Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Upper Chord	Structure 1	U_1 - U_2	-71.64	19.48	-98.73			0.90	1.24	21.68	-109.91	0.00	0.00	Vehicle	Vehicle	------	-331.27	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	------	------	2.70	4.49
		U_2 - U_3	-90.83	39.29	-162.82			0.90	1.24	43.74	-181.27	0.00	0.00	Vehicle	Vehicle	------	-510.82	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	41.01	Pass	42.67	48.56	Pass	9.33	12.00	Pass	------	------	1.57	2.62
		U_3 - U_4	-61.13	58.35	-178.13			0.90	1.24	64.96	-198.31	0.00	0.00	Vehicle	Vehicle	61.27	-509.14	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	41.07	Pass	42.67	48.64	Pass	9.33	12.00	Pass	6.76	11.27	1.53	2.54
		U_4 - U_5	10.71	76.43	-164.02			0.90	1.24	85.09	-182.60	0.00	0.00	Vehicle	Vehicle	198.28	-381.72	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.66	7.76	1.89	3.15
		U_5 - U_6	12.86	76.84	-163.22			0.90	1.24	85.55	-181.71	0.00	0.00	Vehicle	Vehicle	202.07	-376.98	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.62	7.69	1.91	3.18
		U_6 - U_7	121.37	88.98	-122.02			0.90	1.24	99.06	-135.85	0.00	0.00	Vehicle	Vehicle	372.42	-136.55	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	3.33	5.55	3.03	5.05
		U_7 - U_2	249.49	98.48	-72.77			0.90	1.24	109.63	-81.01	0.00	0.00	Vehicle	Vehicle	561.88	------	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	------	------	42.67	------	------	9.33	------	------	3.04	5.06	------	------
		U_2 - U_8	376.92	100.54	-13.25			0.90	1.24	111.93	-14.76	0.00	0.00	Vehicle	Vehicle	732.50	------	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	------	------	32.00	------	------	7.11	------	------	3.93	6.55	------	------
		U_8 - U_9	319.74	105.48	-14.66			0.90	1.20	113.73	-15.81	0.00	0.00	Vehicle	Vehicle	662.08	------	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	------	------	32.00	------	------	7.11	------	------	3.27	5.44	------	------
		U_9 - U_{10}	128.77	98.09	-65.11			0.90	1.20	105.76	-70.20	0.00	0.00	Vehicle	Vehicle	396.55	------	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	------	------	42.67	------	------	10.67	------	------	3.29	5.49	------	------
		U_{10} - U_{11}	-70.90	88.36	-124.19			0.90	1.20	95.27	-133.90	0.00	0.00	Vehicle	Vehicle	114.24	-382.28	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	4.91	8.19	2.36	3.93
		U_{11} - U_{12}	-252.96	78.24	-176.86			0.90	1.20	84.36	-190.69	0.00	0.00	Vehicle	Vehicle	------	-742.01	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	40.79	Pass	28.44	48.30	Pass	8.00	12.00	Pass	------	------	1.76	2.93
		U_{12} - U_{13}	-391.95	67.07	-219.91			0.90	1.20	72.31	-237.11	0.00	0.00	Vehicle	Vehicle	------	-1023.26	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	41.17	Pass	28.44	48.75	Pass	8.00	12.00	Pass	------	------	1.89	3.14
		U_{13} - U_{14}	-482.99	55.98	-248.13			0.90	1.20	60.35	-267.53	0.00	0.00	Vehicle	Vehicle	------	-1207.55	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.90	Pass	25.60	48.44	Pass	6.40	12.00	Pass	------	------	1.89	3.16
		U_{14} - U_{15}	-454.44	55.77	-248.72			0.90	1.20	60.13	-268.17	0.00	0.00	Vehicle	Vehicle	------	-1210.81	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.85	Pass	25.60	48.37	Pass	6.40	12.00	Pass	------	------	1.89	3.14
		U_{15} - U_{16}	-502.02	42.80	-250.87			0.90	1.20	46.15	-270.48	0.00	0.00	Vehicle	Vehicle	------	-1238.68	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.39	Pass	25.60	47.83	Pass	6.40	12.00	Pass	------	------	1.83	3.05
		U_{16} - U_{17}	-467.99	31.15	-232.34			0.90	1.20	33.58	-250.51	0.00	0.00	Vehicle	Vehicle	------	-1151.16	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	41.89	Pass	25.60	49.61	Pass	6.40	12.00	Pass	------	------	2.06	3.43
		U_{17} - U_{18}	-368.86	19.28	-177.66			0.90	1.20	20.79	-191.55	0.00	0.00	Vehicle	Vehicle	------	-894.54	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	40.68	Pass	32.00	48.17	Pass	10.67	12.00	Pass	------	------	1.89	3.14
		U_{18} - U_{19}	-251.56	9.64	-120.32			0.90	1.20	10.39	-129.73	0.00	0.00	Vehicle	Vehicle	------	-608.10	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	41.15	Pass	32.00	48.73	Pass	10.67	12.00	Pass	------	------	1.97	3.28
		U_{19} - U_{20}	-117.89	2.39	-57.01			0.90	1.20	2.58	-61.47	0.00	0.00	Vehicle	Vehicle	------	-286.43	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	------	------	5.46	9.10
	Structure 2	U_1 - U_1	-118.23	7.62	-61.09			0.90	1.18	8.11	-65.05	0.00	0.00	Vehicle	Vehicle	------	-294.63	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	------	------	4.88	8.13
		U_1 - U_2	-239.56	17.44	-128.12			0.90	1.18	18.56	-136.41	0.00	0.00	Vehicle	Vehicle	------	-606.99	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.47	Pass	42.67	50.00	Pass	10.67	12.00	Pass	------	------	2.43	4.04
		U_1 - U_3	-350.44	29.09	-182.24			0.90	1.18	30.98	-194.03	0.00	0.00	Vehicle	Vehicle	------	-875.96	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	43.17	Pass	23.27	50.00	Pass	5.82	12.00	Pass	------	------	2.25	3.75
		U_2 - U_4	-449.15	43.38	-227.19			0.90	1.18	46.18	-241.86	0.00	0.00	Vehicle	Vehicle	------	-1107.98	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	42.85	Pass	23.27	50.00	Pass	5.82	12.00	Pass	------	------	2.21	3.69
		U_3 - U_5	-483.26	51.26	-254.05			0.90	1.18	53.76	-270.46	0.00	0.00	Vehicle	Vehicle	------	-1214.24	14.14	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.10	Pass	25.60	50.00	Pass	6.40	12.00	Pass	------	------	2.23	3.71
		U_4 - U_6	-485.85	73.15	-269.41			0.90	1.18	77.88	-286.84	0.00	0.00	Vehicle	Vehicle	------	-1253.10	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	42.43	Pass	25.60	50.00	Pass	6.40	12.00	Pass	------	------	2.09	3.49
		U_5 - U_7	-428.85	86.68	-259.81			0.90	1.18	92.28	-276.62	0.00	0.00	Vehicle	Vehicle	------	-1156.85	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.93	Pass	23.27	49.66	Pass	5.82	12.00	Pass	------	------	1.98	3.30
		U_6 - U_8	-428.37	86.88	-259.28			0.90	1.18	92.51	-276.06	0.00	0.00	Vehicle	Vehicle	------	-1155.01	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.97	Pass	23.27	49.70	Pass	5.82	12.00	Pass	------	------	1.98	3.31
		U_8 - U_9	-335.42	99.64	-235.33			0.90	1.18	106.09	-250.55	0.00	0.00	Vehicle	Vehicle	------	-978.90	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	41.77	Pass	32.00	49.46	Pass	6.40	12.00	Pass	------	------	1.89	3.16
		U_9 - U_{10}	-200.29	107.82	-192.17			0.90	1.18	114.79	-204.60	0.00	0.00	Vehicle	Vehicle	------	-703.67	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	43.67	Pass	32.00	50.00	Pass	6.40	12.00	Pass	------	------	2.01	3.35
		U_{10} - U_{11}	-52.14	114.46	-147.53			0.90	1.18	121.86	-157.07	0.00	0.00	Vehicle	Vehicle	196.26	-408.10	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	4.74	7.90	2.74	4.57
		U_{11} - U_{12}	107.02	114.26	-92.43			0.90	1.18	121.65	-98.41	0.00	0.00	Vehicle	Vehicle	402.70	------	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	------	------	42.67	------	------	8.00	------	------	3.96	6.61	------	------
		U_{12} - U_{13}	259.33	113.20	-47.37			0.90	1.18	120.53	-50.44	0.00	0.00	Vehicle	Vehicle	598.27	------	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	------	------	42.67	------	------	8.00	------	------	4.38	7.30	------	------
		U_{13} - U_{14}	391.98	106.62	-21.55			0.90	1.18	113.51	-22.95	0.00	0.00	Vehicle	Vehicle	755.52	------	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	------	------	25.60	------	------	8.00	------	------	6.20	10.33	------	------
		U_{14} - U_{15}	439.40	107.32	-18.71			0.90	1.17	112.91	-19.69	0.00	0.00	Vehicle	Vehicle	815.87	------	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	------	------	25.60	------	------	8.00	------	------	5.98	9.96	------	------
		U_{15} - U_{16}	369.66	105.60	-35.53			0.90	1.17	111.10	-37.38	0.00	0.00	Vehicle	Vehicle	721.29	------	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	------	------	36.57	------	------	8.00	------	------	4.88	8.13	------	------
		U_{16} - U_{17}	271.39	101.74	-65.00			0.90	1.17	107.04	-68.39	0.00	0.00	Vehicle	Vehicle	584.72	------	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	------	------	36.57	------	------	8.00	------	------	4.33	7.22	------	------
		U_{17} - U_{18}	171.75	96.91	-100.93			0.90	1.17	101.96	-106.18	0.00	0.00	Vehicle	Vehicle	444.19	------	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	------	------	42.67	------	------	10.67	------	------	3.50	5.83	------	------
		U_{18} - U_{19}	72.78	88.36	-138.92			0.90	1.17	92.96	-146.15	0.00	0.00	Vehicle	Vehicle	296.03	-222.05	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	4.48	7.46	2.96	4.93
		U_{19} - U_{20}	-8.11	78.71	-173.59			0.90	1.17	82.81	-182.63	0.00	0.00	Vehicle	Vehicle	168.88	-406.24	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.00	10.00	2.25	3.75
		U_{20} - U_{21}	-60.13	66.51	-198.17			0.90	1.17	69.98	-208.49	0.00	0.00	Vehicle	Vehicle	73.45	-529.90	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.02	15.03	2.23	3.72
		U_{21} - U_{22}	-82.18	52.89	-210.44			0.90	1.17	55.64	-221.40	0.00	0.00	Vehicle	Vehicle	------	-586.54	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	------	------	2.04	3.41
		U_{22} - U_{23}	-82.40	52.69	-210.13			0.90	1.17	55.44	-221.08	0.00	0.00	Vehicle	Vehicle	------	-586.14	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	------	------	2.05	3.41
		U_{23} - U_{24}	-65.94	65.31	-204.82			0.90	1.17	68.71	-215.49	0.00	0.00	Vehicle	Vehicle	63.14	-552.62	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.24	15.39	2.15	3.58
		U_{24} - U_{25}	61.51	77.81	-147.55			0.90	1.24	88.04	-164.26	0.00	0.00	Vehicle	Vehicle	154.17	-452.42	5.25	32.31	26.8125	1066.31	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.14	10.23	2.04	3.41
		U_{25} - U_{26}	55.02	88.47	-156.22			0.90	1.17	93.08	-164.36	0.00	0.00	Vehicle	Vehicle	273.20	-284.58	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	4.58	7.64	2.56	4.27
		U_{26} - U_{27}	136.02	97.27	-115.63			0.90	1.17	102.34	-121.65	0.00	0.00	Vehicle	Vehicle	398.56	------	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	------	------	42.67	------	------	10.67	------	------	3.70	6.16	------	------
		U_{27} - U_{28}	216.87	101.45	-76.34			0.90	1.17	106.74	-80.32	0.00	0.00	Vehicle	Vehicle	513.19	------	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	------	------	36.57	------	------	8.00	------	------	4.65	7.75	------	------
		U_{28} - U_{29}	293.76	103.83	-39.92			0.90	1.17	109.24	-42.00	0.00	0.00	Vehicle	Vehicle	618.57	------	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	------	------	36.57	------	------	8.00	------	------	5.38	8.96	------	------
		U_{29} - U_{30}	358.11	102.61	-25.63			0.90	1.17	107.96	-26.97	0.00	0.00	Vehicle	Vehicle	699.46	------	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	------	------	25.60	------	------	8.00	------	------	6.70	11.17	------	------
		U_{30} - U_{31}	339.33	116.06	-29.28			0.90	1.18	123.57	-31.17	0.00	0.00	Vehicle	Vehicle	708.86	------	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	------	------	25.60	------	------	8.00	------	------	5.95	9.91	------	------
		U_{31} - U_{32}	251.17	115.81	-34.58			0.90	1.18	123.31	-36.82	0.00	0.00	Vehicle	Vehicle	593.69	------	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0 - L_1	4.85	6.90	-4.54			0.90	1.24	7.68	-5.05	0.00	0.00	Vehicle	Vehicle	22.95	-4.64	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**38.88**	**64.80**	**50.87**	**84.78**
	L_1 - L_2	74.27	95.82	-22.43			0.90	1.24	106.68	-24.97	0.00	0.00	Vehicle	Vehicle	327.68	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**2.41**	**4.02**	*****	*****
	L_2 - L_3	97.71	154.66	-42.33			0.90	1.24	172.18	-47.13	0.00	0.00	Vehicle	Vehicle	500.16	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**1.99**	**3.32**	*****	*****
	L_3 - L_4	66.93	171.07	-61.27			0.90	1.24	190.45	-68.21	0.00	0.00	Vehicle	Vehicle	499.65	-80.77	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**1.90**	**3.16**	**5.54**	**9.24**
	L_4 - L_5	-108.46	117.96	-91.99			0.90	1.24	131.33	-102.42	0.00	0.00	Vehicle	Vehicle	143.55	-362.90	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**3.21**	**5.35**	**2.30**	**3.83**
	L_5 - L_6	-237.28	68.90	-101.51			0.90	1.24	76.71	-113.02	0.00	0.00	Vehicle	Vehicle	-----	-553.33	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	42.60	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.24**	**3.74**
	L_6 - L_7	-362.27	8.78	-106.12			0.90	1.24	9.77	-118.15	0.00	0.00	Vehicle	Vehicle	-----	-726.93	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	44.49	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**2.96**	**4.93**
	L_7 - L_8	-478.66	1.34	-114.29			0.90	1.24	1.49	-127.24	0.00	0.00	Vehicle	Vehicle	-----	-897.94	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.40**	**5.66**
	L_8 - L_9	-477.02	0.59	-117.15			0.90	1.20	0.64	-126.31	0.00	0.00	Vehicle	Vehicle	-----	-893.79	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.43**	**5.72**
	L_9 - L_{10}	-301.43	8.50	-98.29			0.90	1.20	9.17	-105.98	0.00	0.00	Vehicle	Vehicle	-----	-621.48	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.65**	**6.08**
	L_{10} - L_{11}	-104.46	51.45	-86.88			0.90	1.20	55.48	-93.67	0.00	0.00	Vehicle	Vehicle	-----	-338.75	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.54**	**4.23**
	L_{11} - L_{12}	97.11	103.20	-76.81			0.90	1.20	111.27	-82.81	0.00	0.00	Vehicle	Vehicle	367.32	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.68**	**4.47**	*****	*****
	L_{12} - L_{13}	268.74	147.76	-66.44			0.90	1.20	159.32	-71.63	0.00	0.00	Vehicle	Vehicle	694.55	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.66**	**4.43**	*****	*****
	L_{13} - L_{14}	405.66	187.35	-55.99			0.90	1.20	202.00	-60.37	0.00	0.00	Vehicle	Vehicle	965.02	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.66**	**4.47**	*****	*****
	L_{14} - L_{15}	502.77	207.71	-51.38			0.90	1.20	223.95	-33.83	0.00	0.00	Vehicle	Vehicle	1138.84	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.87**	**4.79**	*****	*****
	L_{15} - L_{16}	469.25	188.57	-25.46			0.90	1.20	203.32	-27.45	0.00	0.00	Vehicle	Vehicle	1050.54	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.26**	**5.44**	*****	*****
	L_{16} - L_{17}	365.43	131.65	-17.20			0.90	1.20	141.95	-18.54	0.00	0.00	Vehicle	Vehicle	782.60	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.60**	**6.00**	*****	*****
	L_{17} - L_{18}	248.67	83.92	-12.60			0.90	1.20	90.49	-13.59	0.00	0.00	Vehicle	Vehicle	519.33	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.21**	**7.01**	*****	*****
	L_{18} - L_{19}	112.99	44.71	-37.29			0.90	1.20	48.21	-40.20	0.00	0.00	Vehicle	Vehicle	251.34	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.85**	**8.08**	*****	*****
	L_{19} - L_{20}	-14.26	34.78	-75.27			0.90	1.20	37.50	-81.15	0.00	0.00	Vehicle	Vehicle	62.72	-194.36	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**8.27**	**13.78**	**3.03**	**5.04**
Structure 2	L_0 - L_1	15.26	11.59	-11.89			0.90	1.18	12.34	-12.66	0.00	0.00	Vehicle	Vehicle	46.57	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**30.05**	**50.09**	*****	*****
	L_1 - L_2	136.12	52.79	-7.72			0.90	1.18	56.21	-8.22	0.00	0.00	Vehicle	Vehicle	298.74	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**5.31**	**8.85**	*****	*****
	L_2 - L_3	262.92	110.69	-15.59			0.90	1.18	117.86	-16.60	0.00	0.00	Vehicle	Vehicle	597.15	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.63**	**6.05**	*****	*****
	L_3 - L_4	373.32	163.40	-27.03			0.90	1.18	173.97	-28.78	0.00	0.00	Vehicle	Vehicle	862.26	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.23**	**5.38**	*****	*****
	L_4 - L_5	456.80	206.27	-40.71			0.90	1.18	219.61	-43.35	0.00	0.00	Vehicle	Vehicle	1060.67	-----	11.08	65.05	54.1000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.26**	**5.43**	*****	*****
	L_5 - L_6	489.63	232.85	-55.03			0.90	1.18	247.92	-58.59	0.00	0.00	Vehicle	Vehicle	1173.67	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.15**	**5.26**	*****	*****
	L_6 - L_7	479.27	246.49	-69.73			0.90	1.18	262.44	-74.24	0.00	0.00	Vehicle	Vehicle	1191.66	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.06**	**5.10**	*****	*****
	L_7 - L_8	330.30	214.90	-95.52			0.90	1.18	228.80	-101.70	0.00	0.00	Vehicle	Vehicle	925.13	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**2.65**	**4.42**	*****	*****
	L_8 - L_9	189.19	170.52	-103.31			0.90	1.18	181.55	-109.99	0.00	0.00	Vehicle	Vehicle	639.30	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**3.01**	**5.02**	*****	*****
	L_9 - L_{10}	39.95	127.70	-110.08			0.90	1.18	135.96	-117.20	0.00	0.00	Vehicle	Vehicle	346.52	-202.00	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**3.63**	**6.04**	**3.93**	**6.55**
	L_{10} - L_{11}	-127.23	74.06	-111.00			0.90	1.18	78.85	-118.18	0.00	0.00	Vehicle	Vehicle	-----	-421.46	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**2.66**	**4.43**
	L_{11} - L_{12}	-282.51	36.62	-110.08			0.90	1.18	38.99	-117.20	0.00	0.00	Vehicle	Vehicle	-----	-621.20	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.32**	**5.53**
	L_{12} - L_{13}	-426.62	26.10	-106.45			0.90	1.18	27.78	-113.33	0.00	0.00	Vehicle	Vehicle	-----	-800.16	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.49**	**7.49**
	L_{13} - L_{14}	-536.34	24.27	-136.09			0.90	1.18	25.84	-144.89	0.00	0.00	Vehicle	Vehicle	-----	-1011.17	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.05**	**6.76**
	L_{14} - L_{15}	-537.64	28.93	-118.06			0.90	1.17	30.44	-124.21	0.00	0.00	Vehicle	Vehicle	-----	-968.07	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.72**	**7.87**
	L_{15} - L_{16}	-475.53	26.73	-115.84			0.90	1.17	28.12	-121.87	0.00	0.00	Vehicle	Vehicle	-----	-882.24	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.94**	**6.56**
	L_{16} - L_{17}	-384.21	27.17	-104.83			0.90	1.17	28.59	-110.29	0.00	0.00	Vehicle	Vehicle	-----	-738.43	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.61**	**6.01**
	L_{17} - L_{18}	-281.70	53.00	-100.66			0.90	1.17	55.76	-105.91	0.00	0.00	Vehicle	Vehicle	-----	-595.68	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.03	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**2.53**	**4.21**
	L_{18} - L_{19}	-174.99	80.88	-91.84			0.90	1.17	85.10	-96.63	0.00	0.00	Vehicle	Vehicle	-----	-436.84	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	44.60	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**2.48**	**4.13**
	L_{19} - L_{20}	-76.34	116.22	-83.17			0.90	1.17	122.27	-87.50	0.00	0.00	Vehicle	Vehicle	165.67	-288.83	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.71**	**6.18**	**3.41**	**5.68**
	L_{20} - L_{21}	4.59	141.00	-70.80			0.90	1.17	148.35	-74.49	0.00	0.00	Vehicle	Vehicle	327.40	-155.42	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.88**	**6.47**	**6.60**	**10.99**
	L_{21} - L_{22}	56.15	163.46	-58.69			0.90	1.17	171.97	-61.75	0.00	0.00	Vehicle	Vehicle	445.59	-60.79	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.17**	**5.28**	**8.46**	**14.10**
	L_{22} - L_{23}	63.16	156.82	-37.63			0.90	1.17	164.99	-39.59	0.00	0.00	Vehicle	Vehicle	439.59	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.28**	**5.46**	*****	*****
	L_{23} - L_{24}	15.68	138.99	-50.16			0.90	1.17	146.23	-52.77	0.00	0.00	Vehicle	Vehicle	337.22	-93.95	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.89**	**6.49**	**9.44**	**15.73**
	L_{24} - L_{25}	-55.90	99.31	-56.78			0.90	1.17	104.48	-59.74	0.00	0.00	Vehicle	Vehicle	153.71	-202.10	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.22**	**7.03**	**5.20**	**8.67**
	L_{25} - L_{26}	-136.32	71.88	-65.53			0.90	1.17	75.62	-68.94	0.00	0.00	Vehicle	Vehicle	-----	-326.58	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.81**	**6.34**
	L_{26} - L_{27}	-217.71	41.08	-89.75			0.90	1.17	43.22	-94.42	0.00	0.00	Vehicle	Vehicle	-----	-487.60	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.24**	**5.40**
	L_{27} - L_{28}	-296.28	37.99	-127.10			0.90	1.17	39.97	-133.72	0.00	0.00	Vehicle	Vehicle	-----	-674.89	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.37**	**5.62**
	L_{28} - L_{29}	-364.24	45.77	-167.23			0.90	1.17	48.15	-175.94	0.00	0.00	Vehicle	Vehicle	-----	-854.72	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.11**	**5.18**
	L_{29} - L_{30}	-418.31	48.93	-194.08			0.90	1.17	51.48	-204.19	0.00	0.00	Vehicle	Vehicle	-----	-986.22	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.22**	**5.37**
	L_{30} - L_{31}	-350.66	24.27	-128.33			0.90	1.18	25.83	-136.63	0.00	0.00	Vehicle	Vehicle	-----	-751.90	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.11**	**8.52**
	L_{31} - L_{32}	-275.63	24.87	-104.00			0.90	1.18	26.48	-110.73	0.00	0.00	Vehicle	Vehicle	-----	-598.24	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals																																														
Structure 1	U_0 - L_0	-77.20	17.50	-113.47			0.90	1.24	19.48	-126.33	0.00	0.00	Vehicle	Vehicle	-----	-374.07	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	38.25	Fail	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	1.27	2.12
	U_1 - L_1	-33.88	15.72	-79.67			0.90	1.24	17.50	-88.70	0.00	0.00	Vehicle	Vehicle	-----	-236.23	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----
	U_2 - L_2	10.41	14.79	-59.06			0.90	1.24	16.46	-65.76	0.00	0.00	Vehicle	Vehicle	49.19	-128.94	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	15.21	25.35	3.31	5.51
	U_3 - L_3	44.37	14.76	-41.26			0.90	1.24	16.43	-45.94	0.00	0.00	Vehicle	Vehicle	93.28	-41.85	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	14.00	23.33	5.16	8.61
	U_4 - L_4	-16.71	1.45	-55.69			0.90	1.24	1.61	-61.99	0.00	0.00	Vehicle	Vehicle	-----	-156.04	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	3.22	5.37
	U_5 - L_5	-109.52	3.48	-85.41			0.90	1.24	3.87	-95.08	0.00	0.00	Vehicle	Vehicle	-----	-348.39	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	43.90	Pass	5.37	12.00	Pass	-----	-----	-----	-----	1.99	3.32
	U_6 - L_6	-143.61	0.60	-101.01			0.90	1.24	0.66	-112.45	0.00	0.00	Vehicle	Vehicle	-----	-430.33	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	43.32	Pass	8.89	12.00	Pass	-----	-----	-----	-----	1.94	3.24
	U_7 - L_7	-142.76	3.29	-114.34			0.90	1.24	3.66	-127.29	0.00	0.00	Vehicle	Vehicle	-----	-461.38	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	40.34	Pass	10.00	12.00	Pass	-----	-----	-----	-----	1.50	2.49
	U_8 - L_8	-391.96	3.07	-132.43			0.90	1.24	3.42	-147.43	0.00	0.00	Vehicle	Vehicle	-----	-828.98	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	44.89	Pass	5.96	12.00	Pass	-----	-----	-----	-----	2.74	4.57
	U_9 - L_9	-223.26	10.77	-106.47			0.90	1.20	11.61	-114.80	0.00	0.00	Vehicle	Vehicle	-----	-538.96	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.62	Pass	9.60	12.00	Pass	-----	-----	-----	-----	2.20	3.67
	U_{10} - L_{10}	-225.85	7.60	-106.58			0.90	1.20	8.19	-114.92	0.00	0.00	Vehicle	Vehicle	-----	-542.60	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	2.70	4.50
	U_{11} - L_{11}	-198.80	5.30	-97.03			0.90	1.20	5.71	-104.62	0.00	0.00	Vehicle	Vehicle	-----	-485.11	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	2.54	4.23
	U_{12} - L_{12}	-154.81	9.36	-87.40			0.90	1.20	10.10	-94.24	0.00	0.00	Vehicle	Vehicle	-----	-405.43	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	2.40	4.01
	U_{13} - L_{13}	-109.06	16.50	-80.72			0.90	1.20	17.79	-87.03	0.00	0.00	Vehicle	Vehicle	-----	-330.34	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	42.78	Pass	5.94	12.00	Pass	-----	-----	-----	-----	1.87	3.12
	U_{14} - L_{14}	-12.31	1.95	-49.76			0.90	1.20	2.10	-53.65	0.00	0.00	Vehicle	Vehicle	-----	-132.23	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	3.72	6.20
	U_{15} - L_{15}	-5.62	31.47	-53.90			0.90	1.20	33.93	-58.12	0.00	0.00	Vehicle	Vehicle	66.22	-133.22	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	7.66	12.77	3.49	5.81
	U_{16} - L_{16}	-51.73	15.74	-72.45			0.90	1.20	16.97	-78.12	0.00	0.00	Vehicle	Vehicle	-----	-236.51	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	2.22	3.71
	U_{17} - L_{17}	-127.32	12.81	-95.14			0.90	1.20	13.81	-102.57	0.00	0.00	Vehicle	Vehicle	-----	-387.75	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	41.61	Pass	5.37	12.00	Pass	-----	-----	-----	-----	1.66	2.77
	U_{18} - L_{18}	-159.94	11.82	-105.24			0.90	1.20	12.75	-113.47	0.00	0.00	Vehicle	Vehicle	-----	-453.78	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	42.84	Pass	7.23	12.00	Pass	-----	-----	-----	-----	1.93	3.22
	U_{19} - L_{19}	-191.17	10.02	-117.53			0.90	1.20	10.80	-126.72	0.00	0.00	Vehicle	Vehicle	-----	-523.08	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	43.62	Pass	6.06	12.00	Pass	-----	-----	-----	-----	2.01	3.36
	U_{20} - L_{20}	-212.33	10.03	-123.77			0.90	1.20	10.81	-133.45	0.00	0.00	Vehicle	Vehicle	-----	-565.18	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	41.96	Pass	6.06	12.00	Pass	-----	-----	-----	-----	1.66	2.77
Structure 2	U_0 - L_0	-206.69	12.95	-112.00			0.90	1.18	13.78	-119.25	0.00	0.00	Vehicle	Vehicle	-----	-527.07	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	2.19	3.65
	U_1 - L_1	-188.76	13.29	-105.90			0.90	1.18	14.15	-112.75	0.00	0.00	Vehicle	Vehicle	-----	-489.67	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	2.57	4.29
	U_2 - L_2	-155.92	14.02	-105.08			0.90	1.18	14.93	-111.88	0.00	0.00	Vehicle	Vehicle	-----	-445.11	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	2.24	3.74
	U_3 - L_3	-134.58	15.89	-92.02			0.90	1.18	16.92	-97.97	0.00	0.00	Vehicle	Vehicle	-----	-387.22	0.00	22.75	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	43.67	Pass	4.91	12.00	Pass	-----	-----	-----	-----	1.94	3.24
	U_4 - L_4	-64.49	15.18	-76.05			0.90	1.18	16.16	-80.97	0.00	0.00	Vehicle	Vehicle	-----	-259.28	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	2.04	3.39
	U_5 - L_5	-19.94	23.23	-70.32			0.90	1.18	24.73	-74.87	0.00	0.00	Vehicle	Vehicle	27.67	-188.15	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	10.86	18.10	2.57	4.28
	U_6 - L_6	40.08	38.86	-45.01			0.90	1.18	41.37	-47.92	0.00	0.00	Vehicle	Vehicle	141.75	-51.72	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	5.62	9.37	4.78	7.97
	U_7 - L_7	-26.04	0.52	-51.57			0.90	1.18	0.55	-54.90	0.00	0.00	Vehicle	Vehicle	-----	-152.81	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	3.44	5.73
	U_8 - L_8	-125.25	19.70	-75.97			0.90	1.18	20.98	-80.89	0.00	0.00	Vehicle	Vehicle	-----	-338.07	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	3.01	5.01
	U_9 - L_9	-174.53	8.65	-95.34			0.90	1.18	9.21	-101.51	0.00	0.00	Vehicle	Vehicle	-----	-446.84	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	3.05	5.09
	U_{10} - L_{10}	-202.66	4.58	-105.23			0.90	1.18	4.88	-112.04	0.00	0.00	Vehicle	Vehicle	-----	-506.21	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	3.08	5.14
	U_{11} - L_{11}	-229.53	3.07	-117.92			0.90	1.18	3.27	-125.55	0.00	0.00	Vehicle	Vehicle	-----	-570.41	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	2.56	4.26
	U_{12} - L_{12}	-250.85	4.36	-122.33			0.90	1.18	4.64	-130.24	0.00	0.00	Vehicle	Vehicle	-----	-608.30	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	2.54	4.23
	U_{13} - L_{13}	-223.32	13.39	-116.62			0.90	1.18	14.26	-124.17	0.00	0.00	Vehicle	Vehicle	-----	-559.35	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	2.26	3.76
	U_{14} - L_{14}	-343.31	2.62	-126.42			0.90	1.18	2.79	-134.60	0.00	0.00	Vehicle	Vehicle	-----	-737.93	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	3.16	5.26
	U_{15} - L_{15}	-123.14	12.92	-99.62			0.90	1.17	13.59	-104.81	0.00	0.00	Vehicle	Vehicle	-----	-387.18	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	3.25	5.41
	U_{16} - L_{16}	-156.70	9.96	-105.42			0.90	1.17	10.48	-110.91	0.00	0.00	Vehicle	Vehicle	-----	-444.02	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	2.76	4.59
	U_{17} - L_{17}	-147.91	9.70	-110.49			0.90	1.17	10.20	-116.25	0.00	0.00	Vehicle	Vehicle	-----	-444.16	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	2.45	4.09
	U_{18} - L_{18}	-142.22	12.16	-96.85			0.90	1.17	12.80	-101.89	0.00	0.00	Vehicle	Vehicle	-----	-405.66	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	2.56	4.27
	U_{19} - L_{19}	-111.48	13.60	-95.78			0.90	1.17	14.30	-100.77	0.00	0.00	Vehicle	Vehicle	-----	-363.25	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	2.38	3.97
	U_{20} - L_{20}	-76.55	17.93	-84.58			0.90	1.17	18.87	-88.98	0.00	0.00	Vehicle	Vehicle	-----	-292.31	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	2.01	3.36
	U_{21} - L_{21}	-44.31	22.50	-66.37			0.90	1.17	23.67	-69.83	0.00	0.00	Vehicle	Vehicle	-----	-208.90	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	2.54	4.24
	U_{22} - L_{22}	-21.25	1.61	-51.06			0.90	1.17	1.69	-53.72	0.00	0.00	Vehicle	Vehicle	-----	-144.02	0.00	16.85	16.8486	556.00	131.71	9.5363	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	3.58	5.97
	U_{23} - L_{23}	-39.07	29.65	-60.33			0.90	1.17	31.20	-63.47	0.00	0.00	Vehicle	Vehicle	-----	-188.31	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	2.85	4.75
	U_{24} - L_{24}	-74.84	22.56	-73.33			0.90	1.17	23.73	-77.15	0.00	0.00	Vehicle	Vehicle	-----	-264.45	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	2.34	3.89
	U_{25} - L_{25}	-103.27	16.62	-89.76			0.90	1.17	17.48	-94.43	0.00	0.00	Vehicle	Vehicle	-----	-338.85	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	2.59	4.32
	U_{26} - L_{26}	-120.22	15.68	-101.36			0.90	1.17	16.49	-106.64	0.00	0.00	Vehicle	Vehicle	-----	-387.34	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	2.57	4.29
	U_{27} - L_{27}	-123.93	12.95	-107.88			0.90	1.17	13.62	-113.50	0.00	0.00	Vehicle	Vehicle	-----	-407.02	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	2.64	4.40
	U_{28} - L_{28}	-135.60	11.78	-114.42			0.90	1.17	12.39	-120.38	0.00	0.00	Vehicle	Vehicle	-----	-437.10	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	2.64	4.41
	U_{29} - L_{29}	-116.87	6.90	-113.22			0.90	1.17	7.26	-119.12	0.00	0.00	Vehicle	Vehicle	-----	-410.03	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	2.89	4.81
	U_{30} - L_{30}	-262.02	4.99	-121.31			0.90	1.18	5.31	-129.16	0.00	0.00	Vehicle	Vehicle	-----	-620.46	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	3.67	6.12
	U_{31} - L_{31}	-156.38	16.20	-104.82			0.90	1.18	17.25	-111.60	0.00	0.00	Vehicle	Vehicle	-----	-445.09	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	2.87	4.78
	U_{32} - L_{32}	-185.51	11.54	-115.61			0.90	1.18	12.28	-123.09	0.00	0.00	Vehicle	Vehicle	-----	-507.85	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	3.00	5.01
	U_{33} - L_{33}	-186.18	9.64	-110.18			0.90	1.18	10.26	-117.31	0.00	0.00	Vehicle	Vehicle	-----	-496.20	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals																																															
Structure 1	U$_1$ - L$_1$	87.33	122.12	-24.54			0.90	1.24	135.96	-27.32	0.00	0.00	Vehicle	Vehicle	408.10	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	2.20	3.67	-----	-----
	U$_1$ - L$_2$	23.35	94.26	-24.47			0.90	1.24	104.94	-27.24	0.00	0.00	Vehicle	Vehicle	257.72	-28.67	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	2.31	3.85	7.90	13.17
	U$_2$ - L$_3$	-37.85	64.34	-23.81			0.90	1.24	71.62	-26.51	0.00	0.00	Vehicle	Vehicle	105.98	-106.64	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	3.90	6.50	6.71	11.18
	U$_3$ - L$_4$	-92.19	42.99	-63.48			0.90	1.24	47.86	-70.67	0.00	0.00	Vehicle	Vehicle	-----	-272.96	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	44.78	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.07	3.46
	U$_4$ - L$_4$	143.37	102.49	-13.91			0.90	1.24	114.10	-15.49	0.00	0.00	Vehicle	Vehicle	433.59	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	2.00	3.34	-----	-----
	U$_5$ - L$_5$	177.90	113.33	-4.10			0.90	1.24	126.17	-4.56	0.00	0.00	Vehicle	Vehicle	504.63	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.25	3.75	-----	-----
	U$_6$ - L$_6$	184.42	124.26	-2.88			0.90	1.24	138.34	-3.21	0.00	0.00	Vehicle	Vehicle	539.48	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.02	3.37	-----	-----
	U$_7$ - L$_7$	180.02	125.43	-4.64			0.90	1.24	139.64	-5.17	0.00	0.00	Vehicle	Vehicle	536.57	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.02	3.37	-----	-----
	U$_8$ - L$_9$	268.98	116.74	-12.60			0.90	1.20	125.87	-13.58	0.00	0.00	Vehicle	Vehicle	622.38	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	3.30	5.51	-----	-----
	U$_9$ - L$_{10}$	278.85	125.20	-12.27			0.90	1.20	134.99	-13.23	0.00	0.00	Vehicle	Vehicle	654.98	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	3.04	5.06	-----	-----
	U$_{10}$ - L$_{11}$	285.04	122.12	-6.91			0.90	1.20	131.67	-7.45	0.00	0.00	Vehicle	Vehicle	655.83	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	2.85	4.75	-----	-----
	U$_{11}$ - L$_{12}$	250.60	118.26	-11.31			0.90	1.20	127.51	-12.20	0.00	0.00	Vehicle	Vehicle	602.05	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.48	4.13	-----	-----
	U$_{12}$ - L$_{13}$	189.65	109.53	-22.69			0.90	1.20	118.10	-24.46	0.00	0.00	Vehicle	Vehicle	502.42	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	2.24	3.74	-----	-----
	U$_{13}$ - L$_{14}$	123.32	83.23	-31.46			0.90	1.20	89.74	-33.91	0.00	0.00	Vehicle	Vehicle	354.76	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	2.04	3.39	-----	-----
	U$_{14}$ - L$_{15}$	-24.41	57.20	-60.63			0.90	1.20	61.67	-65.37	0.00	0.00	Vehicle	Vehicle	101.89	-173.37	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	4.40	7.33	2.79	4.65
	U$_{15}$ - L$_{15}$	48.53	73.91	-41.99			0.90	1.20	79.69	-45.27	0.00	0.00	Vehicle	Vehicle	235.75	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	2.85	4.76	-----	-----
	U$_{16}$ - L$_{16}$	146.59	108.30	-17.50			0.90	1.20	116.77	-18.87	0.00	0.00	Vehicle	Vehicle	443.56	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	1.94	3.24	-----	-----
	U$_{17}$ - L$_{17}$	182.46	112.13	-15.09			0.90	1.20	120.89	-16.27	0.00	0.00	Vehicle	Vehicle	499.13	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.32	3.87	-----	-----
	U$_{18}$ - L$_{18}$	223.82	119.81	-12.65			0.90	1.20	129.18	-13.64	0.00	0.00	Vehicle	Vehicle	570.87	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.26	3.77	-----	-----
	U$_{20}$ - L$_{19}$	232.72	123.14	-10.58			0.90	1.20	132.77	-11.41	0.00	0.00	Vehicle	Vehicle	590.20	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.16	3.60	-----	-----
Structure 2	U$_1$ - L$_1$	213.54	110.19	-13.81			0.90	1.18	117.32	-14.71	0.00	0.00	Vehicle	Vehicle	531.80	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.88	4.81	-----	-----
	U$_1$ - L$_2$	200.48	118.13	-16.22			0.90	1.18	125.77	-17.27	0.00	0.00	Vehicle	Vehicle	533.12	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.75	4.59	-----	-----
	U$_2$ - L$_3$	172.81	105.61	-18.15			0.90	1.18	112.44	-19.32	0.00	0.00	Vehicle	Vehicle	468.28	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.55	4.25	-----	-----
	U$_3$ - L$_4$	147.16	105.59	-21.35			0.90	1.18	112.42	-22.73	0.00	0.00	Vehicle	Vehicle	434.89	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	2.29	3.82	-----	-----
	U$_4$ - L$_5$	49.10	88.23	-28.09			0.90	1.18	93.94	-29.91	0.00	0.00	Vehicle	Vehicle	267.37	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.41	28.25	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	2.42	4.03	-----	-----
	U$_5$ - L$_6$	2.96	72.17	-42.12			0.90	1.18	76.84	-44.85	0.00	0.00	Vehicle	Vehicle	170.33	-93.31	0.00	16.85	16.8486	556.00	131.71	13.1356	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	3.32	5.53	4.40	7.33
	U$_6$ - L$_7$	-85.74	48.66	-69.53			0.90	1.18	51.81	-74.03	0.00	0.00	Vehicle	Vehicle	-----	-271.86	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	2.22	3.69
	U$_8$ - L$_7$	140.30	86.12	-41.75			0.90	1.18	91.70	-44.45	0.00	0.00	Vehicle	Vehicle	381.06	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	3.03	5.05	-----	-----
	U$_8$ - L$_8$	204.22	108.16	-16.78			0.90	1.18	115.16	-17.86	0.00	0.00	Vehicle	Vehicle	514.99	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.64	4.39	-----	-----
	U$_{19}$ - L$_9$	234.87	116.77	-9.83			0.90	1.18	124.33	-10.46	0.00	0.00	Vehicle	Vehicle	574.70	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.62	4.36	-----	-----
	U$_{11}$ - L$_{10}$	263.10	127.66	-3.15			0.90	1.18	135.92	-3.35	0.00	0.00	Vehicle	Vehicle	636.52	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	2.57	4.28	-----	-----
	U$_{11}$ - L$_{11}$	274.02	128.11	-3.86			0.90	1.18	136.39	-4.11	0.00	0.00	Vehicle	Vehicle	651.75	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	2.51	4.18	-----	-----
	U$_{12}$ - L$_{12}$	254.94	124.95	-13.89			0.90	1.18	133.04	-14.79	0.00	0.00	Vehicle	Vehicle	619.67	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.36	3.93	-----	-----
	U$_{13}$ - L$_{13}$	217.71	110.42	-16.12			0.90	1.18	117.57	-17.17	0.00	0.00	Vehicle	Vehicle	537.74	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.86	4.76	-----	-----
	U$_{14}$ - L$_{15}$	110.05	89.89	-13.54			0.90	1.17	94.57	-14.25	0.00	0.00	Vehicle	Vehicle	347.96	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	3.43	5.72	-----	-----
	U$_{15}$ - L$_{16}$	132.30	99.90	-14.41			0.90	1.17	105.11	-15.16	0.00	0.00	Vehicle	Vehicle	399.71	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.96	4.93	-----	-----
	U$_{16}$ - L$_{17}$	172.89	116.12	-10.17			0.90	1.17	122.17	-10.70	0.00	0.00	Vehicle	Vehicle	489.46	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.64	4.40	-----	-----
	U$_{17}$ - L$_{18}$	160.19	108.28	-12.11			0.90	1.17	113.92	-12.75	0.00	0.00	Vehicle	Vehicle	455.07	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.58	4.31	-----	-----
	U$_{18}$ - L$_{19}$	152.35	112.36	-15.84			0.90	1.17	118.22	-16.67	0.00	0.00	Vehicle	Vehicle	454.19	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.53	4.22	-----	-----
	U$_{20}$ - L$_{20}$	120.69	109.97	-19.22			0.90	1.17	115.70	-20.22	0.00	0.00	Vehicle	Vehicle	407.57	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	2.50	4.17	-----	-----
	U$_{20}$ - L$_{21}$	76.08	86.29	-27.76			0.90	1.17	90.78	-29.21	0.00	0.00	Vehicle	Vehicle	295.60	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	2.32	3.87	-----	-----
	U$_{21}$ - L$_{22}$	31.46	74.58	-44.55			0.90	1.17	78.47	-46.88	0.00	0.00	Vehicle	Vehicle	210.91	-60.67	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	3.03	5.05	4.57	7.62
	U$_{22}$ - L$_{22}$	24.30	64.43	-60.34			0.90	1.17	67.79	-63.48	0.00	0.00	Vehicle	Vehicle	178.46	-105.96	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	3.57	5.95	3.28	5.47
	U$_{23}$ - L$_{23}$	72.26	79.50	-37.94			0.90	1.17	83.64	-39.91	0.00	0.00	Vehicle	Vehicle	275.16	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	2.55	4.25	-----	-----
	U$_{24}$ - L$_{24}$	112.13	100.62	-23.68			0.90	1.17	105.86	-24.91	0.00	0.00	Vehicle	Vehicle	375.13	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	2.78	4.64	-----	-----
	U$_{25}$ - L$_{25}$	180.76	125.05	-9.57			0.90	1.18	133.14	-10.19	0.00	0.00	Vehicle	Vehicle	523.46	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.69	4.48	-----	-----
	U$_{26}$ - L$_{26}$	162.94	113.35	-13.06			0.90	1.18	120.68	-13.90	0.00	0.00	Vehicle	Vehicle	473.30	-----	0.00	27.98	27.9777	923.26	131.71	13.3125	2.8289	42.35	31.29	-744.20	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.72	4.53	-----	-----
	U$_{27}$ - L$_{27}$	112.94	99.55	-25.94			0.90	1.18	105.99	-27.62	0.00	0.00	Vehicle	Vehicle	376.46	-----	3.00	23.77	20.7656	784.26	131.71	13.2708	2.1158	56.45	29.97	-605.39	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	2.78	4.63	-----	-----
	U$_{27}$ - L$_{27}$	-73.86	37.39	-91.40			0.90	1.18	39.81	-97.31	0.00	0.00	Vehicle	Vehicle	-----	-306.86	0.00	18.61	18.6095	614.11	131.71	13.8229	1.9845	62.69	29.26	-462.87	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	44.39	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	1.74	2.90
	U$_{28}$ - L$_{28}$	-4.37	59.46	-55.25			0.90	1.18	63.31	-58.83	0.00	0.00	Vehicle	Vehicle	131.49	-133.14	0.00	16.85	16.8486	556.00	131.71	13.6250	1.9682	62.30	29.31	-419.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	4.09	6.82	3.25	5.41
	U$_{29}$ - L$_{29}$	29.28	74.66	-39.11			0.90	1.18	79.49	-41.64	0.00	0.00	Vehicle	Vehicle	210.29	-52.15	0.00	16.85	16.8486	556.00	131.71	13.8750	1.9682	63.45	29.17	-417.77	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	3.01	5.01	5.05	8.42
	U$_{41}$ - L$_{40}$	101.12	104.19	-22.62			0.90	1.18	110.93	-24.08	0.00	0.00	Vehicle	Vehicle	371.81	-----	0.00	22.73	22.7330	750.19	131.71	14.1250	2.0170	63.03	29.22	-564.65	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	2.57	4.29	-----	-----
	U$_{42}$ - L$_{41}$	121.87	114.27	-19.85			0.90	1.18	121.66	-21.13	0.00	0.00	Vehicle	Vehicle	422.03	-----	0.00	25.63	25.6315	845.84	131.71	14.4896	2.8057	46.48	30.95	-674.19	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.61	4.35	-----	-----
	U$_{43}$ - L$_{42}$	156.17	125.54	-18.05			0.90	1.18	133.66	-19.21	0.00	0.00	Vehicle	Vehicle	492.62	-----	0.00	30.63	30.6305	1010.81	131.71	15.6875	2.8427	49.67	30.65	-798.10	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.79	4.65	-----	-----
	U$_{44}$ - L$_{43}$	164.27	122.88	-15.21			0.90	1.18	130.83	-16.20	0.00	0.00	Vehicle	Vehicle	497.01	-----	0.00	30.63	30.6305

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U$_0$ - U$_1$	-52.64	20.60	-102.00			0.75	1.24	19.11	-94.63	0.00	0.00	Vehicle	Vehicle	-----	-273.46	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.25	5.42
		U$_1$ - U$_2$	-61.57	36.70	-147.80			0.75	1.24	34.05	-137.12	0.00	0.00	Vehicle	Vehicle	-----	-377.14	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.20	3.67
		U$_2$ - U$_3$	-26.99	50.70	-162.40			0.75	1.24	47.04	-150.67	0.00	0.00	Vehicle	Vehicle	66.83	-361.53	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	8.90	14.84	2.14	3.57
		U$_3$ - U$_4$	32.92	65.00	-143.20			0.75	1.24	60.30	-132.85	0.00	0.00	Vehicle	Vehicle	173.46	-245.05	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.35	10.58	2.70	4.50
		U$_4$ - U$_5$	34.77	65.30	-141.90			0.75	1.24	60.58	-131.65	0.00	0.00	Vehicle	Vehicle	176.47	-240.03	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.30	10.50	2.74	4.56
		U$_5$ - U$_6$	124.13	77.50	-115.00			0.75	1.24	71.90	-106.69	0.00	0.00	Vehicle	Vehicle	317.15	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	4.56	7.61	-----	-----
		U$_6$ - U$_7$	223.19	91.40	-73.90			0.75	1.24	84.80	-68.56	0.00	0.00	Vehicle	Vehicle	473.87	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	4.11	6.85	-----	-----
		U$_7$ - U$_8$	331.76	103.20	-25.40			0.75	1.24	95.74	-23.56	0.00	0.00	Vehicle	Vehicle	638.74	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	4.88	8.13	-----	-----
		U$_8$ - U$_9$	267.61	87.80	-21.60			0.75	1.20	78.89	-19.41	0.00	0.00	Vehicle	Vehicle	518.82	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	5.11	8.51	-----	-----
		U$_9$ - U$_{10}$	89.12	76.50	-73.20			0.75	1.20	68.74	-65.77	0.00	0.00	Vehicle	Vehicle	264.78	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	5.41	9.02	-----	-----
		U$_{10}$ - U$_{11}$	-76.81	65.70	-121.80			0.75	1.20	59.03	-109.44	0.00	0.00	Vehicle	Vehicle	-----	-336.96	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.85	4.76
		U$_{11}$ - U$_{12}$	-230.69	55.80	-164.90			0.75	1.20	50.14	-148.16	0.00	0.00	Vehicle	Vehicle	-----	-620.91	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	44.59	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.36	3.93
		U$_{12}$ - U$_{13}$	-341.88	47.20	-202.20			0.75	1.20	42.41	-181.68	0.00	0.00	Vehicle	Vehicle	-----	-838.08	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.63	4.38
		U$_{13}$ - U$_{14}$	-421.62	39.40	-218.10			0.75	1.20	35.40	-195.96	0.00	0.00	Vehicle	Vehicle	-----	-972.69	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.77	4.62
		U$_{14}$ - U$_{15}$	-422.51	39.30	-218.50			0.75	1.20	35.31	-196.32	0.00	0.00	Vehicle	Vehicle	-----	-974.62	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.77	4.61
		U$_{15}$ - U$_{16}$	-439.94	30.70	-227.40			0.75	1.20	27.58	-204.32	0.00	0.00	Vehicle	Vehicle	-----	-1014.62	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.62	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.61	4.34
		U$_{16}$ - U$_{17}$	-422.43	23.30	-219.10			0.75	1.20	20.94	-196.86	0.00	0.00	Vehicle	Vehicle	-----	-975.69	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.76	4.60
		U$_{17}$ - U$_{18}$	-340.94	15.60	-175.00			0.75	1.20	14.02	-157.24	0.00	0.00	Vehicle	Vehicle	-----	-783.90	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	43.46	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	2.40	4.01
		U$_{18}$ - U$_{19}$	-247.15	9.50	-126.00			0.75	1.20	8.54	-113.21	0.00	0.00	Vehicle	Vehicle	-----	-566.58	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	42.63	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	2.28	3.80
		U$_{19}$ - U$_{20}$	-131.71	4.70	-63.80			0.75	1.20	4.22	-57.32	0.00	0.00	Vehicle	Vehicle	-----	-295.42	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.71	9.52
	Structure 2	U$_0$ - U$_1$	-131.51	10.50	-70.30			0.75	1.18	9.32	-62.37	0.00	0.00	Vehicle	Vehicle	-----	-306.10	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.96	8.27
		U$_1$ - U$_2$	-247.03	22.50	-131.40			0.75	1.18	19.96	-116.58	0.00	0.00	Vehicle	Vehicle	-----	-573.73	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.80	4.67
		U$_2$ - U$_3$	-347.15	34.90	-177.80			0.75	1.18	30.97	-157.75	0.00	0.00	Vehicle	Vehicle	-----	-793.09	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.78	4.63
		U$_3$ - U$_4$	-437.07	48.90	-213.40			0.75	1.18	43.39	-189.34	0.00	0.00	Vehicle	Vehicle	-----	-978.42	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.87	4.78
		U$_4$ - U$_5$	-468.70	60.00	-232.60			0.75	1.18	53.24	-206.37	0.00	0.00	Vehicle	Vehicle	-----	-1056.46	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.96	4.93
		U$_5$ - U$_6$	-471.03	71.00	-236.90			0.75	1.18	62.99	-210.19	0.00	0.00	Vehicle	Vehicle	-----	-1067.75	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.90	4.83
		U$_6$ - U$_7$	-414.41	79.10	-222.90			0.75	1.18	70.18	-197.77	0.00	0.00	Vehicle	Vehicle	-----	-967.23	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.81	4.69
		U$_7$ - U$_8$	-413.45	79.20	-222.10			0.75	1.18	70.27	-197.06	0.00	0.00	Vehicle	Vehicle	-----	-964.44	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.83	4.71
		U$_8$ - U$_9$	-321.98	86.60	-201.20			0.75	1.18	76.84	-178.51	0.00	0.00	Vehicle	Vehicle	-----	-805.36	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.70	4.50
		U$_9$ - U$_{10}$	-182.11	91.10	-168.20			0.75	1.18	80.83	-149.24	0.00	0.00	Vehicle	Vehicle	-----	-560.08	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.83	4.72
		U$_{10}$ - U$_{11}$	-32.58	96.60	-131.80			0.75	1.18	85.71	-116.94	0.00	0.00	Vehicle	Vehicle	143.35	-295.72	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	6.60	11.01	3.78	6.30
		U$_{11}$ - U$_{12}$	133.59	99.80	-91.60			0.75	1.18	88.55	-81.27	0.00	0.00	Vehicle	Vehicle	365.52	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	5.27	8.78	-----	-----
		U$_{12}$ - U$_{13}$	289.99	102.70	-50.90			0.75	1.18	91.12	-45.16	0.00	0.00	Vehicle	Vehicle	574.41	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	5.59	9.32	-----	-----
		U$_{13}$ - U$_{14}$	434.76	104.80	-26.90			0.75	1.18	92.98	-23.87	0.00	0.00	Vehicle	Vehicle	766.65	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	7.29	12.15	-----	-----
		U$_{14}$ - U$_{15}$	474.45	88.70	-22.70			0.75	1.17	77.77	-19.90	0.00	0.00	Vehicle	Vehicle	785.28	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	8.41	14.01	-----	-----
		U$_{15}$ - U$_{16}$	383.28	85.60	-46.00			0.75	1.17	75.05	-40.33	0.00	0.00	Vehicle	Vehicle	660.87	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	7.11	11.85	-----	-----
		U$_{16}$ - U$_{17}$	279.57	80.70	-74.90			0.75	1.17	70.75	-65.67	0.00	0.00	Vehicle	Vehicle	516.74	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	6.48	10.80	-----	-----
		U$_{17}$ - U$_{18}$	172.63	75.10	-104.50			0.75	1.17	65.84	-91.62	0.00	0.00	Vehicle	Vehicle	367.08	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	5.41	9.02	-----	-----
		U$_{18}$ - U$_{19}$	74.36	67.00	-134.90			0.75	1.17	58.74	-118.27	0.00	0.00	Vehicle	Vehicle	223.95	-159.59	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	7.07	11.78	3.66	6.10
		U$_{19}$ - U$_{20}$	-10.01	58.60	-154.60			0.75	1.17	51.38	-135.55	0.00	0.00	Vehicle	Vehicle	98.30	-306.70	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.70	16.16	3.02	5.04
	Structure 3	U$_0$ - U$_1$	-62.06	49.10	-173.60			0.75	1.17	43.05	-152.20	0.00	0.00	Vehicle	Vehicle	-----	-410.45	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.05	5.09
		U$_1$ - U$_2$	-88.74	42.50	-175.20			0.75	1.17	37.26	-153.61	0.00	0.00	Vehicle	Vehicle	-----	-448.17	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.92	4.87
		U$_2$ - U$_3$	-88.92	42.70	-174.60			0.75	1.17	37.44	-153.08	0.00	0.00	Vehicle	Vehicle	-----	-447.26	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.93	4.89
		U$_3$ - U$_4$	-76.67	52.30	-174.20			0.75	1.17	45.85	-152.73	0.00	0.00	Vehicle	Vehicle	-----	-430.58	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.99	4.98
		U$_4$ - U$_5$	-37.64	61.00	-160.30			0.75	1.17	53.48	-140.54	0.00	0.00	Vehicle	Vehicle	66.94	-353.45	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.62	16.04	2.80	4.66
		U$_5$ - U$_6$	37.23	68.70	-138.10			0.75	1.17	60.23	-121.08	0.00	0.00	Vehicle	Vehicle	178.90	-213.94	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	7.26	12.10	3.39	5.65
		U$_6$ - U$_7$	128.02	76.50	-105.20			0.75	1.17	67.07	-92.23	0.00	0.00	Vehicle	Vehicle	311.74	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	5.71	9.52	-----	-----
		U$_7$ - U$_8$	233.68	81.60	-77.00			0.75	1.17	71.54	-67.51	0.00	0.00	Vehicle	Vehicle	458.79	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	6.80	11.33	-----	-----
		U$_8$ - U$_9$	337.65	86.20	-42.40			0.75	1.17	75.58	-37.17	0.00	0.00	Vehicle	Vehicle	602.70	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	7.42	12.37	-----	-----
		U$_9$ - U$_{10}$	437.10	89.40	-21.20			0.75	1.17	78.38	-18.59	0.00	0.00	Vehicle	Vehicle	738.05	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	8.63	14.38	-----	-----
		U$_{10}$ - U$_{11}$	420.53	106.30	-24.90			0.75	1.18	94.31	-22.09	0.00	0.00	Vehicle	Vehicle	751.04	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	7.28	12.13	-----	-----
		U$_{11}$ - U$_{12}$	300.69	104.50	-49.40			0.75	1.18	92.72	-43.83	0.00	0.00	Vehicle	Vehicle	591.79	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck

Condition: As-Built

Fy = 33.0 ksi

Fu = 60.0 ksi

E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17

Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension

(-) Negative Stresses / Forces Indicate Compression

& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009

Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel

** Area deducted for rivet holes (see separate calculation

*** K = 0.75 per MCEB 6.6.2.1

**** Per AASHTO Std. Specs. For Highway Bridges, Articl

(Case I considered in Max. Tension/Compression Load)

Center Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0- L_1	8.49	13.70	-11.20			0.75	1.24	12.71	-10.39	0.00	0.00	Vehicle	Vehicle	38.58	-11.48	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**23.33**	**38.88**	**24.95**	**41.59**
	L_1 - L_2	50.81	96.50	-21.40			0.75	1.24	89.53	-19.85	0.00	0.00	Vehicle	Vehicle	260.03	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.03**	**5.05**	-----	-----
	L_2 - L_3	61.22	133.70	-36.50			0.75	1.24	124.04	-33.86	0.00	0.00	Vehicle	Vehicle	348.34	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**2.94**	**4.90**	-----	-----
	L_3 - L_4	25.70	146.20	-50.40			0.75	1.24	135.64	-46.76	0.00	0.00	Vehicle	Vehicle	327.29	-67.90	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**2.84**	**4.74**	**7.55**	**12.59**
	L_4 - L_5	-118.45	102.90	-73.90			0.75	1.24	95.47	-68.56	0.00	0.00	Vehicle	Vehicle	-----	-302.54	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.34**	**5.57**
	L_5 - L_6	-217.80	63.60	-88.20			0.75	1.24	59.00	-81.83	0.00	0.00	Vehicle	Vehicle	-----	-460.43	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.24**	**5.40**
	L_6 - L_7	-320.36	20.70	-101.20			0.75	1.24	19.20	-93.89	0.00	0.00	Vehicle	Vehicle	-----	-619.89	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.99**	**6.65**
	L_7 - L_8	-417.18	0.10	-109.10			0.75	1.24	0.09	-101.22	0.00	0.00	Vehicle	Vehicle	-----	-761.64	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.64**	**7.73**
	L_8 - L_9	-410.79	0.00	-116.70			0.75	1.20	0.00	-104.85	0.00	0.00	Vehicle	Vehicle	-----	-761.21	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.51**	**7.52**
	L_9 - L_{10}	-247.75	18.80	-83.30			0.75	1.20	16.89	-74.85	0.00	0.00	Vehicle	Vehicle	-----	-484.24	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.59**	**9.32**
	L_{10} - L_{11}	-65.21	71.10	-72.40			0.75	1.20	63.88	-65.05	0.00	0.00	Vehicle	Vehicle	-----	-225.72	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.01**	**6.69**
	L_{11} - L_{12}	101.88	112.60	-61.80			0.75	1.20	101.17	-55.53	0.00	0.00	Vehicle	Vehicle	351.65	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.92**	**4.86**	-----	-----
	L_{12} - L_{13}	264.09	152.60	-53.10			0.75	1.20	137.11	-47.71	0.00	0.00	Vehicle	Vehicle	640.39	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.11**	**5.18**	-----	-----
	L_{13} - L_{14}	373.73	187.70	-44.70			0.75	1.20	168.65	-40.16	0.00	0.00	Vehicle	Vehicle	851.26	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.32**	**5.54**	-----	-----
	L_{14} - L_{15}	476.34	208.40	-29.20			0.75	1.20	187.25	-26.24	0.00	0.00	Vehicle	Vehicle	1024.94	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.52**	**5.86**	-----	-----
	L_{15} - L_{16}	459.97	196.90	-21.80			0.75	1.20	176.91	-19.59	0.00	0.00	Vehicle	Vehicle	981.27	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.78**	**6.30**	-----	-----
	L_{16} - L_{17}	381.37	150.70	-14.50			0.75	1.20	135.40	-13.03	0.00	0.00	Vehicle	Vehicle	789.15	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.70**	**6.17**	-----	-----
	L_{17} - L_{18}	288.98	102.70	-9.60			0.75	1.20	92.28	-8.63	0.00	0.00	Vehicle	Vehicle	575.60	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.86**	**6.44**	-----	-----
	L_{18} - L_{19}	176.20	48.60	-8.10			0.75	1.20	43.67	-7.28	0.00	0.00	Vehicle	Vehicle	323.67	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.49**	**7.48**	-----	-----
	L_{19} - L_{20}	69.74	18.10	-28.10			0.75	1.20	16.26	-25.25	0.00	0.00	Vehicle	Vehicle	125.90	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**15.97**	**26.62**	-----	-----
Structure 2	L_0- L_1	24.59	8.80	-12.60			0.75	1.18	7.81	-11.18	0.00	0.00	Vehicle	Vehicle	48.88	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**46.78**	**77.97**	-----	-----
	L_1 - L_2	138.59	71.00	-11.70			0.75	1.18	62.99	-10.38	0.00	0.00	Vehicle	Vehicle	316.65	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**4.71**	**7.85**	-----	-----
	L_2 - L_3	252.83	133.60	-24.40			0.75	1.18	118.54	-21.65	0.00	0.00	Vehicle	Vehicle	585.51	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.66**	**6.10**	-----	-----
	L_3 - L_4	352.30	176.60	-36.90			0.75	1.18	156.69	-32.74	0.00	0.00	Vehicle	Vehicle	797.49	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.66**	**6.11**	-----	-----
	L_4 - L_5	447.17	208.00	-51.00			0.75	1.18	184.55	-45.25	0.00	0.00	Vehicle	Vehicle	981.17	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.91**	**6.52**	-----	-----
	L_5 - L_6	477.93	218.90	-62.00			0.75	1.18	194.22	-55.01	0.00	0.00	Vehicle	Vehicle	1042.12	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.06**	**6.77**	-----	-----
	L_6 - L_7	482.68	222.20	-72.90			0.75	1.18	197.15	-64.68	0.00	0.00	Vehicle	Vehicle	1054.63	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**4.06**	**6.77**	-----	-----
	L_7 - L_8	336.61	188.60	-88.10			0.75	1.18	167.34	-78.17	0.00	0.00	Vehicle	Vehicle	800.16	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.60**	**6.01**	-----	-----
	L_8 - L_9	196.05	154.30	-91.80			0.75	1.18	136.90	-81.45	0.00	0.00	Vehicle	Vehicle	551.48	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**3.96**	**6.60**	-----	-----
	L_9 - L_{10}	45.60	117.10	-96.50			0.75	1.18	103.90	-85.62	0.00	0.00	Vehicle	Vehicle	284.38	-126.24	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**4.71**	**7.86**	**5.42**	**9.03**
	L_{10} - L_{11}	-126.26	77.80	-98.90			0.75	1.18	69.03	-87.75	0.00	0.00	Vehicle	Vehicle	-----	-354.26	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.59**	**5.98**
	L_{11} - L_{12}	-284.87	42.50	-102.00			0.75	1.18	37.71	-90.50	0.00	0.00	Vehicle	Vehicle	-----	-566.41	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.28**	**7.14**
	L_{12} - L_{13}	-433.79	29.00	-109.30			0.75	1.18	25.73	-96.98	0.00	0.00	Vehicle	Vehicle	-----	-774.04	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.21**	**8.68**
	L_{13} - L_{14}	-552.65	28.20	-111.10			0.75	1.18	25.02	-98.57	0.00	0.00	Vehicle	Vehicle	-----	-932.02	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.86**	**9.76**
	L_{14} - L_{15}	-573.48	28.00	-117.50			0.75	1.17	24.55	-103.02	0.00	0.00	Vehicle	Vehicle	-968.72	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.48**	**9.14**
	L_{15} - L_{16}	-492.94	24.40	-92.90			0.75	1.17	21.39	-81.45	0.00	0.00	Vehicle	Vehicle	-817.30	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.76**	**9.61**
	L_{16} - L_{17}	-395.30	37.90	-86.80			0.75	1.17	33.23	-76.10	0.00	0.00	Vehicle	Vehicle	-678.78	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.14**	**8.57**
	L_{17} - L_{18}	-288.04	69.30	-81.90			0.75	1.17	60.76	-71.81	0.00	0.00	Vehicle	Vehicle	-530.04	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.67**	**6.12**
	L_{18} - L_{19}	-175.85	98.30	-75.90			0.75	1.17	86.18	-66.55	0.00	0.00	Vehicle	Vehicle	-----	-372.78	1.25	26.75	25.5500	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.59**	**5.98**
	L_{19} - L_{20}	-78.08	121.00	-67.80			0.75	1.17	106.09	-59.44	0.00	0.00	Vehicle	Vehicle	128.36	-230.29	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.28**	**7.14**	**5.00**	**8.34**
	L_{20} - L_{21}	7.55	146.00	-59.60			0.75	1.17	128.01	-52.25	0.00	0.00	Vehicle	Vehicle	287.17	-103.40	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.49**	**7.48**	**9.44**	**15.73**
	L_{21} - L_{22}	59.07	164.70	-50.10			0.75	1.17	144.40	-43.93	0.00	0.00	Vehicle	Vehicle	389.65	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.76**	**6.27**	-----	-----
	L_{22} - L_{23}	71.98	166.10	-53.70			0.75	1.17	145.63	-47.08	0.00	0.00	Vehicle	Vehicle	409.10	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.68**	**6.13**	-----	-----
	L_{23} - L_{24}	33.55	147.80	-62.20			0.75	1.17	129.58	-54.53	0.00	0.00	Vehicle	Vehicle	324.38	-74.55	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.31**	**7.19**	**9.33**	**15.55**
	L_{24} - L_{25}	-45.09	119.60	-69.20			0.75	1.17	104.86	-60.67	0.00	0.00	Vehicle	Vehicle	168.58	-190.06	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.14**	**6.91**	**5.23**	**8.71**
	L_{25} - L_{26}	-134.94	85.10	-75.90			0.75	1.17	74.61	-66.55	0.00	0.00	Vehicle	Vehicle	-----	-319.60	1.25	26.75	25.5500	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.96**	**6.59**
	L_{26} - L_{27}	-245.90	58.00	-79.90			0.75	1.17	50.85	-70.05	0.00	0.00	Vehicle	Vehicle	-----	-471.45	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**4.13**	**6.88**
	L_{27} - L_{28}	-351.78	28.50	-84.20			0.75	1.17	24.99	-73.82	0.00	0.00	Vehicle	Vehicle	-----	-617.26	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.66**	**9.43**
	L_{28} - L_{29}	-458.29	20.10	-96.80			0.75	1.17	17.62	-84.87	0.00	0.00	Vehicle	Vehicle	-----	-779.66	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.78**	**9.63**
	L_{29} - L_{30}	-542.18	23.10	-124.80			0.75	1.17	20.25	-109.42	0.00	0.00	Vehicle	Vehicle	-----	-941.91	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.34**	**8.89**
	L_{30} - L_{31}	-514.03	27.40	-108.70			0.75	1.18	24.31	-96.44	0.00	0.00	Vehicle	Vehicle	-----	-877.20	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.23**	**10.38**
	L_{31} - L_{32}	-411.21	28.40	-101.90			0.75	1.18	25.20	-90.41	0.00	0.00	Vehicle	Vehicle	-----	-730.47	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.73**	**9.55**

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	(No Impact) Pedestrian Load MAX	(No Impact) Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.60	14.43	-200.35			0.75	1.24	13.39	-185.87	0.00	0.00	Vehicle	Vehicle	-----	-490.61	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	38.00	Fail	6.56	12.00	Pass	-----	-----	-----	-----	-----	0.89	1.49
		U_1 - L_1	-24.06	13.97	-86.23			0.75	1.24	12.96	-80.00	0.00	0.00	Vehicle	Vehicle	-----	-204.62	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.46	4.10
		U_2 - L_2	12.88	11.69	-64.71			0.75	1.24	10.85	-60.04	0.00	0.00	Vehicle	Vehicle	40.24	-113.34	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	22.95	38.25	3.65	6.08
		U_3 - L_3	37.35	26.20	-50.75			0.75	1.24	24.30	-47.08	0.00	0.00	Vehicle	Vehicle	101.21	-53.46	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	9.64	16.06	4.95	8.25
		U_4 - L_4	-15.53	7.96	-66.20			0.75	1.24	7.38	-61.41	0.00	0.00	Vehicle	Vehicle	-----	-153.25	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.27	5.44
		U_5 - L_5	-92.52	17.20	-84.08			0.75	1.24	15.96	-78.00	0.00	0.00	Vehicle	Vehicle	-----	-289.28	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	2.56	4.26
		U_6 - L_6	-117.01	0.93	-108.11			0.75	1.24	0.87	-100.30	0.00	0.00	Vehicle	Vehicle	-----	-369.43	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	2.34	3.90
		U_7 - L_7	-127.49	0.26	-126.61			0.75	1.24	0.24	-117.47	0.00	0.00	Vehicle	Vehicle	-----	-420.24	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	42.27	Pass	10.00	12.00	Pass	-----	-----	1.70	2.83
		U_8 - L_8	-368.60	3.84	-173.76			0.75	1.24	3.56	-161.21	0.00	0.00	Vehicle	Vehicle	-----	-828.46	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	44.91	Pass	5.96	12.00	Pass	-----	-----	2.59	4.32
		U_9 - L_9	-214.45	6.39	-135.71			0.75	1.20	5.74	-121.94	0.00	0.00	Vehicle	Vehicle	-----	-542.99	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.46	Pass	9.60	12.00	Pass	-----	-----	2.12	3.53
		U_{10} - L_{10}	-198.57	1.66	-122.82			0.75	1.20	1.49	-110.35	0.00	0.00	Vehicle	Vehicle	-----	-497.24	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	2.96	4.93
		U_{11} - L_{11}	-171.30	5.90	-107.57			0.75	1.20	5.30	-96.66	0.00	0.00	Vehicle	Vehicle	-----	-432.11	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.92	4.86
		U_{12} - L_{12}	-128.27	17.15	-96.82			0.75	1.20	15.41	-86.99	0.00	0.00	Vehicle	Vehicle	-----	-355.24	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	2.79	4.65
		U_{13} - L_{13}	-96.55	24.37	-86.61			0.75	1.20	21.89	-77.82	0.00	0.00	Vehicle	Vehicle	-----	-294.14	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	2.19	3.65
		U_{14} - L_{14}	-11.04	8.76	-59.69			0.75	1.20	7.87	-53.63	0.00	0.00	Vehicle	Vehicle	-----	-130.56	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.73	6.22
		U_{15} - L_{15}	-2.54	44.14	-64.56			0.75	1.20	39.66	-58.01	0.00	0.00	Vehicle	Vehicle	82.63	-128.98	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	6.51	10.85	3.52	5.87
		U_{16} - L_{16}	-31.31	31.93	-74.51			0.75	1.20	28.69	-66.94	0.00	0.00	Vehicle	Vehicle	-----	-185.75	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	2.78	4.63
		U_{17} - L_{17}	-105.02	13.61	-93.73			0.75	1.20	12.22	-84.21	0.00	0.00	Vehicle	Vehicle	-----	-318.98	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	2.18	3.64
		U_{18} - L_{18}	-126.66	6.61	-110.47			0.75	1.20	5.94	-99.26	0.00	0.00	Vehicle	Vehicle	-----	-379.71	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	2.41	4.02
		U_{19} - L_{19}	-166.54	6.19	-116.40			0.75	1.20	5.56	-104.59	0.00	0.00	Vehicle	Vehicle	-----	-443.10	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.58	4.30
		U_{20} - L_{20}	-184.30	5.75	-118.73			0.75	1.20	5.16	-106.68	0.00	0.00	Vehicle	Vehicle	-----	-470.73	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.24	3.73
	Structure 2	U_0 - L_0	-203.39	15.74	-127.16			0.75	1.18	13.96	-112.82	0.00	0.00	Vehicle	Vehicle	-----	-508.86	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	2.34	3.89
		U_1 - L_1	-176.11	17.01	-118.89			0.75	1.18	15.09	-105.49	0.00	0.00	Vehicle	Vehicle	-----	-457.50	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	2.82	4.71
		U_2 - L_2	-137.45	16.10	-112.30			0.75	1.18	14.28	-99.63	0.00	0.00	Vehicle	Vehicle	-----	-394.56	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.63	4.39
		U_3 - L_3	-117.61	16.73	-99.14			0.75	1.18	14.84	-87.97	0.00	0.00	Vehicle	Vehicle	-----	-343.48	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	2.28	3.80
		U_4 - L_4	-50.97	20.92	-84.70			0.75	1.18	18.56	-75.15	0.00	0.00	Vehicle	Vehicle	-----	-229.09	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	2.30	3.83
		U_5 - L_5	-13.79	33.89	-74.25			0.75	1.18	30.07	-65.88	0.00	0.00	Vehicle	Vehicle	47.23	-160.65	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	8.81	14.68	2.98	4.96
		U_6 - L_6	45.46	47.91	-54.06			0.75	1.18	42.51	-47.96	0.00	0.00	Vehicle	Vehicle	151.20	-44.82	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	5.40	8.99	4.84	8.07
		U_7 - L_7	-22.33	4.78	-67.03			0.75	1.18	4.24	-59.47	0.00	0.00	Vehicle	Vehicle	-----	-157.88	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.21	5.35
		U_8 - L_8	-120.06	32.86	-80.48			0.75	1.18	29.16	-71.41	0.00	0.00	Vehicle	Vehicle	-----	-310.79	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	3.45	5.75
		U_9 - L_9	-177.00	25.84	-91.75			0.75	1.18	22.93	-81.40	0.00	0.00	Vehicle	Vehicle	-----	-406.48	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.79	6.32
		U_{10} - L_{10}	-205.85	19.27	-105.95			0.75	1.18	17.10	-94.00	0.00	0.00	Vehicle	Vehicle	-----	-471.28	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.66	6.09
		U_{11} - L_{11}	-239.21	12.40	-117.46			0.75	1.18	11.00	-104.22	0.00	0.00	Vehicle	Vehicle	-----	-536.77	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.03	5.04
		U_{12} - L_{12}	-257.92	2.85	-118.63			0.75	1.18	2.53	-105.25	0.00	0.00	Vehicle	Vehicle	-----	-563.34	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	3.10	5.17
		U_{13} - L_{13}	-243.80	7.98	-128.38			0.75	1.18	7.08	-113.90	0.00	0.00	Vehicle	Vehicle	-----	-563.73	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	2.35	3.92
		U_{14} - L_{14}	-420.84	7.73	-160.72			0.75	1.18	6.86	-142.60	0.00	0.00	Vehicle	Vehicle	-----	-856.07	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	2.65	4.42
		U_{15} - L_{15}	-158.85	13.28	-125.15			0.75	1.17	11.64	-109.72	0.00	0.00	Vehicle	Vehicle	-----	-444.23	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.91	4.84
		U_{16} - L_{16}	-174.03	10.37	-126.71			0.75	1.17	9.09	-111.09	0.00	0.00	Vehicle	Vehicle	-----	-466.93	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	2.66	4.43
		U_{17} - L_{17}	-156.46	11.91	-117.92			0.75	1.17	10.44	-103.38	0.00	0.00	Vehicle	Vehicle	-----	-427.40	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.71	4.52
		U_{18} - L_{18}	-142.20	12.60	-104.13			0.75	1.17	11.05	-91.30	0.00	0.00	Vehicle	Vehicle	-----	-382.68	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.86	4.76
		U_{19} - L_{19}	-113.66	19.87	-102.69			0.75	1.17	17.42	-90.04	0.00	0.00	Vehicle	Vehicle	-----	-342.84	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	2.65	4.42
		U_{20} - L_{20}	-76.52	26.66	-88.19			0.75	1.17	23.38	-77.32	0.00	0.00	Vehicle	Vehicle	-----	-267.00	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	2.32	3.86
		U_{21} - L_{21}	-45.78	31.33	-73.20			0.75	1.17	27.47	-64.18	0.00	0.00	Vehicle	Vehicle	-----	-198.57	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	2.76	4.59
		U_{22} - L_{22}	-17.71	7.84	-63.20			0.75	1.17	6.87	-55.41	0.00	0.00	Vehicle	Vehicle	-----	-143.09	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.51	5.85
		U_{23} - L_{23}	-30.66	38.66	-66.30			0.75	1.17	33.89	-58.13	0.00	0.00	Vehicle	Vehicle	33.57	-165.81	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	8.11	13.52	3.20	5.33
		U_{24} - L_{24}	-62.03	35.84	-72.59			0.75	1.17	31.42	-63.64	0.00	0.00	Vehicle	Vehicle	-----	-218.53	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	2.95	4.92
		U_{25} - L_{25}	-103.10	25.70	-94.58			0.75	1.17	22.54	-82.92	0.00	0.00	Vehicle	Vehicle	-----	-313.70	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	2.95	4.92
		U_{26} - L_{26}	-134.31	17.17	-103.17			0.75	1.17	15.06	-90.45	0.00	0.00	Vehicle	Vehicle	-----	-370.57	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.94	4.90
		U_{27} - L_{27}	-155.93	10.36	-108.08			0.75	1.17	9.09	-94.76	0.00	0.00	Vehicle	Vehicle	-----	-408.01	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.96	4.93
		U_{28} - L_{28}	-179.28	8.91	-121.18			0.75	1.17	7.81	-106.25	0.00	0.00	Vehicle	Vehicle	-----	-463.27	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	2.75	4.58
		U_{29} - L_{29}	-171.45	6.28	-127.90			0.75	1.17	5.51	-112.14	0.00	0.00	Vehicle	Vehicle	-----	-465.84	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.78	4.63
		U_{30} - L_{30}	-392.76	11.56	-158.81			0.75	1.18	10.25	-140.90	0.00	0.00	Vehicle	Vehicle	-----	-815.87	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	2.81	4.68
		U_{31} - L_{31}	-203.21	13.45	-134.77			0.75	1.18	11.94	-119.57	0.00	0.00	Vehicle	Vehicle	-----	-523.25	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	2.44	4.07
		U_{32} - L_{32}	-222.46	5.35	-130.09			0.75	1.18	4.75	-115.42	0.00	0.00	Vehicle	Vehicle	-----	-539.27	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	3.01	5.02
		U_{33} - L_{33}	-211.56	4.27	-119.65			0.75	1.18	3.79	-106.16	0.00	0.00	Vehicle	Vehicle	-----	-505.05	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.13	5.21
		U_{34} - L_{34}	-191.20	11.81	-115.77			0.75	1.18	10.48	-102.72	0.00	0.00	Vehicle	Vehicle	-----	-471.10	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.43	5.72
		U_{35} - L_{35}	-171.49	17.90	-106.53			0.75	1.18	15.88	-94.51	0.00	0.00	Vehicle	Vehicle	-----	-427.72	0.00	33.27	33.2657	1097.77	131.71	11.3

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U$_0$ - L$_1$	53.25	131.55	-21.76			0.75	1.24	122.05	-20.19	0.00	0.00	Vehicle	Vehicle	333.66	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	7.23	-----	-----	-----	-----	-----	**2.62**	**4.37**	-----	-----
		U$_1$ - L$_2$	10.78	94.67	-19.98			0.75	1.24	87.83	-18.54	0.00	0.00	Vehicle	Vehicle	204.30	-26.15	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**2.85**	**4.75**	**11.20**	**18.67**
		U$_2$ - L$_3$	-44.02	77.00	-40.97			0.75	1.24	71.44	-38.01	0.00	0.00	Vehicle	Vehicle	97.56	-139.57	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.96**	**6.60**	**4.58**	**7.63**
		U$_3$ - L$_4$	-76.72	56.22	-88.78			0.75	1.24	52.16	-82.36	0.00	0.00	Vehicle	Vehicle	-----	-278.19	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	44.36	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**1.89**	**3.15**
		U$_4$ - L$_5$	118.39	101.08	-41.55			0.75	1.24	93.78	-38.54	0.00	0.00	Vehicle	Vehicle	357.09	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.60**	**4.33**	-----	-----
		U$_5$ - L$_6$	137.53	110.52	-22.32			0.75	1.24	102.54	-20.71	0.00	0.00	Vehicle	Vehicle	400.95	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U$_6$ - L$_7$	157.34	127.07	-1.60			0.75	1.24	117.89	-1.49	0.00	0.00	Vehicle	Vehicle	459.96	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.51**	**4.18**	-----	-----
		U$_7$ - L$_8$	149.30	137.83	-0.30			0.75	1.24	127.88	-0.27	0.00	0.00	Vehicle	Vehicle	471.15	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.35**	**3.92**	-----	-----
		U$_8$ - L$_9$	249.09	147.77	-7.31			0.75	1.20	132.77	-6.57	0.00	0.00	Vehicle	Vehicle	611.49	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.22**	**5.37**	-----	-----
		U$_9$ - L$_{10}$	260.26	143.11	-5.79			0.75	1.20	128.58	-5.20	0.00	0.00	Vehicle	Vehicle	616.92	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.28**	**5.46**	-----	-----
		U$_{10}$ - L$_{11}$	236.30	134.75	-7.67			0.75	1.20	121.08	-6.89	0.00	0.00	Vehicle	Vehicle	569.53	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**3.34**	**5.57**	-----	-----
		U$_{11}$ - L$_{12}$	211.92	124.33	-23.11			0.75	1.20	111.71	-20.77	0.00	0.00	Vehicle	Vehicle	517.55	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.04**	**5.06**	-----	-----
		U$_{12}$ - L$_{13}$	151.66	116.18	-34.73			0.75	1.20	104.39	-31.20	0.00	0.00	Vehicle	Vehicle	423.33	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**2.76**	**4.59**	-----	-----
		U$_{13}$ - L$_{14}$	108.60	95.18	-50.41			0.75	1.20	85.52	-45.29	0.00	0.00	Vehicle	Vehicle	326.48	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.24**	**3.73**	-----	-----
		U$_{14}$ - L$_{15}$	-24.45	62.39	-82.49			0.75	1.20	56.05	-74.12	0.00	0.00	Vehicle	Vehicle	89.67	-192.37	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.84**	**8.07**	**2.46**	**4.10**
		U$_{15}$ - L$_{15}$	23.99	83.19	-59.48			0.75	1.20	74.75	-53.44	0.00	0.00	Vehicle	Vehicle	193.15	-84.59	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.24**	**5.40**	**3.91**	**6.52**
		U$_{17}$ - L$_{16}$	120.03	103.97	-31.74			0.75	1.20	93.41	-28.52	0.00	0.00	Vehicle	Vehicle	358.44	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.60**	**4.33**	-----	-----
		U$_{18}$ - L$_{17}$	144.79	109.90	-16.13			0.75	1.20	98.74	-14.49	0.00	0.00	Vehicle	Vehicle	402.18	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U$_{19}$ - L$_{18}$	193.05	119.11	-8.00			0.75	1.20	107.02	-7.19	0.00	0.00	Vehicle	Vehicle	482.85	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.90**	**4.83**	-----	-----
		U$_{20}$ - L$_{19}$	193.51	121.66	-6.53			0.75	1.20	109.31	-5.87	0.00	0.00	Vehicle	Vehicle	488.41	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.84**	**4.73**	-----	-----
	Structure 2	U$_0$ - L$_1$	202.41	122.94	-17.73			0.75	1.18	109.07	-15.73	0.00	0.00	Vehicle	Vehicle	499.46	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.16**	**5.27**	-----	-----
		U$_1$ - L$_2$	190.86	121.60	-19.85			0.75	1.18	107.89	-17.62	0.00	0.00	Vehicle	Vehicle	481.87	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U$_2$ - L$_3$	155.85	112.77	-19.31			0.75	1.18	100.05	-17.13	0.00	0.00	Vehicle	Vehicle	419.38	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.97**	**4.95**	-----	-----
		U$_3$ - L$_4$	134.05	110.36	-21.50			0.75	1.18	97.92	-19.07	0.00	0.00	Vehicle	Vehicle	386.43	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U$_4$ - L$_5$	46.02	91.84	-42.64			0.75	1.18	81.48	-37.83	0.00	0.00	Vehicle	Vehicle	236.36	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.81**	**4.68**	-----	-----
		U$_5$ - L$_6$	3.45	74.21	-59.46			0.75	1.18	65.84	-52.75	0.00	0.00	Vehicle	Vehicle	147.13	-109.82	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.87**	**6.44**	**3.74**	**6.24**
		U$_6$ - L$_7$	-84.29	62.72	-77.82			0.75	1.18	55.65	-69.04	0.00	0.00	Vehicle	Vehicle	-----	-259.16	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.39**	**3.98**
		U$_7$ - L$_8$	137.30	93.07	-56.70			0.75	1.18	82.57	-50.31	0.00	0.00	Vehicle	Vehicle	357.39	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.39**	**5.64**	-----	-----
		U$_8$ - L$_9$	210.89	104.57	-40.23			0.75	1.18	92.78	-35.70	0.00	0.00	Vehicle	Vehicle	475.17	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.23**	**5.38**	-----	-----
		U$_9$ - L$_{10}$	236.36	110.16	-30.91			0.75	1.18	97.74	-27.43	0.00	0.00	Vehicle	Vehicle	519.04	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.32**	**5.54**	-----	-----
		U$_{11}$ - L$_{10}$	274.62	121.03	-20.56			0.75	1.18	107.39	-18.24	0.00	0.00	Vehicle	Vehicle	589.67	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.18**	**5.31**	-----	-----
		U$_{12}$ - L$_{11}$	281.06	126.78	-13.61			0.75	1.18	112.48	-12.08	0.00	0.00	Vehicle	Vehicle	609.09	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.01**	**5.01**	-----	-----
		U$_{13}$ - L$_{12}$	278.12	118.00	-8.70			0.75	1.18	104.70	-7.72	0.00	0.00	Vehicle	Vehicle	588.39	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
		U$_{14}$ - L$_{13}$	235.45	117.33	-10.70			0.75	1.18	104.10	-9.49	0.00	0.00	Vehicle	Vehicle	531.64	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U$_{14}$ - L$_{15}$	143.03	112.25	-13.06			0.75	1.17	98.41	-11.45	0.00	0.00	Vehicle	Vehicle	399.16	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.09**	**5.16**	-----	-----
		U$_{15}$ - L$_{16}$	171.91	120.76	-13.06			0.75	1.17	105.88	-11.45	0.00	0.00	Vehicle	Vehicle	452.89	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U$_{16}$ - L$_{17}$	181.04	123.54	-12.61			0.75	1.17	108.31	-11.05	0.00	0.00	Vehicle	Vehicle	470.02	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.93**	**4.89**	-----	-----
		U$_{17}$ - L$_{18}$	171.16	111.79	-14.23			0.75	1.17	98.01	-12.47	0.00	0.00	Vehicle	Vehicle	434.87	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.94**	**4.89**	-----	-----
		U$_{18}$ - L$_{19}$	150.64	119.58	-22.94			0.75	1.17	104.84	-20.11	0.00	0.00	Vehicle	Vehicle	422.99	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
		U$_{19}$ - L$_{20}$	125.86	107.18	-33.87			0.75	1.17	93.97	-29.70	0.00	0.00	Vehicle	Vehicle	367.23	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.05**	**5.08**	-----	-----
		U$_{20}$ - L$_{21}$	76.05	91.94	-39.42			0.75	1.17	80.61	-34.56	0.00	0.00	Vehicle	Vehicle	273.51	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.62**	**4.36**	-----	-----
		U$_{21}$ - L$_{22}$	38.34	81.17	-57.33			0.75	1.17	71.16	-50.26	0.00	0.00	Vehicle	Vehicle	204.03	-59.05	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.28**	**5.47**	**4.34**	**7.24**
		U$_{23}$ - L$_{22}$	18.02	67.88	-75.14			0.75	1.17	59.51	-65.88	0.00	0.00	Vehicle	Vehicle	152.38	-119.31	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.13**	**6.88**	**3.11**	**5.18**
		U$_{24}$ - L$_{23}$	58.54	84.29	-50.38			0.75	1.17	73.90	-44.17	0.00	0.00	Vehicle	Vehicle	236.22	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U$_{25}$ - L$_{24}$	114.92	91.75	-46.62			0.75	1.17	80.44	-40.87	0.00	0.00	Vehicle	Vehicle	323.68	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.64**	**6.07**	-----	-----
		U$_{26}$ - L$_{25}$	142.93	113.10	-30.53			0.75	1.17	99.16	-26.76	0.00	0.00	Vehicle	Vehicle	400.66	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U$_{27}$ - L$_{26}$	173.71	114.28	-20.26			0.75	1.17	100.20	-17.76	0.00	0.00	Vehicle	Vehicle	442.92	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.76**	-----	-----
		U$_{28}$ - L$_{27}$	186.49	116.64	-11.38			0.75	1.17	102.26	-9.97	0.00	0.00	Vehicle	Vehicle	463.99	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U$_{29}$ - L$_{28}$	190.57	118.00	-7.62			0.75	1.17	103.46	-6.68	0.00	0.00	Vehicle	Vehicle	471.90	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.67**	**4.45**	-----	-----
		U$_{30}$ - L$_{29}$	161.74	116.01	-9.16			0.75	1.17	101.71	-8.03	0.00	0.00	Vehicle	Vehicle	430.63	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.88**	**4.81**	-----	-----
		U$_{30}$ - L$_{31}$	191.49	122.40	-13.07			0.75	1.18	108.59	-11.60	0.00	0.00	Vehicle	Vehicle	484.22	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.24**	**5.40**	-----	-----
		U$_{31}$ - L$_{32}$	226.17	124.20	-14.49			0.75	1.18	110.20	-12.86	0.00	0.00	Vehicle	Vehicle	532.78	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U$_{32}$ - L$_{33}$	243.26	126.25	-4.99			0.75	1.18	112.02	-4.43	0.00	0.00	Vehicle	Vehicle	558.94	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.22**	**5.37**	-----	-----
		U$_{33}$ - L$_{34}$	238.98	128.44	-13.06			0.75	1.18	113.96	-11.59	0.00	0.00	Vehicle	Vehicle	557.58	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.19**	**5.31**	-----	-----
		U$_{34}$ - L$_{35}$	222.10	123.80	-20.77			0.75	1.18	109.84	-18.43	0.00	0.00	Vehicle	Vehicle	526.72	-----	0.00	30.63	30.6305

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck

Condition: As-Built

Fy = 33.0 ksi

Fu = 60.0 ksi

E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17

Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension

(-) Negative Stresses / Forces Indicate Compression

& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009

Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel

** Area deducted for rivet holes (see separate calculation

*** K = 0.75 per MCEB 6.6.2.1

**** Per AASHTO Std. Specs. For Highway Bridges, Artic

(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.77	13.40	-58.77	2.20	-8.83	0.90	1.24	14.92	-65.43	2.20	-8.83	Vehicle	Vehicle	-----	-228.56	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.57	7.62
		U_1 - U_2	-86.66	31.80	-94.19	6.00	-16.34	0.90	1.24	35.41	-104.86	6.00	-16.34	Vehicle	Vehicle	-----	-339.85	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.74	4.56
		U_2 - U_3	-48.28	47.11	-100.06	9.44	-19.05	0.90	1.24	52.44	-111.40	9.44	-19.05	Vehicle	Vehicle	50.87	-304.12	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	8.23	13.72	2.78	4.64
		U_3 - U_4	36.43	60.73	-86.55	12.72	-17.47	0.90	1.24	67.61	-96.36	12.72	-17.47	Vehicle	Vehicle	193.86	-161.42	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.63	9.39	3.75	6.24
		U_4 - U_5	38.78	60.93	-85.82	12.78	-17.37	0.90	1.24	67.83	-95.54	12.78	-17.37	Vehicle	Vehicle	197.39	-156.59	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.59	9.32	3.79	6.32
		U_5 - U_6	154.43	68.39	-55.74	15.13	-12.03	0.90	1.24	76.14	-62.06	15.13	-12.03	Vehicle	Vehicle	365.72	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	4.07	6.79	-----	-----
		U_6 - U_7	288.19	74.30	-24.50	17.11	-4.31	0.90	1.24	82.72	-27.27	17.11	-4.31	Vehicle	Vehicle	553.87	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.74	6.24	-----	-----
		U_7 - U_8	410.75	76.12	-1.56	22.59	0.00	0.90	1.24	84.74	-1.73	22.59	0.00	Vehicle	Vehicle	717.57	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	4.95	8.25	-----	-----
		U_8 - U_9	311.35	57.10	-5.91	19.05	0.00	0.90	1.20	61.57	-6.38	19.05	0.00	Vehicle	Vehicle	538.14	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	6.12	10.19	-----	-----
		U_9 - U_{10}	78.25	57.60	-46.28	12.28	-6.83	0.90	1.20	62.10	-49.90	12.28	-6.83	Vehicle	Vehicle	236.28	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	6.10	10.16	-----	-----
		U_{10} - U_{11}	-141.75	54.30	-88.20	11.11	-18.45	0.90	1.20	58.54	-95.10	11.11	-18.45	Vehicle	Vehicle	-----	-390.32	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.87	4.79
		U_{11} - U_{12}	-338.40	50.00	-130.82	9.77	-27.96	0.90	1.20	53.91	-141.05	9.77	-27.96	Vehicle	Vehicle	-----	-745.53	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	40.69	Pass	28.44	48.19	Pass	8.00	12.00	Pass	-----	-----	2.02	3.36
		U_{12} - U_{13}	-480.50	43.77	-153.77	8.23	-34.35	0.90	1.20	47.19	-165.79	8.23	-34.35	Vehicle	Vehicle	-----	-983.86	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	41.98	Pass	28.44	49.72	Pass	8.00	12.00	Pass	-----	-----	2.38	3.96
		U_{13} - U_{14}	-571.10	37.17	-167.86	6.68	-37.24	0.90	1.20	40.08	-180.98	6.68	-37.24	Vehicle	Vehicle	-----	-1134.56	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.20	Pass	25.60	49.97	Pass	6.40	12.00	Pass	-----	-----	2.51	4.18
		U_{14} - U_{15}	-571.52	36.99	-167.61	6.65	-37.25	0.90	1.20	39.88	-180.71	6.65	-37.25	Vehicle	Vehicle	-----	-1134.53	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.20	Pass	25.60	49.97	Pass	6.40	12.00	Pass	-----	-----	2.51	4.18
		U_{15} - U_{16}	-582.34	28.87	-158.21	4.98	-36.14	0.90	1.20	31.13	-170.58	4.98	-36.14	Vehicle	Vehicle	-----	-1126.64	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.35	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.62	4.37
		U_{16} - U_{17}	-539.92	21.56	-138.89	3.53	-31.87	0.90	1.20	23.25	-149.75	3.53	-31.87	Vehicle	Vehicle	-----	-1026.36	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.37	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.16	5.26
		U_{17} - U_{18}	-422.72	13.95	-104.06	2.26	-25.07	0.90	1.20	15.05	-112.20	2.26	-25.07	Vehicle	Vehicle	-----	-792.63	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	43.22	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	2.93	4.89
		U_{18} - U_{19}	-286.53	7.87	-65.78	1.28	-16.97	0.90	1.20	8.49	-70.92	1.28	-16.97	Vehicle	Vehicle	-----	-526.15	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	44.23	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	3.31	5.51
		U_{19} - U_{20}	-140.97	3.34	-29.04	0.55	-8.68	0.90	1.20	3.60	-31.32	0.55	-8.68	Vehicle	Vehicle	-----	-251.11	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	10.28	17.13
	Structure 2	U_0 - U_1	-147.48	6.81	-42.90	0.45	-4.88	0.90	1.18	7.25	-45.68	0.45	-4.88	Vehicle	Vehicle	-----	-290.70	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.57	10.94
		U_1 - U_2	-319.09	14.40	-85.63	1.96	-13.36	0.90	1.18	15.33	-91.17	1.96	-13.36	Vehicle	Vehicle	-----	-612.36	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.27	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.11	5.18
		U_2 - U_3	-460.93	25.83	-125.27	3.77	-20.95	0.90	1.18	27.50	-133.37	3.77	-20.95	Vehicle	Vehicle	-----	-888.18	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	42.87	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.77	4.62
		U_3 - U_4	-580.02	39.31	-160.08	5.92	-27.68	0.90	1.18	41.85	-170.44	5.92	-27.68	Vehicle	Vehicle	-----	-1123.31	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	42.55	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.68	4.47
		U_4 - U_5	-616.47	51.02	-173.30	7.86	-31.35	0.90	1.18	54.32	-184.51	7.86	-31.35	Vehicle	Vehicle	-----	-1201.20	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.34	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.83	4.72
		U_5 - U_6	-604.69	62.82	-177.93	9.87	-32.88	0.90	1.18	66.89	-189.44	9.87	-32.88	Vehicle	Vehicle	-----	-1196.55	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.42	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.79	4.66
		U_6 - U_7	-514.75	71.78	-159.84	11.56	-31.23	0.90	1.18	76.42	-170.18	11.56	-31.23	Vehicle	Vehicle	-----	-1037.91	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.27	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.91	4.86
		U_7 - U_8	-512.80	71.84	-159.52	11.57	-31.18	0.90	1.18	76.49	-169.85	11.57	-31.18	Vehicle	Vehicle	-----	-1034.63	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.34	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.93	4.88
		U_8 - U_9	-373.48	79.88	-138.23	13.16	-27.41	0.90	1.18	85.05	-147.18	13.16	-27.41	Vehicle	Vehicle	-----	-804.41	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.07	5.11
		U_9 - U_{10}	-181.02	83.80	-105.04	14.25	-21.42	0.90	1.18	89.22	-111.84	14.25	-21.42	Vehicle	Vehicle	-----	-477.63	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.78	6.31
		U_{10} - U_{11}	26.21	86.83	-70.50	15.21	-14.40	0.90	1.18	92.45	-75.06	15.21	-14.40	Vehicle	Vehicle	234.38	-128.57	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	5.74	9.57	6.36	10.60
		U_{11} - U_{12}	237.41	85.05	-37.09	15.56	-6.85	0.90	1.18	90.55	-39.49	15.56	-6.85	Vehicle	Vehicle	504.82	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	4.46	7.44	-----	-----
		U_{12} - U_{13}	435.92	83.44	-22.08	18.38	0.00	0.90	1.18	88.84	-23.51	18.38	0.00	Vehicle	Vehicle	759.17	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.75	7.92	-----	-----
		U_{13} - U_{14}	595.85	79.53	-20.63	24.32	0.00	0.90	1.18	84.67	-21.96	24.32	0.00	Vehicle	Vehicle	958.06	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	6.86	11.44	-----	-----
		U_{14} - U_{15}	615.52	71.62	-17.88	24.37	0.00	0.90	1.17	75.35	-18.81	24.37	0.00	Vehicle	Vehicle	963.43	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	7.56	12.59	-----	-----
		U_{15} - U_{16}	486.12	74.73	-23.59	18.61	0.00	0.90	1.17	78.62	-24.82	18.61	0.00	Vehicle	Vehicle	802.31	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	6.00	10.00	-----	-----
		U_{16} - U_{17}	339.23	74.32	-48.95	14.66	-2.95	0.90	1.17	78.19	-51.50	14.66	-2.95	Vehicle	Vehicle	610.40	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	5.41	9.01	-----	-----
		U_{17} - U_{18}	192.06	72.68	-76.83	15.12	-9.49	0.90	1.17	76.47	-80.83	15.12	-9.49	Vehicle	Vehicle	415.35	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.51	7.51	-----	-----
		U_{18} - U_{19}	53.73	66.59	-100.96	15.12	-15.34	0.90	1.17	70.06	-106.22	15.12	-15.34	Vehicle	Vehicle	221.64	-160.30	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.10	10.17	3.96	6.60
		U_{19} - U_{20}	-59.08	59.06	-124.43	15.07	-19.84	0.90	1.17	62.13	-130.91	15.07	-19.84	Vehicle	Vehicle	57.82	-360.46	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.49	14.15	2.90	4.84
	Structure 3	U_{20} - U_{21}	-125.50	49.25	-134.05	14.76	-22.39	0.90	1.17	51.82	-141.03	14.76	-22.39	Vehicle	Vehicle	-----	-468.72	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.03	5.04
		U_{21} - U_{22}	-146.93	40.84	-133.93	14.37	-22.74	0.90	1.17	42.96	-140.91	14.37	-22.74	Pedestrian	Vehicle	-----	-496.32	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.94	4.90
		U_{22} - U_{23}	-146.70	40.96	-133.77	14.36	-22.72	0.90	1.17	43.09	-140.74	14.36	-22.72	Vehicle	Vehicle	-----	-495.64	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.94	4.90
		U_{23} - U_{24}	-112.76	49.85	-124.12	13.87	-21.04	0.90	1.17	52.45	-130.59	13.87	-21.04	Vehicle	Vehicle	-----	-429.53	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.33	5.54
		U_{24} - U_{25}	-36.27	57.49	-107.28	13.40	-17.33	0.90	1.17	60.48	-112.87	13.40	-17.33	Vehicle	Vehicle	83.89	-291.72	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.50	14.16	3.49	5.82
		U_{25} - U_{26}	80.70	62.56	-78.94	12.92	-12.15	0.90	1.17	65.82	-83.05	12.92	-12.15	Vehicle	Vehicle	247.51	-75.04	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.25	10.42	5.26	8.77
		U_{26} - U_{27}	220.59	66.54	-53.12	12.57	-7.08	0.90	1.17	70.01	-55.89	12.57	-7.08	Vehicle	Vehicle	438.46	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.68	7.79	-----	-----
		U_{27} - U_{28}	363.31	67.20	-28.60	14.90	-2.16	0.90	1.17	70.70	-30.08	14.90	-2.16	Vehicle	Vehicle	625.48	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	5.78	9.63	-----	-----
		U_{28} - U_{29}	503.82	67.27	-15.56	21.74	0.00	0.90	1.17	70.78	-16.37	21.74	0.00	Vehicle	Vehicle	808.32	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	6.52	10.86	-----	-----
		U_{29} - U_{30}	616.57	66.34	-18.29	27.08	0.00	0.90	1.17	69.80	-19.25	27.08	0.00	Pedestrian	Vehicle	958.96	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck

Condition: As-Built

Fy = 33.0 ksi

Fu = 60.0 ksi

E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17

Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension

(-) Negative Stresses / Forces Indicate Compression

& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009

Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel

** Area deducted for rivet holes (see separate calculation

*** K = 0.75 per MCEB 6.6.2.1

**** Per AASHTO Std. Specs. For Highway Bridges, Articl

(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L$_0$- L$_1$	-2.01	11.58	-8.93	0.36	-2.06	0.90	1.24	12.89	-9.95	0.36	-2.06	Vehicle	Vehicle	25.32	-24.16	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**23.49**	**39.15**	**25.44**	**42.39**
		L$_1$ - L$_2$	67.91	57.45	-17.55	9.23	-3.36	0.90	1.24	63.95	-19.53	9.23	-3.36	Vehicle	Vehicle	226.85	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.08**	**6.80**	-----	-----
		L$_2$ - L$_3$	78.84	99.96	-38.01	15.48	-7.39	0.90	1.24	111.28	-42.31	15.48	-7.39	Vehicle	Vehicle	343.60	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**3.18**	**5.30**	-----	-----
		L$_3$ - L$_4$	39.14	104.88	-53.11	18.09	-10.83	0.90	1.24	116.76	-59.13	18.09	-10.83	Vehicle	Vehicle	303.86	-77.22	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**3.23**	**5.39**	**6.11**	**10.18**
		L$_4$ - L$_5$	-166.38	66.20	-76.63	10.96	-16.90	0.90	1.24	73.70	-85.31	10.96	-16.90	Vehicle	Vehicle	-----	-401.13	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	43.54	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.35**	**3.91**
		L$_5$ - L$_6$	-301.23	31.00	-82.76	3.23	-18.93	0.90	1.24	34.51	-92.14	3.23	-18.93	Vehicle	Vehicle	-----	-591.22	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	41.21	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.33**	**3.89**
		L$_6$ - L$_7$	-438.94	5.74	-89.37	0.00	-26.51	0.90	1.24	6.39	-99.49	0.00	-26.51	Vehicle	Vehicle	-----	-786.18	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	42.78	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.05**	**5.09**
		L$_7$ - L$_8$	-551.65	4.38	-89.73	0.00	-35.55	0.90	1.24	4.87	-99.90	0.00	-35.55	Vehicle	Pedestrian	-----	-937.24	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	44.17	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.83**	**4.78**
		L$_8$ - L$_9$	-570.53	11.01	-99.17	0.00	-37.48	0.90	1.20	11.88	-106.92	0.00	-37.48	Vehicle	Pedestrian	-----	-976.34	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	43.28	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.48**	**4.36**
		L$_9$ - L$_{10}$	-355.48	12.33	-58.14	0.00	-24.70	0.90	1.20	13.29	-62.68	0.00	-24.70	Vehicle	Pedestrian	-----	-604.11	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.40**	**6.75**
		L$_{10}$ - L$_{11}$	-118.48	41.90	-48.24	0.00	-12.43	0.90	1.20	45.17	-52.01	0.00	-12.43	Vehicle	Vehicle	-----	-266.72	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.41**	**7.34**
		L$_{11}$ - L$_{12}$	103.45	77.42	-44.79	9.96	-9.47	0.90	1.20	83.48	-48.29	9.96	-9.47	Vehicle	Vehicle	315.35	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.53**	**5.88**	-----	-----
		L$_{12}$ - L$_{13}$	300.60	121.90	-41.55	17.83	-8.14	0.90	1.20	131.44	-44.80	17.83	-8.14	Vehicle	Vehicle	675.56	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.08**	**5.13**	-----	-----
		L$_{13}$ - L$_{14}$	441.19	144.12	-35.38	24.15	-6.61	0.90	1.20	155.39	-38.15	24.15	-6.61	Vehicle	Vehicle	910.23	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.35**	**5.58**	-----	-----
		L$_{14}$ - L$_{15}$	547.00	150.79	-22.67	24.57	-3.49	0.90	1.20	162.58	-24.44	24.57	-3.49	Vehicle	Vehicle	1063.35	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.74	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.79**	**6.32**	-----	-----
		L$_{15}$ - L$_{16}$	506.09	130.16	-21.28	20.32	-2.03	0.90	1.20	140.34	-22.94	20.32	-2.03	Vehicle	Vehicle	961.99	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**4.57**	**7.61**	-----	-----
		L$_{16}$ - L$_{17}$	398.75	97.02	-19.05	12.72	-0.83	0.90	1.20	104.61	-20.54	12.72	-0.83	Vehicle	Vehicle	745.03	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.69**	**7.82**	-----	-----
		L$_{17}$ - L$_{18}$	263.81	61.30	-15.57	4.81	0.00	0.90	1.20	66.09	-16.79	4.81	0.00	Vehicle	Vehicle	486.15	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**5.62**	**9.37**	-----	-----
		L$_{18}$ - L$_{19}$	118.75	49.03	-12.18	0.71	-3.38	0.90	1.20	52.86	-13.14	0.71	-3.38	Vehicle	Vehicle	268.91	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.36**	**7.26**	-----	-----
		L$_{19}$ - L$_{20}$	-23.36	42.08	-11.05	1.28	-12.08	0.90	1.20	45.37	-11.91	1.28	-12.08	Vehicle	Pedestrian	67.93	-69.35	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**6.96**	**11.59**	**13.34**	**16.68**
		L$_0$- L$_1$	-36.12	25.86	-17.55	1.33	-5.14	0.90	1.18	27.54	-18.69	1.33	-5.14	Vehicle	Vehicle	-----	-87.45	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	**16.02**	**26.69**
		L$_1$ - L$_2$	132.64	40.45	-6.80	2.93	-0.06	0.90	1.18	43.07	-7.24	2.93	-0.06	Vehicle	Vehicle	265.75	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.98**	**11.63**	-----	-----
		L$_2$ - L$_3$	303.94	87.28	-14.52	10.52	-1.79	0.90	1.18	92.92	-15.46	10.52	-1.79	Vehicle	Vehicle	596.45	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**4.34**	**7.23**	-----	-----
		L$_3$ - L$_4$	445.73	122.23	-26.08	18.15	-3.63	0.90	1.18	130.14	-27.76	18.15	-3.63	Vehicle	Vehicle	861.41	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.98**	**6.64**	-----	-----
		L$_4$ - L$_5$	567.64	160.90	-41.81	24.81	-6.10	0.90	1.18	171.31	-44.52	24.81	-6.10	Vehicle	Vehicle	1109.11	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.79**	**6.32**	-----	-----
		L$_5$ - L$_6$	603.43	173.72	-53.59	28.47	-8.06	0.90	1.18	184.96	-57.06	28.47	-8.06	Vehicle	Vehicle	1185.21	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.86**	**6.43**	-----	-----
		L$_6$ - L$_7$	599.28	183.00	-67.88	30.25	-10.41	0.90	1.18	194.84	-72.27	30.25	-10.41	Vehicle	Vehicle	1201.22	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.75**	**6.25**	-----	-----
		L$_7$ - L$_8$	373.73	143.76	-84.65	24.92	-13.66	0.90	1.18	153.06	-90.13	24.92	-13.66	Vehicle	Vehicle	817.47	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.79**	**6.32**	-----	-----
		L$_8$ - L$_9$	195.51	115.75	-91.14	19.51	-15.12	0.90	1.18	123.23	-97.04	19.51	-15.12	Vehicle	Vehicle	521.17	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**4.40**	**7.34**	-----	-----
		L$_9$ - L$_{10}$	-13.41	79.36	-94.35	12.45	-16.11	0.90	1.18	84.50	-100.45	12.45	-16.11	Vehicle	Vehicle	165.64	-235.09	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**6.21**	**10.36**	**4.27**	**7.11**
		L$_{10}$ - L$_{11}$	-217.51	45.62	-95.82	5.50	-17.02	0.90	1.18	48.57	-102.02	5.50	-17.02	Vehicle	Vehicle	-----	-503.81	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	44.24	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**2.55**	**4.24**
		L$_{11}$ - L$_{12}$	-420.12	25.95	-94.39	0.00	-23.35	0.90	1.18	27.63	-100.49	0.00	-23.35	Vehicle	Vehicle	-----	-763.89	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	43.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.05**	**5.08**
		L$_{12}$ - L$_{13}$	-591.61	26.05	-96.39	0.00	-30.09	0.90	1.18	27.74	-102.62	0.00	-30.09	Vehicle	Vehicle	-----	-991.44	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	44.19	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.00**	**6.66**
		L$_{13}$ - L$_{14}$	-724.42	24.41	-92.34	0.00	-35.12	0.90	1.18	25.99	-98.32	0.00	-35.12	Vehicle	Pedestrian	-----	-1158.58	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	44.57	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.74**	**5.93**
		L$_{14}$ - L$_{15}$	-747.19	28.10	-106.17	0.00	-36.29	0.90	1.17	29.56	-111.70	0.00	-36.29	Vehicle	Vehicle	-----	-1213.37	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	43.56	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.13**	**6.88**
		L$_{15}$ - L$_{16}$	-632.29	25.83	-87.36	0.00	-31.22	0.90	1.17	27.17	-91.91	0.00	-31.22	Vehicle	Pedestrian	-----	-1022.06	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	43.53	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.18**	**5.22**
		L$_{16}$ - L$_{17}$	-488.73	22.13	-62.65	0.00	-25.40	0.90	1.17	23.29	-65.91	0.00	-25.40	Vehicle	Pedestrian	-----	-783.72	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**4.90**	**6.12**
		L$_{17}$ - L$_{18}$	-337.06	41.68	-62.12	0.00	-18.13	0.90	1.17	43.86	-65.35	0.00	-18.13	Vehicle	Vehicle	-----	-579.77	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.62	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.58**	**5.97**
		L$_{18}$ - L$_{19}$	-183.64	71.15	-61.15	4.48	-11.34	0.90	1.17	74.86	-64.33	4.48	-11.34	Vehicle	Vehicle	-----	-378.11	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.64**	**6.06**
		L$_{19}$ - L$_{20}$	-45.76	88.50	-55.00	8.92	-9.58	0.90	1.17	93.11	-57.86	8.92	-9.58	Vehicle	Vehicle	142.25	-184.85	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.67**	**7.78**	**5.47**	**9.12**
	Structure 2	L$_{20}$ - L$_{21}$	68.06	115.61	-48.87	11.57	-9.12	0.90	1.17	121.63	-51.42	11.57	-9.12	Vehicle	Vehicle	352.02	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.42**	**7.37**	-----	-----
		L$_{21}$ - L$_{22}$	134.01	123.62	-39.07	13.61	-8.81	0.90	1.17	130.06	-41.11	13.61	-8.81	Vehicle	Vehicle	456.00	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.83**	**6.39**	-----	-----
		L$_{22}$ - L$_{23}$	122.68	118.20	-43.14	11.79	-7.57	0.90	1.17	124.36	-45.39	11.79	-7.57	Vehicle	Vehicle	428.94	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.06**	**6.77**	-----	-----
		L$_{23}$ - L$_{24}$	46.89	99.80	-48.20	8.09	-7.09	0.90	1.17	105.00	-50.71	8.09	-7.09	Vehicle	Vehicle	288.46	-48.92	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**5.24**	**8.74**	**10.19**	**16.98**
		L$_{24}$ - L$_{25}$	-66.54	75.54	-53.67	3.32	-6.23	0.90	1.17	79.48	-56.47	3.32	-6.23	Vehicle	Vehicle	85.70	-208.85	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**5.63**	**9.38**	**5.39**	**8.98**
		L$_{25}$ - L$_{26}$	-205.63	55.22	-57.42	0.00	-11.77	0.90	1.17	58.10	-60.41	0.00	-11.77	Vehicle	Vehicle	-----	-398.21	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.65**	**6.09**
		L$_{26}$ - L$_{27}$	-350.43	51.58	-58.51	0.00	-18.87	0.90	1.17	54.27	-61.56	0.00	-18.87	Vehicle	Vehicle	-----	-588.93	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.28	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.68**	**6.13**
		L$_{27}$ - L$_{28}$	-494.65	43.21	-58.30	0.00	-25.89	0.90	1.17	45.46	-61.33	0.00	-25.89	Vehicle	Pedestrian	-----	-784.77	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.07**	**6.34**
		L$_{28}$ - L$_{29}$	-620.83	37.13	-65.27	0.00	-31.78	0.90	1.17	39.06	-68.67	0.00	-31.78	Vehicle	Pedestrian	-----	-970.32	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	44.67	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.21**	**6.52**
		L$_{29}$ - L$_{30}$	-716.91	29.18	-78.34	0.00	-36.29	0.90	1.17	30.70	-82.42	0.00	-36.29	Vehicle	Pedestrian	-----	-1124.89	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	(No Impact) Pedestrian Load MAX	(No Impact) Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.72	17.35	-76.68	3.44	-12.32	0.90	1.24	19.32	-85.37	3.44	-12.32	Vehicle	Vehicle	-----	-306.81	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	42.24	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.76	2.94
		U_1 - L_1	-46.53	14.94	-49.91	2.93	-9.05	0.90	1.24	16.63	-55.56	2.93	-9.05	Vehicle	Vehicle	-----	-180.87	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.30	5.50
		U_2 - L_2	-0.10	13.51	-34.56	2.84	-5.68	0.90	1.24	15.04	-38.47	2.84	-5.68	Vehicle	Vehicle	32.45	-83.48	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	17.07	28.45	5.49	9.15
		U_3 - L_3	39.60	11.90	-20.17	2.69	-2.12	0.90	1.24	13.25	-22.46	2.69	-2.12	Vehicle	Vehicle	80.18	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	17.58	29.30	-----	-----
		U_4 - L_4	-30.20	2.00	-23.61	0.00	-3.46	0.90	1.24	2.22	-26.28	0.00	-3.46	Vehicle	Vehicle	-----	-96.21	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	7.30	12.16
		U_5 - L_5	-130.49	3.03	-45.45	0.00	-10.23	0.90	1.24	3.38	-50.60	0.00	-10.23	Vehicle	Vehicle	-----	-279.27	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	3.49	5.82
		U_6 - L_6	-158.18	8.62	-47.21	0.00	-13.06	0.90	1.24	9.59	-52.56	0.00	-13.06	Vehicle	Vehicle	-----	-319.51	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	3.99	6.66
		U_7 - L_7	-152.32	14.52	-44.95	0.00	-13.24	0.90	1.24	16.16	-50.05	0.00	-13.24	Vehicle	Vehicle	-----	-306.45	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	3.69	6.15
		U_8 - L_8	-455.55	18.11	-77.52	0.00	-31.72	0.90	1.24	20.16	-86.30	0.00	-31.72	Vehicle	Pedestrian	-----	-784.00	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	4.13	5.17
		U_9 - L_9	-287.55	3.99	-76.04	0.00	-18.20	0.90	1.20	4.30	-81.98	0.00	-18.20	Vehicle	Vehicle	-----	-551.44	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.12	Pass	9.60	12.00	Pass	-----	-----	2.62	4.36
		U_{10} - L_{10}	-276.32	1.93	-74.02	0.00	-17.54	0.90	1.20	2.08	-79.81	0.00	-17.54	Vehicle	Vehicle	-----	-532.13	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	3.51	5.84
		U_{11} - L_{11}	-232.59	1.96	-67.69	0.00	-14.41	0.90	1.20	2.11	-72.98	0.00	-14.41	Vehicle	Vehicle	-----	-460.49	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.36	5.60
		U_{12} - L_{12}	-178.43	1.19	-55.07	0.00	-11.20	0.90	1.20	1.28	-59.37	0.00	-11.20	Vehicle	Vehicle	-----	-360.59	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	3.58	5.96
		U_{13} - L_{13}	-127.74	4.19	-42.62	0.00	-7.88	0.90	1.20	4.52	-45.95	0.00	-7.88	Vehicle	Vehicle	-----	-265.62	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.30	5.50
		U_{14} - L_{14}	-30.39	0.28	-29.81	0.00	-3.03	0.90	1.20	0.30	-32.14	0.00	-3.03	Vehicle	Vehicle	-----	-109.14	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	5.87	9.78
		U_{15} - L_{15}	-28.94	11.84	-32.76	1.55	-4.54	0.90	1.20	12.77	-35.32	1.55	-4.54	Vehicle	Vehicle	-----	-114.15	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	5.34	8.90
		U_{16} - L_{16}	-76.03	8.19	-37.20	1.39	-7.08	0.90	1.20	8.83	-40.11	1.39	-7.08	Vehicle	Vehicle	-----	-185.75	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.97	6.61
		U_{17} - L_{17}	-161.89	8.01	-51.38	1.30	-10.66	0.90	1.20	8.63	-55.40	1.30	-10.66	Vehicle	Vehicle	-----	-330.49	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	2.70	4.50
		U_{18} - L_{18}	-190.28	6.87	-52.03	1.12	-12.71	0.90	1.20	7.40	-56.09	1.12	-12.71	Vehicle	Vehicle	-----	-368.91	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	3.58	5.97
		U_{19} - L_{19}	-228.17	5.88	-51.12	0.97	-14.98	0.90	1.20	6.34	-55.12	0.97	-14.98	Vehicle	Vehicle	-----	-416.04	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	4.23	7.04
		U_{20} - L_{20}	-242.83	5.33	-50.04	0.95	-15.63	0.90	1.20	5.75	-53.96	0.95	-15.63	Vehicle	Vehicle	-----	-432.58	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.77	6.29
	Structure 2	U_0 - L_0	-303.03	13.31	-81.02	2.22	-15.08	0.90	1.18	14.17	-86.26	2.22	-15.08	Vehicle	Vehicle	-----	-580.84	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	43.14	Pass	5.62	12.00	Pass	-----	-----	2.36	3.94
		U_1 - L_1	-268.78	13.54	-75.09	2.12	-13.67	0.90	1.18	14.41	-79.95	2.12	-13.67	Vehicle	Vehicle	-----	-522.64	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.03	5.05
		U_2 - L_2	-220.87	14.58	-69.81	2.34	-12.32	0.90	1.18	15.52	-74.33	2.34	-12.32	Vehicle	Vehicle	-----	-448.18	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.85	4.76
		U_3 - L_3	-175.23	15.62	-64.49	2.49	-10.35	0.90	1.18	16.63	-68.67	2.49	-10.35	Vehicle	Vehicle	-----	-376.57	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	44.29	Pass	4.91	12.00	Pass	-----	-----	2.42	4.03
		U_4 - L_4	-82.08	13.52	-44.57	2.21	-6.62	0.90	1.18	14.40	-47.45	2.21	-6.62	Vehicle	Vehicle	-----	-209.50	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.25	5.42
		U_5 - L_5	-19.89	13.36	-35.17	2.23	-4.16	0.90	1.18	14.22	-37.44	2.23	-4.16	Vehicle	Vehicle	-----	-106.98	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	5.14	8.56
		U_6 - L_6	60.32	25.45	-20.15	1.75	-0.47	0.90	1.18	27.10	-21.45	1.75	-0.47	Vehicle	Vehicle	137.13	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	8.13	13.56	-----	-----
		U_7 - L_7	-41.77	1.24	-25.23	0.00	-2.50	0.90	1.18	1.32	-26.86	0.00	-2.50	Vehicle	Vehicle	-----	-112.50	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	6.67	11.12
		U_8 - L_8	-189.01	6.02	-46.84	0.00	-8.38	0.90	1.18	6.41	-49.87	0.00	-8.38	Vehicle	Vehicle	-----	-353.77	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	4.11	6.85
		U_9 - L_9	-253.99	2.40	-58.59	0.00	-10.55	0.90	1.18	2.55	-62.38	0.00	-10.55	Vehicle	Vehicle	-----	-465.35	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	4.21	7.01
		U_{10} - L_{10}	-290.02	4.61	-60.68	0.00	-12.18	0.90	1.18	4.91	-64.61	0.00	-12.18	Vehicle	Vehicle	-----	-517.01	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	4.54	7.56
		U_{11} - L_{11}	-312.18	9.99	-65.01	0.00	-12.59	0.90	1.18	10.64	-69.21	0.00	-12.59	Vehicle	Vehicle	-----	-555.79	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.92	6.54
		U_{12} - L_{12}	-327.28	14.48	-59.65	0.00	-13.75	0.90	1.18	15.42	-63.51	0.00	-13.75	Vehicle	Vehicle	-----	-563.06	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	4.48	7.47
		U_{13} - L_{13}	-277.21	19.67	-50.44	0.45	-12.38	0.90	1.18	20.94	-53.70	0.45	-12.38	Vehicle	Vehicle	-----	-476.73	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	4.61	7.69
		U_{14} - L_{14}	-505.44	24.83	-64.84	0.00	-21.41	0.90	1.18	26.43	-69.04	0.00	-21.41	Vehicle	Vehicle	-----	-806.66	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	4.75	7.91
		U_{15} - L_{15}	-232.94	6.91	-72.41	1.67	-12.16	0.90	1.17	7.27	-76.18	1.67	-12.16	Vehicle	Vehicle	-----	-467.87	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.60	6.00
		U_{16} - L_{16}	-260.12	7.97	-73.05	0.83	-13.04	0.90	1.17	8.38	-76.86	0.83	-13.04	Vehicle	Vehicle	-----	-504.68	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.17	5.28
		U_{17} - L_{17}	-228.24	8.99	-70.80	0.66	-11.76	0.90	1.17	9.45	-74.49	0.66	-11.76	Vehicle	Vehicle	-----	-458.10	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.18	5.30
		U_{18} - L_{18}	-209.27	10.80	-65.43	0.00	-11.28	0.90	1.17	11.37	-68.84	0.00	-11.28	Vehicle	Vehicle	-----	-421.20	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.21	5.35
		U_{19} - L_{19}	-166.55	11.57	-56.83	0.00	-9.53	0.90	1.17	12.17	-59.79	0.00	-9.53	Vehicle	Vehicle	-----	-346.07	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	3.46	5.77
		U_{20} - L_{20}	-113.95	11.61	-45.19	0.00	-7.50	0.90	1.17	12.22	-47.55	0.00	-7.50	Vehicle	Vehicle	-----	-251.15	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.30	5.49
		U_{21} - L_{21}	-62.76	15.02	-36.52	0.00	-5.22	0.90	1.17	15.80	-38.42	0.00	-5.22	Vehicle	Vehicle	-----	-164.84	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.34	7.23
		U_{22} - L_{22}	-38.94	1.07	-27.92	0.00	-2.15	0.90	1.17	1.12	-29.37	0.00	-2.15	Vehicle	Vehicle	-----	-114.25	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	6.19	10.31
		U_{23} - L_{23}	-74.43	12.27	-37.62	0.48	-6.10	0.90	1.17	12.91	-39.58	0.48	-6.10	Vehicle	Vehicle	-----	-182.52	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.03	6.72
		U_{24} - L_{24}	-121.36	12.03	-44.61	0.37	-8.17	0.90	1.17	12.65	-46.93	0.37	-8.17	Vehicle	Vehicle	-----	-259.46	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.24	5.41
		U_{25} - L_{25}	-169.12	11.56	-54.07	0.43	-9.94	0.90	1.17	12.17	-56.89	0.43	-9.94	Vehicle	Vehicle	-----	-343.11	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	3.61	6.02
		U_{26} - L_{26}	-207.97	10.46	-56.32	0.14	-11.42	0.90	1.17	11.00	-59.26	0.14	-11.42	Vehicle	Vehicle	-----	-398.76	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.74	6.23
		U_{27} - L_{27}	-219.96	8.61	-58.90	0.16	-11.49	0.90	1.17	9.06	-61.97	0.16	-11.49	Vehicle	Vehicle	-----	-420.21	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.91	6.51
		U_{28} - L_{28}	-240.91	12.41	-55.03	0.00	-12.60	0.90	1.17	13.06	-57.90	0.00	-12.60	Vehicle	Vehicle	-----	-438.63	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	4.41	7.34
		U_{29} - L_{29}	-202.73	18.88	-47.35	0.00	-10.35	0.90	1.17	19.86	-49.81	0.00	-10.35	Vehicle	Vehicle	-----	-371.47	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	5.87	9.78
		U_{30} - L_{30}	-518.05	19.87	-67.88	0.00	-22.08	0.90	1.18	21.16	-72.27	0.00	-22.08	Vehicle	Vehicle	-----	-830.05	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	4.43	7.39
		U_{31} - L_{31}	-318.43	9.29	-71.16	0.87	-14.13	0.90	1.18	9.89	-75.76	0.87	-14.13	Vehicle	Vehicle	-----	-578.11	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	2.94	4.91
		U_{32} - L_{32}	-358.67	4.08	-77.37	0.00	-14.88	0.90	1.18	4.35	-82.38	0.00	-14.88	Vehicle	Vehicle	-----	-644.76	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	3.23	5.38
		U_{33} - L_{33}	-325.88	4.30	-76.25	0.00	-13.51	0.90	1.18	4.58	-81.18	0.00	-13.51	Vehicle	Vehicle	-----	-599.55	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.66	77.35	-23.43	14.00	-4.60	0.90	1.24	86.11	-26.08	14.00	-4.60	Vehicle	Vehicle	300.54	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**3.47**	**5.79**	-----	-----
		U_1 - L_2	23.90	58.29	-22.94	9.20	-4.71	0.90	1.24	64.90	-25.54	9.20	-4.71	Vehicle	Vehicle	171.68	-24.27	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.73**	**6.22**	**8.44**	**14.07**
		U_2 - L_3	-49.02	31.03	-19.19	3.33	-4.32	0.90	1.24	34.54	-21.37	3.33	-4.32	Vehicle	Vehicle	-----	-110.02	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.01**	**13.35**
		U_3 - L_4	-108.88	15.06	-35.60	0.00	-6.30	0.90	1.24	16.77	-39.63	0.00	-6.30	Vehicle	Vehicle	-----	-227.40	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**3.44**	**5.74**
		U_4 - L_4	153.12	54.68	-7.19	10.11	0.00	0.90	1.24	60.88	-8.01	10.11	0.00	Vehicle	Vehicle	330.95	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.66**	**6.10**	-----	-----
		U_5 - L_5	186.35	59.94	-4.10	13.44	0.00	0.90	1.24	66.73	-4.57	13.44	0.00	Vehicle	Vehicle	386.83	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.17**	**6.96**	-----	-----
		U_6 - L_6	177.52	57.27	-14.68	14.13	0.00	0.90	1.24	63.76	-16.34	14.13	0.00	Vehicle	Vehicle	368.92	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.45**	**7.42**	-----	-----
		U_7 - L_7	173.18	49.79	-16.12	13.87	0.00	0.90	1.24	55.43	-17.94	13.87	0.00	Vehicle	Vehicle	345.23	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.17**	**8.61**	-----	-----
		U_8 - L_8	328.11	83.23	-5.10	19.45	-0.13	0.90	1.20	89.74	-5.50	19.45	-0.13	Vehicle	Vehicle	620.98	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.24**	**7.07**	-----	-----
		U_9 - L_{10}	339.70	89.78	-3.58	19.74	0.00	0.90	1.20	96.80	-3.86	19.74	0.00	Vehicle	Vehicle	651.34	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.86**	**6.43**	-----	-----
		U_{10} - L_{11}	313.22	85.52	-2.59	18.15	0.00	0.90	1.20	92.20	-2.80	18.15	0.00	Vehicle	Vehicle	606.95	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**3.89**	**6.48**	-----	-----
		U_{11} - L_{12}	270.68	78.02	-2.61	14.84	0.00	0.90	1.20	84.12	-2.81	14.84	0.00	Vehicle	Vehicle	534.14	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.62**	**6.03**	-----	-----
		U_{12} - L_{13}	194.17	58.70	-5.84	10.79	0.00	0.90	1.20	63.28	-6.29	10.79	0.00	Vehicle	Vehicle	389.53	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**4.14**	**6.90**	-----	-----
		U_{13} - L_{14}	123.57	46.87	-14.33	5.96	0.00	0.90	1.20	50.53	-15.45	5.96	0.00	Vehicle	Vehicle	270.12	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.61**	**6.02**	-----	-----
		U_{15} - L_{14}	-16.32	34.15	-25.47	1.48	-2.35	0.90	1.20	36.82	-27.46	1.48	-2.35	Vehicle	Vehicle	58.56	-80.73	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.23**	**12.06**	**6.82**	**11.36**
		U_{16} - L_{15}	59.12	44.16	-15.73	6.08	-2.09	0.90	1.20	47.61	-16.96	6.08	-2.09	Vehicle	Vehicle	180.02	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.64**	**7.74**	-----	-----
		U_{17} - L_{16}	172.14	61.07	-11.17	9.93	-1.86	0.90	1.20	65.85	-12.04	9.93	-1.86	Vehicle	Vehicle	366.46	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.21**	**5.35**	-----	-----
		U_{18} - L_{17}	210.78	61.14	-9.46	12.51	-1.53	0.90	1.20	65.92	-10.20	12.51	-1.53	Vehicle	Vehicle	416.84	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.00**	**6.67**	-----	-----
		U_{19} - L_{18}	242.64	61.72	-7.56	13.73	-1.21	0.90	1.20	66.54	-8.15	13.73	-1.21	Vehicle	Vehicle	459.60	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.22**	**7.03**	-----	-----
		U_{20} - L_{19}	257.76	54.02	-6.21	15.70	-1.03	0.90	1.20	58.24	-6.69	15.70	-1.03	Vehicle	Vehicle	461.28	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.66**	**7.77**	-----	-----
		U_0 - L_1	298.99	77.88	-14.12	14.21	-2.21	0.90	1.18	82.92	-15.04	14.21	-2.21	Vehicle	Vehicle	568.34	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.46**	**5.77**	-----	-----
		U_1 - L_2	284.21	82.35	-16.81	14.05	-2.66	0.90	1.18	87.68	-17.90	14.05	-2.66	Vehicle	Vehicle	559.44	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.38**	**5.63**	-----	-----
		U_2 - L_3	221.42	74.14	-17.93	11.83	-2.85	0.90	1.18	78.93	-19.09	11.83	-2.85	Vehicle	Vehicle	458.87	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_3 - L_4	178.30	68.97	-20.24	10.08	-3.23	0.90	1.18	73.43	-21.55	10.08	-3.23	Vehicle	Vehicle	390.89	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**3.26**	**5.43**	-----	-----
		U_4 - L_5	53.50	45.46	-17.30	5.37	-2.87	0.90	1.18	48.40	-18.42	5.37	-2.87	Vehicle	Vehicle	174.41	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.64**	**7.73**	-----	-----
		U_5 - L_6	-16.51	37.60	-24.07	2.23	-2.92	0.90	1.18	40.03	-25.63	2.23	-2.92	Vehicle	Vehicle	65.26	-76.99	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.66**	**11.10**	**7.24**	**12.07**
		U_6 - L_7	-133.21	17.39	-45.51	0.00	-5.36	0.90	1.18	18.52	-48.46	0.00	-5.36	Vehicle	Vehicle	-----	-278.16	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.80**	**4.67**
		U_7 - L_7	208.77	55.69	-12.84	8.33	0.00	0.90	1.18	59.29	-13.67	8.33	0.00	Vehicle	Vehicle	399.87	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.99**	**6.65**	-----	-----
		U_8 - L_8	289.58	70.00	-3.03	10.70	0.00	0.90	1.18	74.53	-3.22	10.70	0.00	Vehicle	Vehicle	537.93	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.39**	**5.64**	-----	-----
		U_{10} - L_9	327.97	71.53	-2.83	12.66	0.00	0.90	1.18	76.15	-3.02	12.66	0.00	Vehicle	Vehicle	591.36	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.54**	**5.90**	-----	-----
		U_{11} - L_{10}	349.25	76.48	-10.56	12.70	0.00	0.90	1.18	81.43	-11.24	12.70	0.00	Vehicle	Vehicle	630.46	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.65**	**6.08**	-----	-----
		U_{12} - L_{11}	358.20	71.36	-11.24	13.52	0.00	0.90	1.18	75.97	-11.97	13.52	0.00	Vehicle	Vehicle	630.26	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.84**	**6.40**	-----	-----
		U_{13} - L_{12}	307.75	58.47	-21.34	12.26	-0.24	0.90	1.18	62.26	-22.72	12.26	-0.24	Vehicle	Vehicle	534.96	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.53**	**7.55**	-----	-----
		U_{14} - L_{13}	260.20	48.04	-18.21	11.72	-1.50	0.90	1.18	51.15	-19.39	11.72	-1.50	Vehicle	Vehicle	449.08	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.07**	**10.11**	-----	-----
		U_{14} - L_{15}	208.42	66.30	-9.11	11.04	-2.51	0.90	1.17	69.76	-9.58	11.04	-2.51	Vehicle	Vehicle	422.09	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.80**	**6.34**	-----	-----
		U_{15} - L_{16}	243.55	74.30	-6.24	11.54	-1.48	0.90	1.17	78.18	-6.56	11.54	-1.48	Vehicle	Vehicle	486.00	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{16} - L_{17}	255.86	75.20	-9.46	12.23	-0.85	0.90	1.17	79.11	-9.96	12.23	-0.85	Vehicle	Vehicle	504.04	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.45**	**5.74**	-----	-----
		U_{17} - L_{18}	235.29	77.14	-11.09	11.35	-0.75	0.90	1.17	81.16	-11.66	11.35	-0.75	Vehicle	Vehicle	481.72	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{18} - L_{19}	212.11	67.16	-13.54	11.09	0.00	0.90	1.17	70.65	-14.24	11.09	0.00	Vehicle	Vehicle	428.83	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.72**	**6.21**	-----	-----
	Structure 2	U_{19} - L_{20}	168.24	62.84	-14.99	9.14	0.00	0.90	1.17	66.11	-15.77	9.14	0.00	Vehicle	Vehicle	361.95	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.95**	**6.58**	-----	-----
		U_{20} - L_{21}	97.26	46.97	-18.41	6.66	0.00	0.90	1.17	49.42	-19.37	6.66	0.00	Vehicle	Vehicle	233.51	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.01**	**6.69**	-----	-----
		U_{21} - L_{22}	30.60	36.47	-27.72	3.66	-2.18	0.90	1.17	38.37	-29.16	3.66	-2.18	Vehicle	Vehicle	122.92	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.21**	**10.35**	-----	-----
		U_{23} - L_{22}	49.78	43.35	-22.74	5.11	-0.95	0.90	1.17	45.61	-23.92	5.11	-0.95	Vehicle	Vehicle	163.53	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.97**	**8.29**	-----	-----
		U_{24} - L_{23}	115.07	50.97	-16.31	8.00	-0.72	0.90	1.17	53.63	-17.16	8.00	-0.72	Vehicle	Vehicle	265.78	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.50**	**5.83**	-----	-----
		U_{25} - L_{24}	179.22	63.58	-15.86	10.10	-0.73	0.90	1.17	66.90	-16.68	10.10	-0.73	Vehicle	Vehicle	377.93	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.80**	**6.34**	-----	-----
		U_{26} - L_{25}	220.97	65.81	-13.91	11.89	-0.57	0.90	1.17	69.23	-14.63	11.89	-0.57	Vehicle	Vehicle	437.27	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.72**	**6.21**	-----	-----
		U_{27} - L_{26}	234.87	67.56	-11.06	11.45	-0.35	0.90	1.17	71.08	-11.63	11.45	-0.35	Vehicle	Vehicle	459.34	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.51**	**5.85**	-----	-----
		U_{28} - L_{27}	253.15	64.45	-9.97	12.25	-0.28	0.90	1.17	67.81	-10.48	12.25	-0.28	Vehicle	Vehicle	476.01	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.04**	**6.74**	-----	-----
		U_{29} - L_{28}	215.91	52.72	-21.25	10.20	0.00	0.90	1.17	55.46	-22.36	10.20	0.00	Vehicle	Vehicle	400.85	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.70**	**7.84**	-----	-----
		U_{30} - L_{29}	180.73	44.87	-18.04	8.90	-0.90	0.90	1.17	47.21	-18.98	8.90	-0.90	Vehicle	Vehicle	337.23	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.97**	**9.95**	-----	-----
		U_{30} - L_{31}	294.99	65.98	-10.80	12.90	-1.64	0.90	1.18	70.25	-11.50	12.90	-1.64	Vehicle	Vehicle	535.70	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.12**	**6.87**	-----	-----
		U_{31} - L_{32}	342.70	77.02	-9.52	13.70	-0.55	0.90	1.18	82.01	-10.14	13.70	-0.55	Vehicle	Vehicle	623.20	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.18**	**5.30**	-----	-----
		U_{32} - L_{33}	363.39	80.73	-4.95	14.16	0.00	0.90	1.18	85.96	-5.27	14.16	0.00	Vehicle	Vehicle	658.65	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **HS20 Truck**
Condition: **As-Built**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location		Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
North Truss - Upper Chord	Structure 1	U_0-U_1	-129.89	-23.02	-0.29	1.77	4.00	-13.43	0.00	0.00	0.00	0.00
		U_1-U_2	-54.81	-51.14	0.28	3.03	-2.67	-19.50	0.00	0.00	0.00	0.00
		U_2-U_3	39.69	59.09	44.50	1.24	-7.86	-13.17	0.00	0.00	0.00	0.00
		U_3-U_4	-52.27	61.68	2.76	4.43	-10.29	-14.29	0.00	0.00	0.00	0.00
		U_4-U_5	-27.43	50.17	3.09	4.43	-11.27	-16.90	0.00	0.00	0.00	0.00
		U_5-U_6	4.19	145.97	3.60	0.44	-11.31	0.08	0.00	0.00	0.00	0.00
		U_6-U_7	94.94	53.37	3.86	2.45	-11.13	-1.56	0.00	0.00	0.00	0.00
		U_7-U_8	-70.13	598.66	2.18	5.86	-19.70	22.37	0.00	0.00	0.00	0.00
		U_8-U_9	528.73	-128.77	8.76	10.63	8.16	-10.79	113.34	11.99	111.59	105.54
		U_9-U_{10}	69.10	44.97	2.76	3.60	-3.06	-7.23	35.07	46.54	-21.54	83.53
		U_{10}-U_{11}	101.46	-177.08	3.86	3.08	1.70	-15.41	49.98	39.82	22.02	-199.42
		U_{11}-U_{12}	48.14	-160.19	4.41	2.53	-1.32	-13.67	57.02	-13.95	85.53	-183.74
		U_{12}-U_{13}	-56.63	-218.18	3.43	1.17	-3.37	-17.44	44.40	15.11	17.76	-225.61
		U_{13}-U_{14}	-113.99	-343.23	2.36	1.17	-5.68	-4.69	-27.91	-2.89	-40.62	-301.31
		U_{14}-U_{15}	-287.88	-237.50	2.96	1.71	-26.41	-16.54	38.26	22.09	-341.64	-213.94
		U_{15}-U_{16}	-196.26	-337.79	2.90	0.17	-17.34	-7.88	37.48	2.17	-224.31	-101.99
		U_{16}-U_{17}	-295.52	-164.09	1.79	0.00	-25.79	4.59	-354.06	-207.04	-153.73	39.09
		U_{17}-U_{18}	-190.08	-29.82	0.96	-0.89	-14.88	3.06	12.36	-11.40	-192.47	39.60
		U_{18}-U_{19}	-179.81	-40.24	0.80	-0.45	-13.89	-0.26	11.04	-2.92	-179.74	-3.42
		U_{19}-U_{20}	-290.19	260.74	0.63	-0.38	-17.44	12.32	8.10	-4.92	-325.08	169.46
		U_{20}-U_{21}	-27.02	-172.57	-0.61	1.44	7.49	-13.83	-7.81	18.42	95.66	-176.67
		U_{21}-U_{22}	-25.34	-194.81	-0.28	1.16	7.49	-19.37	-8.26	19.37	95.66	-247.41
		U_{22}-U_{23}	-8.42	-292.61	-0.86	1.96	0.11	-23.27	-8.42	25.98	1.41	-292.31
		U_{23}-U_{24}	33.19	-324.61	-1.03	2.32	0.11	-25.82	19.14	32.47	-13.40	-294.59
		U_{24}-U_{25}	-360.73	-390.17	0.18	3.27	-18.46	-28.23	2.33	41.79	-235.79	-360.64
		U_{25}-U_{26}	-403.61	-390.17	0.18	3.27	-18.46	-28.23	-4.31	41.79	-400.09	-234.06
		U_{26}-U_{27}	-349.76	-208.78	4.55	6.49	-23.79	-33.25	58.13	57.38	-300.95	-424.87
		U_{27}-U_{28}	-253.89	-280.84	3.53	4.88	-33.50	-10.89	45.13	62.40	-427.56	-135.11
		U_{28}-U_{29}	-330.50	-61.31	3.08	4.08	-33.50	-10.89	45.13	62.40	-427.56	-135.11
		U_{29}-U_{30}	-237.13	39.43	5.08	6.43	-20.57	-5.77	64.94	82.10	-262.82	-73.72
		U_{30}-U_{31}	-152.28	56.94	5.00	6.43	-20.13	-3.46	80.18	82.10	-249.15	-44.14
		U_{31}-U_{32}	-116.81	170.72	5.43	4.37	-20.27	1.38	69.35	55.87	-259.03	17.68
		U_{32}-U_{33}	-52.38	194.81	5.28	4.37	-20.27	1.38	69.35	55.87	-259.03	17.68
		U_{33}-U_{34}	-211.15	1121.81	3.90	6.40	-0.59	-0.64	49.87	81.73	-7.56	-8.16
		U_{34}-U_{35}	1029.87	-26.76	15.19	1.76	-1.21	0.58	191.74	22.23	-15.23	1.06
		U_{35}-U_{36}	9.93	1048.39	1.76	15.19	0.58	-1.21	18.16	191.74	-187.99	-15.23
		U_{36}-U_{37}	271.35	25.12	3.73	3.50	-2.62	-15.58	47.08	44.20	-33.01	-196.68
		U_{37}-U_{38}	40.37	39.26	3.50	3.73	-15.58	-2.62	44.20	47.08	-196.68	-33.01
		U_{38}-U_{39}	196.46	-8.75	5.12	3.92	-6.50	-17.33	64.67	49.43	-82.08	-218.82
		U_{39}-U_{40}	48.44	11.25	3.09	4.09	-9.80	-15.93	64.31	51.64	-123.78	-201.06
		U_{40}-U_{41}	35.25	52.64	3.10	3.65	-20.13	-3.46	64.16	64.31	-123.78	-201.06
		U_{41}-U_{42}	-92.46	-65.91	2.03	2.23	-17.20	-26.19	25.68	28.12	-217.12	-330.59
		U_{42}-U_{43}	-59.53	-97.41	2.23	2.03	-26.19	-17.20	28.12	25.68	-330.59	-217.12
		U_{43}-U_{44}	-48.21	-31.51	0.14	4.14	-14.16	-11.63	1.73	52.29	-178.82	-146.82
		U_{44}-U_{45}	10.71	137.89	3.18	4.73	-18.70	0.53	40.10	59.69	-236.04	6.72
		U_{45}-U_{46}	57.18	-122.84	4.03	3.56	-15.10	-3.49	59.60	44.92	-190.63	-44.09
		U_{46}-U_{47}	40.37	39.26	3.50	3.73	-15.58	-2.62	37.76	44.20	-196.68	-33.01
		U_{47}-U_{48}	85.58	3.84	3.84	3.59	-12.69	-14.41	48.51	20.10	-160.18	-181.89
		U_{48}-U_{49}	14.12	816.06	2.28	3.84	-14.41	-12.69	28.24	48.51	-181.89	-160.18
		U_{49}-U_{50}	823.61	100.42	12.72	1.47	-1.58	-5.70	162.48	18.76	-20.19	-8.89
		U_{50}-U_{51}	32.23	96.21	1.16	1.47	-5.70	-1.58	18.76	162.48	-8.89	-20.19
		U_{51}-U_{52}	190.29	-52.92	3.69	4.55	-4.44	-12.13	47.20	58.17	-56.77	-164.93
		U_{52}-U_{53}	17.33	-89.79	4.86	5.11	-3.38	-13.91	62.12	65.33	-43.20	-177.75
		U_{53}-U_{54}	39.75	-129.06	4.86	5.11	-3.38	-13.91	65.48	62.12	-177.75	-43.20
		U_{54}-U_{55}	-75.26	-230.76	5.12	3.16	-2.13	-19.34	65.42	40.32	-27.15	-247.15
		U_{55}-U_{56}	-208.29	-141.54	3.16	5.12	-19.34	-2.13	40.32	65.42	-247.15	-27.15
		U_{56}-U_{57}	-84.35	-278.75	5.06	4.39	-24.15	-25.52	64.58	56.05	-308.51	-325.99
		U_{57}-U_{58}	-39.75	-129.06	4.86	5.11	-3.38	-13.91	62.12	65.33	-43.20	-177.75
		U_{58}-U_{59}	-275.08	-274.62	3.20	0.42	-28.84	-16.77	40.90	5.35	-368.45	-214.20
		U_{59}-U_{60}	-257.08	-269.15	1.91	0.28	-30.99	-11.19	24.34	3.54	-395.90	-142.92
		U_{60}-U_{61}	-214.75	-83.24	1.91	0.28	-30.99	-11.19	24.34	3.54	-395.90	-142.92
		U_{61}-U_{62}	-154.97	-33.11	1.29	-0.31	-17.10	-2.25	16.42	-3.99	-218.51	-28.72
		U_{62}-U_{63}	-131.36	-34.71	1.29	-0.31	-17.10	-2.25	16.42	-3.99	-218.51	-28.72
		U_{63}-U_{64}	40.07	-167.86	-0.55	0.55	3.21	-11.18	-7.08	7.14	-41.55	-144.65
		U_{64}-U_{65}	-10.53	-132.37	-0.43	0.72	3.03	-13.38	-5.59	9.30	39.18	-173.13
		U_{65}-U_{66}	-11.34	-134.91	-0.43	0.72	3.03	-13.38	-5.59	9.30	39.18	-173.13
		U_{66}-U_{67}	-140.16	-260.93	-0.17	0.65	-4.42	-18.60	-2.20	8.36	-57.15	-240.71
		U_{67}-U_{68}	-187.19	-276.08	1.62	2.24	-16.19	-22.94	20.91	29.03	-209.41	-296.62
		U_{68}-U_{69}	-322.62	-140.38	1.12	1.62	-3.57	-16.19	29.03	20.91	-296.62	-209.41
		U_{69}-U_{70}	-162.95	-104.84	1.20	3.97	-11.75	-4.69	15.98	46.14	-152.59	-60.66
		U_{70}-U_{71}	-147.84	26.72	2.87	4.26	-18.87	-1.08	34.53	55.08	-244.15	-13.96
		U_{71}-U_{72}	-153.80	61.93	3.03	4.26	-18.87	-1.08	34.53	55.08	-244.15	-13.96
		U_{72}-U_{73}	-162.95	-104.84	1.20	3.97	-11.75	-4.69	15.98	46.14	-152.59	-60.66
		U_{73}-U_{74}	-147.84	26.72	2.87	4.26	-18.87	-1.08	34.53	55.08	-244.15	-13.96
		U_{74}-U_{75}	-153.80	61.93	3.03	4.26	-18.87	-1.08	34.53	55.08	-244.15	-13.96
		U_{75}-U_{76}	-126.28	54.04	4.29	3.74	-3.72	-15.11	57.34	49.99	-49.74	-201.90
		U_{76}-U_{77}	-70.10	43.63	4.61	3.35	-9.01	-12.82	61.63	44.71	-120.33	-171.31
		U_{77}-U_{78}	-51.16	-17.92	3.35	4.61	-12.82	-9.01	44.71	61.63	-171.31	-120.33
		U_{78}-U_{79}	-128.06	54.04	4.29	3.74	-3.72	-15.11	57.34	49.99	-49.74	-201.90
		U_{79}-U_{80}	-70.10	43.63	4.61	3.35	-9.01	-12.82	61.63	44.71	-120.33	-171.31
		U_{80}-U_{81}	-51.16	-17.92	3.35	4.61	-12.82	-9.01	44.71	61.63	-171.31	-120.33
		U_{81}-U_{82}	-8.36	-30.51	2.79	3.98	-16.80	-11.29	37.23	-53.16	-224.40	-150.78
		U_{82}-U_{83}	-53.39	-54.45	3.98	2.79	-11.29	-16.80	-53.16	37.23	-150.78	-224.40
		U_{83}-U_{84}	-8.36	-30.51	2.79	3.98	-16.80	-11.29	37.23	-53.16	-224.40	-150.78

ZZ Axis Moment Properties

Location		Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. (k-in)	S_{bb} (in^3)	S_{tt} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula (If $\frac{I_{eff}}{I} \geq 0.85$, $C_{pos} = 1.0$; Else $C_{pos} = \frac{I_{eff}}{I}$)	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{pos}	Equivalent Mom. Factor C_{neg}
North Truss - Upper Chord	Structure 1	U_0-U_1	-175.99	21.31	-52.94	-418.61	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.126	0.65	0.65
		U_1-U_2	-63.21	21.22	-148.60	-530.84	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.069	0.69	0.69
		U_2-U_3	-144.64	-187.00	-438.19	-324.42	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.126	0.65	0.65
		U_3-U_4	16.89	51.83	-154.75	-178.20	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.912	0.96	0.96
		U_4-U_5	36.83	59.22	-137.43	-190.95	0.0	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.912	0.96	0.96
		U_5-U_6	41.27	53.95	-227.51	-75.99	0.0	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.126	0.65	0.65
		U_6-U_7	48.13	54.93	-151.08	1.03	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.589	0.36	0.36
		U_7-U_8	51.64	33.45	-166.67	-20.83	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.589	0.36	0.36
		U_8-U_9	29.16	78.25	-263.12	298.83	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_9-U_{10}	113.34	11.99	105.54	-139.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{10}-U_{11}	35.07	46.54	-21.54	83.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{11}-U_{12}	49.98	39.82	22.02	-199.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{12}-U_{13}	57.02	-13.95	85.53	-183.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{13}-U_{14}	44.40	15.11	17.76	-225.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{14}-U_{15}	38.26	22.09	-341.64	-213.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{15}-U_{16}	37.48	2.17	-224.31	-101.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{16}-U_{17}	-354.06	-207.04	-153.73	39.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{17}-U_{18}	12.36	-11.40	-192.47	39.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{18}-U_{19}	11.04	-2.92	-179.74	-3.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{19}-U_{20}	8.10	-4.92	-325.08	169.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{20}-U_{21}	-7.81	18.42	95.66	-176.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{21}-U_{22}	-8.26	19.37	95.66	-247.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{22}-U_{23}	-8.42	25.98	1.41	-292.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{23}-U_{24}	19.14	32.47	-13.40	-294.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{24}-U_{25}	2.33	41.79	-235.79	-360.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{25}-U_{26}	-4.31	41.79	-400.09	-234.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{26}-U_{27}	58.13	57.38	-300.95	-424.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{27}-U_{28}	45.13	62.40	-427.56	-135.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{28}-U_{29}	45.13	62.40	-427.56	-135.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{29}-U_{30}	64.94	82.10	-262.82	-73.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{30}-U_{31}	80.18	82.10	-249.15	-44.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{31}-U_{32}	69.35	55.87	-259.03	17.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{32}-U_{33}	69.35	55.87	-259.03	17.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{33}-U_{34}	49.87	81.73	-7.56	-8.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{34}-U_{35}	191.74	22.23	-15.23	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{35}-U_{36}	18.16	191.74	-187.99	-15.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{36}-U_{37}	47.08	44.20	-33.01	-196.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{37}-U_{38}	44.20	47.08	-196.68	-33.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{38}-U_{39}	64.67	49.43	-82.08	-218.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{39}-U_{40}	64.31	51.64	-123.78	-201.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{40}-U_{41}	64.16	64.31	-123.78	-201.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{41}-U_{42}	25.68	28.12	-217.12	-330.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{42}-U_{43}	28.12	25.68	-330.59	-217.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{43}-U_{44}	1.73	52.29	-178.82	-146.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{44}-U_{45}	40.10	59.69	-236.04	6.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{45}-U_{46}	59.60	44.92	-190.63	-44.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{46}-U_{47}	37.76	44.20	-196.68	-33.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{47}-U_{48}	48.51	20.10	-160.18	-181.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{48}-U_{49}	28.24	48.51	-181.89	-160.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{49}-U_{50}	162.48	18.76	-20.19	-8.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{50}-U_{51}	18.76	162.48	-8.89	-20.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{51}-U_{52}	47.20	58.17	-56.77	-164.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{52}-U_{53}	62.12	65.33	-43.20	-177.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{53}-U_{54}	65.48	62.12	-177.75	-43.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{54}-U_{55}	65.42	40.32	-27.15	-247.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{55}-U_{56}	40.32	65.42	-247.15	-27.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{56}-U_{57}	64.58	56.05	-308.51	-325.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{57}-U_{58}	62.12	65.33	-43.20	-177.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{58}-U_{59}	40.90	5.35	-368.45	-214.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{59}-U_{60}	24.34	3.54	-395.90	-142.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{60}-U_{61}	16.42	-3.99	-218.51	-28.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{61}-U_{62}	16.42	-3.99	-218.51	-28.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{62}-U_{63}	-7.08	7.14	-41.55	-144.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{63}-U_{64}	-5.59	9.30	39.18	-173.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{64}-U_{65}	-5.59	9.30	39.18	-173.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
		U_{65}-U_{66}	-2.20	8.36	-57.15	-240.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	L_0-L_1	-44.17	-99.07	0.59	-9.90	4.91	-7.40	7.87	-12.02	65.53	-98.89
	L_1-L_2	-131.02	-112.64	-1.52	-13.07	-0.42	2.45	-20.28	-174.57	-5.66	32.74
	L_2-L_3	-73.45	-79.70	-12.69	-14.21	1.26	2.85	-169.47	-189.78	16.79	38.10
	L_3-L_4	18.36	16.12	-13.41	-12.18	1.38	5.15	-179.19	-162.75	18.40	68.87
	L_4-L_5	68.34	210.22	-16.97	-2.17	5.39	53.64	-226.75	-48.93	53.64	53.91
	L_5-L_6	8.36	229.14	-10.47	4.05	3.10	57.43	-139.85	-54.13	41.43	79.78
	L_6-L_7	61.83	217.52	-9.60	2.43	4.19	4.60	-90.84	64.67	18.71	85.28
	L_7-L_8	1.61	459.47	0.00	-0.02	0.51	13.39	0.04	-0.24	6.85	178.44
	L_8-L_9	439.88	-25.12	0.03	-0.02	7.83	0.36	-0.36	-0.26	-101.32	4.92
	L_9-L_{10}	224.03	-117.02	-4.62	0.00	1.45	3.50	135.67	-250.24	224.48	-54.02
	L_{10}-L_{11}	168.12	-117.13	-3.16	-5.58	5.30	2.51	-40.62	-72.14	68.61	32.48
	L_{11}-L_{12}	23.72	272.25	-1.35	-6.85	3.31	2.55	-17.47	-111.26	42.85	25.82
	L_{12}-L_{13}	-19.73	-128.50	-6.76	-11.22	3.29	1.61	-74.51	-145.13	42.29	20.87
	L_{13}-L_{14}	-175.78	-425.21	-7.94	-17.19	2.54	2.22	-102.76	-222.36	32.88	28.70
	L_{14}-L_{15}	-409.28	-20.76	-7.52	-12.02	3.84	2.22	-242.46	-80.91	-44.06	29.77
	L_{15}-L_{16}	-209.39	-318.68	-16.11	-15.32	0.89	0.76	-208.46	-198.27	11.53	59.85
	L_{16}-L_{17}	-374.86	-834.56	-17.03	-12.02	0.89	0.76	-360.67	-151.91	-452.11	103.40
	L_{17}-L_{18}	-171.07	-198.86	-10.19	-1.29	0.35	-0.04	-131.89	-16.72	4.50	-0.50
	L_{18}-L_{19}	-208.33	253.19	-2.64	0.14	-2.79	3.71	-34.17	36.13	-40.20	0.00
	L_{19}-L_{20}	-84.78	1.02	-1.64	0.73	-0.46	3.52	-21.27	9.43	-0.69	45.56
	L_{20}-L_{21}	10.35	-213.29	0.61	-1.69	3.27	-4.98	7.83	-21.53	41.80	-69.16
	L_{21}-L_{22}	54.16	-247.73	0.00	-1.75	4.44	-1.06	40.82	-100.07	64.47	-13.25
	L_{22}-L_{23}	-0.36	-194.33	-2.70	-12.93	-0.57	1.16	-34.48	-155.16	-7.23	14.80
	L_{23}-L_{24}	-87.79	-189.74	-5.02	-8.27	-0.57	1.16	-62.52	-126.80	-0.07	14.80
	L_{24}-L_{25}	-287.80	-299.08	-16.98	-17.26	-0.21	-2.06	-216.96	-220.50	-2.71	-26.29
	L_{25}-L_{26}	-437.71	-474.21	-16.98	-17.26	-0.21	-2.06	-314.22	-352.76	-8.68	-47.58
	L_{26}-L_{27}	-467.54	-273.29	-8.48	-18.54	2.99	4.46	-363.85	-236.90	-38.19	56.82
	L_{27}-L_{28}	-310.55	-49.89	-36.06	-13.04	3.66	6.74	-332.89	-166.68	-46.76	86.15
	L_{28}-L_{29}	-272.23	-205.04	-34.34	-24.24	5.60	52.17	-284.29	-244.56	-53.92	53.07
	L_{29}-L_{30}	-261.97	188.33	-14.69	-6.30	3.24	6.65	-187.66	-80.47	-41.43	84.99
	L_{30}-L_{31}	-35.73	284.33	-12.68	-2.21	4.08	6.65	-87.43	212.74	-22.51	84.99
	L_{31}-L_{32}	-131.48	389.15	-6.47	-6.81	3.72	6.72	-82.65	-86.98	-47.50	85.91
	L_{32}-L_{33}	-164.35	-140.48	-1.44	-0.01	5.78	2.51	-18.35	-0.13	73.87	-32.06
	L_{33}-L_{34}	-30.47	-98.41	-0.26	-0.18	0.00	0.00	-8.23	-6.14	113.84	-66.76
	L_{34}-L_{35}	-912.03	-326.86	-0.65	-0.49	9.02	0.46	-8.23	-6.14	113.84	-66.76
	L_{35}-L_{36}	-289.13	-418.93	-1.03	-0.77	11.49	0.59	-404.10	-132.63	159.93	-83.65
	L_{36}-L_{37}	-515.59	-35.24	-1.67	0.10	7.13	2.21	-21.06	1.20	90.03	27.90
	L_{37}-L_{38}	-258.52	-259.07	-1.67	-0.48	6.27	2.73	-91.80	-107.59	79.10	34.07
	L_{38}-L_{39}	-230.55	-46.37	-0.58	-11.67	3.68	4.11	-108.36	-147.39	-66.49	52.68
	L_{39}-L_{40}	-41.53	-186.96	-15.90	-21.39	3.04	2.73	-200.69	-270.09	-38.32	34.48
	L_{40}-L_{41}	-197.37	-197.37	-23.33	-23.33	3.73	3.73	-348.37	-348.37	-60.61	60.61
	L_{41}-L_{42}	-108.55	-10.73	-15.98	-12.52	1.87	0.56	-247.21	-158.05	23.63	63.82
	L_{42}-L_{43}	-30.56	-18.19	-4.76	-3.00	0.56	0.00	-74.14	-41.16	39.50	41.16
	L_{43}-L_{44}	-65.47	-173.47	-6.23	-11.01	2.40	5.56	-78.65	-138.94	-30.00	70.18
	L_{44}-L_{45}	-30.98	-151.24	-3.20	-5.07	-2.24	6.07	-40.35	0.90	-26.29	76.61
	L_{45}-L_{46}	-27.07	313.77	0.11	-0.02	-0.02	0.00	-12.69	198.36	-10.57	362.60
	L_{46}-L_{47}	-19.38	-193.41	-1.09	-0.98	1.40	3.14	-13.72	-12.40	-17.65	39.67
	L_{47}-L_{48}	-27.79	-14.86	-2.85	-2.85	3.31	2.55	-17.47	-111.26	-42.85	25.82
	L_{48}-L_{49}	-740.88	-268.17	-1.37	0.10	12.03	-0.96	-17.65	1.30	153.73	-12.25
	L_{49}-L_{50}	-140.43	-76.07	-0.26	-1.11	3.54	0.15	3.28	-14.16	45.25	-2.02
	L_{50}-L_{51}	-27.79	-14.86	-2.85	-2.85	3.31	2.55	-17.47	-111.26	-42.85	25.82
	L_{51}-L_{52}	-147.94	-145.21	-2.56	-8.25	2.56	4.54	-32.68	-105.46	-32.72	58.04
	L_{52}-L_{53}	-59.61	-39.74	-1.15	-0.85	0.00	0.00	-32.68	-105.46	-32.72	58.04
	L_{53}-L_{54}	95.37	-212.64	-2.66	-15.02	3.63	3.72	-33.99	-191.88	-46.34	47.63
	L_{54}-L_{55}	27.76	-114.86	-2.66	-15.02	3.63	3.72	-33.99	-191.88	-46.34	47.63
	L_{55}-L_{56}	-182.93	-415.63	-18.56	-28.76	3.10	2.96	-237.08	-367.41	-39.62	38.02
	L_{56}-L_{57}	-370.36	-165.17	-30.16	-17.93	2.93	0.64	-385.34	-229.07	-37.49	8.13
	L_{57}-L_{58}	-224.72	-278.52	-29.75	-28.75	2.93	0.64	-305.81	-350.30	-33.53	8.13
	L_{58}-L_{59}	-304.19	-21.34	-21.75	-6.48	1.43	-0.33	-277.93	-62.83	18.32	-4.19
	L_{59}-L_{60}	-227.31	-59.39	-14.11	-6.17	0.93	-0.41	-187.30	-2.11	11.87	-5.25
	L_{60}-L_{61}	-227.31	-59.39	-14.11	-6.17	0.93	-0.41	-180.31	-2.11	11.87	-5.25
	L_{61}-L_{62}	-43.83	-117.87	0.36	-1.44	3.83	-5.18	4.63	-18.59	49.54	-67.06
	L_{62}-L_{63}	-152.35	-177.82	0.04	-2.36	1.55	-1.74	7.04	-33.08	20.03	-22.50
	L_{63}-L_{64}	-55.48	-320.94	-2.96	-14.76	-0.16	0.81	1.11	-111.61	-11.49	0.00
	L_{64}-L_{65}	-55.48	-320.94	-2.96	-14.76	-0.16	0.81	-153.20	-111.61	-11.49	0.00
	L_{65}-L_{66}	-64.07	-371.05	-12.27	-21.18	0.00	2.44	-158.70	-274.09	0.00	31.59
	L_{66}-L_{67}	-370.76	-82.43	-22.18	-5.43	1.64	2.76	-299.93	-70.26	-21.15	55.65
	L_{67}-L_{68}	-304.19	-21.34	-21.75	-6.48	1.43	-0.33	-277.93	-62.83	18.32	-4.19
	L_{68}-L_{69}	-200.77	-149.87	-10.71	-1.96	2.01	3.26	-138.65	-25.40	26.01	42.39
	L_{69}-L_{70}	-131.78	166.76	-1.11	0.51	-2.40	5.01	-14.30	6.55	-33.69	83.61
	L_{70}-L_{71}	-361.88	-172.92	-0.04	0.00	10.01	0.11	-0.49	0.09	-13.89	0.51
	L_{71}-L_{72}	-61.50	-313.31	-1.06	-10.09	-1.94	3.86	-2.16	-134.79	-25.96	51.50
	L_{72}-L_{73}	-189.90	-5.62	-1.99	-15.00	4.12	4.39	-26.52	-200.45	-55.09	58.60
	L_{73}-L_{74}	-38.98	-56.51	-13.65	-13.81	3.14	1.40	-182.31	-184.59	41.91	-19.80
	L_{74}-L_{75}	-66.62	-26.78	-1.14	-1.23	4.33	3.52	-15.19	-16.41	-57.90	52.34

YY Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_x (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/E_s	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
Structure 1	L_0-L_1	-40.38	-104.85	84.55	-343.05	83.6	83.58	74.65	100.97	2577	1.21	3332	0.99900394	2755.4	-0.246	0.50	0.50
	L_1-L_2	-126.38	-324.67	158.05	-75.49	83.6	83.58	67.49	100.97	2577	1.21	3332	0.99900394	2755.4	-0.241	0.50	0.50
	L_2-L_3	-442.38	-514.63	-38.82	-20.07	99.5	99.53	81.00	125.43	3409	1.21	4141	0.99901881	3294.8	-0.127	0.50	0.50
	L_3-L_4	-364.38	-331.66	63.73	170.18	99.9	99.93	84.14	125.49	3409	1.21	4141	0.99901881	3294.8	0.910	0.96	0.96
	L_4-L_5	-682.94	-242.46	381.43	320.07	92.6	92.58	76.68	114.47	3295	1.21	3777	0.99913181	3052.5	-0.497	0.37	0.37
	L_5-L_6	-292.14	-180.60	100.63	470.75	104.6	104.58	95.61	136.57	4040	1.21	4630	0.99902345	3448.5	0.214	0.69	0.69
	L_6-L_7	-865.67	-151.91	482.11	103.40	103.9	103.89	138.16	206.43	5972	1.21	6842	0.99914121	4776.0	0.340	0.74	0.74
	L_7-L_8	-508.16	-10.41	-212.64	24.72	121.1	121.08	112.11	157.22	3591	1.40	5028	0.99904481	3891.8	0.020	0.61	0.61
	L_8-L_9	-344.86	303.18	-349.04	410.25	83.6	83.58	74.62	100.97	2577	1.21	3332	0.99900394	2755.5	-0.939	0.44	0.44
	L_9-L_{10}	-727.87	843.86	-247.23	-392.95	179.7	179.69	170.68	251.43	5763	1.40	8297	0.99912252	6524.6	0.958	0.94	0.94
	L_{10}-L_{11}	-169.30	21.76	248.21	100.82	83.6	83.58	67.49	100.97	2740	1.21	3332	0.99900394	2755.5	0.403	0.44	0.44
	L_{11}-L_{12}	7.83	-21.53	41.80	-69.16	103.0	122.01	103.28	148.52	3592	1.40	5028	0.99904481	3891.8	0.020	0.61	0.61
	L_{12}-L_{13}	30.42	-323.93	104.03	-470.50	122.0	122.01	103.28	148.52	3592	1.40	5028	0.99904481	4022.0	-0.221	0.51	0.51
	L_{13}-L_{14}	352.36	-647.20	20.16	-352.61	122.0	122.01	103.28	148.52	3592	1.40	5028	0.99904481	4022.0	-0.469	0.41	0.41
	L_{14}-L_{15}	-75.18	-510.48	-16.13	-220.97	162.5	162.51	151.98	209.67	4946	2.152.2	1.29	6919	0.99904436	5357.7	0.123	0.65	0.65
	L_{15}-L_{16}	-78.77	-181.63	108.45	-176.70	83.6	83.58	74.65	100.97	2577	1.21	3332	0.99900394	2755.5	0.403	0.44	0.44
	L_{16}-L_{17}	-844.21	-866.54	-380.00	-331.63	174.3	174.28	163.71	320.70	7266	1.40	10163	0.99902244	6746.8	0.974	0.99	0.99
	L_{17}-L_{18}	-1,034.22	-1,032.78	-1,038.07	-1,037.63	174.3	174.28	163.71	320.70	7266	1.40	10163	0.99902244	6746.8	0.999	0.99	0.99
	L_{18}-L_{19}	-1,096.14	-868.56	-525.07	-232.18	216.3	216.33	205.74	398.74	7625	1.40	10679	0.99902244	7132.6	0.822	0.85	0.85
	L_{19}-L_{20}	-124.97	-420.74	-332.39	127.01	255.7	255.71	195.15	274.47	5445	1.40	2642.2	0.99898547	6781.3	0.374	0.75	0.75
	L_{20}-L_{21}	-861.45	-171.59	-232.73	402.46	168.2	168.54	149.99	233.22	4264	1.40	5968	0.99914121	5524.6	-0.054	0.50	0.50
	L_{21}-L_{22}	-747.68	-70.48	-250.71	428.97	149.0	149.01	130.61	189.42	4793	1.40	5268.4	0.99914121	4912.7	-0.094	0.56	0.56
	L_{22}-L_{23}	-873.63	310.74	-72.58	-67.44	148.0	148.01	138.21	189.42	4264	1.40	5968	0.99914121	4095.3	-0.524	0.50	0.50
	L_{23}-L_{24}	-350.00	317.44	-68.03	682.04	165.6	165.55	155.01	222.43	5842	1.40	2444.6	0.134	7340	0.99914121	5468.6	-0.098	0.56
	L_{24}-L_{25}	-1,011.78	-1,182.90	-53.60	-252.08	226.0	226.03	215.39	364.84	7486	1.40	3164.4	0.135	10480	0.99914121	7449.1	-0.722	0.75
	L_{25}-L_{26}	-1,011.78	-1,182.90	-53.60	-252.08	226.0	226.03	215.39	364.84	7486	1.40	11452	0.99900039	8222.2	-0.288	0.48	0.48
	L_{26}-L_{27}	-904.10	-1,239.64	-43.21	866.33	14.64	180.3	180.26	169.70	249.67	6400	2721.8	0.136	8197	0.99915121	6943.8	0.017	0.61
	L_{27}-L_{28}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{28}-L_{29}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{29}-L_{30}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{30}-L_{31}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{31}-L_{32}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{32}-L_{33}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{33}-L_{34}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{34}-L_{35}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{35}-L_{36}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{36}-L_{37}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{37}-L_{38}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{38}-L_{39}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{39}-L_{40}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{40}-L_{41}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{41}-L_{42}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{42}-L_{43}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{43}-L_{44}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{44}-L_{45}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{45}-L_{46}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{46}-L_{47}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{47}-L_{48}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{48}-L_{49}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{49}-L_{50}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{50}-L_{51}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{51}-L_{52}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{52}-L_{53}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{53}-L_{54}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{54}-L_{55}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{55}-L_{56}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{56}-L_{57}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{57}-L_{58}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{58}-L_{59}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{59}-L_{60}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{60}-L_{61}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{61}-L_{62}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{62}-L_{63}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{63}-L_{64}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{64}-L_{65}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{65}-L_{66}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{66}-L_{67}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{67}-L_{68}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{68}-L_{69}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{69}-L_{70}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{70}-L_{71}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{71}-L_{72}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{72}-L_{73}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3	180.26	169.70	249.67	6400	1.40	6251	0.99915121	6943.8	0.017	0.61	0.61
	L_{73}-L_{74}	-1,239.64	-1,239.64	-1,239.64	-1,239.64	180.3

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

North/Truss Vertices

M_2 Information

ZZ Axis Moment from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{bb} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{bb}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	$C_{m(x)}$
Structure 1	U_0–L_1	-56.29	86.22	0.70	-0.93	-4.40	5.17					-52.97	85.14	-200.60	261.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.797
	U_1–L_1	-14.44	23.27	0.91	-0.92	-3.52	3.85					12.18	-12.22	-47.00	51.37	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.852
	U_1–L_2	36.84	-5.85	1.10	-1.25	-2.66	3.40					40.15	-43.32	-69.57	93.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.732
	U_1–L_3	36.84	-39.22	0.97	-1.19	-2.03	2.54					12.99	-15.91	-27.08	33.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.947
	U_2–L_3	49.77	-69.19	1.69	-1.70	-2.38	2.45					-113.66	-113.66	-20.90	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000
	U_2–L_4	57.71	-69.80	-0.20	0.04	3.20	-3.86					-2.69	0.48	-42.73	61.54	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.928
	U_3–L_4	67.23	-90.39	-0.30	0.06	4.27	-4.78					-2.77	1.52	-54.37	83.81	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.944
	U_3–L_5	106.28	-118.16	-0.15	0.12	5.40	-5.79					-2.00	1.63	-72.14	77.19	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.919
	U_4–L_5	-10.96	6.72	10.55	-6.65	2.44	-2.79					7.31	-8.74	32.64	-37.31	0.00	0.00	0.00	0.00	0	1.09	-10.20	56.47	-72.12	107.1
	U_4–L_6	-144.91	167.70	0.40	-0.38	-4.74	5.29					-177.22	207.35	-327.35	327.35	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_5–L_6	-102.02	95.66	0.18	-0.38	-3.27	4.20					2.23	-4.94	-42.30	54.29	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_5–L_7	-111.13	68.05	0.01	-0.18	-3.32	4.97					1.10	-4.32	-42.39	64.34	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_6–L_7	-96.42	93.90	0.54	-0.46	-3.61	3.96					6.93	-6.00	-46.72	51.20	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_6–L_8	-60.91	75.94	0.79	-0.90	-3.20	3.60					10.26	-10.39	-41.35	46.53	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_7–L_8	-33.99	37.86	0.66	-0.73	-2.36	2.65					6.26	-6.43	-42.29	24.36	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_7–L_9	8.32	-15.87	-2.03	1.99	3.17	-3.46					-26.20	25.75	40.99	-44.79	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_8–L_9	47.73	-50.39	-0.30	0.36	3.89	-4.03					-15.38	8.90	39.86	-49.22	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_8–L_{10}	61.55	-72.81	-0.60	0.60	3.50	-3.85					-7.70	7.75	49.22	-49.86	0.00	0.00	0.00	0.00	0	63.33	-77.77	177.99	-202.69	194.4
	U_9–L_{10}	133.11	-138.25	0.83	-0.83	6.27	-6.66					-10.70	11.08	-91.08	96.18	0.00	0.00	0.00	0.00	0	148.85	-158.37	348.72	-364.38	33.7
	U_9–L_{11}	157.87	-153.86	-0.85	0.76	6.69	-6.56					-10.66	9.82	-86.56	-90.32	0.00	0.00	0.00	0.00	0	181.49	-178.74	362.78	-399.72	42.7
	U_{10}–L_{11}	131.38	-213.66	-0.37	0.62	4.82	-6.50					-4.74	7.96	62.31	-84.76	0.00	0.00	0.00	0.00	0	160.51	-260.51	355.77	-461.40	42.7
	U_{10}–L_{12}	-147.13	191.00	0.26	-0.66	-4.86	7.26					6.07	-8.74	-124.76	224.19	0.00	0.00	0.00	0.00	0	-172.05	228.19	533.99	-727.46	42.7
	U_{11}–L_{12}	-122.87	130.77	0.80	-0.82	-6.12	6.29					10.16	-10.41	-78.17	80.31	0.00	0.00	0.00	0.00	0	-137.22	-147.44	-329.09	344.01	46.7
	U_{11}–L_{13}	119.87	-126.79	0.98	-0.98	4.29	-4.29					12.67	-12.67	-84.56	84.56	0.00	0.00	0.00	0.00	0	134.64	134.64	310.99	310.99	46.7
	U_{12}–L_{13}	-62.46	69.03	0.63	-0.64	-3.22	3.52					8.06	-8.22	-42.43	-65.01	0.00	0.00	0.00	0.00	0	-63.73	71.94	-173.13	187.26	21.5
	U_{12}–L_{14}	37.86	-43.29	0.82	-0.82	-3.75	3.75					4.91	-4.91	-41.67	41.67	0.00	0.00	0.00	0.00	0	37.86	-43.29	82.82	-94.70	21.5
	U_{13}–L_{14}	-9.11	15.69	1.32	1.30	-2.74	3.16					16.90	-16.61	-64.01	60.39	0.00	0.00	0.00	0.00	0	24.78	-15.59	-87.61	-107.96	15.4
	U_{13}–L_{15}	14.84	-14.93	1.97	-2.08	-2.59	2.80					25.11	-26.59	-33.13	35.71	0.00	0.00	0.00	0.00	0	73.68	-77.01	-52.49	57.97	15.4
	U_{14}–L_{15}	33.59	-35.64	1.81	-1.89	-2.17	2.34					7.18	-20.39	-17.27	-17.82	0.00	0.00	0.00	0.00	0	88.83	-103.26	-32.70	-15.42	15.4
	U_{14}–L_{16}	88.81	-97.92	-1.01	0.91	3.63	-4.15					-12.32	11.68	48.96	-53.07	0.00	0.00	0.00	0.00	0	87.46	-101.99	221.53	-242.29	20.8
	U_{15}–L_{16}	-153.08	153.02	0.71	-0.46	-3.92	3.92					-10.38	8.35	59.56	-66.22	0.00	0.00	0.00	0.00	0	179.33	-189.20	392.95	-443.23	46.7
	U_{15}–L_{17}	140.09	-147.00	-0.29	0.51	6.21	-6.44					-3.76	0.13	-79.28	82.29	0.00	0.00	0.00	0.00	0	174.01	-190.82	353.89	-369.40	43.0
	U_{16}–L_{17}	148.96	-153.44	-0.15	0.26	5.69	-5.77					-1.67	3.35	65.01	-72.86	0.00	0.00	0.00	0.00	0	189.61	-192.22	334.50	-351.40	43.0
	U_{16}–L_{18}	143.67	-139.96	0.43	-0.43	5.90	-5.90					12.67	-12.67	-84.56	84.56	0.00	0.00	0.00	0.00	0	134.64	134.64	310.99	310.99	46.7
	U_{17}–L_{18}	185.41	-182.32	-0.66	0.62	7.28	-6.91					-8.48	7.90	92.95	-88.22	0.00	0.00	0.00	0.00	0	222.65	-220.17	462.42	-428.42	39.2
	U_{17}–L_{19}	72.60	73.13	0.70	-0.70	3.07	-3.07					1.00	-1.00	51.50	-51.50	0.00	0.00	0.00	0.00	0	109.46	-109.46	229.69	-229.69	39.2
	U_{18}–L_{19}	-128.28	129.98	0.72	-0.64	-5.90	5.82					9.14	-8.11	-74.53	73.43	0.00	0.00	0.00	0.00	0	-146.93	151.43	-328.21	328.06	39.2
	U_{18}–L_{20}	128.28	-129.98	0.72	-0.64	5.90	-5.82					8.14	-9.11	74.53	-73.43	0.00	0.00	0.00	0.00	0	146.93	-151.43	328.21	-328.06	39.2
	U_{19}–L_{20}	-125.94	122.64	0.73	-0.69	-6.22	6.66					9.27	-8.71	-78.54	84.07	0.00	0.00	0.00	0.00	0	-143.68	140.55	-333.90	341.88	42.7
	U_{19}–L_{21}	-109.69	106.91	0.97	-0.95	-6.37	6.50					12.20	-11.98	-80.41	87.34	0.00	0.00	0.00	0.00	0	-116.98	115.62	-316.81	330.74	38.9
	U_{20}–L_{21}	43.25	-43.74	0.80	-0.73	-2.98	3.34					10.07	-9.18	-37.67	42.17	0.00	0.00	0.00	0.00	0	-34.40	36.98	-137.85	148.23	17.2
	U_{20}–L_{22}	29.76	-24.19	0.91	-0.91	-2.61	2.61					5.57	-5.57	-30.20	30.20	0.00	0.00	0.00	0.00	0	-8.28	6.73	-36.19	29.42	17.2
	U_{21}–L_{22}	-4.28	1.60	-1.61	1.87	0.83	-0.77					-20.26	23.65	10.49	-9.75	0.00	0.00	0.00	0.00	0	-46.78	53.32	21.07	-19.04	15.4
	U_{21}–L_{23}	38.81	-37.34	-1.58	1.58	-2.63	2.63					40.24	-40.24	40.24	-40.24	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_{22}–L_{23}	46.57	-51.18	-1.14	0.99	4.64	-4.16					-14.39	12.49	51.06	-52.47	0.00	0.00	0.00	0.00	0	29.30	39.48	171.16	-180.22	17.2
	U_{22}–L_{24}	62.68	-61.36	-0.97	0.94	5.06	-4.95					-12.26	11.84	63.93	-62.91	0.00	0.00	0.00	0.00	0	54.92	-54.10	220.00	-215.20	18.7
	U_{23}–L_{24}	108.60	-105.79	-1.04	1.00	8.32	-8.39					-13.08	12.68	105.65	-105.87	0.00	0.00	0.00	0.00	0	110.24	-110.07	368.20	-366.93	42.7
	U_{23}–L_{25}	72.60	-73.13	-0.70	0.70	3.07	-3.07					-1.00	1.00	51.50	-51.50	0.00	0.00	0.00	0.00	0	109.46	-109.46	229.69	-229.69	39.2
	U_{24}–L_{25}	-114.56	114.55	-0.50	0.42	7.17	-7.08					-6.36	5.29	90.57	-89.40	0.00	0.00	0.00	0.00	0	135.14	-137.45	345.17	-342.61	39.2
	U_{24}–L_{26}	-13.73	5.73	-0.57	0.57	0.46	-0.46					-15.38	15.38	13.73	-13.73	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_{25}–L_{26}	-121.12	118.67	0.78	-0.73	6.54	-5.35					9.98	-9.31	-70.76	68.32	0.00	0.00	0.00	0.00	0	135.83	134.09	-310.76	302.29	39.2
	U_{25}–L_{27}	-92.37	86.40	0.82	-0.86	-4.61	5.03					7.97	-10.92	-58.95	64.25	0.00	0.00	0.00	0.00	0	102.81	88.65	-247.08	251.53	43.2
	U_{26}–L_{27}	52.26	-51.26	-1.35	1.35	3.96	-3.96					12.26	-12.26	57.56	-57.56	0.00	0.00	0.00	0.00	0	79.82	-79.82	183.46	-183.46	23.0
	U_{26}–L_{28}	-96.77	103.11	0.18	-0.15	-5.01	5.50					2.23	-1.89	-64.04	70.24	0.00	0.00	0.00	0.00	0	-120.85	129.95	-264.55	286.24	43.0
	U_{27}–L_{28}	-72.60	73.13	0.70	-0.70	-3.07	3.07					1.00	-1.00	-51.50	51.50	0.00	0.00	0.00	0.00	0	-109.46	109.46	-229.69	229.69	39.2
	U_{28}–L_{29}	-43.45	70.69	0.57	-0.51	-4.83	4.82					7.26	-6.55	-57.86	61.61	0.00	0.00	0.00	0.00	0	-66.77	77.56	-207.86	225.25	20.8
	U_{28}–L_{30}	-32.66	38.67	0.50	-0.59	-0.12	0.24					6.32	-7.47	-1.57	3.04	0.00	0.00	0.00	0.00	0	-28.76	34.07	-45.67	56.86	15.4
	U_{29}–L_{30}	5.87	-9.62	-1.39	1.23	4.84	-4.71					-18.04	18.42	64.59	-62.98	0.00	0.00	0.00	0.00	0	-32.55	23.18	147.58	-148.96	15.4
	U_{30}–L_{31}	20.19	-40.81	-0.29	0.95	-0.61	-1.36					-3.85	12.62	8.15	-18.21	0.00	0.00	0.00	0.00	0	17.91	-25.70	8.59	-52.51	15.4
Structure 2	U_1–U_2	99.11	-131.59	-0.22	-0.04	3.84	-5.57					-2.86	-0.48	49.63	-72.04	0.00	0.00	0.00	0.00	0	122.64	-171.98	236.37	-327.03	42.7
	U_2–U_3	95.00	-87.91	-0.08	0.21	4.95	-5.00					-1.06	2.68	64.03	-71.21	0.00	0.00	0.00	0.00	0	121.20	-121.48	262.24	-261.58	36.5
	U_3–U_4	135.46	-154.19	-0.22	0.20	6.07	-6.75					-2.86	2.52	78.47	-87.31	0.00	0.00	0.00	0.00	0	169.90	-194.87	346.12	-389.93	33.1
	U_4–U_5	52.77	-14.32	0.16	-0.19	2.94	-1.39					2.12	-2.47	39.33	-52.05	0.00	0.00	0.00	0.00	0	73.20	-101.97	153.82	-209.39	107.1
	U_5–U_6	-62.87	69.94	0.35	-0.34	-4.05	4.62					4.66	-4.48	-58.07	61.69	0.00	0.00	0.00	0.00	0	-71.63	80.70	-297.56	224.07	18.5
	U_6–U_7	-41.65	35.38	0.19	-0.33	-3.42	4.02					2.51	-4.41	-45.64	53.68	0.00	0.00	0.00	0.00	0	-48.70	36.44	-153.02	162.30	20.8
	U_7–U_8	-36.85	40.05	0.07	-0.05	-2.92	3.65					0.95	-0.67	-38.96	48.72	0.00	0.00	0.00	0.00	0	-45.85	50.62	-132.31	157.83	19.4
	U_8–U_9	-39.84	39.91	-0.12	0.10	-2.48	2.48					-1.59	1.32	-33.07	33.17	0.00	0.00	0.00	0.00	0	-55.24	54.75	-123.43	123.76	15.4
	U_9–U_{10}	-38.87	40.30	-2.69	2.77	1.08	-1.48					-35.88	17.70	14.40	-19.73	0.00	0.00	0.00	0.00	0	-128.28	132.65	-19.33	9.63	15.4
	U_9–U_{11}	-13.42	14.14	-1.32	1.50	2.60	-3.44					-17.67	20.00	34.71	-46.89	0.00	0.00	0.00	0.00	0	-65.74	61.71	57.76	-81.05	15.4
	U_{10}–U_{11}	5.87	-9.62	-1.39	1.23	4.84	-4.71					-18.04	18.42	64.59	-62.98	0.00	0.00	0.00	0.00	0	-32.55	23.18	147.58	-148.96	15.4
	U_{10}–U_{12}	20.19	-40.81	-0.29	0.95	-0.61	-1.36					-3.85	12.62	8.15	-18.21	0.00	0.00	0.00	0.00	0	17.91	-25.70	8.59	-52.51	15.4
Structure 3	U_0–L_1	-56.29	86.22	0.70	-0.93	-4.40	5.17					-52.97	85.14	-200.60	261.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.797
	U_1–L_1	-14.44	23.27	0.91	-0.92	-3.52	3.85					12.18	-12.22	-47.00	51.37	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.852
	U_1–L_2	36.84	-5.85	1.10	-1.25	-2.66	3.40					40.15	-43.32	-69.57	93.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.732
	U_1–L_3	36.84	-39.22	0.97	-1.19	-2.03	2.54					12.99	-15.91	-27.08	33.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.947
	U_2–L_3	49.77	-69.19	1.69	-1.70	-2.38	2.45					-113.66	-113.66	-20.90	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000
	U_2–L_4	57.71	-69.80	-0.20	0.04	3.20	-3.86					-2.69	0.48	-42.73	61.54	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.928
	U_3–L_4	67.23	-90.39	-0.30	0.06	4.27	-4.78					-2.77	1.52	-54.37	83.81	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.944
	U_3–L_5	106.28	-118.16	-0.15	0.12	5.40	-5.79					-2.00	1.63	-72.14	77.19	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.919
	U_4–L_5	-10.96	6.72	10.55	-6.65	2.44	-2.79					7.31	-8.74	32.64	-37.31	0.00	0.00	0.00	0.00	0	1.09	-10.20	56.47	-72.12	107.1
	U_4–L_6	-144.91	167.70	0.40	-0.38	-4.74	5.29					-177.22	207.35	-327.35	327.35	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_5–L_6	-102.02	95.66	0.18	-0.38	-3.27	4.20					2.23	-4.94	-42.30	54.29	0.00	0.00	0.00	0.00	0	-127.66	113.65	-224.26	241.99	35.5
	U_5–L_7	-111.13	68.05	0.01	-0.18	-3.32	4.97					1.10	-4.32	-42.39	64.34	0.00	0.00	0.00	0.00	0	-144.10	138.60	-227.97	245.05	35.5
	U_6–L_7	-96.42	93.90	0.54	-0.46	-3.61	3.96					6.93	-6.00	-46.72	51.20	0.00	0.00	0.00	0.00	0	-110.32	109.06	-238.57	233.00	21.1
	U_6–L_8	-60.91	75.94	0.79	-0.90	-3.20	3.60					10.26	-10.39	-41.35	46.53	0.00	0.00	0.00	0.00	0	-56.95	76.21	-168.17	199.53	17.2
	U_7–L_8	-33.99	37.86	0.66	-0.73	-2.36	2.65					6.26	-6.43	-42.29	24.36	0.00	0.00	0.00	0.00	0	-60.40	54.94	-94.85	70.49	17.2
	U_7–L_9	8.32	-15.87	-2.03	1.99	3.17	-3.46					-26.20	25.75	40.99	-44.79	0.00	0.00	0.00	0.00	0	-45.96	35.15	99.62	-117.69	15.4
	U_8–L_9	47.73	-50.39	-0.30	0.36	3.89	-4.03					-15.38	8.90	39.86	-49.22	0.00	0.00	0.00	0.00	0	-59.56	-86.22	148.47	-160.68	15.4
	U_8–L_{10}	61.55	-72.81	-0.60	0.60	3.50	-3.85					-7.70	7.75	49.22	-49.86	0.00	0.00	0.00	0.00	0	63.33	-77.77	177.99	-202.69	194.4
	U_9–L_{10}	133.11	-138.25	0.83	-0.83	6.27	-6.66					-10.70	11.08	-91.08	96.18	0.00	0.00	0.00	0.00	0	148.85	-158.37	348.72	-364.38	33.7
	U_9–L_{11}	157.87	-153.86	-0.85	0.76	6.69	-6.56					-10.66	9.82	-86.56	-90.32	0.00	0.00	0.00	0.00	0	181.49	-178.74	362.78	-399.72	42.7
	U_{10}–L_{11}	131.38	-213.66	-0.37	0.62	4.82	-6.50					-4.74	7.96	62.31	-84.76	0.00	0.00	0.00	0.00	0	160.51	-260.51	355.77	-461.40	42.7
	U_{10}–L_{12}	-147.13	191.00	0.26	-0.66	-4.86	7.26					6.07	-8.74	-124.76	224.19	0.00	0.00	0.00	0.00	0	-172.05	228.19	533.99	-727.46	42.7
	U_{11}–L_{12}	-122.87	130.77	0.80	-0.82	-6.12	6.29					10.16	-10.41	-78.17	80.31	0.00	0.00	0.00	0.00	0	-137.22	-147.44	-329.09	344.01	46.7
	U_{11}–L_{13}	119.87	-126.79	0.98	-0.98	4.29	-4.29					12.67	-12.67	-84.56	84.56	0.00	0.00	0.00	0.00	0	134.64	134.64	310.99	310.99	46.7
	U_{12}–L_{13}	-62.46	69.03	0.63	-0.64	-3.22	3.52					8.06	-8.22	-42.43	-65.01	0.00	0.00	0.00	0.00	0	-63.73	71.94	-173.13	187.26	21.5
	U_{12}–L_{14}	37.86	-43.29	0.82	-0.82	-3.75	3.75					4.91	-4.91	-41.67	41.67	0.00	0.00	0.00	0.00	0	37.86	-43.29	82.82	-94.70	21.5
	U_{13}–L_{14}	-9.11	15.69	1.32	1.30	-2.74	3.16					16.90	-16.61	-64.01	60.39	0.00	0.00	0.00	0.00	0	24.78	-15.59	-87.61	-107.96	15.4
	U_{13}–L_{15}	14.84	-14.93	1.97	-2.08	-2.59	2.80					25.11	-26.59	-33.13	35.71	0.00	0.00	0.00	0.00	0	73.68	-77.01	-52.49	57.97	15.4
	U_{14}–L_{15}	33.59	-35.64	1.81	-1.89	-2.17	2.34					7.18	-20.39	-17.27	-17.82	0.00	0.00	0.00	0.00	0	88.83	-103.26	-32.70	-15.42	15.4
	U_{14}–L_{16}	88.81	-97.92	-1.01	0.91	3.63	-4.15					-12.32	11.68	48.96	-53.07	0.00	0.00	0.00	0.00	0	87.46	-101.99	221.53	-242.29	20.8
	U_{15}–L_{16}	-153.08	153.02	0.71	-0.46	-3.92	3.92					-10.38	8.35	59.56	-66.22	0.00	0.00	0.00	0.00	0	179.33	-189.20	392.95	-443.23	46.7
	U_{15}–L_{17}	140.09	-147.00	-0.29	0.51	6.21	-6.44					-3.76	0.13	-79.28	82.29	0.00	0.00	0.00	0.00	0	174.01	-190.82	353.89	-369.40	43.0
	U_{16}–L_{17}	148.96	-153.44	-0.15	0.26	5.69	-5.77					-1.67	3.35	65.01	-72.86	0.00	0.00	0.00	0.00	0	189.61	-192.22	334.50	-351.40	43.0
	U_{16}–L_{18}	143.67	-139.96	0.43	-0.43	5.90	-5.90					12.67	-12.67	-84.56	84.56	0.00	0.00	0.00	0.00	0	134.64	134.64	310.99	310.99	46.7
	U_{17}–L_{18}	185.41	-182.32	-0.66	0.62	7.28	-6.91					-8.48	7.90	92.95	-88.22	0.00	0.00	0.00	0.00	0	222.65	-220.17	462.42	-428.42	39.2
	U_{17}–L_{19}	72.60	73.13	0.70	-0.70	3.07	-3.07					1.00

Axial - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 2.17
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guidelines for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Does Lumpbelt in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-23.44	-7.53	0.86	0.72	0.27	-0.22				
	U_1-L_2	-3.41	-8.42	1.56	0.91	0.37	-0.14				
	U_2-L_3	-16.78	-7.89	1.93	0.90	0.32	-0.51				
	U_3-L_4	7.93	-13.37	-0.93	-0.74	-0.40	-1.22				
	U_4-L_5	-14.61	18.52	-1.77	-0.03	-0.41	-0.24				
	U_5-L_6	-37.44	76.90	-3.45	-2.39	-0.72	-0.19				
	U_6-L_7	-37.19	76.90	-6.02	-3.62	-1.25	-0.31				
	U_7-L_8	-8.75	101.99	-2.31	4.07	0.33	0.07				
	L_1-L_2	-5.11	118.70	1.39	3.07	0.39	-0.24				
	L_2-L_3	-77.69	73.54	-3.19	2.79	0.42	-0.15				
	L_3-L_4	-43.88	73.22	-2.84	1.31	0.39	-0.05				
	L_4-L_5	-43.88	73.22	-2.84	0.10	0.39	-0.71				
	L_5-L_6	-65.20	48.77	2.71	1.83	0.14	-0.67				
	L_6-L_7	-24.90	6.63	-1.36	0.71	0.18	-0.80				
	L_7-L_8	-0.81	3.25	-2.63	-0.23	0.14	-0.68				
	L_0-U_1	-25.30	9.99	-1.72	1.47	-0.04	-0.71				
	U_1-U_2	-37.01	20.01	-2.68	2.32	-0.05	-0.71				
	U_2-U_3	-101.94	74.32	-4.78	3.76	0.54	-0.54				
	U_3-U_4	-115.87	80.00	-5.24	3.90	0.40	-0.47				
	U_4-U_5	-75.88	78.94	3.85	3.75	0.11	-0.22				
	U_5-U_6	-109.41	98.91	3.61	3.91	0.51	-0.53				
	U_6-U_7	-89.79	78.55	3.47	3.57	0.52	-0.57				
	U_7-U_8	-90.87	71.82	-4.37	3.61	0.74	-0.64				
	L_0-L_1	-47.39	28.52	-2.62	-1.53	0.17	-0.86				
	L_1-L_2	-20.35	3.86	-2.22	1.61	0.43	-0.70				
	L_2-L_3	-1.38	-11.20	-3.14	-0.72	0.07	-0.98				
	L_3-L_4	6.85	-23.87	-1.33	0.42	1.62	-1.57				
	L_4-L_5	-44.41	35.31	-2.14	1.64	-0.22	-1.03				
	L_5-L_6	-96.57	69.69	-4.46	3.23	-0.49	-1.29				
	L_6-L_7	-85.40	67.30	-3.83	2.84	-0.47	-0.52				
	L_7-L_8	-37.01	29.80	-4.16	1.39	-0.40	-0.24				
	U_0-L_1	-109.84	116.34	-5.04	3.97	0.43	0.05				
	U_1-L_2	-141.98	130.62	-5.89	5.18	0.82	-0.40				
	U_2-L_3	-82.19	133.47	-2.95	5.18	0.52	-0.10				
	U_3-L_4	-11.96	79.20	-3.17	3.90	0.65	-0.51				
	U_4-L_5	-77.27	77.27	-4.26	4.34	0.91	-0.51				
	U_5-L_6	-66.19	89.97	-4.79	4.31	0.34	-0.42				
	U_6-L_7	-58.07	72.69	-4.15	3.27	0.47	-0.53				
	U_7-L_8	-58.07	72.69	-4.15	3.27	0.47	-0.53				
	L_0-U_1	-31.84	37.59	-2.17	2.20	0.17	-0.71				
	U_1-U_2	-43.07	53.16	-2.98	3.06	0.09	-0.71				
	U_2-U_3	-10.03	3.77	-1.63	0.68	0.59	-1.21				
	U_3-U_4	-19.43	19.57	-1.95	1.66	0.36	-0.87				
	U_4-L_5	-46.53	58.29	-3.91	3.50	0.64	-0.71				
	L_5-U_6	-54.32	68.37	-4.73	3.67	0.52	-0.65				
	U_6-L_7	-49.49	72.12	-5.70	5.05	0.36	-0.43				
	L_7-U_8	-17.78	17.78	-3.53	1.53	0.22	-0.43				
	L_0-L_1	-35.84	53.55	-3.38	4.25	0.84	-0.68				
	L_1-L_2	-29.97	29.97	-3.27	2.67	0.71	-0.73				
	L_2-L_3	-76.26	85.09	-4.00	3.68	0.66	-0.27				
	L_3-L_4	-78.38	71.14	-4.08	3.08	0.59	-0.55				
	L_4-L_5	-76.64	76.64	-4.07	3.25	0.40	-0.71				
	L_5-L_6	-76.26	76.26	-3.90	3.66	0.39	-0.71				
	L_6-L_7	-76.64	55.13	-4.17	3.25	0.04	-0.71				
	L_7-L_8	-25.70	33.90	-2.82	2.79	0.04	-0.71				
	L_0-L_1	-26.26	-17.63	-0.91	0.36	0.67	-1.54				
	L_1-L_2	-19.27	1.03	-0.85	1.51	0.00	-1.40				
	L_2-L_3	-13.28	6.67	-0.85	1.51	0.00	-1.40				
	L_3-L_4	-33.71	19.61	-2.73	2.03	0.55	-0.49				
	L_4-L_5	-78.83	60.14	-4.03	4.49	0.74	-0.67				
	L_5-L_6	-78.83	60.14	-4.03	4.49	0.74	-0.67				
	L_6-L_7	-61.15	51.03	-3.88	3.73	0.43	-0.71				
	L_7-L_8	-30.42	64.48	-4.36	3.27	0.36	-0.33				
	L_0-L_1	-53.53	18.27	-2.33	1.84	0.34	-0.31				
	L_1-L_2	-49.13	2.74	-2.33	1.84	0.34	-0.31				
	L_2-L_3	-1.49	-18.99	-1.56	0.27	0.53	-1.10				
	L_3-L_4	-33.89	37.99	-2.43	2.03	-0.32	-0.81				
	L_4-L_5	-61.82	22.38	-3.34	1.23	-1.45	-0.97				
	L_5-L_6	-73.70	52.24	-3.34	3.36	-1.45	-0.97				
	L_6-L_7	-73.27	65.81	-3.33	2.96	0.22	0.06				
	L_7-L_8	-30.42	64.48	-4.36	3.27	0.36	-0.33				
	L_0-L_1	-5.27	64.91	-2.00	3.49	0.31	-0.20				
	L_1-L_2	-38.99	50.41	-4.16	3.47	-0.13	-0.96				
	L_2-L_3	-7.78	19.68	-1.65	0.19	-0.10	-0.26				
	L_3-L_4	-33.89	37.99	-2.43	2.03	-0.32	-0.81				
	L_4-L_5	-61.82	22.38	-3.34	1.23	-1.45	-0.97				
	L_5-L_6	-73.70	52.24	-3.34	3.36	-1.45	-0.97				
	L_6-L_7	-73.27	65.81	-3.33	2.96	0.22	0.06				
	L_7-L_8	-30.42	64.48	-4.36	3.27	0.36	-0.33				
	L_0-L_1	-5.27	64.91	-2.00	3.49	0.31	-0.20				
	L_1-L_2	-38.99	50.41	-4.16	3.47	-0.13	-0.96				
	L_2-L_3	-7.78	19.68	-1.65	0.19	-0.10	-0.26				
	L_3-L_4	-2.61	-8.77	-1.38	-0.19	-0.45	-0.81				
	L_4-L_5	-5.74	-5.59	-1.38	-0.19	-0.45	-0.81				
	L_5-L_6	-5.74	0.35	-0.14	0.58	-0.14	-0.14				

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)
Structure 1	U_0-L_1	-55.28	30.71	-22.68	3.39
	U_1-L_2	-29.76	23.20	-46.37	10.58
	U_2-L_3	-46.37	10.58	-94.00	35.1
	U_3-L_4	-237.94	205.96	-80.37	31.34
	U_4-L_5	-30.82	54.36	-4.46	0.95
	U_5-L_6	-17.96	39.67	5.01	3.11
	U_6-L_7	-42.00	29.28	5.41	1.94
	U_7-L_8	-36.71	16.94	5.07	0.66
	L_1-L_2	-40.11	15.54	3.23	-0.23
	L_2-L_3	-35.00	23.66	1.84	-8.69
	L_3-L_4	-17.54	9.21	2.37	-11.02
	L_4-L_5	-14.61	14.61	5.84	-15.68
	L_5-L_6	-25.30	9.99	-1.72	-0.04
	L_6-L_7	-37.01	20.01	-2.68	-0.05
	L_7-L_8	-101.94	74.32	-4.78	3.76
	L_0-L_1	-115.87	80.00	-5.24	3.90
	L_1-L_2	-75.88	78.94	3.85	3.75
	L_2-L_3	-109.41	98.91	3.61	3.91
	L_3-L_4	-89.79	78.55	3.47	3.57
	L_4-L_5	-90.87	71.82	-4.37	3.61
	L_5-L_6	-47.39	28.52	-2.62	-1.53
	L_6-L_7	-20.35	3.86	-2.22	1.61
	L_7-L_8	-1.38	-11.20	-3.14	-0.72
	L_0-L_1	6.85	-23.87	-1.33	0.42
	L_1-L_2	-44.41	35.31	-2.14	1.64
	L_2-L_3	-96.57	69.69	-4.46	3.23
	L_3-L_4	-85.40	67.30	-3.83	2.84
	L_4-L_5	-37.01	29.80	-4.16	1.39
	L_5-L_6	-109.84	116.34	-5.04	3.97
	L_6-L_7	-141.98	130.62	-5.89	5.18
	L_7-L_8	-82.19	133.47	-2.95	5.18
	L_0-L_1	-11.96	79.20	-3.17	3.90
	L_1-L_2	-77.27	77.27	-4.26	4.34
	L_2-L_3	-66.19	89.97	-4.79	4.31
	L_3-L_4	-58.07	72.69	-4.15	3.27
	L_4-L_5	-58.07	72.69	-4.15	3.27
	L_5-L_6	-31.84	37.59	-2.17	2.20
	L_6-L_7	-43.07	53.16	-2.98	3.06
	L_7-L_8	-10.03	3.77	-1.63	0.68
	L_0-L_1	-19.43	19.57	-1.95	1.66
	L_1-L_2	-46.53	58.29	-3.91	3.50
	L_2-L_3	-54.32	68.37	-4.73	3.67
	L_3-L_4	-49.49	72.12	-5.70	5.05
	L_4-L_5	-17.78	17.78	-3.53	1.53
	L_5-L_6	-35.84	53.55	-3.38	4.25
	L_6-L_7	-29.97	29.97	-3.27	2.67
	L_7-L_8	-76.26	85.09	-4.00	3.68
	L_0-L_1	-78.38	71.14	-4.08	3.08
	L_1-L_2	-76.64	76.64	-4.07	3.25
	L_2-L_3	-76.26	76.26	-3.90	3.66
	L_3-L_4	-76.64	55.13	-4.17	3.25
	L_4-L_5	-25.70	33.90	-2.82	2.79
	L_5-L_6	-26.26	-17.63	-0.91	0.36
	L_6-L_7	-19.27	1.03	-0.85	1.51
	L_7-L_8	-13.28	6.67	-0.85	1.51
	L_0-L_1	-33.71	19.61	-2.73	2.03
	L_1-L_2	-78.83	60.14	-4.03	4.49
	L_2-L_3	-78.83	60.14	-4.03	4.49
	L_3-L_4	-61.15	51.03	-3.88	3.73
	L_4-L_5	-30.42	64.48	-4.36	3.27
	L_5-L_6	-53.53	18.27	-2.33	1.84
	L_6-L_7	-49.13	2.74	-2.33	1.84
	L_7-L_8	-1.49	-18.99	-1.56	0.27
	L_0-L_1	-33.89	37.99	-2.43	2.03
	L_1-L_2	-61.82	22.38	-3.34	1.23
	L_2-L_3	-73.70	52.24	-3.34	3.36
	L_3-L_4	-73.27	65.81	-3.33	2.96
	L_4-L_5	-30.42	64.48	-4.36	3.27
	L_5-L_6	-5.27	64.91	-2.00	3.49
	L_6-L_7	-38.99	50.41	-4.16	3.47
	L_7-L_8	-7.78	19.68	-1.65	0.19
	L_0-L_1	-2.61	-8.77	-1.38	-0.19
	L_1-L_2	-5.74	-5.59	-1.38	-0.19
	L_2-L_3	-5.74	0.35	-0.14	0.58

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-28.15	-30.90	1.75	-0.78	0.47	0.83				
	U_1-L_2	-44.15	-40.74	-2.04	-14.72	9.03	0.00				
	U_2-L_3	-62.17	-20.78	-2.23	-2.39	-2.36	-2.36				
	U_3-L_4	-33.39	-37.29	-3.64	-2.60	1.57	-3.73				
	U_4-L_5	-28.31	-58.94	-3.63	-4.77	-1.37	-2.20				
	U_5-L_6	-42.42	-25.04	-7.84	-6.36	-13.72	-2.19				
	U_6-L_7	-67.11	-36.38	-10.63	-4.11	3.56	-1.88				
	U_7-L_8	-50.81	-75.61	-7.13	-6.97	3.55	2.20				
	L_1-L_2	-66.10	-50.77	-3.55	-4.77	4.73	3.90				
	L_2-L_3	-23.74	-67.56	16.28	2.00	5.22	1.26				
	L_3-L_4	-25.85	112.77	-0.62	3.37	-0.19	0.63				
	L_4-L_5	-32.31	-19.77	-2.49	-1.32	-0.62	-0.62				
	L_5-L_6	-87.86	61.19	10.43	7.98	0.00	0.00				
	L_6-L_7	-90.64	72.56	16.28	2.00	5.22	1.26				
	L_7-L_8	-8.02	-43.62	-2.43	8.09	0.00	0.00				
	L_0-L_1	-12.61	32.14	-17.13	-6.05	0.00	0.00				
	L_1-L_2	-16.11	44.61	-10.03	-19.50	0.00	0.00				
	L_2-L_3	-60.00	-66.36	0.27	1.29	-0.11	-1.30				
	L_3-L_4	-39.44	-163.50	-2.35	1.09	-7.25	0.42				
	L_4-L_5	-51.02	-38.61	-140.65	5.45	0.00	0.00				
	L_5-L_6	-103.60	-87.54	21.61	14.62	0.00	0.00				
	L_6-L_7	-138.27	-130.44	-10.16	-8.27	1.76	1.34				
	L_7-L_8	-131.39	-107.03	22.82	17.30	0.00	0.00				
	L_0-L_1	-87.75	-119.66	-10.70	-8.10	1.52	1.32				
	L_1-L_2	-138.45	-109.61	27.05	20.49	0.00	0.00				
	L_2-L_3	-116.50	-276.43	-7.63	11.61	0.00	0.00				
	L_3-L_4	-118.85	-93.01	37.88	28.83	0.00	0.00				
	L_4-L_5	-150.35	-120.64	-10.16	-8.27	1.76	1.34				
	L_5-L_6	-102.1	-77.3	-13.2	-10.0	2.3	1.7				
	L_6-L_7	-102.1	-77.3	-13.2	-10.0	2.3	1.7				
	L_7-L_8	-87.75	-119.66	-10.70	-8.10	1.52	1.32				
	L_0-L_1	-47.39	-28.52	-2.62	-1.53	0.17	-0.86				
	L_1-L_2	-20.35	-3.86	-2.22	-1.61	0.43	-0.70				
	L_2-L_3	-1.38	11.20	-3.14	0.72	0.07	0.98				
	L_3-L_4	-6.85	23.87	-1.33	-0.42	1.62	1.57				
	L_4-L_5	-44.41	-35.31	-2.14	-1.64	-0.22	1.03				
	L_5-L_6	-96.57	-69.69	-4.46	-3.23	-0.49	1.29				
	L_6-L_7	-85.40	-67.30	-3.83	-2.84	-0.47	0.52				
	L_7-L_8	-37.01	-29.80	-4.16	-1.39	-0.40	0.24				
	U_0-L_1	-109.84	-116.34	-5.04	-3.97	0.43	0.05				
	U_1-L_2	-141.98	-130.62	-5.89	-5.18	0.82	-0.40				
	U_2-L_3	-82.19	-133.47	-2.95	-5.18	0.52	-0.10				
	U_3-L_4	-11.96	-79.20	-3.17	-3.90	0.65	-0.51				
	U_4-L_5	-77.27	-77.27	-4.26	-4.34	0.91	-0.51				
	U_5-L_6	-66.19	-89.97	-4.79	-4.31	0.34	-0.42				
	U_6-L_7	-58.07	-72.69	-4.15	-3.27	0.47	-0.53				
	U_7-L_8	-58.07	-72.69	-4.15	-3.27	0.47	-0.53				
	L_0-U_1	-31.84	-37.59	-2.17	-2.20	0.17	-0.71				
	U_1-U_2	-43.07	-53.16	-2.98	-3.06	0.09	-0.71				
	U_2-U_3	-10.03	-3.77	-1.63	-0.68	0.59	-1.21				
	U_3-U_4	-19.43	-19.57	-1.95	-1.66	0.36	-0.87				
	U_4-L_5	-46.53	-58.29	-3.91	-3.50	0.64	-0.71				
	L_5-U_6	-54.32	-68.37	-4.73	-3.67	0.52	-0.65				
	U_6-L_7	-49.49	-72.12	-5.70	-5.05	0.36	-0.43				
	L_7-U_8	-17.78	-17.78	-3.53	-1.53	0.22	-0.43				
	L_0-L_1	-35.84	-53.55	-3.38	-4.25	0.84	-0.68				
	L_1-L_2	-29.97	-29.97	-3.27	-2.67	0.71	-0.73				
	L_2-L_3	-76.26	-85.09	-4.00	-3.68	0.66	-0.27				
	L_3-L_4	-78.38	-71.14	-4.08	-3.08	0.59	-0.55				
	L_4-L_5	-76.64	-76.64	-4.07	-3.25	0.40	-0.71				
	L_5-L_6	-76.26	-76.26	-3.90	-3.66	0.39	-0.71				
	L_6-L_7	-76.64	-55.13	-4.17	-3.25	0.04	-0.71				
	L_7-L_8	-25.70	-33.90	-2.82	-2.79	0.04	-0.71				
	L_0-L_1	-26.26	17.63	-0.91	-0.36	0.67	-1.54				
	L_1-L_2	-19.27	12.83	12.09	-19.56	0.00	-1.40				
	L_2-L_3	-13.28	6.67	-0.85	-1.51	0.00	-1.40				
	L_3-L_4	-33.71	19.61	-2.73	-2.03	0.55	-0.49				
	L_4-L_5	-78.83	60.14	-4.03	-4.49	0.74	-0.67				
	L_5-L_6	-78.83	60.14	-4.03	-4.49	0.74	-0.67				
	L_6-L_7	-61.15	51.03	-3.88	-3.73	0.43	-0.71				
	L_7-L_8	-30.42	64.48	-4.36	-3.27	0.36	-0.33				
	L_0-L_1	-53.53	18.27	-2.33	-1.84	0.34	-0.31				
	L_1-L_2	-49.13	2.74	-2.33	-1.84	0.34	-0.31				
	L_2-L_3	-1.49	18.99	-1.56	-0.27	0.53	-1.10				
	L_3-L_4	-33.89	37.99	-2.43	-2.03	-0.32	-0.81				
	L_4-L_5	-61.82	22.38	-3.34	-1.23	-1.45	-0.97				
	L_5-L_6	-73.70	52.24	-3.34	-3.36	-1.45	-0.97				
	L_6-L_7	-73.27	65.81	-3.33	-2.96	0.22	0.06				
	L_7-L_8	-30.42	64.48	-4.36	-3.27	0.36	-0.33				
	L_0-L_1	-5.27	64.91	-2.00	-3.49	0.31	-0.20				
	L_1-L_2	-38.99	50.41	-4.16	-3.47	-0.13	-0.96				
	L_2-L_3	-7.78	19.68	-1.65	-0.19	-0.10	-0.26				
	L_3-L_4	-33.89	37.99	-2.43	-2.03	-0.32	-0.81				
	L_4-L_5	-61.82	22.38	-3.34	-1.23	-1.45	-0.97				
	L_5-L_6	-73.70	52.24	-3.34	-3.36	-1.45	-0.97				
	L_6-L_7	-73.27	65.81	-3.33	-2.96	0.22	0.06				
	L_7-L_8	-30.42	64.48	-4.36	-3.27	0.36	-0.33				
	L_0-L_1	-5.27	64.91	-2.00	-3.49	0.31	-0.20				
	L_1-L_2	-38.99	50.41	-4.16	-3.47	-0.13	-0.96				
	L_2-L_3	-7.78	19.68	-1.65	-0.19	-0.10	-0.26				
	L_3-L_4	-2.61	-8.77	-1.38	-0.19	-0.45	-0.81				
	L_4-L_5	-5.74	-5.59	-1.38	-0.19	-0.45	-0.81				
	L_5-L_6	-5.74	0.35	-0.14	0.58	-0.14	-0.14				

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)
Structure 1	U_0-L_1	-23.05	-16.20
	U_1-L_2	-16.47	-96.76
	U_2-L_3	-31.49	-11.48
	U_3-L_4	-37.93	-94.0
	U_4-L_5	-103.31	272.75
	U_5-L_6	-216.07	-146.58
	U_6-L_7	-139.20	-141.14
	U_7-L_8	-139.20	-141.14
	L_1-L_2	-36.19	-103.31
	L_2-L_3	-216.07	-278.63
	L_3-L_4	-106.13	-85.02
	L_4-L_5	-216.07	-146.58
	L_5-L_6	-198.20	-216.77
	L_6-L_7	-139.20	-141.14
	L_7-L_8	-139.20	-141.14
	L_0-L_1	-36.19	-103.31
	L_1-L_2	-216.07	-278.63
	L_2-L_3	-106.13	-85.02
	L_3-L_4	-216.07	-146.58
	L_4-L_5	-198.20	-216.77
	L_5-L_6	-139.20	-141.14
	L_6-L_7	-139.20	-141.14
	L_7-L_8	-36.19	-103.31
	L_0-L_1	-216.07	-278.63
	L_1-L_2	-106.13	-85.02
	L_2-L_3	-216.07	-146.58
	L_3-L_4	-198.20	-216.77
	L_4-L_5	-139.20	-141.14
	L_5-L_6	-139.20	-141.14
	L_6-L_7	-36.19	-103.31
	L_7-L_8	-216.07	-278.63
	L_0-L_1	-106.13	-85.02
	L_1-L_2	-216.07	-146.58
	L_2-L_3	-198.20	-216.77
	L_3-L_4	-139.20	-141.14
	L_4-L_5	-139.20	-141.14
	L_5-L_6	-36.19	-103.31
	L_6-L_7	-216.07	-278.63
	L_7-L_8	-106.13	-85.02
	L_0-L_1	-216.07	-146.58
	L_1-L_2	-198.20	-216.77
	L_2-L_3	-139.20	-141.14
	L_3-L_4	-139.20	-141.14
	L_4-L_5	-36.19	-103.31
	L_5-L_6	-216.07	-278.63
	L_6-L_7	-106.13	-85.02
	L_7-L_8	-216.07	-146.58
	L_0-L_1	-198.20	-216.77
	L_1-L_2	-139.20	-141.14
	L_2-L_3	-139.20	-141.14
	L_3-L_4	-36.19	-103.31
	L_4-L_5	-216.07	-278.63
	L_5-L_6	-106.13	-85.02
	L_6-L_7	-216.07	-146.58
	L_7-L_8	-198.20	-216.77
	L_0-L_1	-139.20	-141.14
	L_1-L_2	-139.20	-141.14
	L_2-L_3	-36.19	-103.31
	L_3-L_4	-216.07	-278.63
	L_4-L_5	-106.13	-85.02
	L_5-L_6	-216.07	-146.58
	L_6-L_7	-198.20	-216.77
	L_7-L_8	-139.20	-141.14
	L_0-L_1	-139.20	-141.14
	L_1-L_2	-36.19	-103.31
	L_2-L_3	-216.07	-278.63
	L_3-L_4	-106.13	-85.02
	L_4-L_5	-216.07	-146.58
	L_5-L_6	-198.20	-216.77
	L_6-L_7	-

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-75.12	-0.70	1.20	1.40	5.40	-18.70	13.36	-13.59	11.25	-208.19
	U_1 - U_2	-45.81	-20.16	3.30	-2.30	-19.30	-27.83	-214.87	-214.87	0.00	0.00
	U_2 - U_3	-112.19	86.51	1.30	3.60	-10.70	-17.60	14.47	40.08	-119.12	-195.94
	U_3 - U_4	-15.68	66.14	2.30	2.40	-13.30	-13.10	25.61	37.85	-116.90	-168.11
	U_4 - U_5	-9.16	61.58	2.30	3.40	-19.00	-1.90	25.61	37.85	-211.53	-21.15
	U_5 - U_6	42.76	120.09	2.60	3.40	-15.60	-3.40	28.95	37.85	-173.67	-37.85
	U_6 - U_7	93.72	43.54	2.60	2.70	-3.40	-2.30	28.95	22.21	-156.98	-3.34
	U_7 - U_8	-47.40	525.96	0.00	9.00	-24.30	25.00	3.34	100.20	-270.53	278.33
	U_8 - U_9	474.81	-124.29	0.00	0.00	12.40	-16.70	98.12	0.00	133.70	-185.06
	U_9 - U_{10}	46.76	20.63	2.00	2.50	-3.60	-10.70	21.56	29.96	-38.82	-115.37
	U_{10} - U_{11}	64.51	-138.68	2.10	1.10	-14.50	-1.90	34.50	17.84	11.83	-156.34
	U_{11} - U_{12}	27.83	-140.42	3.40	1.60	-6.30	-17.70	36.66	17.25	-67.93	-190.84
	U_{12} - U_{13}	-106.18	-154.99	2.50	0.90	2.50	-19.90	26.96	9.70	26.96	-214.56
	U_{13} - U_{14}	-137.97	-202.66	1.70	1.30	-21.50	-21.50	18.33	14.02	-196.51	-216.82
	U_{14} - U_{15}	-245.66	-182.98	1.70	1.30	-27.50	-16.40	18.33	14.02	-296.51	-176.82
	U_{15} - U_{16}	-123.52	-326.70	2.10	0.30	-26.30	-3.10	22.64	3.23	-283.57	-32.42
	U_{16} - U_{17}	-269.82	-144.58	0.80	0.10	-27.80	-4.20	8.63	1.08	-299.74	-45.28
	U_{17} - U_{18}	-144.16	-67.23	0.80	0.40	-13.60	-3.10	8.63	4.31	-147.26	-44.77
	U_{18} - U_{19}	-170.35	-20.48	0.70	-0.10	-17.10	1.50	7.55	-1.08	-181.74	20.49
	U_{19} - U_{20}	-186.12	24.46	0.70	-0.60	-17.60	7.50	7.55	-6.47	-189.76	85.18
	U_{20} - U_{21}	-178.14	209.21	0.30	-0.70	-15.50	19.70	3.19	-19.41	-189.29	230.14
	U_{21} - U_{22}	-70.88	181.00	-0.30	2.10	0.10	-19.90	-3.19	22.36	1.06	211.88
	U_{22} - U_{23}	-5.39	53.89	-0.20	0.70	0.00	-5.70	-1.06	5.39	0.00	53.89
	U_{23} - U_{24}	-327.18	-325.33	1.40	3.00	-16.80	-21.20	14.91	31.94	-178.87	-225.72
	U_{24} - U_{25}	-338.53	-244.71	1.70	2.10	-21.70	-16.70	18.33	22.36	-266.16	-218.22
	U_{25} - U_{26}	-396.09	-197.74	2.90	5.60	-34.20	-18.60	30.88	59.62	-366.13	-205.92
	U_{26} - U_{27}	-344.15	-179.39	4.30	3.80	-17.40	-41.30	45.78	40.46	-185.26	-439.72
	U_{27} - U_{28}	-226.10	-291.73	3.20	4.30	-40.30	-4.70	34.06	45.78	-448.26	-50.04
	U_{28} - U_{29}	-350.17	-90.75	3.70	4.80	-23.00	-2.40	39.39	51.11	-244.88	-25.55
	U_{29} - U_{30}	-237.32	-237.32	4.10	4.30	-24.30	-24.30	43.63	45.78	-259.81	-259.81
	U_{30} - U_{31}	-167.07	39.82	4.70	4.70	-17.60	-3.60	50.04	50.04	-186.32	-38.33
	U_{31} - U_{32}	-44.72	170.72	4.20	3.80	-22.90	2.00	44.77	40.46	-243.82	21.29
	U_{32} - U_{33}	-27.28	-15.94	3.80	3.70	-4.70	-4.70	37.25	39.82	-128.82	-104.34
	U_{33} - U_{34}	-261.00	1265.93	0.50	13.70	-0.80	-1.50	5.32	145.88	-8.52	-15.97
	U_{34} - U_{35}	-1192.75	52.96	0.00	0.00	0.00	0.00	0.00	145.19	0.00	0.00
	U_{35} - U_{36}	-25.30	11.62	1.00	2.40	-14.10	-19.10	-10.10	14.81	-354.31	-342.29
	U_{36} - U_{37}	-34.72	28.98	1.00	2.40	-14.10	-19.10	-10.10	34.72	-354.31	-411.47
	U_{37} - U_{38}	-150.58	33.05	3.60	3.10	-9.50	-14.50	37.88	32.62	-89.95	-152.55
	U_{38} - U_{39}	-147.30	4.36	4.10	2.90	-6.20	-21.70	43.14	30.51	-65.23	-228.31
	U_{39} - U_{40}	-107.54	-107.54	3.80	3.80	-21.70	-21.70	39.32	39.32	-228.31	-228.31
	U_{40} - U_{41}	-31.67	-34.01	3.40	0.60	-15.50	-18.30	35.77	6.31	-163.08	-192.53
	U_{41} - U_{42}	-86.04	-71.70	2.70	3.10	-18.70	-16.70	22.69	32.62	-192.48	-175.82
	U_{42} - U_{43}	-60.95	-66.97	1.30	1.80	-29.00	-7.20	13.68	18.94	-305.11	-75.75
	U_{43} - U_{44}	-21.07	-21.07	1.80	1.80	-7.20	-7.20	18.94	18.94	-75.75	-75.75
	U_{44} - U_{45}	-32.99	-28.66	3.10	4.00	-14.60	-8.30	32.62	42.06	-153.61	-87.32
	U_{45} - U_{46}	-15.12	113.76	2.90	4.20	-18.80	0.50	30.51	44.19	-197.79	5.26
	U_{46} - U_{47}	-3.68	113.76	2.90	4.20	-18.80	0.50	32.62	44.19	-197.79	5.26
	U_{47} - U_{48}	-2.69	209.81	2.30	3.10	-19.30	-6.60	24.20	32.62	-203.06	-89.44
	U_{48} - U_{49}	-26.01	209.81	2.30	3.10	-19.30	-6.60	24.20	32.62	-203.06	-89.44
	U_{49} - U_{50}	-122.28	1156.58	0.40	14.20	0.10	-1.90	4.21	149.40	-1.05	-19.99
	U_{50} - U_{51}	-1153.78	196.80	12.80	1.20	-1.20	-0.90	136.28	12.78	-12.78	-9.58
	U_{51} - U_{52}	-1.37	202.66	1.70	1.30	-21.50	-21.50	18.33	14.02	-196.51	-216.82
	U_{52} - U_{53}	-178.87	-59.61	3.80	4.00	-6.40	-15.90	40.46	42.59	-68.14	-169.29
	U_{53} - U_{54}	-178.87	-59.61	3.80	4.00	-6.40	-15.90	40.46	42.59	-68.14	-169.29
	U_{54} - U_{55}	-68.77	-178.57	5.10	4.10	0.00	-26.80	54.30	43.65	0.00	-285.34
	U_{55} - U_{56}	-68.77	-178.57	5.10	4.10	0.00	-26.80	54.30	43.65	0.00	-285.34
	U_{56} - U_{57}	-236.40	-153.06	3.80	3.40	-13.70	-44.10	40.46	36.20	-145.86	-469.53
	U_{57} - U_{58}	-98.63	-313.14	4.10	3.80	-43.70	-7.80	43.65	40.46	-465.27	-83.05
	U_{58} - U_{59}	-139.47	-392.96	5.10	4.10	-26.80	-5.10	54.30	43.65	-285.34	-54.30
	U_{59} - U_{60}	-350.27	-386.72	3.00	2.80	-35.20	-9.40	31.94	8.52	-374.77	-100.08
	U_{60} - U_{61}	-350.27	-386.72	3.00	2.80	-35.20	-9.40	31.94	8.52	-374.77	-100.08
	U_{61} - U_{62}	-278.82	-117.63	2.00	-0.50	-31.80	0.50	21.29	-5.32	-338.57	5.32
	U_{62} - U_{63}	-282.26	-37.61	1.40	-0.60	-34.00	3.00	14.91	-6.39	-364.00	32.00
	U_{63} - U_{64}	-186.18	-74.50	1.90	-0.90	-20.10	7.00	15.97	-9.58	-274.00	74.53
	U_{64} - U_{65}	-139.59	-187.78	-0.10	0.90	4.90	-16.30	-1.08	9.70	52.83	-175.75
	U_{65} - U_{66}	-47.42	-119.54	-0.20	1.10	2.00	-15.20	-2.16	12.94	43.13	-196.23
	U_{66} - U_{67}	-52.50	-226.93	-0.20	1.20	4.00	-18.20	-2.16	12.94	43.13	-196.23
	U_{67} - U_{68}	-277.57	-111.60	0.90	2.30	-14.30	-20.90	9.70	24.80	-154.18	-225.34
	U_{68} - U_{69}	-166.87	-240.33	1.50	2.10	-20.40	-19.60	16.17	22.64	-219.95	-211.33
	U_{69} - U_{70}	-287.50	-127.71	1.50	1.80	-20.20	-8.90	16.17	19.41	-217.80	-96.16
	U_{70} - U_{71}	-141.30	-113.93	1.30	2.40	-16.50	-9.90	14.02	25.88	-177.90	-9.72
	U_{71} - U_{72}	-141.54	56.98	2.00	3.30	-18.40	1.70	21.56	35.58	-198.39	18.33
	U_{72} - U_{73}	-136.80	470.88	0.50	7.50	-17.80	16.50	5.39	80.87	-191.92	177.90
	U_{73} - U_{74}	-59.30	15.07	3.50	2.10	-8.80	-15.20	38.97	23.38	-97.97	-169.22
	U_{74} - U_{75}	80.64	-19.79	3.50	1.90	-14.70	-5.80	38.97	21.15	-163.66	-64.57
	U_{75} - U_{76}	80.24	-119.59	3.40	0.70	-17.00	-4.70	37.85	7.79	-189.26	-52.33
	U_{76} - U_{77}	-24.67	-27.08	2.10	0.20	-20.80	-3.10	23.38	2.23	-231.57	-34.51
	U_{77} - U_{78}	29.36	-160.66	1.50	-0.40	-15.30	2.70	16.15	-4.46	-170.33	30.06

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bc} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F/F_{cb}	M_z k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(a)}$	Equivalent Mom. Factor $C_{m(b)}$
Structure 1	U_0 - U_1	0.00	0.00	0.00	0.00	-62.21	32.87	63.22	-451.98	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206
	U_1 - U_2	0.00	0.00	0.00	0.00	-53.61	-83.74	-121.35	-461.76	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206
	U_2 - U_3	0.00	0.00	0.00	0.00	-114.49	199.30	-603.94	-312.08	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206
	U_3 - U_4	0.00	0.00	0.00	0.00	-35.19	169.49	-273.05	-37.37	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206
	U_4 - U_5	0.00	0.00	0.00	0.00	-53.57	162.07	-470.22	34.22	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206
	U_5 - U_6	0.00	0.00	0.00	0.00	28.95	37.85	-173.67	-37.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_6 - U_7	0.00	0.00	0.00	0.00	28.95	22.21	-156.98	-3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_7 - U_8	0.00	0.00	0.00	0.00	3.34	100.20	-270.53	278.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_8 - U_9	0.00	0.00	0.00	0.00	98.12	0.00	133.70	-185.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9 - U_{10}	0.00	0.00	0.00	0.00	21.56	29.96	-38.82	-115.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10} - U_{11}	0.00	0.00	0.00	0.00	34.50	17.84	11.83	-156.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11} - U_{12}	0.00	0.00	0.00	0.00	36.66	17.25	-67.93	-190.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12} - U_{13}	0.00	0.00	0.00	0.00	26.96	9.70	26.96	-214.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13} - U_{14}	0.00	0.00	0.00	0.00	18.33	14.02	-196.51	-216.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14} - U_{15}	0.00	0.00	0.00	0.00	18.33	14.02	-296.51	-176.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15} - U_{16}	0.00	0.00	0.00	0.00	22.64	3.23	-283.57	-32.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16} - U_{17}	0.00	0.00	0.00	0.00	8.63	1.08	-299.74	-45.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17} - U_{18}	0.00	0.00	0.00	0.00	8.63	4.31	-147.26	-44.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18} - U_{19}	0.00	0.00	0.00	0.00	7.55	-1.08	-181.74	20.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19} - U_{20}	0.00	0.00	0.00	0.00	7.55	-6.47	-189.76	85.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20} - U_{21}	0.00	0.00	0.00	0.00	3.19	-19.41	-189.29	230.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21} - U_{22}	0.00	0.00	0.00	0.00	-3.19	22.36	1.06	211.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22} - U_{23}	0.00	0.00	0.00	0.00	-1.06	5.39	0.00	53.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23} - U_{24}	0.00	0.00	0.00	0.00	14.91	31.94	-178.87	-225.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24} - U_{25}	0.00	0.00	0.00	0.00	18.33	22.36	-266.16	-218.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25} - U_{26}	0.00	0.00	0.00	0.00	30.88	59.62	-366.13	-205.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26} - U_{27}	0.00	0.00	0.00	0.00	45.78	40.46	-185.26	-439.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27} - U_{28}	0.00	0.00	0.00	0.00	34.06	45.78	-448.26	-50.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28} - U_{29}	0.00	0.00	0.00	0.00	39.39	51.11	-244.88	-25.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29} - U_{30}	0.00	0.00	0.00	0.00	43.63	45.78	-259.81	-259.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{30} - U_{31}	0.00	0.00	0.00	0.00	50.04	50.04	-186.32	-38.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{31} - U_{32}	0.00	0.00	0.00	0.00	44.77	40.46	-243.82	21.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32} - U_{33}	0.00	0.00	0.00	0.00	37.25	39.82	-128.82	-104.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33} - U_{34}	0.00	0.00	0.00	0.00	5.32	145.88	-8.52	-15.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34} - U_{35}	0.00	0.00	0.00	0.00	145.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35} - U_{36}	0.00	0.00	0.00	0.00	-25.30	11.62	1.00	2.40	-14.10	-19.10
	U_{36} - U_{37}	0.00	0.00	0.00	0.00	-34.72	28.98	1.00	2.40	-14.10	-19.10
	U_{37} - U_{38}	0.00	0.00	0.00	0.00	37.88	32.62	-89.95	-152.55	0.00	0.00
	U_{38} - U_{39}	0.00	0.00	0.00	0.00	43.14	30.51	-65.23	-228.31	0.00	0.00
	U_{39} - U_{40}	0.00	0.00	0.00	0.00	39.32	39.32	-228.31	-228.31	0.00	0.00
	U_{40} - U_{41}	0.00	0.00	0.00	0.00	35.77	6.31	-163.08	-192.53	0.00	0.00
	U_{41} - U_{42}	0.00	0.00	0.00	0.00	22.69	32.62	-192.48	-175.82	0.00	0.00
	U_{42} - U_{43}	0.00	0.00	0.00	0.00	13.68	18.94	-305.11	-75.75	0.00	0.00
	U_{43} - U_{44}	0.00	0.00	0.00	0.00	18.94	18.94	-75.75	-75.75	0.00	0.00
	U_{44} - U_{45}	0.00	0.00	0.00	0.00	32.62	42.06	-153.61	-87.32	0.00	0.00
	U_{45} - U_{46}	0.00	0.00	0.00	0.00	30.51	44.19	-197.79	5.26	0.00	0.00
	U_{46} - U_{47}	0.00	0.00	0.00	0.00	32.62	44.19	-197.79	5.26	0.00	0.00
	U_{47} - U_{48}	0.00	0.00	0.00	0.00	24.20	32.62	-203.06	-89.44	0.00	0.00
	U_{48} - U_{49}	0.00	0.00	0.00	0.00	24.20	32.62	-203.06	-89.44	0.00	0.00
	U_{49} - U_{50}	0.00	0.00	0.00	0.00	4.21	149.40	-1.05	-19.99	0.00	0.00
	U_{50} - U_{51}	0.00	0.00	0.00	0.00	136.28	12.78	-12.78	-9.58	0.00	0.00
	U_{51} - U_{52}	0.00	0.00	0.00	0.00	18.33	14.02	-196.51	-216.82	0.00	0.00
	U_{52} - U_{53}	0.00	0.00	0.00	0.00	40.46	42.59	-68.14	-169.29	0.00	0.00
	U_{53} - U_{54}	0.00	0.00	0.00	0.00	40.46	42.59	-68.14	-169.29	0.00	0.00
	U_{54} - U_{55}	0.00	0.00	0.00	0.00	54.30	43.65	0.00	-285.34	0.00	0.00
	U_{55} - U_{56}	0.00	0.00	0.00	0.00	54.30	43.65	0.00	-285.34	0.00	0.00
	U_{56} - U_{57}	0.00	0.00	0.00	0.00	40.46	36.20	-145.86	-469.53	0.00	0.00
	U_{57} - U_{58}	0.00	0.00	0.00	0.00	43.65	40.46	-465.27	-83.05	0.00	0.00
	U_{58} - U_{59}	0.00	0.00	0.00	0.00	54.30	43.65	-285.34	-54.30	0.00	0.00
	U_{59} - U_{60}	0.00	0.00	0.00	0.00	31.94	8.52	-374.77	-100.08	0.00	0.00
	U_{60} - U_{61}	0.00	0.00	0.00	0.00	31.94	8.52	-374.77	-100.08	0.00	0.00
	U_{61} - U_{62}	0.00	0.00	0.00	0.00	21.29	-5.32	-338.57	5.32	0.00	0.00
	U_{62} - U_{63}	0.00	0.00	0.00	0.00	14.91	-6.39	-364.00	32.00	0.00	0.00
	U_{63} - U_{64}	0.00	0.00	0.00	0.00	15.97	-9.58	-274.00	74.53	0.00	0.00
	U_{64} - U_{65}	0.00	0.00	0.00	0.00	-1.08	9.70	52.83	-175.75	0.00	0.00
	U_{65} - U_{66}	0.00	0.00	0.00	0.00	-2.16	12.94	43.13	-196.23	0.00	0.00
	U_{66} - U_{67}	0.00	0.00	0.00	0.00	-2.16	12.94	43.13	-196.23	0.00	0.00
	U_{67} - U_{68}	0.00	0.00	0.00	0.00	9.70	24.80	-154.18	-225.34	0.00	0.00
	U_{68} - U_{69}	0.00	0.00	0.00	0.00	16.17	22.64	-219.95	-211.33	0.00	0.00
	U_{69} - U_{70}	0.00	0.00	0.00	0.00	16.17	19.41	-217.80	-96.16	0.00	0.00
	U_{70} - U_{71}	0.00	0.00	0.00	0.00	14.02	25.88	-177.90	-9.72	0.00	0.00
	U_{71} - U_{72}	0.00	0.00	0.00	0.00	21.56	35.58	-198.39	18.33	0.00	0.00
	U_{72} - U_{73}	0.00	0.00	0.00	0.00	5.39	80.87	-191.92	177.90	0.00	0.00
	U_{73} - U_{74}	0.00	0.00	0.00	0.00	109.10	1.11	175.90	-202.62	0.00	0.00
	U_{74} - U_{75}	0.00	0.00	0.00	0.00	113.01	44.44	3.60	2.40	-3.40	-10.80
	U_{75} - U_{76}	0.00	0.00	0.00	0.00	40.08	26.72	-37.85	-120.24	0.00	0.00
	U_{76} - U_{77}	0.00	0.00	0.00	0.00	38.97	23.38	-97.97	-169.22	0.00	0.00
	U_{77} - U_{78}	0.00	0.00	0.00	0.00	16.15	-4.46	-170.33	30.06	0.00	0.00

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-4.45	-10.02	-16.70	-90.18	0.00	0.00	0.00	0.00	0.00	0.00
	U_1 - U_2	-17.81	-5.57	-37.81	-5.57	0.00	0.00	0.00	0.00	0.00	0.00
	U_2 - U_3	-16.70	0.00	24.49	-3.34	0.00	0.00	0.00	0.00	0.00	0.00
	U_3 - U_4	-20.04	-5.57	-2.23	-2.23	0.00	0.00	0.00	0.00	0.00	0.00
	U_4 - U_5	-34.49	0.68	-5.57	-11.13	0.00	0.00	0.00	0.00	0.00	0.00
	U_5 - U_6	-25.61	11.13	7.79	-42.31	0.00	0.00	0.00	0.00	0.00	0.00
	U_6 - U_7	-15.59	10.13	-26.74	-22.26	0.00	0.00	0.00	0.00	0.00	0.00
	U_7 - U_8	-6.99	0.91	-37.81	-27.83	0.00	0.00	0.00	0.00	0.00	0.00
	U_8 - U_9	-19.41	10.58	-11.13	4.31	0.00	0.00	0.00	0.00	0.00	0.00
	U_9 - U_{10}	-6.47	17.25	0.00	33.42	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10} - U_{11}	-4.31	9.70	15.33	-2.16	0.00	0.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Section Loss for Strength Design of Truss Bridges (LDF) 1985 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-In (kip-ft)	Dead Load End-In (kip-ft)	Live Load (Max) Start-In (kip-ft)	Live Load (Max) End-In (kip-ft)	Pedestrian Load (Max) Start-In (kip-ft)	Pedestrian Load (Min) End-In (kip-ft)	Lane Reduction & Impact Live Load Start-In (kip-ft)	Lane Reduction & Impact Live Load End-In (kip-ft)	Impact Pedestrian Load Max Start-In (kip-ft)	Impact Pedestrian Load Max End-In (kip-ft)
Structure 1	L_0-L_1	-15.54	-73.33	3.90	-8.90	3.20	-2.70	43.42	-76.82	35.63	-30.06
	L_1-L_2	39.76	-87.96	-5.70	-12.80	-0.10	2.30	-83.46	-142.50	-1.11	25.61
	L_2-L_3	33.59	-42.20	-9.90	-13.50	1.40	2.40	-170.22	-172.82	19.19	26.72
	L_3-L_4	-11.34	11.55	-19.60	-3.90	1.30	4.00	-218.21	-43.42	14.47	44.53
	L_4-L_5	-49.11	208.03	-34.47	131.25	28.95	41.19	-347.02	203.75	52.61	92.58
	L_5-L_6	-0.46	181.07	-6.00	-6.40	2.20	5.40	-66.80	-71.25	24.49	80.32
	L_6-L_7	47.44	78.72	-12.90	-10.90	2.60	-1.30	-143.02	-54.55	-15.86	8.84
	L_7-L_8	-25.11	448.74	0.00	0.00	-0.10	10.00	0.00	0.00	-1.11	111.33
	L_8-L_9	425.89	-36.02	0.00	0.00	11.20	-0.60	0.00	0.00	120.76	-6.47
	L_9-L_{10}	150.02	-126.53	-7.90	-5.60	-0.80	2.40	10.48	-3.16	2.33	-176.34
	L_{10}-L_{11}	120.44	-115.99	-4.50	-5.30	4.40	1.80	-48.52	-57.14	47.44	19.41
	L_{11}-L_{12}	39.08	-108.07	-5.70	-6.70	4.40	1.30	-61.46	-105.46	-1.09	14.02
	L_{12}-L_{13}	-45.24	-121.26	-6.30	-10.20	2.40	1.10	-87.93	-109.98	25.88	11.86
	L_{13}-L_{14}	96.32	-264.98	-5.90	-21.70	1.90	1.40	-63.61	-233.97	20.49	15.09
	L_{14}-L_{15}	36.52	-264.98	-6.00	-21.70	1.90	1.40	-250.16	-165.45	15.09	15.09
	L_{15}-L_{16}	-191.89	-318.35	-17.80	-16.30	0.90	0.40	-595.28	-764.64	-228.43	-404.51
	L_{16}-L_{17}	339.58	44.88	-15.10	-3.90	0.40	0.60	-162.81	-42.05	8.63	-3.23
	L_{17}-L_{18}	-154.59	-31.26	-11.80	-1.60	0.20	-0.20	-127.23	-17.25	2.16	-2.16
	L_{18}-L_{19}	-215.80	145.76	-10.00	-3.60	0.30	0.00	-107.92	88.51	-3.60	-0.72
	L_{19}-L_{20}	-136.32	49.67	-0.70	-2.70	4.80	7.80	-7.50	-2.16	-76.55	81.75
	L_{20}-L_{21}	-2.68	-185.02	2.40	-6.80	3.40	4.70	25.55	-72.40	36.20	-71.33
	L_{21}-L_{22}	-4.23	-243.21	1.60	-8.90	4.50	6.20	-7.65	-155.40	-7.45	-19.16
	L_{22}-L_{23}	-4.23	-180.72	-4.60	-13.20	-0.20	1.50	0.00	0.00	0.00	0.00
	L_{23}-L_{24}	3.56	-324.42	-6.60	-19.10	4.30	2.40	-68.62	-206.36	-2.35	-25.55
	L_{24}-L_{25}	-252.80	-295.03	-20.00	-14.60	1.40	2.40	-212.94	-155.45	14.91	25.55
	L_{25}-L_{26}	-475.08	-252.15	-20.00	-14.60	1.40	2.40	-305.97	-156.51	40.46	40.46
	L_{26}-L_{27}	-280.47	-64.51	-27.10	-11.70	3.10	5.40	-288.53	-124.57	33.01	57.49
	L_{27}-L_{28}	-292.36	-219.74	-27.10	-11.70	3.10	5.40	-187.39	-69.62	41.52	57.49
	L_{28}-L_{29}	-225.83	141.30	-15.00	-5.40	2.60	5.20	-159.71	-57.49	27.68	55.36
	L_{29}-L_{30}	-201.52	259.41	-15.00	-5.40	2.60	5.40	-286.05	215.12	-165.19	55.36
	L_{30}-L_{31}	-160.03	387.16	-6.10	-8.40	2.60	6.10	-64.95	-89.43	27.68	64.95
	L_{31}-L_{32}	-202.71	204.45	-1.20	-5.30	2.10	-0.90	-12.78	3.19	22.36	-17.46
	L_{32}-L_{33}	373.76	1103.16	0.10	-4.70	1.70	-0.70	-18.34	-1.05	200.95	-43.14
	L_{33}-L_{34}	1072.48	412.35	-1.80	-0.10	19.10	-4.10	-18.34	-1.05	200.95	-43.14
	L_{34}-L_{35}	339.46	41.57	-1.80	-0.10	19.10	-4.10	-7.38	-0.43	65.23	25.22
	L_{35}-L_{36}	475.57	49.03	-7.50	-6.20	6.10	1.60	-78.91	-86.27	64.18	16.83
	L_{36}-L_{37}	1.19	83.13	-7.50	-6.20	6.10	1.60	-78.91	-86.27	64.18	16.83
	L_{37}-L_{38}	226.51	-41.81	-9.90	-7.10	5.00	2.10	-104.16	-74.70	52.61	22.09
	L_{38}-L_{39}	214.45	-56.43	-12.10	-10.30	2.90	3.10	-127.30	-108.37	30.51	32.62
	L_{39}-L_{40}	49.27	-202.49	-21.00	-15.20	2.40	1.90	-220.94	-159.92	25.25	19.99
	L_{40}-L_{41}	-197.10	-24.39	-21.00	-15.20	2.40	1.90	-220.94	-159.92	25.25	19.99
	L_{41}-L_{42}	-111.92	0.86	-21.60	-11.30	2.00	4.30	-230.41	-118.89	21.04	45.24
	L_{42}-L_{43}	-173.76	113.16	-21.60	-11.30	2.00	4.30	-230.41	-118.89	21.04	45.24
	L_{43}-L_{44}	-60.78	179.81	-10.80	-7.60	2.10	4.90	-113.63	-79.96	22.09	51.55
	L_{44}-L_{45}	-81.80	265.56	-7.40	-10.10	3.50	2.00	-77.86	-106.26	36.82	21.04
	L_{45}-L_{46}	29.58	413.39	-6.80	-9.00	3.20	1.80	-77.89	-84.42	34.73	18.94
	L_{46}-L_{47}	-99.81	-279.28	-0.40	-0.70	-0.40	1.50	-4.21	-7.38	-4.21	19.99
	L_{47}-L_{48}	-371.96	1004.43	-0.40	-0.70	-0.40	1.50	-4.21	-7.38	-4.21	19.99
	L_{48}-L_{49}	1026.29	362.30	-1.00	0.00	19.80	-5.00	-10.65	0.00	210.91	-53.24
	L_{49}-L_{50}	-226.76	-125.36	0.10	-1.30	-4.50	3.30	1.06	-13.84	-47.91	35.14
	L_{50}-L_{51}	-371.96	1004.43	-0.40	-0.70	-0.40	1.50	-4.21	-7.38	-4.21	19.99
	L_{51}-L_{52}	278.05	-132.91	-4.50	-8.40	2.70	4.10	-47.91	-89.43	28.75	43.65
	L_{52}-L_{53}	119.66	33.51	-4.50	-8.40	2.70	4.10	-47.91	-89.43	28.75	43.65
	L_{53}-L_{54}	222.98	-243.21	-4.90	-15.90	3.20	3.70	-52.17	-169.29	34.07	37.26
	L_{54}-L_{55}	222.98	-243.21	-4.90	-15.90	3.20	3.70	-52.17	-169.29	34.07	37.26
	L_{55}-L_{56}	-167.58	-470.72	-25.60	-38.80	3.70	2.80	-272.66	-285.34	39.39	29.81
	L_{56}-L_{57}	-445.06	-83.48	-28.20	-19.90	3.20	0.70	-220.94	-211.68	34.07	14.95
	L_{57}-L_{58}	-291.78	319.55	-6.80	-10.00	3.60	2.30	-271.92	-166.04	47.26	25.22
	L_{58}-L_{59}	-392.27	38.30	-21.10	-9.30	1.40	-0.50	-266.69	-164.75	-477.68	38.26
	L_{59}-L_{60}	-392.27	38.30	-21.10	-9.30	1.40	-0.50	-143.73	-164.75	-477.68	38.26
	L_{60}-L_{61}	-297.04	199.10	-12.60	-1.60	0.90	-0.50	-137.35	-17.04	9.58	-5.32
	L_{61}-L_{62}	-297.04	199.10	-12.60	-1.60	0.90	-0.50	-137.35	-17.04	9.58	-5.32
	L_{62}-L_{63}	24.53	-109.42	3.60	-5.90	4.10	-5.70	38.82	-63.61	44.21	-61.46
	L_{63}-L_{64}	139.90	-177.77	2.10	-10.70	-0.40	0.80	22.64	-115.37	-4.31	8.63
	L_{64}-L_{65}	11.57	-138.51	3.60	-5.90	4.10	-5.70	-15.65	-63.61	44.21	-61.46
	L_{65}-L_{66}	47.96	-293.64	-7.70	-12.40	-0.30	1.30	-155.28	-153.70	-3.23	14.02
	L_{66}-L_{67}	47.96	-293.64	-7.70	-12.40	-0.30	1.30	-155.28	-153.70	-3.23	14.02
	L_{67}-L_{68}	-47.68	-343.07	-19.20	-12.50	0.40	2.30	-207.01	-134.78	4.31	24.80
	L_{68}-L_{69}	-341.10	86.20	-21.50	-7.40	1.90	1.70	-231.81	-79.76	19.41	38.33
	L_{69}-L_{70}	-341.10	86.20	-21.50	-7.40	1.90	1.70	-231.81	-79.76	19.41	38.33
	L_{70}-L_{71}	-201.09	152.50	-9.70	-3.50	1.30	2.90	-104.59	-37.74	14.02	31.27
	L_{71}-L_{72}	-201.09	152.50	-9.70	-3.50	1.30	2.90	-104.59	-37.74	14.02	31.27
	L_{72}-L_{73}	-148.24	148.96	-11.50	-2.70	2.60	-0.90	-123.99	-29.11	28.03	-6.39
	L_{73}-L_{74}	-148.24	148.96	-11.50	-2.70	2.60	-0.90	-123.99	-29.11	28.03	-6.39
	L_{74}-L_{75}	428.31	-26.46	-0.00	0.00	10.80	-3.30	0.00	0.00	120.24	-33.44
	L_{75}-L_{76}	428.31	-26.46	-0.00	0.00	10.80	-3.30	0.00	0.00	120.24	-33.44
	L_{76}-L_{77}	70.66	-27.56	-6.30	-7.90	2.30	2.30	-70.14	-80.16	21.75	25.61
	L_{77}-L_{78}	70.66	-27.56	-6.30	-7.90	2.30	2.30	-70.14	-80.16	21.75	25.61
	L_{78}-L_{79}	194.48	-25.11	-7.10	-8.10	3.50	2.90	-79.04	-95.18	38.97	32.29
	L_{79}-L_{80}	194.48	-25.11	-7.10	-8.10	3.50	2.90	-79.04	-95.18	38.97	32.29
	L_{80}-L_{81}	-45.48	-80.88	-13.70	-13.60	2.00	0.70	-389.59	-433.20	11.88	68.26
	L_{81}-L_{82}	-45.48	-80.88	-13.70	-13.60	2.00	0.70	-389.59	-433.20	11.88	68.26
	L_{82}-L_{83}	-74.64	-5.53	-7.50	-3.60	4.10	3.60	-134.71	-55.41	-22.27	7.79
	L_{83}-L_{84}	-74.64	-5.53	-7.50	-3.60	4.10	3.60	-83.00	-40.08	-45.65	-42.08

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start-In (kip-ft)	Max. Pos. Mom. End-In (kip-ft)	Max. Neg. Mom. Start-In (kip-ft)	Max. Neg. Mom. End-In (kip-ft)	S_{top} (in^3)	S_b (in^3)	S_{bb} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/E_s	M_z (k-in)	Equivalent Mem. Factor a	Equivalent Mem. Factor C_{mx}	Equivalent Mem. Factor C_{mm}
Structure 1	L_0-L_1	-73.87	-201.77	56.99	-160.46	83.6	83.58	74.65	100.97	2577	1.21	3332	0.99900094	2755.4	-0.282	0.49	0.49
	L_1-L_2	-85.80	-423.11	49.28	-358.87	83.6	83.58	67.49	100.97	2577	1.21	3332	0.99900094	2755.4	0.203	0.68	0.68
	L_2-L_3	-341.35	-428.75	-69.78	-363.76	99.5	99.53	91.00	125.49	3409	1.26	4141	0.99911881	3294.8	0.162	0.66	0.66
	L_3-L_4	-487.52	-79.05	16.62	111.51	99.9	99.93	84.14	125.49	3409	1.26	4141	0.99911881	3294.8	0.162	0.66	0.66
	L_4-L_5	-203.75	52.61	92.58	76.68	114.47	114.47	97.36	144.00	3780	1.26	4677	0.99912001	3652.4	-0.043	0.58	0.58
	L_5-L_6	-145.32	81.02	52.47	365.65	104.6	104.58	95.61	136.37	4040	1.30	4520	0.99952345	3448.5	0.144	0.66	0.66
	L_6-L_7	-365.64	-15.86	8.84	-72.39	104.9	104.93	95.91	136.37	4040	1.30	4520	0.99952345	4776.0	0.043	0.62	0.62
	L_7-L_8	-32.65	583.36	-39.06	824.37	145.8	145.75	130.44	228.84	6550	2.932.4	1.57	7552	0.99952915	4806.3	-0.043	0.58	0.58
	L_8-L_9	553.65	-46.82	815.30	200.33	162.5	145.75	130.74	228.84	6550	2932.4	1.57	7552	0.99952915	4806.4	-0.075	0.57	0.57
	L_9-L_{10}	10.48	-316.33	176.34	-108.42	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.99914994	4776.1	-0.033	0.59	0.59
	L_{10}-L_{11}	51.45	-274.60	259.36	-108.73	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.187	0.53	0.53
	L_{11}-L_{12}	-73.64	-280.71	212.21	-227.19	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.187	0.53	0.53
	L_{12}-L_{13}	-205.99	-395.93	-2.75	-131.95	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99952922	4288.6	0.520	0.81	0.81
	L_{13}-L_{14}	-12.61	-668.40	169.62	-428.76	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99910936	5370.6	0.013	0.61	0.61
	L_{14}-L_{15}	-250.16	-165.45	15.09	-15.09	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99910936	5370.6	0.013	0.61	0.61
	L_{15}-L_{16}	-595.62	-764.64	-228.43	-404.51	179.7	179.69	170.68	251.43	6743	3050.7	1.40	8297	0.99912202	5924.6	0.837	0.93	0.93
	L_{16}-L_{17}	-162.81	-42.05	8.63	-3.23	112.1	112.11	103.89	138.16	4263	1922.9	1.40	5702	0.99952922	4288.6	0.520	0.81	0.81
	L_{17}-L_{18}	-127.23	-17.25	2.16	-2.16	112.1	112.11	101.68	157.22	3591	1640.0	1.30	5188	0.99904482	3891.8	0.164	0.67	0.67
	L_{18}-L_{19}	-107.92	88.51	-3.60	-0.72	83.8	83.58	74.62	100.97	2748	1298.2	1.21	3332	0.99900094	2755.5	-0.403	0.44	0.44
	L_{19}-L_{20}	-7.50	-2.16	-76.55	81.75	83.8	83.58	67.49	100.97	2748	1298.2	1.21	3332	0.99900094	2755.5	-0.519	0.39	0.39
	L_{20}-L_{21}	51.89	-397.39	74.95	-359.08	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.131	0.55	0.55
	L_{21}-L_{22}	-216.02	-655.60	73.72	-522.01	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.131	0.55	0.55
	L_{22}-L_{23}	-111.62	-539.44	-10.12	-200.33	162.5	162.51	151.98	209.67	4946	2152.2	1.29	6919	0.99904436	5357.7	0.207	0.68	0.68
	L_{23}-L_{24}	-58.48	-316.93	179.36	-108.45	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.99914994	4776.1	-0.033	0.59	0.59
	L_{24}-L_{25}	-760.97	-720.34	-296.41	-328.17	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10563	0.99952244	5746.8	0.912	0.96	0.96
	L_{25}-L_{26}	-691.62	-1029.75	-191.72	-1139.91	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10563	0.99952244	5746.8	0.912	0.96	0.96
	L_{26}-L_{27}	-1279.67	-666.90	-529.94	-240.13	216.3	216.33	205.74	748.29	7625	3425.8	1.59	11778	0.99914994	7132.6	0.521	0.91	0.91
	L_{27}-L_{28}	-889.77	-353.76	-293.10	-40.71	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.357	0.74	0.74
	L_{28}-L_{29}	-786.07	-166.48	-240.10	357.54	168.2	168.24	149.99	232.12	4264	2122.7	1.29	7010	0.99912202	5924.6	0.837	0.93	0.93
	L_{29}-L_{30}	-639.61	-59.11	-233.61	303.64	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99952915	4912.7	-0.092	0.56	0.56
	L_{30}-L_{31}	-396.05	315.12	-165.19	55.36	138.2	138.21	119.76	183.22	4364	1727.4	1.25	5716	0.99952922	4288.6	0.520	0.81	0.81
	L_{31}-L_{32}	-348.76	309.33	-148.06	644.02	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99914215	5408.6	-0.230	0.51	0.51
	L_{32}-L_{33}	-291.20	-316.86	-213.08	-424.16	226.0	225.99	325.99	319.39	364.84	7480	3164.4	1.35	11452	0.99900030	8222.0	-0.344	0.46
	L_{33}-L_{34}	-486.15	-1604.04	-229.25	-1604.04	226.0	225.99	325.99	319.39	364.84	7480	3164.4	1.35	11452	0.99900030	8222.0	-0.344	0.46
	L_{34}-L_{35}	1353.16	-538.34	1829.39	-629.52	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99900030	8222.0	-0.344	0.46	0.46
	L_{35}-L_{36}	-468.85	-51.62	1829.39	-629.52	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99900030	8222.0	-0.344	0.46	0.46
	L_{36}-L_{37}	440.77	-230.66	750.79	-27.27	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8701	0.99915157	5943.8	-0.036	0.55	0.59
	L_{37}-L_{38}	226.51	-207.44	307.16	-207.44	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8701	0.99915157	5943.8	-0.036	0.55	0.59
	L_{38}-L_{39}	68.79	-216.21	408.44	-6.49	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99898888	4200.3	-0.016	0.59	0.59
	L_{39}-L_{40}	2.96	-310.75	344.89	-5.29	127.4	127.41	108.77	157.02	3808	1501.0	1.23	5182	0.99898891	4200.3	-0.019	0.59	0.59
	L_{40}-L_{41}	-266.06	-371.12	-165.19	-55.36	127.4	127.41	108.77	157.02	3808	1501.0	1.23	5182	0.99898891	4200.3	-0.019	0.59	0.59
	L_{41}-L_{42}	-414.65	-609.72	118.76	-219.92	161.2	161.18	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.680	0.87	0.87
	L_{42}-L_{43}	-414.65	-609.72	118.76	-219.92	161.2	161.18	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.680	0.87	0.87
	L_{43}-L_{44}	-296.47	-266.48	-99.90	99.13	161.2	161.18	150.63	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.398	0.76	0.76
	L_{44}-L_{45}	-296.47	-266.48	-99.90	99.13	161.2	161.18	150.63	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.398	0.76	0.76
	L_{45}-L_{46}	-325.20	82.50	-31.14	345.45	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99898888	4200.3	-0.090	0.56	0.56
	L_{46}-L_{47}	-275.02	-114.99	-26.55	-390.92	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99952915	4912.7	-0.068	0.57	0.57
	L_{47}-L_{48}	-1026.29	-362.30	-210.91	-53.24	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99952922	8221.8	-0.327	0.47	0.47
	L_{48}-L_{49}	-1311.10	-470.99	-1760.59	-886.93	226.0	225.99	325.99	319.39	364.84	7480	3164.4	1.35	11452	0.99900030	8222.0	-0.344	0.46
	L_{49}-L_{50}	-292.48	-192.98	-398.93	-235.43	168.8	168.54	149.99	224.57	5911	2429.7	1.33	7411	0.99914215	5557.1	-0.259	0.50	0.50
	L_{50}-L_{51}	-1026.29	-362.30	-210.91	-53.24	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99952922	8221.8	-0.327	0.47	0.47
	L_{51}-L_{52}	-257.65	-366.55	623.75	-78.20	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5716	0.99952915	4596.4	-0.185	0.53	0.53
	L_{52}-L_{53}	-257.65	-366.55	623.75	-78.20	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5716	0.99952915	4596.4	-0.185	0.53	0.53
	L_{53}-L_{54}	-808.93	-1230.17	-133.03	-547.45	219.3	219.33	205.74	744.78	7625	3425.8	1.59	11378	0.99917356	6919.3	0.472	0.79	0.79
	L_{54}-L_{55}	-1229.11	-560.59	-554.76	-155.38	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917356	6919.3	0.472	0.79	0.79
	L_{55}-L_{56}	-1026.29	-362.30	-210.91	-53.24	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99952922	8221.8	-0.327	0.47	0.47
	L_{56}-L_{57}	-1026.29	-362.30	-210.91	-53.24	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99952922	8221.8	-0.327	0.47	0.47
	L_{57}-L_{58}	-1026.29	-362.30	-210.91	-53.24	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99952922	8221.8	-0.327	0.47	0.47
	L_{58}-L_{59}	1.06	-13.84	-47.91	35.14	106.9	106.92	96.17	144.00	3780	1.26	4677	0.99912001	3652.4	-0.043	0.58	0.58
	L_{59}-L_{60}	-52.17	-169.29	34.07	37.26	106.9	106.92	96.17	144.00	3780	1.26	4677	0.99912001	3652.4	-0.043	0.58	0.58
	L_{60}-L_{61}	-52.17	-169.29	34.07	37.26	106.9	106.92	96.17	144.00	3780	1.26	4677	0.99912001	3652.4	-0.043	0.58	0.58
	L_{61}-L_{62}	-272.66	-285.34	39.39	29.81	106.9	106.92	96.17	144.00	3780	1.26	4677	0.99912001	3652.4	-0.043	0.58	0.58
	L_{62}-L_{63}	-1229.11	-560.59	-554.76	-155.38	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917356	6919.3	0.472	0.79	0.79
	L_{63}-L_{64}	-1229.11	-560.59	-554.76	-155.38	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917356	6919.3	0.472	0.79	0.79
	L_{64}-L_{65}	-1311.10	-470.99	-1760.59	-886.93	226.0	225.99	325.99	319.39	364.84	7480	3164.4	1.35	11452	0.99900030	8222.0	-0.344	0.46
	L_{65}-L_{66}	-292.48	-192.98	-398.93	-235.43	168.8	168.54	149.99	224.57	5911	2429.7	1.33	7411	0.99914215	5557.1	-0.259	0.50	0.50
	L_{66}-L_{67}	-292.48	-192.98	-398.93	-235.43	168.8	168.54	149.99	224.57	5911	2429.7	1.33	7411	0.99914215	5557.1	-0.259

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 2.17
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Min) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0–L_1	-29.84	-49.00	8.85	-9.93	-1.20	3.25	9.47	-10.31	-13.37	36.17
	U_1–L_1	-9.06	15.16	7.72	-0.78	-3.83	4.11	8.06	-8.71	-42.64	45.75
	U_1–L_2	10.00	-9.71	0.99	-11.23	-29.02	38.41	0.00	0.00	34.60	-36.95
	U_2–L_2	33.43	-34.38	2.44	-2.39	-2.22	2.79	27.14	-28.61	-24.72	31.04
	U_2–L_3	41.60	-42.42	1.39	-1.36	-1.38	2.31	25.46	-25.34	-24.34	30.01
	U_3–L_3	45.52	-51.05	-0.76	0.61	2.95	-3.60	-8.49	8.81	-82.85	90.26
	U_3–L_4	53.57	-55.55	0.49	0.33	-4.43	5.07	8.52	-9.02	-39.32	49.29
	U_4–L_4	91.21	-101.85	-0.02	0.02	6.69	-6.18	-0.22	0.24	-30.29	68.85
	U_4–L_5	-20.53	21.18	0.43	-0.53	-2.66	3.27	-16.34	14.84	-90.90	106.43
	U_5–L_5	-135.19	155.81	-2.28	-3.09	-41.50	71.34	-169.18	193.91	-339.00	357.13
	U_5–L_6	-88.41	88.14	0.00	-0.15	-3.44	4.56	-0.04	-1.56	-37.04	-69.21
	U_6–L_6	-91.02	123.95	0.03	-0.23	-3.26	5.12	0.05	-2.08	-36.13	-68.72
	U_6–L_7	-79.50	78.32	0.87	-0.83	-3.46	3.89	9.33	-8.91	-37.34	41.96
	U_7–L_7	-49.20	60.09	1.61	-1.48	-3.09	3.48	17.40	-15.91	-33.31	37.50
	U_7–L_8	-29.72	34.60	2.26	-2.10	-2.23	2.51	23.63	-21.70	-28.50	34.95
	U_8–L_8	-1.46	-2.70	2.80	2.81	2.68	-2.99	-30.14	30.31	28.85	-32.23
	U_8–L_9	34.16	-36.57	1.86	1.60	2.76	-3.06	-26.02	27.11	28.80	-33.33
	U_9–L_9	46.21	-55.82	-0.65	0.41	3.08	-3.48	-7.00	4.45	33.18	-37.52
	U_9–L_{10}	110.34	-114.53	-0.48	0.48	3.36	-5.54	-9.10	8.75	33.79	-44.07
	U_{10}–L_{10}	-121.24	-131.09	-0.42	0.43	6.06	-6.57	-4.56	4.58	65.31	-70.87
	U_{10}–L_{11}	-134.20	-173.18	-0.26	0.36	7.24	-7.87	-2.81	3.87	78.05	-84.84
	U_{11}–L_{11}	-134.26	-168.30	-0.99	1.16	6.97	-7.59	-1.25	2.56	75.14	-81.67
	U_{11}–L_{12}	-124.38	-133.15	0.95	-1.02	-6.10	6.55	10.14	-10.82	-64.89	69.73
	U_{12}–L_{12}	-73.97	-146.78	1.17	-0.11	-3.46	6.23	12.69	-11.91	-38.93	64.09
	U_{12}–L_{13}	-56.00	62.15	0.64	-0.67	-2.95	3.33	6.80	-7.18	-37.45	39.47
	U_{13}–L_{13}	-34.84	39.78	0.83	-0.89	-2.61	3.09	8.83	-9.09	-32.95	34.58
	U_{13}–L_{14}	-7.05	12.30	3.08	-2.12	-2.77	3.17	25.38	-22.54	-29.44	36.19
	U_{14}–L_{14}	15.85	-15.58	2.78	-2.76	-2.36	2.52	29.63	-29.40	-25.11	26.78
	U_{14}–L_{15}	38.85	-43.43	1.21	-1.26	-2.03	2.31	24.66	-25.07	-23.28	24.95
	U_{15}–L_{15}	86.89	-96.05	-1.78	1.72	3.79	-4.04	-18.98	18.28	40.34	-43.01
	U_{15}–L_{16}	105.08	-109.44	-1.34	1.30	3.63	-3.87	-16.05	15.98	31.34	-39.35
	U_{16}–L_{16}	141.21	-149.39	-1.19	0.77	4.37	-5.10	-12.65	8.24	46.56	-54.32
	U_{16}–L_{17}	192.53	-192.81	-0.67	0.42	4.63	-5.34	-7.15	4.49	49.32	-56.84
	U_{17}–L_{17}	187.09	-186.79	-0.17	-0.04	4.44	-5.11	-1.79	0.00	47.23	-54.41
	U_{17}–L_{18}	203.50	-203.15	-0.52	0.55	6.72	-6.81	-5.49	5.86	71.58	-72.47
	U_{18}–L_{18}	192.02	-194.26	-0.72	0.91	7.21	-6.98	-7.61	10.03	76.52	-77.12
	U_{18}–L_{19}	-159.87	162.82	0.84	-0.89	-7.22	7.18	8.81	-9.24	-75.94	75.58
	U_{19}–L_{19}	-113.84	112.66	0.83	-0.86	-5.14	5.11	8.80	-9.11	-54.06	53.77
	U_{19}–L_{20}	-130.37	127.18	0.81	-0.79	-6.38	6.94	8.50	-8.30	-67.09	73.03
	U_{20}–L_{20}	-113.07	114.60	0.91	-0.93	-5.60	6.40	9.52	-9.76	-58.94	68.24
	U_{20}–L_{21}	-44.70	47.44	-1.34	-1.42	-3.62	3.87	14.15	-14.77	-37.39	43.04
	U_{21}–L_{21}	-44.77	46.58	1.17	-1.15	-2.96	3.28	12.30	-12.05	-31.13	34.64
	U_{21}–L_{22}	-30.50	31.99	1.39	-1.37	-2.68	3.11	16.11	-15.78	-28.11	32.63
	U_{22}–L_{22}	-3.79	4.34	1.86	-2.10	1.23	-1.22	19.60	-22.08	12.95	-12.86
	U_{22}–L_{23}	22.64	26.75	-2.20	-2.20	2.07	-2.19	21.80	-21.80	0.00	0.00
	U_{23}–L_{23}	-19.32	17.75	28.86	-32.06	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23}–L_{24}	66.55	-67.48	-1.41	1.13	3.63	-3.95	-14.80	11.91	38.22	-41.51
	U_{24}–L_{24}	78.76	-79.05	-0.72	0.77	3.77	-4.03	-7.53	6.16	39.00	-42.38
	U_{24}–L_{25}	138.22	-138.56	-0.76	0.75	6.65	-7.18	-7.54	7.84	70.05	-75.57
	U_{25}–L_{25}	139.45	-139.63	-0.93	0.93	6.70	-7.23	-9.35	10.05	-2.08	-75.03
	U_{25}–L_{26}	173.80	-176.10	-0.43	0.37	7.74	-7.77	-4.47	3.90	81.42	-81.76
	U_{26}–L_{26}	-2.19	-2.19	-0.87	-0.88	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26}–L_{27}	-167.09	167.27	-0.77	-0.85	4.81	6.72	8.16	-9.05	-72.53	71.98
	U_{27}–L_{27}	-116.04	109.89	-0.50	-0.60	-5.07	5.65	3.88	-6.35	-53.98	50.18
	U_{28}–L_{28}	-124.63	127.50	-0.10	-0.13	-5.43	6.31	1.58	-2.61	-57.80	58.66
	U_{28}–L_{29}	-119.83	124.38	-0.58	-0.47	-4.78	5.42	6.18	-5.03	-50.94	57.13
	U_{29}–L_{29}	-98.38	101.11	-0.41	-0.34	-4.03	4.57	4.34	-3.53	-42.94	48.16
	U_{29}–L_{30}	-79.51	88.86	1.22	-1.20	-4.12	4.39	12.95	-12.79	-43.90	48.31
	U_{30}–L_{30}	-43.96	51.93	-2.15	-2.60	0.54	-0.52	-22.90	27.66	5.72	-5.65
	U_{31}–L_{31}	-29.99	31.03	-3.41	-3.50	0.79	-0.70	-35.50	36.29	-20.70	20.60
	U_{31}–L_{32}	-9.57	1.81	-2.78	2.66	3.52	-3.69	-29.59	28.27	37.46	-39.26
	U_{32}–L_{32}	-15.19	15.91	-0.27	0.28	1.98	-2.08	-18.43	18.97	20.95	-21.96
	U_{33}–L_{33}	55.25	-61.09	-0.62	0.63	2.89	-3.31	-6.55	6.69	30.72	-35.25
	U_{34}–L_{34}	106.85	-107.73	-0.97	0.97	4.97	-5.69	-9.97	9.97	55.97	-64.60
	U_{35}–L_{35}	137.13	-150.74	-0.81	0.83	5.83	-6.41	-8.66	8.78	62.03	-68.27
	U_{36}–L_{36}	165.72	-206.83	-0.60	0.80	6.63	-7.85	-6.36	8.50	70.56	-83.56
	U_{37}–L_{37}	156.72	-163.90	-0.57	0.61	6.26	-6.89	-5.87	6.31	66.56	-73.14
	U_{38}–L_{38}	-109.81	112.89	0.53	-0.56	-5.64	6.21	9.67	-9.05	-60.62	66.99
	U_{39}–L_{39}	-57.67	57.67	0.82	-0.82	-3.57	3.62	14.40	-13.51	-38.05	42.00
	U_{40}–L_{40}	-38.40	-68.11	0.39	-0.41	-3.02	3.45	4.15	-4.44	-32.56	37.15
	U_{41}–L_{41}	-29.67	34.14	1.41	-1.31	-2.98	3.38	18.62	-19.77	-34.17	39.70
	U_{42}–L_{42}	-2.78	8.39	1.73	-1.87	3.17	3.52	18.62	-19.77	-34.17	39.70
	U_{43}–L_{43}	25.87	-28.68	2.28	-2.53	-1.49	1.56	24.53	-27.24	-16.11	16.86
	U_{44}–L_{44}	46.64	-50.35	2.36	-2.61	-1.36	1.46	24.53	-27.24	-16.11	16.86
	U_{45}–L_{45}	79.35	-76.96	-1.61	1.49	3.08	-3.54	-17.33	16.02	33.22	-38.16
	U_{46}–L_{46}	94.22	-125.87	-0.94	0.80	3.29	-5.10	-10.15	8.63	35.51	-54.96
	U_{47}–L_{47}	92.27	-95.87	-0.49	0.28	3.70	-4.66	-5.32	2.99	39.86	-50.19
	U_{48}–L_{48}	142.63	-166.19	-0.09	0.12	5.79	-6.92	-0.96	1.29	62.41	-74.56
	U_{49}–L_{49}	37.52	-58.80	-0.12	0.14	2.93	-3.99	-1.30	1.50	32.58	-43.92
	U_{50}–L_{50}	-81.19	89.90	0.02	-0.05	-5.16	5.54	0.20	-0.51	-57.44	61.69
	U_{51}–L_{51}	-38.38	37.17	0.69	-0.69	-2.29	2.70	0.00	0.00	0.00	0.00
	U_{52}–L_{52}	-34.81	36.10	17.11	-22.71	0.00	0.00	0.00	0.00	0.00	0.00
	U_{53}–L_{53}	-13.62	15.07	27.71	-36.36	0.00	0.00	0.00	0.00	0.00	0.00
	U_{54}–L_{54}	-8.41	8.16	44.35	-47.27	0.00	0.00	0.00	0.00	0.00	0.00
	U_{55}–L_{55}	-5.70	7.93	34.50	-50.29	0.00	0.00	0.00	0.00	0.00	0.00

ZZ Axis Moment Properties

Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_y (k-in)
U_0–L_1	-187.27	41.36	-87.77	142.07	15.4	15.42	15.42	23.71	2	751.9
U_1–L_1	5.68	0.84	-104.17	118.82	15.4	15.42	15.42	23.71	2	751.9
U_1–L_2	34.60	-36.95	-49.63	70.00	15.4	15.42	15.42	23.71	2	751.9
U_2–L_2	102.26	-102.34	-10.10	22.56	15.4	15.42	15.42	23.71	2	751.9
U_2–L_3	21.09	-10.75	-10.04	25.18	15.4	15.42	15.42	23.71	2	751.9
U_3–L_3	40.76	-31.60	130.28	-153.16	19.4	19.37	19.31	29.87	3	907.0
U_3–L_4	82.47	-86.19	107.53	-134.78	19.4	20.80	20.67	34.66	4	1076.0
U_4–L_4	115.18	-131.87	256.71	-281.67	18.5	18.45	18.36	30.78	4	1020.9
U_4–L_5	-16.34	14.84	-90.90	106.43	107.1	107.13	107.11	162.71	26	2056.9
U_5–L_5	-169.18	193.91	-339.00	357.13	33.1	33.05	32.91	54.51	14	1408.8
U_5–L_6	-115.02	111.20	-185.18	221.21	35.5	35.52	35.44	58.46	14	1509.7
U_6–L_6	-96.57	135.36	-194.50	456.20	42.74	42.74	42.74	65.30	8	1389.6
U_6–L_7	-83.15	82.51	-164.25	192.73	21.1	21.09	21.09	36.46	10	1137.6
U_7–L_7	-26.26	43.64	-136.12	159.37	17.2	17.24	17.24	26.54	2	824.7
U_7–L_8	-114.76	135.80	-80.78	153.04	15.4	15.42	15.42	23.71	2	751.9
U_8–L_8	-67.19	62.16	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_8–L_9	-10.25	108.97	-119.75	154.14	15.4	15.42	15.42	23.71	2	751.9
U_9–L_9	-62.62	131.96	-153.87	194.19	19.37	19.37	19.37	29.87	3	907.0
U_9–L_{10}	-287.18	35.71	35.09	35.09	33.51	33.51	33.51	51.67	3	1157.1
U_{10}–L_{10}	-160.49	298.11	-323.97	42.7	42.74	42.74	65.30	8	1389.6
U_{10}–L_{11}	-216.74	343.57	-408.96	42.7	42.74	42.74	65.30	8	1389.6
U_{11}–L_{11}	-164.99	300.52	-324.18	46.7	46.71	46.71	71.43	10	1711.0
U_{11}–L_{12}	-139.73	149.66	-322.09	324.18	46.7	46.71	46.71	71.43	10	1711.0
U_{12}–L_{12}	-111.67	148.38	-38.63	38.63	15.4	15.42	15.42	23.71	2	751.9
U_{12}–L_{13}	-68.06	65.25	-140.95	157.64	21.5	21.54	21.54	33.27	5	987.9
U_{13}–L_{13}	-63.63	63.63	-143.65	157.64	21.5	21.54	21.54	33.27	5	987.9
U_{13}–L_{14}	-52.95	89.16	15.44	15.42	15.42	23.71	2	751.9	1.54	782
U_{14}–L_{14}	-24.93	32.85	-72.95	89.16	15.4	15.42	15.42	23.71	2	751.9
U_{14}–L_{15}	-33.80	37.76	15.4	15.42	15.42	23.71	2	751.9	1.54	782
U_{15}–L_{15}	-14.76	135.80	-80.78	153.04	15.4	15.42	15.42	23.71	2	751.9
U_{16}–L_{16}	-13.63	135.80	-80.78	153.04	15.4	15.42	15.42	23.71	2	751.9
U_{16}–L_{17}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{17}–L_{17}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{17}–L_{18}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{18}–L_{18}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{18}–L_{19}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{19}–L_{19}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{19}–L_{20}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{20}–L_{20}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{20}–L_{21}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{21}–L_{21}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{21}–L_{22}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{22}–L_{22}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{23}–L_{23}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{23}–L_{24}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{24}–L_{24}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{25}–L_{25}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{25}–L_{26}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{26}–L_{26}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{26}–L_{27}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{27}–L_{27}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{28}–L_{28}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{29}–L_{29}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{29}–L_{30}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{30}–L_{30}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{31}–L_{31}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{31}–L_{32}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{32}–L_{32}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{33}–L_{33}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{34}–L_{34}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{35}–L_{35}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{36}–L_{36}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{37}–L_{37}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{38}–L_{38}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{39}–L_{39}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{40}–L_{40}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{41}–L_{41}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{42}–L_{42}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{43}–L_{43}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{44}–L_{44}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{45}–L_{45}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{46}–L_{46}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{47}–L_{47}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{48}–L_{48}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{49}–L_{49}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{50}–L_{50}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{51}–L_{51}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{52}–L_{52}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{53}–L_{53}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{54}–L_{54}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9
U_{55}–L_{55}	-12.62	12.62	60.62	-73.33	15.4	15.42	15.42	23.71	2	751.9

YY Axis Moments from STAAD

Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Min) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
U_0–L_1	-105.02	-33.68	2.17	0.70	-8.19	-2.63	24.16	7.75	-91.18	-29.25
U_1–L_1	15.54	7.80	-91.78	-20.04	0.00	0.00	17.51	5.99	-215.02	-54.34
U_1–L_2	-13.20	7.00	4.13	-2.34	1.86	-1.06	5.83	6.37	59.30	53.37
U_2–L_2	-64.37	-2.08	-3.63	-1.91	1.78	2.28	-197.34	-48.73	-66.65	52.34
U_2–L_3	-123.46	-67.29	-1.13	0.86	1.92	2.26	-197.34	-48.73	-19.92	94.03
U_3–L_3	-115.65	-35.59	0.63	0.07	4.36	0.26	-135.07	-44.60	-45.17	-10.92
U_3–L_4	-104.26	-52.09	1.31	0.46	2.94	0.74	-129.23	-32.83	-54.44	17.71
U_4–L_4	-100.29	33.53	0.04	0.00	5.88	1.05	-129.53	46.18	11.51	71.61
U_4–L_5	-168.87	-52.49	0.41	0.02	2.92	0.00	0.00	0.00	-209.54	-68.17
U_5–L_5	-188.33	-131.85	0.31	0.38	-0.12	-3.53	0.00	0.00	-230.53	-162.48
U_5–L_6	-156.15	-112.09	-0.04	-0.02	-1.12	-0.64	0.00	0.00	-203.91	-145.77
U_6–L_6	-95.57	-34.31	0.28	0.81	5.18	2.65	0.00	0.00	-133.77	-12.61
U_6–L_7	-53.27	8.77	56.83	26.06	0.00	0.00	0.00	0.00	-205.64	-49.23
U_7–L_7	-9.15	-1.92	3.09	14.89	0.00	0.00	0.00	0.00	-144.88	1.06
U_7–L_8	5.76	10.10	8.53	11.32	0.00	0.00	0.00	0.00	-94.01	66.93
U_8–L_8	-11.07	8.87	10.56	10.44	0.00	0.00	0.00	0.00	-125.41	44.64
U_8–L_9	9.75	3.74	10.64	10.33	0.00	0.00	0.00	0.00	-145.18	-108.61
U_9–L_9	23.99	11.48	10.27	10.24	0.00	0.00	0.00	0.00	-118.57	-143.24
U_9–L_{10}	24.01	16.33	60.82	11.39	0.00	0.00	0.00	0.00	-128.97	-77.80
U_{10}–L_{10}	-137.44	-44.31	0.40	0.10	1.97	0.22	0.00	0.00	-150.82	-197.13
U_{10}–L_{11}	-2.31	-5.10	-221.62	30.36	0.00	0.00	0.00	0.00	-60.89	21.45
U_{11}–L_{11}	-10.97	-1.43	231.62	30.36	0.00	0.00	0.00	0.00	38.24	5.01
U_{11}–L_{12}	6.32	-1.02	-195.54	-13.39	0.00	0.00	0.00	0.00	-267.74	-65.38
U_{12}–L_{12}	15.23	2.75	-146.97	-2.69	0.00	0.00	0.00	0.00	-255.13	-63.97
U_{12}–L_{13}	13.47	-1.58	50.93	0.00	0.00	0.00	0.00	0.00	-255.53	-62.87
U_{13}–L_{13}	7.78	6.45	31.40	11.90	0.00	0.00	0.00	0.00	0

Axial - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-12.55	3.37	0.65	0.57	0.41	-0.24	-7.19	6.31	4.61	-2.65
	U_1-L_1	-1.68	-7.06	-1.62	0.32	0.28	-0.07	-17.99	3.58	3.16	-0.79
	U_1-L_2	-8.37	-1.12	0.74	-0.56	-0.76	0.74	-17.27	1.02	-6.22	-8.76
	L_1-L_2	9.78	-11.75	-0.89	-0.45	-0.38	-1.02	-9.87	-4.98	-4.17	-11.38
	U_2-L_2	-10.32	17.59	-1.64	-0.02	-0.71	-0.67	-53.00	-22.34	-2.54	-1.94
	U_2-L_3	-26.82	58.45	3.14	2.18	-0.57	-0.52	-110.49	128.55	-48.53	63.35
	L_2-L_3	39.76	58.80	-1.56	1.00	-1.18	4.50	-58.08	37.26	-11.68	4.50
	U_3-L_3	-28.28	48.62	0.10	-0.09	0.00	0.00	-28.28	48.62	0.10	-0.09
	U_3-L_4	-9.60	109.51	1.73	3.87	0.29	-0.12	-42.19	26.19	3.68	1.35
	U_4-L_4	-74.77	114.56	-3.91	-2.43	0.34	0.13	-42.19	26.19	3.68	1.35
	U_4-L_5	-56.82	54.75	-2.97	1.43	-1.18	-0.43	-32.07	13.40	-12.72	-4.59
	L_4-L_5	-56.82	54.75	-2.97	1.43	-1.18	-0.43	-32.07	13.40	-12.72	-4.59
	U_5-L_5	-55.23	39.04	-2.73	1.80	0.48	-0.84	-29.46	19.38	-6.32	-8.02
	U_5-L_6	-20.96	7.36	-1.69	0.62	-0.21	-0.77	-18.25	6.73	-2.21	-8.32
	L_5-L_6	-20.96	7.36	-1.69	0.62	-0.21	-0.77	-18.25	6.73	-2.21	-8.32
	U_6-L_6	-19.01	4.12	-1.98	1.23	0.35	-1.05	-21.32	13.29	3.76	-11.31
	U_6-L_7	-28.63	13.01	-2.61	0.18	-0.42	-0.62	-28.18	17.10	-1.90	-4.71
	L_6-L_7	-89.28	58.13	-4.66	3.43	-0.84	-0.08	-50.24	36.98	-9.07	-0.89
	U_7-L_7	-89.28	61.33	-4.66	3.32	-0.84	-0.23	-50.23	31.74	-9.07	-2.72
	U_7-L_8	-105.04	88.64	-5.44	3.98	0.22	-2.22	-50.07	42.86	-2.33	-2.32
	L_7-L_8	-82.69	87.74	-3.88	4.17	0.81	-0.75	-41.28	44.36	8.60	-7.94
	U_8-L_8	-87.97	71.76	-4.55	3.72	0.63	-4.90	-56.96	42.71	3.33	-4.90
	U_8-L_9	-91.28	63.04	-4.74	3.62	0.55	-6.92	-50.41	38.56	9.02	-7.34
	L_8-L_9	-91.28	63.04	-4.74	3.62	0.55	-6.92	-29.65	27.68	2.07	-6.38
	U_9-L_9	-17.36	7.01	-2.19	1.62	0.05	-0.74	-23.31	17.23	0.53	-7.88
	U_9-L_{10}	-6.62	-11.45	-1.76	0.42	0.14	-0.56	-16.12	5.83	13.82	-17.51
	L_9-L_{10}	7.42	-23.91	-1.51	0.55	1.30	-1.65	-16.12	5.83	13.82	-17.51
	U_{10}-L_{10}	-44.31	35.87	-2.75	1.21	0.20	-1.25	-28.71	12.86	2.17	-13.26
	U_{10}-L_{11}	-66.38	68.64	-4.20	2.62	0.75	-1.46	-45.43	27.94	1.62	-15.13
	L_{10}-L_{11}	-88.54	73.82	-3.91	2.36	-0.50	-0.82	-41.05	25.14	-5.30	-8.72
	U_{11}-L_{11}	-89.40	59.64	-4.48	2.82	0.75	-1.46	-47.72	23.76	-2.30	-3.81
	U_{11}-L_{12}	-108.36	116.66	-4.88	3.73	-0.21	-0.10	-51.84	39.69	-2.25	-1.04
	L_{11}-L_{12}	-154.28	139.69	-6.16	4.93	0.52	-0.21	-65.33	52.50	5.48	-2.20
	U_{12}-L_{12}	-82.16	140.32	-2.89	5.14	0.03	-0.06	-24.74	100.39	-3.80	4.84
	U_{12}-L_{13}	-24.74	100.39	-3.80	4.84	0.65	-0.59	-39.99	50.87	8.85	-6.24
	L_{12}-L_{13}	-89.29	59.79	-4.52	2.82	0.75	-1.46	-47.72	23.76	-2.30	-3.81
	U_{13}-L_{13}	-74.15	95.51	-5.25	4.60	0.47	-0.53	-55.26	48.34	4.90	-5.62
	U_{13}-L_{14}	-55.45	68.85	-4.44	3.32	0.49	-0.99	-47.01	32.72	3.61	-5.65
	L_{13}-L_{14}	-55.45	68.85	-4.30	3.25	0.49	-0.99	-45.21	34.18	5.11	-10.44
	U_{14}-L_{14}	-32.97	39.97	-3.07	2.26	0.53	-1.92	-32.29	23.81	5.57	-10.47
	U_{14}-L_{15}	-24.87	25.71	-2.79	1.70	0.48	-1.65	-27.43	20.74	7.58	-11.65
	L_{14}-L_{15}	-10.33	4.39	-1.74	0.77	0.82	-1.21	-18.31	8.11	8.59	-12.69
	U_{15}-L_{15}	-6.26	2.39	-1.74	0.77	0.82	-1.21	-18.31	8.11	8.59	-12.69
	U_{15}-L_{16}	-17.07	16.15	-2.03	1.36	0.54	-1.04	-21.37	14.29	5.67	-10.93
	L_{15}-L_{16}	-55.66	65.11	-4.47	3.05	-0.43	-0.82	-47.06	32.12	-4.56	-8.60
	U_{16}-L_{16}	-69.18	80.37	-4.71	3.56	-0.36	-0.34	-49.03	37.45	-3.80	-3.54
	U_{16}-L_{17}	-84.55	96.63	-5.03	3.83	-0.29	-0.03	-54.15	43.53	-2.20	-0.33
	L_{16}-L_{17}	-106.02	102.60	-5.10	5.04	0.34	-0.38	-64.13	53.07	3.56	-3.97
	U_{17}-L_{17}	-39.07	102.60	-2.94	5.04	0.34	-0.38	-41.41	53.07	3.56	-3.97
	U_{17}-L_{18}	-47.57	127.97	-4.33	5.39	0.74	-0.64	-46.12	57.38	7.83	-6.78
	L_{17}-L_{18}	-89.45	99.26	-4.42	3.83	-0.20	-0.03	-47.07	40.72	2.12	-0.33
	U_{18}-L_{18}	-86.48	92.53	-4.31	3.00	0.03	-0.46	-45.89	31.90	0.31	-4.92
	U_{18}-L_{19}	-84.39	87.47	-4.49	2.92	0.14	-0.46	-44.71	31.04	0.96	-5.46
	L_{18}-L_{19}	-50.13	67.65	-4.20	2.52	0.56	-1.39	-44.71	31.04	5.96	-14.82
	U_{19}-L_{19}	-12.59	26.40	-1.03	0.61	0.85	-1.53	-10.91	6.48	9.00	-16.27
	U_{19}-L_{20}	6.51	-17.79	-1.62	1.36	0.75	-1.40	-17.26	14.51	7.99	-15.59
	L_{19}-L_{20}	-11.68	0.88	-1.77	0.77	0.82	-1.21	-21.96	14.29	5.67	-10.93
	U_{20}-L_{20}	-38.91	20.55	-2.76	1.84	-0.09	-0.67	-29.36	19.57	-0.93	-7.15
	U_{20}-L_{21}	-52.99	51.69	-3.63	2.63	-0.12	-0.67	-42.28	37.51	-4.35	-7.15
	L_{20}-L_{21}	-88.49	71.14	-5.15	3.85	-0.63	-0.53	-54.63	40.95	-5.65	-5.63
	U_{21}-L_{21}	-52.99	111.66	-3.63	4.17	-0.12	-0.67	-42.28	37.51	-4.35	-7.15
	U_{21}-L_{22}	-70.17	69.10	-5.19	4.20	0.47	-0.36	-55.95	45.32	5.06	-5.14
	L_{21}-L_{22}	-88.86	56.37	-5.08	3.64	0.44	-0.33	-54.74	39.29	4.74	-5.09
	U_{22}-L_{22}	-89.06	52.05	-4.41	3.35	0.38	-0.33	-49.67	37.53	5.35	-4.36
	U_{22}-L_{23}	-26.09	12.76	-2.41	1.84	-0.40	-0.39	-25.95	19.85	-4.33	-4.20
	L_{22}-L_{23}	-21.88	12.76	-2.41	1.84	-0.40	-0.39	-21.88	12.76	-2.41	-10.74
	U_{23}-L_{23}	-9.08	-18.28	-1.54	0.44	0.05	-1.20	-16.63	4.79	7.51	-12.94
	U_{23}-L_{24}	-11.68	0.88	-1.77	0.77	0.82	-1.21	-21.96	14.29	5.67	-10.93
	L_{23}-L_{24}	-50.46	39.07	-2.36	2.13	-0.62	-1.13	-29.36	19.57	-0.93	-7.15
	U_{24}-L_{24}	-59.57	20.60	-3.50	1.04	-1.03	-1.13	-37.69	11.16	-11.11	-12.18
	L_{24}-L_{25}	-52.16	37.99	-3.18	1.96	-0.85	-0.77	-34.18	13.50	-9.30	-4.17
	U_{25}-L_{25}	-77.37	67.15	-3.98	2.59	-0.51	-0.05	-42.92	27.55	-5.48	-0.57
	L_{25}-L_{26}	-77.37	67.15	-3.98	2.59	-0.51	-0.05	-42.92	27.55	-5.48	-0.57
	U_{26}-L_{26}	-2.84	82.09	-2.39	4.16	0.34	0.17	-26.66	46.28	3.81	1.84
	U_{26}-L_{27}	-54.59	58.66	-3.77	3.34	0.03	-0.30	-53.13	37.22	-0.36	-0.34
	L_{26}-L_{27}	-54.59	58.66	-3.77	3.34	0.03	-0.30	-53.13	37.22	-0.36	-0.34
	U_{27}-L_{27}	-9.16	17.57	-1.55	0.27	-0.84	-0.64	-17.30	3.03	-3.33	-7.11
	U_{27}-L_{28}	-11.68	0.88	-1.77	0.77	0.82	-1.21	-21.96	14.29	5.67	-10.93
	L_{27}-L_{28}	-0.12	-8.77	-1.28	-0.07	-0.25	-0.83	-14.23	-0.80	-9.34	-9.21
	U_{28}-L_{28}	-23.22	7.61	-1.12	0.84	0.17	-0.13	-12.46	9.36	-1.89	-1.63

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mDL}
Structure 1	U_0-L_1	-31.90	18.06	-8.33	-1.36	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7
	U_1-L_1	-31.90	18.06	-8.33	-1.36	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7
	U_1-L_2	-27.06	-27.06	3.66	-39.93	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_1-L_2	-8.69	-26.06	3.66	-39.93	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2-L_2	-53.00	-22.34	-12.54	6.71	19.4	19.37	19.37	29.87	5	958.8	2.42	1,043	1.5	953.8
	U_2-L_3	-110.49	128.55	-48.53	63.35	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	L_2-L_3	-58.08	37.26	-11.68	4.50	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_3-L_3	-69.54	220.82	-8.05	115.29	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_3-L_4	-52.98	232.69	-13.68	139.60	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7
	U_4-L_4	-188.61	141.43	-89.23	87.60	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7
	U_4-L_5	-143.35	104.53	-101.44	61.22	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6
	U_5-L_5	-153.57	89.79	-94.89	9.61	42.4	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_5-L_6	-43.08	31.20	20.80	20.80	42.4	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_6-L_6	-135.60	92.73	-63.08	31.20	20.80	20.80	20.67	34.66	7	1076.0	1.67	1344	1.5	1229.6
	U_6-L_7	-66.80	24.15	-32.04	-8.48	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_7-L_7	-28.29	-10.91	-11.77	-20.78	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_7-L_8	-70.90	34.15	-16.56	-19.16	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_8-L_8	-88.29	54.94	-19.14	-19.37	19.37	19.37	19.37	29.87	5	907.0	1.54	986	1.5	958.8
	U_8-L_9	-224.92	155.70	-135.70	73.63	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_9-L_9	-240.51	161.52	-113.45	76.97	35.4	35.83	35.83	55.23	3	1294.6	1.53	1953	1.5	1922.1
	U_9-L_{10}	-245.04	208.33	-131.51	110.47	38.8	38.83	38.83	59.23	3	1294.6	1.53	1953	1.5	1922.1
	U_{10}-L_{10}	-196.93	210.17	-88.85	96.86	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{10}-L_{11}	-250.64	189.33	-109.53	74.61	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{11}-L_{11}	-254.69	189.51	-86.12	66.06	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{11}-L_{12}	-215.87	214.51	-21.54	21.54	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{12}-L_{12}	-72.99	46.43	-21.34	-79.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{12}-L_{13}	-72.99	46.43	-21.34	-79.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{13}-L_{13}	-25.28	18.45	39.59	49.03	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{13}-L_{14}	-28.71	12.86	2.17	-13.26	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	U_{14}-L_{14}	-45.43	27.94	1.62	-15.13	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	U_{14}-L_{15}	-41.05	25.14	-5.30	-8.72	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	U_{15}-L_{15}	-47.72	23.76	-2.30	-3.81	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	U_{15}-L_{16}	-51.84	39.69	-2.25	-1.04	0.00	0.00	0.00	0.00	0	253.40	236.36	-149.74	148.10	46.7
	U_{16}-L_{16}	-65.33	52.50	5.48	-2.20	0.00	0.00	0.00	0.00	0	253.40	236.36	-149.74	148.10	46.7
	L_{16}-L_{17}	-39.99	50.87	8.85	-6.24	0.00	0.00	0.00	0.00	0	118.81	240.98	-117.32	117.25	35.1
	U_{16}-L_{17}	-62.23	74.39	-4.45	-0.02	0.00	0.00	0.00	0.00	0	282.61	238.41	-177.75	177.75	35.1
	U_{17}-L_{17}	-55.26	48.34	4.90	-5.62	0.00	0.00	0.00	0.00	0	236.11	228.91	-85.73	85.73	35.1
	U_{17}-L_{18}	-47.01	32.72	3.61	-5.65	0.00	0.00	0.00	0.00	0	118.81	240.98	-117.32	117.25	35.1
	U_{18}-L_{18}	-45.21	34.18	5.11	-10.44	0.00	0.00	0.00	0.00	0	170.03	163.57	-61.00	66.89	35.1
	U_{19}-L_{19}	-32.29	23.81	5.57	-10.47	0.00	0.00	0.00	0.00	0	112.62	153.55	-30.80	29.28	20.5
	U_{19}-L_{20}	-27.43	20.74	7.58	-11.65	0.00	0.00	0.00	0.00	0	112.62	153.55	-30.80	29.28	20.5
	U_{20}-L_{20}	-18.31	8.11	8.59	-12.69	0.00	0.00	0.00	0.00	0	53.09	23.28	5.18	-21.78	15.4
	U_{20}-L_{21}	-18.31	8.11	8.59	-12.69	0.00	0.00	0.00	0.00	0	53.09	23.28	5.18	-21.78	15.4
	U_{21}-L_{21}	-21.37	14.29	5.67	-10.93	0.00	0.00	0.00	0.00	0	68.49	51.95	-9.91	-2.69	15.4
	U_{21}-L_{22}	-31.27	17.47	5.04	-10.23	0.00	0.00	0.00	0.00	0	68.49	51.95	-9.91	-2.69	15.4
	U_{22}-L_{22}	-47.06	32.12	-4.56	-8.60	0.00	0.00	0.00	0.00	0	174.33	154.23	82.23	66.02	35.1
	U_{22}-L_{23}	-49.03	37.45	-3.80	-3.54	0.00	0.00	0.00	0.00	0	197.39	185.63	88.17	96.82	35.1
	U_{23}-L_{23}	-54.15	43.53	-2.20	-0.33	0.00	0.00	0.00	0.00	0	221.55	191.24	93.46	101.24	35.1
	U_{23}-L_{24}	-64.13	53.07	3.56	-3.97	0.00	0.00	0.00	0.00	0	276.76	248.23	-130.11	124.66	35.1
	U_{24}-L_{24}	-41.41	53.07	3.56	-3.97	0.00	0.00	0.00	0.00	0	276.76	248.23	-130.11	124.66	35.1
	U_{24}-L_{25}	-46.12	57.38	7.83	-6.78	0.00	0.00	0.00	0.00	0	167.77	290.68	-44.88	151.67	42.7
	U_{25}-L_{25}	-46.02	57.38	7.83	-6.78	0.00	0.00	0.00	0.00	0	310.20	290.68	-44.88	151.67	42.7
	U_{26}-L_{26}	-44.71	31.04	5.96	-14.82	0.00	0.00	0.00	0.00	0	214.06	155.13	-154.27	55.84	38.8
	U_{26}-L_{27}	-44.71	31.04	0.96	-5.46	0.00	0.00	0.00	0.00	0	211.85	176.40	-111.76	96.63	46.7
	U_{27}-L_{27}	-50.13	67.65	2.52	-1.39	0.00	0.00	0.00	0.00	0	211.85	176.40	-111.76	96.63	46.7
	U_{27}-L_{28}	-10.91	6.48	9.00	-16.27	0.00	0.00	0.00	0.00	0	53.09	23.28	5.18	-21.78	15.4
	U_{28}-L_{28}	-17.26	14.51	7.99	-15.59	0.00	0.00	0.00	0.00	0	28.93	9.32	25.76	-56.90	19.4
	U_{28}-L_{29}	-21.96	14.29	5.67	-10.93	0.00	0.00	0.00	0.00	0	68.49	51.95	-9.91	-2.69	15.4
	U_{29}-L_{29}	-29.36	19.57	-0.93	-7.15	0.00	0.00	0.00	0.00	0	114.21	69.11	-52.59	11.21	21.5
	U_{29}-L_{30}	-52.28	37.51	-4.35	-7.15	0.00	0.00	0.00	0.00	0	222.37	160.69	-52.44	11.21	21.5
	U_{30}-L_{30}	-54.63	40.95	-5.65	-5.63	0.00	0.00	0.00	0.00	0	246.84	181.20	-113.62	80.27	42.7
	U_{30}-L_{31}	-70.17	45.32	-5.06	-5.14	0.00	0.00	0.00	0.00	0	212.45	188.01	-86.27	80.86	38.8
	U_{31}-L_{31}	-54.74	39.29	4.74	-5.09	0.00	0.00	0.00	0.00	0	231.52	168.41	-152.64	63.55	38.8
	U_{32}-L_{32}	-49.67	37.53	5.35	-4.36	0.00	0.00	0.00	0.00	0	209.89	189.65	-90.61	80.27	38.8
	U_{32}-L_{33}	-25.95	19.85	-4.33	-4.20	0.00	0.00	0.00	0.00	0	90.15	59.52	-43.31	7.40	19.4
	L_{32}-L_{33}	-21.88	12.76	-2.41	-10.74	0.00	0.00	0.00	0.00	0	28.93	9.32	25.76	-56.90	19.4
	U_{33}-L_{33}	-16.63	4.79	7.51	-12.94	0.00	0.00	0.00	0.00	0	36.12	-13.39	1.00	-51.79	15.4
	U_{34}-L_{34}	-14.23	-0.80	-9.34	-9.21	0.00	0.00	0.00	0.00	0	0.39	-34.10	-30.67	-13.14	15.4
	U_{35}-L_{35}	-12.46	9.36	-1.89	-1.63	0.00	0.00	0.00	0.00	0	67.18	32.04	-30.67	-13.14	15.4

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-27.62	-49.04	8.65	1.19	0.00	0.00	0.00	0.00	-128.47	-131.40
	U_1-L_1	-27.62	-49.04	8.65	1.19	0.00	0.00	0.00	0.00	-128.47	-131.40
	U_1-L_2	-0.53	-19.67	11.01	0.88	9.69	0.00	0.00	0.00	-42.09	-81.99
	L_1-L_2	-19.99	-36.71	11.01	-123.58	-30.92	0.00	0.00	0.00	-104.19	-162.10
	U_2-L_2	-35.21	-41.16	-27.95	-29.10	0.00	0.00	0.00	0.00	-192.91	-137.72
	U_2-L_3	-39.42	-44.34	-52.84	-28.51	0.00	0.00	0.00	0.00	-324.38	-161.34
	L_2-L_3	-27.72	-38.54	-13.47	-8.26	0.00	0.00	0.00	0.00	-128.88	-12.50
	U_3-L_3	-12.97	-4.32	11.51	33.96	0.00	0.00	0.00	0.00	-324.38	-161.34
	U_3-L_4	16.53	-5.69	-31.01	-3.23	0.00	0.00	0.00	0.00	-278.93	-162.56
	U_4-L_4	22.21	14.79	-12.01	-6.16	0.00	0.00	0.00	0.00	-190.63	-184.97
	U_4-L_5	21.94	9.04	79.65	2.04	0.00	0.00	0.00	0.00	-58.78	-134.25
	U_5-L_5	-11.84	-8.41	20.62	-1.74	0.00	0.00	0.00	0.00	-78.72	-87.33
	U_5-L_6	-19.34	-27.55	-1.06	-7.12	0.00	0.00	0.00	0.00	-234.18	-222.44
	U_6-L_6	-28.99	-29.73	-31.21	-21.77	0.00	0.00	0.00	0.00	-292.30	-298.83
	U_6-L_7	-23.48	-25.26	3.20	-26.57	0.00	0.00	0.00	0.00	-260.26	-261.89
	U_7-L_7	-28.29	-10.91	-11.77	-20.78	0.00	0.00	0.00	0.00	-67.68	-126.49
	U_7-L_8	-33.40	-27.29	-49.79	-10.79	0.00	0.00	0.00	0.00	-145.42	-175.48
	U_8-L_8	-29.12	-28.01	-47.13	-7.34	0.00	0.00	0.00	0.00	-167.01	-169.39
	U_8-L_9	-47.72	-28.42	-51.58	-6.89	0.00	0.00	0.00	0.00	-82.67	-114.89
	U_9-L_9	-49.11	-30.75	-53.38	-6.42	0.00	0.00	0.00	0.00	-85.38

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Segment
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.83

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max	Impact Pedestrian Load Min
Structure 1	U_0-U_1	89.33	-98.19	-2.39	2.13	0.39	-7.66	0.65	0.45	2.38	-2.03
	U_1-U_2	89.33	-98.19	-2.39	2.13	0.39	-7.66	0.65	0.45	2.38	-2.03
	U_2-L_1	-130.88	58.71	1.28	3.74	-7.23	-7.00	2.20	0.80	-0.90	-1.36
	L_1-L_2	-46.29	16.63	0.31	1.33	-2.53	-2.47	0.77	0.28	-0.32	-0.48
	L_2-U_3	-26.07	74.96	2.65	3.45	-7.96	-2.90	0.47	0.77	1.36	-0.71
	U_3-U_4	19.43	179.86	2.96	3.05	-7.70	1.44	0.62	0.72	4.37	0.17
	U_4-U_5	19.43	179.86	2.96	3.05	-7.70	1.44	0.62	0.72	4.37	0.17
	L_3-U_5	-71.37	606.06	1.34	5.10	-1.03	-1.45	1.34	3.99	0.00	0.00
	U_5-L_4	624.62	-195.24	3.05	-1.42	3.57	-1.52	0.00	0.00	39.40	17.78
	L_4-U_6	71.38	-13.83	1.36	2.47	0.34	-6.15	0.28	0.49	0.23	-0.97
	U_6-U_7	97.28	223.12	2.91	2.69	-0.44	-6.43	0.49	0.39	0.26	-1.81
	U_7-L_5	35.32	221.77	2.57	1.91	-0.43	-11.85	0.56	0.33	0.24	-1.72
	L_5-U_8	-120.58	-238.24	2.22	0.85	-3.55	-8.52	0.44	0.14	-0.62	-1.62
	U_8-U_9	-201.64	-432.99	1.47	0.00	-5.87	-5.58	0.00	0.00	-1.36	-2.61
	U_9-L_6	-380.63	-263.81	1.95	1.13	-18.71	-5.81	0.32	0.20	-2.38	-6.60
	L_6-U_{10}	-387.00	1.88	0.19	0.04	-8.96	0.39	-0.03	0.04	-2.41	-2.58
	U_{10}-U_{11}	-353.36	-172.80	0.76	-0.02	-11.06	-3.98	0.05	-0.04	-1.64	-6.73
	U_{11}-L_7	-227.30	-24.62	0.70	-0.07	-8.13	1.02	0.10	-0.01	-1.48	0.22
	L_7-U_{12}	-214.14	19.61	0.57	-0.23	-5.75	1.08	0.09	-0.06	-1.42	0.34
	U_{12}-U_{13}	-232.24	7.36	0.53	-0.09	-4.57	2.16	0.06	-0.04	-1.35	0.65
	U_{13}-L_8	-221.38	379.27	1.31	0.26	-3.28	16.67	0.15	0.03	-1.35	5.01
	L_8-U_{14}	-113.13	299.58	-0.05	-1.26	-1.85	-10.33	0.00	-0.18	-0.50	-1.31
	U_{14}-U_{15}	-74.14	427.13	-0.04	-1.34	-1.29	-6.39	-0.02	-0.18	-0.33	-1.39
	U_{15}-L_9	-433.72	494.87	0.70	2.20	-6.26	-18.96	0.08	0.31	-1.29	-2.64
	L_9-U_{16}	-480.37	540.41	0.70	2.11	-6.37	-20.84	0.08	0.31	-1.29	-2.87
	U_{16}-U_{17}	-543.26	-229.94	2.23	5.55	-15.89	-16.30	0.37	0.87	0.70	-2.85
	U_{17}-L_{10}	-414.57	-309.81	4.17	3.59	-14.16	-14.41	0.64	0.58	1.77	-2.26
	L_{10}-U_{18}	-388.52	-328.14	3.32	4.22	-11.71	-14.91	0.51	0.64	2.44	-1.46
	U_{18}-U_{19}	-443.90	-59.15	3.63	4.80	-13.14	-3.69	0.49	0.82	2.01	-0.82
	U_{19}-L_{11}	-318.56	28.98	4.32	4.90	-10.96	-1.81	0.61	0.83	2.01	-0.28
	L_{11}-U_{20}	-165.92	101.76	5.02	4.37	-8.51	-2.75	0.77	0.79	1.44	-0.29
	U_{20}-U_{21}	-149.71	264.88	4.43	3.79	-8.36	0.86	0.73	0.60	1.58	0.29
	U_{21}-L_{12}	-80.76	1.64	2.98	2.12	0.00	-6.12	0.00	0.00	0.00	-0.97
	L_{12}-U_{22}	-291.45	1663.41	2.38	7.96	-0.74	-0.15	-1.35	5.47	0.00	0.00
	U_{22}-U_{23}	1538.34	1663.41	7.96	2.38	-0.15	-0.74	5.53	0.00	0.00	0.00
	U_{23}-L_{13}	-27.62	20.42	1.60	3.42	-6.76	-8.61	-0.01	-0.26	0.00	0.00
	L_{13}-U_{24}	301.51	1.64	2.78	0.00	-3.42	-6.12	0.00	0.00	0.00	0.00
	U_{24}-U_{25}	186.23	-23.02	2.96	3.49	-2.71	-11.70	0.46	0.70	0.18	-1.19
	U_{25}-L_{14}	179.28	-73.30	3.90	2.81	-4.56	-9.50	0.59	0.66	0.03	-1.32
	L_{14}-U_{26}	206.84	-76.05	3.63	2.63	-4.56	-9.50	0.59	0.66	0.03	-1.32
	U_{26}-U_{27}	-76.62	-111.17	3.39	0.26	-8.95	-10.92	0.37	0.45	-0.79	-1.30
	U_{27}-L_{15}	-158.30	-160.60	3.39	0.26	-8.95	-10.92	0.37	0.45	-0.79	-1.30
	L_{15}-U_{28}	-164.26	-164.79	1.53	1.48	-13.69	-8.38	0.68	0.50	-1.67	-1.21
	U_{28}-U_{29}	-164.26	-164.79	1.53	1.48	-13.69	-8.38	0.68	0.50	-1.67	-1.21
	U_{29}-L_{16}	-44.20	64.61	3.00	3.40	-12.80	-2.57	0.49	0.43	0.96	-0.34
	L_{16}-U_{30}	-69.18	212.29	2.72	3.42	-9.00	-1.20	0.53	0.34	-1.02	-0.42
	U_{30}-U_{31}	-40.92	345.50	2.41	2.25	-7.63	-0.19	-0.61	1.31	-0.96	0.63
	U_{31}-L_{17}	91.24	229.64	2.56	1.83	-7.63	-0.19	-0.61	1.31	-0.96	0.63
	L_{17}-U_{32}	-149.00	1535.72	1.31	8.02	-0.17	-1.22	-0.98	5.62	0.00	0.00
	U_{32}-U_{33}	1621.12	341.75	4.12	2.69	-0.57	-0.79	5.68	-1.53	0.00	0.00
	U_{33}-L_{18}	68.85	12.72	1.36	1.36	-0.24	-0.47	0.00	0.00	0.00	0.00
	L_{18}-U_{34}	253.89	-149.73	2.99	3.88	-1.08	-8.89	0.52	0.59	0.38	-1.49
	U_{34}-U_{35}	84.18	-327.28	4.47	3.75	-2.86	-12.52	0.74	0.68	1.98	-2.07
	U_{35}-L_{19}	68.85	12.72	1.36	1.36	-0.24	-0.47	0.00	0.00	0.00	0.00
	L_{19}-U_{36}	-358.58	-362.06	3.57	3.20	-12.02	-15.17	0.64	0.55	1.52	-2.40
	U_{36}-U_{37}	-300.98	-456.96	3.92	3.47	-14.77	-12.73	0.69	0.52	2.31	-2.62
	U_{37}-L_{20}	-327.41	-597.75	3.46	3.46	-11.05	-16.56	0.56	0.62	1.84	-2.24
	U_{38}-L_{21}	-569.52	-449.99	2.68	0.39	-16.56	-6.51	0.36	-0.04	-2.55	-1.21
	L_{21}-U_{39}	-406.59	-544.41	1.60	-0.84	-10.51	0.66	0.21	-0.18	-1.89	0.64
	U_{39}-U_{40}	-406.59	-544.41	1.60	-0.84	-10.51	0.66	0.21	-0.18	-1.89	0.64
	L_{22}-U_{41}	-290.66	-12.32	1.25	1.28	-6.69	3.42	0.20	-0.01	-1.64	0.87
	U_{41}-U_{42}	-434.97	-311.66	0.52	0.41	-5.63	-9.79	0.25	0.07	3.50	-2.00
	U_{42}-L_{23}	-55.48	-205.27	0.46	-0.48	-12.82	-5.07	0.00	-0.06	-0.16	-1.28
	L_{23}-U_{43}	-21.73	-219.02	0.52	0.89	0.25	-7.91	-0.12	0.40	-5.62	-5.74
	U_{43}-U_{44}	-361.44	-188.09	0.55	0.20	-10.72	-7.34	-0.02	0.37	1.24	-1.70
	U_{44}-L_{24}	-252.08	-374.58	1.46	2.22	-8.62	-15.89	0.20	0.27	2.43	-1.34
	L_{24}-U_{45}	-444.50	-197.91	1.81	-0.76	-4.56	0.12	0.29	-0.43	-1.34	0.56
	U_{45}-U_{46}	-235.24	-84.04	1.23	0.53	-6.90	0.14	0.46	-1.65	-0.50	0.24
	U_{46}-L_{25}	-214.94	-128.20	2.46	2.35	-7.51	0.63	0.70	0.29	-2.48	-0.43
	L_{25}-U_{47}	-187.04	640.76	0.89	5.01	-6.52	5.22	-1.47	3.55	0.00	0.00
	U_{47}-U_{48}	-187.04	640.76	0.89	5.01	-6.52	5.22	-1.47	3.55	0.00	0.00
	U_{48}-L_{26}	-55.62	170.13	1.36	-0.61	-4.07	1.34	0.26	0.12	-1.52	-0.15

ZZ Axis Moment Properties

Location	Member	Start (k-in)	End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	S_T (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y*S_bb	M_y k-in	Equivalent Mem. Factor a	C_{mx}	C_{mm}
Structure 1	U_0-U_1	-202.01	70.38	2.30	2.87	-8.83	0.10	0.30	0.09	-1.62	-0.15
	U_1-U_2	-214.94	128.20	2.46	2.35	-7.51	0.63	0.39	0.52	-1.79	0.34
	U_2-U_3	-291.45	1663.41	2.38	7.96	-0.74	-0.15	-1.35	5.47	0.00	0.00
	U_3-U_4	1538.34	1663.41	7.96	2.38	-0.15	-0.74	5.53	0.00	0.00	0.00
	U_4-U_5	-27.62	20.42	1.60	3.42	-6.76	-8.61	-0.01	-0.26	0.00	0.00
	U_5-U_6	301.51	1.64	2.78	0.00	-3.42	-6.12	0.00	0.00	0.00	0.00
	U_6-U_7	186.23	-23.02	2.96	3.49	-2.71	-11.70	0.46	0.70	0.18	-1.19
	U_7-U_8	179.28	-73.30	3.90	2.81	-4.56	-9.50	0.59	0.66	0.03	-1.32
	U_8-U_9	206.84	-76.05	3.63	2.63	-4.56	-9.50	0.59	0.66	0.03	-1.32
	U_9-U_{10}	-76.62	-111.17	3.39	0.26	-8.95	-10.92	0.37	0.45	-0.79	-1.30
	U_{10}-U_{11}	-158.30	-160.60	3.39	0.26	-8.95	-10.92	0.37	0.45	-0.79	-1.30
	U_{11}-U_{12}	-164.26	-164.79	1.53	1.48	-13.69	-8.38	0.68	0.50	-1.67	-1.21
	U_{12}-U_{13}	-164.26	-164.79	1.53	1.48	-13.69	-8.38	0.68	0.50	-1.67	-1.21
	U_{13}-U_{14}	-44.20	64.61	3.00	3.40	-12.80	-2.57	0.49	0.43	0.96	-0.34
	U_{14}-U_{15}	-69.18	212.29	2.72	3.42	-9.00	-1.20	0.53	0.34	-1.02	-0.42
	U_{15}-U_{16}	-40.92	345.50	2.41	2.25	-7.63	-0.19	-0.61	1.31	-0.96	0.63
	U_{16}-U_{17}	91.24	229.64	2.56	1.83	-7.63	-0.19	-0.61	1.31	-0.96	0.63
	U_{17}-U_{18}	-149.00	1535.72	1.31	8.02	-0.17	-1.22	-0.98	5.62	0.00	0.00
	U_{18}-U_{19}	1621.12	341.75	4.12	2.69	-0.57	-0.79	5.68	-1.53	0.00	0.00
	U_{19}-U_{20}	68.85	12.72	1.36	1.36	-0.24	-0.47	0.00	0.00	0.00	0.00
	U_{20}-U_{21}	253.89	-149.73	2.99	3.88	-1.08	-8.89	0.52	0.59	0.38	-1.49
	U_{21}-U_{22}	84.18	-327.28	4.47	3.75	-2.86	-12.52	0.74	0.68	1.98	-2.07
	U_{22}-U_{23}	68.85	12.72	1.36	1.36	-0.24	-0.47	0.00	0.00	0.00	0.00
	U_{23}-U_{24}	-358.58	-362.06	3.57	3.20	-12.02	-15.17	0.64	0.55	1.52	-2.40
	U_{24}-U_{25}	-300.98	-456.96	3.92	3.47	-14.77	-12.73	0.69	0.52	2.31	-2.62
	U_{25}-U_{26}	-327.41	-597.75	3.46	3.46	-11.05	-16.56	0.56	0.62	1.84	-2.24
	U_{26}-U_{27}	-569.52	-449.99	2.68	0.39	-16.56	-6.51	0.36	-0.04	-2.55	-1.21
	U_{27}-U_{28}	-406.59	-544.41	1.60	-0.84	-10.51	0.66	0.21	-0.18	-1.89	0.64
	U_{28}-U_{29}	-406.59	-544.41	1.60	-0.84	-10.51	0.66	0.21	-0.18	-1.89	0.64
	U_{29}-U_{30}	-290.66	-12.32	1.25	1.28	-6.69	3.42	0.20	-0.01	-1.64	0.87
	U_{30}-U_{31}	-434.97	-311.66	0.52	0.41	-5.63	-9.79	0.25	0.07	3.50	-2.00
	U_{31}-U_{32}	-55.48	-205.27	0.46	-0.48	-12.82	-5.07	0.00	-0.06	-0.16	-1.28
	U_{32}-U_{33}	-21.73	-219.02	0.52	0.89	0.25	-7.91	-0.12	0.40	-5.62	-5.74
	U_{33}-U_{34}	-361.44	-188.09	0.55	0.20	-10.72	-7.34	-0.02	0.37	1.24	-1.70
	U_{34}-U_{35}	-252.08	-374.58	1.46	2.22	-8.62	-15.89	0.20	0.27	2.43	-1.34
	U_{35}-U_{36}	-444.50	-197.91	1.81	-0.76	-4.56	0.12	0.29	-0.43	-1.34	0.56
	U_{36}-U_{37}	-235.24	-84.04	1.23	0.53	-6.90	0.14	0.46	-1.65	-0.50	0.24
	U_{37}-U_{38}	-214.94	-128.20	2.46	2.35	-7.51	0.63	0.70	0.29	-2.48	-0.43
	U_{38}-U_{39}	-187.04	640.76	0.89	5.01	-6.52	5.22	-1.47	3.55	0.00	0.00
	U_{39}-U_{40}	-187.04	640.76	0.89	5.01	-6.52	5.22	-1.47	3.55	0.00	0.00
	U_{40}-U_{41}	-55.62	170.13	1.36	-0.61	-4.07	1.34	0.26	0.12	-1.52	-0.15

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max	Impact Pedestrian Load Min
Structure 1	U_0-U_1	73.03	-4.68	-1.62	1.40	2.52	-8.27	0.43	0.24	1.16	0.06
	U_1-U_2	4206	0.99880042	2974.3	0.333	0.73	0.73	-73.71	3.14	-0.34	1.93
	U_2-L_1	4206	0.99880042	2974.3	0.333	0.73	0.73	-73.71	3.14	-0.34	1.93
	L_1-L_2	4206	0.99880042	2974.3	0.052	0.58	0.58	80.76	-87.30	3.32	12.12
	L_2-U_3	4206	0.99880042	2974.3	0.052	0.58	0.58	80.76	-87.30	3.32	12.12
	U_3-U_4	4206	0.99880042	2974.3	0.344	0.74	0.74	32.23	-29.57	0.87	2.03
	U_4-U_5	4206	0.99880042	2974.3	0.344	0.74	0.74	32.23	-29.57	0.87	2.03
	L_3-U_5	4204	0.99880136	3201.5	0.084	0.58	0.58	86.19	-84.24	2.47	2.89
	U_5-L_4	4206	0.99880042	2974.3	0.052	0.58	0.58	80.76	-87.30	3.32	12.12
	L_4-U_6	4206	0.99880042	2974.3	0.333	0.73	0.73	-73.71	3.14	-0.34	1.93
	U_6-U_7	4206	0.99880042	2974.3	0.333	0.73	0.73	-73.71	3.14	-0.34	1.93
	U_7-L_5	4206	0.99880042	2974.3	0.052	0.58	0.58	80.76	-87.30	3.32	12.12
	L_5-U_8	4206	0.99880042	2974.3	0.052	0.58	0.58	80.76	-87.30	3.32	12.12
	U_8-U_9	4206	0.99880042	2974.3	0.344	0.74	0.74	32.23	-29.57	0.87	2.03
	U_9-L_6	4206	0.99880042	2974.3	0.344	0.74	0.74	32.23	-29.57	0.87	2.03
	L_6-U_{10}	4204	0.99880136	3201.5	0.084	0.58	0.58	86.19	-84.24	2.47	2.89
	U_{10}-U_{11}	4206	0.99880042	2974.3	0.052	0.58	0.58	80.76	-87.30	3.32	12.12
	U_{11}-L_7	4206	0.99880042	2974.3	0.333	0.73	0.73	-73.71	3.14	-0.34	1.93
	L_7-U_{12}	4206	0.99880042	2974.3	0.333	0.73	0.73	-73.71	3.14	-0.34	1.93
	U_{12}-U_{13}	4206	0.99880042	2974.3	0.052	0.58	0.58	80.76	-87.30	3.32	12.12
	U_{13}-L_8	4206	0.99880042	2974.3	0.344	0.74	0.74	32.23	-29.57	0.87	2.03
	L_8-U_{14}	4206	0.99880042	2974.3	0.344	0.74	0.74	32.23	-29.57	0.87	2.03
	U_{14}-U_{15}	4204	0.99880136	3201.5	0.084	0.58	0.58	86.19	-84.24	2.47	2.89
	U_{15}-U_{16}	4206	0.99880042	2974.3	0.052	0.58	0.58	80.76	-87.30	3.32	12.12
	U_{16}-U_{17}	4206	0.99880042	2974.3	0.333	0.73	0.73	-73.71	3.14	-0.34	1.93
	U_{17}-L_{10}	4206	0.99880042	2974.3	0.207	0.68	0.68	2.59	-47.06	-0.68	2.09
	U_{18}-L_{11}	4206	0.99880042	2974.3	0.192	0.67	0.67	-59.97	56.85	0.05	1.81
	L_{11}-U_{20}	4206	0.99880042	2974.3	0.525	0.81	0.81	59.78	-109.85	1.43	1.05
	U_{20}-U_{21}	4206	0.99880042	2974.3	0.530	0.81	0.81	30.98	29.38	0.50	0.04
	U_{21}-L_{12}	4206	0.99880042	2974.3	0.310	0.72	0.72	192.32	-158.03	-0.65	0.13
	L_{12}-U_{22}	4206	0.99880042	2974.3	0.140	0.66	0.66	507.79	-80.55	-0.06	-0.05
	U_{22}-U_{23}	4206	0.99880042	2974.3	0.140	0.66	0.66	507.79	-80.55	-0.06	-0.05
	U_{23}-L_{13}	4206	0.99880042	2974.3	0.310	0.72	0.72	192.32	-158.03	-0.65	0.13
	L_{13}-U_{24}	4206	0.99880042	2974.3	0.192	0.67	0.67	-59.97	56.85	0.05	1.81
	U_{24}-U_{25}	4206	0.99880042	2974.3	0.525	0.81	0.81	59.78	-109.85	1.43	1.05
	U_{25}-L_{14}	4206	0.99880042	2974.3	0.530	0.81	0.81	30.98	29.38	0.50	0.04
	U_{26}-L_{15}	4206	0.99880042	2974.3	0.310	0.72	0.72	192.32	-158.03	-0.65	0.13
	L_{15}-U_{28}	4206	0.99880042	2974.3	0.140	0.66	0.66	507.79	-80.55	-0.06	-0.05
	U_{28}-U_{29}	4206	0.99880042	2974.3	0.140	0.66	0.66	507.79	-80.55	-0.06	-0.05
	U_{29}-L_{16}	4206	0.99880042	2974.3	0.310	0.72	0.72	192.32	-158.03	-0.65	0.13
	L_{16}-U_{30}	4206	0.99880042	2974.3	0.192	0.67	0.67	-59.97	56.85	0.05	1.81
	U_{30}-U_{31}	4206	0.99880042	2974.3	0.525	0.81	0.81	59.78	-109.85	1.43	1.05
	U_{31}-L_{17}	4206	0.99880042	2974.3	0.530	0.81	0.81	30.98	29.38	0.50	0.04
	U_{32}-L_{18}	4206	0.99880042	2974.3	0.310	0.72	0.72	192.32	-158.03	-0.65	0.13
	L_{18}-U_{34}	4206	0.99880042	2974.3	0.140	0.66	0.66	507.79	-80.55	-0.06	-0.05
	U_{34}-U_{35}	4206	0.99880042	2974.3	0.140	0.66	0.66	507.79	-80.55	-0.06	-0.05
	U_{35}-L_{19}	4206	0.99880042	2974.3	0.310	0.72	0.72	192.32	-158.03	-0.65	0.13
	L_{19}-U_{36}	4206	0.99880042	2974.3	0.192	0.67	0.67	-59.97	56.85	0.05	1.81
	U_{36}-U_{37}	4206	0.99880042	2974.3	0.525	0.81	0.81	59.78	-109.85	1.43	1.05
	U_{37}-L_{20}	4206	0.99880042	2974.3	0.530	0.81	0.81	30.98	29.38	0.50	0.04
	L_{20}-U_{39}	4206	0.99880042	2974.3	0.207	0.68	0.68	2.59	-47.06	-0.68	2.09
	U_{39}-U_{40}	4206	0.99880042	2974.3	0.192	0.67	0.67	-59.97	56.85	0.05	1.81
	U_{40}-L_{21}	4206	0.99880042	2974.3	0.525	0.81	0.81	59.78	-109.85	1.43	1.05
	L_{21}-U_{41}	4206	0.99880042	2974.3	0.530	0.81	0.81	30.98	29.38	0.50	0.04
	U_{41}-L_{22}	4206	0.99880042	2974.3	0.310	0.72	0.72	192.32	-158.03	-0.65	0.13
	L_{22}-U_{43}	4206	0.99880042	2974.3	0.140	0.66	0.66	507.79	-80.55	-0.06	-0.05
	U_{43}-U_{44}	4206	0.99880042	2974.3	0.140	0.66	0.66	507.79	-80.55	-0.06	-0.05
	U_{44}-L_{23}	4206	0.99880042	2974.3	0.310	0.72	0.72	192.32	-158.03	-0.65	0.13
	L_{23}-U_{45}	4206	0.99880042	2974.3	0.192	0.67	0.67	-59.97	56.85	0.05	1.81
	U_{45}-U_{46}	4206	0.99880042	2974.3	0.525	0.81	0.81	59.78	-109.85	1.43	1.05
	U_{46}-L_{25}	4206	0.99880042	2974.3	0.530	0.81	0.81	30.98	29.38	0.50	0.04
	L_{25}-U_{47}	4206	0.99880042	2974.3	0.207	0.68	0.68	2.59	-47.06	-0.68	2.09
	U_{47}-U_{48}	4206	0.99880042	2974.3	0.192	0.67	0.67	-59.97	56.85	0.05	1.81
	U_{48}-L_{26}	4206	0.99880042	2974.3	0.525	0.81	0.81	59.78	-109.85	1.43	1.05

YY Axis Moment Properties

Location	Member	Start (k-in)	End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	S_T (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y*S_bb	M_y k-in	Equivalent Mem. Factor a	C_{mx}	C_{mm}
Structure 1	U_0-U_1	-202.01	70.38	2.30	2.87	-8.83	0.10	0.30	0.09	-1.62	-0.15
	U_1-U_2	-214.94	128.20	2.46	2.35	-7.51	0.63	0.39	0.52	-1.79	0.34
	U_2-U_3	-291.45	1663.41	2.38	7.96	-0.74	-0.15	-1.35	5.47	0.00	0.00
	U_3-U_4	1538.34	1663.41	7.96	2.38	-0.15	-0.74	5.53	0.00	0.00	0.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **HS20 Truck**
Condition: **As-Built**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

M_z Information

M_y Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	$I_{z/c}$ (in^3)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{bb}	M_z (k-in)	YY Axis Moments from STAAD: Equivalent Mom. Start (k-in)	Equivalent Mom. End (k-in)	Dead Load (k-in)	Live Load (Max) (k-in)	Live Load (Min) (k-in)	Pedestrian Load (Max) (k-in)	Pedestrian Load (Min) (k-in)	Lane Reduction & Impact Live Load Max (k-in)	Lane Reduction & Impact Live Load Min (k-in)	Impact Pedestrian Load Max (k-in)	Impact Pedestrian Load Min (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	Tension: Yield S_{bb} (in^3)	S_b (in^3)	Z_y (in^3)	$I_{z/c}$ (in^4)	Pass	Compression: Buckle: Axial (kips)	Moment (k-in)	Total	Pass	Fracture: Axial (kips)	Moment (k-in)	Total	Pass	Yield: Axial (kips)	Moment (k-in)	Total	Pass
L_0-L_1		-19.48	-91.71	0.70	-0.38	2.57	-2.00	-0.11	0.13	0.00	-0.64	9.31	-5.12	-28.88	-26.75	-1.37	1.50	3.54	-7.68	-5.14	-1.30.31	37.46	-177.17	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.211	0.52	0.52	36.69	129.06	0.83	2.33	-1.00	-3.69	-0.03	-0.11	0.46	1.68	8.47	31.14	13.40	-49.24	-0.46	-1.68	6.78	24.94	63.97	239.25	16.58	61.09	138.3	128.29	121.83	141.18	626.8	1.10	4659	----	0.99805042	4225.3	0.272	0.71	0.71	0.039	0.104	0.15	Yes	0.023	0.052	0.09	Yes	0.044	0.073	0.12	Yes	0.043	0.053	0.10	Yes
L_0-L_1		30.33	-116.64	-1.47	-9.16	-0.66	2.31	-0.07	-0.13	-0.13	-0.43	-19.60	-122.39	-8.76	-80.92	-8.92	-0.82	-15.98	-1.85	5.12	-1.53.32	-3.03	-416.80	20.44	-84.68	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.211	0.52	0.52	169.01	-70.76	-19.97	6.75	1.76	-0.01	0.04	0.05	-0.12	-266.79	90.11	23.53	-12.24	29.02	-12.93	2.29	-1.71	-358.34	103.25	270.68	-138.13	128.29	115.05	141.18	626.8	1.10	6220	----	0.99788161	5653.3	0.607	1.38	1.38	0.054	0.229	0.28	Yes	0.031	0.114	0.15	Yes	0.059	0.162	0.22	Yes	0.058	0.116	0.17	Yes
L_0-L_1		-69.05	14.64	-7.70	-6.22	1.31	4.20	-1.19	-1.34	0.23	0.86	-102.87	-83.12	17.43	56.12	-14.24	-16.13	2.75	10.32	-307.44	-161.08	-46.79	140.63	99.9	99.93	84.14	129.49	3409	1373.0	1.26	4141	0.99991188	3294.8	0.524	0.81	0.81	-209.19	-211.28	41.72	22.04	-9.22	26.53	-15.02	0.62	1.38	281.34	-97.74	224.20	-208.11	171.6	171.62	158.81	188.47	749.3	1.10	6220	----	0.99795191	5651.9	0.347	0.74	0.74	0.390	0.119	0.47	Yes	0.208	0.075	0.29	Yes	0.100	0.113	0.22	Yes	0.105	0.074	0.18	Yes
L_0-L_1		-60.77	124.10	-6.82	5.51	1.12	-1.79	-1.05	1.19	-0.20	0.76	-65.28	-40.33	-17.81	-11.08	9.04	-7.12	-12.39	4.55	-271.24	-204.27	-249.36	47.47	52.98	76.68	74.47	114.59	3186	1283.8	1.26	3872	0.99991188	3052.4	0.491	0.82	0.82	-68.28	170.56	5.00	-7.48	3.12	-9.00	5.09	-4.14	1.34	0.19	-4.36	68.84	-89.70	3.37	-0.05	-16.88	28.74	170.31	-184.3	171.6	171.62	158.81	188.47	749.3	1.10	5717	----	0.99797879	5114.3	-0.374	0.40	0.40	1.000	0.617	1.00	Yes	0.722	0.386	1.00	Yes	0.345	0.617	0.96	Yes	0.361	0.384	0.74	Yes
L_0-L_1		-2.22	269.06	-4.32	-9.64	2.47	4.65	-0.84	0.55	0.53	1.12	-57.71	-8.60	-32.97	52.11	-10.07	9.55	6.35	13.38	-127.93	331.14	68.56	484.35	504.6	504.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	3448.5	0.142	0.66	0.66	140.99	-140.80	-5.69	2.04	-0.39	-0.81	1.33	-0.87	-0.36	-0.37	-76.04	27.25	-5.26	-10.78	19.71	-12.93	-5.37	-5.54	18.52	-136.69	171.88	-218.10	128.25	784.3	1.10	7464	----	0.99778988	6800.4	-0.788	0.83	0.83	0.690	0.104	0.81	Yes	0.682	0.107	0.79	Yes
L_0-L_1		-3.28	58.33	-1.22	0.55	1.14	0.02	-0.29	-0.14	-16.33	7.32	-62.08	-21.27	-0.04	-0.29	-0.14	-0.13	-0.36	-1.66	-21.34	-14.15	-129.09	152.94	9290	2378.8	1.33	6264	0.99991188	4776.0	-0.437	0.43	0.43	-17.37	-1.34	-1.17	0.00	0.00	0.00	1.33	-0.77	42.05	11.17	-5.35	13.90	0.00	0.00	19.06	-11.05	332.17	-65.71	263.76	244.81	288.5	288.46	246.71	321.09	1086.4	1.02	10626	----	0.99753246	9386.7	-0.375	0.46	0.46	0.433	0.214	0.65	Yes	0.433	0.214	0.65	Yes
L_0-L_1		-38.40	570.90	0.32	-1.42	0.25	6.09	0.00	0.00	0.35	3.65	4.29	-18.92	3.35	31.28	0.00	0.00	0.00	-4.16	43.81	-40.66	701.27	-57.24	153.35	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952915	4806.3	-0.058	0.58	0.58	217.29	184.07	1.62	-0.10	2.29	5.78	0.00	0.00	-0.09	21.67	-11.39	30.58	77.15	0.00	0.00	11.40	-1.34	329.17	211.36	392.43	405.42	355.4	355.44	352.52	403.40	1093.1	1.13	13312	----	0.99717071	11898.3	-0.864	0.95	0.95	0.000	0.821	0.82	Yes	0.773	0.821	1.00	Yes	0.616	0.821	1.00	Yes	0.616	0.821	1.00	Yes
L_0-L_1		555.48	-39.07	-1.34	0.44	7.18	-0.08	0.00	0.00	3.40	-0.27	-17.34	57.53	72.5	92.94	-1.06	0.00	0.00	0.00	83.40	53.93	314.15	144.5	145.75	130.74	228.84	6500	2932.4	1.57	7552	0.99952915	4806.3	-0.058	0.58	0.58	84.66	184.07	1.62	-0.10	2.29	5.78	0.00	0.00	0.00	1.33	-0.77	42.05	11.17	-5.35	13.90	0.00	0.00	19.06	-11.05	332.17	-65.71	263.76	244.81	288.5	288.46	246.71	321.09	1086.4	1.02	10626	----	0.99753246	9386.7	-0.375	0.46	0.46	0.452	0.215	0.67	Yes	0.452	0.215	0.67	Yes	0.452	0.215	0.67	Yes
L_0-L_1		185.35	-153.68	1.16	-0.30	3.81	2.10	0.00	0.00	0.00	0.00	-14.96	1.10	-60.76	-27.18	0.00	0.00	0.00	4.03	-5.92	274.63	-208.31	324.78	188.47	144.9	144.85	129.09	192.84	5210	2379.8	1.33	6364	0.99991188	4776.1	0.583	0.83	0.83	189.43	-92.23	3.23	0.38	-1.30	-3.92	-0.12	-0.16	0.00	1.33	-0.77	42.05	11.17	-5.35	13.90	0.00	0.00	19.06	-11.05	332.17	-65.71	263.76	244.81	288.5	288.46	246.71	321.09	1086.4	1.02	10626	----	0.99754246	9386.7	-0.375	0.46	0.46	0.452	0.215	0.67	Yes	0.452	0.215	0.67	Yes	0.452	0.215	0.67	Yes
L_0-L_1		-164.35	-164.49	-2.33	-3.85	2.94	1.65	0.00	0.00	-1.00	-0.73	-30.08	-49.81	38.00	-21.37	0.00	0.00	0.00	11.99	-8.75	148.48	-321.76	295.99	-167.52	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.461	0.42	0.42	-135.95	67.51	3.79	-6.23	-1.09	-0.45	0.00	0.00	-0.60	1.06	49.04	-80.58	-14.15	-5.82	0.00	0.00	-11.47	15.25	-70.49	-86.83	-207.40	75.15	158.2	158.16	151.51	173.24	694.3	1.10	5717	----	0.99798353	5208.8	0.161	0.82	0.82	0.362	0.408	0.77	Yes	0.408	0.206	0.62	Yes	0.240	0.331	0.38	Yes	----	----	----	----	----
L_0-L_1		178.34	-251.25	2.81	-4.95	3.06	0.16	-1.26	0.42	0.25	-0.26	-35.40	-69.57	2.88	-18.83	0.00	0.00	0.00	-13.25	7.35	154.25	-465.72	367.06	-283.88	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.461	0.42	0.42	74.19	-12.73	-2.22	4.72	0.55	-0.74	1.54	1.80	-0.82	22.07	-11.47	-0.73	-0.92	-470.54	89.85	-117.81	62.28	158.2	158.16	151.51	173.24	694.3	1.10	5717	----	0.99798353	5208.8	0.161	0.82	0.82	0.362	0.408	0.77	Yes	0.408	0.206	0.62	Yes	0.240	0.331	0.38	Yes	----	----	----	----	----
L_0-L_1		-57.28	170.48	-4.97	-6.49	2.14	1.07	-0.57	-0.97	0.43	0.20	-64.24	-83.94	29.60	-27.89	13.87	-6.78	-11.64	5.10	2.41	-213.65	-403.92	-14.47	-191.57	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99992852	4288.6	0.529	0.81	0.81	-96.77	102.89	-60.62	-12.93	-3.54	-0.24	-1.11	1.03	0.00	-3.54	-15.89	14.84	-0.04	-0.59	142.65	-227.44	-141.00	128.47	233.3	233.26	201.34	209.94	975.8	1.11	8978	----	0.99789998	7679.8	0.627	0.85	0.85	0.833	0.088	0.64	Yes	0.833	0.088	0.64	Yes	0.833	0.088	0.64	Yes
L_0-L_1		70.09	-469.84	0.27	-10.96	1.63	-1.47	-0.45	-2.28	0.35	0.23	-68.15	-141.75	21.35	-19.06	-5.44	-27.35	4.18	2.75	-56.53	-917.92	137.37	-569.49	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99991036	5310.6	0.062	0.62	0.62	-106.42	40.42	-16.28	2.59	0.14	-0.54	1.78	-1.05	-0.05	0.98	-236.56	33.50	1.76	-7.01	25.56	-15.04	-0.68	-1.19	-314.19	125.12	142.16	37.35	321.7	321.70	275.89	363.71	1221.7	1.13	12002	----	0.99741170	10968.7	-0.334	0.47	0.47	0.533	0.168	0.70	Yes	0.347	0.097	0.45	Yes	0.533	0.168	0.70	Yes
L_0-L_1		-488.80	137.87	-6.83	5.34	0.20	0.32	-1.09	-0.34	-0.22	0.08	-137.02	-74.76	-37.84	-3.74	-30.54	-13.26	6.79	-17.53	-1.36.78	367.03	-74.74	322.63	274.7	274.74	247.98	370.56	11609	4406.1	1.35	12232	0.99991036	5310.6	0.062	0.62	0.62	-179.36	68.13	-27.44	4.36	0.24	-0.91	3.00	-1.77	-0.08	1.66	-398.70	56.46	2.97	-11.82	43.08	-25.35	-1.14	-1.35	-529.57	211.00	239.81	62.95	542.2	542.20	464.84	613.21	2059.4	1.13	12002	----	0.99741170	10968.7	-0.334	0.47	0.47	0.533	0.168	0.70	Yes	0.347	0.097	0.45	Yes	0.533	0.168	0.70	Yes
L_0-L_1		-272.90	-394.23	-8.77	-8.25	0.56	1.60	-1.43	-1.04	0.13	-0.03	-117.66	-177.72	2.74	-12.93	-1.15	-0.35	-8.00.62	-691.83	-332.49	-432.49	179.7	179.67	162.4	162.43	147.23	219.93	6887	2613.8	1.35	7258	0.99991036	5310.6	0.062	0.62	0.62	8297	0.99913252	5924.6	0.868	0.95	0.95	-10.67	-168.47	-7.90	3.48	1.34	0.59	1.47	0.07	-0.11	-0.01	-102.16	45.03	12.32	7.67	21.12	-15.32	-1.51	-0.07	-235.22	39.45	23.66	-176.38	129.5	129.50	116.91	142.19	626.8	1.10	4852	----	0.99810102	4303.9	0.153	0.69	0.69	0.104	0.143	0.25	Yes	0.063	0.095	0.16	Yes	0.125	0.104	0.23	Yes
L_0-L_1		-202.42	20.75	-1.00	-0.44	0.30	0.06	-0.91	0.20	0.00	0.00	-12.93	-5.67	3.86	0.75	-10.86	2.40	0.00	0.00	-291.15	54.69	-254.79	28.60	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99990448	3891.8	-0.050	0.58	0.58	54.74	-106.62	-1.25	-1.25	-0.34	4.86	12.77	-11.08	0.00	0.00	0.00	36.18	-173.76	80.56	-128.06	213.3	213.34	184.04	236.66	808.1	1.11	7813	----	0.99773815	7024.3	-0.208	0.52	0.52	0.423	0.078	0.51	Yes	0.271	0.048	0.32	Yes	0.423	0.078	0.51	Yes
L_0-L_1		-240.36	179.73	-1.95	0.53	0.06	0.06	-0.06	-0.12	0.07	0.07	-18.22	6.87	-0.61	0.61	-0.77	-13.26	6.89	-1.67.88	-224.56	-298.36	232.33	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99990547	2755.5	-0.630	0.34	0.34	-126.40	114.23	0.44	-1.01	-0.32	0.00	0.00	0.00	-0.25	1.66	5.68	22.20	0.88	-4.47	0.35	-1.78	14.22	-15.85	19.01	-14.19	133.1	107.44	146.13	626.8	1.10	4852	----	0.99810102	4303.9	0.153	0.69	0.69	0.104	0.143	0.25	Yes	0.063	0.095	0.16	Yes	0.125	0.104	0.23	Yes
L_0-L_1		-190.79	100.10	-0.92	-0.15	3.51	2.48	0.06	-0.06	1.21	0.90	-11.86	-1.91	-46.48	32.10	0.74	-0.71	-14.53	10.82	273.74	125.97	-345.51	-178.28	83.6	83.58	74.62	100.97	2577	1098.2	1.21	3332	0.99990547	2755.5	0.516	0.81	0.81	109.51	24.52	0.75	2.84	-0.56	0.46	0.10	13.14	2.95	190.41	42.62	18.61	4.95	2.62	-133.11	119.24	146.13	626.8	1.10	4852	----	0.99810102	4303.9	0.224	0.69	0.69	0.104	0.143	0.25	Yes	0.063	0.095	0.16	Yes	0.125	0.104	0.23	Yes
L_0-L_1		26.57	-260.07	0.42	-0.39	1.45	3.18	-0.05	0.10	0.35	-1.08	5.30	-4.92	18.55	-40.62	-0.56	1.20	4.19	-12.92	46.03	-348.74	74.74	-426.09	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99983332	4022.0	-0.175	0.53	0.53	22.46	78.18	0.26	0.89	-0.39	-1.34	0.01	0.04	0.23	0.80	3.28	11.35	-4.92	-17.07	0.16	0.53	3.28	11.39	36.32	126.21	18.55	64.65	167.9	167.91	155.45	164.50	1098.1	1.10	6089	----	0.99834634	5531.9	0.268	0.72	0.72	0.346	0.385	0.53	Yes	0.102	0.118	0.31	Yes	0.346	0.385	0.53	Yes
L_0-L_1		7.20	-277.30	-2.09	-0.69	1.13	2.23	-1.18	-0.13	0.17	-0.68	-109.53	-168.42	18.44	-2.71	-14.17	-1.60	2.04	-6.44	-278.1	-14.17	-1.60	2.04	-6.44	278.1	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99990547	2755.5	0.516	0.81	0.81	-55.27	127.02	2.70	-9.90	-0.03	-13.15	-0.47	0.98	-0.03	-0.04	-1.64	-6.67	13.97	-0.37	-2.77	2.84	-108.96	-72.73	161.58	258.9	258.92	218.75	284.83	1462.6	1.10	9399	----	0.99819159	8926.6	-0.347	0.38	0.38	0.561	0.308	0.61	Yes	0.561	0.308	0.61	Yes	0.561	0.308	0.61	Yes
L_0-L_1		-1.36	-479.17	-3.21	-0.48	1.45	2.86	-1.51	-0.17	0.22	-0.87	-140.49	-216.00	23.66	-3.48	-18.17	-2.05	2.62	-8.26	-356.7	-18.17	-2.05	2.62	-8.26	356.7	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99990547	2755.5	0.516	0.81	0.81	-119.37	46.99	5.77	-21.39	-0.07	-28.41	-1.01	2.12	-0.07	-0.09	-3.54	-14.42	30.18	-0.81	-5.99	6.14	-235.19	-157.08	348.92	558.9	558.92	472.44	615.21	3158.6	1.10	16743	----	0.99817112	14648.8	0.749	0.90	0.90	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
L_0-L_1		-367.44	-421.31	-11.00	-13.05	0.55	2.06	-1.24	-1.72	0.04	0.32	-140.49	-166.77	6.99	-26.26	-14.87	-20.62	0.43	3.78	-782.06	-909.04	-462.53	-490.81	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99992244	5764.8	0.860	0.94	0.94	-229.89	134.81	4.00	-111.1	-0.70	-0.17	-0.58	0.03	-0.51	51.13	-141.93	-8.53	-2.13	-8.22	13.13	-1.83	-0.37	81.63	-132.27	-48.11	170.63	385.1	385.09	321.50	445.45	1668.6	1.16	14832	----	0.99795552	12807.3	-0.288	0.48	0.48	0.517	0.097	0.62	Yes	0.342	0.058	0.41	Yes	0.342	0.058	0.41	Yes
L_0-L_1		-211.67	-681.03	-0.13	-0.37	0.37	0.57	-0.10	-0.15	0.02	0.03	-117.66	-295.26	17.33	-2.60	-14.17	-3.44	2.04	-6.44	-428.89	-1.116.56	-520.69	-1.116.56	520.69	428.89	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99990547	2755.5	0.516	0.81	0.81	-119.37	46.99	5.77	-21.39	-0.07	-28.41	-1.01	2.12	-0.07	-0.09	-3.54	-14.42	30.18	-0.81	-5.99	6.14	-235.19	-157.08	348.92	558.9	558.92	472.44	615.21	3158.6	1.10	16743	----	0.99817112	14648.8	0.749	0.90	0.90	0.616	0.140	0.76	Yes	0.611	0.176	0.79	Yes
L_0-L_1		-419.34	-397.03	-8.67	-8.97	3.40	3.65	-2.41	-2.51	0.47	0.59	-364.06	-109.46	-43.48	47.09	-28.90	-24.11	5.63	7.06	-1.037.27	-1.037.27	-1.037.27	-1.037.27	1037.27	1037.27	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99990547	2755.5	0.516	0.81	0.81	-119.37	46.99	5.77	-21.39	-0.07	-28.41	-1.01	2.12	-0.07	-0.09	-3.54	-14.42	30.18	-0.81	-5.99	6.14	-235.19	-157.08	348.92	558.9	558.92	472.44	615.21	3158.6	1.10	16743	----	0.99817112	14648.8	0.749	0.90	0.90	0.616	0.140	0.76	Yes	0.611	0.176	0.79	Yes
L_0-L_1		-394.51	-7.27	-14.14	-7.11	2.99	5.56	-1.94	-0.96	0.46	0.90	-180.59	-90.75	38.19	71.00	-23.32	-11.46	5.50	10.76	-904.15	-206.16	-430.12	144.36	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99985427	6781.3	0.228	0.85	0.85	51.21	-152.38	12.68	16.93	2.04	12.31	-23.04	1.97	-2.92	-206.45	3.45	160.45	-149.62	330.3	330.27	276.06	369.76	1851.4	1.12	12202	----	0.99799921	10877.1	-0.017	0.59	0.59	0.469	0.117	0.55	Yes	0.308	0.069	0.38	Yes	0.469	0.117	0.55	Yes
L_0-L_1		-488.80	-137.87	-6.83	-5.34	0.20	0.32	-1.09	-0.34	-0.22	0.08	-137.02	-74.76	-37.84	-3.74	-30.54	-13.26	6.79	-17.53	-1.36.78	367.03	-74.74	322.63	274.7	274.74	247.98	370.56	11609	4406.1	1.35	12232	0.99991036	5310.6	0.062	0.62	0.62	-179.36	68.13	-27.44	4.36	0.24	-0.91	3.00	-1.77	-0.08	1.66	-398.70	56.46	2.97	-11.82	43.08	-25.35	-1.14	-1.35	-529.57	211.00	239.81	62.95	542.2	542.20	464.84	613.21	2059.4	1.13	12002	----	0.99741170	10968.7	-0.334	0.47	0.47	0.533	0.168	0.70	Yes	0.347	0.097	0.45	Yes	0.533	0.168	0.70	Yes
L_0-L_1		-295.55	282.64	-8.06	-1.94	2.68	5.23	-1.43	-0.45	0.41	0.92	-102.99	-24.79	34.29	66.81	-17.12	-0.60	4.93	10.98	-397.33	-287.72	-309.92	486.18	149.0	148.99	131.69	189.42	4703	1908.4	1.27	6251	0.99991232	4912.7	-0.474	0.41	0.41	50.93	-175.60	8.82	4.91	2.00	12.62	11.61	-17.88	1.31	5.07	205.68	-139.33	88.77	-203.93	229.93	229.93	202.49	251.27	1241.9	1.10	8314	----	0.99827238	7563.1	0.520	0.97	0.97	0.148	0.122	0.27	Yes	0.249	0.078	0.33	Yes	0.247	0.057	0.30	Yes
L_0-L_1		-39.34	24.00	-0.53	-0.61	0.11	0.87	2.07	-1.24	-0.07	0.12	-0.76	2.34	4.56	0.47	-1.52	4.25	0.78	2.71	-4.92	34.54	-80.53	-139.50	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99990547	2755.5	0.516	0.81	0.81	-41.28	7.32	0.23	-0.92	-0.01	-1.27	-0.04	0.09	-0.01	-0.01	-0.85	0.85	0.04	0.01	0.01	-0.01	0.85	-0.85	-0.04	-0.01	-0.01

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_z (in^3) | I_z (in^4) | $I_{t/n}$ (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term * F_y/S_bb | M_2 (k-in) | Equivalent Mom. Factor: C_{bb} | C_b | C_{calc} | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_y (in^3) | $I_{t/n}$ (in^4) | Shape Factor f | M_p (k-in) | σ_{bb} (ksi) | Formula 1.8 Term * F_y/S_bb | M_2 (k-in) | Equivalent Mom. Factor: C_{bb} | C_b | C_{calc} | Yield: Axial Axial/Axial | Yield: Moment Positive | Yield: Total | Pass | Tension: Axial Axial/Axial | Tension: Fracture Moment Positive | Tension: Total | Pass | Buckle: Axial Axial/Axial | Buckle: Moment Total | Buckle: Total | Pass | Compression: Axial Axial/Axial | Compression: Moment Total | Compression: Total | Pass |
|---|---|---|---

Axial - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
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Load Rating Analysis - Truss Spans
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Vehicle Load Factors		Pedestrian Load Factors	
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(+) Positive Stresses / Forces Indicate Tension
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& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	3.65	-1.42	0.27	0.43	-0.05	-0.12	0.15	0.01	0.00	-0.03
	U_1-L_1	-11.48	-3.33	-1.01	0.16	0.39	-0.16	-0.25	0.07	0.08	-0.04
	U_1-L_2	-10.93	-11.78	-0.76	0.06	0.43	-0.12	-0.13	-0.03	0.09	-0.03
	U_1-L_3	9.81	-15.01	-0.34	-0.26	-0.14	-0.68	0.00	0.00	0.00	-0.11
	U_2-L_2	-16.21	25.06	-0.92	0.62	-0.13	-0.24	0.35	4.17	-2.55	-1.69
	U_2-L_3	-34.06	79.08	-1.71	1.12	0.12	-0.26	-0.28	0.44	0.00	0.00
	U_3-L_3	-71.10	69.80	-2.27	1.56	0.27	-0.27	-0.38	0.61	0.00	0.00
	U_3-L_4	-1.39	103.62	-0.93	1.70	0.33	-0.58	-0.29	0.65	0.00	0.00
	U_4-L_4	-12.27	139.07	-1.04	2.26	0.37	0.05	-0.19	0.58	0.21	0.13
	U_4-L_5	-73.43	169.51	-0.21	1.00	0.18	0.07	-0.31	0.35	0.00	0.00
	U_5-L_5	-82.30	169.51	-0.29	1.00	0.18	0.07	-0.31	0.35	0.00	0.00
	U_5-L_6	-69.90	47.85	1.60	1.09	-0.14	-0.24	-0.31	0.21	0.00	0.00
	U_6-L_6	-27.40	6.37	-0.86	0.20	0.08	-0.50	-0.15	0.03	0.00	0.00
	U_6-L_7	-0.38	-32.71	0.00	0.00	0.00	-0.05	0.04	0.00	0.00	0.00
	U_7-L_7	-31.05	12.71	-1.18	0.79	0.04	-0.33	0.11	0.05	-0.04	-0.02
	U_7-L_8	-46.66	27.26	-1.47	1.03	0.05	-0.22	-0.09	0.06	-0.05	-0.03
	U_8-L_8	-118.88	85.32	-2.68	2.08	0.35	-0.33	-0.55	0.42	0.06	-0.05
	U_8-L_9	-118.21	87.78	-2.48	1.91	0.34	-0.26	-0.57	0.46	0.04	-0.04
	U_9-L_9	-146.00	120.15	-2.29	2.05	0.19	-0.29	-0.77	0.62	0.04	-0.04
	U_9-L_{10}	-86.84	116.71	-2.77	2.87	0.22	-0.43	-0.13	0.38	0.01	-0.06
	U_{10}-L_{10}	-104.13	114.46	-2.52	2.69	0.22	-0.43	-0.13	0.38	0.01	-0.06
	U_{10}-L_{11}	-118.22	92.25	-3.25	2.54	0.73	-0.65	-0.52	0.43	0.11	-0.10
	U_{11}-L_{11}	-58.39	58.80	-1.87	1.21	0.49	-0.43	-0.32	0.24	0.07	-0.06
	U_{11}-L_{12}	-24.32	8.60	-1.27	0.90	0.44	-0.36	-0.18	0.11	0.07	-0.06
	U_{12}-L_{12}	1.48	-13.42	-0.53	0.43	0.11	-0.07	-0.06	-0.16	-0.04	0.04
	U_{12}-L_{13}	13.33	-37.03	0.57	0.13	0.47	-0.98	0.00	0.00	0.04	0.00
	U_{13}-L_{13}	-66.01	54.01	-1.46	1.10	-0.19	-0.40	-0.23	0.17	0.00	0.00
	U_{13}-L_{14}	-133.76	104.35	-2.67	2.08	-0.40	-0.82	-0.50	0.35	0.00	0.00
	U_{14}-L_{14}	-116.16	105.67	-2.48	2.03	0.45	-0.35	-0.36	0.36	0.00	0.00
	U_{14}-L_{15}	-138.98	104.35	-2.67	2.08	-0.40	-0.82	-0.45	0.35	0.00	0.00
	U_{15}-L_{15}	-131.93	101.03	-2.50	2.05	0.63	-0.34	-0.42	0.51	0.00	0.00
	U_{15}-L_{16}	-175.29	162.92	-2.67	2.48	1.03	-0.74	-0.56	0.54	0.02	-0.02
	U_{16}-L_{16}	-64.32	98.11	-1.86	1.52	0.73	-0.49	-0.36	0.41	0.01	-0.01
	U_{16}-L_{17}	-45.28	135.72	-2.32	2.84	0.67	-0.18	-0.36	0.49	0.18	-0.02
	U_{17}-L_{17}	-143.91	201.73	-3.73	4.60	1.49	-0.29	-0.73	0.84	0.29	-0.03
	U_{17}-L_{18}	-112.48	136.84	-3.24	3.01	0.33	-0.40	-0.48	0.55	0.07	0.00
	U_{18}-L_{18}	-83.68	84.68	-2.85	1.97	0.44	-0.45	-0.37	0.40	0.00	0.00
	U_{18}-L_{19}	-51.76	54.22	-1.84	1.25	0.40	-0.37	-0.27	0.25	0.00	0.00
	U_{19}-L_{19}	-138.38	104.35	-2.67	2.08	-0.40	-0.82	-0.45	0.35	0.00	0.00
	U_{19}-L_{20}	-14.01	1.02	-0.81	0.33	0.34	-0.75	-0.11	0.03	-0.01	-0.08
	U_{20}-L_{20}	18.16	2.54	-0.61	0.24	0.24	-0.56	-0.08	0.02	-0.01	-0.06
	U_{20}-L_{21}	-32.82	30.90	-1.24	1.03	0.38	-0.35	-0.20	0.17	0.03	-0.03
	U_{21}-L_{21}	-53.30	119.62	-1.85	2.13	0.69	-0.26	-0.29	0.37	0.09	-0.01
	U_{21}-L_{22}	-83.93	100.93	-2.49	2.11	0.44	-0.48	-0.39	0.44	0.06	0.03
	U_{22}-L_{22}	-98.58	117.15	-2.65	2.25	0.37	-0.45	-0.42	0.49	0.05	0.02
	U_{22}-L_{23}	-126.11	124.55	-2.52	2.41	1.02	-0.79	-0.52	0.49	0.00	0.00
	U_{23}-L_{23}	-126.17	124.55	-2.52	2.41	1.02	-0.79	-0.52	0.49	0.00	0.00
	U_{23}-L_{24}	-29.24	32.38	-0.97	1.13	0.07	-0.47	-0.14	0.13	-0.02	-0.02
	U_{24}-L_{24}	-82.40	185.99	-2.36	3.03	0.80	-0.29	-0.44	0.60	0.17	0.01
	U_{24}-L_{25}	-138.48	247.98	-3.67	3.87	0.98	-0.29	-0.58	0.77	0.22	0.01
	U_{25}-L_{25}	-138.42	160.32	-3.00	2.50	0.57	-0.36	-0.45	0.49	0.06	0.00
	U_{25}-L_{26}	-128.98	123.04	-2.82	1.85	0.38	0.06	-0.40	0.44	0.00	0.00
	U_{26}-L_{26}	-128.98	123.04	-2.82	1.85	0.38	0.06	-0.40	0.44	0.00	0.00
	U_{26}-L_{27}	-128.43	95.01	-2.70	1.69	-0.17	-0.37	-0.41	0.35	0.00	0.00
	U_{27}-L_{27}	-63.23	43.22	-1.34	0.82	-0.08	-0.18	-0.20	0.17	0.00	0.00
	U_{27}-L_{28}	8.89	-32.25	-0.62	0.18	0.36	-0.83	0.00	0.00	0.03	0.12
	U_{28}-L_{28}	-4.65	-13.30	-0.97	0.61	-0.22	-0.62	-0.11	0.03	0.07	-0.06
	U_{28}-L_{29}	-43.22	40.48	-1.58	1.26	0.44	-0.38	-0.27	0.19	0.07	-0.07
	U_{29}-L_{29}	-135.94	107.53	-2.59	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08
	U_{29}-L_{30}	-135.94	107.53	-2.59	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08
	U_{30}-L_{30}	-65.25	88.28	-2.81	2.57	0.13	-0.23	-0.01	0.23	0.00	0.00
	U_{30}-L_{31}	-138.22	96.74	-3.30	2.31	0.43	-0.36	-0.75	0.56	0.05	0.00
	U_{31}-L_{31}	-113.16	82.77	-2.64	1.85	0.34	-0.29	-0.59	0.44	0.04	0.00
	U_{31}-L_{32}	-43.91	24.73	-1.62	1.06	0.30	-0.25	-0.30	0.20	0.03	0.00
	U_{32}-L_{32}	-2.65	-25.30	-0.70	0.10	0.30	-0.79	-0.09	-0.06	0.04	0.03
	U_{32}-L_{33}	-49.48	-12.52	-0.81	0.04	0.37	-0.14	-0.13	0.04	0.07	-0.06
	U_{33}-L_{33}	-7.40	33.68	-1.61	1.23	-0.07	-0.29	-0.32	0.23	0.00	0.00
	U_{33}-L_{34}	-81.44	41.31	-1.98	0.95	-0.35	-0.32	-0.36	0.25	0.00	0.00
	U_{34}-L_{34}	-70.63	39.79	-1.84	0.91	-0.31	-0.28	-0.31	0.22	0.00	0.00
	U_{34}-L_{35}	-94.52	94.91	-1.37	1.49	0.61	-0.24	-0.40	0.54	0.00	0.00
	U_{35}-L_{35}	-10.13	116.77	-1.41	2.48	0.35	0.08	-0.26	0.53	0.16	0.13
	U_{35}-L_{36}	-89.38	90.66	-2.14	2.07	0.13	-0.31	-0.50	0.43	0.00	0.00
	U_{36}-L_{36}	-18.98	22.49	-0.83	-0.02	-0.21	-0.31	0.10	0.00	0.00	0.00
	U_{36}-L_{37}	-4.49	-12.52	-0.81	0.04	0.37	-0.14	-0.13	0.04	0.07	-0.06
	U_{37}-L_{37}	-34.24	14.49	-0.63	0.52	0.10	-0.20	-0.13	0.07	0.06	-0.05

YY Axis Moments from STAAD

Location	Member	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(top)}$	Equivalent Mom. Factor $C_{m(bot)}$
Structure 1	U_0-L_1	-84.92	-28.02	-4.95	-6.30	2.36	2.34	-1.09	-0.56	0.55	0.50	-66.10	-84.19	31.48	31.25
	U_1-L_1	-114.83	-23.62	-7.96	-6.42	3.07	2.43	1.18	-0.11	0.49	0.45	-106.33	-85.76	40.99	32.49
	U_1-L_2	-112.59	-79.74	-7.78	-6.56	2.64	1.86	1.30	-0.10	0.36	0.23	-65.58	-79.46	37.94	25.26
	U_1-L_3	206.47	91.61	-1.53	-1.61	-15.94	-4.28	0.00	0.00	0.00	0.00	34.30	11.46	224.15	72.38
	U_2-L_2	-154.31	8.15	-7.69	-11.08	2.54	-1.86	-0.39	0.00	0.00	0.00	-121.60	-27.04	-8.09	0.00
	U_2-L_3	-192.51	23.27	-2.40	4.84	0.63	0.37	-1.71	-0.37	0.00	0.00	-32.01	64.71	80.55	1.96
	U_3-L_3	-153.23	-53.31	2.91	3.30	-3.82	-1.85	-1.81	-0.82	0.00	0.00	33.53	44.09	-51.05	-24.70
	U_3-L_4	-58.42	-78.50	-6.37	-9.93	1.34	1.21	1.09	0.30	0.00	0.00	-67.34	-380.48	118.62	-68.15
	U_4-L_4	49.31	-87.17	-10.45	-1.08	1.40	2.23	0.08	0.00	0.00	0.00	-233.56	-495.16	114.63	118.72
	U_4-L_5	16.09	32.04	9.52	0.56	0.00	0.00	0.00	0.00	0.00	0.00	-132.38	-103.15	74.13	17.72
	U_5-L_5	16.09	32.04	9.52	0.56	0.00	0.00	0.00	0.00	0.00	0.00	-132.38	-103.15	74.13	17.72
	U_5-L_6	-136.87	327.94	-200.81	-178.58	133.5	-238.11	1.94	0.89	0.00	0.00	-66.39	-89.66	-95.90	-30.73
	U_6-L_6	-38.71	286.57	-199.18	-172.78	94.0	93.99	93.99	93.99	0.00	0.00	-48.89	-84.47	-109.02	-31.96
	U_6-L_7	-260.28	-163.04	-1.50	-0.65	-16.91	-5.06	2.89	0.00	0.00	0.00	-41.09	-8.97	10.79	-0.79
	U_7-L_7	-288.05	-227.03	-24.39	-14.5	-20.91	-6.96	2.89	0.00	0.00	0.00	-41.09	-8.97	10.79	-0.79
	U_7-L_8	-39.25	-79.65	-3.77	-6.53	-8.43	-2.47	2.35	0.79	0.00	0.00	-48.80	-84.47	-109.02	-31.96
	U_8-L_8	-260.28	-163.04	-1.50	-0.65	-16.91	-5.06	2.89	0.00	0.00	0.00	-41.09	-8.97	10.79	-0.79
	U_8-L_9	-288.05	-227.03	-24.39	-14.5	-20.91	-6.96	2.89	0.00	0.00	0.00	-41.09	-8.97	10.79	-0.79
	U_9-L_9	-288.05	-227.03	-24.39	-14.5	-20.91	-6.96	2.89	0.00	0.00	0.00	-41.09	-8.97	10.79	-0.79
	U_9-L_{10}	-243.52	-138.08	0.84	2.78	14.76	-0.32	-1.76	-0.67	0.00	0.00	-11.96	-35.51	-188.57	-4.14
	U_{10}-L_{10}	-243.52	-138.08	0.84	2.78	14.76	-0.32	-1.76	-0.67	0.00	0.00	-11.96	-35.51	-188.57	-4.14
	U_{10}-L_{11}	-324.23	-143.04	1.57	1.60	-2.35	0.01	-2.02	-0.23	-0.16	-0.19	-73.12	-29.58	-85.10	-15.96
	U_{11}-L_{11}	-325.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{11}-L_{12}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97
	U_{12}-L_{12}	-329.23	103.03	1.32	2.77	-1.98	0.84	-2.21	-0.57	0.00	0.00	-50.50	-39.39	-25.23	10.76
	U_{12}-L_{13}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97
	U_{13}-L_{13}	-324.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{13}-L_{14}	-325.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{14}-L_{14}	-324.23	-143.04	1.57	1.60	-2.35	0.01	-2.02	-0.23	-0.16	-0.19	-73.12	-29.58	-85.10	-15.96
	U_{14}-L_{15}	-329.23	103.03	1.32	2.77	-1.98	0.84	-2.21	-0.57	0.00	0.00	-50.50	-39.39	-25.23	10.76
	U_{15}-L_{15}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97
	U_{15}-L_{16}	-324.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{16}-L_{16}	-325.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{16}-L_{17}	-324.23	-143.04	1.57	1.60	-2.35	0.01	-2.02	-0.23	-0.16	-0.19	-73.12	-29.58	-85.10	-15.96
	U_{17}-L_{17}	-329.23	103.03	1.32	2.77	-1.98	0.84	-2.21	-0.57	0.00	0.00	-50.50	-39.39	-25.23	10.76
	U_{17}-L_{18}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97
	U_{18}-L_{18}	-324.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{19}-L_{19}	-325.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{19}-L_{20}	-324.23	-143.04	1.57	1.60	-2.35	0.01	-2.02	-0.23	-0.16	-0.19	-73.12	-29.58	-85.10	-15.96
	U_{20}-L_{20}	-329.23	103.03	1.32	2.77	-1.98	0.84	-2.21	-0.57	0.00	0.00	-50.50	-39.39	-25.23	10.76
	U_{20}-L_{21}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97
	U_{21}-L_{21}	-324.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{21}-L_{22}	-325.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{22}-L_{22}	-324.23	-143.04	1.57	1.60	-2.35	0.01	-2.02	-0.23	-0.16	-0.19	-73.12	-29.58	-85.10	-15.96
	U_{23}-L_{23}	-329.23	103.03	1.32	2.77	-1.98	0.84	-2.21	-0.57	0.00	0.00	-50.50	-39.39	-25.23	10.76
	U_{23}-L_{24}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97
	U_{24}-L_{24}	-324.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{24}-L_{25}	-325.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{25}-L_{25}	-324.23	-143.04	1.57	1.60	-2.35	0.01	-2.02	-0.23	-0.16	-0.19	-73.12	-29.58	-85.10	-15.96
	U_{25}-L_{26}	-329.23	103.03	1.32	2.77	-1.98	0.84	-2.21	-0.57	0.00	0.00	-50.50	-39.39	-25.23	10.76
	U_{26}-L_{26}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97
	U_{26}-L_{27}	-324.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{27}-L_{27}	-325.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{27}-L_{28}	-324.23	-143.04	1.57	1.60	-2.35	0.01	-2.02	-0.23	-0.16	-0.19	-73.12	-29.58	-85.10	-15.96
	U_{28}-L_{28}	-329.23	103.03	1.32	2.77	-1.98	0.84	-2.21	-0.57	0.00	0.00	-50.50	-39.39	-25.23	10.76
	U_{28}-L_{29}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97
	U_{29}-L_{29}	-324.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{29}-L_{30}	-325.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{30}-L_{30}	-324.23	-143.04	1.57	1.60	-2.35	0.01	-2.02	-0.23	-0.16	-0.19	-73.12	-29.58	-85.10	-15.96
	U_{31}-L_{31}	-329.23	103.03	1.32	2.77	-1.98	0.84	-2.21	-0.57	0.00	0.00	-50.50	-39.39	-25.23	10.76
	U_{32}-L_{32}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97
	U_{33}-L_{33}	-324.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{34}-L_{34}	-325.23	-201.51	2.47	3.43	-0.17	1.99	-1.64	-0.32	0.00	0.00	-31.61	-43.80	2.16	25.39
	U_{35}-L_{35}	-324.23	-143.04	1.57	1.60	-2.35	0.01	-2.02	-0.23	-0.16	-0.19	-73.12	-29.58	-85.10	-15.96
	U_{36}-L_{36}	-329.23	103.03	1.32	2.77	-1.98	0.84	-2.21	-0.57	0.00	0.00	-50.50	-39.39	-25.23	10.76
	U_{37}-L_{37}	-302.00	-254.62	1.38	1.58	-2.22	-0.01	-1.98	-0.56	0.00	0.00	-28.82	-31.45	-0.50	10.97

M_y Information

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	σ_{bc} (ksi)	Formula 1.8 Term * F_y/S_x	M_{cy} (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(top)}$	Equivalent Mom. Factor $C_{m(bot)}$
Structure 1	U_0-L_1	-66.10	-84.19	31.48	31.25	-16.17	-8.33	8.12	7.42	-253.62	-218.85	-42.20	31.27	100.5	100.60
	U_1-L_1	-106.33	-85.76	-40.99	32.49	17.52	-1.60	7.33	6.64	-71.51	-155.10	-247.68	101.10	94.0	93.99
	U_1-L_2	-65.58	-79.46	37.94	25.26	19.27	2.19	5.18	3.44	-61.24	-159.00	-263.86	107.92	93.99	93.99
	U_1-L_3	-193.02	-4.65	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	171	0.95178776	3126.1	0.883
	U_2-L_2	-121.60	-27.04	-8.09	0.00	0.00	0.00	0.00	0.00	1.11	3454	171	0.95178776	3126.1	0.883
	U_2-L_3	-32.01	64.71	80.55	1.96	3.09	0.38	0.12	0.04	0.11	-155.10	247.68	101.10	94.0	93.99
	U_3-L_3	33.53	44.09	-51.05	-24.70	26.84	-12.19	0.00	0.00	0.00	-126.55	-29.79	-309.80	-174.82	148.9
	U_3-L_4	-67.34	-380.48	118.62	-68.15	197.4	197.41	184.99	230.30	248.6	1.17	7602	299	0.99831336	6309.5
	U_4-L_4	-233.56	-495.16	114.63	118.72	202.71	247.5	1.17	6690	277	0.91252526	5961.6	0.878	0.943	0.943
	U_4-L_5	-132.38	-103.15	74.13	17.72	173.70	173.70	173.70	173.7	1.17	6690	277	0.91252526	5961.6	0.878
	U_5-L_5	-132.38	-103.15	74.13	17.72	173.70	173.70	173.70	173.7	1.17	6690	277	0.91252526	5961.6	0.878
	U_5-L_6	-66.39	-89.66	-95.90	-30.73	27.90	9.92	0.00	0.00	0.00	-136.87	-327.94	-200.81	-178.58	133.5
	U_6-L_6	-48.89	-84.47	-109.02	-31.96	33.81	11.41	0.00	0.00	0.00	-38.71	-286.57	-199.18	-172.78	94.0
	U_6-L_7	-41.09	-8.97	10.79	-0.79	-8.09	-2.27	0.00	0.00	0.00	-260.28	-163.04	-1.50	-0.65	-16.91
	U_7-L_7	-41.09	-8.97	10.79	-0.79	-8.09	-2.27	0.00	0.00	0.00	-288.05	-227.03	-24.39	-14.5	-20.91
	U_7-L_8	-48.80	-84.47	-109.02	-31.96	33.81	11.41	0.00	0.00	0.00	-39.25	-79.65	-3.77	-6.53	-8.43
	U_8-L_8	-260.28	-163.04	-1.50	-0.65	-16.91	-5.06	2.89	0.00	0.00	0.00	-41.09	-8.97	10.79	-0.79
	U_8-L_9	-288.05	-227.03	-24.39	-14.5	-20.91	-6.96	2.89	0.00	0.00	0.00	-41.09	-8.97	10.79	-0.79
	U_9-L_9	-288.05	-227.03	-24.39	-14.5	-20.91	-6.96	2.89	0.00	0.00	0.00	-41.09	-8.97	10.79	-0.79
	U_9-L_{10}	-243.52	-138.08	0.84	2.78	14.76	-0.32	-1.76	-0.67	0.00	0.00	-11.96	-35.51	-188.57	-4.14
	U_{10}-L_{10}

Axial AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-592.25	-184	77	74	-845	9	-7	-60	77	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.194	1.00	Yes	0.799	0.201	1.00	Yes	1.00	**2.10**
		U_1 - U_2			-----	-584.87	-62	38	-163	-737	-7	-36	-45	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.201	1.00	Yes	0.789	0.175	0.97	Yes	1.00	**1.19**
		U_2 - U_3			95.30	-613.05	-136	218	-463	-416	6	26	-3	147	0.109	0.135	0.25	Yes	0.074	0.088	0.17	Yes	0.834	0.164	1.00	Yes	0.827	0.110	0.94	Yes	1.00	**1.24**
		U_3 - U_4			288.39	-575.11	51	271	-511	-536	14	36	222	80	0.331	0.165	0.50	Yes	0.227	0.113	0.34	Yes	0.783	0.212	1.00	Yes	0.776	0.127	0.91	Yes	1.00	**1.49**
		U_4 - U_5			300.93	-586.97	101	254	-792	-187	22	-28	93	-211	0.345	0.224	0.57	Yes	0.237	0.153	0.40	Yes	0.799	0.201	1.00	Yes	0.792	0.188	0.98	Yes	1.00	**1.53**
		U_5 - U_6			659.00	-529.55	245	463	-763	195	-140	-63	329	-16	0.755	0.237	1.00	Yes	0.509	0.155	0.67	Yes	0.721	0.130	0.86	Yes	0.714	0.181	0.90	Yes	1.00	**2.34**
		U_6 - U_7			844.35	-----	368	223	-620	-30	-289	-114	410	-109	0.807	0.188	1.00	Yes	0.564	0.129	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		U_7 - U_8			941.11	-----	26	1094	-1152	1983	-431	-23	144	-248	0.652	0.344	1.00	Yes	0.455	0.235	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.86**
		U_8 - U_9			915.17	-----	1185	-115	1151	-780	-377	-212	-360	99	0.750	0.245	1.00	Yes	0.513	0.167	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		U_9 - U_{10}			745.10	-----	257	313	-28	-452	-170	5	-139	536	0.808	0.187	1.00	Yes	0.547	0.126	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		U_{10} - U_{11}			271.03	-602.65	322	-78	216	-990	25	94	282	174	0.294	0.267	0.57	Yes	0.196	0.171	0.37	Yes	0.776	0.203	0.98	Yes	0.769	0.222	1.00	Yes	1.00	**1.76**
		U_{11} - U_{12}			-----	-877.28	222	-113	1	-695	100	405	182	615	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.163	1.00	Yes	0.823	0.115	0.94	Yes	1.00	**1.33**
		U_{12} - U_{13}			-----	-1212.68	6	-239	-73	-953	339	214	566	385	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.175	1.00	Yes	0.810	0.131	0.95	Yes	1.00	**1.37**
		U_{13} - U_{14}			-----	-1357.33	-147	-383	-391	-1435	221	177	391	518	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1.00	Yes	0.778	0.158	0.94	Yes	1.00	**1.26**
		U_{14} - U_{15}			-----	-1341.55	-273	-250	-1281	-877	214	31	580	151	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.220	1.00	Yes	0.769	0.141	0.92	Yes	1.00	**1.23**
		U_{15} - U_{16}			-----	-1421.02	-149	-433	-892	-729	85	38	470	185	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.171	1.00	Yes	0.815	0.098	0.92	Yes	1.00	**1.31**
		U_{16} - U_{17}			-----	-1372.82	-342	-209	-1403	-383	137	-51	616	103	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1.00	Yes	0.787	0.155	0.95	Yes	1.00	**1.41**
		U_{17} - U_{18}			-----	-1071.68	-209	-74	-842	84	-5	-61	429	16	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.148	1.00	Yes	0.839	0.137	0.98	Yes	1.00	**1.43**
		U_{18} - U_{19}			-----	-722.25	-200	-70	-781	-63	25	-120	383	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1.00	Yes	0.813	0.157	0.97	Yes	1.00	**1.41**
		U_{19} - U_{20}			-----	-559.88	-272	306	-1818	1394	-69	-131	376	-536	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.188	0.83	Yes	0.630	0.366	1.00	Yes	1.00	**3.05**
	Structure 2	U_0 - U_1			-----	-628.88	-92	-90	664	-1515	3	-71	-40	60	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.186	0.94	Yes	0.743	0.257	1.00	Yes	1.00	**3.37**
		U_1 - U_2			-----	-834.06	-47	-190	24	-1201	-71	-223	-43	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.189	1.00	Yes	0.805	0.182	0.99	Yes	1.00	**1.77**
		U_2 - U_3			-----	-1174.09	-99	-275	-63	-1468	-29	370	-22	386	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.157	1.00	Yes	0.833	0.150	0.99	Yes	1.00	**1.71**
		U_3 - U_4			-----	-1350.54	-424	-417	-930	-1317	529	906	330	453	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.220	1.00	Yes	0.769	0.117	0.89	Yes	1.00	**1.46**
		U_4 - U_5			-----	-1491.57	-461	-374	-1222	-1658	774	307	335	272	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.227	1.00	Yes	0.766	0.137	0.91	Yes	1.00	**1.47**
		U_5 - U_6			-----	-1524.61	-428	-8	-1770	-986	187	-211	249	446	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.209	1.00	Yes	0.783	0.147	0.93	Yes	1.00	**1.44**
		U_6 - U_7			-----	-1360.62	-286	-105	-1337	-1505	-134	-185	301	158	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1.00	Yes	0.775	0.134	0.91	Yes	1.00	**1.34**
		U_7 - U_8			-----	-1394.17	-193	-176	-1628	-787	-106	-185	246	96	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.193	1.00	Yes	0.794	0.145	0.94	Yes	1.00	**1.40**
		U_8 - U_9			-----	-1206.59	-281	110	-1396	-281	-93	-198	374	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.168	1.00	Yes	0.818	0.148	0.97	Yes	1.00	**1.42**
		U_9 - U_{10}			-----	-975.02	-81	338	-1226	-206	-138	-152	265	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.150	1.00	Yes	0.841	0.149	1.00	Yes	1.00	**1.61**
		U_{10} - U_{11}			498.47	-797.63	175	372	-1393	-159	-178	-163	440	-3	0.421	0.250	0.68	Yes	0.287	0.162	0.45	Yes	0.797	0.201	1.00	Yes	0.793	0.197	0.99	Yes	1.00	**2.14**
		U_{11} - U_{12}			830.19	-----	242	539	-1623	322	-349	-126	519	86	0.701	0.292	1.00	Yes	0.471	0.195	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		U_{12} - U_{13}			1186.49	-----	495	160	-1142	-741	-449	-390	503	-265	0.801	0.192	1.00	Yes	0.571	0.131	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		U_{13} - U_{14}			1477.47	-----	151	2155	-339	1389	-943	-458	-414	-492	0.727	0.264	1.00	Yes	0.514	0.174	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		U_{14} - U_{15}			1379.04	-----	2709	124	1229	-27	-1022	-806	-554	-487	0.678	0.321	1.00	Yes	0.480	0.211	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.30**
		U_{15} - U_{16}			1317.01	-----	149	494	-1172	-1031	-648	-435	-317	791	0.796	0.200	1.00	Yes	0.566	0.136	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		U_{16} - U_{17}			1065.14	-----	666	327	133	-1276	-227	-33	492	429	0.785	0.212	1.00	Yes	0.522	0.140	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		U_{17} - U_{18}			744.64	-----	468	335	-288	-747	-4	243	74	805	0.747	0.245	1.00	Yes	0.498	0.161	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		U_{18} - U_{19}			563.83	-643.08	530	238	-211	-1116	100	117	411	467	0.566	0.258	0.83	Yes	0.371	0.165	0.54	Yes	0.764	0.233	1.00	Yes	0.759	0.189	0.95	Yes	1.00	**2.33**
		U_{19} - U_{20}			310.98	-719.63	313	215	-418	-766	22	14	130	481	0.292	0.188	0.48	Yes	0.193	0.123	0.32	Yes	0.799	0.196	1.00	Yes	0.794	0.123	0.92	Yes	1.00	**1.79**
		U_{20} - U_{21}			189.62	-876.02	182	-25	-733	-751	-23	-59	258	292	0.147	0.141	0.29	Yes	0.103	0.091	0.20	Yes	0.805	0.193	1.00	Yes	0.800	0.109	0.91	Yes	1.00	**1.77**
		U_{21} - U_{22}			-----	-808.12	-39	3	-808	-1133	-3	65	152	392	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.254	1.00	Yes	0.738	0.164	0.91	Yes	1.00	**1.46**
		U_{22} - U_{23}			-----	-822.50	68	-39	-1162	-546	58	-2	463	144	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.241	1.00	Yes	0.751	0.168	0.92	Yes	1.00	**1.49**
		U_{23} - U_{24}			172.20	-894.66	-56	155	-734	-592	-27	-57	351	56	0.134	0.145	0.28	Yes	0.094	0.095	0.19	Yes	0.822	0.173	1.00	Yes	0.817	0.106	0.93	Yes	1.00	**1.73**
		U_{24} - U_{25}			279.61	-755.64	180	275	-787	-251	-60	-86	395	-93	0.262	0.179	0.45	Yes	0.174	0.118	0.30	Yes	0.839	0.154	1.00	Yes	0.834	0.126	0.96	Yes	1.00	**1.71**
		U_{25} - U_{26}			501.67	-687.99	199	455	-1077	210	-159	-77	316	-24	0.504	0.229	0.74	Yes	0.330	0.146	0.48	Yes	0.817	0.161	0.98	Yes	0.812	0.183	1.00	Yes	1.00	**2.13**
		U_{26} - U_{27}			762.78	-----	366	417	-1017	-93	-249	-68	416	-168	0.766	0.234	1.00	Yes	0.510	0.155	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.64**
		U_{27} - U_{28}			1053.80	-----	326	570	-1352	-304	-369	-13	457	-18	0.776	0.218	1.00	Yes	0.517	0.143	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		U_{28} - U_{29}			1291.18	-----	515	172	-1222	-1509	-405	-277	521	-299	0.781	0.216	1.00	Yes	0.555	0.145	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		U_{29} - U_{30}			1496.85	-----	251	2158	-55	753	-860	-477	-268	-22	0.736	0.259	1.00	Yes	0.521	0.170	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		U_{30} - U_{31}			1473.78	-----	2429	26	902	-205	-706	-602	-201	-55	0.725	0.273	1.00	Yes	0.513	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		U_{31} - U_{32}			1195.21	-----	63	446	-871	-847	-420	-245	-98	848	0.807	0.191	1.00	Yes	0.575	0.131	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		U_{32} - U_{33}			930.68	-----	488	292	-157	-1030	-104	-5	418	509	0.786	0.207	1.00	Yes	0.528	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		U_{33} - U_{34}			731.62	-730.01	396	277	-237	-1183	10	249	402	986	0.618	0.287	0.91	Yes	0.421	0.189	0.61	Yes	0.730	0.262	1.00	Yes	0.725	0.167	0.90	Yes	1.00	**2.77**
		U_{34} - U_{35}			344.50	-884.15	344	63	88	-1557	201	164	645	533	0.253	0.259	0.52	Yes	0.171	0.175	0.35	Yes	0.767	0.225	1.00	Yes	0.763	0.189	0.96	Yes	1.00	**1.98**
		U_{35} - U_{36}			-----	-1181.82	163	-139	-206	-1286	106	91	404	564	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.187	1.00	Yes	0.802	0.137	0.94	Yes	1.00	**1.84**
		U_{36} - U_{37}			-----	-1397.27	-54	42	-858	-1414	83	-3	405	330	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1.00	Yes	0.796	0.126	0.93	Yes	1.00	**1.82**
		U_{37} - U_{38}			-----	-1363.19	122	-150	-1292	-1598	45	18	365	281	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.217	1.00	Yes	0.776	0.142	0.92	Yes	1.00	**1.75**
		U_{38} - U_{39}			-----	-1530.81	108	-295	-1050	-1648	132	-34	691	180	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.786	0.137	0.93	Yes	1.00	**1.78**
		U_{39} - U_{40}			-----	-1509.46	-202	-337	-1757	-1171	32	-27	515	177	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.217	1.00	Yes	0.775	0.146	0.93	Yes	1.00	**1.75**
		U_{40} - U_{41}			-----	-1350.24	-247	-337	-1747	-860	48	-115	566	61	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1.00	Yes	0.769	0.156	0.93	Yes	1.00	**1.65**
		U_{41} - U_{42}			-----	-1153.19	-148	-132	-1625	-85	-68	-101	417	39	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1.00	Yes	0.818	0.165	0.99	Yes	1.00	**1.83**
		U_{42} - U_{43}			-----	-838.06	-131	-60	-1146	-167	-39	-93	376	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1.00	Yes	0.809	0.174	0.99	Yes	1.00	**1.99**
		U_{43} - U_{44}			-----	-564.31	-9	-220	-1921	1039	-69	38	292	-410	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.231	0.91	Yes	0.666	0.326	1.00	Yes	1.00	**3.24**
	Structure 3	U_0 - U_1			-----	-638.06	-4	-162	381	-1363	7	-78	170	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.210	0.94	Yes	0.718	0.274	1.00	Yes	1.00	**3.65**
		U_1 - U_2			-----	-731.62	-33	-140	123	-775	-63	-233	-67	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.167	1.00	Yes	0.823	0.156	0.98	Yes	1.00	**1.61**
		U_2 - U_3			-----	-1047.49	-72	-165	131	-973	-52	336	6	388	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.161	1.00	Yes	0.820	0.158	0.98	Yes	1.00	**1.49**
		U_3 - U_4			-----	-1362.98	-190	-311	-377	-1159	493	829	361	481	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.200	1.00	Yes	0.781	0.128	0.91	Yes	1.00	**1.57**
		U_4 - U_5			-----	-1381.30	-399	-63	-953	-879	688	230	476	287	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.191	1.00	Yes	0.792	0.105	0.90	Yes	1.00	**1.39**
		U_5 - U_6			-----	-1363.99	-182	-274	-854	-1225	140	-152	228	362	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.207	1.00	Yes	0.782	0.135	0.92	Yes	1.00	**1.35**
		U_6 - U_7			-----	-1387.90	-376	-98	-1302	-625	-94	-190	451	60	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.194	1.00	Yes	0.796	0.144	0.94	Yes	1.00	**1.39**
		U_7 - U_8			-----	-1285.11	-162	10	-694	-329	-63	-184	328	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.131	1.00	Yes	0.858	0.096	0.96	Yes	1.00	**1.46**
		U_8 - U_9			-----	-909.29	-101	180	-835	-2	-33	-158	294	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.139	1.00	Yes	0.853	0.139	1.00	Yes	1.00	**1.22**
		U_9 - U_{10}			-----	-619.15	-76	229	-897	131	-98	-108	221	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.172	0.97	Yes	0.790	0.201	1.00	Yes	1.00	**1.44**
		U_{10} - U_{11}			700.24	-445.50	318	238	-748	33	-246	-139	423	-250	0.760	0.236	1.00	Yes	0.514	0.158	0.68	Yes	0.574	0.149	0.73	Yes	0.568	0.168	0.74	Yes	1.00	**2.83**
		U_{11} - U_{12}			834.32	-----	-39	972	-1209	1550	-410	-110	172	-366	0.684	0.310	1.00	Yes	0.468	0.211	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		U_{12} - U_{13}			1058.34	-----	1182	120	1368	-834	-545	-504	-369	-2	0.733	0.263	1.00	Yes	0.512	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		U_{13} - U_{14}			874.55	-----	232	440	-292	-388	-342	-223	-173	482	0.836	0.160	1.00	Yes	0.584	0.110	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		U_{14} - U_{15}			646.39	-----	425	296	391	-841	-128	-40	291	102	0.741	0.249	1.00	Yes	0.500	0.163	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		U_{15} - U_{16}			424.85	-563.56	333	232	-380	-614	-67	132	6	478	0.487	0.227	0.72	Yes	0.334	0.155	0.49	Yes	0.767	0.231	1.00	Yes	0.760	0.146	0.91	Yes	1.00	**1.81**
		U_{16} - U_{17}			411.34	-551.12	394	128	-361	-716	76	74	402	149	0.471	0.238	0.71	Yes	0.324	0.163	0.49	Yes	0.750	0.243	1.00	Yes	0.743	0.170	0.92	Yes	1.00	**1.76**
		U_{17} - U_{18}			191.67	-563.31	300	-74	-570	-377	-43	71	279	209	0.220	0.183	0.41	Yes	0.148	0.120	0.27	Yes	0.766	0.231	1.00	Yes	0.760	0.135	0.90	Yes	1.00	**1.35**
		U_{18} - U_{19}			77.43	-546.31	148	-42	-768	-267	-23	27	451	16	0.089	0.259	0.35	Yes	0.061	0.177	0.24	Yes	0.743	0.254	1.00	Yes	0.737	0.183	0.92	Yes	1.00	**1.33**
		U_{19} - U_{20}			-----	-536.24	174	-303	-1124	708	-116	110	368	-357	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.162	0.90	Yes	0.723	0.267	1.00	Yes	1.00	**2.29**

Axial AB Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 2.167

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	$L_0 - L_1$	164.37	-97.69	104	-376	1291	-2163	-22	-81	116	426	0.252	0.741	1.00	Yes	0.148	0.453	0.61	Yes	0.177	0.468	0.65	Yes	0.176	0.649	0.83	Yes	1.00	**9.50**
		$L_1 - L_2$	445.42	-----	104	-717	152	-39	-439	-114	-29	-31	0.682	0.310	1.00	Yes	0.416	0.204	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.51**
		$L_2 - L_3$	694.85	-----	-634	-729	-20	22	-152	41	-33	23	0.799	0.201	1.00	Yes	0.462	0.120	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.52**
		$L_3 - L_4$	729.53	-143.10	-581	-528	86	253	-83	25	61	69	0.839	0.154	1.00	Yes	0.499	0.100	0.60	Yes	0.196	0.183	0.38	Yes	0.194	0.140	0.34	Yes	1.00	**1.56**
		$L_4 - L_5$	318.38	-499.24	-882	302	99	592	-195	305	53	36	0.412	0.288	0.71	Yes	0.247	0.188	0.44	Yes	0.768	0.130	0.90	Yes	0.761	0.233	1.00	Yes	1.00	**1.61**
		$L_5 - L_6$	-----	-719.44	-498	101	162	588	251	65	72	126	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.152	1.00	Yes	0.830	0.130	0.97	Yes	1.00	**1.68**
		$L_6 - L_7$	-----	-1082.84	-744	-15	209	175	78	375	120	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.111	1.00	Yes	0.872	0.117	0.99	Yes	1.00	**2.39**
		$L_7 - L_8$	-----	-1235.75	2	596	35	1458	-117	-132	-87	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.205	1.00	Yes	0.783	0.193	0.98	Yes	1.00	**2.23**
		$L_8 - L_9$	-----	-1313.28	570	-34	1128	-6	-142	-154	9	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.156	1.00	Yes	0.832	0.149	0.99	Yes	1.00	**2.53**
		$L_9 - L_{10}$	-----	-1096.15	-132	-582	140	149	547	109	42	144	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.100	1.00	Yes	0.882	0.091	0.98	Yes	1.00	**3.07**
		$L_{10} - L_{11}$	-----	-559.91	34	-479	529	-5	43	75	140	49	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.108	0.97	Yes	0.853	0.140	1.00	Yes	1.00	**2.09**
		$L_{11} - L_{12}$	589.23	-----	234	-818	485	-171	112	-51	91	-30	0.763	0.236	1.00	Yes	0.458	0.156	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**
		$L_{12} - L_{13}$	1047.88	-----	-352	-803	161	-76	112	256	25	35	0.827	0.172	1.00	Yes	0.529	0.103	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$L_{13} - L_{14}$	1332.53	-----	-181	-1439	360	-438	110	-47	8	-3	0.784	0.207	1.00	Yes	0.508	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$L_{14} - L_{15}$	1549.36	-----	-1845	-649	-371	-27	-169	219	-118	-66	0.757	0.238	1.00	Yes	0.492	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.85**
		$L_{15} - L_{16}$	1638.50	-----	-1327	-1417	-214	-364	87	-294	-121	-55	0.801	0.191	1.00	Yes	0.514	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.33**
		$L_{16} - L_{17}$	1156.38	-----	-1547	-97	-431	96	-455	214	-105	-45	0.731	0.268	1.00	Yes	0.474	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$L_{17} - L_{18}$	882.88	-----	-1038	-78	-195	23	132	-216	-81	-17	0.769	0.228	1.00	Yes	0.492	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$L_{18} - L_{19}$	486.65	-----	-512	342	-525	612	-64	313	-325	-19	0.745	0.251	1.00	Yes	0.504	0.159	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$L_{19} - L_{20}$	193.65	-477.69	-244	55	-450	259	172	39	-68	-15	0.296	0.171	0.47	Yes	0.181	0.114	0.30	Yes	0.868	0.102	0.97	Yes	0.860	0.135	1.00	Yes	1.00	**2.61**
	Structure 2	$L_0 - L_1$	337.50	-----	215	-831	1090	-2573	29	102	-112	-388	0.410	0.587	1.00	Yes	0.244	0.378	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.88**
		$L_1 - L_2$	537.03	-----	475	-1283	178	-237	-510	-101	-45	17	0.652	0.345	1.00	Yes	0.388	0.219	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		$L_2 - L_3$	1008.01	-----	-195	-1186	-41	-169	60	232	71	74	0.794	0.196	1.00	Yes	0.521	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		$L_3 - L_4$	1322.69	-----	-245	-1738	28	-433	200	67	157	81	0.777	0.219	1.00	Yes	0.523	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$L_4 - L_5$	1780.82	-----	-1547	-1581	-389	-247	45	257	93	203	0.830	0.167	1.00	Yes	0.550	0.099	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.49**
		$L_5 - L_6$	1831.02	-----	-1219	-2298	-145	-382	148	-68	113	-15	0.786	0.213	1.00	Yes	0.527	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$L_6 - L_7$	1827.87	-----	-2278	-1443	-432	-94	-129	359	-164	45	0.774	0.222	1.00	Yes	0.514	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$L_7 - L_8$	1374.71	-----	-1779	-748	-211	296	133	-88	-131	8	0.788	0.207	1.00	Yes	0.518	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		$L_8 - L_9$	1090.45	-----	-1444	36	-94	533	-226	407	-27	16	0.763	0.233	1.00	Yes	0.514	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$L_9 - L_{10}$	825.10	-614.57	-1408	-213	-105	728	280	-190	17	93	0.736	0.259	1.00	Yes	0.429	0.161	0.59	Yes	0.650	0.172	0.83	Yes	0.645	0.225	0.88	Yes	1.00	**2.62**
		$L_{10} - L_{11}$	-----	-706.98	-965	246	106	537	-293	283	61	0	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.093	0.93	Yes	0.830	0.169	1.00	Yes	1.00	**2.12**
		$L_{11} - L_{12}$	-----	-1047.06	-650	1	105	1004	135	-168	84	239	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.124	0.99	Yes	0.859	0.137	1.00	Yes	1.00	**2.68**
		$L_{12} - L_{13}$	-----	-1544.20	-374	-184	431	-463	119	-163	200	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.931	0.061	1.00	Yes	0.924	0.046	0.97	Yes	1.00	**4.03**
		$L_{13} - L_{14}$	-----	-1527.74	-367	1230	-592	2591	-262	-455	-247	-547	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.193	0.97	Yes	0.769	0.226	1.00	Yes	1.00	**2.65**
		$L_{14} - L_{15}$	-----	-1621.12	1125	-470	2031	-381	-517	-319	-318	-441	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.155	0.98	Yes	0.816	0.177	1.00	Yes	1.00	**3.43**
		$L_{15} - L_{16}$	-----	-1491.16	-469	-15	-989	350	-214	97	11	397	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.084	0.99	Yes	0.892	0.098	1.00	Yes	1.00	**3.31**
		$L_{16} - L_{17}$	-----	-1153.95	545	-39	1205	120	187	-16	401	189	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.152	1.00	Yes	0.840	0.149	0.99	Yes	1.00	**2.74**
		$L_{17} - L_{18}$	-----	-857.25	-1	-475	482	250	164	71	110	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.906	0.088	1.00	Yes	0.900	0.077	0.98	Yes	1.00	**2.14**
		$L_{18} - L_{19}$	-----	-643.90	-68	-494	668	116	114	154	-4	33	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.129	1.00	Yes	0.858	0.129	0.99	Yes	1.00	**1.99**
		$L_{19} - L_{20}$	600.07	-599.69	-320	-903	566	241	435	-4	58	-46	0.680	0.241	0.93	Yes	0.402	0.152	0.56	Yes	0.804	0.188	1.00	Yes	0.799	0.174	0.98	Yes	1.00	**2.64**
		$L_{20} - L_{21}$	963.27	-474.70	-850	-1354	571	54	-69	232	-100	-103	0.768	0.223	1.00	Yes	0.504	0.133	0.64	Yes	0.448	0.204	0.66	Yes	0.445	0.198	0.65	Yes	1.00	**2.98**
		$L_{21} - L_{22}$	919.27	-230.86	-934	-1572	243	-73	277	10	-95	-32	0.733	0.259	1.00	Yes	0.490	0.163	0.66	Yes	0.218	0.254	0.48	Yes	0.217	0.229	0.45	Yes	1.00	**2.27**
		$L_{22} - L_{23}$	851.88	-----	-1882	-832	-155	203	-128	368	-20	3	0.679	0.314	1.00	Yes	0.454	0.197	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$L_{23} - L_{24}$	914.85	-302.41	-1651	-981	6	376	253	-196	11	78	0.730	0.268	1.00	Yes	0.478	0.160	0.64	Yes	0.286	0.265	0.56	Yes	0.284	0.241	0.53	Yes	1.00	**2.82**
		$L_{24} - L_{25}$	563.92	-436.64	-1434	-256	242	359	-325	522	62	0	0.639	0.356	1.00	Yes	0.378	0.225	0.61	Yes	0.586	0.243	0.83	Yes	0.582	0.277	0.86	Yes	1.00	**2.81**
		$L_{25} - L_{26}$	-----	-640.46	-614	-708	118	697	84	-292	41	128	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.124	0.99	Yes	0.854	0.137	1.00	Yes	1.00	**3.10**
		$L_{26} - L_{27}$	-----	-844.64	-280	202	-209	652	-106	274	-209	17	-----	-----	-----	-----	-----	-----	-----	-----	0.893	0.086	0.98	Yes	0.887	0.104	1.00	Yes	1.00	**2.75**
		$L_{27} - L_{28}$	-----	-1168.15	-67	216	-232	1149	88	197	-42	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.118	0.98	Yes	0.851	0.142	1.00	Yes	1.00	**2.70**
		$L_{28} - L_{29}$	-----	-1586.67	-112	-330	86	0	171	-19	-86	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.038	1.00	Yes	0.949	0.033	0.99	Yes	1.00	**2.92**
		$L_{29} - L_{30}$	-----	-1633.64	-373	805	-458	1992	-65	-129	-13	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.128	0.96	Yes	0.822	0.174	1.00	Yes	1.00	**2.46**
		$L_{30} - L_{31}$	-----	-1595.28	817	-338	2245	-451	-133	-117	-600	-467	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.174	0.99	Yes	0.803	0.196	1.00	Yes	1.00	**3.85**
		$L_{31} - L_{32}$	-----	-1559.38	-153	-252	302	-77	-60	73	-397	108	-----	-----	-----	-----	-----	-----	-----	-----	0.941	0.053	1.00	Yes	0.933	0.030	0.97	Yes	1.00	**5.01**
		$L_{32} - L_{33}$	-----	-1041.80	382	-371	1013	155	170	35	-145	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.114	0.98	Yes	0.854	0.138	1.00	Yes	1.00	**3.86**
		$L_{33} - L_{34}$	-----	-713.77	-26	-895	411	200	352	-132	7	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.122	0.97	Yes	0.838	0.156	1.00	Yes	1.00	**3.09**
		$L_{34} - L_{35}$	807.22	-601.36	-323	-1204	633	36	321	686	-29	69	0.721	0.275	1.00	Yes	0.420	0.169	0.59	Yes	0.636	0.229	0.87	Yes	0.631	0.193	0.83	Yes	1.00	**3.31**
		$L_{35} - L_{36}$	1086.03	-----	-67	-1356	385	-9	560	32	101	-48	0.760	0.236	1.00	Yes	0.512	0.148	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		$L_{36} - L_{37}$	1317.24	-----	-633	-1851	239	-2	-19	395	-100	11	0.755	0.237	1.00	Yes	0.496	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		$L_{37} - L_{38}$	1826.92	-----	-1443	-2408	-36	-347	181	-188	-42	-7	0.773	0.223	1.00	Yes	0.514	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		$L_{38} - L_{39}$	1785.52	-----	-2427	-1371	-292	-174	-158	249	-23	-17	0.766	0.231	1.00	Yes	0.514	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.33**
		$L_{39} - L_{40}$	1705.84	-----	-1835	-1604	-197	-306	112	-352	-51	-35	0.795	0.197	1.00	Yes	0.526	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		$L_{40} - L_{41}$	1291.62	-----	-1765	-436	-305	-48	-373	366	-58	-11	0.759	0.236	1.00	Yes	0.511	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		$L_{41} - L_{42}$	1021.59	-----	-1197	-189	-158	-65	142	-70	-27	11	0.805	0.188	1.00	Yes	0.528	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		$L_{42} - L_{43}$	511.76	-----	-1459	64	-219	43	-412	495	-2	-9	0.622	0.378	1.00	Yes	0.370	0.241	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.98**
		$L_{43} - L_{44}$	311.16	-501.78	-646	259	-1380	597	577	168	187	55	0.378	0.376	0.76	Yes	0.225	0.239	0.47	Yes	0.722	0.232	0.96	Yes	0.717	0.281	1.00	Yes	1.00	**7.10**
	Structure 3	$L_0 - L_1$	390.76	-415.26	104	-343	562	-837	-29	-131	10	44	0.598	0.278	0.88	Yes	0.365	0.188	0.56	Yes	0.754	0.139	0.90	Yes	0.748	0.251	1.00	Yes	1.00	**4.70**
		$L_1 - L_2$	537.24	-----	252	-486	352	-404	-67	32	39	112	0.822	0.169	1.00	Yes	0.556	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$L_2 - L_3$	912.37	-----	20	-931	5	-175	183	104	15	2	0.794	0.203	1.00	Yes	0.509	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$L_3 - L_4$	1215.91	-----	-120	-1373	62	-365	296	128	44	53	0.769	0.228	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$L_4 - L_5$	1640.26	-----	-1215	-1407	-329	-216	81	281	79	117	0.801	0.189	1.00	Yes	0.514	0.111	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		$L_5 - L_6$	1591.53	-----	-783	-1690	-83	-343	-48	-46	142	78	0.778	0.214	1.00	Yes	0.505	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		$L_6 - L_7$	1269.87	-----	-1570	-148	-405	236	-99	344	-186	18	0.747	0.245	1.00	Yes	0.484	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$L_7 - L_8$	1053.94	-----	-781	-490	-88	109	198	19	-30	38	0.832	0.162	1.00	Yes	0.532	0.097	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$L_8 - L_9$	563.41	-----	-741	107	-171	342	-201	409	-17	47	0.730	0.268	1.00	Yes	0.438	0.173	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.60**
		$L_9 - L_{10}$	263.86	-520.87	-778	-44	-1	483	316	26	67	125	0.342	0.261	0.61	Yes	0.199	0.157	0.36	Yes	0.801	0.191	1.00	Yes	0.794	0.206	1.00	Yes	1.00	**2.42**
		$L_{10} - L_{11}$	-----	-1088.40	-291	271	-430	764	-81	232	-55	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.070	0.96	Yes	0.876	0.120	1.00	Yes	1.00	**3.85**
		$L_{11} - L_{12}$	-----	-1256.72	-41	471	-69	1198	-167	-187	-351	-541	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1.00	Yes	0.796	0.159	0.96	Yes	1.00	**2.23**
		$L_{12} - L_{13}$	-----	-1253.44	468	-23	1162	-15	-243	-216	-568	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1.00	Yes	0.794	0.154	0.95	Yes	1.00	**2.39**
		$L_{13} - L_{14}$	-----	-1106.40	70	-633	-47	281	59	-17	-227	122	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.080	0.99	Yes	0.891	0.100	1.00	Yes	1.00	**2.27**
		$L_{14} - L_{15}$	-----	-741.73	95	-298	566	165	45	22	148	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.129	1.00	Yes	0.856	0.125	0.99	Yes	1.00	**1.63**
		$L_{15} - L_{16}$	-----	-541.17	162	-631	422	194	44	-50	16	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.098	0.93	Yes	0.824	0.167	1.00	Yes	1.00	**1.47**
		$L_{16} - L_{17}$	667.83	-247.77	-519	-717	340	34	120	319	92	-34	0.768	0.225	1.00	Yes	0.456	0.144	0.61	Yes	0.338	0.236	0.58	Yes	0.335	0.173	0.51	Yes	1.00	**1.60**
		$L_{17} - L_{18}$	681.72	-131.03	-710	-741	101	-2	191	-1	2	12	0.784	0.210	1.00	Yes	0.454	0.126	0.58	Yes	0.179	0.242	0.43	Yes	0.177	0.179	0.36	Yes	1.00	**1.67**
		$L_{18} - L_{19}$	441.65	-----	-779	-69	66	-5	-190	417	28	-116	0.676	0.323	1.00	Yes	0.412	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		$L_{19} - L_{20}$	184.27	-324.72	-381	284	-1208	980	1206	328	301	82	0.282	0.621	0.91	Yes	0.166	0.373	0.54	Yes	0.590	0.407	1.00	Yes	0.585	0.363	0.95	Yes	1.00	**8.94**

Axial AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-327.37	-56	90	-179	236	-33	-10	-280	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.186	0.92	Yes	0.693	0.302	1.00	Yes	1.00	**0.83**
		$U_1 - L_1$			-----	-347.47	23	-12	-180	206	-5	-5	286	158	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.164	0.93	Yes	0.735	0.263	1.00	Yes	1.00	**1.58**
		$U_2 - L_2$			99.23	-328.83	85	-94	-176	235	63	29	360	186	0.178	0.404	0.59	Yes	0.098	0.222	0.33	Yes	0.719	0.217	0.94	Yes	0.696	0.300	1.00	Yes	1.00	**2.40**
		$U_3 - L_3$			195.27	-326.96	157	-179	-179	238	208	69	677	196	0.351	0.500	0.86	Yes	0.193	0.275	0.47	Yes	0.716	0.253	0.97	Yes	0.692	0.304	1.00	Yes	1.00	**3.86**
		$U_4 - L_4$			-----	-334.63	179	-179	225	-220	-383	-148	504	143	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.198	0.94	Yes	0.708	0.288	1.00	Yes	1.00	**2.33**
		$U_5 - L_5$			-----	-430.74	67	-89	205	-247	17	18	188	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.108	0.89	Yes	0.743	0.251	1.00	Yes	1.00	**1.40**
		$U_6 - L_6$			-----	-522.98	87	-82	251	-278	-210	-71	308	41	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.130	0.93	Yes	0.750	0.243	1.00	Yes	1.00	**1.38**
		$U_7 - L_7$			-----	-446.32	134	-150	286	-312	-177	11	462	74	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.200	0.95	Yes	0.689	0.307	1.00	Yes	1.00	**0.95**
		$U_8 - L_8$			-----	-1202.63	20	-32	139	-167	-5	38	1259	348	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.129	1.00	Yes	0.834	0.031	0.87	Yes	1.00	**2.17**
		$U_9 - L_9$			-----	-663.38	-172	202	-388	441	-358	-151	-163	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.140	0.94	Yes	0.749	0.245	1.00	Yes	1.00	**1.50**
		$U_{10} - L_{10}$			-----	-763.88	-123	104	-306	347	-819	-458	-302	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1.00	Yes	0.754	0.180	0.94	Yes	1.00	**1.89**
		$U_{11} - L_{11}$			-----	-673.97	-144	194	-315	459	-569	-387	-108	-280	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.176	0.99	Yes	0.784	0.213	1.00	Yes	1.00	**1.83**
		$U_{12} - L_{12}$			-----	-534.05	-101	101	-290	303	-325	-201	110	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.146	0.92	Yes	0.733	0.259	1.00	Yes	1.00	**1.63**
		$U_{13} - L_{13}$			-----	-384.55	-51	70	-195	229	-164	-10	290	30	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.150	0.93	Yes	0.737	0.261	1.00	Yes	1.00	**1.29**
		$U_{14} - L_{14}$			-----	-315.80	-163	189	-175	188	-21	-15	841	145	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.289	1.00	Yes	0.668	0.242	0.92	Yes	1.00	**2.58**
		$U_{15} - L_{15}$			173.07	-316.21	-128	116	229	-259	62	117	384	-49	0.311	0.442	0.76	Yes	0.171	0.243	0.42	Yes	0.709	0.163	0.88	Yes	0.669	0.331	1.00	Yes	1.00	**2.45**
		$U_{16} - L_{16}$			-----	-337.61	26	-35	200	-218	57	-77	679	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.217	0.98	Yes	0.714	0.278	1.00	Yes	1.00	**1.60**
		$U_{17} - L_{17}$			-----	-440.75	59	-74	201	-228	-123	-113	295	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.118	0.95	Yes	0.760	0.232	1.00	Yes	1.00	**1.24**
		$U_{18} - L_{18}$			-----	-540.48	142	-148	411	-432	-135	-120	291	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.083	0.88	Yes	0.752	0.245	1.00	Yes	1.00	**1.35**
		$U_{19} - L_{19}$			-----	-657.67	170	-168	485	-492	-116	-45	605	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.137	0.96	Yes	0.765	0.228	1.00	Yes	1.00	**1.49**
		$U_{20} - L_{20}$			-----	-594.61	159	-259	320	-480	31	4	514	67	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.207	1.00	Yes	0.692	0.223	0.92	Yes	1.00	**1.10**
	Structure 2	$U_0 - L_0$			-----	-679.33	-162	211	-450	568	-42	-7	-542	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.184	1.00	Yes	0.728	0.241	0.97	Yes	1.00	**1.59**
		$U_1 - L_1$			-----	-724.04	-117	126	-492	511	-106	-6	-816	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.162	1.00	Yes	0.776	0.217	1.00	Yes	1.00	**1.96**
		$U_2 - L_2$			-----	-607.89	-108	118	-398	432	-108	-38	385	54	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.117	0.94	Yes	0.775	0.221	1.00	Yes	1.00	**1.67**
		$U_3 - L_3$			-----	-494.09	-55	63	-219	236	77	-46	71	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.075	0.92	Yes	0.775	0.215	1.00	Yes	1.00	**1.50**
		$U_4 - L_4$			-----	-351.11	-15	23	-184	193	243	74	199	29	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.145	0.95	Yes	0.743	0.247	1.00	Yes	1.00	**1.52**
		$U_5 - L_5$			78.28	-341.38	59	-50	-159	191	-47	84	509	25	0.141	0.391	0.54	Yes	0.077	0.215	0.30	Yes	0.771	0.227	1.00	Yes	0.722	0.244	0.97	Yes	1.00	**1.94**
		$U_6 - L_6$			326.71	-265.94	186	-196	-201	218	54	99	440	48	0.588	0.406	1.00	Yes	0.323	0.223	0.55	Yes	0.598	0.204	0.81	Yes	0.563	0.278	0.85	Yes	1.00	**3.06**
		$U_7 - L_7$			-----	-325.95	143	-168	143	-154	-65	-34	739	76	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1.00	Yes	0.690	0.214	0.91	Yes	1.00	**2.46**
		$U_8 - L_8$			-----	-484.19	64	-81	310	-338	-2	-63	650	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.161	0.87	Yes	0.697	0.296	1.00	Yes	1.00	**1.83**
		$U_9 - L_9$			-----	-689.55	158	-172	602	-608	-36	-195	121	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.086	0.86	Yes	0.739	0.258	1.00	Yes	1.00	**2.10**
		$U_{10} - L_{10}$			-----	-788.56	165	-191	554	-577	-39	-220	225	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.104	0.89	Yes	0.737	0.255	1.00	Yes	1.00	**2.16**
		$U_{11} - L_{11}$			-----	-822.47	186	-185	465	-504	-190	-69	665	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.144	0.98	Yes	0.769	0.222	1.00	Yes	1.00	**1.93**
		$U_{12} - L_{12}$			-----	-879.36	161	-149	534	-540	-220	-30	172	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.107	0.96	Yes	0.762	0.232	1.00	Yes	1.00	**1.96**
		$U_{13} - L_{13}$			-----	-745.91	210	-208	582	-561	-175	22	280	40	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1.00	Yes	0.719	0.279	1.00	Yes	1.00	**1.69**
		$U_{14} - L_{14}$			-----	-1126.91	120	-116	355	-342	-30	198	1252	293	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.173	1.00	Yes	0.747	0.063	0.82	Yes	1.00	**2.33**
		$U_{15} - L_{15}$			-----	-746.32	-116	124	-584	580	-307	9	301	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.155	0.99	Yes	0.720	0.279	1.00	Yes	1.00	**2.58**
		$U_{16} - L_{16}$			-----	-712.26	-89	63	-481	477	-808	-260	-491	-388	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.177	1.00	Yes	0.763	0.204	0.97	Yes	1.00	**2.12**
		$U_{17} - L_{17}$			-----	-656.73	-127	125	-478	495	-274	-185	57	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.114	0.93	Yes	0.764	0.230	1.00	Yes	1.00	**1.84**
		$U_{18} - L_{18}$			-----	-584.53	-95	95	-458	484	-114	-127	-82	-280	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.111	0.89	Yes	0.745	0.248	1.00	Yes	1.00	**1.81**
		$U_{19} - L_{19}$			-----	-486.41	-56	60	-266	274	-66	-32	149	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.074	0.81	Yes	0.726	0.264	1.00	Yes	1.00	**1.56**
		$U_{20} - L_{20}$			-----	-402.31	-22	26	-184	200	-160	-34	393	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.155	0.98	Yes	0.771	0.229	1.00	Yes	1.00	**1.57**
		$U_{21} - L_{21}$			-----	-327.29	14	-9	-212	233	-90	28	155	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.121	0.87	Yes	0.693	0.298	1.00	Yes	1.00	**1.78**
		$U_{22} - L_{22}$			-----	-324.52	-114	133	56	-52	-46	-50	784	138	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.261	1.00	Yes	0.687	0.170	0.86	Yes	1.00	**2.55**
		$U_{23} - L_{23}$			-----	-335.53	-53	49	200	-223	84	73	618	29	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.236	1.00	Yes	0.710	0.285	1.00	Yes	1.00	**2.07**
		$U_{24} - L_{24}$			-----	-367.91	10	-23	240	-251	75	26	195	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.108	0.87	Yes	0.705	0.286	1.00	Yes	1.00	**1.62**
		$U_{25} - L_{25}$			-----	-468.69	38	-38	308	-301	-88	-29	240	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.097	0.81	Yes	0.700	0.296	1.00	Yes	1.00	**1.63**
		$U_{26} - L_{26}$			-----	-581.29	66	-69	445	-496	-123	-22	882	71	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.192	0.97	Yes	0.741	0.254	1.00	Yes	1.00	**1.84**
		$U_{27} - L_{27}$			-----	-628.58	85	-85	571	-574	-136	3	266	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.101	0.88	Yes	0.732	0.266	1.00	Yes	1.00	**1.90**
		$U_{28} - L_{28}$			-----	-708.95	74	-71	558	-550	-156	17	358	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.104	0.93	Yes	0.760	0.237	1.00	Yes	1.00	**2.04**
		$U_{29} - L_{29}$			-----	-670.73	121	-126	543	-538	-112	28	853	63	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.244	1.00	Yes	0.647	0.260	0.91	Yes	1.00	**2.01**
		$U_{30} - L_{30}$			-----	-1148.90	-63	52	202	-210	-181	64	1207	211	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.157	1.00	Yes	0.762	0.037	0.80	Yes	1.00	**2.89**
		$U_{31} - L_{31}$			-----	-756.95	-108	108	-508	493	-308	-34	95	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.154	1.00	Yes	0.730	0.243	0.98	Yes	1.00	**2.29**
		$U_{32} - L_{32}$			-----	-845.87	-81	59	-409	428	-687	-276	-101	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.181	1.00	Yes	0.733	0.184	0.92	Yes	1.00	**2.27**
		$U_{33} - L_{33}$			-----	-832.51	-118	106	-461	474	-469	-356	-251	-433	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.155	1.00	Yes	0.778	0.209	0.99	Yes	1.00	**2.32**
		$U_{34} - L_{34}$			-----	-827.76	-114	124	-465	507	-170	-156	363	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.083	0.91	Yes	0.774	0.224	1.00	Yes	1.00	**2.45**
		$U_{35} - L_{35}$			-----	-728.89	-112	126	-464	515	-143	-12	733	82	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.143	0.96	Yes	0.781	0.218	1.00	Yes	1.00	**2.17**
		$U_{36} - L_{36}$			-----	-488.95	-54	66	-306	330	-46	62	259	38	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.121	0.83	Yes	0.704	0.289	1.00	Yes	1.00	**1.79**
		$U_{37} - L_{37}$			-----	-344.69	-6	7	-52	68	-69	7	665	96	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.215	1.00	Yes	0.729	0.087	0.82	Yes	1.00	**2.66**
		$U_{38} - L_{38}$			295.73	-138.33	-189	201	71	-78	95	40	700	30	0.532	0.459	1.00	Yes	0.293	0.253	0.55	Yes	0.311	0.213	0.53	Yes	0.293	0.257	0.55	Yes	1.00	**2.29**
		$U_{39} - L_{39}$			153.58	-322.68	-134	120	225	-245	50	72	161	-102	0.276	0.360	0.64	Yes	0.152	0.198	0.35	Yes	0.729	0.110	0.84	Yes	0.683	0.313	1.00	Yes	1.00	**2.38**
		$U_{40} - L_{40}$			-----	-340.96	-19	1	218	-217	23	4	166	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.087	0.87	Yes	0.721	0.278	1.00	Yes	1.00	**1.75**
		$U_{41} - L_{41}$			-----	-489.17	27	-31	208	-230	7	-31	529	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.163	1.00	Yes	0.767	0.210	0.98	Yes	1.00	**1.62**
		$U_{42} - L_{42}$			-----	-595.80	58	-67	432	-461	12	-35	588	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.133	0.94	Yes	0.759	0.236	1.00	Yes	1.00	**1.82**
		$U_{43} - L_{43}$			-----	-713.64	77	-90	539	-554	-50	-51	518	37	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.125	0.95	Yes	0.765	0.235	1.00	Yes	1.00	**1.96**
		$U_{44} - L_{44}$			-----	-651.69	117	-134	340	-457	-132	-22	865	147	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1.00	Yes	0.698	0.194	0.90	Yes	1.00	**1.55**
	Structure 3	$U_0 - L_0$			-----	-579.72	-146	194	-410	469	-56	-7	-826	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.232	1.00	Yes	0.675	0.218	0.90	Yes	1.00	**1.24**
		$U_1 - L_1$			-----	-668.40	-113	124	-437	465	-122	-3	-410	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.122	0.96	Yes	0.778	0.216	1.00	Yes	1.00	**1.88**
		$U_2 - L_2$			-----	-555.46	-110	117	-376	400	-148	-45	190	41	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.095	0.91	Yes	0.773	0.226	1.00	Yes	1.00	**1.57**
		$U_3 - L_3$			-----	-456.52	-47	60	-170	199	42	-64	335	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.138	1.00	Yes	0.788	0.201	0.99	Yes	1.00	**1.26**
		$U_4 - L_4$			-----	-335.34	-22	30	-212	224	14	22	105	8	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.107	0.87	Yes	0.710	0.286	1.00	Yes	1.00	**1.62**
		$U_5 - L_5$			88.06	-332.96	59	-55	-198	225	-65	86	380	33	0.158	0.398	0.56	Yes	0.087	0.219	0.31	Yes	0.746	0.199	0.95	Yes	0.705	0.288	1.00	Yes	1.00	**2.03**
		$U_6 - L_6$			-----	-318.74	159	-175	-39	41	-197	-32	868	93	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.286	1.00	Yes	0.674	0.224	0.90	Yes	1.00	**2.27**
		$U_7 - L_7$			-----	-376.02	8	-22	213	-241	-11	-18	268	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.121	0.89	Yes	0.720	0.276	1.00	Yes	1.00	**1.67**
		$U_8 - L_8$			-----	-520.46	63	-69	317	-328	-14	-84	317	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.103	0.86	Yes	0.714	0.280	1.00	Yes	1.00	**1.88**
		$U_9 - L_9$			-----	-664.38	117	-173	335	-471	6	-35	579	6	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.134	0.94	Yes	0.773	0.218	1.00	Yes	1.00	**1.92**
		$U_{10} - L_{10}$			-----	-774.42	119	-116	402	-437	-214	-99	198	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.105	0.91	Yes	0.764	0.227	1.00	Yes	1.00	**2.01**
		$U_{11} - L_{11}$			-----	-648.21	167	-193	419	-471	-166	-34	439	118	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.150	0.93	Yes	0.732	0.262	1.00	Yes	1.00	**1.43**
		$U_{12} - L_{12}$			-----	-1145.52	79	-109	263	-353	-122	33	1548	440	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.171	1.00	Yes	0.794	0.066	0.86	Yes	1.00	**2.28**
		$U_{13} - L_{13}$			-----	-459.70	-67	76	-265	286	-296	-42	31	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.155	0.93	Yes	0.709	0.281	1.00	Yes	1.00	**1.46**
		$U_{14} - L_{14}$			-----	-515.12	-45	30	-218	238	-708	-338	-459	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.217	1.00	Yes	0.739	0.209	0.95	Yes	1.00	**1.65**
		$U_{15} - L_{15}$			-----	-453.06	-45	50	-175	210	-354	-203	-61	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.164	0.99	Yes	0.782	0.213	1.00	Yes	1.00	**1.50**
		$U_{16} - L_{16}$			-----	-318.93	-61	60	-247	247	-532	-312	309	19	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.242	0.95	Yes	0.675	0.316	1.00	Yes	1.00	**2.72**
		$U_{17} - L_{17}$			262.52	-203.37	-279	289	41	-73	-118	89	519	71	0.472	0.519	1.00	Yes	0.260	0.286	0.55	Yes	0.446	0.200	0.65	Yes	0.430	0.369	0.80	Yes	1.00	**2.94**
		$U_{18} - L_{18}$			118.48	-326.26	-110	123	165	-223	-110	16	795	123	0.213	0.515	0.73	Yes	0.117	0.283	0.41	Yes	0.713	0.284	1.00	Yes	0.690	0.284	0.98	Yes	1.00	**2.42**
		$U_{19} - L_{19}$			47.14	-333.48	-56	44	228	-228	-84	-3	343	70	0.085	0.391	0.48	Yes	0.047	0.215	0.27	Yes	0.729	0.149	0.88	Yes	0.706	0.292	1.00	Yes	1.00	**1.58**
		$U_{20} - L_{20}$			-----	-380.88	19	-28	10	-89	-46	-15	-235	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.148	1.00	Yes	0.806	0.114	0.92	Yes	1.00	**0.91**

Axial AB Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$			672.75	-----	-78	50	-16	-2	59	-83	-11	5	0.883	0.111	1.00	Yes	0.533	0.061	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_1 - L_2$			462.96	-81.94	-91	1	16	-19	-170	-136	-8	-16	0.833	0.165	1.00	Yes	0.458	0.091	0.55	Yes	0.188	0.137	0.33	Yes	0.173	0.116	0.29	Yes	1.00	**1.90**
		$U_2 - L_3$			415.66	-221.26	-112	-2	-47	-64	-345	-47	140	-59	0.748	0.243	1.00	Yes	0.411	0.134	0.55	Yes	0.509	0.214	0.73	Yes	0.468	0.143	0.62	Yes	1.00	**3.00**
		$U_3 - L_4$			-----	-375.14	-34	-53	-9	-76	-219	-174	32	-228	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.140	1.00	Yes	0.794	0.097	0.90	Yes	1.00	**1.67**
		$U_4 - L_4$			563.25	-----	-97	23	-37	0	-199	-288	-310	-175	0.826	0.171	1.00	Yes	0.454	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.52**
		$U_5 - L_5$			667.37	-----	-208	211	-82	91	-335	-326	-463	-134	0.789	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.60**
		$U_1 - L_6$			654.02	-----	-294	246	-83	102	-249	-213	295	122	0.773	0.221	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.38**
		$U_6 - L_7$			650.03	-----	-103	294	2	135	-114	-179	311	186	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.37**
		$U_5 - L_8$			989.44	-----	-98	356	19	139	329	377	342	107	0.791	0.207	1.00	Yes	0.490	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		$U_9 - L_{10}$			1008.66	-----	-304	231	-75	86	158	450	122	139	0.806	0.193	1.00	Yes	0.499	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		$U_{10} - L_{11}$			985.59	-----	-255	174	-59	98	-4	350	22	184	0.833	0.164	1.00	Yes	0.515	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_{11} - L_{12}$			847.87	-----	-256	106	-105	1	-10	235	-28	71	0.839	0.154	1.00	Yes	0.461	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{12} - L_{13}$			648.22	-----	-204	144	-79	34	-67	118	-57	-100	0.790	0.201	1.00	Yes	0.497	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.57**
		$U_{13} - L_{14}$			461.16	-----	-91	42	-24	-26	-53	-57	-72	-169	0.829	0.165	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.55**
		$U_{15} - L_{14}$			228.84	-307.92	-60	-4	18	-96	-264	-236	-526	-112	0.412	0.275	0.69	Yes	0.226	0.151	0.38	Yes	0.721	0.272	1.00	Yes	0.652	0.123	0.78	Yes	1.00	**1.95**
		$U_{16} - L_{15}$			359.55	-----	-116	84	-35	-21	-343	-269	-676	-105	0.647	0.344	1.00	Yes	0.356	0.189	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.72**
		$U_{17} - L_{16}$			508.81	-----	-143	87	-34	14	-452	-409	-110	-130	0.746	0.250	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.26**
		$U_{18} - L_{17}$			600.89	-----	-319	243	-111	76	-575	-492	-111	-118	0.710	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.39**
		$U_{19} - L_{18}$			674.32	-----	-352	254	-132	87	-538	-467	-65	-105	0.730	0.268	1.00	Yes	0.402	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.37**
		$U_{20} - L_{19}$			719.18	-----	-255	255	-94	92	-533	-367	-102	-38	0.779	0.218	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.45**
	Structure 2	$U_0 - L_1$			809.41	-----	-351	355	-113	98	-4	-191	-61	-50	0.801	0.193	1.00	Yes	0.440	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		$U_1 - L_2$			785.72	-----	-392	301	-95	72	-220	37	-100	-29	0.777	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.93**
		$U_2 - L_3$			657.82	-----	-333	271	-82	62	-164	39	-22	91	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$U_3 - L_4$			597.26	-----	-183	131	-37	16	-159	11	105	61	0.796	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_4 - L_5$			420.98	-----	-134	91	-6	-21	-224	74	-69	-143	0.757	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.75**
		$U_5 - L_6$			434.68	-247.60	-127	71	57	-104	-160	19	-169	-163	0.782	0.211	1.00	Yes	0.430	0.116	0.55	Yes	0.585	0.160	0.75	Yes	0.524	0.162	0.69	Yes	1.00	**2.59**
		$U_6 - L_7$			-----	-382.89	-53	-11	57	-104	-159	-83	-96	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.173	1.00	Yes	0.734	0.119	0.86	Yes	1.00	**1.69**
		$U_8 - L_7$			549.30	-----	-167	130	-69	-7	-240	-406	-712	-165	0.700	0.295	1.00	Yes	0.441	0.169	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.85**
		$U_8 - L_8$			683.74	-----	-332	211	-141	42	-481	-469	-519	-242	0.741	0.255	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.68**
		$U_{10} - L_9$			792.44	-----	-303	230	-135	61	-472	-441	74	-192	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_{11} - L_{10}$			870.71	-----	-334	286	-107	131	-444	-463	140	-1	0.793	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		$U_{12} - L_{11}$			850.63	-----	-371	335	-118	154	-384	-435	223	77	0.775	0.217	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_{13} - L_{12}$			758.71	-----	-426	382	-151	153	-196	-161	338	129	0.751	0.248	1.00	Yes	0.413	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.48**
		$U_{14} - L_{13}$			747.03	-----	-271	424	-18	155	-261	-131	399	195	0.739	0.257	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{14} - L_{15}$			632.13	-----	-222	358	27	70	235	161	215	-43	0.747	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.39**
		$U_{15} - L_{16}$			632.44	-----	-368	341	-62	69	-163	201	-10	21	0.748	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{16} - L_{17}$			711.42	-----	-327	334	-69	96	-296	314	-149	63	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_{17} - L_{18}$			655.66	-----	-289	284	-66	79	-43	291	-26	102	0.775	0.216	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_{18} - L_{19}$			667.68	-----	-281	258	-49	68	68	254	34	20	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.83**
		$U_{19} - L_{20}$			607.12	-----	-197	157	-33	14	24	231	-13	-39	0.774	0.223	1.00	Yes	0.426	0.126	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		$U_{20} - L_{21}$			448.54	-----	-126	113	-8	-7	19	90	-56	-89	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$U_{21} - L_{22}$			440.53	-197.84	-118	49	25	-73	-32	98	-41	-178	0.792	0.202	1.00	Yes	0.436	0.111	0.55	Yes	0.467	0.142	0.61	Yes	0.419	0.151	0.57	Yes	1.00	**2.35**
		$U_{23} - L_{22}$			378.12	-292.95	-96	50	-1	-70	-221	-258	-682	-22	0.680	0.320	1.00	Yes	0.374	0.176	0.55	Yes	0.698	0.285	0.99	Yes	0.620	0.122	0.75	Yes	1.00	**2.36**
		$U_{24} - L_{23}$			412.38	-----	-119	105	-8	-16	-314	-215	-347	-44	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.76**
		$U_{25} - L_{24}$			564.15	-----	-183	177	-53	19	-390	-306	-547	-133	0.719	0.276	1.00	Yes	0.396	0.157	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{26} - L_{25}$			657.28	-----	-271	265	-26	38	-361	-353	120	47	0.777	0.219	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_{27} - L_{26}$			642.92	-----	-298	265	-46	58	-331	-351	177	68	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.75**
		$U_{28} - L_{27}$			708.34	-----	-332	360	-47	66	-273	-248	204	113	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
		$U_{29} - L_{28}$			628.57	-----	-373	343	-73	72	-227	-170	211	102	0.743	0.252	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_{30} - L_{29}$			625.68	-----	-223	344	37	102	-168	-224	317	159	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		$U_{30} - L_{31}$			765.15	-----	-293	431	14	72	154	189	284	0	0.757	0.242	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		$U_{31} - L_{32}$			760.14	-----	-438	380	-73	76	-190	252	15	48	0.752	0.241	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{32} - L_{33}$			886.57	-----	-356	347	-57	93	-282	280	-147	142	0.808	0.189	1.00	Yes	0.444	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		$U_{33} - L_{34}$			877.42	-----	-345	276	-67	90	-39	367	26	209	0.799	0.197	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{34} - L_{35}$			821.87	-----	-313	224	-93	48	16	267	88	-23	0.813	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		$U_{35} - L_{36}$			744.50	-----	-335	256	-97	32	15	85	-71	-132	0.806	0.193	1.00	Yes	0.444	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{36} - L_{37}$			607.02	-----	-193	143	-34	-10	-110	74	-68	-215	0.774	0.217	1.00	Yes	0.487	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		$U_{38} - L_{37}$			-----	-368.50	-24	-10	32	-78	-169	-211	-462	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.201	1.00	Yes	0.706	0.089	0.80	Yes	1.00	**1.29**
		$U_{39} - L_{38}$			323.92	-311.94	-99	54	64	-109	-365	-250	-463	-93	0.583	0.274	0.86	Yes	0.320	0.151	0.48	Yes	0.743	0.252	1.00	Yes	0.660	0.140	0.80	Yes	1.00	**2.40**
		$U_{40} - L_{39}$			377.04	-139.50	-122	94	-6	-33	-341	-271	-554	-96	0.678	0.316	1.00	Yes	0.373	0.174	0.55	Yes	0.334	0.217	0.56	Yes	0.295	0.156	0.46	Yes	1.00	**1.97**
		$U_{41} - L_{40}$			548.99	-----	-175	123	-17	2	-479	-383	-93	-78	0.732	0.260	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.74**
		$U_{42} - L_{41}$			607.80	-----	-328	247	-49	32	-475	-487	-67	-64	0.719	0.274	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.70**
		$U_{43} - L_{42}$			749.84	-----	-381	313	-64	43	-484	-433	-3	-45	0.742	0.249	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{44} - L_{43}$			770.42	-----	-281	325	-93	79	-574	-324	60	-21	0.762	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
	Structure 3	$U_0 - L_1$			703.34	-----	-374	314	-112	93	-259	-165	-62	-53	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.86**
		$U_1 - L_2$			716.72	-----	-343	253	-99	67	-280	-52	-125	-44	0.776	0.221	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_2 - L_3$			645.05	-----	-331	242	-97	63	-253	126	-48	78	0.763	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.63**
		$U_3 - L_4$			554.98	-----	-151	108	-28	10	-140	-18	74	48	0.814	0.185	1.00	Yes	0.448	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.64**
		$U_4 - L_5$			424.08	-----	-132	90	-8	-29	-211	26	-101	-164	0.763	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.85**
		$U_5 - L_6$			418.96	-295.56	-113	-5	36	-103	-240	-11	-220	-330	0.754	0.240	1.00	Yes	0.414	0.132	0.55	Yes	0.692	0.218	0.92	Yes	0.625	0.144	0.77	Yes	1.00	**2.53**
		$U_7 - L_6$			426.09	-----	-85	34	-16	-37	-256	-287	-403	-185	0.766	0.225	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.73**
		$U_8 - L_7$			576.97	-----	-187	147	-85	11	-419	-372	-666	-227	0.703	0.293	1.00	Yes	0.443	0.168	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.71**
		$U_8 - L_8$			747.45	-----	-247	91	-153	-19	-593	-548	-934	-461	0.739	0.254	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$U_{10} - L_9$			933.90	-----	-268	148	-109	56	-590	-646	-632	-303	0.789	0.209	1.00	Yes	0.488	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		$U_{11} - L_{10}$			997.15	-----	-302	259	-82	89	-502	-425	231	89	0.797	0.198	1.00	Yes	0.494	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		$U_{12} - L_{11}$			974.05	-----	-112	357	3	133	-452	-312	324	183	0.779	0.217	1.00	Yes	0.482	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{12} - L_{13}$			656.26	-----	-113	293	25	73	273	181	172	-14	0.776	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**
		$U_{13} - L_{14}$			669.87	-----	-286	241	-24	58	-81	230	-32	49	0.792	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
		$U_{14} - L_{15}$			709.71	-----	-196	193	-17	64	-205	244	34	73	0.839	0.156	1.00	Yes	0.461	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{15} - L_{16}$			586.76	-----	-102	36	-16	11	-21	143	-46	55	0.860	0.137	1.00	Yes	0.473	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.93**
		$U_{17} - L_{16}$			-----	-389.68	-12	-22	7	-53	25	20	-251	23	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.105	1.00	Yes	0.825	0.068	0.90	Yes	1.00	**1.60**
		$U_{18} - L_{17}$			228.46	-311.72	-83	-24	-25	-62	-294	-247	-644	-33	0.411	0.293	0.71	Yes	0.226	0.161	0.39	Yes	0.717	0.278	1.00	Yes	0.660	0.106	0.77	Yes	1.00	**2.18**
		$U_{19} - L_{18}$			411.80	-124.49	-101	12	24	-19	-445	-374	153	118	0.741	0.258	1.00	Yes	0.407	0.142	0.55	Yes	0.286	0.237	0.53	Yes	0.263	0.129	0.40	Yes	1.00	**1.74**
		$U_{20} - L_{19}$			633.45	-----	-15	31	-15	-7	-515	-399	105	118	0.831	0.166	1.00	Yes	0.502	0.091	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**

Axial AB Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression																				Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield																				
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass																				
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.248	1	Yes	0.738	0.251	0.99	Yes	1.00	**2.34**																
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-547.40	-24	78	269	-1055	21	-28	-41	-434	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.248	1	Yes	0.738	0.251	0.99	Yes	1.00	**2.34**																
		U_1 - U_2	-----	-582.99	-49	92	-163	-814	-6	43	-43	72	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.205	1	Yes	0.786	0.194	0.98	Yes	1.00	**1.69**																
		U_2 - U_3	137.09	-586.59	-93	259	-582	-605	0	-90	150	-103	0.157	0.169	0.33	Yes	0.106	0.110	0.22	Yes	0.798	0.198	1	Yes	0.791	0.144	0.94	Yes	1.00	**1.69**																
		U_3 - U_4	311.99	-550.24	94	255	-542	-664	-87	-80	3	-160	0.358	0.185	0.55	Yes	0.245	0.127	0.38	Yes	0.749	0.246	1	Yes	0.742	0.158	0.90	Yes	1.00	**2.06**																
		U_4 - U_5	325.03	-562.86	106	255	-989	-18	-168	-20	-81	-102	0.373	0.264	0.64	Yes	0.256	0.181	0.44	Yes	0.766	0.219	0.99	Yes	0.759	0.235	1.00	Yes	1.00	**2.13**																
		U_5 - U_6	606.63	-----	235	391	-1020	-78	-341	-12	-134	-343	0.695	0.300	1.00	Yes	0.469	0.196	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**																
		U_6 - U_7	790.75	-----	292	188	-806	37	-343	87	-468	-162	0.756	0.236	1.00	Yes	0.528	0.162	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**																
		U_7 - U_8	922.94	-----	-44	1198	-1451	2113	-265	339	-311	151	0.639	0.355	1.00	Yes	0.446	0.242	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**																
		U_8 - U_9	871.90	-----	1269	-162	1505	-1358	-97	249	3	213	0.714	0.283	1.00	Yes	0.489	0.193	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**																
		U_9 - U_{10}	651.51	-----	229	237	-242	-872	107	436	157	562	0.707	0.286	1.00	Yes	0.479	0.192	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**																
		U_{10} - U_{11}	-----	-620.98	248	-72	140	-925	223	101	315	45	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1	Yes	0.792	0.207	1.00	Yes	1.00	**2.20**																
		U_{11} - U_{12}	-----	-862.59	175	-117	-222	-907	165	101	271	134	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.178	1	Yes	0.809	0.151	0.96	Yes	1.00	**1.75**																
		U_{12} - U_{13}	-----	-1232.81	-21	-159	-21	-1133	220	-29	243	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.162	1	Yes	0.823	0.156	0.98	Yes	1.00	**2.00**																
		U_{13} - U_{14}	-----	-1361.67	-103	-349	-918	-1365	151	68	205	50	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.205	1	Yes	0.781	0.151	0.94	Yes	1.00	**1.92**																
		U_{14} - U_{15}	-----	-1333.10	-246	-182	-1503	-944	184	-49	137	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1	Yes	0.764	0.166	0.94	Yes	1.00	**1.84**																
		U_{15} - U_{16}	-----	-1391.70	-70	-412	-1298	-559	23	-60	222	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.798	0.143	0.95	Yes	1.00	**1.85**																
		U_{16} - U_{17}	-----	-1372.09	-314	-184	-1604	-378	51	-173	-62	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.205	1	Yes	0.787	0.177	0.97	Yes	1.00	**1.93**																
		U_{17} - U_{18}	-----	-1051.94	-167	-104	-935	42	-157	-224	-73	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.163	1	Yes	0.823	0.152	0.98	Yes	1.00	**1.79**																
		U_{18} - U_{19}	-----	-716.29	-195	-30	-865	45	-196	-171	-46	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1	Yes	0.806	0.174	0.98	Yes	1.00	**1.61**																
		U_{19} - U_{20}	-----	-590.55	-187	-16	-1630	655	-129	7	376	15	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.265	0.94	Yes	0.664	0.328	1.00	Yes	1.00	**3.38**																
	Structure 2	U_0 - U_1	-----	-624.53	173	-140	111	-1503	96	179	104	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.211	0.96	Yes	0.738	0.255	1.00	Yes	1.00	**3.36**																
		U_1 - U_2	-----	-784.99	-105	-146	-88	-1078	340	643	208	283	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.228	1	Yes	0.758	0.164	0.93	Yes	1.00	**1.84**																
		U_2 - U_3	-----	-1158.36	-81	-212	-124	-1348	608	4	460	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.167	1	Yes	0.822	0.137	0.96	Yes	1.00	**2.07**																
		U_3 - U_4	-----	-1398.64	-360	-283	-1210	-1413	118	-302	245	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.190	1	Yes	0.796	0.126	0.93	Yes	1.00	**2.02**																
		U_4 - U_5	-----	-1484.75	-361	-319	-1567	-1819	-68	-354	131	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.762	0.151	0.92	Yes	1.00	**1.96**																
		U_5 - U_6	-----	-1498.18	-385	-6	-2050	-1092	-108	-295	36	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1	Yes	0.769	0.170	0.94	Yes	1.00	**1.95**																
		U_6 - U_7	-----	-1315.24	-268	-74	-1175	-1960	-88	-265	-17	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.749	0.175	0.93	Yes	1.00	**1.81**																
		U_7 - U_8	-----	-1338.52	-155	-198	-2116	-588	-184	-216	-89	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.762	0.189	0.96	Yes	1.00	**1.88**																
		U_8 - U_9	-----	-1193.79	-284	104	-1519	-229	-226	-185	-50	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.179	1	Yes	0.810	0.161	0.98	Yes	1.00	**2.00**																
		U_9 - U_{10}	-----	-937.47	-81	298	-1470	-92	-284	-133	-84	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.182	1	Yes	0.809	0.179	0.99	Yes	1.00	**2.17**																
		U_{10} - U_{11}	512.45	-799.31	107	376	-1423	-196	-179	-75	-151	-212	0.433	0.227	0.66	Yes	0.295	0.146	0.45	Yes	0.799	0.200	1	Yes	0.794	0.201	1.00	Yes	1.00	**2.99**																
		U_{11} - U_{12}	803.20	-----	175	510	-1876	373	-383	-178	-202	-435	0.678	0.318	1.00	Yes	0.456	0.212	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**																
		U_{12} - U_{13}	1157.67	-----	308	33	-1115	-997	-526	-107	-781	-490	0.782	0.215	1.00	Yes	0.557	0.147	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**																
		U_{13} - U_{14}	1376.58	-----	-293	2919	-414	1506	-652	300	-541	-174	0.677	0.315	1.00	Yes	0.479	0.207	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**																
		U_{14} - U_{15}	1385.43	-----	2986	-27	1311	-100	-547	283	-245	147	0.681	0.314	1.00	Yes	0.482	0.206	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**																
		U_{15} - U_{16}	1195.71	-----	615	259	-22	-1769	304	327	574	372	0.712	0.282	1.00	Yes	0.474	0.186	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**																
		U_{16} - U_{17}	966.85	-----	502	306	-611	-1189	35	172	205	172	0.759	0.232	1.00	Yes	0.505	0.154	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**																
		U_{17} - U_{18}	756.10	-----	1269	-162	1505	-1358	-97	249	3	213	0.714	0.283	1.00	Yes	0.489	0.193	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**																
		U_{18} - U_{19}	460.60	-636.06	459	195	-213	-1409	14	46	177	-19	0.462	0.265	0.73	Yes	0.303	0.168	0.48	Yes	0.756	0.205	0.97	Yes	0.751	0.239	1.00	Yes	1.00	**2.86**																
		U_{19} - U_{20}	256.38	-723.75	295	158	-704	-829	11	153	132	43	0.240	0.153	0.40	Yes	0.159	0.101	0.27	Yes	0.804	0.187	1	Yes	0.799	0.133	0.94	Yes	1.00	**2.42**																
		U_{20} - U_{21}	-----	-845.75	139	-12	-861	-1012	104	-7	210	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.214	1	Yes	0.772	0.147	0.92	Yes	1.00	**2.32**																
		U_{21} - U_{22}	-----	-804.18	-13	15	-824	-1405	-16	-51	59	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.258	1	Yes	0.734	0.203	0.94	Yes	1.00	**2.07**																
		U_{22} - U_{23}	-----	-812.90	-17	-27	-1469	-458	-70	-103	93	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.245	1	Yes	0.742	0.213	0.96	Yes	1.00	**2.10**																
		U_{23} - U_{24}	-----	-844.66	19	95	-1372	-136	-213	-108	23	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1	Yes	0.771	0.199	0.97	Yes	1.00	**2.25**																
		U_{24} - U_{25}	216.84	-747.36	119	246	-806	-397	-239	-34	-140	-160	0.203	0.161	0.37	Yes	0.135	0.106	0.25	Yes	0.830	0.168	1	Yes	0.825	0.129	0.96	Yes	1.00	**2.29**																
		U_{25} - U_{26}	406.60	-671.67	162	411	-1196	179	-215	48	-96	-78	0.408	0.234	0.65	Yes	0.268	0.149	0.42	Yes	0.798	0.153	0.96	Yes	0.793	0.203	1.00	Yes	1.00	**2.74**																
		U_{26} - U_{27}	743.57	-----	270	477	-1242	-392	-223	33	-250	-202	0.746	0.247	1.00	Yes	0.497	0.164	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**																
		U_{27} - U_{28}	959.02	-----	218	571	-1863	-363	-359	-49	-282	-531	0.707	0.290	1.00	Yes	0.470	0.191	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**																
		U_{28} - U_{29}	1155.77	-----	272	62	-1215	-2043	-437	73	-757	-366	0.699	0.296	1.00	Yes	0.497	0.200	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**																
		U_{29} - U_{30}	1364.79	-----	-116	3022	-148	1300	-576	571	-127	326	0.671	0.319	1.00	Yes	0.475	0.209	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**																
		U_{30} - U_{31}	1446.66	-----	2800	-134	1378	-347	-218	425	280	404	0.711	0.288	1.00	Yes	0.504	0.189	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**																
		U_{31} - U_{32}	1110.15	-----	11	346	-1376	-736	189	654	454	761	0.750	0.246	1.00	Yes	0.534	0.168	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**																
		U_{32} - U_{33}	870.08	-----	531	237	-271	-1328	329	295	604	129	0.735	0.261	1.00	Yes	0.494	0.174	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**																
		U_{33} - U_{34}	603.16	-764.11	401	193	-567	-1482	134	188	258	137	0.509	0.241	0.75	Yes	0.347	0.155	0.51	Yes	0.764	0.231	1	Yes	0.759	0.209	0.97	Yes	1.00	**3.16**																
		U_{34} - U_{35}	-----	-912.77	363	-12	89	-1669	115	0	174	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.165	0.96	Yes	0.788	0.203	1.00	Yes	1.00	**2.32**																
		U_{35} - U_{36}	-----	-1194.01	159	-240	-849	-1263	100	92	243	25	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.176	1	Yes	0.810	0.134	0.95	Yes	1.00	**2.22**																
		U_{36} - U_{37}	-----	-1302.20	-135	-45	-927	-2194	166	-47	261	25	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.246	1	Yes	0.741	0.196	0.94	Yes	1.00	**1.96**																
		U_{37} - U_{38}	-----	-1316.03	60	-232	-2139	-766	21	14	242	10	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.240	1	Yes	0.749	0.191	0.94	Yes	1.00	**1.99**																
		U_{38} - U_{39}	-----	-1603.28	65	-388	-919	-1666	85	-99	267	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.170	1	Yes	0.823	0.138	0.97	Yes	1.00	**2.32**																
		U_{39} - U_{40}	-----	-1480.84	-317	-466	-2082	-937	-117	-135	-7	-232	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.224	1	Yes	0.760	0.173	0.94	Yes	1.00	**2.00**																
		U_{40} - U_{41}	-----	-1379.45	-391	-430	-1635	-939	-91	-131	-176	-284	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.208	1	Yes	0.785	0.146	0.94	Yes	1.00	**1.95**																
		U_{41} - U_{42}	-----	-1141.52	-273	-175	-1780	-131	-98	38	-71	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.176	1	Yes	0.810	0.181	1.00	Yes	1.00	**1.93**																
		U_{42} - U_{43}	-----	-845.08	-266	-54	-1147	-101	115	-56	235	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.172	1	Yes	0.816	0.174	0.99	Yes	1.00	**2.08**																
		U_{43} - U_{44}	-----	-584.55	-126	-166	-1800	446	-63	5	302	5	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.277	0.98	Yes	0.690	0.306	1.00	Yes	1.00	**3.36**																
	Structure 3	U_0 - U_1	-----	-612.20	174	-173	568	-1529	62	128	-48	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.208	0.91	Yes	0.689	0.308	1.00	Yes	1.00	**3.37**																
		U_1 - U_2	-----	-689.61	-69	-113	38	-775	252	511	198	289	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1	Yes	0.776	0.156	0.94	Yes	1.00	**1.64**																
		U_2 - U_3	-----	-1033.10	-77	-116	103	-947	518	7	496	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.172	1	Yes	0.808	0.154	0.97	Yes	1.00	**1.83**																
		U_3 - U_4	-----	-1362.68	-144	-200	-889	-1367	129	-238	247	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.201	1	Yes	0.781	0.151	0.94	Yes	1.00	**2.10**																
		U_4 - U_5	-----	-1384.02	-320	-41	-1009	-1093	-16	-313	193	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.191	1	Yes	0.793	0.121	0.92	Yes	1.00	**1.94**																
		U_5 - U_6	-----	-1359.62	-147	-219	-1165	-1227	-53	-211	-20	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1	Yes	0.779	0.135	0.92	Yes	1.00	**1.99**																
		U_6 - U_7	-----	-1391.33	-301	-79	-1351	-597	-96	-234	64	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.188	1	Yes	0.798	0.149	0.95	Yes	1.00	**2.07**																
		U_7 - U_8	-----	-1229.39	-122	-35	-963	-191	-217	-207	-33	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.164	1	Yes	0.821	0.133	0.96	Yes	1.00	**2.02**																
		U_8 - U_9	-----	-895.47	-122	180	-866	-4	-102	-110	-81	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.147	1	Yes	0.840	0.144	0.99	Yes	1.00	**1.79**																
		U_9 - U_{10}	-----	-597.80	-92	226	-1031	152	-206	-126	-142	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.210	0.98	Yes	0.763	0.231	1.00	Yes	1.00	**1.97**																
		U_{10} - U_{11}	661.93	-----	229	235	-958	53	-330	-61	-391	-165	0.718	0.277	1.00	Yes	0.486	0.186	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**																
		U_{11} - U_{12}	814.81	-----	-145	1108	-1354	1703	-315	147	-322	9	0.668	0.325	1.00	Yes	0.457	0.221	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**																
		U_{12} - U_{13}	1001.26	-----	1319	-38	1730	-1293	-360	110	-134	130	0.694	0.299	1.00	Yes	0.484	0.204	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.84**																
		U_{13} - U_{14}	824.73	-----	197	318	-414	-647	-107	377	123	471	0.789	0.202	1.00	Yes	0.551	0.139	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.98**																
		U_{14} - U_{15}	645.53	-----	423	242	-114	-770	48	155	416	9	0.740	0.253	1.00	Yes	0.499	0.166	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**																
		U_{15} - U_{16}	308.04	-565.19	257	127	-375	-761	-2	136	142	167	0.353	0.209	0.57	Yes	0.242	0.143	0.39	Yes	0.769	0.229	1	Yes	0.762	0.181	0.95	Yes	1.00	**2.13**																
		U_{16} - U_{17}	303.55	-566.35	291	72	-642	-323	41	61	252	-1	0.348	0.195	0.55	Yes	0.239	0.134	0.38	Yes	0.771	0.223	1	Yes	0.764	0.153	0.92	Yes	1.00	**2.13**																
		U_{17} - U_{18}	120.01	-579.35	242	-127	-584	-346	-68	154	78	-73	0.138	0.165	0.31	Yes	0.093	0.107	0.21	Yes	0.788	0.203	1	Yes	0.781	0.139	0.93	Yes	1.00	**1.68**																
		U_{18} - U_{19}	-----	-570.62	49	-27	-836	-155	160	24	125	24	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.216	1	Yes	0.769	0.199	0.97	Yes	1.00	**1.60**																
		U_{19} - U_{20}	-----	-535.56	125	-232	-867	-49	-58	21	284	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.264	1	Yes	0.722	0.206	0.93	Yes	1.00	**2.45**																

Axial AB Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	205.81	-148.19	645	-1272	526	-556	-381	-1401	80	271	0.315	0.683	1.00	Yes	0.185	0.409	0.60	Yes	0.269	0.464	0.74	Yes	0.267	0.382	0.65	Yes	1.00	**7.07**
		L_1 - L_2	452.18	-----	-222	-729	47	-4	-392	27	25	17	0.692	0.303	1.00	Yes	0.422	0.201	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.99**
		L_2 - L_3	672.79	-----	-630	-880	-28	73	-84	-22	7	-11	0.774	0.226	1.00	Yes	0.448	0.136	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		L_3 - L_4	628.30	-171.67	-972	-175	49	210	-78	219	-29	34	0.723	0.270	1.00	Yes	0.429	0.174	0.61	Yes	0.235	0.214	0.45	Yes	0.232	0.235	0.47	Yes	1.00	**2.02**
		L_4 - L_5	-----	-563.57	-450	-455	109	517	-259	35	187	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.117	0.99	Yes	0.859	0.137	1.00	Yes	1.00	**2.76**
		L_5 - L_6	-----	-750.76	-382	-172	139	579	-60	-15	17	86	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.122	1	Yes	0.866	0.128	1.00	Yes	1.00	**2.64**
		L_6 - L_7	-----	-1036.94	-1003	-258	137	14	65	68	190	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.145	0.99	Yes	0.835	0.158	1.00	Yes	1.00	**3.05**
		L_7 - L_8	-----	-1259.72	-33	583	-41	1372	41	72	159	214	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.798	0.182	0.98	Yes	1.00	**3.27**
		L_8 - L_9	-----	-1265.37	554	-47	1396	-92	37	-14	128	31	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.179	1	Yes	0.801	0.185	0.99	Yes	1.00	**3.22**
		L_9 - L_{10}	-----	-1063.39	-649	-859	110	92	24	9	-8	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.114	0.98	Yes	0.856	0.135	1.00	Yes	1.00	**4.57**
		L_{10} - L_{11}	-----	-554.88	-194	-564	499	-11	91	-161	75	10	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.112	0.97	Yes	0.845	0.149	1.00	Yes	1.00	**3.34**
		L_{11} - L_{12}	605.69	-----	-81	-545	348	-192	-386	166	-13	15	0.784	0.212	1.00	Yes	0.471	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		L_{12} - L_{13}	1060.71	-----	-414	-733	77	-96	-43	-264	-21	-38	0.837	0.161	1.00	Yes	0.535	0.096	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		L_{13} - L_{14}	1289.41	-----	-178	-1576	223	-390	-223	132	-105	65	0.758	0.236	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		L_{14} - L_{15}	1575.89	-----	-1736	-987	-353	-83	-199	47	-67	-47	0.770	0.223	1.00	Yes	0.500	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		L_{15} - L_{16}	1667.48	-----	-1410	-1476	-191	-388	-60	-18	-73	15	0.815	0.183	1.00	Yes	0.523	0.106	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_{16} - L_{17}	1240.92	-----	-1337	-173	-394	41	-149	78	-37	-64	0.785	0.210	1.00	Yes	0.509	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		L_{17} - L_{18}	915.80	-----	-946	-142	-188	-53	-16	-134	-41	-1	0.797	0.199	1.00	Yes	0.510	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.70**
		L_{18} - L_{19}	447.35	-----	-820	233	-264	189	-183	312	5	-17	0.685	0.311	1.00	Yes	0.463	0.196	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		L_{19} - L_{20}	359.72	-----	-302	29	-1444	921	-4	-1	-58	-19	0.551	0.445	1.00	Yes	0.336	0.302	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
	Structure 2	L_0 - L_1	234.07	-----	658	-2115	934	-2087	-501	-1727	50	203	0.284	0.714	1.00	Yes	0.169	0.448	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.95**
		L_1 - L_2	548.74	-----	243	-1228	156	-207	-506	289	79	102	0.666	0.333	1.00	Yes	0.396	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.70**
		L_2 - L_3	1035.89	-----	-298	-1073	-18	-140	174	-214	123	167	0.816	0.178	1.00	Yes	0.535	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**
		L_3 - L_4	1328.53	-----	-258	-1591	56	-319	-393	198	45	121	0.781	0.217	1.00	Yes	0.526	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		L_4 - L_5	1734.04	-----	-1659	-1354	-236	-224	422	40	17	-14	0.808	0.185	1.00	Yes	0.535	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
		L_5 - L_6	1866.18	-----	-1573	-1818	-24	-324	-450	155	-95	59	0.801	0.189	1.00	Yes	0.537	0.116	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		L_6 - L_7	1812.95	-----	-2455	-1269	-374	-85	85	192	53	-12	0.767	0.228	1.00	Yes	0.510	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_7 - L_8	1340.21	-----	-1921	-756	-187	226	-129	60	-72	77	0.768	0.223	1.00	Yes	0.505	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.49**
		L_8 - L_9	1103.81	-----	-1542	-84	-123	490	-98	26	41	-125	0.772	0.220	1.00	Yes	0.520	0.137	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		L_9 - L_{10}	842.36	-586.05	-1497	-250	-85	601	10	-50	-38	31	0.752	0.246	1.00	Yes	0.438	0.154	0.60	Yes	0.620	0.176	0.8	Yes	0.615	0.240	0.86	Yes	1.00	**3.48**
		L_{10} - L_{11}	-----	-679.98	-1138	197	1	560	-108	47	117	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.102	0.91	Yes	0.799	0.199	1.00	Yes	1.00	**2.71**
		L_{11} - L_{12}	-----	-1048.98	-695	-167	0	990	-46	-119	34	89	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.102	0.97	Yes	0.860	0.135	1.00	Yes	1.00	**3.46**
		L_{12} - L_{13}	-----	-1447.88	-380	-237	-60	-935	-24	-180	433	208	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.124	1	Yes	0.866	0.093	0.96	Yes	1.00	**4.21**
		L_{13} - L_{14}	-----	-1501.28	-480	1324	-1004	2728	-188	-254	209	219	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.172	0.94	Yes	0.755	0.238	1.00	Yes	1.00	**3.67**
		L_{14} - L_{15}	-----	-1483.17	1259	-544	2833	-845	-240	-169	16	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.179	0.94	Yes	0.746	0.247	1.00	Yes	1.00	**3.30**
		L_{15} - L_{16}	-----	-1481.96	-507	-98	-1105	207	-109	8	-196	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.105	1	Yes	0.886	0.110	1.00	Yes	1.00	**4.77**
		L_{16} - L_{17}	-----	-1164.75	-63	-802	1161	80	166	68	4	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.129	0.99	Yes	0.848	0.143	1.00	Yes	1.00	**3.95**
		L_{17} - L_{18}	-----	-834.05	-30	-700	495	189	-366	143	17	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.111	1	Yes	0.876	0.112	0.99	Yes	1.00	**2.95**
		L_{18} - L_{19}	-----	-654.15	-372	-532	631	87	250	-50	-12	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.112	0.99	Yes	0.872	0.122	1.00	Yes	1.00	**2.95**
		L_{19} - L_{20}	694.65	-547.61	-677	-889	508	169	-73	221	-25	-32	0.787	0.205	1.00	Yes	0.466	0.131	0.60	Yes	0.734	0.140	0.88	Yes	0.730	0.172	0.91	Yes	1.00	**3.46**
		L_{20} - L_{21}	998.76	-393.88	-1176	-1003	401	21	244	-38	1	-38	0.796	0.198	1.00	Yes	0.522	0.118	0.65	Yes	0.372	0.218	0.6	Yes	0.370	0.172	0.55	Yes	1.00	**3.57**
		L_{21} - L_{22}	969.02	-----	-1301	-1251	220	-140	-74	266	-55	19	0.773	0.218	1.00	Yes	0.517	0.137	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		L_{22} - L_{23}	912.36	-----	-1735	-1051	-144	185	-126	135	22	-42	0.728	0.268	1.00	Yes	0.487	0.167	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		L_{23} - L_{24}	926.15	-327.79	-1715	-809	-2	309	-79	71	-8	64	0.739	0.259	1.00	Yes	0.484	0.153	0.64	Yes	0.310	0.250	0.56	Yes	0.308	0.250	0.56	Yes	1.00	**3.14**
		L_{24} - L_{25}	647.03	-466.89	-1271	-294	110	456	-58	25	97	-95	0.733	0.260	1.00	Yes	0.434	0.167	0.61	Yes	0.626	0.169	0.8	Yes	0.622	0.245	0.87	Yes	1.00	**3.11**
		L_{25} - L_{26}	-----	-621.56	-841	-302	69	579	-35	-83	15	80	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.123	0.96	Yes	0.828	0.162	1.00	Yes	1.00	**3.09**
		L_{26} - L_{27}	-----	-841.63	-686	-447	168	502	-71	33	149	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.091	0.99	Yes	0.884	0.110	1.00	Yes	1.00	**3.44**
		L_{27} - L_{28}	-----	-1180.00	-1005	-73	66	1122	-94	-272	91	192	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.128	1	Yes	0.859	0.138	1.00	Yes	1.00	**4.52**
		L_{28} - L_{29}	-----	-1556.47	-177	-446	-177	-137	145	100	288	16	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.061	1	Yes	0.931	0.044	0.98	Yes	1.00	**5.22**
		L_{29} - L_{30}	-----	-1506.30	-499	1190	-746	2747	90	121	44	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.170	0.94	Yes	0.758	0.240	1.00	Yes	1.00	**3.38**
		L_{30} - L_{31}	-----	-1444.91	1248	-471	3032	-900	123	68	149	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.182	0.92	Yes	0.727	0.265	1.00	Yes	1.00	**3.72**
		L_{31} - L_{32}	-----	-1503.02	-283	-311	-808	213	85	61	-154	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.907	0.089	1	Yes	0.899	0.080	0.98	Yes	1.00	**4.94**
		L_{32} - L_{33}	-----	-1047.85	34	-741	1016	55	289	-95	-28	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.122	0.99	Yes	0.859	0.138	1.00	Yes	1.00	**3.52**
		L_{33} - L_{34}	-----	-735.79	54	-747	546	108	-303	212	19	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.102	0.98	Yes	0.864	0.131	1.00	Yes	1.00	**2.96**
		L_{34} - L_{35}	871.44	-690.39	-434	-1059	701	-6	401	-95	-5	-68	0.778	0.218	1.00	Yes	0.453	0.134	0.59	Yes	0.730	0.149	0.88	Yes	0.725	0.169	0.90	Yes	1.00	**3.90**
		L_{35} - L_{36}	1112.50	-----	-64	-1463	521	-64	-213	137	-76	14	0.778	0.217	1.00	Yes	0.524	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		L_{36} - L_{37}	1303.10	-----	-432	-2122	315	-75	27	161	33	-9	0.747	0.247	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		L_{37} - L_{38}	1833.68	-----	-1951	-2426	32	-422	-98	109	-64	48	0.776	0.220	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		L_{38} - L_{39}	1793.44	-----	-2428	-1427	-369	-76	-84	135	8	-62	0.770	0.224	1.00	Yes	0.516	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.84**
		L_{39} - L_{40}	1707.51	-----	-2068	-1449	-260	-389	-41	-75	-54	4	0.796	0.201	1.00	Yes	0.527	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.87**
		L_{40} - L_{41}	1321.81	-----	-1756	-499	-427	20	-134	138	2	-15	0.777	0.217	1.00	Yes	0.523	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		L_{41} - L_{42}	1032.96	-----	-1187	-229	-194	-98	97	59	28	121	0.814	0.185	1.00	Yes	0.534	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		L_{42} - L_{43}	542.63	-----	-1305	93	-322	171	-79	443	149	65	0.659	0.338	1.00	Yes	0.392	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		L_{43} - L_{44}	228.50	-----	-627	69	-3071	1223	-565	-166	148	38	0.278	0.718	1.00	Yes	0.165	0.461	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.72**
	Structure 3	L_0 - L_1	272.79	-----	640	-1139	724	-1105	-245	-1136	42	182	0.417	0.577	1.00	Yes	0.255	0.377	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		L_1 - L_2	455.24	-----	280	-760	157	-192	-343	270	37	63	0.697	0.299	1.00	Yes	0.471	0.189	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		L_2 - L_3	937.10	-----	-125	-778	-21	-144	119	-223	89	131	0.816	0.179	1.00	Yes	0.522	0.107	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		L_3 - L_4	1253.57	-----	-405	-1135	44	-303	-398	193	27	120	0.793	0.202	1.00	Yes	0.514	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		L_4 - L_5	1664.58	-----	-1350	-1034	-272	-131	283	-28	24	14	0.813	0.183	1.00	Yes	0.522	0.107	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_5 - L_6	1664.05	-----	-1305	-1260	-28	-296	-29	391	-61	130	0.813	0.185	1.00	Yes	0.528	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_6 - L_7	1297.90	-----	-1585	-281	-348	202	-104	70	3	-31	0.763	0.227	1.00	Yes	0.494	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		L_7 - L_8	1048.27	-----	-901	-481	-92	53	17	107	-21	70	0.827	0.172	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		L_8 - L_9	607.01	-----	-729	30	-199	338	-46	62	60	-92	0.786	0.209	1.00	Yes	0.472	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**
		L_9 - L_{10}	382.46	-564.82	-518	-336	-23	513	14	25	-19	17	0.495	0.142	0.64	Yes	0.288	0.086	0.38	Yes	0.868	0.107	0.98	Yes	0.861	0.137	1.00	Yes	1.00	**3.53**
		L_{10} - L_{11}	-----	-976.22	-1317	-70	62	145	64	29	103	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.143	0.94	Yes	0.786	0.207	1.00	Yes	1.00	**4.19**
		L_{11} - L_{12}	-----	-1253.02	-55	534	-149	1451	-92	-105	-139	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1	Yes	0.794	0.192	0.99	Yes	1.00	**3.32**
		L_{12} - L_{13}	-----	-1242.04	557	-34	1389	-58	-137	-145	-283	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.200	1	Yes	0.787	0.184	0.98	Yes	1.00	**3.19**
		L_{13} - L_{14}	-----	-1059.44	-389	-586	-53	140	-462	-166	-133	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.132	1	Yes	0.853	0.092	0.95	Yes	1.00	**3.17**
		L_{14} - L_{15}	-----	-748.82	-131	-393	576	138	129	-82	-1	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.119	1	Yes	0.864	0.127	1.00	Yes	1.00	**2.69**
		L_{15} - L_{16}	-----	-551.79	-212	-563	482	157	-447	439	11	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.142	1	Yes	0.841	0.149	0.99	Yes	1.00	**2.71**
		L_{16} - L_{17}	679.97	-152.47	-609	-795	254	10	-92	132	33	-76	0.782	0.213	1.00	Yes	0.465	0.138	0.61	Yes	0.208	0.224	0.44	Yes	0.206	0.192	0.40	Yes	1.00	**2.15**
		L_{17} - L_{18}	675.72	-----	-752	-792	42	-70	74	183	18	107	0.777	0.221	1.00	Yes	0.450	0.132	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		L_{18} - L_{19}	469.42	-----	-749	-185	-17	31	7	256	49	-76	0.718	0.280	1.00	Yes	0.438	0.187	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		L_{19} - L_{20}	109.77	-----	-2010	911	-1143	911	1061	289	-163	-42	0.168	0.831	1.00	Yes	0.099	0.503	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.57**

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

				Inventory Loads - HS20 Truck																													
				Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
						Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:		Vehicle 1.300	Pedestrian 1.300	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
LL Factor:		2.167	1.625	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----										
Center Truss - Verticals	Structure 1	U_0 - L_0		-----	-375.23	-24	48	-59	120	-99	-32	-277	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1	Yes	0.794	0.153	0.95	Yes	1.00	**0.71**
		U_1 - L_1		-----	-349.54	20	-15	-181	202	46	20	-381	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.170	0.94	Yes	0.740	0.258	1.00	Yes	1.00	**1.84**
		U_2 - L_2		80.96	-338.80	72	-79	-159	215	35	7	137	132	0.146	0.314	0.46	Yes	0.080	0.173	0.26	Yes	0.740	0.143	0.89	Yes	0.717	0.275	1.00	Yes	1.00	**2.73**
		U_3 - L_3		237.14	-316.79	254	-251	-148	196	-424	-168	44	194	0.427	0.447	0.88	Yes	0.235	0.246	0.49	Yes	0.694	0.181	0.88	Yes	0.670	0.325	1.00	Yes	1.00	**3.58**
		U_4 - L_4		-----	-352.91	-27	20	192	-187	-92	-20	219	62	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.120	0.9	Yes	0.747	0.245	1.00	Yes	1.00	**2.50**
		U_5 - L_5		-----	-441.16	24	-38	194	-231	-121	-43	49	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.101	0.9	Yes	0.761	0.234	1.00	Yes	1.00	**1.90**
		U_6 - L_6		-----	-535.19	51	-63	222	-260	-82	58	-10	31	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.086	0.9	Yes	0.768	0.228	1.00	Yes	1.00	**1.76**
		U_7 - L_7		-----	-452.35	118	-132	273	-300	-129	46	29	75	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.118	0.88	Yes	0.698	0.296	1.00	Yes	1.00	**1.13**
		U_8 - L_8		-----	-1336.59	-1	-4	-184	221	-195	-68	-197	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.965	0.031	1	Yes	0.927	0.041	0.97	Yes	1.00	**2.45**
		U_9 - L_9		-----	-671.12	-166	190	-374	432	-224	-158	-249	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.128	0.93	Yes	0.758	0.240	1.00	Yes	1.00	**1.49**
		U_{10} - L_{10}		-----	-821.22	-115	107	-304	366	-205	-147	-264	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.113	0.97	Yes	0.810	0.190	1.00	Yes	1.00	**2.36**
		U_{11} - L_{11}		-----	-683.14	-70	148	-286	424	-126	10	126	104	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.087	0.91	Yes	0.795	0.197	1.00	Yes	1.00	**2.20**
		U_{12} - L_{12}		-----	-545.86	-63	63	-266	285	-165	-3	-112	70	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.096	0.89	Yes	0.749	0.243	1.00	Yes	1.00	**2.01**
		U_{13} - L_{13}		-----	-395.55	-4	23	-180	208	-87	80	-77	105	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.087	0.89	Yes	0.758	0.238	1.00	Yes	1.00	**1.60**
		U_{14} - L_{14}		-----	-317.01	-237	255	-174	186	-87	-11	154	40	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.134	0.85	Yes	0.671	0.327	1.00	Yes	1.00	**2.60**
		U_{15} - L_{15}		233.71	-349.93	-182	178	171	-196	-108	-95	-103	-179	0.420	0.302	0.73	Yes	0.231	0.166	0.40	Yes	0.784	0.147	0.94	Yes	0.740	0.251	1.00	Yes	1.00	**2.76**
		U_{16} - L_{16}		-----	-348.95	-48	32	182	-201	-60	-79	153	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.117	0.91	Yes	0.738	0.257	1.00	Yes	1.00	**2.13**
		U_{17} - L_{17}		-----	-449.81	34	-56	183	-212	-92	-52	45	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.103	0.95	Yes	0.776	0.215	1.00	Yes	1.00	**1.72**
		U_{18} - L_{18}		-----	-554.99	123	-128	371	-401	-162	-62	75	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.092	0.91	Yes	0.772	0.227	1.00	Yes	1.00	**1.82**
		U_{19} - L_{19}		-----	-645.59	139	-152	426	-461	-65	11	853	62	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.189	1	Yes	0.751	0.214	0.97	Yes	1.00	**1.89**
		U_{20} - L_{20}		-----	-578.20	166	-213	422	-494	27	4	797	104	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.673	0.229	0.91	Yes	1.00	**1.46**
	Structure 2	U_0 - L_0		-----	-639.49	-113	178	-382	504	-260	-44	-932	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.232	1	Yes	0.685	0.214	0.90	Yes	1.00	**1.53**
		U_1 - L_1		-----	-727.64	-114	122	-468	503	36	-67	-730	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.161	1	Yes	0.780	0.213	1.00	Yes	1.00	**2.18**
		U_2 - L_2		-----	-612.90	-87	96	-390	426	90	41	-206	30	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.083	0.91	Yes	0.781	0.218	1.00	Yes	1.00	**2.01**
		U_3 - L_3		-----	-503.47	-46	52	-198	222	15	125	109	147	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.106	0.97	Yes	0.790	0.202	1.00	Yes	1.00	**1.84**
		U_4 - L_4		-----	-359.15	-6	17	-173	184	-93	60	-82	110	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.083	0.9	Yes	0.760	0.236	1.00	Yes	1.00	**1.80**
		U_5 - L_5		135.63	-354.34	120	-99	-160	188	-123	75	87	143	0.244	0.282	0.53	Yes	0.134	0.155	0.29	Yes	0.800	0.104	0.91	Yes	0.750	0.241	1.00	Yes	1.00	**2.36**
		U_6 - L_6		359.31	-279.64	230	-228	-157	169	-53	156	205	172	0.646	0.353	1.00	Yes	0.355	0.194	0.55	Yes	0.629	0.094	0.73	Yes	0.592	0.294	0.89	Yes	1.00	**3.26**
		U_7 - L_7		-----	-373.32	-24	31	149	-162	-87	-11	-97	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.094	0.94	Yes	0.790	0.207	1.00	Yes	1.00	**2.67**
		U_8 - L_8		-----	-494.44	23	-38	304	-329	-133	-136	88	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.107	0.83	Yes	0.712	0.287	1.00	Yes	1.00	**2.19**
		U_9 - L_9		-----	-708.27	78	-114	503	-556	-127	-105	134	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.081	0.87	Yes	0.759	0.236	1.00	Yes	1.00	**2.71**
		U_{10} - L_{10}		-----	-820.21	109	-146	457	-514	-56	8	-110	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.087	0.9	Yes	0.767	0.227	1.00	Yes	1.00	**2.71**
		U_{11} - L_{11}		-----	-838.08	159	-173	445	-484	-51	-132	168	34	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.096	0.94	Yes	0.784	0.213	1.00	Yes	1.00	**2.33**
		U_{12} - L_{12}		-----	-896.22	159	-152	483	-516	-2	54	231	124	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.124	0.99	Yes	0.777	0.221	1.00	Yes	1.00	**2.46**
		U_{13} - L_{13}		-----	-762.93	243	-241	545	-548	-86	43	-32	66	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.103	0.96	Yes	0.736	0.262	1.00	Yes	1.00	**1.81**
		U_{14} - L_{14}		-----	-1333.63	153	-149	318	-307	-59	129	176	57	-----	-----	-----	-----	-----	-----	-----	-----	0.975	0.024	1	Yes	0.884	0.056	0.95	Yes	1.00	**2.55**
		U_{15} - L_{15}		-----	-746.66	-164	166	-582	584	-77	-43	58	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.121	0.96	Yes	0.720	0.279	1.00	Yes	1.00	**2.27**
		U_{16} - L_{16}		-----	-739.60	-116	104	-477	483	-157	-92	-284	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.103	0.96	Yes	0.793	0.205	1.00	Yes	1.00	**2.13**
		U_{17} - L_{17}		-----	-662.25	-132	128	-467	489	-100	-36	-164	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.086	0.91	Yes	0.771	0.227	1.00	Yes	1.00	**2.05**
		U_{18} - L_{18}		-----	-597.24	-104	105	-413	457	-85	-14	80	49	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.076	0.88	Yes	0.761	0.234	1.00	Yes	1.00	**2.08**
		U_{19} - L_{19}		-----	-502.47	-49	53	-249	259	-151	-13	-140	23	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.086	0.85	Yes	0.750	0.249	1.00	Yes	1.00	**1.82**
		U_{20} - L_{20}		-----	-400.75	-10	14	-180	195	-150	4	18	67	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.101	0.93	Yes	0.768	0.223	1.00	Yes	1.00	**1.80**
		U_{21} - L_{21}		-----	-344.74	38	-36	-185	205	-152	23	54	81	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.115	0.9	Yes	0.729	0.262	1.00	Yes	1.00	**2.05**
		U_{22} - L_{22}		-----	-385.60	123	-139	80	-78	-180	-62	-139	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.110	0.98	Yes	0.816	0.177	1.00	Yes	1.00	**3.02**
		U_{23} - L_{23}		140.65	-349.46	-94	91	181	-203	-89	-78	124	-67	0.253	0.295	0.55	Yes	0.139	0.162	0.31	Yes	0.789	0.123	0.92	Yes	0.739	0.259	1.00	Yes	1.00	**2.46**
		U_{24} - L_{24}		-----	-391.85	-43	32	193	-212	-69	-62	83	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.097	0.91	Yes	0.751	0.241	1.00	Yes	1.00	**2.26**
		U_{25} - L_{25}		-----	-494.67	22	-36	253	-268	-81	1	-85	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.082	0.83	Yes	0.739	0.258	1.00	Yes	1.00	**2.01**
		U_{26} - L_{26}		-----	-587.23	90	-111	427	-483	-89	-5	156	26	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.092	0.88	Yes	0.748	0.247	1.00	Yes	1.00	**2.11**
		U_{27} - L_{27}		-----	-643.94	143	-144	506	-533	-149	0	97	50	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.084	0.88	Yes	0.749	0.247	1.00	Yes	1.00	**2.15**
		U_{28} - L_{28}		-----	-727.52	139	-135	487	-512	-117	23	34	63	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.072	0.92	Yes	0.780	0.217	1.00	Yes	1.00	**2.15**
		U_{29} - L_{29}		-----	-732.51	206	-211	596	-600	-115	26	148	60	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.123	0.94	Yes	0.706	0.287	1.00	Yes	1.00	**2.10**
		U_{30} - L_{30}		-----	-1319.35	51	-62	232	-241	-92	114	-127	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.965	0.030	1	Yes	0.875	0.043	0.92	Yes	1.00	**2.65**
		U_{31} - L_{31}		-----	-768.81	-183	179	-523	519	-119	-60	-174	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.134	1	Yes	0.741	0.250	1.00	Yes	1.00	**1.95**
		U_{32} - L_{32}		-----	-914.89	-130	108	-443	469	-186	-96	-295	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.122	1	Yes	0.793	0.201	1.00	Yes	1.00	**2.50**
		U_{33} - L_{33}		-----	-840.72	-156	156	-449	467	-142	-51	-125	0	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.080	0.93	Yes	0.786	0.206	1.00	Yes	1.00	**2.46**
		U_{34} - L_{34}		-----	-831.34	-121	133	-445	489	-168	-14	-137	58	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.083	0.91	Yes	0.777	0.216	1.00	Yes	1.00	**2.62**
		U_{35} - L_{35}		-----	-729.19	-117	132	-462	515	-173	37	163	182	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.074	0.89	Yes	0.781	0.218	1.00	Yes	1.00	**2.47**
		U_{36} - L_{36}		-----	-497.93	-47	60	-295	318	-151	65	110	155	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.089	0.82	Yes	0.717	0.278	1.00	Yes	1.00	**2.02**
		U_{37} - L_{37}		-----	-341.56	-179	214	-27	38	-81	32	-145	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.128	0.9	Yes	0.723	0.274	1.00	Yes	1.00	**2.45**
		U_{38} - L_{38}		357.68	-----	-245	252	72	-78	-69	-104	110	-111	0.643	0.354	1.00	Yes	0.354	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		U_{39} - L_{39}		248.21	-321.65	-192	179	227	-243	-111	-107	-126	-164	0.446	0.358	0.81	Yes	0.246	0.197	0.45	Yes	0.727	0.154	0.89	Yes	0.681	0.310	1.00	Yes	1.00	**2.88**
		U_{40} - L_{40}		-----	-358.27	-52	30	167	-183	-84	-40	-101	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.120	0.94	Yes	0.758	0.234	1.00	Yes	1.00	**2.17**
		U_{41} - L_{41}		-----	-501.34	44	-51	202	-229	-105	-44	148	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.109	0.97	Yes	0.786	0.208	1.00	Yes	1.00	**1.96**
		U_{42} - L_{42}		-----	-597.31	102	-112	432	-462	-84	-49	282	24	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.114	0.92	Yes	0.761	0.237	1.00	Yes	1.00	**2.16**
		U_{43} - L_{43}		-----	-720.70	137	-154	476	-524	-39	-18	830	122	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.175	1	Yes	0.772	0.222	1.00	Yes	1.00	**2.22**
		U_{44} - L_{44}		-----	-640.96	195	-242	437	-531	-25	-4	924	157	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.227	1	Yes	0.687	0.225	0.92	Yes	1.00	**1.45**
	Structure 3	U_0 - L_0		-----	-585.46	-106	171	-289	395	-249	-33	-760	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.223	1	Yes	0.681	0.183	0.87	Yes	1.00	**1.24**
		U_1 - L_1		-----	-617.04	-115	123	-378	412	-4	-78	-1135	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.227	1	Yes	0.718	0.191	0.91	Yes	1.00	**1.83**
		U_2 - L_2		-----	-559.64	-94	100	-348	379	81	30	-163	45	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.090	0.91	Yes	0.778	0.215	1.00	Yes	1.00	**1.80**
		U_3 - L_3		-----	-463.21	-35	47	-166	195	-2	118	97	161	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.116	0.99	Yes	0.799	0.197	1.00	Yes	1.00	**1.64**
		U_4 - L_4		-----	-344.78	25	-7	-199	211	-122	122	-136	147	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.090	0.87	Yes	0.730	0.270	1.00	Yes	1.00	**2.00**
		U_5 - L_5		138.91	-345.45	91	-90	-177	204	-147	63	-143	117	0.250	0.303	0.56	Yes	0.137	0.167	0.31	Yes	0.774	0.109	0.89	Yes	0.731	0.260	1.00	Yes	1.00	**2.35**
		U_6 - L_6		-----	-344.43	189	-209	-68	69	-213	-55	167	22	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.137	0.91	Yes	0.729	0.268	1.00	Yes	1.00	**2.92**
		U_7 - L_7		-----	-374.25	-34	21	219	-245	-175	-141	-210	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.153	0.91	Yes	0.717	0.280	1.00	Yes	1.00	**1.95**
		U_8 - L_8		-----	-541.39	17	-20	269	-291	-137	-103	-184	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.115	0.9	Yes	0.743	0.248	1.00	Yes	1.00	**2.31**
		U_9 - L_9		-----	-677.87	70	-119	306	-447	-95	-140	123	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.099	0.92	Yes	0.789	0.208	1.00	Yes	1.00	**2.38**
		U_{10} - L_{10}		-----	-796.74	90	-108	345	-408	2	81	202	154	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.100	0.93	Yes	0.786	0.211	1.00	Yes	1.00	**2.60**
		U_{11} - L_{11}		-----	-657.33	182	-212	390	-460	-51	62	-32	84	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.095	0.88	Yes	0.742	0.256	1.00	Yes	1.00	**1.51**
		U_{12} - L_{12}		-----	-1327.97	42	-68	223	-310	-111	8	214	77	-----	-----	-----	-----	-----	-----	-----	-----	0.959	0.038	1	Yes	0.921	0.058	0.98	Yes	1.00	**2.46**
		U_{13} - L_{13}		-----	-462.36	-105	115	-265	288	-113	-92	-31	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.128	0.91	Yes	0.713	0.284	1.00	Yes	1.00	**1.28**
		U_{14} - L_{14}		-----	-544.63	-62	58	-216	245	-162	-134	-269	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.132	0.96	Yes	0.781	0.214	1.00	Yes	1.00	**1.76**
		U_{15} - L_{15}		-----	-454.33	-41	48	-174	209	-163	-74	14	40	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.108	0.94	Yes	0.784	0.213	1.00	Yes	1.00	**1.72**
		U_{16} - L_{16}		-----	-306.60	-273	266	-48	66	-139	-28	-233	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.151	0.83	Yes	0.649	0.349	1.00	Yes	1.00	**2.66**
		U_{17} - L_{17}		291.52	-240.61	-291	302	71	-108	-111	-23	-288	-225	0.524	0.470	1.00	Yes	0.288	0.258	0.55	Yes	0.527	0.176	0.71	Yes	0.509	0.386	0.90	Yes	1.00	**3.22**
		U_{18} - L_{18}		117.62	-338.47	-101	111	164	-219	376	64	324	18	0.212	0.389	0.61	Yes	0.116	0.214	0.34	Yes	0.740	0.208	0.95	Yes	0.716	0.280	1.00	Yes	1.00	**2.96**
		U_{19} - L_{19}		-----	-340.16	-32	20	196	-219	-167	-88	147	20	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.130	0.88	Yes	0.720	0.280	1.00	Yes	1.00	**1.99**
		U_{20} - L_{20}		-----	-371.27	49	-57	116	-162	-173	-56	176	57	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.133	0.97	Yes	0.786	0.208	1.00	Yes	1.00	**0.77**

Axial AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	663.79	-----	-51	35	6	-9	-203	-264	-46	-19	0.871	0.126	1.00	Yes	0.526	0.070	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.25**
		$U_1 - L_2$	463.62	-80.89	-94	9	14	-13	-44	-140	16	11	0.834	0.161	1.00	Yes	0.459	0.089	0.55	Yes	0.186	0.120	0.31	Yes	0.171	0.121	0.30	Yes					1.00	**2.36**
		$U_2 - L_3$	362.70	-280.64	-73	-2	-37	-62	-178	-299	-787	-265	0.652	0.322	0.98	Yes	0.359	0.177	0.54	Yes	0.646	0.352	1	Yes	0.594	0.094	0.69	Yes					1.00	**2.71**
		$U_3 - L_4$	-----	-372.47	-20	-32	-1	-53	-233	-185	-209	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.143	1	Yes	0.788	0.068	0.86	Yes					1.00	**1.53**
		$U_4 - L_4$	581.90	-----	-97	22	-50	-11	-69	-181	-130	-114	0.853	0.140	1.00	Yes	0.469	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.11**
		$U_4 - L_5$	721.04	-----	-219	204	-68	45	42	-108	118	52	0.852	0.146	1.00	Yes	0.469	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.44**
		$U_5 - L_6$	602.39	-----	-275	211	-117	100	340	156	673	285	0.712	0.279	1.00	Yes	0.392	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.56**
		$U_6 - L_7$	657.66	-----	-111	292	-8	115	303	154	242	174	0.778	0.221	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.67**
		$U_8 - L_9$	1005.57	-----	-108	356	4	136	257	211	81	103	0.804	0.192	1.00	Yes	0.498	0.107	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.37**
		$U_9 - L_{10}$	1033.75	-----	-325	226	-77	92	208	156	85	104	0.826	0.172	1.00	Yes	0.512	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.50**
		$U_{10} - L_{11}$	1018.12	-----	-262	162	-149	44	-123	-118	68	-79	0.860	0.137	1.00	Yes	0.532	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.71**
		$U_{11} - L_{12}$	840.12	-----	-253	101	-85	-17	-290	-304	-251	-199	0.831	0.163	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.33**
		$U_{12} - L_{13}$	619.78	-----	-191	129	-93	14	-347	-316	-356	-284	0.755	0.236	1.00	Yes	0.475	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.87**
		$U_{13} - L_{14}$	441.36	-----	-91	33	-35	-20	-292	-296	-191	-300	0.794	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.62**
		$U_{15} - L_{14}$	201.33	-340.02	-46	3	21	-83	-193	-308	-191	-283	0.362	0.195	0.56	Yes	0.199	0.107	0.31	Yes	0.797	0.198	1	Yes	0.719	0.105	0.83	Yes					1.00	**1.92**
		$U_{16} - L_{15}$	411.79	-240.90	-133	73	-6	-52	-243	-255	-306	-171	0.741	0.259	1.00	Yes	0.407	0.142	0.55	Yes	0.571	0.217	0.79	Yes	0.510	0.170	0.69	Yes					1.00	**2.35**
		$U_{17} - L_{16}$	532.50	-----	-151	88	-45	-10	-151	-228	-263	-145	0.781	0.214	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.86**
		$U_{18} - L_{17}$	641.41	-----	-347	245	-158	71	-198	-184	-216	-85	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.12**
		$U_{19} - L_{18}$	724.06	-----	-365	247	-105	68	-150	-140	47	6	0.784	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.04**
		$U_{20} - L_{19}$	714.87	-----	-349	297	-127	106	-145	-263	1	34	0.774	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.96**
	Structure 2	$U_0 - L_1$	808.26	-----	-314	336	-64	74	-184	-237	-121	50	0.800	0.191	1.00	Yes	0.440	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.31**
		$U_1 - L_2$	787.97	-----	-412	306	-86	58	-112	-166	43	11	0.780	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.31**
		$U_2 - L_3$	648.25	-----	-330	254	-65	49	-206	-199	-76	-177	0.766	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.06**
		$U_3 - L_4$	573.43	-----	-176	123	-44	7	-313	-282	-290	-206	0.764	0.226	1.00	Yes	0.420	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.88**
		$U_4 - L_5$	412.69	-----	-123	84	-20	-25	-335	-237	-296	-220	0.742	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.00**
		$U_5 - L_6$	402.73	-314.63	-114	67	86	-117	-414	-300	-366	-246	0.724	0.270	1.00	Yes	0.398	0.148	0.55	Yes	0.743	0.250	1	Yes	0.666	0.150	0.82	Yes					1.00	**2.79**
		$U_6 - L_7$	-----	-374.20	-52	-9	63	-98	-326	-277	-299	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.198	1	Yes	0.717	0.112	0.83	Yes					1.00	**1.77**
		$U_8 - L_7$	590.69	-----	-201	111	-47	-20	-138	-259	-280	-221	0.753	0.237	1.00	Yes	0.474	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.30**
		$U_8 - L_9$	723.45	-----	-345	225	-117	16	-140	-226	-123	-155	0.784	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.24**
		$U_{10} - L_9$	821.92	-----	-334	228	-143	50	-62	-170	-50	-84	0.813	0.181	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.43**
		$U_{11} - L_{10}$	904.29	-----	-375	275	-179	103	54	-52	-101	2	0.824	0.173	1.00	Yes	0.453	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.35**
		$U_{12} - L_{11}$	820.59	-----	-351	311	-150	146	167	34	728	149	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.87**
		$U_{13} - L_{12}$	753.78	-----	-446	378	-180	173	267	124	267	150	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.73**
		$U_{14} - L_{13}$	725.03	-----	-265	413	-30	217	269	155	598	140	0.717	0.281	1.00	Yes	0.395	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.86**
		$U_{14} - L_{15}$	639.85	-----	-217	365	-1	102	161	93	49	36	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.13**
		$U_{15} - L_{16}$	641.00	-----	-373	334	-99	104	121	89	50	67	0.758	0.233	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.82**
		$U_{16} - L_{17}$	747.82	-----	-358	353	-73	98	9	-7	9	5	0.810	0.185	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.18**
		$U_{17} - L_{18}$	677.66	-----	-310	283	-64	81	-101	-58	-58	-32	0.801	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.14**
		$U_{18} - L_{19}$	682.12	-----	-282	248	-48	41	-150	-148	-138	-96	0.806	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.14**
		$U_{19} - L_{20}$	604.33	-----	-194	164	-17	3	-244	-165	-166	-129	0.771	0.224	1.00	Yes	0.424	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.16**
		$U_{20} - L_{21}$	432.44	-----	-121	98	7	-20	-224	-145	-207	-147	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.91**
		$U_{21} - L_{22}$	432.62	-220.51	-112	49	33	-63	-266	-242	-263	-228	0.778	0.220	1.00	Yes	0.428	0.121	0.55	Yes	0.521	0.183	0.71	Yes	0.467	0.143	0.61	Yes					1.00	**2.48**
		$U_{23} - L_{22}$	350.44	-338.56	-111	31	13	-66	-106	-201	-231	-183	0.630	0.209	0.84	Yes	0.347	0.115	0.47	Yes	0.806	0.188	1	Yes	0.716	0.142	0.86	Yes					1.00	**2.54**
		$U_{24} - L_{23}$	438.10	-----	-127	91	6	-33	-66	-154	-67	-84	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.26**
		$U_{25} - L_{24}$	606.47	-----	-216	167	-40	-13	-15	-119	-34	-66	0.773	0.217	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.62**
		$U_{26} - L_{25}$	678.82	-----	-306	244	-95	42	59	-25	-93	13	0.803	0.190	1.00	Yes	0.441	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.29**
		$U_{27} - L_{26}$	671.27	-----	-310	271	-107	89	146	8	131	69	0.794	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.05**
		$U_{28} - L_{27}$	722.06	-----	-359	353	-136	138	173	70	165	124	0.782	0.212	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.16**
		$U_{29} - L_{28}$	625.51	-----	-372	327	-125	119	251	118	217	110	0.740	0.256	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.69**
		$U_{30} - L_{29}$	590.48	-----	-200	333	-25	170	212	80	610	116	0.698	0.299	1.00	Yes	0.384	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.73**
		$U_{30} - L_{31}$	775.38	-----	-285	445	-24	133	122	68	62	39	0.767	0.225	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.24**
		$U_{31} - L_{32}$	778.73	-----	-458	386	-129	130	56	39	36	47	0.770	0.221	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.03**
		$U_{32} - L_{33}$	907.77	-----	-365	344	-105	127	-118	-98	31	5	0.827	0.171	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.44**
		$U_{33} - L_{34}$	895.46	-----	-348	271	-111	82	-248	-220	-211	-138	0.816	0.182	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.37**
		$U_{34} - L_{35}$	813.55	-----	-296	217	-89	50	-324	-261	-218	-215	0.805	0.186	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.21**
		$U_{35} - L_{36}$	705.27	-----	-321	230	-90	20	-387	-277	-376	-268	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.11**
		$U_{36} - L_{37}$	598.45	-----	-185	130	-26	-6	-306	-334	-320	-304	0.763	0.233	1.00	Yes	0.480	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.02**
		$U_{38} - L_{37}$	-----	-393.77	-17	-14	44	-85	-112	-225	-198	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.145	1	Yes	0.754	0.096	0.86	Yes					1.00	**1.42**
		$U_{39} - L_{38}$	264.79	-335.20	-76	48	48	-100	-161	-223	-277	-181	0.476	0.208	0.69	Yes	0.262	0.114	0.38	Yes	0.799	0.195	1	Yes	0.709	0.127	0.84	Yes					1.00	**2.26**
		$U_{40} - L_{39}$	432.12	-254.51	-126	97	13	-61	-140	-202	-117	-128	0.777	0.219	1.00	Yes	0.427	0.121	0.55	Yes	0.609	0.150	0.76	Yes	0.539	0.161	0.70	Yes					1.00	**2.66**
		$U_{41} - L_{40}$	578.73	-----	-189	119	-55	-7	-98	-141	-228	-70	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.17**
		$U_{42} - L_{41}$	655.13	-----	-351	253	-74	50	-129	-128	-1	-4	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.14**
		$U_{43} - L_{42}$	781.87	-----	-407	301	-94	64	-223	-172	-6	-30	0.774	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.34**
		$U_{44} - L_{43}$	794.92	-----	-373	358	-137	121	-141	-220	35	4	0.786	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.23**
	Structure 3	$U_0 - L_1$	707.15	-----	-340	291	-69	71	-159	-314	-131	45	0.766	0.226	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.05**
		$U_1 - L_2$	721.05	-----	-363	253	-91	57	-61	-149	37	13	0.781	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.11**
		$U_2 - L_3$	653.00	-----	-325	238	-78	48	-226	-228	-74	-167	0.772	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.07**
		$U_3 - L_4$	528.83	-----	-142	99	-52	-1	-324	-315	-229	-239	0.775	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.92**
		$U_4 - L_5$	405.88	-126.71	-120	79	7	-39	-376	-298	-317	-222	0.730	0.263	1.00	Yes	0.401	0.144	0.55	Yes	0.300	0.197	0.5	Yes	0.268	0.154	0.43	Yes					1.00	**2.01**
		$U_5 - L_6$	310.12	-309.72	-78	-1	2	-84	-427	-328	-392	-334	0.558	0.231	0.79	Yes	0.307	0.127	0.44	Yes	0.726	0.268	1	Yes	0.655	0.108	0.77	Yes					1.00	**2.16**
		$U_7 - L_6$	450.80	-----	-80	47	-10	-34	-107	-279	-113	-252	0.811	0.183	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.02**
		$U_8 - L_7$	639.63	-----	-191	163	-67	-16	-166	-238	-171	-179	0.780	0.213	1.00	Yes	0.491	0.120	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.37**
		$U_8 - L_9$	838.42	-----	-286	89	-139	-41	-52	-190	-231	-147	0.829	0.167	1.00	Yes	0.456	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.56**
		$U_{10} - L_9$	922.55	-----	-257	141	-96	45	116	-45	734	145	0.779	0.215	1.00	Yes	0.482	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.45**
		$U_{11} - L_{10}$	923.51	-----	-312	225	-128	90	381	225	886	476	0.738	0.252	1.00	Yes	0.457	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.28**
		$U_{12} - L_{11}$	987.97	-----	-111	351	-9	143	396	280	272	206	0.790	0.207	1.00	Yes	0.489	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.34**
		$U_{12} - L_{13}$	666.13	-----	-114	298	12	114	200	167	93	95	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.91**
		$U_{13} - L_{14}$	677.76	-----	-291	231	-69	76	146	98	92	116	0.801	0.192	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.91**
		$U_{14} - L_{15}$	727.67	-----	-195	194	-21	56	-126	-109	89	36	0.860	0.134	1.00	Yes	0.473	0.074	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.24**
		$U_{15} - L_{16}$	580.48	-----	-92	37	-55	-10	-221	-203	-66	-109	0.851	0.145	1.00	Yes	0.468	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.15**
		$U_{17} - L_{16}$	-----	-401.78	-7	-16	7	-45	-29	-136	-30	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.919	0.077	1	Yes	0.850	0.058	0.91	Yes					1.00	**1.57**
		$U_{18} - L_{17}$	274.33	-352.10	-75	-16	-21	-60	-116	-199	-276	-71	0.493	0.176	0.67	Yes	0.271	0.097	0.37	Yes	0.810	0.185	1	Yes	0.745	0.096	0.85	Yes					1.00	**2.43**
		$U_{19} - L_{18}$	418.43	-99.75	-86	1	-22	-16	-87	-182	447	19	0.753	0.240	1.00	Yes	0.414	0.132	0.55	Yes	0.229	0.176	0.41	Yes	0.211	0.110	0.33	Yes					1.00	**2.21**
		$U_{20} - L_{19}$	628.33	-----	-91	56	-21	2	-249	-202	31	-7	0.824	0.170	1.00	Yes	0.498	0.093	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.27**

Axial AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression												Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield											
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass								
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																								
South Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-581.62	-126	87	155	-901	-68	135	299	-842	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.200	1	Yes	0.784	0.214	1.00	Yes	1.00	**3.49**
		$U_1 - U_2$	-----	-549.53	-101	100	-386	-631	-158	130	121	-444	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1	Yes	0.741	0.150	0.90	Yes	1.00	**1.92**
		$U_2 - U_3$	175.08	-567.97	-93	303	-608	-348	-117	121	74	-540	0.201	0.236	0.44	Yes	0.135	0.155	0.30	Yes	0.773	0.220	1	Yes	0.766	0.145	0.92	Yes	1.00	**2.09**
		$U_3 - U_4$	480.88	-570.49	142	404	-668	-391	-222	-10	228	-402	0.551	0.227	0.78	Yes	0.378	0.155	0.54	Yes	0.776	0.219	1	Yes	0.769	0.159	0.93	Yes	1.00	**2.96**
		$U_4 - U_5$	493.34	-573.42	197	399	-728	-155	-90	-16	-443	-100	0.565	0.248	0.82	Yes	0.388	0.170	0.56	Yes	0.780	0.215	1	Yes	0.773	0.173	0.95	Yes	1.00	**3.01**
		$U_5 - U_6$	679.28	-----	274	490	-621	355	98	132	-296	-423	0.779	0.219	1.00	Yes	0.525	0.144	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		$U_6 - U_7$	900.36	-----	420	224	-151	-37	319	287	-321	199	0.861	0.133	1.00	Yes	0.602	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_7 - U_8$	1049.94	-----	16	1270	-176	973	528	700	182	356	0.727	0.264	1.00	Yes	0.507	0.180	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		$U_8 - U_9$	854.19	-----	1100	-124	1373	-860	239	496	479	-544	0.700	0.297	1.00	Yes	0.479	0.202	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_9 - U_{10}$	681.92	-----	257	280	134	-761	-10	321	355	-541	0.740	0.257	1.00	Yes	0.501	0.173	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{10} - U_{11}$	-----	-633.74	261	-162	99	-824	45	113	246	-511	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.167	0.99	Yes	0.809	0.185	1.00	Yes	1.00	**2.18**
		$U_{11} - U_{12}$	-----	-912.36	157	-206	27	-802	12	104	-6	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.129	1	Yes	0.856	0.133	0.99	Yes	1.00	**1.55**
		$U_{12} - U_{13}$	-----	-1275.51	-44	-266	-337	-743	81	9	266	-476	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.137	1	Yes	0.852	0.102	0.96	Yes	1.00	**1.81**
		$U_{13} - U_{14}$	-----	-1394.11	-194	-504	-599	-1407	-43	-8	50	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.799	0.155	0.96	Yes	1.00	**1.66**
		$U_{14} - U_{15}$	-----	-1370.88	-407	-292	-1336	-604	41	-277	-123	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.199	1	Yes	0.786	0.147	0.94	Yes	1.00	**1.60**
		$U_{15} - U_{16}$	-----	-1444.73	-197	-467	-767	-840	-114	-428	-333	-231	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.155	1	Yes	0.828	0.093	0.93	Yes	1.00	**1.86**
		$U_{16} - U_{17}$	-----	-1413.88	-412	-226	-1140	-469	-285	-372	-131	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.176	1	Yes	0.811	0.126	0.94	Yes	1.00	**2.19**
		$U_{17} - U_{18}$	-----	-1085.63	-252	-61	-798	31	-116	71	-151	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.132	1	Yes	0.849	0.130	0.98	Yes	1.00	**2.21**
		$U_{18} - U_{19}$	-----	-752.48	-239	10	-677	100	362	-139	69	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.139	1	Yes	0.847	0.136	0.99	Yes	1.00	**2.47**
		$U_{19} - U_{20}$	-----	-669.65	-196	-109	-1220	443	-32	-117	-102	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.208	0.97	Yes	0.753	0.245	1.00	Yes	1.00	**7.17**
	Structure 2	$U_0 - U_1$	-----	-589.82	692	-451	1010	-1741	340	-69	307	-723	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.189	0.9	Yes	0.697	0.295	1.00	Yes	1.00	**4.02**
		$U_1 - U_2$	-----	-842.54	-150	-314	-258	-1008	-23	26	183	-334	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.179	1	Yes	0.813	0.153	0.97	Yes	1.00	**2.17**
		$U_2 - U_3$	-----	-1147.59	-133	-428	-80	-1336	-34	-60	-180	-634	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.172	1	Yes	0.814	0.136	0.96	Yes	1.00	**1.90**
		$U_3 - U_4$	-----	-1371.69	-532	-542	-854	-1521	-116	-38	-233	-448	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.204	1	Yes	0.781	0.136	0.92	Yes	1.00	**1.67**
		$U_4 - U_5$	-----	-1508.35	-582	-553	-1427	-1612	-123	-86	70	-674	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.774	0.134	0.91	Yes	1.00	**1.77**
		$U_5 - U_6$	-----	-1545.23	-577	-15	-1520	-1134	-195	-51	-204	-600	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1	Yes	0.793	0.126	0.92	Yes	1.00	**1.85**
		$U_6 - U_7$	-----	-1411.81	-306	-198	-1328	-1201	-172	-91	13	-372	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.189	1	Yes	0.804	0.118	0.93	Yes	1.00	**2.01**
		$U_7 - U_8$	-----	-1413.61	-336	-188	-1354	-944	-80	-178	-343	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.189	1	Yes	0.805	0.121	0.93	Yes	1.00	**2.03**
		$U_8 - U_9$	-----	-1190.77	-355	217	-1382	-303	-13	-190	-449	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.186	1	Yes	0.808	0.147	0.96	Yes	1.00	**2.21**
		$U_9 - U_{10}$	-----	-903.06	-85	538	-1519	15	-121	-226	-600	-620	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1	Yes	0.779	0.185	0.97	Yes	1.00	**2.76**
		$U_{10} - U_{11}$	827.93	-610.49	335	612	-1259	-169	-171	-92	-975	-249	0.699	0.296	1.00	Yes	0.476	0.195	0.68	Yes	0.610	0.251	0.87	Yes	0.607	0.178	0.79	Yes	1.00	**3.96**
		$U_{11} - U_{12}$	952.04	-----	207	659	-954	448	36	43	-465	-442	0.804	0.191	1.00	Yes	0.540	0.128	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		$U_{12} - U_{13}$	1322.84	-----	479	81	-24	-126	347	444	-91	20	0.893	0.103	1.00	Yes	0.637	0.071	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{13} - U_{14}$	1364.14	-----	-167	2740	-445	2019	644	992	288	582	0.671	0.321	1.00	Yes	0.475	0.212	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.21**
		$U_{14} - U_{15}$	1441.50	-----	2562	6	1926	-242	540	731	517	410	0.709	0.287	1.00	Yes	0.502	0.189	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{15} - U_{16}$	1362.70	-----	151	428	-830	-984	179	431	705	-376	0.824	0.171	1.00	Yes	0.586	0.117	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{16} - U_{17}$	1074.19	-----	676	223	76	-974	-32	324	507	-818	0.792	0.208	1.00	Yes	0.527	0.137	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{17} - U_{18}$	751.49	-----	487	259	18	-999	-59	287	240	-493	0.754	0.242	1.00	Yes	0.502	0.160	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_{18} - U_{19}$	579.91	-703.49	592	163	-186	-968	3	160	557	-752	0.582	0.274	0.86	Yes	0.382	0.176	0.56	Yes	0.836	0.141	0.98	Yes	0.831	0.164	1.00	Yes	1.00	**3.36**
		$U_{19} - U_{20}$	236.34	-736.61	269	104	-467	-932	-55	132	330	-385	0.222	0.201	0.43	Yes	0.147	0.132	0.28	Yes	0.818	0.179	1	Yes	0.813	0.149	0.97	Yes	1.00	**2.33**
		$U_{20} - U_{21}$	-----	-860.20	112	-129	-655	-826	-9	16	97	-607	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1	Yes	0.785	0.120	0.91	Yes	1.00	**2.28**
		$U_{21} - U_{22}$	-----	-839.11	-110	-77	-821	-987	-181	-101	113	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.225	1	Yes	0.766	0.143	0.91	Yes	1.00	**2.12**
		$U_{22} - U_{23}$	-----	-845.27	-124	-127	-1012	-706	-123	-169	-251	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.222	1	Yes	0.771	0.147	0.92	Yes	1.00	**2.15**
		$U_{23} - U_{24}$	-----	-864.74	-136	177	-907	-344	-1	-82	-475	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1	Yes	0.789	0.131	0.93	Yes	1.00	**2.54**
		$U_{24} - U_{25}$	312.71	-718.76	183	326	-1019	-122	-9	-78	-406	-246	0.293	0.218	0.52	Yes	0.194	0.143	0.34	Yes	0.798	0.199	1	Yes	0.793	0.163	0.96	Yes	1.00	**2.75**
		$U_{25} - U_{26}$	676.19	-615.95	208	650	-1076	145	19	-38	-666	-249	0.679	0.280	0.96	Yes	0.445	0.179	0.63	Yes	0.732	0.262	1	Yes	0.727	0.183	0.92	Yes	1.00	**4.01**
		$U_{26} - U_{27}$	761.99	-----	284	472	-806	277	-36	17	-643	-178	0.765	0.231	1.00	Yes	0.509	0.153	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{27} - U_{28}$	1112.95	-----	222	708	-926	429	256	282	-526	-195	0.820	0.172	1.00	Yes	0.546	0.113	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_{28} - U_{29}$	1454.58	-----	471	78	66	-132	646	710	260	293	0.879	0.114	1.00	Yes	0.626	0.078	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		$U_{29} - U_{30}$	1327.51	-----	-168	2912	-209	1885	804	1070	516	707	0.653	0.343	1.00	Yes	0.462	0.226	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_{30} - U_{31}$	1442.96	-----	2550	-156	2048	-529	626	709	673	370	0.710	0.284	1.00	Yes	0.502	0.187	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{31} - U_{32}$	1235.98	-----	96	375	-760	-814	203	396	599	-577	0.835	0.160	1.00	Yes	0.595	0.109	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{32} - U_{33}$	885.62	-----	607	165	230	-1020	5	234	366	-817	0.748	0.244	1.00	Yes	0.502	0.162	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		$U_{33} - U_{34}$	607.25	-798.68	475	157	13	-1374	-26	215	-92	-539	0.513	0.260	0.78	Yes	0.349	0.169	0.52	Yes	0.799	0.192	1	Yes	0.794	0.194	0.99	Yes	1.00	**3.36**
		$U_{34} - U_{35}$	-----	-971.91	382	-196	-66	-1191	43	41	156	-525	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.149	1	Yes	0.839	0.145	0.99	Yes	1.00	**2.21**
		$U_{35} - U_{36}$	-----	-1243.69	101	-462	-393	-1242	-18	90	237	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.148	1	Yes	0.844	0.132	0.98	Yes	1.00	**1.88**
		$U_{36} - U_{37}$	-----	-1439.07	-288	-311	-1065	-1226	-22	-120	322	-330	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.166	1	Yes	0.819	0.109	0.93	Yes	1.00	**1.80**
		$U_{37} - U_{38}$	-----	-1425.98	-200	-425	-1112	-1215	-95	-198	-289	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.175	1	Yes	0.812	0.108	0.93	Yes	1.00	**1.76**
		$U_{38} - U_{39}$	-----	-1594.79	-161	-632	-1170	-1292	8	-210	-407	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.172	1	Yes	0.819	0.107	0.93	Yes	1.00	**1.85**
		$U_{39} - U_{40}$	-----	-1546.72	-607	-565	-1702	-922	15	-81	-248	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1	Yes	0.794	0.141	0.94	Yes	1.00	**1.87**
		$U_{40} - U_{41}$	-----	-1441.87	-530	-519	-1408	-821	173	-151	152	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.170	1	Yes	0.821	0.125	0.95	Yes	1.00	**2.02**
		$U_{41} - U_{42}$	-----	-1208.55	-421	-127	-1234	-27	58	-28	-7	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.128	1	Yes	0.858	0.126	0.99	Yes	1.00	**2.43**
		$U_{42} - U_{43}$	-----	-873.05	-312	-44	-928	14	168	-214	-113	-337	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.146	1	Yes	0.843	0.141	0.99	Yes	1.00	**2.85**
		$U_{43} - U_{44}$	-----	-641.97	-168	-230	-1397	557	-124	-129	-220	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.218	0.99	Yes	0.758	0.237	1.00	Yes	1.00	**6.05**
	Structure 3	$U_0 - U_1$	-----	-589.54	631	-353	1278	-1643	275	-42	199	-998	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.216	0.89	Yes	0.663	0.331	1.00	Yes	1.00	**4.51**
		$U_1 - U_2$	-----	-719.32	-83	-226	-52	-747	-22	7	31	-337	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.177	1	Yes	0.809	0.150	0.96	Yes	1.00	**1.86**
		$U_2 - U_3$	-----	-1062.73	-56	-237	-15	-710	-34	-55	101	-678	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.151	1	Yes	0.832	0.115	0.95	Yes	1.00	**1.92**
		$U_3 - U_4$	-----	-1402.11	-221	-365	-575	-1176	-110	-33	90	-522	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1	Yes	0.804	0.130	0.94	Yes	1.00	**2.07**
		$U_4 - U_5$	-----	-1420.17	-441	-130	-1028	-626	-93	-55	219	-679	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.172	1	Yes	0.814	0.113	0.93	Yes	1.00	**1.86**
		$U_5 - U_6$	-----	-1366.52	-254	-375	-805	-1292	-186	-149	31	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.783	0.143	0.93	Yes	1.00	**1.81**
		$U_6 - U_7$	-----	-1366.23	-497	-152	-1432	-473	-119	-298	-262	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1	Yes	0.783	0.158	0.95	Yes	1.00	**1.82**
		$U_7 - U_8$	-----	-1231.21	-234	37	-826	-162	-108	-317	-445	-537	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.165	1	Yes	0.822	0.114	0.94	Yes	1.00	**2.08**
		$U_8 - U_9$	-----	-887.17	-126	262	-787	97	-215	-186	-383	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.152	1	Yes	0.832	0.131	0.97	Yes	1.00	**2.12**
		$U_9 - U_{10}$	-----	-610.83	-52	383	-974	225	5	2	-271	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.192	0.98	Yes	0.779	0.218	1.00	Yes	1.00	**3.30**
		$U_{10} - U_{11}$	718.54	-----	315	256	-519	161	132	151	-623	-189	0.779	0.216	1.00	Yes	0.528	0.145	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{11} - U_{12}$	877.03	-----	-184	1266	-677	1284	184	535	-225	400	0.719	0.281	1.00	Yes	0.492	0.191	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_{12} - U_{13}$	1046.76	-----	1201	23	832	-135	52	518	694	879	0.725	0.271	1.00	Yes	0.506	0.186	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{13} - U_{14}$	846.24	-----	223	363	-240	-405	-102	380	705	-476	0.809	0.183	1.00	Yes	0.566	0.126	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_{14} - U_{15}$	603.86	-----	440	211	38	-684	-57	246	451	-830	0.692	0.303	1.00	Yes	0.467	0.200	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_{15} - U_{16}$	302.65	-596.76	269	121	-228	-689	-75	200	283	36	0.347	0.211	0.56	Yes	0.238	0.145	0.39	Yes	0.812	0.180	1	Yes	0.805	0.164	0.97	Yes	1.00	**2.42**
		$U_{16} - U_{17}$	301.02	-608.06	322	36	-476	-552	179	-69	80	74	0.345	0.161	0.51	Yes	0.237	0.111	0.35	Yes	0.827	0.163	1	Yes	0.820	0.131	0.96	Yes	1.00	**2.45**
		$U_{17} - U_{18}$	-----	-607.21	214	-175	-424	-517	70	35	-85	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.170	1	Yes	0.819	0.123	0.95	Yes	1.00	**2.03**
		$U_{18} - U_{19}$	-----	-599.91	14	-70	-684	-161	208	-197	4	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.183	1	Yes	0.809	0.163	0.98	Yes	1.00	**2.24**
		$U_{19} - U_{20}$	-----	-609.76	114	-305	-632	-37	-149	-111	-31	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.170	1	Yes	0.822	0.150	0.98	Yes	1.00	**4.75**

Axial AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1	332.14	-260.93	217	-252	727	-814	266	977	-302	-1111	0.508	0.483	1.00	Yes	0.299	0.289	0.59	Yes	0.474	0.344	0.82	Yes	0.470	0.244	0.72	Yes	1.00	**11.99**
		L_1 - L_2	377.07	-----	-49	-704	0	-12	-985	315	326	-147	0.577	0.423	1.00	Yes	0.352	0.274	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		L_2 - L_3	658.62	-----	-670	-603	-39	66	469	-435	-183	124	0.758	0.237	1.00	Yes	0.438	0.141	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		L_3 - L_4	622.49	-238.58	-588	-388	1	294	-858	16	284	-233	0.716	0.280	1.00	Yes	0.425	0.175	0.61	Yes	0.326	0.260	0.59	Yes	0.323	0.142	0.47	Yes	1.00	**2.26**
		L_4 - L_5	-----	-557.83	-551	288	102	466	181	-177	-73	202	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.134	1	Yes	0.850	0.146	1.00	Yes	1.00	**1.85**
		L_5 - L_6	-----	-747.74	-226	317	125	590	-111	-89	163	-236	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.127	1	Yes	0.863	0.131	1.00	Yes	1.00	**1.78**
		L_6 - L_7	-----	-1170.58	-101	116	239	-20	-113	266	-200	406	-----	-----	-----	-----	-----	-----	-----	-----	0.953	0.042	1	Yes	0.942	0.038	0.98	Yes	1.00	**2.78**
		L_7 - L_8	-----	-1250.55	-27	643	-53	1235	396	207	448	513	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.197	1	Yes	0.792	0.164	0.96	Yes	1.00	**2.42**
		L_8 - L_9	-----	-1164.50	654	-29	1114	-64	212	415	437	416	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.250	1	Yes	0.738	0.147	0.89	Yes	1.00	**1.80**
		L_9 - L_{10}	-----	-1053.76	377	-235	586	-424	621	-19	336	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.139	1	Yes	0.848	0.092	0.95	Yes	1.00	**4.17**
		L_{10} - L_{11}	-----	-551.74	-16	-595	504	-50	198	-528	-285	43	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.131	0.98	Yes	0.841	0.157	1.00	Yes	1.00	**3.53**
		L_{11} - L_{12}	501.42	-----	73	-609	343	-244	-1054	226	128	-85	0.649	0.345	1.00	Yes	0.390	0.218	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		L_{12} - L_{13}	1018.90	-----	-381	-623	58	-155	-163	-664	-159	121	0.804	0.188	1.00	Yes	0.514	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		L_{13} - L_{14}	1271.67	-----	-215	-1248	187	-525	-924	203	146	21	0.748	0.249	1.00	Yes	0.484	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		L_{14} - L_{15}	1560.62	-----	-1580	-602	-566	-152	-120	-636	-153	162	0.762	0.235	1.00	Yes	0.495	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		L_{15} - L_{16}	1637.73	-----	-1147	-1206	-304	-370	-727	121	107	-139	0.800	0.196	1.00	Yes	0.514	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		L_{16} - L_{17}	1222.78	-----	-1297	-27	-420	54	185	-387	-127	170	0.773	0.225	1.00	Yes	0.502	0.139	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.11**
		L_{17} - L_{18}	1013.60	-----	-394	-31	-224	35	-93	-303	115	-89	0.883	0.115	1.00	Yes	0.565	0.070	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		L_{18} - L_{19}	515.77	-----	-486	238	-266	229	-129	303	-162	123	0.789	0.209	1.00	Yes	0.534	0.133	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		L_{19} - L_{20}	456.30	-223.40	-375	110	-731	475	380	85	228	51	0.698	0.298	1.00	Yes	0.426	0.198	0.63	Yes	0.406	0.278	0.69	Yes	0.402	0.219	0.63	Yes	1.00	**4.95**
	Structure 2	L_0 - L_1	-----	-504.08	164	-458	488	-1332	110	379	-91	-316	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.229	0.96	Yes	0.720	0.271	1.00	Yes	1.00	**11.29**
		L_1 - L_2	465.77	-----	331	-1243	242	-394	-1072	546	117	43	0.566	0.429	1.00	Yes	0.336	0.269	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		L_2 - L_3	982.85	-----	-159	-1030	-46	-269	146	-635	-74	155	0.775	0.216	1.00	Yes	0.508	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**
		L_3 - L_4	1279.88	-----	-134	-1526	-12	-506	-824	389	181	-4	0.752	0.244	1.00	Yes	0.506	0.154	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		L_4 - L_5	1728.92	-----	-1290	-1512	-437	-396	266	-646	-81	163	0.806	0.186	1.00	Yes	0.534	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.67**
		L_5 - L_6	1802.78	-----	-1166	-1810	-220	-493	-931	95	191	-91	0.774	0.219	1.00	Yes	0.519	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		L_6 - L_7	1837.21	-----	-2239	-1058	-569	-208	285	-314	-161	219	0.778	0.216	1.00	Yes	0.517	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		L_7 - L_8	1344.47	-----	-1526	-519	-299	389	-731	254	219	-143	0.771	0.228	1.00	Yes	0.506	0.137	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		L_8 - L_9	1059.12	-----	-1283	243	-100	595	192	-824	-83	178	0.741	0.251	1.00	Yes	0.499	0.159	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.01**
		L_9 - L_{10}	596.29	-747.06	-1132	161	-135	827	-845	-98	142	-137	0.532	0.283	0.82	Yes	0.310	0.173	0.49	Yes	0.790	0.207	1	Yes	0.784	0.181	0.97	Yes	1.00	**3.35**
		L_{10} - L_{11}	-----	-743.26	-711	483	11	569	149	-154	-76	74	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.085	0.97	Yes	0.873	0.124	1.00	Yes	1.00	**2.08**
		L_{11} - L_{12}	-----	-1036.46	-294	680	-75	1098	158	-218	48	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.128	0.99	Yes	0.850	0.150	1.00	Yes	1.00	**2.25**
		L_{12} - L_{13}	-----	-1525.97	-294	-355	189	-722	-110	113	-331	172	-----	-----	-----	-----	-----	-----	-----	-----	0.920	0.073	1	Yes	0.913	0.072	0.99	Yes	1.00	**3.40**
		L_{13} - L_{14}	-----	-1551.68	-626	1729	-578	2471	153	90	339	487	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.174	0.97	Yes	0.781	0.216	1.00	Yes	1.00	**2.81**
		L_{14} - L_{15}	-----	-1560.84	1712	-661	2381	-678	99	142	532	340	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.174	0.97	Yes	0.785	0.208	1.00	Yes	1.00	**2.44**
		L_{15} - L_{16}	-----	-1539.20	-551	-144	-380	-136	94	-126	262	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.928	0.072	1	Yes	0.921	0.055	0.98	Yes	1.00	**3.58**
		L_{16} - L_{17}	-----	-1053.24	644	-131	1118	-53	-194	69	-385	68	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.219	1	Yes	0.767	0.138	0.91	Yes	1.00	**2.82**
		L_{17} - L_{18}	-----	-801.63	267	-627	515	165	-872	206	126	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.146	1	Yes	0.842	0.100	0.95	Yes	1.00	**2.57**
		L_{18} - L_{19}	-----	-639.82	-150	-566	717	34	352	-313	-211	60	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.117	0.98	Yes	0.853	0.138	1.00	Yes	1.00	**2.88**
		L_{19} - L_{20}	565.78	-448.05	-40	-975	498	114	-1062	504	149	-171	0.641	0.351	1.00	Yes	0.379	0.217	0.60	Yes	0.601	0.185	0.79	Yes	0.597	0.188	0.79	Yes	1.00	**3.10**
		L_{20} - L_{21}	990.98	-----	-985	-1018	411	-76	498	-382	-186	69	0.790	0.202	1.00	Yes	0.518	0.123	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		L_{21} - L_{22}	884.49	-----	-811	-1245	110	-290	-988	107	136	-103	0.705	0.288	1.00	Yes	0.472	0.184	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		L_{22} - L_{23}	852.91	-----	-1638	-586	-354	75	-140	-743	-57	207	0.680	0.319	1.00	Yes	0.455	0.202	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
		L_{23} - L_{24}	891.14	-340.02	-1240	-691	-56	465	-943	-3	163	-139	0.711	0.282	1.00	Yes	0.466	0.173	0.64	Yes	0.321	0.257	0.58	Yes	0.319	0.181	0.50	Yes	1.00	**3.65**
		L_{24} - L_{25}	565.44	-549.69	-1114	58	198	525	346	-908	-105	149	0.641	0.354	1.00	Yes	0.379	0.221	0.60	Yes	0.737	0.188	0.93	Yes	0.733	0.215	0.95	Yes	1.00	**3.79**
		L_{25} - L_{26}	-----	-640.03	-267	191	28	727	-12	-77	102	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.108	0.97	Yes	0.853	0.140	1.00	Yes	1.00	**2.85**
		L_{26} - L_{27}	-----	-868.21	-365	435	218	506	-45	20	-47	226	-----	-----	-----	-----	-----	-----	-----	-----	0.918	0.079	1	Yes	0.912	0.081	1.00	Yes	1.00	**3.09**
		L_{27} - L_{28}	-----	-1145.17	-277	695	-35	1302	-7	-204	282	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.141	0.99	Yes	0.834	0.161	1.00	Yes	1.00	**3.54**
		L_{28} - L_{29}	-----	-1561.71	-403	-488	73	-380	-190	-122	-91	399	-----	-----	-----	-----	-----	-----	-----	-----	0.942	0.056	1	Yes	0.934	0.048	0.99	Yes	1.00	**4.62**
		L_{29} - L_{30}	-----	-1550.97	-729	1996	-774	2432	-2	-30	418	378	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.164	0.96	Yes	0.780	0.212	1.00	Yes	1.00	**3.21**
		L_{30} - L_{31}	-----	-1576.09	1661	-482	2368	-658	581	447	296	234	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.181	0.99	Yes	0.793	0.207	1.00	Yes	1.00	**1.79**
		L_{31} - L_{32}	-----	-1556.82	-92	-314	-137	-330	422	-426	181	57	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.055	1	Yes	0.931	0.033	0.97	Yes	1.00	**3.07**
		L_{32} - L_{33}	-----	-1043.20	585	-318	1009	-71	-585	77	-329	27	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.128	1	Yes	0.855	0.138	1.00	Yes	1.00	**2.57**
		L_{33} - L_{34}	-----	-758.06	443	-404	590	8	178	5	100	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.078	0.98	Yes	0.890	0.103	1.00	Yes	1.00	**2.49**
		L_{34} - L_{35}	681.91	-759.25	-162	-1210	842	-98	824	-709	-218	95	0.609	0.293	0.91	Yes	0.354	0.179	0.54	Yes	0.803	0.145	0.95	Yes	0.797	0.194	1.00	Yes	1.00	**4.26**
		L_{35} - L_{36}	964.38	-----	-60	-1199	566	-171	-1647	318	165	-121	0.675	0.317	1.00	Yes	0.454	0.204	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		L_{36} - L_{37}	1357.85	-----	-698	-1582	302	-258	517	-487	-204	152	0.779	0.217	1.00	Yes	0.511	0.129	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		L_{37} - L_{38}	1718.39	-----	-1541	-2177	-336	-658	-1219	172	106	-172	0.727	0.267	1.00	Yes	0.483	0.161	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		L_{38} - L_{39}	1804.50	-----	-2232	-1006	-610	-222	297	-402	-101	172	0.774	0.223	1.00	Yes	0.520	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		L_{39} - L_{40}	1726.60	-----	-1628	-1162	-444	-326	-478	321	124	-127	0.805	0.186	1.00	Yes	0.533	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		L_{40} - L_{41}	1323.93	-----	-1558	-36	-464	28	450	-38	-45	272	0.778	0.218	1.00	Yes	0.524	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		L_{41} - L_{42}	1019.96	-----	-1092	110	-260	52	-299	65	274	94	0.804	0.190	1.00	Yes	0.527	0.114	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		L_{42} - L_{43}	545.07	-----	-1278	587	-268	213	446	346	142	353	0.662	0.333	1.00	Yes	0.394	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		L_{43} - L_{44}	-----	-459.23	-987	254	-515	163	-377	-110	1221	356	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.338	1	Yes	0.656	0.201	0.86	Yes	1.00	**18.63**
	Structure 3	L_0 - L_1	-----	-470.20	79	-277	312	-498	36	165	2	11	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.101	0.96	Yes	0.847	0.150	1.00	Yes	1.00	**3.79**
		L_1 - L_2	526.80	-----	214	-445	414	-469	226	-247	98	183	0.806	0.192	1.00	Yes	0.545	0.122	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		L_2 - L_3	884.83	-----	-86	-789	47	-229	193	-600	-21	164	0.770	0.229	1.00	Yes	0.493	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		L_3 - L_4	1160.81	-----	-90	-1294	47	-428	-851	543	143	59	0.734	0.266	1.00	Yes	0.476	0.165	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		L_4 - L_5	1631.24	-----	-1310	-1030	-372	-254	572	-349	-33	226	0.797	0.198	1.00	Yes	0.512	0.117	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		L_5 - L_6	1554.05	-----	-678	-1513	-141	-453	-771	295	251	-41	0.759	0.236	1.00	Yes	0.493	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		L_6 - L_7	1263.26	-----	-1521	17	-496	244	138	-530	-53	254	0.743	0.254	1.00	Yes	0.481	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.39**
		L_7 - L_8	1017.43	-----	-655	-263	-101	165	-652	-67	140	-169	0.803	0.192	1.00	Yes	0.514	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		L_8 - L_9	557.01	-----	-811	237	-166	435	283	-361	-108	165	0.721	0.278	1.00	Yes	0.433	0.181	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		L_9 - L_{10}	-----	-561.89	-285	223	-65	517	-69	-322	145	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.103	0.97	Yes	0.856	0.137	1.00	Yes	1.00	**2.74**
		L_{10} - L_{11}	-----	-1171.92	-328	332	32	103	-333	47	-307	160	-----	-----	-----	-----	-----	-----	-----	-----	0.954	0.027	0.99	Yes	0.943	0.052	1.00	Yes	1.00	**4.80**
		L_{11} - L_{12}	-----	-1274.06	-22	620	-59	1263	394	67	284	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.179	1	Yes	0.807	0.167	0.98	Yes	1.00	**3.23**
		L_{12} - L_{13}	-----	-1128.97	687	-11	1340	-56	-7	312	58	144	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.275	1	Yes	0.715	0.177	0.90	Yes	1.00	**2.23**
		L_{13} - L_{14}	-----	-1133.51	240	-110	71	147	554	186	346	-307	-----	-----	-----	-----	-----	-----	-----	-----	0.923	0.075	1	Yes	0.912	0.038	0.96	Yes	1.00	**3.64**
		L_{14} - L_{15}	-----	-733.04	91	-346	575	112	196	-467	-263	84	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.138	1	Yes	0.846	0.127	0.98	Yes	1.00	**2.39**
		L_{15} - L_{16}	-----	-492.70	66	-596	450	99	-1163	375	251	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.235	1	Yes	0.751	0.158	0.91	Yes	1.00	**2.27**
		L_{16} - L_{17}	692.53	-----	-640	-535	264	-66	271	-149	-171	192	0.797	0.198	1.00	Yes	0.473	0.127	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		L_{17} - L_{18}	673.49	-----	-688	-545	10	-110	-328	162	113	-113	0.775	0.219	1.00	Yes	0.448	0.130	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		L_{18} - L_{19}	459.21	-----	-740	95	-38	-16	299	336	-100	212	0.703	0.294	1.00	Yes	0.429	0.195	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		L_{19} - L_{20}	356.23	-123.86	-740	485	-124	-46	717	195	1071	291	0.545	0.452	1.00	Yes	0.321	0.270	0.60	Yes	0.225	0.365	0.6	Yes	0.223	0.222	0.45	Yes	1.00	**21.30**

Axial AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

| | | | Vehicle | Pedestrian | Axial Force | | ZZ Axis Bending | | | | YY Axis Bending | | | | Tension | | | | | | | | Compression | | | | | | | |

Axial AB Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 2.167 | Pedestrian: 1.300 / 1.625

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
			Max. Tension	Max. Comp.	Max. Pos. Mom. Start	Max. Pos. Mom. End	Max. Neg. Mom. Start	Max. Neg. Mom. End	Max. Pos. Mom. Start	Max. Pos. Mom. End	Max. Neg. Mom. Start	Max. Neg. Mom. End	Yield			Pass	Fracture			Pass	Buckle			Pass	Yield			Pass	Controlling Bi-Axial Moment & Axial Value	Rating
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total			
South Truss - Diagonals	Structure 1	$U_0 - L_1$	625.01	-----	-16	32	1	-12	-503	-536	76	149	0.820	0.172	1.00	Yes	0.495	0.095	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**
		$U_1 - L_2$	411.18	-118.52	-94	8	16	-17	-464	-472	399	221	0.740	0.256	1.00	Yes	0.407	0.141	0.55	Yes	0.272	0.212	0.49	Yes	0.251	0.120	0.38	Yes	1.00	**2.70**
		$U_2 - L_3$	-----	-270.32	-99	-23	55	-31	-356	-715	549	296	-----	-----	-----	-----	-----	-----	-----	-----	0.622	0.371	1	Yes	0.572	0.126	0.70	Yes	1.00	**4.46**
		$U_3 - L_4$	-----	-320.44	-8	-35	4	-61	176	22	-693	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.266	1	Yes	0.678	0.078	0.76	Yes	1.00	**2.08**
		$U_4 - L_4$	523.67	-----	-86	45	-43	19	-80	5	589	191	0.768	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.46**
		$U_5 - L_5$	678.27	-----	-194	200	-34	99	-459	453	276	80	0.802	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_7 - L_6$	591.74	-----	-264	233	-39	84	-261	143	-802	-111	0.700	0.296	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		$U_8 - L_7$	615.89	-----	-89	295	30	80	37	189	-559	-295	0.728	0.269	1.00	Yes	0.400	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_9 - L_9$	951.75	-----	-95	352	12	185	-204	-615	592	286	0.761	0.235	1.00	Yes	0.471	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.70**
		$U_9 - L_{10}$	979.02	-----	-300	241	-113	128	-366	-494	605	261	0.783	0.211	1.00	Yes	0.485	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		$U_{10} - L_{11}$	923.78	-----	-241	163	-82	95	-380	-822	178	-14	0.780	0.220	1.00	Yes	0.483	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		$U_{11} - L_{12}$	770.34	-----	-254	75	-95	48	-619	-786	166	-23	0.762	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_{12} - L_{13}$	576.10	-----	-197	134	-100	46	-333	-622	-484	-269	0.702	0.293	1.00	Yes	0.442	0.168	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		$U_{13} - L_{14}$	406.56	-----	-89	21	-31	-23	-160	-515	-454	-259	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_{15} - L_{14}$	224.20	-204.26	-73	-14	-11	-80	-197	-235	1126	-233	0.403	0.429	0.84	Yes	0.222	0.236	0.46	Yes	0.479	0.517	1	Yes	0.432	0.103	0.54	Yes	1.00	**3.08**
		$U_{16} - L_{15}$	381.59	-----	-138	82	-37	-10	-255	135	442	-232	0.686	0.305	1.00	Yes	0.377	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		$U_{17} - L_{16}$	526.59	-----	-148	96	-46	23	-247	-44	-305	-105	0.772	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$U_{18} - L_{17}$	620.39	-----	-330	252	-130	89	-379	-7	-400	-112	0.733	0.259	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{19} - L_{18}$	692.06	-----	-335	254	-132	95	-373	-131	-455	-203	0.750	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		$U_{20} - L_{19}$	700.21	-----	-376	323	-174	140	-148	-66	-259	-140	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.89**
	Structure 2	$U_0 - L_1$	752.26	-----	-268	313	-100	128	-688	-592	-156	6	0.744	0.248	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_1 - L_2$	735.64	-----	-389	294	-162	116	-384	-605	146	-29	0.728	0.271	1.00	Yes	0.400	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.93**
		$U_2 - L_3$	588.97	-----	-312	244	-118	88	-285	-658	126	-27	0.696	0.296	1.00	Yes	0.383	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.76**
		$U_3 - L_4$	533.76	-----	-172	110	-52	25	-450	-581	169	9	0.711	0.279	1.00	Yes	0.391	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_4 - L_5$	365.23	-----	-130	81	3	-17	-274	-599	236	36	0.657	0.340	1.00	Yes	0.361	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		$U_5 - L_6$	341.75	-254.02	-106	26	60	-114	-449	-801	-780	-185	0.615	0.378	1.00	Yes	0.338	0.208	0.55	Yes	0.600	0.292	0.9	Yes	0.537	0.146	0.69	Yes	1.00	**4.19**
		$U_6 - L_7$	-----	-368.57	-12	-41	42	-98	28	-244	-448	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.204	1	Yes	0.706	0.112	0.82	Yes	1.00	**1.86**
		$U_8 - L_7$	558.26	-----	-176	138	-98	46	-259	-8	596	-200	0.712	0.279	1.00	Yes	0.448	0.160	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		$U_8 - L_8$	723.06	-----	-333	251	-175	118	-157	-2	-225	-111	0.783	0.207	1.00	Yes	0.431	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{10} - L_9$	823.86	-----	-315	250	-128	141	-35	202	-188	106	0.815	0.177	1.00	Yes	0.448	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{11} - L_{10}$	878.25	-----	-339	305	-136	164	-222	175	-403	130	0.800	0.199	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		$U_{12} - L_{11}$	851.49	-----	-334	348	-131	174	-509	181	-551	56	0.776	0.223	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{13} - L_{12}$	730.51	-----	-409	380	-158	162	-485	52	-540	-1	0.723	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		$U_{14} - L_{13}$	731.13	-----	-249	426	-17	126	-24	52	-490	-255	0.723	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{14} - L_{15}$	598.50	-----	-196	345	-19	166	153	-394	531	241	0.708	0.292	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
		$U_{15} - L_{16}$	585.37	-----	-349	316	-171	168	78	-263	589	179	0.692	0.304	1.00	Yes	0.381	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.59**
		$U_{16} - L_{17}$	691.36	-----	-332	349	-127	154	42	-415	373	110	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		$U_{17} - L_{18}$	637.74	-----	-285	271	-111	127	-39	-427	358	88	0.754	0.239	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{18} - L_{19}$	613.77	-----	-281	242	-82	96	-247	-619	290	77	0.726	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		$U_{19} - L_{20}$	569.15	-----	-191	154	-40	45	-268	-485	294	84	0.726	0.269	1.00	Yes	0.399	0.153	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		$U_{20} - L_{21}$	384.38	-----	-120	92	-26	1	-90	-516	-330	-79	0.691	0.303	1.00	Yes	0.380	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{21} - L_{22}$	377.63	-----	-109	38	19	-82	-223	-411	-608	-63	0.679	0.315	1.00	Yes	0.374	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{23} - L_{22}$	353.91	-----	-99	44	-19	-37	-87	-57	804	-158	0.637	0.360	1.00	Yes	0.350	0.198	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{24} - L_{23}$	425.25	-----	-123	107	-18	17	-141	99	-255	-63	0.765	0.231	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_{25} - L_{24}$	596.09	-----	-195	174	-41	49	-67	112	-300	-82	0.760	0.236	1.00	Yes	0.418	0.133	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		$U_{26} - L_{25}$	669.45	-----	-283	277	-79	96	-49	179	-254	-57	0.791	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{27} - L_{26}$	647.24	-----	-289	289	-106	125	-159	253	-341	-7	0.765	0.226	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$U_{28} - L_{27}$	672.82	-----	-305	341	-94	148	-416	230	-542	40	0.729	0.264	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{29} - L_{28}$	593.50	-----	-343	333	-92	105	-359	43	-549	-41	0.702	0.294	1.00	Yes	0.386	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		$U_{30} - L_{29}$	629.37	-----	-193	363	34	68	-88	5	-230	-196	0.744	0.247	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		$U_{30} - L_{31}$	729.10	-----	-255	432	-57	224	-35	-272	499	218	0.721	0.275	1.00	Yes	0.397	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		$U_{31} - L_{32}$	738.58	-----	-424	374	-232	217	8	-303	452	120	0.731	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.65**
		$U_{32} - L_{33}$	838.22	-----	-343	331	-160	192	-182	-651	281	58	0.764	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
		$U_{33} - L_{34}$	832.56	-----	-326	264	-146	164	-556	-702	238	37	0.758	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		$U_{34} - L_{35}$	771.27	-----	-295	226	-154	122	-371	-641	9	-137	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		$U_{35} - L_{36}$	678.64	-----	-314	215	-176	103	-360	-612	-299	-205	0.735	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_{36} - L_{37}$	553.07	-----	-182	137	-79	25	-194	-622	-563	-243	0.705	0.290	1.00	Yes	0.444	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		$U_{38} - L_{37}$	-----	-345.96	-21	-33	31	-86	-280	-142	492	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.250	1	Yes	0.663	0.098	0.77	Yes	1.00	**1.92**
		$U_{39} - L_{38}$	298.11	-172.40	-92	38	13	-73	-166	-32	1177	-183	0.536	0.459	1.00	Yes	0.295	0.253	0.55	Yes	0.411	0.442	0.86	Yes	0.365	0.118	0.49	Yes	1.00	**3.24**
		$U_{40} - L_{39}$	396.36	-----	-135	91	-6	-9	-214	91	-379	-103	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.84**
		$U_{41} - L_{40}$	559.78	-----	-175	127	-56	30	-321	-98	-413	-179	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$U_{42} - L_{41}$	624.72	-----	-322	264	-120	90	-385	-73	-403	-171	0.739	0.255	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$U_{43} - L_{42}$	771.54	-----	-378	310	-134	101	-362	-79	-376	-195	0.763	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		$U_{44} - L_{43}$	800.64	-----	-371	371	-175	155	-111	42	-211	-88	0.792	0.204	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
	Structure 3	$U_0 - L_1$	699.63	-----	-242	258	-78	102	-494	-619	-147	6	0.758	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		$U_1 - L_2$	655.38	-----	-347	243	-158	108	-548	-628	164	-40	0.710	0.281	1.00	Yes	0.390	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_2 - L_3$	588.11	-----	-311	240	-123	84	-388	-690	134	-26	0.695	0.301	1.00	Yes	0.382	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_3 - L_4$	493.33	-----	-138	85	-42	20	-342	-563	154	-25	0.723	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**
		$U_4 - L_5$	333.42	-----	-120	78	-37	-15	-329	-477	-835	-214	0.600	0.395	1.00	Yes	0.330	0.217	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		$U_5 - L_6$	248.64	-281.29	-78	-22	28	-117	-347	-558	-877	-276	0.447	0.404	0.86	Yes	0.246	0.222	0.47	Yes	0.659	0.340	1	Yes	0.595	0.150	0.75	Yes	1.00	**3.78**
		$U_7 - L_6$	396.06	-----	-82	32	-45	-8	-198	-131	610	-150	0.712	0.281	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_8 - L_7$	618.12	-----	-205	155	-98	49	-107	75	301	-86	0.753	0.238	1.00	Yes	0.474	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		$U_8 - L_8$	793.25	-----	-244	120	-132	30	-156	46	625	183	0.785	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		$U_{10} - L_9$	886.61	-----	-209	183	-107	89	-220	248	1101	225	0.749	0.241	1.00	Yes	0.464	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_{11} - L_{10}$	942.23	-----	-274	267	-65	101	-285	152	-935	-232	0.753	0.241	1.00	Yes	0.467	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_{12} - L_{11}$	916.97	-----	-78	353	26	113	58	239	-807	-281	0.733	0.260	1.00	Yes	0.454	0.147	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_{12} - L_{13}$	614.71	-----	-91	288	6	156	101	-399	588	304	0.727	0.271	1.00	Yes	0.400	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{13} - L_{14}$	606.04	-----	-278	225	-100	125	-270	-285	677	270	0.716	0.281	1.00	Yes	0.394	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$U_{14} - L_{15}$	663.66	-----	-196	202	-52	97	-152	-534	313	104	0.785	0.212	1.00	Yes	0.432	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_{15} - L_{16}$	537.73	-----	-87	28	-40	6	-65	-358	-507	-297	0.789	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		$U_{17} - L_{16}$	-----	-325.68	-24	-44	-2	-58	-261	-394	497	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.250	1	Yes	0.689	0.074	0.77	Yes	1.00	**2.44**
		$U_{18} - L_{17}$	-----	-286.38	-135	-10	53	-37	-529	-137	-193	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.337	1	Yes	0.606	0.173	0.78	Yes	1.00	**5.51**
		$U_{19} - L_{18}$	452.08	-----	-92	12	19	-21	-225	-224	-204	-116	0.813	0.183	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		$U_{20} - L_{19}$	628.50	-----	-111	74	-29	3	-145	2	-60	14	0.825	0.166	1.00	Yes	0.498	0.092	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**

Axial AB Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.193	1.00	Yes	0.795	0.200	1.00	Yes	1.00	**3.47**
North Truss - Upper Chord	Structure 1	$U_0 - U_1$			-----	-589.63	-184	77	73	-840	9	-8	-60	76																		
		$U_1 - U_2$			-----	-584.22	-62	38	-163	-736	-7	-36	-45	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1.00	Yes	0.788	0.175	0.97	Yes	1.00	**1.98**
		$U_2 - U_3$			94.63	-610.98	-136	218	-462	-414	6	26	-3	146	0.108	0.135	0.25	Yes	0.073	0.088	0.17	Yes	0.831	0.164	1.00	Yes	0.824	0.110	0.94	Yes	1.00	**2.06**
		$U_3 - U_4$			288.24	-574.79	51	271	-511	-535	14	36	222	80	0.330	0.165	0.50	Yes	0.227	0.113	0.34	Yes	0.782	0.212	1.00	Yes	0.775	0.127	0.91	Yes	1.00	**2.48**
		$U_4 - U_5$			298.32	-581.42	100	253	-785	-185	22	-28	92	-209	0.342	0.222	0.57	Yes	0.235	0.152	0.39	Yes	0.791	0.199	1.00	Yes	0.784	0.187	0.98	Yes	1.00	**2.53**
		$U_5 - U_6$			663.17	-535.27	247	465	-769	195	-141	-63	332	-16	0.760	0.239	1.00	Yes	0.513	0.156	0.67	Yes	0.728	0.131	0.86	Yes	0.722	0.183	0.91	Yes	1.00	**3.92**
		$U_6 - U_7$			842.79	-----	367	223	-617	-29	-289	-114	409	-109	0.806	0.187	1.00	Yes	0.563	0.129	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		$U_7 - U_8$			938.19	-----	26	1092	-1145	1975	-430	-24	141	-247	0.650	0.343	1.00	Yes	0.453	0.234	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_8 - U_9$			917.87	-----	1188	-114	1153	-784	-378	-212	-361	100	0.752	0.246	1.00	Yes	0.514	0.167	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_9 - U_{10}$			742.41	-----	256	311	-27	-450	-169	5	-139	534	0.805	0.187	1.00	Yes	0.545	0.125	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_{10} - U_{11}$			271.45	-603.25	323	-78	216	-991	25	94	282	175	0.294	0.267	0.57	Yes	0.196	0.172	0.37	Yes	0.777	0.203	0.98	Yes	0.770	0.222	1.00	Yes	1.00	**2.94**
		$U_{11} - U_{12}$			-----	-875.40	222	-114	1	-693	100	405	182	614	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.163	1.00	Yes	0.821	0.115	0.94	Yes	1.00	**2.20**
		$U_{12} - U_{13}$			-----	-1211.03	6	-239	-73	-951	339	214	566	385	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1.00	Yes	0.809	0.131	0.95	Yes	1.00	**2.28**
		$U_{13} - U_{14}$			-----	-1355.85	-147	-384	-391	-1433	221	178	390	517	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.210	1.00	Yes	0.777	0.158	0.94	Yes	1.00	**2.09**
		$U_{14} - U_{15}$			-----	-1339.28	-273	-250	-1278	-875	214	31	579	150	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.220	1.00	Yes	0.768	0.141	0.91	Yes	1.00	**2.04**
		$U_{15} - U_{16}$			-----	-1421.38	-149	-433	-893	-729	85	38	470	185	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.171	1.00	Yes	0.815	0.098	0.92	Yes	1.00	**2.19**
		$U_{16} - U_{17}$			-----	-1375.47	-341	-209	-1407	-383	137	-51	617	104	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.201	1.00	Yes	0.789	0.155	0.95	Yes	1.00	**2.36**
		$U_{17} - U_{18}$			-----	-1071.44	-209	-74	-842	84	-5	-61	429	16	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.148	1.00	Yes	0.838	0.137	0.98	Yes	1.00	**2.38**
		$U_{18} - U_{19}$			-----	-721.46	-200	-70	-780	-63	25	-120	382	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1.00	Yes	0.812	0.157	0.97	Yes	1.00	**2.34**
		$U_{19} - U_{20}$			-----	-557.96	-272	307	-1810	1389	-69	-131	374	-535	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.187	0.83	Yes	0.628	0.364	1.00	Yes	1.00	**5.06**
	Structure 2	$U_0 - U_1$			-----	-625.61	-92	-91	659	-1506	3	-71	-39	59	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.184	0.93	Yes	0.739	0.256	1.00	Yes	1.00	**5.58**
		$U_1 - U_2$			-----	-833.75	-47	-190	24	-1201	-71	-223	-43	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.805	0.182	0.99	Yes	1.00	**2.95**
		$U_2 - U_3$			-----	-1173.86	-99	-275	-63	-1468	-29	370	-22	386	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.157	1.00	Yes	0.833	0.149	0.99	Yes	1.00	**2.85**
		$U_3 - U_4$			-----	-1351.13	-424	-417	-931	-1317	529	906	330	453	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.220	1.00	Yes	0.769	0.117	0.89	Yes	1.00	**2.44**
		$U_4 - U_5$			-----	-1481.24	-462	-375	-1213	-1645	773	307	339	272	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.225	1.00	Yes	0.760	0.136	0.90	Yes	1.00	**2.43**
		$U_5 - U_6$			-----	-1527.76	-427	-7	-1775	-989	187	-211	249	448	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.210	1.00	Yes	0.784	0.147	0.94	Yes	1.00	**2.40**
		$U_6 - U_7$			-----	-1361.19	-286	-105	-1338	-1506	-134	-185	302	159	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1.00	Yes	0.775	0.134	0.91	Yes	1.00	**2.23**
		$U_7 - U_8$			-----	-1393.65	-193	-176	-1627	-787	-106	-185	246	95	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1.00	Yes	0.794	0.145	0.94	Yes	1.00	**2.33**
		$U_8 - U_9$			-----	-1205.95	-281	110	-1395	-281	-93	-198	374	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.168	1.00	Yes	0.818	0.148	0.97	Yes	1.00	**2.36**
		$U_9 - U_{10}$			-----	-971.77	-82	337	-1222	-205	-137	-152	264	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.150	1.00	Yes	0.839	0.149	0.99	Yes	1.00	**2.67**
		$U_{10} - U_{11}$			495.79	-794.17	173	371	-1388	-158	-178	-163	438	-4	0.419	0.249	0.67	Yes	0.285	0.162	0.45	Yes	0.794	0.200	1.00	Yes	0.789	0.196	0.99	Yes	1.00	**3.56**
		$U_{11} - U_{12}$			829.77	-----	242	539	-1622	322	-348	-126	518	86	0.701	0.292	1.00	Yes	0.471	0.195	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		$U_{12} - U_{13}$			1189.31	-----	496	161	-1146	-743	-450	-390	505	-265	0.803	0.192	1.00	Yes	0.572	0.131	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{13} - U_{14}$			1479.89	-----	152	2157	-339	1389	-944	-458	-414	-492	0.728	0.264	1.00	Yes	0.515	0.174	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.58**
		$U_{14} - U_{15}$			1375.39	-----	2703	124	1229	-27	-1020	-804	-554	-487	0.676	0.320	1.00	Yes	0.479	0.211	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		$U_{15} - U_{16}$			1321.11	-----	150	496	-1178	-1037	-650	-437	-317	794	0.799	0.201	1.00	Yes	0.568	0.137	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_{16} - U_{17}$			1060.85	-----	664	325	134	-1268	-225	-32	489	427	0.782	0.211	1.00	Yes	0.520	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		$U_{17} - U_{18}$			746.86	-----	470	336	-290	-751	-4	242	74	807	0.750	0.246	1.00	Yes	0.499	0.162	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_{18} - U_{19}$			563.47	-642.52	530	238	-211	-1115	100	117	411	467	0.566	0.258	0.83	Yes	0.371	0.164	0.54	Yes	0.763	0.232	1.00	Yes	0.759	0.189	0.95	Yes	1.00	**3.88**
		$U_{19} - U_{20}$			311.89	-721.64	313	216	-419	-768	21	14	130	482	0.292	0.188	0.49	Yes	0.194	0.123	0.32	Yes	0.801	0.196	1.00	Yes	0.796	0.123	0.92	Yes	1.00	**3.00**
		$U_{20} - U_{21}$			188.08	-871.42	180	-25	-729	-747	-22	-59	257	290	0.146	0.140	0.29	Yes	0.102	0.091	0.20	Yes	0.801	0.192	1.00	Yes	0.795	0.108	0.91	Yes	1.00	**2.93**
		$U_{21} - U_{22}$			-----	-809.07	-39	4	-809	-1134	-3	65	152	393	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.255	1.00	Yes	0.738	0.164	0.91	Yes	1.00	**2.44**
		$U_{22} - U_{23}$			-----	-820.45	67	-39	-1159	-545	58	-2	462	144	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.240	1.00	Yes	0.749	0.168	0.92	Yes	1.00	**2.48**
		$U_{23} - U_{24}$			172.18	-894.58	-56	155	-734	-592	-27	-57	351	56	0.134	0.145	0.28	Yes	0.094	0.095	0.19	Yes	0.822	0.173	1.00	Yes	0.816	0.106	0.93	Yes	1.00	**2.89**
		$U_{24} - U_{25}$			279.84	-756.18	180	275	-787	-251	-60	-86	396	-93	0.262	0.179	0.45	Yes	0.174	0.118	0.30	Yes	0.840	0.155	1.00	Yes	0.834	0.126	0.97	Yes	1.00	**2.85**
		$U_{25} - U_{26}$			502.75	-689.91	200	456	-1080	210	-159	-77	317	-24	0.505	0.230	0.74	Yes	0.331	0.146	0.48	Yes	0.820	0.162	0.99	Yes	0.815	0.183	1.00	Yes	1.00	**3.56**
		$U_{26} - U_{27}$			762.23	-----	365	417	-1016	-92	-249	-68	415	-168	0.765	0.233	1.00	Yes	0.509	0.154	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{27} - U_{28}$			1054.24	-----	326	570	-1353	-304	-369	-13	457	-18	0.777	0.218	1.00	Yes	0.517	0.144	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		$U_{28} - U_{29}$			1286.17	-----	513	171	-1215	-1501	-403	-276	518	-298	0.778	0.214	1.00	Yes	0.553	0.144	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		$U_{29} - U_{30}$			1500.38	-----	252	2162	-55	752	-862	-478	-268	-22	0.738	0.259	1.00	Yes	0.522	0.171	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		$U_{30} - U_{31}$			1470.85	-----	2425	26	903	-205	-705	-601	-201	-56	0.723	0.273	1.00	Yes	0.512	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_{31} - U_{32}$			1196.64	-----	63	447	-873	-849	-421	-246	-98	849	0.808	0.191	1.00	Yes	0.576	0.131	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		$U_{32} - U_{33}$			931.13	-----	488	292	-157	-1030	-104	-5	418	509	0.787	0.207	1.00	Yes	0.528	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		$U_{33} - U_{34}$			733.39	-731.85	397	278	-238	-1186	10	249	403	988	0.619	0.288	0.91	Yes	0.422	0.190	0.62	Yes	0.732	0.262	1.00	Yes	0.727	0.167	0.90	Yes	1.00	**4.63**
		$U_{34} - U_{35}$			347.77	-889.21	346	65	88	-1566	200	164	647	535	0.255	0.261	0.52	Yes	0.173	0.176	0.35	Yes	0.772	0.227	1.00	Yes	0.767	0.191	0.96	Yes	1.00	**3.32**
		$U_{35} - U_{36}$			-----	-1180.01	163	-139	-206	-1284	106	91	403	564	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.187	1.00	Yes	0.800	0.136	0.94	Yes	1.00	**3.06**
		$U_{36} - U_{37}$			-----	-1397.38	-53	42	-859	-1414	83	-3	405	330	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1.00	Yes	0.796	0.126	0.93	Yes	1.00	**3.03**
		$U_{37} - U_{38}$			-----	-1355.25	120	-152	-1283	-1588	46	18	363	279	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.216	1.00	Yes	0.772	0.142	0.92	Yes	1.00	**2.89**
		$U_{38} - U_{39}$			-----	-1527.55	107	-296	-1047	-1644	132	-34	690	179	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.204	1.00	Yes	0.784	0.136	0.93	Yes	1.00	**2.95**
		$U_{39} - U_{40}$			-----	-1506.31	-203	-337	-1753	-1168	32	-27	514	176	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.217	1.00	Yes	0.773	0.145	0.92	Yes	1.00	**2.91**
		$U_{40} - U_{41}$			-----	-1349.01	-247	-337	-1745	-859	48	-115	565	61	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1.00	Yes	0.768	0.156	0.93	Yes	1.00	**2.74**
		$U_{41} - U_{42}$			-----	-1155.13	-148	-132	-1628	-85	-68	-101	419	40	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.173	1.00	Yes	0.820	0.166	0.99	Yes	1.00	**3.05**
		$U_{42} - U_{43}$			-----	-839.07	-130	-60	-1147	-167	-39	-93	377	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.182	1.00	Yes	0.810	0.174	0.99	Yes	1.00	**3.33**
		$U_{43} - U_{44}$			-----	-563.88	-9	-220	-1920	1037	-69	37	291	-410	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.231	0.91	Yes	0.666	0.326	1.00	Yes	1.00	**5.40**
	Structure 3	$U_0 - U_1$			-----	-637.61	-4	-162	381	-1362	7	-78	170	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.210	0.94	Yes	0.717	0.274	1.00	Yes	1.00	**6.08**
		$U_1 - U_2$			-----	-733.07	-33	-140	123	-777	-63	-233	-67	-346	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.167	1.00	Yes	0.825	0.156	0.99	Yes	1.00	**2.69**
		$U_2 - U_3$			-----	-1047.21	-72	-165	131	-973	-52	336	6	388	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.160	1.00	Yes	0.819	0.158	0.98	Yes	1.00	**2.48**
		$U_3 - U_4$			-----	-1369.01	-190	-311	-378	-1165	494	830	360	479	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.201	1.00	Yes	0.785	0.129	0.92	Yes	1.00	**2.64**
		$U_4 - U_5$			-----	-1390.67	-399	-62	-960	-887	688	230	473	288	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.192	1.00	Yes	0.797	0.106	0.91	Yes	1.00	**2.34**
		$U_5 - U_6$			-----	-1357.23	-183	-275	-849	-1218	140	-151	228	359	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.206	1.00	Yes	0.778	0.134	0.92	Yes	1.00	**2.23**
		$U_6 - U_7$			-----	-1380.64	-376	-99	-1294	-622	-94	-190	447	59	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.192	1.00	Yes	0.791	0.143	0.94	Yes	1.00	**2.29**
		$U_7 - U_8$			-----	-1275.89	-163	8	-688	-326	-62	-183	324	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.129	1.00	Yes	0.852	0.095	0.95	Yes	1.00	**2.41**
		$U_8 - U_9$			-----	-905.42	-102	179	-831	-2	-33	-157	292	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.138	1.00	Yes	0.849	0.138	0.99	Yes	1.00	**2.01**
		$U_9 - U_{10}$			-----	-622.99	-75	231	-903	132	-98	-108	224	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.173	0.98	Yes	0.795	0.202	1.00	Yes	1.00	**2.41**
		$U_{10} - U_{11}$			702.00	-446.95	319	238	-751	33	-247	-139	425	-250	0.761	0.236	1.00	Yes	0.516	0.159	0.68	Yes	0.575	0.150	0.73	Yes	0.570	0.168	0.74	Yes	1.00	**4.72**
		$U_{11} - U_{12}$			834.54	-----	-39	972	-1209	1550	-410	-109	173	-366	0.684	0.310	1.00	Yes	0.468	0.211	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_{12} - U_{13}$			1056.97	-----	1181	119	1366	-833	-544	-504	-369	-2	0.732	0.262	1.00	Yes	0.511	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		$U_{13} - U_{14}$			874.34	-----	231	440	-292	-388	-342	-223	-173	482	0.836	0.160	1.00	Yes	0.584	0.110	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{14} - U_{15}$			648.96	-----	427	297	392	-846	-129	-40	292	103	0.744	0.251	1.00	Yes	0.502	0.164	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		$U_{15} - U_{16}$			424.04	-562.04	332	231	-379	-613	-67	132	6	477	0.486	0.226	0.72	Yes	0.334	0.155	0.49	Yes	0.765	0.230	1.00	Yes	0.758	0.146	0.91	Yes	1.00	**3.01**
		$U_{16} - U_{17}$			410.89	-550.28	394	128	-360	-715	76	74	402	149	0.471	0.238	0.71	Yes	0.323	0.163	0.49	Yes	0.749	0.243	1.00	Yes	0.742	0.170	0.92	Yes	1.00	**2.92**
		$U_{17} - U_{18}$			191.66	-563.27	300	-74	-570	-377	-43	71	279	209	0.220	0.183	0.41	Yes	0.148	0.120	0.27	Yes	0.766	0.231	1.00	Yes	0.760	0.135	0.90	Yes	1.00	**2.25**
		$U_{18} - U_{19}$			77.22	-545.46	148	-42	-767	-267	-23	27	450	16	0.089	0.258	0.35	Yes	0.061	0.177	0.24	Yes	0.742	0.253	1.00	Yes	0.736	0.182	0.92	Yes	1.00	**2.21**
		$U_{19} - U_{20}$			-----	-537.67	174	-304	-1128	710	-116	111	369	-358	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.162	0.90	Yes	0.725	0.268	1.00	Yes	1.00	**3.83**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
North Truss - Lower Chord	Structure 1	L_0 - L_1	165.26	-98.28	105	-378	1299	-2175	-22	-81	116	429	0.253	0.745	1.00	Yes	0.149	0.455	0.61	Yes	0.178	0.470	0.65	Yes	0.177	0.653	0.83	Yes	1.00	**15.92**
		L_1 - L_2	448.02	-----	104	-722	152	-39	-442	-115	-29	-32	0.686	0.312	1.00	Yes	0.418	0.206	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		L_2 - L_3	689.32	-----	-629	-723	-20	21	-151	40	-32	22	0.793	0.199	1.00	Yes	0.459	0.119	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		L_3 - L_4	729.40	-143.06	-581	-528	86	253	-83	25	61	69	0.839	0.154	1.00	Yes	0.498	0.100	0.60	Yes	0.195	0.183	0.38	Yes	0.194	0.140	0.34	Yes	1.00	**2.59**
		L_4 - L_5	319.58	-500.18	-884	302	99	592	-196	306	54	36	0.414	0.288	0.71	Yes	0.248	0.188	0.44	Yes	0.769	0.131	0.90	Yes	0.762	0.234	1.00	Yes	1.00	**2.70**
		L_5 - L_6	-----	-719.76	-498	101	162	588	251	64	72	126	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.152	1.00	Yes	0.830	0.130	0.97	Yes	1.00	**2.80**
		L_6 - L_7	-----	-1086.75	-749	-16	211	175	78	378	120	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.111	1.00	Yes	0.875	0.118	1.00	Yes	1.00	**4.01**
		L_7 - L_8	-----	-1234.78	2	596	35	1456	-117	-132	-87	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.205	1.00	Yes	0.782	0.193	0.98	Yes	1.00	**3.70**
		L_8 - L_9	-----	-1303.20	570	-34	1120	-6	-141	-154	7	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.155	1.00	Yes	0.825	0.148	0.98	Yes	1.00	**4.16**
		L_9 - L_{10}	-----	-1104.26	-137	-587	139	152	554	109	44	145	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.101	1.00	Yes	0.889	0.092	0.99	Yes	1.00	**5.17**
		L_{10} - L_{11}	-----	-560.38	34	-479	530	-5	43	75	140	49	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.108	0.97	Yes	0.854	0.140	1.00	Yes	1.00	**3.49**
		L_{11} - L_{12}	587.39	-----	234	-816	484	-171	112	-51	91	-30	0.761	0.236	1.00	Yes	0.456	0.155	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		L_{12} - L_{13}	1038.94	-----	-348	-795	159	-77	112	254	26	35	0.820	0.171	1.00	Yes	0.524	0.102	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		L_{13} - L_{14}	1331.66	-----	-181	-1438	359	-439	110	-47	8	-3	0.783	0.207	1.00	Yes	0.507	0.126	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		L_{14} - L_{15}	1551.56	-----	-1848	-650	-370	-27	-169	220	-118	-66	0.758	0.238	1.00	Yes	0.493	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		L_{15} - L_{16}	1640.03	-----	-1328	-1419	-214	-364	87	-294	-121	-55	0.801	0.192	1.00	Yes	0.514	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		L_{16} - L_{17}	1157.51	-----	-1549	-98	-431	96	-455	214	-105	-45	0.732	0.268	1.00	Yes	0.475	0.165	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		L_{17} - L_{18}	881.14	-----	-1036	-77	-195	23	131	-215	-81	-17	0.767	0.227	1.00	Yes	0.491	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		L_{18} - L_{19}	486.69	-----	-512	342	-525	612	-64	314	-325	-19	0.745	0.251	1.00	Yes	0.504	0.159	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		L_{19} - L_{20}	193.01	-476.31	-243	55	-449	258	172	38	-68	-15	0.295	0.170	0.47	Yes	0.180	0.114	0.30	Yes	0.865	0.101	0.97	Yes	0.858	0.135	1.00	Yes	1.00	**4.34**
	Structure 2	L_0 - L_1	337.26	-----	215	-831	1089	-2571	29	102	-112	-387	0.410	0.587	1.00	Yes	0.244	0.378	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.79**
		L_1 - L_2	537.52	-----	476	-1285	178	-237	-510	-101	-45	17	0.653	0.345	1.00	Yes	0.388	0.220	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		L_2 - L_3	1009.43	-----	-196	-1188	-41	-169	60	233	71	74	0.796	0.196	1.00	Yes	0.522	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		L_3 - L_4	1318.97	-----	-244	-1733	28	-433	200	68	157	81	0.775	0.219	1.00	Yes	0.522	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		L_4 - L_5	1772.40	-----	-1538	-1572	-389	-248	45	256	93	202	0.826	0.166	1.00	Yes	0.547	0.098	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		L_5 - L_6	1824.72	-----	-1213	-2290	-145	-383	147	-68	113	-15	0.783	0.212	1.00	Yes	0.525	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		L_6 - L_7	1824.89	-----	-2274	-1440	-433	-95	-129	359	-164	45	0.772	0.222	1.00	Yes	0.513	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		L_7 - L_8	1367.84	-----	-1769	-743	-212	294	131	-88	-131	8	0.784	0.206	1.00	Yes	0.515	0.120	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		L_8 - L_9	1090.31	-----	-1443	36	-94	533	-226	407	-27	16	0.763	0.233	1.00	Yes	0.514	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		L_9 - L_{10}	826.70	-615.95	-1410	-214	-104	729	280	-190	17	93	0.738	0.259	1.00	Yes	0.430	0.161	0.60	Yes	0.651	0.172	0.83	Yes	0.647	0.226	0.88	Yes	1.00	**4.38**
		L_{10} - L_{11}	-----	-701.99	-959	247	103	536	-291	281	60	0	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.093	0.93	Yes	0.825	0.168	1.00	Yes	1.00	**3.49**
		L_{11} - L_{12}	-----	-1042.74	-647	5	103	1001	135	-165	83	239	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.124	0.99	Yes	0.855	0.136	1.00	Yes	1.00	**4.43**
		L_{12} - L_{13}	-----	-1551.22	-375	-184	436	-465	119	-163	200	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.936	0.061	1.00	Yes	0.928	0.046	0.98	Yes	1.00	**6.76**
		L_{13} - L_{14}	-----	-1525.67	-367	1230	-592	2588	-262	-454	-247	-547	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.193	0.97	Yes	0.768	0.226	1.00	Yes	1.00	**4.40**
		L_{14} - L_{15}	-----	-1622.63	1124	-471	2032	-381	-517	-319	-318	-442	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.155	0.98	Yes	0.816	0.177	1.00	Yes	1.00	**5.72**
		L_{15} - L_{16}	-----	-1497.31	-470	-15	-994	352	-214	97	12	399	-----	-----	-----	-----	-----	-----	-----	-----	0.903	0.084	0.99	Yes	0.896	0.099	1.00	Yes	1.00	**5.55**
		L_{16} - L_{17}	-----	-1151.70	546	-39	1203	119	187	-16	400	188	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.152	1.00	Yes	0.839	0.148	0.99	Yes	1.00	**4.55**
		L_{17} - L_{18}	-----	-855.43	1	-474	481	249	163	71	110	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.905	0.087	1.00	Yes	0.898	0.077	0.98	Yes	1.00	**3.55**
		L_{18} - L_{19}	-----	-644.63	-69	-495	669	116	114	154	-5	33	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.130	1.00	Yes	0.859	0.129	0.99	Yes	1.00	**3.32**
		L_{19} - L_{20}	601.50	-600.72	-321	-905	566	242	436	-4	58	-46	0.681	0.241	0.93	Yes	0.403	0.152	0.56	Yes	0.806	0.189	1.00	Yes	0.801	0.175	0.98	Yes	1.00	**4.41**
		L_{20} - L_{21}	964.69	-475.42	-851	-1356	572	54	-69	233	-100	-103	0.769	0.223	1.00	Yes	0.504	0.133	0.64	Yes	0.449	0.204	0.66	Yes	0.446	0.198	0.65	Yes	1.00	**4.97**
		L_{21} - L_{22}	919.69	-231.02	-934	-1573	243	-73	277	10	-95	-32	0.733	0.259	1.00	Yes	0.491	0.163	0.66	Yes	0.218	0.254	0.48	Yes	0.217	0.230	0.45	Yes	1.00	**3.79**
		L_{22} - L_{23}	856.95	-----	-1893	-838	-154	204	-129	370	-20	3	0.683	0.316	1.00	Yes	0.457	0.198	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		L_{23} - L_{24}	912.29	-301.48	-1646	-978	6	375	253	-195	10	78	0.728	0.267	1.00	Yes	0.477	0.159	0.64	Yes	0.285	0.264	0.55	Yes	0.283	0.240	0.53	Yes	1.00	**4.69**
		L_{24} - L_{25}	565.05	-437.29	-1436	-257	242	360	-326	522	63	0	0.640	0.357	1.00	Yes	0.379	0.226	0.61	Yes	0.586	0.244	0.84	Yes	0.583	0.277	0.87	Yes	1.00	**4.70**
		L_{25} - L_{26}	-----	-642.28	-616	-712	119	699	84	-294	41	129	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.125	0.99	Yes	0.856	0.137	1.00	Yes	1.00	**5.19**
		L_{26} - L_{27}	-----	-847.27	-281	202	-209	654	-106	275	-210	17	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.086	0.99	Yes	0.890	0.105	1.00	Yes	1.00	**4.60**
		L_{27} - L_{28}	-----	-1168.62	-67	216	-232	1150	88	197	-42	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.118	0.98	Yes	0.851	0.142	1.00	Yes	1.00	**4.51**
		L_{28} - L_{29}	-----	-1587.67	-112	-330	87	0	171	-19	-86	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.958	0.038	1.00	Yes	0.950	0.033	0.99	Yes	1.00	**4.87**
		L_{29} - L_{30}	-----	-1626.02	-373	806	-457	1985	-65	-130	-14	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.128	0.96	Yes	0.818	0.173	1.00	Yes	1.00	**4.08**
		L_{30} - L_{31}	-----	-1590.87	817	-338	2240	-450	-133	-117	-599	-466	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.174	0.99	Yes	0.801	0.196	1.00	Yes	1.00	**6.39**
		L_{31} - L_{32}	-----	-1558.42	-153	-252	301	-77	-60	73	-396	108	-----	-----	-----	-----	-----	-----	-----	-----	0.940	0.053	1.00	Yes	0.932	0.030	0.97	Yes	1.00	**8.34**
		L_{32} - L_{33}	-----	-1042.86	382	-372	1014	155	170	35	-145	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.114	0.98	Yes	0.855	0.138	1.00	Yes	1.00	**6.44**
		L_{33} - L_{34}	-----	-714.21	-27	-895	411	200	352	-133	7	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.122	0.97	Yes	0.839	0.157	1.00	Yes	1.00	**5.15**
		L_{34} - L_{35}	807.50	-601.61	-323	-1204	633	36	321	686	-29	69	0.721	0.275	1.00	Yes	0.420	0.169	0.59	Yes	0.636	0.229	0.87	Yes	0.632	0.193	0.83	Yes	1.00	**5.52**
		L_{35} - L_{36}	1090.87	-----	-68	-1362	386	-7	563	32	101	-48	0.763	0.237	1.00	Yes	0.514	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_{36} - L_{37}	1325.38	-----	-637	-1864	242	0	-18	397	-100	10	0.760	0.238	1.00	Yes	0.499	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		L_{37} - L_{38}	1831.91	-----	-1448	-2415	-36	-346	182	-188	-42	-7	0.775	0.224	1.00	Yes	0.515	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_{38} - L_{39}	1785.81	-----	-2428	-1372	-292	-174	-158	249	-23	-17	0.766	0.231	1.00	Yes	0.514	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		L_{39} - L_{40}	1709.17	-----	-1839	-1608	-197	-306	112	-353	-51	-34	0.797	0.198	1.00	Yes	0.528	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_{40} - L_{41}	1288.34	-----	-1760	-434	-305	-48	-372	364	-58	-11	0.757	0.236	1.00	Yes	0.510	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**
		L_{41} - L_{42}	1023.66	-----	-1200	-190	-157	-65	142	-71	-27	11	0.807	0.189	1.00	Yes	0.529	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		L_{42} - L_{43}	511.64	-----	-1459	64	-219	43	-412	495	-2	-9	0.621	0.378	1.00	Yes	0.370	0.241	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		L_{43} - L_{44}	311.08	-501.62	-646	259	-1379	597	577	168	187	55	0.378	0.375	0.76	Yes	0.225	0.239	0.47	Yes	0.721	0.232	0.96	Yes	0.717	0.281	1.00	Yes	1.00	**11.82**
	Structure 3	L_0 - L_1	389.82	-414.04	104	-342	561	-835	-29	-130	10	44	0.597	0.278	0.88	Yes	0.364	0.187	0.56	Yes	0.752	0.139	0.90	Yes	0.745	0.251	1.00	Yes	1.00	**7.82**
		L_1 - L_2	537.49	-----	252	-486	352	-404	-67	32	39	112	0.823	0.169	1.00	Yes	0.556	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_2 - L_3	914.79	-----	20	-934	5	-174	183	104	15	2	0.797	0.203	1.00	Yes	0.510	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		L_3 - L_4	1213.74	-----	-119	-1370	62	-365	295	127	44	53	0.767	0.227	1.00	Yes	0.498	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		L_4 - L_5	1649.88	-----	-1223	-1418	-328	-215	81	282	79	116	0.806	0.191	1.00	Yes	0.517	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		L_5 - L_6	1599.73	-----	-788	-1700	-83	-342	-49	-47	142	78	0.782	0.215	1.00	Yes	0.508	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		L_6 - L_7	1274.45	-----	-1576	-149	-405	237	-98	346	-186	18	0.750	0.246	1.00	Yes	0.486	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		L_7 - L_8	1055.56	-----	-783	-491	-88	109	199	19	-30	38	0.833	0.162	1.00	Yes	0.533	0.097	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		L_8 - L_9	563.53	-----	-741	107	-171	342	-201	409	-17	47	0.730	0.268	1.00	Yes	0.438	0.173	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.67**
		L_9 - L_{10}	260.20	-516.00	-771	-42	-3	479	313	26	67	125	0.337	0.259	0.60	Yes	0.196	0.156	0.36	Yes	0.793	0.189	0.99	Yes	0.786	0.204	1.00	Yes	1.00	**3.99**
		L_{10} - L_{11}	-----	-1088.75	-291	271	-430	764	-81	232	-55	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.070	0.96	Yes	0.876	0.120	1.00	Yes	1.00	**6.42**
		L_{11} - L_{12}	-----	-1253.70	-41	471	-68	1196	-167	-187	-350	-540	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1.00	Yes	0.794	0.158	0.96	Yes	1.00	**3.70**
		L_{12} - L_{13}	-----	-1250.39	468	-23	1159	-16	-243	-216	-566	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1.00	Yes	0.792	0.154	0.95	Yes	1.00	**3.96**
		L_{13} - L_{14}	-----	-1108.72	70	-636	-47	282	60	-17	-228	123	-----	-----	-----	-----	-----	-----	-----	-----	0.903	0.080	0.99	Yes	0.892	0.100	1.00	Yes	1.00	**3.79**
		L_{14} - L_{15}	-----	-743.20	95	-299	567	165	45	22	148	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.130	1.00	Yes	0.857	0.125	0.99	Yes	1.00	**2.72**
		L_{15} - L_{16}	-----	-541.50	162	-632	423	194	44	-50	16	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.098	0.94	Yes	0.825	0.167	1.00	Yes	1.00	**2.45**
		L_{16} - L_{17}	668.46	-248.01	-519	-718	340	34	120	319	92	-34	0.769	0.225	1.00	Yes	0.457	0.144	0.61	Yes	0.339	0.236	0.58	Yes	0.336	0.173	0.51	Yes	1.00	**2.66**
		L_{17} - L_{18}	681.77	-131.05	-710	-741	101	-2	191	-1	2	12	0.784	0.210	1.00	Yes	0.454	0.126	0.58	Yes	0.179	0.242	0.43	Yes	0.177	0.179	0.36	Yes	1.00	**2.78**
		L_{18} - L_{19}	441.80	-----	-779	-69	66	-5	-190	417	28	-116	0.676	0.323	1.00	Yes	0.413	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		L_{19} - L_{20}	184.51	-325.18	-381	285	-1210	982	1207	328	301	82	0.282	0.622	0.91	Yes	0.166	0.374	0.54	Yes	0.590	0.408	1.00	Yes	0.585	0.363	0.95	Yes	1.00	**14.92**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Controlling Bi-Axial Moment & Axial Value	Rating
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-329.15	-56	90	-180	237	-33	-11	-282	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.187	0.93	Yes	0.696	0.303	1.00	Yes	1.00	**1.39**
		$U_1 - L_1$	-----	-347.12	23	-12	-179	206	-5	-5	286	157	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.164	0.93	Yes	0.734	0.263	1.00	Yes	1.00	**2.63**
		$U_2 - L_2$	99.36	-329.35	85	-94	-177	235	63	29	360	186	0.179	0.405	0.59	Yes	0.098	0.223	0.33	Yes	0.720	0.217	0.94	Yes	0.697	0.300	1.00	Yes	1.00	**4.01**
		$U_3 - L_3$	195.69	-328.13	157	-179	-180	239	209	69	679	196	0.352	0.502	0.86	Yes	0.194	0.276	0.47	Yes	0.719	0.254	0.98	Yes	0.694	0.305	1.00	Yes	1.00	**6.46**
		$U_4 - L_4$	-----	-334.45	179	-179	225	-220	-383	-148	504	143	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.198	0.94	Yes	0.708	0.288	1.00	Yes	1.00	**3.88**
		$U_5 - L_5$	-----	-432.46	67	-89	205	-248	17	18	190	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.108	0.90	Yes	0.746	0.252	1.00	Yes	1.00	**2.35**
		$U_6 - L_6$	-----	-523.46	86	-82	251	-279	-210	-71	308	42	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.130	0.93	Yes	0.751	0.244	1.00	Yes	1.00	**2.30**
		$U_7 - L_7$	-----	-446.62	134	-150	286	-312	-177	11	463	74	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.200	0.95	Yes	0.689	0.307	1.00	Yes	1.00	**1.58**
		$U_8 - L_8$	-----	-1203.96	20	-32	139	-167	-5	38	1261	348	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.129	1.00	Yes	0.835	0.031	0.87	Yes	1.00	**3.62**
		$U_9 - L_9$	-----	-665.47	-172	202	-389	442	-358	-151	-162	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.140	0.94	Yes	0.752	0.246	1.00	Yes	1.00	**2.51**
		$U_{10} - L_{10}$	-----	-764.35	-123	104	-306	347	-819	-458	-302	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.754	0.180	0.94	Yes	1.00	**3.15**
		$U_{11} - L_{11}$	-----	-673.09	-144	195	-315	459	-568	-386	-109	-279	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.176	0.99	Yes	0.783	0.213	1.00	Yes	1.00	**3.05**
		$U_{12} - L_{12}$	-----	-534.20	-101	101	-290	303	-325	-201	110	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.146	0.92	Yes	0.733	0.259	1.00	Yes	1.00	**2.72**
		$U_{13} - L_{13}$	-----	-382.93	-51	70	-194	228	-164	-10	288	30	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.149	0.93	Yes	0.734	0.260	1.00	Yes	1.00	**2.13**
		$U_{14} - L_{14}$	-----	-316.04	-164	189	-175	188	-21	-15	841	145	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.289	1.00	Yes	0.669	0.242	0.92	Yes	1.00	**4.30**
		$U_{15} - L_{15}$	172.86	-315.85	-128	116	228	-258	62	117	383	-49	0.311	0.441	0.76	Yes	0.171	0.243	0.42	Yes	0.708	0.163	0.88	Yes	0.668	0.330	1.00	Yes	1.00	**4.08**
		$U_{16} - L_{16}$	-----	-337.72	26	-35	200	-218	57	-77	679	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.217	0.98	Yes	0.715	0.278	1.00	Yes	1.00	**2.66**
		$U_{17} - L_{17}$	-----	-442.64	59	-74	202	-229	-123	-112	297	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.119	0.95	Yes	0.764	0.233	1.00	Yes	1.00	**2.08**
		$U_{18} - L_{18}$	-----	-540.14	142	-148	410	-432	-135	-120	290	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.083	0.88	Yes	0.751	0.245	1.00	Yes	1.00	**2.25**
		$U_{19} - L_{19}$	-----	-657.57	170	-168	485	-492	-116	-45	605	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.137	0.96	Yes	0.765	0.228	1.00	Yes	1.00	**2.48**
		$U_{20} - L_{20}$	-----	-594.82	159	-259	320	-480	31	4	515	68	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.207	1.00	Yes	0.692	0.223	0.92	Yes	1.00	**1.84**
	Structure 2	$U_0 - L_0$	-----	-676.63	-162	211	-448	566	-42	-7	-538	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.183	1.00	Yes	0.725	0.240	0.97	Yes	1.00	**2.63**
		$U_1 - L_1$	-----	-724.87	-117	126	-492	512	-106	-6	-817	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.163	1.00	Yes	0.777	0.217	1.00	Yes	1.00	**3.27**
		$U_2 - L_2$	-----	-607.98	-108	118	-398	432	-108	-38	385	54	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.117	0.94	Yes	0.775	0.221	1.00	Yes	1.00	**2.79**
		$U_3 - L_3$	-----	-495.92	-55	63	-220	237	78	-46	72	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.075	0.92	Yes	0.778	0.216	1.00	Yes	1.00	**2.52**
		$U_4 - L_4$	-----	-352.89	-15	23	-185	194	244	74	199	29	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.145	0.95	Yes	0.747	0.249	1.00	Yes	1.00	**2.56**
		$U_5 - L_5$	77.59	-339.29	59	-49	-158	190	-46	85	506	26	0.140	0.389	0.53	Yes	0.077	0.214	0.30	Yes	0.766	0.226	1.00	Yes	0.718	0.242	0.97	Yes	1.00	**3.22**
		$U_6 - L_6$	326.46	-265.66	186	-196	-200	217	54	99	440	48	0.587	0.405	1.00	Yes	0.323	0.223	0.55	Yes	0.598	0.204	0.81	Yes	0.562	0.278	0.84	Yes	1.00	**5.10**
		$U_7 - L_7$	-----	-324.21	142	-167	143	-153	-64	-34	735	76	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.260	1.00	Yes	0.686	0.213	0.90	Yes	1.00	**4.07**
		$U_8 - L_8$	-----	-485.06	64	-81	311	-339	-2	-63	652	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.162	0.87	Yes	0.699	0.296	1.00	Yes	1.00	**3.06**
		$U_9 - L_9$	-----	-686.02	158	-172	599	-604	-37	-194	120	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.086	0.85	Yes	0.735	0.256	1.00	Yes	1.00	**3.48**
		$U_{10} - L_{10}$	-----	-790.28	165	-191	555	-578	-39	-220	226	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.105	0.89	Yes	0.739	0.255	1.00	Yes	1.00	**3.62**
		$U_{11} - L_{11}$	-----	-824.62	186	-185	466	-505	-190	-69	668	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.145	0.98	Yes	0.771	0.223	1.00	Yes	1.00	**3.22**
		$U_{12} - L_{12}$	-----	-880.43	161	-149	534	-541	-220	-30	172	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.107	0.96	Yes	0.763	0.232	1.00	Yes	1.00	**3.27**
		$U_{13} - L_{13}$	-----	-744.52	210	-208	581	-560	-175	22	279	40	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.163	1.00	Yes	0.718	0.278	1.00	Yes	1.00	**2.81**
		$U_{14} - L_{14}$	-----	-1121.86	120	-116	353	-340	-30	198	1242	292	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.171	1.00	Yes	0.744	0.063	0.81	Yes	1.00	**3.86**
		$U_{15} - L_{15}$	-----	-742.65	-116	124	-581	577	-306	9	297	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.154	0.99	Yes	0.716	0.278	1.00	Yes	1.00	**4.28**
		$U_{16} - L_{16}$	-----	-710.60	-89	63	-480	476	-807	-260	-491	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.177	1.00	Yes	0.762	0.204	0.97	Yes	1.00	**3.52**
		$U_{17} - L_{17}$	-----	-656.53	-127	125	-477	495	-274	-185	57	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.114	0.93	Yes	0.764	0.230	1.00	Yes	1.00	**3.07**
		$U_{18} - L_{18}$	-----	-586.98	-94	94	-460	486	-114	-127	-82	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.111	0.90	Yes	0.748	0.249	1.00	Yes	1.00	**3.04**
		$U_{19} - L_{19}$	-----	-489.52	-56	60	-268	276	-66	-32	151	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.075	0.82	Yes	0.731	0.265	1.00	Yes	1.00	**2.63**
		$U_{20} - L_{20}$	-----	-399.86	-22	26	-183	199	-159	-34	389	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.153	0.98	Yes	0.766	0.227	1.00	Yes	1.00	**2.60**
	Structure 3	$U_{21} - L_{21}$	-----	-328.75	14	-10	-213	234	-90	28	156	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.121	0.87	Yes	0.696	0.299	1.00	Yes	1.00	**2.99**
		$U_{22} - L_{22}$	-----	-324.75	-114	133	56	-52	-46	-50	785	139	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.261	1.00	Yes	0.687	0.170	0.86	Yes	1.00	**4.25**
		$U_{23} - L_{23}$	-----	-335.67	-53	49	200	-223	84	73	618	29	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.236	1.00	Yes	0.710	0.285	1.00	Yes	1.00	**3.45**
		$U_{24} - L_{24}$	-----	-370.77	10	-22	242	-253	76	27	198	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.109	0.87	Yes	0.710	0.288	1.00	Yes	1.00	**2.73**
		$U_{25} - L_{25}$	-----	-468.03	38	-38	307	-301	-88	-29	239	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.097	0.81	Yes	0.699	0.296	1.00	Yes	1.00	**2.72**
		$U_{26} - L_{26}$	-----	-582.42	65	-69	446	-497	-124	-21	885	71	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.192	0.97	Yes	0.742	0.254	1.00	Yes	1.00	**3.07**
		$U_{27} - L_{27}$	-----	-627.18	85	-85	570	-572	-136	3	265	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.100	0.88	Yes	0.730	0.266	1.00	Yes	1.00	**3.16**
		$U_{28} - L_{28}$	-----	-710.48	74	-71	559	-552	-156	17	359	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.105	0.93	Yes	0.761	0.237	1.00	Yes	1.00	**3.41**
		$U_{29} - L_{29}$	-----	-675.14	121	-126	547	-542	-112	28	861	63	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.247	1.00	Yes	0.651	0.262	0.92	Yes	1.00	**3.38**
		$U_{30} - L_{30}$	-----	-1147.02	-63	52	202	-210	-180	65	1204	211	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.157	1.00	Yes	0.761	0.037	0.80	Yes	1.00	**4.80**
		$U_{31} - L_{31}$	-----	-757.02	-108	108	-509	493	-308	-34	95	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.154	1.00	Yes	0.730	0.243	0.98	Yes	1.00	**3.82**
		$U_{32} - L_{32}$	-----	-849.02	-81	58	-411	430	-689	-276	-99	-313	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1.00	Yes	0.736	0.184	0.93	Yes	1.00	**3.80**
		$U_{33} - L_{33}$	-----	-837.31	-117	106	-463	477	-472	-358	-251	-435	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.156	1.00	Yes	0.783	0.211	1.00	Yes	1.00	**3.90**
		$U_{34} - L_{34}$	-----	-826.79	-114	124	-465	506	-170	-156	362	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.083	0.90	Yes	0.773	0.223	1.00	Yes	1.00	**4.07**
		$U_{35} - L_{35}$	-----	-727.19	-112	126	-463	513	-142	-12	731	82	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.142	0.96	Yes	0.779	0.218	1.00	Yes	1.00	**3.60**
		$U_{36} - L_{36}$	-----	-488.71	-54	66	-306	330	-46	62	259	38	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.121	0.83	Yes	0.704	0.289	1.00	Yes	1.00	**2.98**
		$U_{37} - L_{37}$	-----	-344.74	-6	7	-52	68	-69	7	665	97	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.215	1.00	Yes	0.729	0.087	0.82	Yes	1.00	**4.44**
		$U_{38} - L_{38}$	297.27	-139.40	-190	202	72	-78	95	40	704	30	0.535	0.462	1.00	Yes	0.294	0.254	0.55	Yes	0.314	0.214	0.53	Yes	0.295	0.258	0.56	Yes	1.00	**3.83**
		$U_{39} - L_{39}$	153.44	-322.43	-133	120	225	-245	50	72	161	-102	0.276	0.360	0.64	Yes	0.152	0.198	0.35	Yes	0.728	0.110	0.84	Yes	0.682	0.313	1.00	Yes	1.00	**3.97**
		$U_{40} - L_{40}$	-----	-338.03	-19	1	216	-215	22	3	165	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.086	0.86	Yes	0.715	0.276	1.00	Yes	1.00	**2.89**
		$U_{41} - L_{41}$	-----	-488.40	27	-31	208	-230	7	-31	528	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1.00	Yes	0.766	0.209	0.98	Yes	1.00	**2.69**
		$U_{42} - L_{42}$	-----	-596.02	58	-67	432	-462	12	-35	588	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.133	0.94	Yes	0.759	0.236	1.00	Yes	1.00	**3.04**
		$U_{43} - L_{43}$	-----	-709.41	77	-90	535	-551	-50	-51	513	36	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.124	0.94	Yes	0.760	0.234	1.00	Yes	1.00	**3.24**
		$U_{44} - L_{44}$	-----	-652.60	117	-134	340	-457	-132	-22	867	147	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1.00	Yes	0.699	0.194	0.90	Yes	1.00	**2.60**
	Structure 4	$U_0 - L_0$	-----	-576.78	-146	194	-408	467	-56	-7	-820	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.230	1.00	Yes	0.671	0.217	0.89	Yes	1.00	**2.06**
		$U_1 - L_1$	-----	-670.00	-113	124	-438	466	-122	-3	-411	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.122	0.96	Yes	0.780	0.216	1.00	Yes	1.00	**3.14**
		$U_2 - L_2$	-----	-553.09	-111	117	-374	398	-148	-45	188	41	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.094	0.91	Yes	0.769	0.225	1.00	Yes	1.00	**2.59**
		$U_3 - L_3$	-----	-456.34	-47	60	-170	198	42	-64	335	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.138	1.00	Yes	0.787	0.201	0.99	Yes	1.00	**2.10**
		$U_4 - L_4$	-----	-333.72	-22	31	-211	223	15	22	106	9	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.107	0.86	Yes	0.706	0.285	1.00	Yes	1.00	**2.68**
		$U_5 - L_5$	88.58	-334.50	60	-56	-199	226	-66	86	381	33	0.159	0.399	0.56	Yes	0.088	0.220	0.31	Yes	0.750	0.200	0.95	Yes	0.708	0.289	1.00	Yes	1.00	**3.39**
		$U_6 - L_6$	-----	-316.90	158	-174	-39	41	-195	-32	863	93	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.284	1.00	Yes	0.671	0.223	0.90	Yes	1.00	**3.76**
		$U_7 - L_7$	-----	-376.30	8	-22	214	-242	-11	-18	269	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.121	0.89	Yes	0.721	0.276	1.00	Yes	1.00	**2.78**
		$U_8 - L_8$	-----	-523.06	62	-69	318	-330	-14	-84	320	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.104	0.86	Yes	0.718	0.282	1.00	Yes	1.00	**3.15**
		$U_9 - L_9$	-----	-666.32	117	-173	336	-472	6	-35	582	7	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.135	0.94	Yes	0.776	0.219	1.00	Yes	1.00	**3.21**
		$U_{10} - L_{10}$	-----	-777.37	119	-116	404	-439	-215	-100	199	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.106	0.92	Yes	0.767	0.228	1.00	Yes	1.00	**3.37**
		$U_{11} - L_{11}$	-----	-650.34	167	-192	420	-472	-167	-34	442	119	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.151	0.93	Yes	0.735	0.262	1.00	Yes	1.00	**2.39**
		$U_{12} - L_{12}$	-----	-1141.81	79	-109	262	-352	-122	34	1541	438	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.170	1.00	Yes	0.792	0.066	0.86	Yes	1.00	**3.77**
		$U_{13} - L_{13}$	-----	-461.20	-67	76	-266	286	-297	-42	32	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.156	0.93	Yes	0.711	0.282	1.00	Yes	1.00	**2.44**
		$U_{14} - L_{14}$	-----	-514.38	-45	30	-217	238	-707	-338	-459	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.217	1.00	Yes	0.738	0.208	0.95	Yes	1.00	**2.75**
		$U_{15} - L_{15}$	-----	-455.13	-45	50	-175	211	-355	-204	-60	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.165	0.99	Yes	0.785	0.214	1.00	Yes	1.00	**2.52**
		$U_{16} - L_{16}$	-----	-320.57	-61	60	-248	248	-535	-313	311	20	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.243	0.95	Yes	0.678	0.317	1.00	Yes	1.00	**4.56**
		$U_{17} - L_{17}$	263.81	-204.86	-281	290	42	-74	-118	89	523	71	0.474	0.522	1.00	Yes	0.261	0.287	0.55	Yes	0.449	0.201	0.66	Yes	0.433	0.371	0.81	Yes	1.00	**4.93**
		$U_{18} - L_{18}$	118.22	-325.41	-110	123	164	-222	-110	16	792	123	0.213	0.513	0.73	Yes	0.117	0.282	0.40	Yes	0.711	0.283	1.00	Yes	0.689	0.284	0.98	Yes	1.00	**4.03**
		$U_{19} - L_{19}$	47.07	-333.16	-56	44	228	-228	-84	-3	343	70	0.085	0.391	0.48	Yes	0.047	0.215	0.27	Yes	0.728	0.149	0.88	Yes	0.705	0.292	1.00	Yes	1.00	**2.63**
		$U_{20} - L_{20}$	-----	-378.21	19	-28	10	-89	-46	-15	-233	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.147	1.00	Yes	0.800	0.113	0.92	Yes	1.00	**1.50**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 Vehicle 1.300 Pedestrian 1.300
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$	673.84	-----	-78	50	-16	-2	60	-83	-11	5	0.884	0.112	1.00	Yes	0.534	0.062	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		$U_1 - L_2$	459.76	-81.11	-90	1	16	-19	-169	-136	-8	-16	0.827	0.164	1.00	Yes	0.455	0.090	0.55	Yes	0.186	0.136	0.33	Yes	0.172	0.115	0.29	Yes	1.00	**3.15**
		$U_2 - L_3$	417.90	-222.09	-113	-2	-48	-65	-347	-47	141	-59	0.752	0.244	1.00	Yes	0.413	0.134	0.55	Yes	0.511	0.215	0.73	Yes	0.470	0.144	0.62	Yes	1.00	**5.02**
		$U_3 - L_4$	-----	-375.82	-35	-53	-9	-76	-219	-174	32	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.140	1.00	Yes	0.795	0.097	0.90	Yes	1.00	**2.79**
		$U_4 - L_4$	562.10	-----	-97	23	-37	0	-199	-288	-310	-175	0.824	0.170	1.00	Yes	0.453	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		$U_5 - L_5$	669.29	-----	-209	211	-82	91	-337	-328	-465	-134	0.791	0.205	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.67**
		$U_5 - L_6$	653.76	-----	-293	246	-83	102	-249	-213	295	122	0.773	0.221	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_6 - L_7$	653.63	-----	-104	295	2	135	-116	-181	312	187	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_8 - L_8$	988.18	-----	-98	356	19	139	329	376	342	106	0.790	0.206	1.00	Yes	0.489	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_9 - L_{10}$	1004.62	-----	-303	230	-75	86	157	448	122	139	0.803	0.192	1.00	Yes	0.497	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_{10} - L_{11}$	986.95	-----	-255	174	-59	98	-4	351	22	184	0.834	0.164	1.00	Yes	0.516	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		$U_{11} - L_{12}$	846.80	-----	-255	106	-105	1	-10	235	-28	71	0.838	0.154	1.00	Yes	0.461	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_{12} - L_{13}$	650.31	-----	-204	144	-78	34	-68	119	-57	-100	0.793	0.202	1.00	Yes	0.499	0.113	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		$U_{13} - L_{14}$	461.88	-----	-91	42	-24	-26	-53	-56	-72	-169	0.831	0.166	1.00	Yes	0.457	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		$U_{15} - L_{14}$	227.87	-306.89	-60	-4	18	-96	-264	-235	-524	-112	0.410	0.274	0.69	Yes	0.225	0.151	0.38	Yes	0.719	0.271	1.00	Yes	0.649	0.122	0.78	Yes	1.00	**3.24**
		$U_{16} - L_{15}$	361.15	-----	-116	84	-35	-21	-344	-270	-679	-105	0.650	0.345	1.00	Yes	0.357	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
		$U_{17} - L_{16}$	509.69	-----	-143	87	-34	14	-452	-409	-110	-130	0.747	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		$U_{18} - L_{17}$	602.04	-----	-319	244	-111	76	-576	-493	-111	-117	0.712	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		$U_{19} - L_{18}$	669.28	-----	-349	252	-132	87	-533	-463	-66	-106	0.725	0.266	1.00	Yes	0.399	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_{20} - L_{19}$	716.18	-----	-254	254	-94	92	-530	-365	-102	-39	0.776	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
	Structure 2	$U_0 - L_1$	811.26	-----	-352	356	-113	98	-4	-191	-61	-50	0.803	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		$U_1 - L_2$	790.55	-----	-394	303	-95	71	-221	38	-100	-29	0.782	0.216	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		$U_2 - L_3$	657.43	-----	-333	271	-82	62	-164	39	-22	91	0.777	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		$U_3 - L_4$	594.49	-----	-183	130	-38	16	-157	11	105	61	0.792	0.199	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.76**
		$U_4 - L_5$	420.78	-----	-134	91	-6	-21	-224	74	-69	-143	0.757	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**
		$U_5 - L_6$	436.98	-248.94	-127	72	58	-105	-161	20	-170	-163	0.786	0.212	1.00	Yes	0.432	0.117	0.55	Yes	0.588	0.161	0.75	Yes	0.527	0.163	0.69	Yes	1.00	**4.34**
		$U_6 - L_7$	-----	-382.69	-53	-12	57	-104	-159	-83	-96	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1.00	Yes	0.733	0.119	0.86	Yes	1.00	**2.82**
		$U_8 - L_7$	550.11	-----	-167	130	-69	-7	-240	-406	-713	-165	0.701	0.295	1.00	Yes	0.442	0.170	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_8 - L_8$	682.35	-----	-331	210	-141	42	-480	-468	-518	-242	0.739	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		$U_{10} - L_9$	792.79	-----	-303	230	-135	61	-473	-441	75	-192	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{11} - L_{10}$	871.45	-----	-334	287	-107	131	-445	-464	141	-1	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{12} - L_{11}$	851.20	-----	-371	335	-118	154	-384	-435	223	77	0.775	0.217	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_{13} - L_{12}$	754.02	-----	-424	380	-151	154	-193	-159	336	128	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		$U_{14} - L_{13}$	746.76	-----	-271	424	-18	155	-260	-131	399	194	0.739	0.256	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_{14} - L_{15}$	632.71	-----	-223	358	27	70	235	162	215	-43	0.748	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_{15} - L_{16}$	633.05	-----	-369	342	-62	68	-163	201	-10	21	0.748	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_{16} - L_{17}$	711.36	-----	-327	333	-69	96	-296	314	-149	63	0.770	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_{17} - L_{18}$	655.71	-----	-289	284	-66	79	-43	291	-26	102	0.775	0.216	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{18} - L_{19}$	668.55	-----	-281	259	-49	68	68	255	34	20	0.790	0.205	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_{19} - L_{20}$	604.10	-----	-196	156	-33	14	24	230	-13	-39	0.770	0.222	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		$U_{20} - L_{21}$	449.91	-----	-127	113	-8	-7	19	90	-57	-90	0.809	0.188	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		$U_{21} - L_{22}$	440.72	-197.95	-118	49	25	-73	-32	98	-41	-178	0.793	0.202	1.00	Yes	0.436	0.111	0.55	Yes	0.468	0.142	0.61	Yes	0.419	0.151	0.57	Yes	1.00	**3.92**
		$U_{23} - L_{22}$	375.54	-290.52	-95	49	-1	-70	-220	-256	-677	-22	0.675	0.318	1.00	Yes	0.371	0.175	0.55	Yes	0.692	0.282	0.98	Yes	0.615	0.122	0.74	Yes	1.00	**3.90**
		$U_{24} - L_{23}$	412.60	-----	-119	105	-8	-16	-314	-215	-347	-44	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{25} - L_{24}$	564.27	-----	-183	177	-53	19	-390	-306	-548	-133	0.719	0.276	1.00	Yes	0.396	0.157	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{26} - L_{25}$	656.05	-----	-271	264	-26	38	-361	-352	120	47	0.776	0.219	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		$U_{27} - L_{26}$	643.21	-----	-298	265	-45	58	-331	-351	177	68	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{28} - L_{27}$	708.51	-----	-332	360	-47	66	-273	-248	204	113	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_{29} - L_{28}$	625.79	-----	-371	342	-73	72	-224	-169	211	102	0.740	0.251	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{30} - L_{29}$	628.82	-----	-225	346	38	102	-170	-226	318	159	0.743	0.253	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_{30} - L_{31}$	762.34	-----	-292	429	14	72	153	188	283	0	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_{31} - L_{32}$	759.93	-----	-438	380	-73	76	-190	252	15	48	0.752	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{32} - L_{33}$	887.31	-----	-356	347	-57	93	-282	280	-147	142	0.808	0.190	1.00	Yes	0.445	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{33} - L_{34}$	880.16	-----	-346	277	-67	90	-39	368	25	209	0.802	0.197	1.00	Yes	0.441	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{34} - L_{35}$	822.73	-----	-314	224	-93	48	16	267	88	-23	0.814	0.186	1.00	Yes	0.448	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{35} - L_{36}$	745.01	-----	-335	256	-97	32	15	85	-71	-132	0.807	0.193	1.00	Yes	0.444	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{36} - L_{37}$	612.05	-----	-195	144	-34	-11	-111	76	-68	-216	0.780	0.219	1.00	Yes	0.491	0.123	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{38} - L_{37}$	-----	-368.57	-24	-10	32	-78	-169	-211	-463	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.201	1.00	Yes	0.706	0.089	0.80	Yes	1.00	**2.15**
		$U_{39} - L_{38}$	324.76	-312.73	-99	54	64	-110	-365	-251	-464	-93	0.584	0.275	0.86	Yes	0.321	0.151	0.48	Yes	0.745	0.252	1.00	Yes	0.662	0.140	0.81	Yes	1.00	**4.01**
		$U_{40} - L_{39}$	377.29	-139.63	-122	94	-6	-33	-341	-271	-554	-96	0.679	0.316	1.00	Yes	0.373	0.174	0.55	Yes	0.334	0.217	0.56	Yes	0.295	0.156	0.46	Yes	1.00	**3.28**
		$U_{41} - L_{40}$	549.71	-----	-175	123	-17	2	-480	-383	-93	-78	0.733	0.260	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		$U_{42} - L_{41}$	609.07	-----	-329	248	-49	32	-476	-488	-67	-64	0.720	0.275	1.00	Yes	0.396	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_{43} - L_{42}$	751.96	-----	-382	314	-63	43	-486	-434	-3	-45	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{44} - L_{43}$	767.43	-----	-281	324	-93	79	-571	-323	60	-21	0.759	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
	Structure 3	$U_0 - L_1$	704.27	-----	-375	315	-112	93	-259	-165	-62	-53	0.763	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.11**
		$U_1 - L_2$	717.80	-----	-343	253	-99	67	-280	-52	-125	-44	0.777	0.222	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_2 - L_3$	645.40	-----	-331	242	-97	63	-253	126	-48	78	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		$U_3 - L_4$	554.17	-----	-150	108	-28	10	-140	-18	74	48	0.813	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		$U_4 - L_5$	426.86	-----	-133	91	-8	-29	-213	27	-102	-165	0.768	0.232	1.00	Yes	0.422	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.11**
		$U_5 - L_6$	418.23	-295.11	-112	-5	36	-103	-240	-11	-220	-330	0.752	0.239	1.00	Yes	0.414	0.132	0.55	Yes	0.691	0.218	0.91	Yes	0.624	0.144	0.77	Yes	1.00	**4.21**
		$U_7 - L_6$	427.41	-----	-85	34	-16	-37	-256	-287	-404	-185	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.89**
		$U_8 - L_7$	576.30	-----	-187	147	-85	11	-419	-372	-666	-227	0.702	0.293	1.00	Yes	0.442	0.168	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_8 - L_8$	746.64	-----	-247	90	-153	-19	-593	-547	-933	-460	0.739	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		$U_{10} - L_9$	927.64	-----	-266	147	-108	56	-585	-641	-626	-301	0.784	0.207	1.00	Yes	0.485	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{11} - L_{10}$	997.38	-----	-302	259	-82	89	-502	-426	231	89	0.797	0.198	1.00	Yes	0.494	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_{12} - L_{11}$	972.28	-----	-112	357	3	133	-450	-311	323	182	0.777	0.216	1.00	Yes	0.481	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{12} - L_{13}$	655.46	-----	-112	292	25	73	273	181	172	-14	0.775	0.216	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.44**
		$U_{13} - L_{14}$	668.67	-----	-286	241	-24	58	-81	229	-32	49	0.791	0.205	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_{14} - L_{15}$	710.64	-----	-197	193	-17	64	-205	244	34	73	0.840	0.156	1.00	Yes	0.462	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_{15} - L_{16}$	586.68	-----	-102	36	-16	11	-21	143	-46	55	0.860	0.137	1.00	Yes	0.473	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_{17} - L_{16}$	-----	-389.65	-12	-22	7	-53	25	20	-251	23	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.105	1.00	Yes	0.824	0.068	0.90	Yes	1.00	**2.67**
		$U_{18} - L_{17}$	226.93	-310.36	-83	-23	-25	-62	-293	-246	-640	-33	0.408	0.291	0.70	Yes	0.224	0.160	0.39	Yes	0.714	0.276	1.00	Yes	0.657	0.106	0.77	Yes	1.00	**3.61**
		$U_{19} - L_{18}$	409.25	-123.70	-100	12	24	-19	-443	-372	152	117	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	0.284	0.236	0.52	Yes	0.262	0.128	0.39	Yes	1.00	**2.89**
		$U_{20} - L_{19}$	633.01	-----	-15	31	-15	-7	-515	-399	105	118	0.830	0.166	1.00	Yes	0.501	0.091	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**

Axial AB Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-546.14	-24	78	269	-1052	21	-28	-41	-433	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.247	1	Yes	0.736	0.250	0.99	Yes	1.00	**3.88**
		$U_1 - U_2$	-----	-579.46	-49	91	-162	-809	-5	43	-42	72	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.204	1	Yes	0.781	0.192	0.98	Yes	1.00	**2.80**
		$U_2 - U_3$	137.52	-587.98	-93	260	-583	-607	-1	-90	151	-103	0.158	0.170	0.33	Yes	0.106	0.111	0.22	Yes	0.800	0.198	1	Yes	0.793	0.144	0.94	Yes	1.00	**2.82**
		$U_3 - U_4$	310.91	-547.87	93	254	-540	-661	-86	-80	3	-159	0.356	0.184	0.55	Yes	0.245	0.126	0.38	Yes	0.745	0.245	1	Yes	0.739	0.157	0.90	Yes	1.00	**3.42**
		$U_4 - U_5$	325.30	-563.44	106	255	-990	-18	-168	-19	-81	-102	0.373	0.264	0.64	Yes	0.256	0.181	0.44	Yes	0.767	0.220	0.99	Yes	0.760	0.235	1.00	Yes	1.00	**3.56**
		$U_5 - U_6$	603.59	-----	234	389	-1013	-77	-340	-12	-135	-341	0.692	0.298	1.00	Yes	0.467	0.195	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_6 - U_7$	791.05	-----	292	188	-806	37	-343	88	-468	-162	0.756	0.236	1.00	Yes	0.529	0.162	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
		$U_7 - U_8$	921.68	-----	-45	1197	-1447	2109	-265	339	-310	151	0.639	0.354	1.00	Yes	0.445	0.241	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_8 - U_9$	872.69	-----	1270	-162	1507	-1359	-98	249	3	213	0.715	0.283	1.00	Yes	0.489	0.193	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		$U_9 - U_{10}$	650.21	-----	228	236	-241	-870	107	436	157	561	0.705	0.285	1.00	Yes	0.478	0.191	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		$U_{10} - U_{11}$	-----	-617.58	247	-73	140	-920	223	101	315	45	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.193	0.99	Yes	0.788	0.206	1.00	Yes	1.00	**3.64**
		$U_{11} - U_{12}$	-----	-864.75	176	-117	-223	-910	164	101	271	134	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.179	1	Yes	0.811	0.151	0.97	Yes	1.00	**2.93**
		$U_{12} - U_{13}$	-----	-1234.53	-21	-159	-21	-1135	220	-29	243	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.162	1	Yes	0.825	0.156	0.99	Yes	1.00	**3.35**
		$U_{13} - U_{14}$	-----	-1366.51	-103	-348	-922	-1371	151	69	205	51	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.206	1	Yes	0.783	0.151	0.94	Yes	1.00	**3.21**
		$U_{14} - U_{15}$	-----	-1334.98	-246	-182	-1506	-946	184	-49	137	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.222	1	Yes	0.765	0.166	0.94	Yes	1.00	**3.08**
		$U_{15} - U_{16}$	-----	-1391.82	-70	-412	-1298	-559	23	-60	222	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.798	0.143	0.95	Yes	1.00	**3.09**
		$U_{16} - U_{17}$	-----	-1366.59	-315	-184	-1595	-377	51	-173	-61	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1	Yes	0.783	0.176	0.96	Yes	1.00	**3.19**
		$U_{17} - U_{18}$	-----	-1049.94	-167	-104	-933	42	-157	-224	-74	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.162	1	Yes	0.822	0.152	0.98	Yes	1.00	**2.97**
		$U_{18} - U_{19}$	-----	-719.03	-195	-30	-869	45	-196	-170	-44	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.184	1	Yes	0.809	0.175	0.99	Yes	1.00	**2.70**
		$U_{19} - U_{20}$	-----	-589.73	-187	-15	-1627	654	-129	7	374	15	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.264	0.94	Yes	0.663	0.327	1.00	Yes	1.00	**5.62**
	Structure 2	$U_0 - U_1$	-----	-625.78	173	-140	111	-1506	96	179	104	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.212	0.96	Yes	0.739	0.256	1.00	Yes	1.00	**5.61**
		$U_1 - U_2$	-----	-786.27	-105	-146	-88	-1081	340	643	208	282	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.229	1	Yes	0.759	0.164	0.93	Yes	1.00	**3.07**
		$U_2 - U_3$	-----	-1157.57	-81	-212	-124	-1347	608	4	460	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.167	1	Yes	0.822	0.137	0.96	Yes	1.00	**3.44**
		$U_3 - U_4$	-----	-1401.14	-360	-282	-1212	-1416	118	-302	245	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.190	1	Yes	0.798	0.126	0.93	Yes	1.00	**3.38**
		$U_4 - U_5$	-----	-1485.44	-361	-319	-1567	-1820	-68	-354	131	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.763	0.151	0.92	Yes	1.00	**3.27**
		$U_5 - U_6$	-----	-1508.01	-383	-3	-2067	-1101	-109	-296	36	-305	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.774	0.171	0.95	Yes	1.00	**3.28**
		$U_6 - U_7$	-----	-1314.42	-268	-75	-1174	-1958	-88	-265	-17	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.748	0.174	0.93	Yes	1.00	**3.02**
		$U_7 - U_8$	-----	-1335.10	-156	-199	-2108	-587	-184	-215	-89	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.228	1	Yes	0.760	0.188	0.95	Yes	1.00	**3.11**
		$U_8 - U_9$	-----	-1193.46	-284	104	-1518	-229	-226	-185	-50	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.179	1	Yes	0.809	0.161	0.98	Yes	1.00	**3.34**
		$U_9 - U_{10}$	-----	-940.10	-80	299	-1475	-92	-284	-133	-84	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.183	1	Yes	0.811	0.179	1.00	Yes	1.00	**3.63**
		$U_{10} - U_{11}$	510.61	-796.80	106	375	-1419	-196	-179	-75	-151	-212	0.431	0.226	0.66	Yes	0.294	0.146	0.44	Yes	0.797	0.199	1	Yes	0.792	0.200	1.00	Yes	1.00	**4.96**
		$U_{11} - U_{12}$	801.54	-----	174	509	-1872	373	-383	-178	-202	-435	0.677	0.317	1.00	Yes	0.455	0.212	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{12} - U_{13}$	1157.12	-----	308	33	-1114	-997	-526	-107	-781	-490	0.781	0.215	1.00	Yes	0.557	0.147	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.59**
		$U_{13} - U_{14}$	1376.66	-----	-293	2919	-414	1506	-652	300	-541	-174	0.677	0.315	1.00	Yes	0.479	0.207	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{14} - U_{15}$	1382.21	-----	2980	-27	1312	-100	-545	282	-245	148	0.680	0.313	1.00	Yes	0.481	0.205	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.57**
		$U_{15} - U_{16}$	1197.70	-----	65	328	-1415	-1780	53	746	376	864	0.724	0.275	1.00	Yes	0.515	0.186	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.17**
		$U_{16} - U_{17}$	966.82	-----	615	259	-22	-1769	304	327	574	372	0.712	0.282	1.00	Yes	0.474	0.186	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.56**
		$U_{17} - U_{18}$	758.97	-----	503	308	-616	-1196	35	173	205	173	0.762	0.233	1.00	Yes	0.507	0.155	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		$U_{18} - U_{19}$	463.60	-642.12	461	196	-216	-1420	13	46	178	-19	0.465	0.267	0.74	Yes	0.305	0.170	0.48	Yes	0.763	0.206	0.97	Yes	0.758	0.241	1.00	Yes	1.00	**4.80**
		$U_{19} - U_{20}$	258.37	-728.98	296	159	-709	-836	10	154	133	43	0.242	0.155	0.40	Yes	0.161	0.102	0.27	Yes	0.809	0.189	1	Yes	0.804	0.134	0.94	Yes	1.00	**4.06**
		$U_{20} - U_{21}$	-----	-848.81	139	-12	-864	-1016	104	-7	210	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.215	1	Yes	0.775	0.147	0.93	Yes	1.00	**3.88**
		$U_{21} - U_{22}$	-----	-801.02	-13	15	-821	-1399	-16	-51	59	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.257	1	Yes	0.731	0.203	0.94	Yes	1.00	**3.43**
		$U_{22} - U_{23}$	-----	-817.02	-17	-26	-1477	-460	-71	-103	93	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.246	1	Yes	0.746	0.214	0.96	Yes	1.00	**3.52**
		$U_{23} - U_{24}$	-----	-842.83	19	94	-1369	-136	-212	-107	23	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.219	1	Yes	0.769	0.198	0.97	Yes	1.00	**3.74**
		$U_{24} - U_{25}$	215.34	-743.42	118	245	-802	-394	-239	-35	-140	-159	0.202	0.161	0.37	Yes	0.134	0.105	0.24	Yes	0.825	0.168	1	Yes	0.820	0.128	0.95	Yes	1.00	**3.80**
		$U_{25} - U_{26}$	406.93	-672.32	162	411	-1197	179	-215	48	-96	-78	0.408	0.235	0.65	Yes	0.268	0.149	0.42	Yes	0.799	0.153	0.96	Yes	0.794	0.203	1.00	Yes	1.00	**4.58**
		$U_{26} - U_{27}$	741.89	-----	269	476	-1238	-391	-223	33	-250	-202	0.745	0.247	1.00	Yes	0.496	0.164	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		$U_{27} - U_{28}$	960.89	-----	219	572	-1869	-365	-359	-49	-282	-532	0.708	0.291	1.00	Yes	0.471	0.191	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		$U_{28} - U_{29}$	1156.58	-----	272	62	-1216	-2046	-438	73	-757	-366	0.699	0.297	1.00	Yes	0.497	0.200	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.30**
		$U_{29} - U_{30}$	1366.90	-----	-116	3026	-148	1300	-577	572	-127	326	0.672	0.320	1.00	Yes	0.476	0.210	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.84**
		$U_{30} - U_{31}$	1440.76	-----	2792	-135	1379	-347	-215	424	279	404	0.708	0.287	1.00	Yes	0.502	0.188	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		$U_{31} - U_{32}$	1105.82	-----	11	344	-1369	-731	190	652	453	759	0.747	0.245	1.00	Yes	0.532	0.167	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		$U_{32} - U_{33}$	872.97	-----	533	238	-273	-1334	328	295	605	129	0.737	0.262	1.00	Yes	0.495	0.175	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{33} - U_{34}$	605.11	-766.71	403	194	-569	-1486	134	189	258	138	0.511	0.241	0.76	Yes	0.348	0.156	0.51	Yes	0.767	0.231	1	Yes	0.762	0.210	0.98	Yes	1.00	**5.28**
		$U_{34} - U_{35}$	-----	-913.34	363	-12	89	-1670	115	1	174	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.165	0.96	Yes	0.788	0.203	1.00	Yes	1.00	**3.88**
		$U_{35} - U_{36}$	-----	-1195.35	159	-240	-850	-1264	100	92	244	26	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1	Yes	0.811	0.134	0.95	Yes	1.00	**3.70**
		$U_{36} - U_{37}$	-----	-1307.74	-134	-44	-931	-2208	166	-47	261	26	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.248	1	Yes	0.745	0.197	0.95	Yes	1.00	**3.29**
		$U_{37} - U_{38}$	-----	-1317.42	61	-232	-2142	-767	21	15	242	10	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.241	1	Yes	0.750	0.191	0.95	Yes	1.00	**3.33**
		$U_{38} - U_{39}$	-----	-1596.28	64	-389	-914	-1658	85	-99	266	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.169	1	Yes	0.820	0.137	0.96	Yes	1.00	**3.84**
		$U_{39} - U_{40}$	-----	-1491.20	-315	-465	-2101	-942	-117	-135	-5	-233	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.226	1	Yes	0.766	0.174	0.94	Yes	1.00	**3.38**
		$U_{40} - U_{41}$	-----	-1380.18	-391	-430	-1636	-939	-91	-131	-176	-284	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.208	1	Yes	0.786	0.146	0.94	Yes	1.00	**3.26**
		$U_{41} - U_{42}$	-----	-1143.93	-273	-175	-1785	-131	-98	38	-71	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1	Yes	0.812	0.182	1.00	Yes	1.00	**3.23**
		$U_{42} - U_{43}$	-----	-847.82	-265	-54	-1152	-102	115	-55	236	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.173	1	Yes	0.818	0.175	1.00	Yes	1.00	**3.48**
		$U_{43} - U_{44}$	-----	-585.58	-125	-166	-1804	448	-63	5	303	5	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.278	0.98	Yes	0.692	0.306	1.00	Yes	1.00	**5.61**
	Structure 3	$U_0 - U_1$	-----	-610.88	174	-173	567	-1525	62	128	-48	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.208	0.91	Yes	0.687	0.307	1.00	Yes	1.00	**5.61**
		$U_1 - U_2$	-----	-689.34	-69	-113	38	-774	252	511	198	289	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1	Yes	0.776	0.156	0.94	Yes	1.00	**2.72**
		$U_2 - U_3$	-----	-1032.71	-77	-116	103	-947	518	8	496	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.172	1	Yes	0.808	0.154	0.97	Yes	1.00	**3.05**
		$U_3 - U_4$	-----	-1362.53	-144	-200	-889	-1366	129	-238	247	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.201	1	Yes	0.781	0.151	0.94	Yes	1.00	**3.50**
		$U_4 - U_5$	-----	-1388.59	-320	-40	-1013	-1098	-16	-313	193	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1	Yes	0.796	0.121	0.92	Yes	1.00	**3.25**
		$U_5 - U_6$	-----	-1360.24	-147	-219	-1165	-1228	-53	-211	-20	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1	Yes	0.780	0.135	0.92	Yes	1.00	**3.32**
		$U_6 - U_7$	-----	-1389.74	-301	-79	-1349	-596	-96	-234	63	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1	Yes	0.797	0.149	0.95	Yes	1.00	**3.45**
		$U_7 - U_8$	-----	-1224.28	-123	-35	-959	-190	-216	-207	-33	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.163	1	Yes	0.818	0.132	0.95	Yes	1.00	**3.35**
		$U_8 - U_9$	-----	-898.39	-122	181	-869	-4	-102	-109	-81	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.148	1	Yes	0.843	0.144	0.99	Yes	1.00	**3.00**
		$U_9 - U_{10}$	-----	-596.92	-92	226	-1030	152	-206	-126	-142	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.209	0.98	Yes	0.762	0.231	1.00	Yes	1.00	**3.28**
		$U_{10} - U_{11}$	660.91	-----	229	234	-956	53	-330	-61	-391	-165	0.717	0.277	1.00	Yes	0.486	0.186	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		$U_{11} - U_{12}$	816.25	-----	-145	1109	-1358	1706	-315	148	-322	9	0.669	0.326	1.00	Yes	0.458	0.222	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_{12} - U_{13}$	1003.86	-----	1321	-38	1735	-1299	-361	110	-133	131	0.696	0.300	1.00	Yes	0.485	0.204	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{13} - U_{14}$	827.36	-----	198	318	-417	-650	-108	378	123	472	0.791	0.203	1.00	Yes	0.553	0.140	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		$U_{14} - U_{15}$	647.33	-----	424	242	-115	-773	48	155	417	9	0.742	0.254	1.00	Yes	0.500	0.167	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{15} - U_{16}$	307.25	-563.35	256	127	-374	-759	-2	136	142	167	0.352	0.209	0.57	Yes	0.242	0.143	0.39	Yes	0.767	0.228	1	Yes	0.760	0.180	0.95	Yes	1.00	**3.54**
		$U_{16} - U_{17}$	302.83	-564.67	291	71	-640	-322	41	61	251	-1	0.347	0.195	0.55	Yes	0.238	0.133	0.38	Yes	0.768	0.223	1	Yes	0.761	0.152	0.92	Yes	1.00	**3.53**
		$U_{17} - U_{18}$	120.62	-581.52	243	-127	-587	-346	-68	155	78	-73	0.138	0.166	0.31	Yes	0.093	0.108	0.21	Yes	0.791	0.204	1	Yes	0.784	0.139	0.93	Yes	1.00	**2.81**
		$U_{18} - U_{19}$	-----	-571.18	49	-27	-837	-155	160	24	125	24	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1	Yes	0.770	0.199	0.97	Yes	1.00	**2.67**
		$U_{19} - U_{20}$	-----	-536.85	126	-233	-870	-49	-58	21	285	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.265	1	Yes	0.724	0.207	0.94	Yes	1.00	**4.09**

Axial AB Operating

Operating Loads - HS20 Truck | Calc: BKC | Date: 10/28/2009 | Check: NRF | Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End																					
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass					
Center Truss - Lower Chord	Structure 1	L_0 - L_1	205.09	-147.60	643	-1268	524	-554	-379	-1396	80	270	0.314	0.680	1.00	Yes	0.185	0.408	0.60	Yes	0.268	0.462	0.74	Yes	0.266	0.381	0.65	Yes	1.00	**11.74**
		L_1 - L_2	450.38	-----	-221	-726	47	-4	-391	27	25	17	0.689	0.302	1.00	Yes	0.421	0.200	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.30**
		L_2 - L_3	668.83	-----	-626	-875	-29	72	-83	-21	7	-11	0.769	0.225	1.00	Yes	0.445	0.135	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		L_3 - L_4	627.53	-171.40	-971	-175	49	210	-78	219	-29	34	0.722	0.270	1.00	Yes	0.429	0.174	0.61	Yes	0.234	0.214	0.45	Yes	0.232	0.234	0.47	Yes	1.00	**3.37**
		L_4 - L_5	-----	-562.87	-449	-453	109	516	-258	35	187	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.117	0.99	Yes	0.858	0.137	1.00	Yes	1.00	**4.59**
		L_5 - L_6	-----	-750.57	-382	-172	139	579	-60	-15	17	86	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.122	1	Yes	0.866	0.128	1.00	Yes	1.00	**4.39**
		L_6 - L_7	-----	-1043.93	-1014	-262	140	13	65	70	191	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.147	1	Yes	0.840	0.159	1.00	Yes	1.00	**5.14**
		L_7 - L_8	-----	-1259.96	-33	583	-41	1373	41	72	159	214	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.798	0.182	0.98	Yes	1.00	**5.45**
		L_8 - L_9	-----	-1269.60	554	-47	1401	-92	37	-14	128	32	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.180	1	Yes	0.804	0.185	0.99	Yes	1.00	**5.40**
		L_9 - L_{10}	-----	-1069.83	-656	-865	109	94	24	9	-8	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.115	0.99	Yes	0.861	0.136	1.00	Yes	1.00	**7.69**
		L_{10} - L_{11}	-----	-556.30	-195	-565	500	-10	91	-161	76	10	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.112	0.97	Yes	0.848	0.150	1.00	Yes	1.00	**5.58**
		L_{11} - L_{12}	604.76	-----	-80	-544	348	-192	-386	166	-13	15	0.783	0.212	1.00	Yes	0.470	0.136	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		L_{12} - L_{13}	1060.23	-----	-414	-733	76	-96	-43	-263	-21	-38	0.837	0.161	1.00	Yes	0.535	0.096	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		L_{13} - L_{14}	1290.12	-----	-178	-1577	223	-389	-223	132	-105	65	0.759	0.236	1.00	Yes	0.492	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_{14} - L_{15}	1577.13	-----	-1737	-988	-353	-83	-199	47	-67	-47	0.771	0.223	1.00	Yes	0.501	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		L_{15} - L_{16}	1660.48	-----	-1402	-1469	-191	-388	-60	-18	-73	15	0.811	0.182	1.00	Yes	0.521	0.106	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{16} - L_{17}	1240.06	-----	-1336	-173	-394	41	-149	78	-37	-64	0.784	0.209	1.00	Yes	0.509	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		L_{17} - L_{18}	916.19	-----	-946	-142	-188	-53	-16	-134	-41	-1	0.798	0.199	1.00	Yes	0.511	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		L_{18} - L_{19}	445.36	-----	-815	232	-265	189	-182	309	5	-17	0.682	0.309	1.00	Yes	0.461	0.194	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		L_{19} - L_{20}	357.99	-----	-301	29	-1436	915	-4	-1	-57	-19	0.548	0.443	1.00	Yes	0.334	0.301	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.64**
	Structure 2	L_0 - L_1	234.12	-----	658	-2115	934	-2088	-501	-1727	50	203	0.284	0.714	1.00	Yes	0.169	0.448	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.92**
		L_1 - L_2	548.52	-----	243	-1228	156	-207	-506	288	79	102	0.666	0.333	1.00	Yes	0.396	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		L_2 - L_3	1033.97	-----	-297	-1071	-18	-140	174	-214	123	167	0.815	0.178	1.00	Yes	0.534	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		L_3 - L_4	1329.69	-----	-258	-1592	56	-319	-393	198	45	121	0.781	0.218	1.00	Yes	0.526	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		L_4 - L_5	1734.25	-----	-1659	-1355	-236	-224	422	40	17	-14	0.809	0.185	1.00	Yes	0.535	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		L_5 - L_6	1883.27	-----	-1593	-1835	-23	-320	-455	156	-95	59	0.808	0.191	1.00	Yes	0.542	0.117	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		L_6 - L_7	1818.23	-----	-2463	-1273	-373	-83	85	193	53	-13	0.770	0.228	1.00	Yes	0.511	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		L_7 - L_8	1341.78	-----	-1924	-757	-186	227	-129	59	-72	77	0.769	0.223	1.00	Yes	0.505	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		L_8 - L_9	1102.53	-----	-1540	-84	-123	490	-98	26	41	-125	0.771	0.220	1.00	Yes	0.519	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		L_9 - L_{10}	839.58	-583.76	-1493	-248	-86	599	10	-49	-38	31	0.749	0.245	1.00	Yes	0.436	0.153	0.59	Yes	0.617	0.176	0.8	Yes	0.613	0.239	0.86	Yes	1.00	**5.78**
		L_{10} - L_{11}	-----	-676.85	-1133	198	-1	559	-108	46	116	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.102	0.91	Yes	0.795	0.198	1.00	Yes	1.00	**4.49**
		L_{11} - L_{12}	-----	-1047.76	-694	-166	-1	989	-46	-119	34	89	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.102	0.97	Yes	0.859	0.135	1.00	Yes	1.00	**5.76**
		L_{12} - L_{13}	-----	-1445.60	-380	-237	-60	-934	-23	-180	432	207	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.124	1	Yes	0.865	0.093	0.96	Yes	1.00	**6.99**
		L_{13} - L_{14}	-----	-1501.11	-480	1324	-1004	2727	-188	-254	209	219	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.172	0.94	Yes	0.755	0.238	1.00	Yes	1.00	**6.11**
		L_{14} - L_{15}	-----	-1484.08	1258	-544	2835	-845	-241	-169	16	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.179	0.94	Yes	0.747	0.248	1.00	Yes	1.00	**5.51**
		L_{15} - L_{16}	-----	-1474.64	-506	-97	-1099	204	-109	7	-195	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.104	1	Yes	0.882	0.109	1.00	Yes	1.00	**7.87**
		L_{16} - L_{17}	-----	-1168.64	-67	-806	1164	81	167	69	4	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.129	0.99	Yes	0.851	0.144	1.00	Yes	1.00	**6.62**
		L_{17} - L_{18}	-----	-836.06	-32	-703	496	190	-368	143	17	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.884	0.112	1	Yes	0.878	0.112	1.00	Yes	1.00	**4.94**
		L_{18} - L_{19}	-----	-655.73	-374	-534	632	87	251	-50	-12	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.112	1	Yes	0.874	0.122	1.00	Yes	1.00	**4.94**
		L_{19} - L_{20}	694.51	-547.53	-676	-889	508	169	-73	221	-25	-32	0.787	0.205	1.00	Yes	0.465	0.130	0.60	Yes	0.734	0.140	0.88	Yes	0.730	0.172	0.91	Yes	1.00	**5.77**
		L_{20} - L_{21}	994.57	-392.17	-1171	-999	399	21	243	-37	1	-37	0.793	0.197	1.00	Yes	0.520	0.118	0.64	Yes	0.370	0.217	0.59	Yes	0.368	0.171	0.54	Yes	1.00	**5.92**
		L_{21} - L_{22}	972.68	-----	-1307	-1255	221	-139	-75	267	-55	19	0.776	0.219	1.00	Yes	0.519	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		L_{22} - L_{23}	912.49	-----	-1735	-1051	-144	185	-126	135	22	-42	0.728	0.268	1.00	Yes	0.487	0.167	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		L_{23} - L_{24}	921.86	-325.99	-1707	-805	-3	308	-79	71	-8	64	0.735	0.258	1.00	Yes	0.482	0.152	0.64	Yes	0.308	0.249	0.56	Yes	0.306	0.249	0.56	Yes	1.00	**5.21**
		L_{24} - L_{25}	651.18	-469.29	-1278	-297	111	458	-59	26	98	-95	0.738	0.262	1.00	Yes	0.436	0.168	0.61	Yes	0.629	0.170	0.8	Yes	0.625	0.247	0.88	Yes	1.00	**5.21**
		L_{25} - L_{26}	-----	-622.40	-842	-303	69	580	-35	-83	15	80	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.124	0.96	Yes	0.829	0.163	1.00	Yes	1.00	**5.17**
		L_{26} - L_{27}	-----	-840.75	-685	-445	168	502	-71	33	149	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.091	0.98	Yes	0.883	0.110	1.00	Yes	1.00	**5.72**
		L_{27} - L_{28}	-----	-1180.87	-1006	-74	67	1123	-94	-272	91	192	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.128	1	Yes	0.860	0.138	1.00	Yes	1.00	**7.54**
		L_{28} - L_{29}	-----	-1548.64	-177	-446	-177	-139	145	99	286	16	-----	-----	-----	-----	-----	-----	-----	-----	0.934	0.061	1	Yes	0.926	0.044	0.98	Yes	1.00	**8.64**
		L_{29} - L_{30}	-----	-1495.80	-499	1192	-742	2728	89	120	43	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.168	0.93	Yes	0.753	0.238	1.00	Yes	1.00	**5.56**
		L_{30} - L_{31}	-----	-1449.92	1248	-471	3043	-902	124	69	150	0	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.183	0.92	Yes	0.730	0.266	1.00	Yes	1.00	**6.23**
		L_{31} - L_{32}	-----	-1501.67	-283	-311	-807	213	85	61	-154	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.906	0.089	1	Yes	0.898	0.080	0.98	Yes	1.00	**8.23**
		L_{32} - L_{33}	-----	-1041.54	38	-736	1012	53	287	-94	-27	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.121	0.99	Yes	0.854	0.138	1.00	Yes	1.00	**5.81**
		L_{33} - L_{34}	-----	-735.02	54	-746	546	107	-302	212	19	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.102	0.98	Yes	0.863	0.131	1.00	Yes	1.00	**4.93**
		L_{34} - L_{35}	868.00	-687.59	-431	-1056	699	-7	399	-95	-5	-68	0.775	0.217	1.00	Yes	0.451	0.134	0.59	Yes	0.727	0.148	0.88	Yes	0.722	0.169	0.90	Yes	1.00	**6.48**
		L_{35} - L_{36}	1111.68	-----	-63	-1462	521	-64	-213	137	-76	14	0.778	0.217	1.00	Yes	0.524	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		L_{36} - L_{37}	1304.59	-----	-433	-2125	316	-75	27	161	33	-9	0.748	0.248	1.00	Yes	0.491	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		L_{37} - L_{38}	1834.89	-----	-1953	-2428	32	-422	-98	109	-64	48	0.777	0.220	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		L_{38} - L_{39}	1792.85	-----	-2427	-1426	-369	-76	-84	135	8	-62	0.769	0.224	1.00	Yes	0.516	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		L_{39} - L_{40}	1699.93	-----	-2057	-1442	-261	-389	-41	-74	-54	5	0.793	0.199	1.00	Yes	0.525	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_{40} - L_{41}	1320.64	-----	-1754	-499	-427	20	-134	138	2	-15	0.776	0.216	1.00	Yes	0.523	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		L_{41} - L_{42}	1029.75	-----	-1183	-229	-194	-98	97	59	28	121	0.812	0.184	1.00	Yes	0.532	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		L_{42} - L_{43}	541.98	-----	-1303	93	-322	171	-79	442	149	65	0.658	0.338	1.00	Yes	0.392	0.215	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_{43} - L_{44}	228.19	-----	-626	69	-3067	1221	-564	-166	148	37	0.277	0.717	1.00	Yes	0.165	0.461	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.49**
	Structure 3	L_0 - L_1	273.85	-----	643	-1144	728	-1110	-246	-1141	43	183	0.419	0.580	1.00	Yes	0.256	0.379	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.11**
		L_1 - L_2	455.70	-----	281	-761	157	-191	-344	271	37	63	0.697	0.300	1.00	Yes	0.472	0.189	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		L_2 - L_3	937.44	-----	-125	-779	-21	-144	119	-223	89	131	0.816	0.179	1.00	Yes	0.523	0.107	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_3 - L_4	1257.13	-----	-407	-1138	44	-302	-399	193	27	120	0.795	0.203	1.00	Yes	0.516	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_4 - L_5	1667.35	-----	-1353	-1036	-272	-131	284	-28	24	14	0.815	0.183	1.00	Yes	0.523	0.107	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_5 - L_6	1661.75	-----	-1302	-1258	-28	-297	-29	390	-61	130	0.812	0.184	1.00	Yes	0.528	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_6 - L_7	1309.72	-----	-1601	-286	-346	204	-105	71	3	-31	0.770	0.229	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		L_7 - L_8	1047.46	-----	-900	-481	-92	53	17	107	-21	70	0.827	0.172	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		L_8 - L_9	603.98	-----	-726	31	-199	337	-45	61	60	-92	0.782	0.208	1.00	Yes	0.469	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		L_9 - L_{10}	378.59	-560.45	-515	-332	-25	510	14	25	-19	17	0.490	0.141	0.64	Yes	0.286	0.086	0.38	Yes	0.862	0.107	0.97	Yes	0.854	0.136	1.00	Yes	1.00	**5.83**
		L_{10} - L_{11}	-----	-980.39	-1324	-72	63	144	64	30	103	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.144	0.95	Yes	0.789	0.208	1.00	Yes	1.00	**7.02**
		L_{11} - L_{12}	-----	-1253.83	-55	534	-149	1452	-92	-105	-139	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1	Yes	0.794	0.192	0.99	Yes	1.00	**5.55**
		L_{12} - L_{13}	-----	-1243.04	557	-34	1390	-58	-137	-145	-284	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.200	1	Yes	0.787	0.184	0.98	Yes	1.00	**5.33**
		L_{13} - L_{14}	-----	-1064.55	-393	-590	-54	141	-465	-167	-133	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.133	1	Yes	0.857	0.093	0.95	Yes	1.00	**5.32**
		L_{14} - L_{15}	-----	-748.21	-131	-393	575	138	129	-82	-1	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.119	1	Yes	0.863	0.127	1.00	Yes	1.00	**4.47**
		L_{15} - L_{16}	-----	-554.05	-215	-566	483	158	-449	441	12	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.143	1	Yes	0.844	0.150	1.00	Yes	1.00	**4.55**
		L_{16} - L_{17}	679.33	-152.29	-608	-794	253	10	-92	132	33	-76	0.782	0.213	1.00	Yes	0.464	0.138	0.61	Yes	0.208	0.223	0.44	Yes	0.206	0.192	0.40	Yes	1.00	**3.59**
		L_{17} - L_{18}	675.87	-----	-752	-793	42	-70	74	183	18	107	0.778	0.221	1.00	Yes	0.450	0.132	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		L_{18} - L_{19}	467.47	-----	-746	-184	-18	31	7	254	49	-76	0.715	0.278	1.00	Yes	0.436	0.186	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		L_{19} - L_{20}	109.23	-----	-1998	905	-1136	905	1054	288	-162	-42	0.167	0.826	1.00	Yes	0.098	0.500	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.51**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression										
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-375.05	-24	48	-59	120	-99	-32	-277	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1	Yes	0.794	0.153	0.95	Yes	1.00	**1.19**
		$U_1 - L_1$			-----	-348.49	20	-15	-181	201	45	20	-380	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.169	0.94	Yes	0.737	0.257	1.00	Yes	1.00	**3.05**
		$U_2 - L_2$			80.94	-338.66	72	-79	-159	215	35	7	137	132	0.146	0.314	0.46	Yes	0.080	0.173	0.26	Yes	0.740	0.143	0.89	Yes	0.717	0.274	1.00	Yes	1.00	**4.55**
		$U_3 - L_3$			237.25	-317.00	254	-251	-148	196	-424	-168	45	195	0.427	0.448	0.88	Yes	0.235	0.246	0.49	Yes	0.695	0.181	0.88	Yes	0.671	0.325	1.00	Yes	1.00	**5.97**
		$U_4 - L_4$			-----	-354.38	-28	20	193	-188	-92	-20	221	63	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.121	0.9	Yes	0.750	0.246	1.00	Yes	1.00	**4.19**
		$U_5 - L_5$			-----	-443.11	24	-38	195	-232	-121	-43	51	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.102	0.91	Yes	0.764	0.236	1.00	Yes	1.00	**3.18**
		$U_6 - L_6$			-----	-535.20	51	-63	222	-260	-82	58	-10	31	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.086	0.9	Yes	0.768	0.228	1.00	Yes	1.00	**2.94**
		$U_7 - L_7$			-----	-450.84	118	-132	272	-300	-129	46	29	75	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.118	0.88	Yes	0.696	0.295	1.00	Yes	1.00	**1.87**
		$U_8 - L_8$			-----	-1335.06	-1	-4	-184	221	-195	-68	-197	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.964	0.031	1	Yes	0.926	0.041	0.97	Yes	1.00	**4.08**
		$U_9 - L_9$			-----	-671.42	-166	190	-374	432	-224	-158	-249	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.128	0.93	Yes	0.758	0.240	1.00	Yes	1.00	**2.48**
		$U_{10} - L_{10}$			-----	-817.23	-115	107	-303	364	-205	-147	-264	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.112	0.96	Yes	0.806	0.189	1.00	Yes	1.00	**3.90**
		$U_{11} - L_{11}$			-----	-688.64	-70	148	-288	427	-126	11	129	106	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.088	0.92	Yes	0.801	0.198	1.00	Yes	1.00	**3.71**
		$U_{12} - L_{12}$			-----	-547.29	-63	63	-267	285	-165	-3	-112	70	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.096	0.89	Yes	0.751	0.244	1.00	Yes	1.00	**3.36**
		$U_{13} - L_{13}$			-----	-395.20	-4	23	-179	208	-87	80	-77	105	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.087	0.89	Yes	0.757	0.238	1.00	Yes	1.00	**2.67**
		$U_{14} - L_{14}$			-----	-316.76	-237	255	-174	186	-87	-11	154	40	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.134	0.85	Yes	0.670	0.326	1.00	Yes	1.00	**4.34**
		$U_{15} - L_{15}$			235.32	-352.29	-183	179	172	-197	-108	-94	-102	-179	0.423	0.304	0.73	Yes	0.233	0.167	0.41	Yes	0.790	0.148	0.94	Yes	0.745	0.252	1.00	Yes	1.00	**4.63**
		$U_{16} - L_{16}$			-----	-350.16	-48	32	182	-202	-60	-79	154	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.118	0.91	Yes	0.741	0.258	1.00	Yes	1.00	**3.56**
		$U_{17} - L_{17}$			-----	-450.55	34	-56	184	-212	-91	-52	46	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.103	0.95	Yes	0.777	0.216	1.00	Yes	1.00	**2.87**
		$U_{18} - L_{18}$			-----	-552.92	123	-128	369	-399	-162	-62	73	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.092	0.91	Yes	0.769	0.226	1.00	Yes	1.00	**3.01**
		$U_{19} - L_{19}$			-----	-645.88	139	-152	426	-461	-65	11	853	62	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.189	1	Yes	0.752	0.214	0.97	Yes	1.00	**3.16**
		$U_{20} - L_{20}$			-----	-578.25	166	-213	422	-494	27	4	797	104	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.673	0.229	0.91	Yes	1.00	**2.44**
	Structure 2	$U_0 - L_0$			-----	-640.50	-113	178	-383	504	-260	-44	-933	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.233	1	Yes	0.686	0.214	0.91	Yes	1.00	**2.56**
		$U_1 - L_1$			-----	-730.02	-114	122	-470	504	37	-67	-734	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.161	1	Yes	0.782	0.214	1.00	Yes	1.00	**3.65**
		$U_2 - L_2$			-----	-612.30	-87	96	-390	426	90	41	-205	30	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.083	0.91	Yes	0.780	0.218	1.00	Yes	1.00	**3.35**
		$U_3 - L_3$			-----	-504.45	-46	52	-199	223	15	125	110	147	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.106	0.97	Yes	0.791	0.203	1.00	Yes	1.00	**3.07**
		$U_4 - L_4$			-----	-359.87	-6	17	-173	185	-93	60	-82	110	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.083	0.9	Yes	0.761	0.236	1.00	Yes	1.00	**3.01**
		$U_5 - L_5$			136.31	-355.82	121	-100	-160	189	-123	75	88	143	0.245	0.283	0.53	Yes	0.135	0.156	0.30	Yes	0.804	0.105	0.91	Yes	0.753	0.242	1.00	Yes	1.00	**3.95**
		$U_6 - L_6$			359.20	-279.51	230	-228	-157	169	-53	156	204	172	0.646	0.353	1.00	Yes	0.355	0.194	0.55	Yes	0.629	0.094	0.73	Yes	0.591	0.294	0.89	Yes	1.00	**5.43**
		$U_7 - L_7$			-----	-370.64	-23	30	148	-161	-87	-11	-97	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.093	0.94	Yes	0.784	0.206	1.00	Yes	1.00	**4.42**
		$U_8 - L_8$			-----	-494.43	23	-38	304	-329	-133	-136	88	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.107	0.83	Yes	0.712	0.287	1.00	Yes	1.00	**3.64**
		$U_9 - L_9$			-----	-706.49	79	-114	502	-555	-128	-106	132	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.081	0.87	Yes	0.757	0.235	1.00	Yes	1.00	**4.50**
		$U_{10} - L_{10}$			-----	-818.54	109	-146	456	-513	-56	7	-111	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.087	0.9	Yes	0.765	0.226	1.00	Yes	1.00	**4.51**
		$U_{11} - L_{11}$			-----	-838.11	159	-173	445	-484	-51	-132	168	34	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.096	0.94	Yes	0.784	0.213	1.00	Yes	1.00	**3.89**
		$U_{12} - L_{12}$			-----	-896.59	159	-152	483	-516	-2	54	231	124	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.124	0.99	Yes	0.777	0.221	1.00	Yes	1.00	**4.10**
		$U_{13} - L_{13}$			-----	-762.87	243	-241	545	-548	-86	43	-32	66	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.103	0.96	Yes	0.735	0.262	1.00	Yes	1.00	**3.01**
		$U_{14} - L_{14}$			-----	-1327.25	152	-148	316	-305	-59	128	173	57	-----	-----	-----	-----	-----	-----	-----	-----	0.971	0.024	1	Yes	0.880	0.056	0.94	Yes	1.00	**4.21**
		$U_{15} - L_{15}$			-----	-745.81	-165	166	-581	583	-77	-43	58	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.121	0.96	Yes	0.719	0.279	1.00	Yes	1.00	**3.78**
		$U_{16} - L_{16}$			-----	-738.50	-116	105	-476	483	-157	-92	-284	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.103	0.96	Yes	0.791	0.205	1.00	Yes	1.00	**3.55**
		$U_{17} - L_{17}$			-----	-663.05	-132	128	-468	490	-100	-36	-164	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.086	0.91	Yes	0.772	0.227	1.00	Yes	1.00	**3.42**
		$U_{18} - L_{18}$			-----	-594.83	-104	105	-412	455	-85	-14	78	48	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.076	0.87	Yes	0.758	0.233	1.00	Yes	1.00	**3.45**
		$U_{19} - L_{19}$			-----	-502.82	-49	53	-249	259	-151	-13	-140	24	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.086	0.85	Yes	0.751	0.249	1.00	Yes	1.00	**3.03**
		$U_{20} - L_{20}$			-----	-401.02	-10	14	-180	195	-150	4	18	68	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.101	0.93	Yes	0.768	0.223	1.00	Yes	1.00	**3.00**
	Structure 3	$U_0 - L_0$			-----	-347.50	38	-37	-186	207	-153	23	56	81	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.116	0.91	Yes	0.735	0.264	1.00	Yes	1.00	**3.45**
		$U_1 - L_1$			-----	-385.26	123	-139	80	-78	-180	-62	-139	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.110	0.98	Yes	0.815	0.177	1.00	Yes	1.00	**5.03**
		$U_2 - L_2$			140.23	-348.74	-94	90	181	-202	-89	-78	123	-67	0.252	0.294	0.55	Yes	0.139	0.162	0.31	Yes	0.788	0.123	0.92	Yes	0.738	0.259	1.00	Yes	1.00	**4.09**
		$U_3 - L_3$			-----	-392.81	-43	32	193	-212	-69	-62	84	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.098	0.91	Yes	0.753	0.242	1.00	Yes	1.00	**3.77**
		$U_4 - L_4$			-----	-492.67	22	-36	252	-267	-81	1	-86	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.082	0.83	Yes	0.736	0.257	1.00	Yes	1.00	**3.33**
		$U_5 - L_5$			-----	-589.77	90	-111	429	-485	-89	-5	157	26	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.092	0.88	Yes	0.752	0.248	1.00	Yes	1.00	**3.53**
		$U_6 - L_6$			-----	-643.29	143	-144	505	-532	-149	0	97	50	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.084	0.88	Yes	0.749	0.247	1.00	Yes	1.00	**3.58**
		$U_7 - L_7$			-----	-724.91	139	-136	485	-511	-117	23	33	63	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.072	0.91	Yes	0.777	0.217	1.00	Yes	1.00	**3.56**
		$U_8 - L_8$			-----	-732.70	206	-211	596	-601	-115	26	148	60	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.123	0.94	Yes	0.706	0.287	1.00	Yes	1.00	**3.50**
		$U_9 - L_9$			-----	-1325.64	51	-63	234	-243	-92	115	-127	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.969	0.030	1	Yes	0.879	0.043	0.93	Yes	1.00	**4.45**
		$U_{10} - L_{10}$			-----	-768.41	-183	179	-523	519	-120	-60	-174	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.134	1	Yes	0.741	0.250	1.00	Yes	1.00	**3.24**
		$U_{11} - L_{11}$			-----	-915.16	-130	108	-444	469	-186	-96	-295	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.122	1	Yes	0.793	0.201	1.00	Yes	1.00	**4.17**
		$U_{12} - L_{12}$			-----	-845.41	-156	156	-451	470	-142	-51	-125	0	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.081	0.94	Yes	0.790	0.207	1.00	Yes	1.00	**4.13**
		$U_{13} - L_{13}$			-----	-829.61	-121	133	-444	488	-168	-14	-137	58	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.083	0.91	Yes	0.776	0.216	1.00	Yes	1.00	**4.35**
		$U_{14} - L_{14}$			-----	-725.81	-117	132	-460	513	-173	37	161	181	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.074	0.89	Yes	0.778	0.217	1.00	Yes	1.00	**4.09**
		$U_{15} - L_{15}$			-----	-497.50	-47	60	-295	318	-151	65	109	154	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.089	0.82	Yes	0.717	0.278	1.00	Yes	1.00	**3.36**
		$U_{16} - L_{16}$			-----	-341.13	-178	214	-27	38	-81	32	-145	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.128	0.9	Yes	0.722	0.274	1.00	Yes	1.00	**4.08**
		$U_{17} - L_{17}$			357.25	-----	-244	252	72	-78	-69	-104	110	-111	0.643	0.354	1.00	Yes	0.353	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{18} - L_{18}$			250.04	-324.13	-193	180	228	-245	-110	-107	-125	-165	0.450	0.360	0.82	Yes	0.247	0.198	0.45	Yes	0.732	0.155	0.89	Yes	0.686	0.313	1.00	Yes	1.00	**4.84**
		$U_{19} - L_{19}$			-----	-358.23	-52	30	167	-183	-84	-40	-101	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.120	0.94	Yes	0.758	0.234	1.00	Yes	1.00	**3.61**
		$U_{20} - L_{20}$			-----	-504.09	44	-51	203	-230	-104	-43	150	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.110	0.97	Yes	0.791	0.209	1.00	Yes	1.00	**3.29**
		$U_{21} - L_{21}$			-----	-598.43	102	-112	433	-463	-84	-49	283	24	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.114	0.92	Yes	0.763	0.237	1.00	Yes	1.00	**3.62**
		$U_{22} - L_{22}$			-----	-717.94	137	-154	474	-522	-39	-18	825	122	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.174	1	Yes	0.769	0.221	1.00	Yes	1.00	**3.67**
		$U_{23} - L_{23}$			-----	-641.16	195	-242	437	-532	-25	-4	924	157	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.227	1	Yes	0.687	0.226	0.92	Yes	1.00	**2.42**
		$U_0 - L_0$			-----	-583.99	-106	171	-288	394	-249	-33	-758	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1	Yes	0.680	0.183	0.87	Yes	1.00	**2.06**
		$U_1 - L_1$			-----	-617.16	-115	123	-378	412	-4	-78	-1136	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.227	1	Yes	0.718	0.191	0.91	Yes	1.00	**3.04**
		$U_2 - L_2$			-----	-562.23	-94	100	-350	381	81	30	-164	45	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.090	0.92	Yes	0.782	0.215	1.00	Yes	1.00	**3.02**
		$U_3 - L_3$			-----	-461.53	-35	47	-165	194	-2	118	96	161	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.116	0.98	Yes	0.796	0.197	1.00	Yes	1.00	**2.72**
		$U_4 - L_4$			-----	-344.02	25	-7	-198	211	-122	122	-136	147	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.090	0.87	Yes	0.728	0.269	1.00	Yes	1.00	**3.33**
		$U_5 - L_5$			139.49	-346.74	91	-90	-178	204	-147	63	-144	117	0.251	0.304	0.56	Yes	0.138	0.167	0.31	Yes	0.777	0.110	0.89	Yes	0.734	0.261	1.00	Yes	1.00	**3.92**
		$U_6 - L_6$			-----	-344.66	189	-210	-68	69	-213	-55	167	23	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.137	0.91	Yes	0.729	0.268	1.00	Yes	1.00	**4.87**
		$U_7 - L_7$			-----	-371.67	-33	20	217	-244	-175	-141	-210	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.152	0.91	Yes	0.712	0.278	1.00	Yes	1.00	**3.22**
		$U_8 - L_8$			-----	-544.65	16	-19	270	-292	-136	-103	-184	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.116	0.91	Yes	0.747	0.250	1.00	Yes	1.00	**3.87**
		$U_9 - L_9$			-----	-678.57	70	-119	306	-448	-95	-140	123	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.099	0.92	Yes	0.790	0.208	1.00	Yes	1.00	**3.97**
		$U_{10} - L_{10}$			-----	-794.87	90	-108	344	-407	2	81	201	153	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.100	0.93	Yes	0.784	0.211	1.00	Yes	1.00	**4.33**
		$U_{11} - L_{11}$			-----	-657.42	182	-212	390	-460	-51	62	-32	84	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.095	0.88	Yes	0.743	0.256	1.00	Yes	1.00	**2.52**
		$U_{12} - L_{12}$			-----	-1323.06	42	-68	222	-309	-111	8	213	77	-----	-----	-----	-----	-----	-----	-----	-----	0.955	0.038	1	Yes	0.917	0.058	0.98	Yes	1.00	**4.08**
		$U_{13} - L_{13}$			-----	-460.94	-105	115	-264	287	-113	-92	-31	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.127	0.9	Yes	0.711	0.283	1.00	Yes	1.00	**2.13**
		$U_{14} - L_{14}$			-----	-546.75	-62	58	-217	246	-162	-135	-270	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.132	0.97	Yes	0.784	0.215	1.00	Yes	1.00	**2.95**
		$U_{15} - L_{15}$			-----	-455.89	-41	48	-175	210	-163	-75	15	40	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.108	0.94	Yes	0.787	0.213	1.00	Yes	1.00	**2.88**
		$U_{16} - L_{16}$			-----	-307.23	-273	267	-48	66	-139	-28	-233	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.151	0.83	Yes	0.650	0.349	1.00	Yes	1.00	**4.44**
		$U_{17} - L_{17}$			292.79	-242.10	-293	304	71	-109	-111	-23	-289	-225	0.527	0.472	1.00	Yes	0.290	0.259	0.55	Yes	0.531	0.177	0.71	Yes	0.512	0.388	0.91	Yes	1.00	**5.39**
		$U_{18} - L_{18}$			117.25	-337.11	-100	111	164	-218	374	63	322	18	0.211	0.387	0.60	Yes	0.116	0.213	0.33	Yes	0.737	0.207	0.95	Yes	0.713	0.279	1.00	Yes	1.00	**4.92**
		$U_{19} - L_{19}$			-----	-339.05	-31	19	195	-218	-167	-88	146	20	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.130	0.88	Yes	0.717	0.279	1.00	Yes	1.00	**3.30**
		$U_{20} - L_{20}$			-----	-372.65	49	-57	116	-163	-173	-56	178	57	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.134	0.97	Yes	0.789	0.208	1.00	Yes	1.00	**1.29**

Axial AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	665.60	-----	-51	35	6	-9	-204	-265	-46	-19	0.873	0.127	1.00	Yes	0.527	0.070	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.76**
		$U_1 - L_2$	464.43	-81.06	-94	9	14	-13	-44	-140	16	11	0.835	0.161	1.00	Yes	0.459	0.089	0.55	Yes	0.186	0.121	0.31	Yes	0.172	0.121	0.30	Yes					1.00	**3.94**
		$U_2 - L_3$	359.54	-278.95	-73	-2	-36	-62	-177	-297	-782	-264	0.647	0.319	0.97	Yes	0.356	0.176	0.54	Yes	0.642	0.349	1	Yes	0.590	0.093	0.69	Yes					1.00	**4.49**
		$U_3 - L_4$	-----	-374.28	-20	-32	-1	-53	-234	-186	-210	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.143	1	Yes	0.792	0.068	0.86	Yes					1.00	**2.56**
		$U_4 - L_4$	581.94	-----	-97	22	-50	-11	-69	-181	-130	-114	0.853	0.140	1.00	Yes	0.469	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.51**
		$U_4 - L_5$	717.61	-----	-218	203	-68	45	43	-107	118	53	0.848	0.146	1.00	Yes	0.467	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.04**
		$U_5 - L_6$	602.99	-----	-276	211	-117	100	340	156	673	285	0.713	0.279	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.60**
		$U_6 - L_7$	652.08	-----	-110	290	-8	115	302	155	242	174	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.76**
		$U_8 - L_9$	1006.05	-----	-109	357	4	136	257	211	81	103	0.804	0.192	1.00	Yes	0.498	0.107	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.95**
		$U_9 - L_{10}$	1030.87	-----	-324	226	-77	92	207	155	85	104	0.824	0.171	1.00	Yes	0.510	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.14**
		$U_{10} - L_{11}$	1012.34	-----	-261	161	-148	44	-122	-118	67	-79	0.855	0.136	1.00	Yes	0.529	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.48**
		$U_{11} - L_{12}$	843.67	-----	-254	101	-86	-17	-291	-305	-252	-199	0.835	0.164	1.00	Yes	0.459	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.91**
		$U_{12} - L_{13}$	622.85	-----	-192	130	-93	14	-348	-317	-357	-284	0.759	0.237	1.00	Yes	0.478	0.134	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.14**
		$U_{13} - L_{14}$	439.98	-----	-91	33	-35	-20	-291	-295	-191	-300	0.791	0.203	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.69**
		$U_{15} - L_{14}$	202.72	-341.86	-46	3	21	-83	-193	-309	-191	-284	0.365	0.195	0.57	Yes	0.201	0.107	0.31	Yes	0.801	0.199	1	Yes	0.723	0.106	0.83	Yes					1.00	**3.22**
		$U_{16} - L_{15}$	408.99	-238.90	-132	73	-6	-52	-242	-254	-304	-171	0.736	0.257	1.00	Yes	0.405	0.142	0.55	Yes	0.566	0.215	0.79	Yes	0.506	0.169	0.68	Yes					1.00	**3.89**
		$U_{17} - L_{16}$	530.87	-----	-150	87	-45	-10	-150	-228	-262	-145	0.778	0.214	1.00	Yes	0.428	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.09**
		$U_{18} - L_{17}$	640.08	-----	-346	245	-158	71	-198	-183	-215	-85	0.757	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.52**
		$U_{19} - L_{18}$	723.45	-----	-365	246	-105	68	-150	-140	47	6	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.40**
		$U_{20} - L_{19}$	711.63	-----	-347	296	-127	106	-144	-261	1	34	0.771	0.221	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.24**
	Structure 2	$U_0 - L_1$	808.85	-----	-314	336	-64	74	-184	-237	-120	50	0.800	0.191	1.00	Yes	0.440	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.85**
		$U_1 - L_2$	787.66	-----	-412	306	-86	58	-112	-166	43	11	0.779	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.85**
		$U_2 - L_3$	648.74	-----	-330	254	-65	49	-206	-199	-76	-177	0.767	0.225	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.43**
		$U_3 - L_4$	576.16	-----	-177	124	-44	7	-313	-283	-290	-206	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.16**
		$U_4 - L_5$	410.65	-----	-123	83	-20	-25	-334	-237	-296	-219	0.739	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.31**
		$U_5 - L_6$	404.12	-315.74	-115	67	86	-118	-415	-301	-366	-246	0.727	0.270	1.00	Yes	0.400	0.149	0.55	Yes	0.746	0.251	1	Yes	0.668	0.150	0.82	Yes					1.00	**4.67**
		$U_6 - L_7$	-----	-374.16	-52	-9	63	-98	-326	-277	-299	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.198	1	Yes	0.717	0.112	0.83	Yes					1.00	**2.95**
		$U_8 - L_7$	591.05	-----	-201	111	-47	-20	-138	-259	-280	-221	0.754	0.237	1.00	Yes	0.474	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.84**
		$U_8 - L_9$	721.02	-----	-344	224	-117	16	-139	-225	-122	-155	0.781	0.213	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.71**
		$U_{10} - L_9$	824.71	-----	-336	229	-143	50	-63	-171	-50	-85	0.816	0.181	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.07**
		$U_{11} - L_{10}$	903.25	-----	-375	275	-179	103	54	-52	-101	3	0.823	0.173	1.00	Yes	0.453	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.91**
		$U_{12} - L_{11}$	821.42	-----	-351	311	-150	146	167	34	729	149	0.748	0.249	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.12**
		$U_{13} - L_{12}$	753.72	-----	-446	378	-180	173	267	124	267	150	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.88**
		$U_{14} - L_{13}$	719.82	-----	-263	410	-30	217	268	155	594	140	0.712	0.279	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.06**
		$U_{14} - L_{15}$	641.79	-----	-217	366	0	102	162	93	49	35	0.759	0.237	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.56**
		$U_{15} - L_{16}$	641.92	-----	-374	335	-99	104	121	89	50	67	0.759	0.234	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.04**
		$U_{16} - L_{17}$	745.41	-----	-357	352	-73	98	9	-7	9	5	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.62**
		$U_{17} - L_{18}$	676.99	-----	-310	283	-64	81	-101	-58	-58	-32	0.800	0.194	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.57**
		$U_{18} - L_{19}$	683.14	-----	-282	248	-48	41	-150	-148	-138	-96	0.808	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.58**
		$U_{19} - L_{20}$	607.07	-----	-195	164	-17	3	-245	-166	-166	-129	0.774	0.225	1.00	Yes	0.426	0.126	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.63**
		$U_{20} - L_{21}$	432.64	-----	-121	98	7	-20	-224	-145	-208	-147	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.19**
		$U_{21} - L_{22}$	432.00	-220.07	-112	49	33	-62	-266	-242	-263	-228	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	0.520	0.182	0.71	Yes	0.466	0.143	0.61	Yes					1.00	**4.13**
		$U_{23} - L_{22}$	351.70	-339.95	-111	31	13	-66	-107	-201	-232	-184	0.633	0.210	0.85	Yes	0.348	0.115	0.47	Yes	0.810	0.189	1	Yes	0.719	0.142	0.87	Yes					1.00	**4.24**
		$U_{24} - L_{23}$	440.29	-----	-128	91	6	-33	-67	-155	-68	-85	0.792	0.208	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.79**
		$U_{25} - L_{24}$	607.46	-----	-216	167	-40	-13	-16	-119	-34	-66	0.775	0.218	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.38**
		$U_{26} - L_{25}$	679.25	-----	-307	244	-95	42	59	-25	-93	13	0.803	0.191	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.83**
		$U_{27} - L_{26}$	669.85	-----	-310	270	-107	89	146	8	131	69	0.792	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.41**
		$U_{28} - L_{27}$	723.06	-----	-359	354	-136	138	173	70	165	124	0.783	0.212	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.62**
		$U_{29} - L_{28}$	625.60	-----	-372	327	-125	119	251	118	217	110	0.740	0.256	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.81**
		$U_{30} - L_{29}$	589.55	-----	-200	332	-26	170	212	80	609	116	0.697	0.299	1.00	Yes	0.383	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.87**
		$U_{30} - L_{31}$	775.01	-----	-285	444	-24	134	122	68	62	39	0.767	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_{31} - L_{32}$	780.59	-----	-459	387	-129	130	56	39	36	47	0.772	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.40**
		$U_{32} - L_{33}$	907.72	-----	-365	344	-105	127	-118	-98	31	5	0.827	0.171	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.06**
		$U_{33} - L_{34}$	893.26	-----	-347	270	-111	82	-248	-220	-211	-138	0.814	0.181	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.93**
		$U_{34} - L_{35}$	818.17	-----	-298	218	-88	50	-325	-262	-218	-215	0.809	0.187	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.71**
		$U_{35} - L_{36}$	705.73	-----	-322	230	-90	20	-387	-277	-376	-268	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.52**
		$U_{36} - L_{37}$	599.20	-----	-185	130	-26	-6	-306	-334	-320	-304	0.764	0.233	1.00	Yes	0.481	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.37**
		$U_{38} - L_{37}$	-----	-395.50	-18	-14	44	-85	-113	-226	-199	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.145	1	Yes	0.758	0.097	0.86	Yes					1.00	**2.39**
		$U_{39} - L_{38}$	265.56	-336.00	-76	48	48	-100	-161	-223	-278	-182	0.478	0.208	0.69	Yes	0.263	0.114	0.38	Yes	0.801	0.195	1	Yes	0.711	0.127	0.84	Yes					1.00	**3.78**
		$U_{40} - L_{39}$	431.04	-253.74	-126	97	13	-60	-139	-201	-116	-128	0.775	0.219	1.00	Yes	0.426	0.120	0.55	Yes	0.607	0.150	0.76	Yes	0.537	0.160	0.70	Yes					1.00	**4.42**
		$U_{41} - L_{40}$	579.63	-----	-189	119	-55	-7	-98	-141	-228	-70	0.773	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.63**
		$U_{42} - L_{41}$	650.87	-----	-349	252	-75	50	-127	-127	-1	-4	0.769	0.221	1.00	Yes	0.423	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.53**
		$U_{43} - L_{42}$	778.35	-----	-405	299	-94	64	-221	-170	-6	-30	0.770	0.221	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.88**
		$U_{44} - L_{43}$	797.23	-----	-373	359	-137	121	-141	-221	35	4	0.789	0.206	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.74**
	Structure 3	$U_0 - L_1$	709.93	-----	-341	292	-69	71	-159	-316	-131	45	0.769	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.44**
		$U_1 - L_2$	722.23	-----	-364	253	-91	57	-61	-149	37	13	0.782	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.52**
		$U_2 - L_3$	650.82	-----	-324	237	-78	48	-225	-228	-74	-167	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.43**
		$U_3 - L_4$	526.48	-----	-141	99	-52	-1	-324	-314	-229	-239	0.772	0.219	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.18**
		$U_4 - L_5$	408.12	-127.72	-121	79	7	-39	-377	-299	-318	-223	0.734	0.264	1.00	Yes	0.404	0.145	0.55	Yes	0.303	0.198	0.51	Yes	0.270	0.154	0.43	Yes					1.00	**3.38**
		$U_5 - L_6$	310.71	-310.25	-78	-1	2	-84	-427	-328	-393	-334	0.559	0.232	0.80	Yes	0.307	0.127	0.44	Yes	0.727	0.268	1	Yes	0.656	0.108	0.77	Yes					1.00	**3.61**
		$U_7 - L_6$	451.46	-----	-81	48	-10	-35	-107	-279	-113	-252	0.812	0.184	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.38**
		$U_8 - L_7$	642.79	-----	-192	164	-67	-16	-167	-239	-172	-180	0.784	0.214	1.00	Yes	0.493	0.120	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.98**
		$U_8 - L_9$	834.72	-----	-285	88	-139	-40	-51	-189	-229	-147	0.826	0.166	1.00	Yes	0.454	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.23**
		$U_{10} - L_9$	919.70	-----	-256	141	-96	45	116	-44	732	145	0.777	0.214	1.00	Yes	0.481	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.07**
		$U_{11} - L_{10}$	925.70	-----	-313	226	-128	90	381	225	888	477	0.740	0.252	1.00	Yes	0.458	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.81**
		$U_{12} - L_{11}$	982.18	-----	-111	349	-10	143	395	280	272	206	0.785	0.206	1.00	Yes	0.486	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.87**
		$U_{12} - L_{13}$	666.34	-----	-114	299	12	114	200	167	93	95	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.19**
		$U_{13} - L_{14}$	675.70	-----	-290	230	-70	76	145	98	92	116	0.799	0.192	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.18**
		$U_{14} - L_{15}$	726.24	-----	-194	193	-21	56	-126	-109	89	36	0.859	0.134	1.00	Yes	0.472	0.074	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_{15} - L_{16}$	581.07	-----	-93	37	-55	-10	-221	-203	-66	-109	0.852	0.145	1.00	Yes	0.469	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.58**
		$U_{17} - L_{16}$	-----	-402.10	-7	-16	7	-45	-29	-136	-30	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.919	0.077	1	Yes	0.851	0.058	0.91	Yes					1.00	**2.62**
		$U_{18} - L_{17}$	274.27	-352.05	-75	-16	-21	-60	-116	-199	-276	-71	0.493	0.176	0.67	Yes	0.271	0.097	0.37	Yes	0.810	0.185	1	Yes	0.745	0.096	0.85	Yes					1.00	**4.05**
		$U_{19} - L_{18}$	419.80	-100.13	-86	1	-22	-16	-88	-182	449	19	0.755	0.240	1.00	Yes	0.415	0.132	0.55	Yes	0.230	0.177	0.41	Yes	0.212	0.110	0.33	Yes					1.00	**3.69**
		$U_{20} - L_{19}$	630.60	-----	-92	56	-21	2	-250	-203	31	-8	0.827	0.170	1.00	Yes	0.500	0.094	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.80**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-581.82	-126	87	155	-902	-68	135	299	-842	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.200	1	Yes	0.785	0.214	1.00	Yes	1.00	**5.82**
		U_1 - U_2			-----	-552.12	-100	101	-388	-634	-159	131	122	-447	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.248	1	Yes	0.745	0.151	0.90	Yes	1.00	**3.22**
		U_2 - U_3			176.93	-571.90	-92	305	-612	-351	-117	122	76	-544	0.203	0.237	0.45	Yes	0.137	0.156	0.30	Yes	0.778	0.222	1	Yes	0.771	0.145	0.92	Yes	1.00	**3.52**
		U_3 - U_4			482.36	-572.60	143	405	-671	-393	-222	-10	229	-403	0.553	0.227	0.79	Yes	0.379	0.156	0.54	Yes	0.779	0.219	1	Yes	0.772	0.159	0.94	Yes	1.00	**4.95**
		U_4 - U_5			494.73	-575.37	198	400	-731	-156	-90	-16	-444	-100	0.567	0.249	0.82	Yes	0.389	0.170	0.56	Yes	0.783	0.216	1	Yes	0.776	0.174	0.95	Yes	1.00	**5.04**
		U_5 - U_6			679.03	-----	274	490	-621	355	98	132	-296	-423	0.778	0.219	1.00	Yes	0.525	0.144	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		U_6 - U_7			899.52	-----	419	223	-151	-36	319	286	-320	198	0.860	0.133	1.00	Yes	0.601	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		U_7 - U_8			1054.50	-----	17	1274	-177	974	530	702	181	356	0.731	0.264	1.00	Yes	0.510	0.181	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		U_8 - U_9			850.53	-----	1097	-125	1368	-855	239	494	478	-538	0.697	0.295	1.00	Yes	0.477	0.201	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		U_9 - U_{10}			679.90	-----	256	279	134	-759	-10	321	354	-538	0.737	0.256	1.00	Yes	0.499	0.172	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.16**
		U_{10} - U_{11}			-----	-635.41	262	-162	99	-826	45	113	247	-513	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.168	0.99	Yes	0.811	0.185	1.00	Yes	1.00	**3.65**
		U_{11} - U_{12}			-----	-913.16	158	-205	27	-803	12	104	-6	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.130	1	Yes	0.857	0.133	0.99	Yes	1.00	**2.58**
		U_{12} - U_{13}			-----	-1273.77	-44	-267	-337	-741	81	8	265	-475	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.137	1	Yes	0.851	0.102	0.96	Yes	1.00	**3.01**
		U_{13} - U_{14}			-----	-1392.97	-194	-504	-599	-1406	-43	-8	50	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1	Yes	0.799	0.155	0.96	Yes	1.00	**2.76**
		U_{14} - U_{15}			-----	-1371.91	-407	-292	-1337	-605	41	-277	-123	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1	Yes	0.786	0.148	0.94	Yes	1.00	**2.68**
		U_{15} - U_{16}			-----	-1442.02	-198	-467	-765	-839	-114	-429	-332	-232	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.155	1	Yes	0.827	0.093	0.92	Yes	1.00	**3.09**
		U_{16} - U_{17}			-----	-1410.35	-413	-226	-1136	-468	-286	-372	-133	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1	Yes	0.809	0.125	0.94	Yes	1.00	**3.64**
		U_{17} - U_{18}			-----	-1083.93	-252	-61	-796	31	-116	71	-151	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.132	1	Yes	0.848	0.130	0.98	Yes	1.00	**3.66**
		U_{18} - U_{19}			-----	-753.81	-239	10	-678	101	362	-139	68	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.139	1	Yes	0.848	0.136	0.99	Yes	1.00	**4.14**
		U_{19} - U_{20}			-----	-667.27	-196	-108	-1215	441	-32	-117	-101	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.207	0.97	Yes	0.751	0.245	1.00	Yes	1.00	**11.89**
	Structure 2	U_0 - U_1			-----	-592.31	693	-451	1013	-1748	341	-70	307	-728	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.190	0.9	Yes	0.700	0.297	1.00	Yes	1.00	**6.75**
		U_1 - U_2			-----	-842.52	-150	-314	-258	-1008	-23	26	182	-334	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.179	1	Yes	0.813	0.153	0.97	Yes	1.00	**3.61**
		U_2 - U_3			-----	-1151.68	-133	-427	-80	-1342	-34	-59	-181	-638	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.173	1	Yes	0.817	0.137	0.96	Yes	1.00	**3.19**
		U_3 - U_4			-----	-1375.68	-531	-541	-855	-1527	-116	-38	-234	-451	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.205	1	Yes	0.783	0.136	0.92	Yes	1.00	**2.81**
		U_4 - U_5			-----	-1500.31	-583	-555	-1418	-1602	-122	-86	68	-668	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.217	1	Yes	0.770	0.133	0.91	Yes	1.00	**2.91**
		U_5 - U_6			-----	-1545.26	-577	-15	-1520	-1134	-195	-51	-204	-600	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1	Yes	0.793	0.126	0.92	Yes	1.00	**3.08**
		U_6 - U_7			-----	-1411.00	-306	-198	-1327	-1200	-172	-91	12	-372	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.189	1	Yes	0.803	0.118	0.93	Yes	1.00	**3.35**
		U_7 - U_8			-----	-1413.80	-336	-188	-1354	-944	-80	-178	-343	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.189	1	Yes	0.805	0.121	0.93	Yes	1.00	**3.38**
		U_8 - U_9			-----	-1189.55	-355	216	-1380	-303	-13	-190	-448	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.186	1	Yes	0.807	0.147	0.96	Yes	1.00	**3.68**
		U_9 - U_{10}			-----	-906.18	-84	540	-1524	14	-120	-225	-602	-622	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.213	1	Yes	0.782	0.185	0.97	Yes	1.00	**4.61**
		U_{10} - U_{11}			828.77	-611.16	335	612	-1260	-169	-171	-92	-976	-249	0.700	0.297	1.00	Yes	0.476	0.195	0.68	Yes	0.611	0.251	0.87	Yes	0.607	0.178	0.79	Yes	1.00	**6.61**
		U_{11} - U_{12}			953.25	-----	208	660	-955	448	37	43	-466	-443	0.805	0.192	1.00	Yes	0.541	0.128	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		U_{12} - U_{13}			1317.08	-----	476	79	-23	-125	344	441	-90	21	0.889	0.102	1.00	Yes	0.634	0.070	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.50**
		U_{13} - U_{14}			1373.82	-----	-163	2752	-446	2019	649	998	287	582	0.676	0.323	1.00	Yes	0.478	0.213	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		U_{14} - U_{15}			1434.16	-----	2555	3	1927	-242	540	727	517	410	0.705	0.286	1.00	Yes	0.499	0.188	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		U_{15} - U_{16}			1364.50	-----	152	429	-831	-986	179	431	707	-378	0.825	0.172	1.00	Yes	0.587	0.117	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.17**
		U_{16} - U_{17}			1070.39	-----	675	222	78	-969	-32	323	504	-813	0.789	0.207	1.00	Yes	0.525	0.136	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		U_{17} - U_{18}			751.88	-----	488	259	17	-1000	-59	287	241	-494	0.755	0.242	1.00	Yes	0.503	0.160	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		U_{18} - U_{19}			577.79	-700.26	590	162	-184	-965	3	159	555	-748	0.580	0.273	0.86	Yes	0.381	0.175	0.56	Yes	0.832	0.141	0.98	Yes	0.827	0.164	1.00	Yes	1.00	**5.58**
		U_{19} - U_{20}			234.11	-731.91	268	102	-463	-926	-55	132	327	-382	0.220	0.200	0.42	Yes	0.146	0.131	0.28	Yes	0.813	0.178	1	Yes	0.808	0.148	0.96	Yes	1.00	**3.85**
		U_{20} - U_{21}			-----	-856.31	111	-129	-652	-822	-9	15	96	-604	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.203	1	Yes	0.782	0.119	0.91	Yes	1.00	**3.78**
		U_{21} - U_{22}			-----	-838.82	-78	-33	-821	-987	-187	-101	112	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.225	1	Yes	0.766	0.143	0.91	Yes	1.00	**3.54**
		U_{22} - U_{23}			-----	-845.65	-124	-127	-1012	-706	-123	-169	-251	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.222	1	Yes	0.772	0.147	0.92	Yes	1.00	**3.58**
		U_{23} - U_{24}			-----	-865.49	-136	177	-908	-344	-1	-82	-476	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.199	1	Yes	0.790	0.131	0.93	Yes	1.00	**4.23**
		U_{24} - U_{25}			313.78	-720.75	183	327	-1022	-123	-9	-77	-407	-246	0.294	0.219	0.52	Yes	0.195	0.143	0.34	Yes	0.800	0.199	1	Yes	0.795	0.164	0.96	Yes	1.00	**4.59**
		U_{25} - U_{26}			677.79	-617.96	209	651	-1079	145	19	-38	-668	-249	0.680	0.281	0.97	Yes	0.446	0.180	0.63	Yes	0.734	0.263	1	Yes	0.730	0.183	0.92	Yes	1.00	**6.70**
		U_{26} - U_{27}			762.87	-----	284	472	-808	277	-36	17	-644	-178	0.766	0.231	1.00	Yes	0.510	0.153	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		U_{27} - U_{28}			1116.11	-----	224	710	-931	429	257	284	-528	-196	0.822	0.172	1.00	Yes	0.547	0.113	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.01**
		U_{28} - U_{29}			1454.72	-----	471	78	66	-132	647	710	260	293	0.879	0.114	1.00	Yes	0.626	0.078	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.69**
		U_{29} - U_{30}			1327.05	-----	-168	2911	-205	1913	804	1070	503	704	0.653	0.343	1.00	Yes	0.462	0.225	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		U_{30} - U_{31}			1448.06	-----	2553	-154	2047	-529	627	711	674	369	0.712	0.285	1.00	Yes	0.504	0.187	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.50**
		U_{31} - U_{32}			1233.00	-----	95	373	-758	-810	203	395	597	-573	0.833	0.159	1.00	Yes	0.594	0.109	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		U_{32} - U_{33}			892.56	-----	610	169	229	-1029	5	236	370	-826	0.754	0.246	1.00	Yes	0.506	0.164	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		U_{33} - U_{34}			611.41	-803.28	477	160	12	-1381	-26	216	-93	-542	0.516	0.261	0.78	Yes	0.351	0.170	0.53	Yes	0.803	0.193	1	Yes	0.798	0.195	1.00	Yes	1.00	**5.63**
		U_{34} - U_{35}			-----	-975.28	384	-195	-66	-1195	43	42	156	-528	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.149	1	Yes	0.842	0.145	0.99	Yes	1.00	**3.70**
		U_{35} - U_{36}			-----	-1243.62	101	-462	-393	-1242	-18	90	237	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.148	1	Yes	0.843	0.132	0.98	Yes	1.00	**3.14**
		U_{36} - U_{37}			-----	-1439.31	-288	-311	-1065	-1227	-22	-120	322	-330	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.166	1	Yes	0.820	0.109	0.93	Yes	1.00	**3.00**
		U_{37} - U_{38}			-----	-1431.56	-199	-423	-1117	-1220	-94	-198	-291	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.175	1	Yes	0.815	0.109	0.93	Yes	1.00	**2.96**
		U_{38} - U_{39}			-----	-1587.54	-163	-632	-1163	-1287	8	-210	-403	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.171	1	Yes	0.815	0.107	0.93	Yes	1.00	**3.06**
		U_{39} - U_{40}			-----	-1546.09	-607	-565	-1701	-922	15	-81	-248	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1	Yes	0.794	0.141	0.94	Yes	1.00	**3.12**
		U_{40} - U_{41}			-----	-1442.29	-530	-519	-1409	-821	173	-151	153	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.170	1	Yes	0.821	0.126	0.95	Yes	1.00	**3.37**
		U_{41} - U_{42}			-----	-1211.45	-420	-127	-1238	-26	59	-28	-7	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.129	1	Yes	0.860	0.126	0.99	Yes	1.00	**4.07**
		U_{42} - U_{43}			-----	-870.09	-313	-44	-924	13	168	-214	-111	-336	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.145	1	Yes	0.840	0.140	0.99	Yes	1.00	**4.71**
		U_{43} - U_{44}			-----	-642.68	-168	-231	-1399	558	-124	-129	-220	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.218	0.99	Yes	0.759	0.237	1.00	Yes	1.00	**10.09**
	Structure 3	U_0 - U_1			-----	-591.30	631	-353	1280	-1648	275	-43	199	-1002	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.217	0.89	Yes	0.665	0.332	1.00	Yes	1.00	**7.55**
		U_1 - U_2			-----	-723.34	-83	-225	-52	-752	-22	8	31	-341	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.178	1	Yes	0.814	0.151	0.97	Yes	1.00	**3.14**
		U_2 - U_3			-----	-1067.74	-56	-236	-15	-714	-34	-55	102	-684	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.152	1	Yes	0.835	0.116	0.96	Yes	1.00	**3.22**
		U_3 - U_4			-----	-1403.72	-221	-365	-576	-1178	-110	-33	90	-523	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1	Yes	0.805	0.130	0.94	Yes	1.00	**3.45**
		U_4 - U_5			-----	-1426.70	-441	-129	-1033	-630	-93	-54	221	-684	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.173	1	Yes	0.818	0.114	0.94	Yes	1.00	**3.12**
		U_5 - U_6			-----	-1368.21	-254	-374	-806	-1294	-186	-149	31	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.202	1	Yes	0.784	0.143	0.93	Yes	1.00	**3.02**
		U_6 - U_7			-----	-1359.33	-497	-153	-1423	-471	-119	-298	-261	-399	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.203	1	Yes	0.779	0.157	0.94	Yes	1.00	**3.00**
		U_7 - U_8			-----	-1230.02	-234	37	-825	-162	-108	-317	-444	-536	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.165	1	Yes	0.822	0.114	0.94	Yes	1.00	**3.46**
		U_8 - U_9			-----	-888.85	-126	262	-789	98	-215	-186	-384	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.152	1	Yes	0.834	0.131	0.97	Yes	1.00	**3.54**
		U_9 - U_{10}			-----	-607.51	-54	382	-969	225	4	1	-270	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.191	0.98	Yes	0.775	0.217	1.00	Yes	1.00	**5.46**
		U_{10} - U_{11}			717.76	-----	314	256	-519	161	132	151	-622	-189	0.779	0.216	1.00	Yes	0.527	0.145	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		U_{11} - U_{12}			870.94	-----	-185	1260	-671	1278	183	531	-220	398	0.714	0.280	1.00	Yes	0.488	0.190	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		U_{12} - U_{13}			1040.63	-----	1198	21	833	-135	53	514	688	871	0.721	0.270	1.00	Yes	0.503	0.185	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		U_{13} - U_{14}			847.65	-----	224	364	-241	-406	-102	381	707	-478	0.811	0.184	1.00	Yes	0.567	0.127	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		U_{14} - U_{15}			603.09	-----	439	210	38	-683	-57	246	450	-829	0.691	0.302	1.00	Yes	0.466	0.200	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		U_{15} - U_{16}			302.35	-596.21	269	120	-228	-688	-75	200	282	36	0.347	0.211	0.56	Yes	0.238	0.145	0.39	Yes	0.811	0.180	1	Yes	0.804	0.164	0.97	Yes	1.00	**4.03**
		U_{16} - U_{17}			301.22	-608.44	322	36	-477	-552	179	-69	80	74	0.345	0.162	0.51	Yes	0.237	0.111	0.35	Yes	0.828	0.163	1	Yes	0.820	0.131	0.96	Yes	1.00	**4.08**
		U_{17} - U_{18}			-----	-609.33	215	-175	-426	-518	70	35	-85	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.170	1	Yes	0.822	0.123	0.95	Yes	1.00	**3.39**
		U_{18} - U_{19}			-----	-599.22	14	-70	-683	-161	208	-197	4	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1	Yes	0.808	0.162	0.98	Yes	1.00	**3.73**
		U_{19} - U_{20}			-----	-609.30	114	-305	-631	-37	-149	-111	-31	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.170	1	Yes	0.822	0.150	0.98	Yes	1.00	**7.91**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
South Truss - Lower Chord	Structure 1	L_0 - L_1	333.99	-262.36	218	-253	731	-818	267	981	-304	-1118	0.511	0.485	1.00	Yes	0.301	0.290	0.60	Yes	0.476	0.346	0.83	Yes	0.472	0.245	0.72	Yes	1.00	**20.09**
		L_1 - L_2	377.06	-----	-49	-704	0	-12	-985	315	326	-147	0.577	0.423	1.00	Yes	0.352	0.274	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		L_2 - L_3	659.28	-----	-671	-603	-39	66	470	-435	-183	124	0.758	0.237	1.00	Yes	0.439	0.141	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		L_3 - L_4	624.12	-239.41	-590	-389	1	295	-861	17	285	-233	0.718	0.281	1.00	Yes	0.426	0.175	0.61	Yes	0.327	0.261	0.59	Yes	0.324	0.142	0.47	Yes	1.00	**3.78**
		L_4 - L_5	-----	-556.02	-548	288	101	465	180	-175	-73	202	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.133	0.99	Yes	0.847	0.145	1.00	Yes	1.00	**3.06**
		L_5 - L_6	-----	-748.01	-226	316	125	590	-111	-89	163	-236	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.127	1	Yes	0.863	0.131	1.00	Yes	1.00	**2.98**
		L_6 - L_7	-----	-1172.85	-102	116	240	-20	-113	266	-201	407	-----	-----	-----	-----	-----	-----	-----	-----	0.955	0.042	1	Yes	0.944	0.038	0.99	Yes	1.00	**4.66**
		L_7 - L_8	-----	-1247.78	-33	668	-53	1232	367	209	447	511	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.197	1	Yes	0.790	0.163	0.96	Yes	1.00	**3.01**
		L_8 - L_9	-----	-1164.15	671	-35	1113	-64	214	381	437	416	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.250	1	Yes	0.737	0.147	0.89	Yes	1.00	**2.25**
		L_9 - L_{10}	-----	-1061.01	345	-227	590	-427	529	-43	337	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.135	1	Yes	0.854	0.093	0.95	Yes	1.00	**5.27**
		L_{10} - L_{11}	-----	-552.51	-17	-595	505	-50	199	-530	-285	43	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.131	0.99	Yes	0.842	0.158	1.00	Yes	1.00	**5.89**
		L_{11} - L_{12}	501.75	-----	73	-609	343	-244	-1055	226	128	-85	0.650	0.346	1.00	Yes	0.390	0.218	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		L_{12} - L_{13}	1017.74	-----	-381	-622	58	-155	-163	-663	-159	121	0.803	0.188	1.00	Yes	0.514	0.114	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_{13} - L_{14}	1270.68	-----	-215	-1247	187	-525	-923	203	146	21	0.747	0.249	1.00	Yes	0.484	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		L_{14} - L_{15}	1558.39	-----	-1578	-601	-566	-152	-120	-634	-153	161	0.761	0.235	1.00	Yes	0.495	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_{15} - L_{16}	1632.63	-----	-1143	-1202	-304	-371	-723	120	106	-140	0.798	0.196	1.00	Yes	0.512	0.116	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		L_{16} - L_{17}	1224.69	-----	-1299	-27	-420	54	185	-388	-127	171	0.774	0.225	1.00	Yes	0.502	0.139	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		L_{17} - L_{18}	1015.27	-----	-395	-31	-224	35	-93	-304	115	-89	0.884	0.115	1.00	Yes	0.566	0.070	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.83**
		L_{18} - L_{19}	514.13	-----	-485	238	-266	229	-130	302	-162	123	0.787	0.208	1.00	Yes	0.532	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		L_{19} - L_{20}	432.11	-274.95	-369	111	-860	568	368	82	251	56	0.661	0.334	1.00	Yes	0.403	0.223	0.63	Yes	0.499	0.315	0.82	Yes	0.495	0.258	0.76	Yes	1.00	**7.84**
	Structure 2	L_0 - L_1	-----	-505.62	165	-459	490	-1335	110	380	-92	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.229	0.96	Yes	0.722	0.272	1.00	Yes	1.00	**18.88**
		L_1 - L_2	466.39	-----	332	-1245	242	-394	-1075	547	117	43	0.566	0.430	1.00	Yes	0.337	0.269	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_2 - L_3	982.77	-----	-159	-1030	-46	-269	146	-635	-74	155	0.775	0.216	1.00	Yes	0.508	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		L_3 - L_4	1278.00	-----	-134	-1524	-12	-506	-822	388	181	-4	0.751	0.244	1.00	Yes	0.506	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		L_4 - L_5	1735.28	-----	-1296	-1519	-437	-395	268	-651	-82	163	0.809	0.187	1.00	Yes	0.536	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		L_5 - L_6	1807.62	-----	-1170	-1815	-219	-491	-936	96	191	-91	0.776	0.219	1.00	Yes	0.521	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		L_6 - L_7	1836.04	-----	-2238	-1058	-569	-209	284	-314	-161	219	0.777	0.216	1.00	Yes	0.516	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_7 - L_8	1344.86	-----	-1526	-519	-299	389	-732	254	219	-143	0.771	0.228	1.00	Yes	0.507	0.137	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		L_8 - L_9	1060.90	-----	-1285	242	-99	595	193	-826	-83	178	0.742	0.251	1.00	Yes	0.500	0.159	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_9 - L_{10}	595.40	-746.00	-1131	162	-136	826	-844	-98	142	-137	0.531	0.282	0.82	Yes	0.309	0.172	0.49	Yes	0.789	0.207	1	Yes	0.783	0.181	0.97	Yes	1.00	**5.58**
		L_{10} - L_{11}	-----	-742.67	-710	483	11	569	149	-153	-76	74	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.085	0.97	Yes	0.872	0.124	1.00	Yes	1.00	**3.47**
		L_{11} - L_{12}	-----	-1035.61	-294	680	-75	1098	158	-218	49	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.128	0.99	Yes	0.849	0.150	1.00	Yes	1.00	**3.75**
		L_{12} - L_{13}	-----	-1528.38	-294	-355	190	-724	-110	113	-332	172	-----	-----	-----	-----	-----	-----	-----	-----	0.922	0.073	1	Yes	0.914	0.072	0.99	Yes	1.00	**5.69**
		L_{13} - L_{14}	-----	-1554.72	-624	1736	-879	2474	173	126	339	488	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.174	0.97	Yes	0.782	0.216	1.00	Yes	1.00	**3.53**
		L_{14} - L_{15}	-----	-1561.30	1712	-661	2381	-678	99	142	532	340	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.174	0.97	Yes	0.786	0.208	1.00	Yes	1.00	**4.06**
		L_{15} - L_{16}	-----	-1538.45	-529	-129	-380	-136	108	-136	262	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.928	0.069	1	Yes	0.920	0.053	0.98	Yes	1.00	**4.48**
		L_{16} - L_{17}	-----	-1054.50	671	-134	1119	-52	-210	64	-385	68	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.219	1	Yes	0.768	0.138	0.91	Yes	1.00	**3.53**
		L_{17} - L_{18}	-----	-801.61	267	-627	515	165	-872	206	126	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.146	1	Yes	0.842	0.100	0.95	Yes	1.00	**4.28**
		L_{18} - L_{19}	-----	-639.97	-150	-566	717	34	352	-313	-211	60	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.117	0.98	Yes	0.853	0.138	1.00	Yes	1.00	**4.80**
		L_{19} - L_{20}	565.90	-448.12	-40	-975	498	114	-1063	504	149	-171	0.641	0.351	1.00	Yes	0.379	0.217	0.60	Yes	0.601	0.185	0.79	Yes	0.597	0.188	0.79	Yes	1.00	**5.17**
		L_{20} - L_{21}	996.62	-----	-991	-1023	413	-75	502	-385	-186	69	0.795	0.203	1.00	Yes	0.521	0.123	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		L_{21} - L_{22}	884.90	-----	-811	-1245	110	-290	-988	107	136	-103	0.706	0.288	1.00	Yes	0.472	0.184	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		L_{22} - L_{23}	847.29	-----	-1628	-581	-355	74	-139	-735	-58	206	0.676	0.317	1.00	Yes	0.452	0.200	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		L_{23} - L_{24}	891.28	-340.09	-1240	-691	-56	465	-943	-3	163	-139	0.711	0.283	1.00	Yes	0.466	0.173	0.64	Yes	0.321	0.257	0.58	Yes	0.319	0.181	0.51	Yes	1.00	**6.08**
		L_{24} - L_{25}	563.18	-548.08	-1111	59	197	524	345	-905	-105	149	0.638	0.353	1.00	Yes	0.377	0.220	0.60	Yes	0.735	0.188	0.93	Yes	0.730	0.214	0.95	Yes	1.00	**6.29**
		L_{25} - L_{26}	-----	-639.41	-267	192	28	726	-12	-77	101	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.108	0.97	Yes	0.852	0.140	1.00	Yes	1.00	**4.74**
		L_{26} - L_{27}	-----	-864.24	-362	435	215	505	-46	22	-48	225	-----	-----	-----	-----	-----	-----	-----	-----	0.914	0.079	1	Yes	0.908	0.081	0.99	Yes	1.00	**5.11**
		L_{27} - L_{28}	-----	-1147.64	-241	730	-35	1304	40	-191	282	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.142	0.99	Yes	0.836	0.161	1.00	Yes	1.00	**4.45**
		L_{28} - L_{29}	-----	-1558.71	-306	-503	72	-380	-159	-39	-91	398	-----	-----	-----	-----	-----	-----	-----	-----	0.940	0.057	1	Yes	0.932	0.050	0.99	Yes	1.00	**5.76**
		L_{29} - L_{30}	-----	-1555.98	-720	1932	-774	2438	59	37	420	379	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.165	0.96	Yes	0.783	0.213	1.00	Yes	1.00	**4.04**
		L_{30} - L_{31}	-----	-1562.23	1667	-486	2353	-656	571	441	295	234	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.179	0.98	Yes	0.786	0.205	1.00	Yes	1.00	**2.89**
		L_{31} - L_{32}	-----	-1562.13	-91	-314	-135	-331	424	-429	181	59	-----	-----	-----	-----	-----	-----	-----	-----	0.942	0.055	1	Yes	0.934	0.033	0.97	Yes	1.00	**5.16**
		L_{32} - L_{33}	-----	-1044.20	584	-318	1010	-71	-586	77	-329	27	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.128	1	Yes	0.856	0.138	1.00	Yes	1.00	**4.29**
		L_{33} - L_{34}	-----	-758.82	443	-405	590	8	179	5	100	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.897	0.079	0.98	Yes	0.891	0.103	1.00	Yes	1.00	**4.16**
		L_{34} - L_{35}	684.57	-761.87	-164	-1213	844	-96	827	-712	-219	95	0.611	0.294	0.91	Yes	0.356	0.180	0.54	Yes	0.805	0.145	0.96	Yes	0.800	0.194	1.00	Yes	1.00	**7.12**
		L_{35} - L_{36}	963.42	-----	-60	-1198	566	-171	-1645	317	165	-121	0.674	0.317	1.00	Yes	0.454	0.204	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_{36} - L_{37}	1352.87	-----	-694	-1576	300	-260	513	-483	-204	152	0.776	0.216	1.00	Yes	0.510	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_{37} - L_{38}	1722.17	-----	-1545	-2182	-335	-657	-1224	174	106	-172	0.729	0.267	1.00	Yes	0.484	0.161	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		L_{38} - L_{39}	1801.42	-----	-2227	-1004	-610	-222	296	-400	-101	172	0.773	0.223	1.00	Yes	0.519	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		L_{39} - L_{40}	1727.59	-----	-1629	-1163	-444	-326	-478	322	124	-127	0.805	0.186	1.00	Yes	0.533	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_{40} - L_{41}	1324.98	-----	-1560	-36	-464	28	451	-39	-45	272	0.778	0.218	1.00	Yes	0.524	0.136	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		L_{41} - L_{42}	1019.68	-----	-1092	110	-260	52	-299	65	274	94	0.804	0.190	1.00	Yes	0.527	0.114	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.52**
		L_{42} - L_{43}	547.02	-----	-1283	588	-267	213	449	347	143	354	0.664	0.335	1.00	Yes	0.395	0.213	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.87**
		L_{43} - L_{44}	-----	-466.61	-845	214	-517	165	-240	-70	1238	361	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.323	1	Yes	0.667	0.172	0.84	Yes	1.00	**23.69**
	Structure 3	L_0 - L_1	-----	-471.99	79	-277	313	-500	36	165	2	10	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.101	0.96	Yes	0.850	0.150	1.00	Yes	1.00	**6.34**
		L_1 - L_2	522.52	-----	214	-444	412	-467	225	-244	98	182	0.800	0.191	1.00	Yes	0.541	0.121	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		L_2 - L_3	879.66	-----	-85	-784	47	-230	191	-593	-21	164	0.766	0.227	1.00	Yes	0.490	0.138	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_3 - L_4	1157.43	-----	-90	-1290	47	-429	-847	541	143	59	0.732	0.265	1.00	Yes	0.475	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		L_4 - L_5	1637.72	-----	-1315	-1034	-372	-254	576	-352	-34	226	0.800	0.199	1.00	Yes	0.514	0.118	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		L_5 - L_6	1556.93	-----	-680	-1516	-141	-452	-775	296	251	-41	0.761	0.237	1.00	Yes	0.494	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		L_6 - L_7	1266.99	-----	-1525	17	-495	244	139	-533	-53	255	0.745	0.255	1.00	Yes	0.483	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		L_7 - L_8	1013.55	-----	-652	-261	-102	164	-648	-68	139	-170	0.800	0.191	1.00	Yes	0.512	0.117	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		L_8 - L_9	557.00	-----	-811	237	-166	435	283	-361	-108	165	0.721	0.278	1.00	Yes	0.433	0.181	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_9 - L_{10}	-----	-562.98	-285	223	-64	518	-70	-322	145	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.104	0.97	Yes	0.858	0.137	1.00	Yes	1.00	**4.58**
		L_{10} - L_{11}	-----	-1178.70	-289	302	34	102	-278	80	-309	159	-----	-----	-----	-----	-----	-----	-----	-----	0.959	0.024	0.99	Yes	0.949	0.048	1.00	Yes	1.00	**6.06**
		L_{11} - L_{12}	-----	-1277.80	-32	651	-59	1267	340	52	285	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.176	1	Yes	0.809	0.168	0.98	Yes	1.00	**4.06**
		L_{12} - L_{13}	-----	-1132.58	712	-19	1345	-56	-22	254	59	144	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.273	1	Yes	0.717	0.178	0.90	Yes	1.00	**2.81**
		L_{13} - L_{14}	-----	-1144.51	210	-98	70	151	461	108	349	-310	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.065	1	Yes	0.921	0.033	0.96	Yes	1.00	**4.64**
		L_{14} - L_{15}	-----	-733.02	91	-346	575	112	196	-467	-263	84	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.138	1	Yes	0.846	0.127	0.98	Yes	1.00	**3.99**
		L_{15} - L_{16}	-----	-492.79	66	-596	450	99	-1163	375	251	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1	Yes	0.751	0.158	0.91	Yes	1.00	**3.78**
		L_{16} - L_{17}	692.88	-----	-640	-535	264	-66	272	-149	-171	192	0.797	0.198	1.00	Yes	0.473	0.127	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_{17} - L_{18}	674.35	-----	-689	-545	10	-110	-329	163	113	-113	0.776	0.219	1.00	Yes	0.449	0.131	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		L_{18} - L_{19}	459.84	-----	-741	95	-38	-16	300	336	-100	212	0.704	0.295	1.00	Yes	0.429	0.196	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_{19} - L_{20}	333.72	-153.79	-704	458	-116	-70	686	186	1284	349	0.511	0.487	1.00	Yes	0.301	0.290	0.60	Yes	0.279	0.409	0.69	Yes	0.277	0.211	0.49	Yes	1.00	**33.28**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression													
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-283.72	-13	52	-107	164	195	63	-1003	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.361	1	Yes	0.600	0.210	0.82	Yes	1.00	**1.46**
		$U_1 - L_1$			-----	-297.04	20	-13	-191	193	566	211	-1049	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.343	1	Yes	0.629	0.247	0.88	Yes	1.00	**3.27**
		$U_2 - L_2$			74.62	-191.38	72	-77	-87	126	737	235	-1991	-594	0.134	0.737	0.88	Yes	0.074	0.406	0.48	Yes	0.418	0.575	1	Yes	0.405	0.161	0.57	Yes	1.00	**3.82**
		$U_3 - L_3$			133.26	-----	112	-128	0	22	636	194	-2046	-525	0.240	0.756	1.00	Yes	0.132	0.416	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_4 - L_4$			-----	-203.10	79	-81	119	-124	1134	570	-1818	-678	-----	-----	-----	-----	-----	-----	-----	-----	0.447	0.549	1	Yes	0.430	0.158	0.59	Yes	1.00	**4.80**
		$U_5 - L_5$			-----	-394.59	78	-88	175	-206	881	408	-878	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.285	1	Yes	0.681	0.209	0.89	Yes	1.00	**3.42**
		$U_6 - L_6$			-----	-402.79	80	-69	187	-200	1620	763	225	220	-----	-----	-----	-----	-----	-----	-----	-----	0.610	0.388	1	Yes	0.578	0.175	0.76	Yes	1.00	**2.89**
		$U_7 - L_7$			-----	-385.14	102	-115	254	-276	1225	305	126	96	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.352	1	Yes	0.594	0.271	0.87	Yes	1.00	**2.88**
		$U_8 - L_8$			-----	-1118.13	-110	125	-212	251	1227	252	-1779	-484	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.184	1	Yes	0.775	0.047	0.83	Yes	1.00	**3.43**
		$U_9 - L_9$			-----	-626.41	-229	260	-371	419	605	233	-1215	-292	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.251	1	Yes	0.708	0.233	0.95	Yes	1.00	**2.37**
		$U_{10} - L_{10}$			-----	-704.36	-158	156	-304	339	623	295	-1204	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.261	1	Yes	0.695	0.176	0.88	Yes	1.00	**3.33**
		$U_{11} - L_{11}$			-----	-595.74	-167	218	-297	410	627	366	-1317	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.280	1	Yes	0.693	0.190	0.89	Yes	1.00	**3.09**
		$U_{12} - L_{12}$			-----	-456.33	-138	138	-234	252	673	368	-1640	-423	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.334	1	Yes	0.626	0.215	0.85	Yes	1.00	**2.91**
		$U_{13} - L_{13}$			-----	-348.50	-73	92	-185	214	316	193	-749	21	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.294	1	Yes	0.668	0.244	0.92	Yes	1.00	**3.05**
		$U_{14} - L_{14}$			-----	-203.34	-42	49	-20	28	630	191	-2224	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.454	0.543	1	Yes	0.430	0.062	0.50	Yes	1.00	**3.92**
		$U_{15} - L_{15}$			-----	-264.48	-39	31	172	-194	399	-135	-1418	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.593	0.403	1	Yes	0.560	0.248	0.81	Yes	1.00	**4.94**
		$U_{16} - L_{16}$			-----	-324.38	47	-59	228	-241	603	-104	-714	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.263	1	Yes	0.686	0.308	1.00	Yes	1.00	**4.33**
		$U_{17} - L_{17}$			-----	-421.26	79	-92	200	-220	504	199	-95	40	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.211	1	Yes	0.727	0.223	0.95	Yes	1.00	**2.93**
		$U_{18} - L_{18}$			-----	-540.80	172	-178	413	-432	677	171	-721	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.190	0.99	Yes	0.752	0.245	1.00	Yes	1.00	**4.02**
		$U_{19} - L_{19}$			-----	-651.52	178	-192	498	-515	583	112	202	38	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.157	0.98	Yes	0.758	0.239	1.00	Yes	1.00	**4.95**
		$U_{20} - L_{20}$			-----	-609.79	233	-280	450	-543	452	59	284	37	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.188	1	Yes	0.710	0.252	0.97	Yes	1.00	**4.19**
	Structure 2	$U_0 - L_0$			-----	-607.36	-161	269	-317	451	36	6	-1209	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.265	1	Yes	0.651	0.191	0.85	Yes	1.00	**1.90**
		$U_1 - L_1$			-----	-654.22	-217	224	-455	476	628	164	-1447	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1	Yes	0.701	0.202	0.91	Yes	1.00	**2.93**
		$U_2 - L_2$			-----	-572.70	-159	175	-399	427	622	289	-935	65	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.228	1	Yes	0.730	0.218	0.95	Yes	1.00	**2.96**
		$U_3 - L_3$			-----	-434.27	-80	91	-185	206	543	269	-740	89	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.254	1	Yes	0.681	0.188	0.87	Yes	1.00	**2.31**
		$U_4 - L_4$			-----	-274.03	-29	40	-140	155	552	241	-1002	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.621	0.372	1	Yes	0.580	0.198	0.78	Yes	1.00	**2.71**
		$U_5 - L_5$			-----	-235.56	48	-41	-115	142	541	183	-1359	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.532	0.458	1	Yes	0.498	0.182	0.69	Yes	1.00	**4.31**
		$U_6 - L_6$			217.07	-----	117	-122	-24	31	84	8	-1565	-154	0.390	0.609	1.00	Yes	0.215	0.335	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_7 - L_7$			-----	-215.07	79	-91	96	-110	581	71	-1818	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.486	0.507	1	Yes	0.455	0.141	0.60	Yes	1.00	**4.60**
		$U_8 - L_8$			-----	-471.37	149	-170	333	-357	418	-30	-287	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.149	0.84	Yes	0.679	0.312	1.00	Yes	1.00	**3.48**
		$U_9 - L_9$			-----	-696.62	270	-277	569	-589	731	345	-665	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.160	0.94	Yes	0.747	0.250	1.00	Yes	1.00	**4.52**
		$U_{10} - L_{10}$			-----	-745.81	233	-233	509	-531	1179	694	-9	216	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.256	1	Yes	0.697	0.235	0.94	Yes	1.00	**4.39**
		$U_{11} - L_{11}$			-----	-733.67	226	-220	459	-462	1187	668	526	492	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.259	1	Yes	0.686	0.204	0.90	Yes	1.00	**3.64**
		$U_{12} - L_{12}$			-----	-722.24	186	-169	418	-411	1480	645	1012	507	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.304	1	Yes	0.626	0.179	0.81	Yes	1.00	**3.59**
		$U_{13} - L_{13}$			-----	-601.99	231	-229	480	-469	1326	332	532	177	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.323	1	Yes	0.580	0.230	0.82	Yes	1.00	**3.46**
		$U_{14} - L_{14}$			-----	-1102.85	-45	38	-198	178	1294	-97	-2069	-335	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.192	1	Yes	0.731	0.035	0.77	Yes	1.00	**4.97**
		$U_{15} - L_{15}$			-----	-613.66	-275	277	-514	505	634	67	-1292	12	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.306	1	Yes	0.592	0.246	0.84	Yes	1.00	**3.14**
		$U_{16} - L_{16}$			-----	-640.51	-194	181	-422	423	672	191	-1472	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.253	1	Yes	0.686	0.180	0.87	Yes	1.00	**3.03**
		$U_{17} - L_{17}$			-----	-618.84	-201	201	-481	492	595	195	-1072	17	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.227	1	Yes	0.720	0.228	0.95	Yes	1.00	**3.33**
		$U_{18} - L_{18}$			-----	-535.68	-168	174	-393	428	621	218	-1375	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.283	1	Yes	0.683	0.219	0.91	Yes	1.00	**2.95**
		$U_{19} - L_{19}$			-----	-450.32	-92	94	-240	249	518	197	-1284	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.314	1	Yes	0.672	0.240	0.92	Yes	1.00	**3.01**
		$U_{20} - L_{20}$			-----	-337.24	-47	51	-167	182	521	186	-897	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.308	1	Yes	0.646	0.208	0.86	Yes	1.00	**3.06**
		$U_{21} - L_{21}$			-----	-252.69	-4	11	-143	162	232	66	-1265	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.571	0.423	1	Yes	0.535	0.208	0.75	Yes	1.00	**3.43**
		$U_{22} - L_{22}$			-----	-216.17	-2	4	-12	13	633	138	-1874	-391	-----	-----	-----	-----	-----	-----	-----	-----	0.486	0.506	1	Yes	0.457	0.017	0.48	Yes	1.00	**4.34**
		$U_{23} - L_{23}$			-----	-320.30	11	-15	227	-246	524	165	-415	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.245	0.97	Yes	0.678	0.314	1.00	Yes	1.00	**4.34**
		$U_{24} - L_{24}$			-----	-369.91	52	-57	217	-228	584	204	-242	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1	Yes	0.709	0.260	0.97	Yes	1.00	**3.48**
		$U_{25} - L_{25}$			-----	-481.55	98	-100	286	-290	588	223	-600	4	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.185	0.91	Yes	0.719	0.279	1.00	Yes	1.00	**3.54**
		$U_{26} - L_{26}$			-----	-570.04	168	-176	497	-521	707	301	229	273	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.189	0.95	Yes	0.726	0.267	1.00	Yes	1.00	**3.89**
		$U_{27} - L_{27}$			-----	-597.58	220	-216	513	-522	1194	556	111	335	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.260	1	Yes	0.696	0.242	0.94	Yes	1.00	**3.87**
		$U_{28} - L_{28}$			-----	-611.77	156	-130	465	-449	1646	556	900	388	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.288	1	Yes	0.656	0.197	0.86	Yes	1.00	**3.97**
		$U_{29} - L_{29}$			-----	-618.02	150	-154	577	-561	1187	197	460	135	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.303	1	Yes	0.596	0.276	0.88	Yes	1.00	**5.47**
		$U_{30} - L_{30}$			-----	-1091.80	-176	149	-344	299	1002	-283	-2213	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.194	1	Yes	0.724	0.061	0.79	Yes	1.00	**4.45**
		$U_{31} - L_{31}$			-----	-709.63	-306	300	-530	512	520	95	-561	13	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1	Yes	0.684	0.254	0.94	Yes	1.00	**3.00**
		$U_{32} - L_{32}$			-----	-801.95	-226	208	-420	423	469	170	-1001	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.227	1	Yes	0.695	0.181	0.88	Yes	1.00	**3.13**
		$U_{33} - L_{33}$			-----	-770.90	-248	237	-432	445	454	216	-1504	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.222	1	Yes	0.721	0.196	0.92	Yes	1.00	**3.29**
		$U_{34} - L_{34}$			-----	-755.46	-237	251	-469	497	552	334	-1128	-121	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.247	1	Yes	0.706	0.219	0.93	Yes	1.00	**3.93**
		$U_{35} - L_{35}$			-----	-640.58	-256	270	-477	511	631	374	-1560	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.278	1	Yes	0.687	0.217	0.91	Yes	1.00	**3.58**
		$U_{36} - L_{36}$			-----	-476.06	-136	158	-286	318	252	182	-1664	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.306	1	Yes	0.686	0.278	0.97	Yes	1.00	**3.42**
		$U_{37} - L_{37}$			-----	-215.44	-80	95	-126	146	497	96	-1988	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.487	0.507	1	Yes	0.456	0.186	0.65	Yes	1.00	**4.30**
		$U_{38} - L_{38}$			288.90	-----	-180	184	153	-164	-173	-499	-820	-258	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.13**
		$U_{39} - L_{39}$			-----	-296.02	-44	38	189	-213	524	153	-830	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.323	1	Yes	0.626	0.273	0.90	Yes	1.00	**5.32**
		$U_{40} - L_{40}$			-----	-325.29	35	-43	217	-221	596	172	6	15	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.254	1	Yes	0.688	0.282	0.98	Yes	1.00	**3.67**
		$U_{41} - L_{41}$			-----	-462.94	86	-95	237	-249	579	192	215	112	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.210	1	Yes	0.726	0.227	0.96	Yes	1.00	**3.15**
		$U_{42} - L_{42}$			-----	-576.65	169	-178	495	-502	668	171	325	136	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.171	0.95	Yes	0.735	0.257	1.00	Yes	1.00	**4.10**
		$U_{43} - L_{43}$			-----	-711.50	186	-204	540	-560	618	185	480	223	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.153	0.97	Yes	0.763	0.237	1.00	Yes	1.00	**5.04**
		$U_{44} - L_{44}$			-----	-670.71	249	-306	470	-598	539	91	480	81	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.187	1	Yes	0.719	0.253	0.98	Yes	1.00	**4.19**
	Structure 3	$U_0 - L_0$			-----	-564.94	-174	261	-297	416	367	48	-874	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.247	1	Yes	0.658	0.193	0.86	Yes	1.00	**2.02**
		$U_1 - L_1$			-----	-603.07	-213	212	-431	437	617	145	-1232	5	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.245	1	Yes	0.702	0.203	0.91	Yes	1.00	**2.78**
		$U_2 - L_2$			-----	-499.50	-163	174	-333	361	655	309	-1074	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.265	1	Yes	0.695	0.204	0.90	Yes	1.00	**2.54**
		$U_3 - L_3$			-----	-405.75	-70	85	-169	193	561	271	-608	138	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1	Yes	0.700	0.196	0.90	Yes	1.00	**2.30**
		$U_4 - L_4$			-----	-281.00	-40	46	-160	175	589	226	-1438	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.362	1	Yes	0.595	0.224	0.82	Yes	1.00	**2.98**
		$U_5 - L_5$			-----	-230.33	43	-32	-133	157	-91	-35	-2037	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.516	0.483	1	Yes	0.487	0.200	0.69	Yes	1.00	**4.57**
		$U_6 - L_6$			-----	-191.51	63	-70	111	-116	857	260	-2022	-480	-----	-----	-----	-----	-----	-----	-----	-----	0.427	0.569	1	Yes	0.405	0.149	0.56	Yes	1.00	**4.22**
		$U_7 - L_7$			-----	-353.64	82	-98	201	-226	500	90	-809	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.278	1	Yes	0.677	0.259	0.94	Yes	1.00	**3.06**
		$U_8 - L_8$			-----	-512.15	133	-134	336	-337	900	373	-65	41	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.260	1	Yes	0.703	0.288	1.00	Yes	1.00	**4.09**
		$U_9 - L_9$			-----	-625.64	160	-220	382	-479	1162	419	447	423	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.249	1	Yes	0.728	0.222	0.96	Yes	1.00	**4.23**
		$U_{10} - L_{10}$			-----	-601.31	154	-142	304	-316	1875	995	1080	667	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.369	1	Yes	0.593	0.164	0.76	Yes	1.00	**3.40**
		$U_{11} - L_{11}$			-----	-565.64	189	-220	375	-422	1503	673	744	423	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.321	1	Yes	0.639	0.234	0.88	Yes	1.00	**3.10**
		$U_{12} - L_{12}$			-----	-1141.03	-22	4	-183	172	1371	350	-1641	-369	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.168	1	Yes	0.791	0.034	0.83	Yes	1.00	**3.65**
		$U_{13} - L_{13}$			-----	-437.22	-154	169	-264	283	649	119	-883	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.266	1	Yes	0.674	0.279	0.96	Yes	1.00	**1.91**
		$U_{14} - L_{14}$			-----	-457.41	-98	96	-191	211	609	247	-1267	-418	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.303	1	Yes	0.656	0.185	0.85	Yes	1.00	**2.45**
		$U_{15} - L_{15}$			-----	-394.30	-79	88	-167	197	527	246	-883	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.280	1	Yes	0.680	0.200	0.89	Yes	1.00	**2.97**
		$U_{16} - L_{16}$			-----	-199.70	-86	87	-81	90	967	361	-1960	-687	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.555	1	Yes	0.423	0.115	0.54	Yes	1.00	**3.63**
		$U_{17} - L_{17}$			149.22	-----	-150	166	78	-103	460	166	-1787	-645	0.268	0.730	1.00	Yes	0.148	0.402	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.94**
		$U_{18} - L_{18}$			95.59	-281.51	-102	109	208	-251	476	152	-1085	-497	0.172	0.635	0.81	Yes	0.095	0.349	0.45	Yes	0.615	0.381	1	Yes	0.596	0.321	0.92	Yes	1.00	**6.69**
		$U_{19} - L_{19}$			-----	-327.56	-30	13	223	-236	425	219	-255	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.206	0.93	Yes	0.693	0.302	1.00	Yes	1.00	**5.03**
		$U_{20} - L_{20}$			-----	-328.91	79	-91	180	-220	604	194	131	42	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.265	1	Yes	0.696	0.281	0.98	Yes	1.00	**2.76**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
South Truss - Diagonals	Structure 1	$U_0 - L_1$	628.89	-----	-17	32	1	-12	-506	-540	78	150	0.825	0.173	1.00	Yes	0.498	0.096	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.60**
		$U_1 - L_2$	412.22	-118.93	-94	8	16	-17	-466	-473	400	222	0.741	0.257	1.00	Yes	0.408	0.141	0.55	Yes	0.273	0.213	0.49	Yes	0.252	0.120	0.38	Yes					1.00	**4.52**
		$U_2 - L_3$	-----	-270.10	-99	-23	55	-31	-355	-714	548	295	-----	-----	-----	-----	-----	-----	-----	-----	0.622	0.371	1	Yes	0.572	0.126	0.70	Yes					1.00	**7.43**
		$U_3 - L_4$	-----	-320.80	-8	-35	4	-61	176	22	-695	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.266	1	Yes	0.679	0.078	0.76	Yes					1.00	**3.48**
		$U_4 - L_4$	523.33	-----	-86	45	-43	19	-80	5	588	191	0.767	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.10**
		$U_4 - L_5$	676.91	-----	-193	200	-34	99	-459	452	274	79	0.800	0.197	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.01**
		$U_5 - L_6$	589.31	-----	-263	232	-39	85	-262	142	-798	-110	0.697	0.295	1.00	Yes	0.383	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.33**
		$U_6 - L_7$	616.75	-----	-89	295	30	80	38	190	-560	-296	0.729	0.270	1.00	Yes	0.401	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.43**
		$U_8 - L_9$	952.34	-----	-95	352	12	185	-204	-615	592	286	0.761	0.235	1.00	Yes	0.472	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.51**
		$U_9 - L_{10}$	979.30	-----	-300	241	-113	128	-366	-494	605	262	0.783	0.211	1.00	Yes	0.485	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.27**
		$U_{10} - L_{11}$	918.22	-----	-240	162	-82	95	-376	-814	177	-15	0.776	0.218	1.00	Yes	0.480	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.26**
		$U_{11} - L_{12}$	770.03	-----	-254	75	-95	48	-619	-785	166	-23	0.762	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.82**
		$U_{12} - L_{13}$	577.06	-----	-197	135	-100	46	-334	-623	-485	-270	0.703	0.294	1.00	Yes	0.443	0.168	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.95**
		$U_{13} - L_{14}$	407.40	-----	-90	21	-31	-23	-161	-516	-455	-260	0.733	0.264	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.76**
		$U_{15} - L_{16}$	224.28	-204.32	-73	-14	-11	-80	-197	-235	1127	-233	0.403	0.429	0.84	Yes	0.222	0.236	0.46	Yes	0.479	0.517	1	Yes	0.432	0.103	0.54	Yes					1.00	**5.13**
		$U_{16} - L_{15}$	381.82	-----	-138	82	-37	-10	-255	135	443	-232	0.687	0.305	1.00	Yes	0.378	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.93**
		$U_{17} - L_{18}$	530.20	-----	-149	97	-46	22	-247	-43	-305	-105	0.778	0.222	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.58**
		$U_{18} - L_{17}$	621.19	-----	-330	253	-130	89	-379	-7	-400	-112	0.734	0.259	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.05**
		$U_{19} - L_{18}$	689.75	-----	-334	253	-132	96	-373	-132	-455	-203	0.747	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.33**
		$U_{20} - L_{19}$	703.58	-----	-377	324	-174	140	-147	-65	-259	-140	0.762	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.87**
	Structure 2	$U_0 - L_1$	757.37	-----	-270	315	-100	128	-695	-600	-154	6	0.749	0.250	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.42**
		$U_1 - L_2$	732.12	-----	-387	292	-163	116	-380	-600	145	-29	0.724	0.269	1.00	Yes	0.398	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.18**
		$U_2 - L_3$	590.59	-----	-313	244	-118	88	-287	-661	126	-27	0.698	0.297	1.00	Yes	0.384	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.95**
		$U_3 - L_4$	536.62	-----	-173	111	-52	25	-455	-586	170	10	0.715	0.281	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.19**
		$U_4 - L_5$	363.31	-----	-130	81	3	-17	-271	-595	235	35	0.653	0.338	1.00	Yes	0.359	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.67**
		$U_5 - L_6$	343.48	-255.12	-107	26	61	-115	-452	-805	-784	-185	0.618	0.380	1.00	Yes	0.340	0.209	0.55	Yes	0.602	0.294	0.9	Yes	0.540	0.147	0.69	Yes					1.00	**7.01**
		$U_6 - L_7$	-----	-367.97	-12	-41	41	-98	28	-243	-446	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.203	1	Yes	0.705	0.112	0.82	Yes					1.00	**3.09**
		$U_8 - L_7$	560.63	-----	-177	139	-98	46	-258	-6	603	-200	0.715	0.281	1.00	Yes	0.450	0.161	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.75**
		$U_8 - L_9$	723.48	-----	-333	251	-175	118	-157	-2	-225	-111	0.784	0.207	1.00	Yes	0.431	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.58**
		$U_{10} - L_9$	830.16	-----	-318	252	-128	141	-32	206	-188	108	0.821	0.178	1.00	Yes	0.452	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.08**
		$U_{11} - L_{10}$	876.27	-----	-338	304	-136	164	-222	174	-402	129	0.798	0.198	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.99**
		$U_{12} - L_{11}$	851.48	-----	-334	348	-131	174	-509	181	-551	56	0.776	0.223	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.91**
		$U_{13} - L_{12}$	733.98	-----	-411	381	-157	161	-486	53	-541	0	0.726	0.272	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.13**
		$U_{14} - L_{13}$	731.34	-----	-249	427	-17	125	-24	52	-491	-255	0.724	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.91**
		$U_{14} - L_{15}$	598.55	-----	-196	345	-19	166	153	-394	531	241	0.708	0.292	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.61**
		$U_{15} - L_{16}$	587.35	-----	-350	317	-171	168	75	-265	590	180	0.694	0.305	1.00	Yes	0.382	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.66**
		$U_{16} - L_{17}$	690.76	-----	-332	349	-127	154	43	-415	373	110	0.748	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.48**
		$U_{17} - L_{18}$	637.81	-----	-285	271	-111	127	-39	-427	358	88	0.754	0.239	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.15**
		$U_{18} - L_{19}$	612.12	-----	-280	241	-82	96	-245	-616	290	77	0.724	0.270	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.66**
		$U_{19} - L_{20}$	569.36	-----	-191	154	-40	45	-268	-485	294	84	0.726	0.270	1.00	Yes	0.399	0.153	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.08**
		$U_{20} - L_{21}$	383.89	-----	-120	92	-26	2	-89	-515	-329	-79	0.690	0.302	1.00	Yes	0.380	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.01**
		$U_{21} - L_{22}$	376.82	-----	-108	38	19	-81	-222	-410	-606	-63	0.678	0.314	1.00	Yes	0.373	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.76**
		$U_{23} - L_{22}$	354.69	-----	-99	45	-19	-37	-86	-57	807	-159	0.638	0.361	1.00	Yes	0.351	0.198	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.89**
		$U_{24} - L_{23}$	425.64	-----	-123	107	-18	17	-140	99	-255	-63	0.766	0.232	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.96**
		$U_{25} - L_{24}$	595.69	-----	-195	174	-41	49	-67	112	-300	-82	0.760	0.236	1.00	Yes	0.418	0.133	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.17**
		$U_{26} - L_{25}$	667.46	-----	-282	276	-79	97	-50	178	-253	-57	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.22**
		$U_{27} - L_{26}$	648.78	-----	-290	290	-106	125	-158	254	-341	-8	0.767	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.72**
		$U_{28} - L_{27}$	672.48	-----	-305	341	-94	148	-416	230	-542	40	0.728	0.263	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.90**
		$U_{29} - L_{28}$	593.37	-----	-343	333	-92	105	-359	43	-549	-41	0.702	0.294	1.00	Yes	0.386	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.34**
		$U_{30} - L_{29}$	631.52	-----	-194	364	34	67	-87	5	-231	-196	0.747	0.248	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.46**
		$U_{30} - L_{31}$	727.15	-----	-255	431	-57	224	-33	-270	497	217	0.719	0.274	1.00	Yes	0.396	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.76**
		$U_{31} - L_{32}$	737.75	-----	-424	373	-232	217	9	-302	452	120	0.730	0.264	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.74**
		$U_{32} - L_{33}$	836.00	-----	-342	330	-160	192	-179	-647	280	57	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.25**
		$U_{33} - L_{34}$	834.77	-----	-327	264	-146	164	-560	-706	238	37	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.40**
		$U_{34} - L_{35}$	771.49	-----	-295	226	-154	122	-371	-642	9	-137	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.51**
		$U_{35} - L_{36}$	677.71	-----	-314	215	-176	104	-359	-611	-298	-205	0.734	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.27**
		$U_{36} - L_{37}$	553.45	-----	-182	137	-79	24	-195	-623	-564	-244	0.706	0.290	1.00	Yes	0.444	0.166	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.34**
		$U_{38} - L_{37}$	-----	-346.37	-21	-32	31	-86	-280	-142	494	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.251	1	Yes	0.664	0.098	0.77	Yes					1.00	**3.21**
		$U_{39} - L_{38}$	299.05	-172.97	-93	38	14	-73	-165	-32	1182	-184	0.538	0.461	1.00	Yes	0.296	0.253	0.55	Yes	0.412	0.444	0.86	Yes	0.366	0.119	0.49	Yes					1.00	**5.41**
		$U_{40} - L_{39}$	396.49	-----	-135	91	-6	-9	-214	91	-379	-103	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.74**
		$U_{41} - L_{40}$	561.86	-----	-176	127	-56	30	-321	-98	-413	-179	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.56**
		$U_{42} - L_{41}$	623.54	-----	-321	264	-120	90	-385	-73	-403	-171	0.737	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.69**
		$U_{43} - L_{42}$	771.15	-----	-378	310	-134	101	-362	-80	-376	-195	0.763	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.68**
		$U_{44} - L_{43}$	799.94	-----	-371	371	-175	155	-111	42	-211	-88	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.22**
	Structure 3	$U_0 - L_1$	702.16	-----	-243	259	-77	102	-496	-623	-146	7	0.761	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.35**
		$U_1 - L_2$	658.27	-----	-349	244	-158	108	-554	-632	165	-39	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.05**
		$U_2 - L_3$	588.46	-----	-311	240	-123	84	-388	-691	134	-26	0.696	0.301	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.29**
		$U_3 - L_4$	493.73	-----	-138	86	-42	20	-342	-564	154	-25	0.724	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.99**
		$U_4 - L_5$	332.87	-----	-120	78	-37	-15	-328	-476	-833	-213	0.599	0.395	1.00	Yes	0.329	0.217	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.62**
		$U_5 - L_6$	248.64	-281.29	-78	-22	28	-117	-347	-558	-877	-276	0.447	0.404	0.86	Yes	0.246	0.222	0.47	Yes	0.659	0.340	1	Yes	0.595	0.150	0.75	Yes					1.00	**6.31**
		$U_7 - L_6$	395.69	-----	-82	32	-45	-8	-199	-131	608	-150	0.712	0.281	1.00	Yes	0.391	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.17**
		$U_8 - L_7$	621.91	-----	-206	156	-98	49	-106	77	307	-86	0.758	0.240	1.00	Yes	0.477	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.17**
		$U_8 - L_9$	794.64	-----	-245	120	-132	30	-156	46	628	184	0.786	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.38**
		$U_{10} - L_9$	891.56	-----	-210	184	-108	89	-221	250	1115	226	0.753	0.244	1.00	Yes	0.466	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.70**
		$U_{11} - L_{10}$	943.77	-----	-274	267	-65	101	-285	152	-937	-233	0.754	0.241	1.00	Yes	0.467	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.73**
		$U_{12} - L_{11}$	920.17	-----	-78	355	26	113	59	240	-811	-283	0.736	0.261	1.00	Yes	0.456	0.148	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.43**
		$U_{12} - L_{13}$	613.66	-----	-90	287	6	156	102	-398	587	304	0.726	0.270	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.15**
		$U_{13} - L_{14}$	605.66	-----	-278	225	-100	125	-269	-285	676	270	0.716	0.281	1.00	Yes	0.394	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.97**
		$U_{14} - L_{15}$	662.23	-----	-195	202	-52	97	-150	-532	313	104	0.783	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.50**
		$U_{15} - L_{16}$	539.65	-----	-87	28	-40	6	-66	-361	-512	-299	0.791	0.208	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.33**
		$U_{17} - L_{16}$	-----	-325.59	-24	-44	-2	-58	-261	-394	496	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.250	1	Yes	0.689	0.074	0.77	Yes					1.00	**4.07**
		$U_{18} - L_{17}$	-----	-287.34	-136	-10	53	-37	-530	-137	-193	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.661	0.339	1	Yes	0.608	0.173	0.79	Yes					1.00	**9.22**
		$U_{19} - L_{18}$	450.32	-----	-92	12	19	-21	-225	-224	-204	-116	0.810	0.183	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.81**
		$U_{20} - L_{19}$	629.62	-----	-111	74	-29	3	-146	2	-60	14	0.826	0.166	1.00	Yes	0.499	0.092	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.10**

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

North Truss - Upper Chord

Location		Member	Member Forces from STAAD D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
	Structure 1	U$_1$ - U$_4$	-71.64	-98.73	-43.66			0.90	1.24	-48.61	-109.91	0.00	0.00	Vehicle	Vehicle	-----	-331.27	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.70	4.49
		U$_1$ - U$_2$	-90.83	-1.68	-140.62			0.90	1.24	-1.87	-156.55	0.00	0.00	Vehicle	Vehicle	-----	-457.28	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	43.34	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	1.82	3.03
		U$_2$ - U$_5$	-61.13	58.32	-174.47			0.90	1.24	64.92	-194.24	0.00	0.00	Vehicle	61.20	-500.31	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	41.43	Pass	42.67	49.07	Pass	9.33	12.00	Pass	6.77	11.28	1.56	2.60
		U$_4$ - U$_6$	10.71	76.36	-125.73			0.90	1.24	85.02	-139.98	0.00	0.00	Vehicle	198.12	-289.37	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.66	7.77	2.47	4.12
		U$_5$ - U$_8$	12.86	76.77	-162.22			0.90	1.24	85.47	-180.60	0.00	0.00	Vehicle	201.91	-374.59	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.62	7.70	1.92	3.20
		U$_6$ - U$_8$	121.37	88.74	-119.06			0.90	1.24	98.79	-132.54	0.00	0.00	Vehicle	371.84	-129.39	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	3.34	5.56	3.11	5.18
		U$_1$ - U$_2$	249.49	98.07	-72.77			0.90	1.24	109.18	-81.01	0.00	0.00	Vehicle	Vehicle	560.89	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.05	5.08	-----	-----
		U$_3$ - U$_5$	376.92	92.57	-13.25			0.90	1.24	103.06	-14.76	0.00	0.00	Vehicle	Vehicle	713.28	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	4.27	7.12	-----	-----
		U$_5$ - U$_8$	319.74	-2.75	1.22			0.90	1.20	1.31	-2.96	0.00	0.00	Vehicle	Vehicle	418.50	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	283.09	471.81	-----	-----
		U$_{10}$ - U$_{11}$	128.77	-10.73	-30.27			0.90	1.20	-11.57	-32.64	0.00	0.00	Vehicle	Vehicle	142.32	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{10}$ - U$_{11}$	-70.90	88.36	-64.72			0.90	1.20	95.27	-69.78	0.00	0.00	Vehicle	114.24	-243.36	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	4.91	8.19	4.53	7.55
		U$_{11}$ - U$_{12}$	-252.96	78.24	-97.96			0.90	1.20	84.36	-105.62	0.00	0.00	Vehicle	Vehicle	-----	-557.70	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.18	5.30
		U$_{12}$ - U$_{13}$	-391.95	67.07	-165.69			0.90	1.20	72.31	-178.64	0.00	0.00	Vehicle	Vehicle	-----	-896.59	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	43.98	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.50	4.17
		U$_{13}$ - U$_{14}$	-482.99	55.98	-187.88			0.90	1.20	60.35	-202.57	0.00	0.00	Vehicle	Vehicle	-----	-1066.79	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	43.52	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.50	4.17
		U$_{14}$ - U$_{15}$	-454.44	55.61	-248.72			0.90	1.20	59.96	-268.37	0.00	0.00	Vehicle	Vehicle	-----	-1210.81	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.85	Pass	25.60	48.37	Pass	6.40	12.00	Pass	-----	-----	1.89	3.14
		U$_{15}$ - U$_{16}$	-502.02	42.80	-250.87			0.90	1.20	46.15	-270.48	0.00	0.00	Vehicle	Vehicle	-----	-1238.68	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.39	Pass	25.60	47.83	Pass	6.40	12.00	Pass	-----	-----	1.83	3.05
		U$_{16}$ - U$_{17}$	-467.99	19.58	-232.34			0.90	1.20	21.11	-250.51	0.00	0.00	Vehicle	Vehicle	-----	-1151.16	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	41.89	Pass	25.60	49.61	Pass	6.40	12.00	Pass	-----	-----	2.06	3.43
		U$_{17}$ - U$_{18}$	-368.86	19.28	-160.00			0.90	1.20	20.79	-172.52	0.00	0.00	Vehicle	Vehicle	-----	-853.30	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	41.65	Pass	32.00	49.32	Pass	10.67	12.00	Pass	-----	-----	2.09	3.49
		U$_{18}$ - U$_{19}$	-251.56	9.64	-120.32			0.90	1.20	10.39	-129.73	0.00	0.00	Vehicle	Vehicle	-----	-608.10	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	41.15	Pass	32.00	48.73	Pass	10.67	12.00	Pass	-----	-----	1.97	3.28
		U$_{19}$ - U$_{20}$	-117.89	2.09	-57.01			0.90	1.20	2.25	-61.47	0.00	0.00	Vehicle	Vehicle	-----	-286.43	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.46	9.10
	Structure 2	U$_1$ - U$_4$	-118.23	-61.09	-29.13			0.90	1.18	-31.01	-65.05	0.00	0.00	Vehicle	Vehicle	-----	-294.63	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.88	8.13
		U$_1$ - U$_2$	-239.56	-114.70	-45.31			0.90	1.18	-48.24	-122.12	0.00	0.00	Vehicle	Vehicle	-----	-576.02	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.71	4.52
		U$_2$ - U$_5$	-350.44	-148.81	-90.29			0.90	1.18	-96.13	-158.44	0.00	0.00	Vehicle	Vehicle	-----	-798.85	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.75	4.59
		U$_4$ - U$_5$	-449.15	26.15	-218.26			0.90	1.18	27.84	-232.38	0.00	0.00	Vehicle	Vehicle	-----	-1087.37	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	43.25	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.39	3.84
		U$_5$ - U$_6$	-483.26	32.45	-205.99			0.90	1.18	34.55	-219.32	0.00	0.00	Vehicle	Vehicle	-----	-1103.43	15.10	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.75	4.58
		U$_6$ - U$_8$	-485.85	72.52	-269.41			0.90	1.18	77.21	-286.84	0.00	0.00	Vehicle	Vehicle	-----	-1253.10	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	42.43	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.09	3.49
		U$_7$ - U$_7$	-428.85	86.68	-259.81			0.90	1.18	92.28	-276.62	0.00	0.00	Vehicle	Vehicle	-----	-1156.85	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.93	Pass	23.27	49.66	Pass	5.82	12.00	Pass	-----	-----	1.98	3.30
		U$_7$ - U$_8$	-428.37	86.88	-259.28			0.90	1.18	92.51	-276.06	0.00	0.00	Vehicle	Vehicle	-----	-1155.01	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.97	Pass	23.27	49.70	Pass	5.82	12.00	Pass	-----	-----	1.98	3.31
		U$_8$ - U$_9$	-335.42	98.56	-221.29			0.90	1.18	104.93	-235.60	0.00	0.00	Vehicle	Vehicle	-----	-946.52	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	42.48	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.01	3.36
		U$_9$ - U$_{10}$	-200.29	107.82	-185.36			0.90	1.18	114.79	-197.36	0.00	0.00	Vehicle	Vehicle	-----	-687.98	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	44.17	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.09	3.48
		U$_{10}$ - U$_{11}$	-52.14	114.46	-147.53			0.90	1.18	121.86	-157.07	0.00	0.00	Vehicle	196.26	-408.10	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	4.74	7.90	2.74	4.57
		U$_{11}$ - U$_{12}$	107.02	114.26	-92.43			0.90	1.18	121.65	-98.41	0.00	0.00	Vehicle	402.70	-74.10	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	3.96	6.61	5.34	8.91
		U$_{12}$ - U$_{13}$	259.33	113.20	-39.16			0.90	1.18	120.53	-41.70	0.00	0.00	Vehicle	598.27	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.38	7.30	-----	-----
		U$_{13}$ - U$_{14}$	391.98	103.01	-7.04			0.90	1.18	109.67	-7.50	0.00	0.00	Vehicle	747.19	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	6.41	10.69	-----	-----
		U$_{14}$ - U$_{15}$	439.40	-2.68	0.40			0.90	1.17	0.42	-2.82	0.00	0.00	Vehicle	574.14	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	1591.89	2653.15	-----	-----
		U$_{15}$ - U$_{16}$	369.66	58.79	-35.53			0.90	1.17	61.85	-37.38	0.00	0.00	Vehicle	614.57	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	8.76	14.60	-----	-----
		U$_{16}$ - U$_{17}$	271.39	-17.15	-44.75			0.90	1.17	-18.05	-47.08	0.00	0.00	Vehicle	313.70	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{17}$ - U$_{18}$	171.75	-39.16	-68.52			0.90	1.17	-41.20	-72.09	0.00	0.00	Vehicle	134.01	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{18}$ - U$_{19}$	72.78	-81.92	-91.00			0.90	1.17	-86.19	-95.74	0.00	0.00	Vehicle	-----	-112.81	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.51	7.52
		U$_{19}$ - U$_{20}$	-8.11	78.71	-138.35			0.90	1.17	82.81	-145.55	0.00	0.00	Vehicle	168.88	-325.91	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.00	10.00	2.82	4.70
		U$_{20}$ - U$_{21}$	-60.13	66.51	-153.39			0.90	1.17	69.98	-161.38	0.00	0.00	Vehicle	73.45	-427.82	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.02	15.03	2.89	4.81
		U$_{21}$ - U$_{22}$	-82.18	52.59	-210.44			0.90	1.17	55.33	-221.40	0.00	0.00	Vehicle	13.04	-586.54	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	11.64	19.41	2.04	3.41
		U$_{22}$ - U$_{23}$	-82.40	52.69	-210.13			0.90	1.17	55.44	-221.08	0.00	0.00	Vehicle	12.98	-586.14	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	11.62	19.37	2.05	3.41
		U$_{23}$ - U$_{24}$	-65.94	37.46	-203.34			0.90	1.17	39.41	-213.94	0.00	0.00	Vehicle	-----	-549.25	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.16	3.60
		U$_{24}$ - U$_{25}$	-193.18	77.83	-193.18			0.90	1.17	81.88	-202.73	0.00	0.00	Vehicle	154.06	-440.92	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.14	10.24	2.10	3.50
		U$_{25}$ - U$_{26}$	55.02	88.39	-156.22			0.90	1.17	92.99	-164.36	0.00	0.00	Vehicle	273.01	-284.58	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	4.59	7.65	2.56	4.27
		U$_{26}$ - U$_{27}$	136.02	97.14	-114.20			0.90	1.17	102.20	-120.15	0.00	0.00	Vehicle	398.26	-83.50	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	3.70	6.17	3.91	6.52
		U$_{27}$ - U$_{28}$	216.87	101.22	-64.94			0.90	1.17	106.50	-68.32	0.00	0.00	Vehicle	512.67	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	4.66	7.77	-----	-----
		U$_{28}$ - U$_{29}$	293.76	103.54	-39.54			0.90	1.17	108.93	-41.59	0.00	0.00	Vehicle	617.90	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	5.39	8.98	-----	-----
		U$_{29}$ - U$_{30}$	358.11	97.26	-1.11			0.90	1.17	102.32	-1.17	0.00	0.00	Vehicle	687.25	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	7.07	11.79	-----	-----
		U$_{30}$ - U$_{31}$	339.33	7.39	-29.22			0.90	1.18	7.87	-31.11	0.00	0.00	Vehicle	458.17	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	93.41	155.69	-----	-----
		U$_{31}$ - U$_{32}$	251.17	51.97	-15.19			0.90	1.18	55.33	-16.18	0.00	0.00	Vehicle	446.40	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	9.63	16.05	-----	-----
		U$_{32}$ - U$_{33}$	136.17

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

North Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0 - L_1	4.85	-1.22	-2.57			0.90	1.24	-1.36	-2.86	0.00	0.00	Vehicle	Vehicle	3.36	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
	L_1 - L_2	74.27	68.31	53.84			0.90	1.24	76.05	59.94	0.00	0.00	Vehicle	Vehicle	261.33	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.38**	**5.63**	-----	-----
	L_2 - L_3	97.77	-42.33	154.66			0.90	1.24	172.18	-47.13	0.00	0.00	Vehicle	Vehicle	500.16	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**1.99**	**3.32**	-----	-----
	L_2 - L_4	66.93	-51.27	164.34			0.90	1.24	182.96	-58.21	0.00	0.00	Vehicle	Vehicle	483.42	-80.77	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**1.97**	**3.29**	**5.54**	**9.24**
	L_3 - L_5	-108.46	-91.99	117.96			0.90	1.24	131.33	-102.42	0.00	0.00	Vehicle	Vehicle	143.55	-362.90	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**3.21**	**5.35**	**2.30**	**3.83**
	L_4 - L_5	-237.28	-101.51	68.90			0.90	1.24	76.71	-113.02	0.00	0.00	Vehicle	Vehicle	-----	-553.33	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	42.60	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.24**	**3.74**
	L_5 - L_7	-362.27	-106.12	8.55			0.90	1.24	9.52	-118.15	0.00	0.00	Vehicle	Vehicle	-----	-726.93	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	44.49	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**2.96**	**4.93**
	L_6 - L_7	-478.66	-92.66	-35.56			0.90	1.24	-39.59	-103.16	0.00	0.00	Vehicle	Vehicle	-----	-845.77	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.19**	**6.99**
	L_7 - L_9	-477.02	-66.12	-2.18			0.90	1.20	-2.35	-71.29	0.00	0.00	Vehicle	Vehicle	-----	-774.59	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.08**	**10.13**
	L_9 - L_{10}	-301.43	-34.44	-35.91			0.90	1.20	-37.13	-38.72	0.00	0.00	Vehicle	Vehicle	-----	-475.75	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**9.98**	**16.63**
	L_{10} - L_{11}	-104.46	-86.88	49.30			0.90	1.20	53.16	-93.67	0.00	0.00	Vehicle	Vehicle	-----	-338.75	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.54**	**4.23**
	L_{11} - L_{12}	97.11	57.74	82.78			0.90	1.20	89.25	62.26	0.00	0.00	Vehicle	Vehicle	319.62	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.34**	**5.57**	-----	-----
	L_{12} - L_{13}	268.74	-65.90	142.08			0.90	1.20	153.19	-71.05	0.00	0.00	Vehicle	Vehicle	681.29	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.77**	**4.61**	-----	-----
	L_{13} - L_{14}	405.66	152.72	179.95			0.90	1.20	194.03	164.67	0.00	0.00	Vehicle	Vehicle	947.74	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.79**	**4.65**	-----	-----
	L_{14} - L_{15}	502.77	-31.38	207.71			0.90	1.20	223.95	-33.83	0.00	0.00	Vehicle	Vehicle	1138.84	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.87**	**4.79**	-----	-----
	L_{15} - L_{16}	469.25	-19.66	188.57			0.90	1.20	203.32	-21.20	0.00	0.00	Vehicle	Vehicle	1050.54	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.26**	**5.44**	-----	-----
	L_{16} - L_{17}	365.43	-16.04	131.65			0.90	1.20	141.95	-17.30	0.00	0.00	Vehicle	Vehicle	782.60	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.60**	**6.00**	-----	-----
	L_{17} - L_{18}	248.67	3.42	83.92			0.90	1.20	90.49	3.69	0.00	0.00	Vehicle	Vehicle	519.33	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.21**	**7.01**	-----	-----
	L_{18} - L_{19}	112.99	-2.94	9.71			0.90	1.20	10.47	-3.17	0.00	0.00	Vehicle	Vehicle	169.57	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**22.33**	**37.22**	-----	-----
	L_{19} - L_{20}	-14.26	17.72	-40.67			0.90	1.20	19.10	-43.85	0.00	0.00	Vehicle	Vehicle	22.85	-113.55	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**16.24**	**27.06**	**5.60**	**9.33**
Structure 2	L_0 - L_1	15.26	-7.97	0.92			0.90	1.18	0.98	-8.48	0.00	0.00	Vehicle	Vehicle	21.95	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**379.84**	**633.07**	-----	-----
	L_1 - L_2	136.12	46.56	14.56			0.90	1.18	49.57	15.51	0.00	0.00	Vehicle	Vehicle	284.36	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.02**	**10.03**	-----	-----
	L_2 - L_3	262.92	82.27	76.39			0.90	1.18	87.59	81.33	0.00	0.00	Vehicle	Vehicle	531.57	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**4.89**	**8.14**	-----	-----
	L_3 - L_4	373.32	130.12	150.85			0.90	1.18	160.61	138.54	0.00	0.00	Vehicle	Vehicle	833.31	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.50**	**5.83**	-----	-----
	L_4 - L_5	456.80	155.31	197.09			0.90	1.18	209.84	165.36	0.00	0.00	Vehicle	Vehicle	1048.49	-----	11.08	65.05	54.1000	2145.00	131.71	10.6406	5.6658	16.91	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.41**	**5.69**	-----	-----
	L_5 - L_6	489.63	-55.03	223.10			0.90	1.18	237.54	-58.59	0.00	0.00	Vehicle	Vehicle	1151.17	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.29**	**5.49**	-----	-----
	L_6 - L_7	479.27	-69.73	246.49			0.90	1.18	262.44	-74.24	0.00	0.00	Vehicle	Vehicle	1191.66	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.06**	**5.10**	-----	-----
	L_7 - L_8	330.30	-95.52	214.90			0.90	1.18	228.80	-101.70	0.00	0.00	Vehicle	Vehicle	925.13	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**2.65**	**4.42**	-----	-----
	L_8 - L_9	189.19	-103.31	170.52			0.90	1.18	181.55	-109.99	0.00	0.00	Vehicle	Vehicle	639.30	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**3.01**	**5.02**	-----	-----
	L_9 - L_{10}	39.95	-110.08	127.70			0.90	1.18	135.96	-117.20	0.00	0.00	Vehicle	Vehicle	346.52	-202.00	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**3.63**	**6.04**	**3.93**	**6.55**
	L_{10} - L_{11}	-127.23	-111.00	50.32			0.90	1.18	53.57	-118.18	0.00	0.00	Vehicle	Vehicle	-----	-421.46	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**2.66**	**4.43**
	L_{11} - L_{12}	-282.51	-110.08	0.06			0.90	1.18	0.06	-117.20	0.00	0.00	Vehicle	Vehicle	-----	-621.20	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.32**	**5.53**
	L_{12} - L_{13}	-426.62	-104.24	-3.66			0.90	1.18	-3.89	-110.98	0.00	0.00	Vehicle	Vehicle	-----	-795.07	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.59**	**7.65**
	L_{13} - L_{14}	-536.34	-72.08	-25.77			0.90	1.18	-27.43	-76.74	0.00	0.00	Vehicle	Vehicle	-----	-863.52	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.65**	**12.75**
	L_{14} - L_{15}	-537.64	-48.73	11.71			0.90	1.17	12.32	-51.27	0.00	0.00	Vehicle	Vehicle	-----	-810.02	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.44**	**19.07**
	L_{15} - L_{16}	-475.53	-99.07	-7.77			0.90	1.17	-8.17	-104.23	0.00	0.00	Vehicle	Vehicle	-----	-844.02	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.60**	**7.67**
	L_{16} - L_{17}	-384.21	-25.61	25.67			0.90	1.17	27.01	-26.95	0.00	0.00	Vehicle	Vehicle	-----	-557.86	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**14.77**	**24.61**
	L_{17} - L_{18}	-281.70	-9.68	53.00			0.90	1.17	55.76	-10.18	0.00	0.00	Vehicle	Vehicle	-----	-388.27	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**26.27**	**43.79**
	L_{18} - L_{19}	-174.99	-91.84	73.49			0.90	1.17	77.32	-96.63	0.00	0.00	Vehicle	Vehicle	-----	-436.84	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	44.60	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**2.48**	**4.13**
	L_{19} - L_{20}	-76.34	71.90	116.22			0.90	1.17	122.27	75.65	0.00	0.00	Vehicle	Vehicle	165.67	-----	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.71**	**6.18**	-----	-----
	L_{20} - L_{21}	4.59	-70.80	138.76			0.90	1.17	145.99	-74.49	0.00	0.00	Vehicle	Vehicle	322.27	-155.42	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.95**	**6.58**	**6.60**	**10.99**
	L_{21} - L_{22}	56.15	-58.52	163.46			0.90	1.17	171.97	-61.57	0.00	0.00	Vehicle	Vehicle	445.59	-60.42	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.17**	**5.28**	**8.48**	**14.14**
	L_{22} - L_{23}	63.16	-27.11	129.95			0.90	1.17	136.72	-28.52	0.00	0.00	Vehicle	Vehicle	378.33	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.96**	**6.59**	-----	-----
	L_{23} - L_{24}	15.68	-50.16	138.99			0.90	1.17	146.23	-52.77	0.00	0.00	Vehicle	Vehicle	337.22	-93.95	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.89**	**6.49**	**9.44**	**15.73**
	L_{24} - L_{25}	-55.90	-56.78	99.31			0.90	1.17	104.48	-59.74	0.00	0.00	Vehicle	Vehicle	153.71	-202.10	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.22**	**7.03**	**5.20**	**8.67**
	L_{25} - L_{26}	-136.32	-65.53	61.50			0.90	1.17	64.71	-68.94	0.00	0.00	Vehicle	Vehicle	-----	-326.58	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.81**	**6.34**
	L_{26} - L_{27}	-217.71	-66.59	29.65			0.90	1.17	31.19	-70.06	0.00	0.00	Vehicle	Vehicle	-----	-434.82	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**4.37**	**7.28**
	L_{27} - L_{28}	-296.28	-69.00	3.14			0.90	1.17	3.31	-72.60	0.00	0.00	Vehicle	Vehicle	-----	-542.46	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**6.21**	**10.35**
	L_{28} - L_{29}	-364.24	-64.23	-28.66			0.90	1.17	-30.15	-67.58	0.00	0.00	Vehicle	Vehicle	-----	-619.93	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.09**	**13.48**
	L_{29} - L_{30}	-418.31	-25.55	-26.64			0.90	1.17	-26.88	-28.02	0.00	0.00	Vehicle	Vehicle	-----	-604.51	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**23.49**	**39.14**
	L_{30} - L_{31}	-350.66	-42.16	24.15			0.90	1.18	25.71	-44.89	0.00	0.00	Vehicle	Vehicle	-----	-553.13	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.56**	**25.93**
	L_{31} - L_{32}	-275.63	-104.00	-27.43			0.90	1.18	-29.21	-110.73	0.00	0.00	Vehicle	Vehicle	-----	-598.24	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals																																														
Structure 1	U_0 - L_0	-77.20	17.50	-101.77			0.90	1.24	19.48	-113.30	0.00	0.00	Vehicle	Vehicle	------	-345.85	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	39.78	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	1.42	2.36
	U_0 - L_1	-33.88	15.69	-68.57			0.90	1.24	17.47	-76.34	0.00	0.00	Vehicle	Vehicle	------	-209.45	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	2.50	4.17
	U_1 - L_2	10.41	14.79	-40.42			0.90	1.24	16.46	-44.99	0.00	0.00	Vehicle	Vehicle	49.19	-83.96	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	15.21	25.35	4.83	8.05
	U_1 - L_3	44.37	14.75	-29.48			0.90	1.24	16.43	-32.82	0.00	0.00	Vehicle	Vehicle	93.27	-13.42	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	14.00	23.34	7.23	12.05
	U_2 - L_4	-16.71	-17.27	-8.14			0.90	1.24	-9.06	-19.23	0.00	0.00	Vehicle	Vehicle	------	-83.39	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	10.39	17.32
	U_3 - L_5	-109.52	-79.15	3.48			0.90	1.24	3.87	-88.12	0.00	0.00	Vehicle	Vehicle	------	-333.29	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	44.88	Pass	5.37	12.00	Pass	------	------	------	------	------	------	------	------	2.15	3.58
	U_4 - L_6	-143.61	-96.64	-3.85			0.90	1.24	-4.28	-107.58	0.00	0.00	Vehicle	Vehicle	------	-419.79	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	43.86	Pass	8.89	12.00	Pass	------	------	------	------	------	------	------	------	2.03	3.39
	U_5 - L_7	-142.76	-107.77	2.98			0.90	1.24	3.31	-119.98	0.00	0.00	Vehicle	Vehicle	------	-445.54	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	41.05	Pass	10.00	12.00	Pass	------	------	------	------	------	------	------	------	1.59	2.65
	U_6 - L_8	-391.96	-122.97	-97.04			0.90	1.24	-108.03	-136.90	0.00	0.00	Vehicle	Vehicle	------	-806.16	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	------	------	------	2.95	4.92
	U_7 - L_9	-223.26	10.77	-92.68			0.90	1.20	11.61	-99.93	0.00	0.00	Vehicle	Vehicle	------	-506.75	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	44.98	Pass	9.60	12.00	Pass	------	------	------	------	------	------	------	------	2.53	4.22
	U_8 - L_{10}	-225.85	7.50	-95.61			0.90	1.20	8.09	-103.09	0.00	0.00	Vehicle	Vehicle	------	-516.97	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	------	------	------	3.01	5.01
	U_9 - L_{11}	-198.80	-2.12	-84.45			0.90	1.20	-2.29	-91.05	0.00	0.00	Vehicle	Vehicle	------	-455.71	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	------	2.92	4.86
	U_{10} - L_{12}	-154.81	3.85	-77.20			0.90	1.20	4.15	-83.23	0.00	0.00	Vehicle	Vehicle	------	-381.59	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	------	------	------	2.72	4.54
	U_{11} - L_{13}	-109.06	11.17	-69.64			0.90	1.20	12.04	-75.08	0.00	0.00	Vehicle	Vehicle	------	-304.46	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	44.56	Pass	5.94	12.00	Pass	------	------	------	------	------	------	------	------	2.17	3.61
	U_{12} - L_{14}	-12.31	-10.46	0.61			0.90	1.20	0.66	-11.28	0.00	0.00	Vehicle	Vehicle	------	-40.44	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	17.68	29.47
	U_{13} - L_{15}	-5.62	-53.67	31.47			0.90	1.20	33.93	-57.87	0.00	0.00	Vehicle	Vehicle	66.22	-132.68	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	7.66	12.77	3.50	5.83
	U_{14} - L_{16}	-51.73	-68.24	14.13			0.90	1.20	15.23	-73.57	0.00	0.00	Vehicle	Vehicle	------	-226.66	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	2.36	3.94
	U_{17} - L_{17}	-127.32	-93.10	12.79			0.90	1.20	13.79	-100.38	0.00	0.00	Vehicle	Vehicle	------	-383.00	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	41.87	Pass	5.37	12.00	Pass	------	------	------	------	------	------	------	------	1.70	2.83
	U_{18} - L_{18}	-159.94	-103.89	11.80			0.90	1.20	12.72	-112.02	0.00	0.00	Vehicle	Vehicle	------	-450.63	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	42.99	Pass	7.23	12.00	Pass	------	------	------	------	------	------	------	------	1.96	3.26
	U_{19} - L_{19}	-191.17	-112.26	10.02			0.90	1.20	10.80	-121.04	0.00	0.00	Vehicle	Vehicle	------	-510.76	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	44.14	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	------	2.11	3.51
	U_{20} - L_{20}	-212.33	-113.48	-43.95			0.90	1.20	-47.38	-122.36	0.00	0.00	Vehicle	Vehicle	------	-541.13	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	42.88	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	------	1.81	3.02
Structure 2	U_0 - L_0	-206.69	12.95	-112.00			0.90	1.18	13.78	-119.25	0.00	0.00	Vehicle	Vehicle	------	-527.07	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	------	2.19	3.65
	U_1 - L_1	-188.76	13.29	-97.90			0.90	1.18	14.15	-104.23	0.00	0.00	Vehicle	Vehicle	------	-471.22	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	------	2.78	4.64
	U_1 - L_2	-155.92	14.02	-93.51			0.90	1.18	14.93	-99.55	0.00	0.00	Vehicle	Vehicle	------	-418.40	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	------	2.52	4.20
	U_2 - L_3	-134.58	15.89	-81.01			0.90	1.18	16.92	-86.25	0.00	0.00	Vehicle	Vehicle	------	-361.83	0.00	22.75	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	------	------	------	------	------	2.21	3.68
	U_3 - L_4	-64.49	15.18	-67.15			0.90	1.18	16.16	-71.50	0.00	0.00	Vehicle	Vehicle	------	-238.75	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	2.31	3.84
	U_4 - L_5	-19.94	20.95	-61.73			0.90	1.18	22.31	-65.73	0.00	0.00	Vehicle	Vehicle	22.42	-168.33	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	12.04	20.06	2.93	4.88
	U_5 - L_6	40.08	38.32	-38.05			0.90	1.18	40.80	-40.51	0.00	0.00	Vehicle	Vehicle	140.51	-35.67	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	5.70	9.50	5.66	9.43
	U_6 - L_7	-26.04	-14.93	-2.15			0.90	1.18	-2.29	-15.89	0.00	0.00	Vehicle	Vehicle	------	-68.28	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	11.87	19.79
	U_7 - L_8	-125.25	-74.81	19.70			0.90	1.18	20.98	-79.65	0.00	0.00	Vehicle	Vehicle	------	-335.40	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	------	------	------	3.05	5.09
	U_8 - L_9	-174.53	-95.34	8.64			0.90	1.18	9.20	-101.51	0.00	0.00	Vehicle	Vehicle	------	-446.84	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	------	3.05	5.09
	U_9 - L_{10}	-202.66	-105.23	3.55			0.90	1.18	3.78	-112.04	0.00	0.00	Vehicle	Vehicle	------	-506.21	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	------	3.08	5.14
	U_{10} - L_{11}	-229.53	-116.25	2.79			0.90	1.18	2.97	-123.77	0.00	0.00	Vehicle	Vehicle	------	-566.56	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	------	2.59	4.32
	U_{11} - L_{12}	-250.85	-122.33	2.65			0.90	1.18	2.82	-130.24	0.00	0.00	Vehicle	Vehicle	------	-608.30	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	------	2.54	4.23
	U_{12} - L_{13}	-223.32	-116.62	12.66			0.90	1.18	13.48	-124.17	0.00	0.00	Vehicle	Vehicle	------	-559.35	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	------	2.26	3.76
	U_{13} - L_{14}	-343.31	-112.13	-93.00			0.90	1.18	-99.02	-119.38	0.00	0.00	Vehicle	Vehicle	------	-704.97	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	------	------	------	3.56	5.93
	U_{14} - L_{15}	-123.14	12.92	-96.96			0.90	1.17	13.59	-102.01	0.00	0.00	Vehicle	Vehicle	------	-381.10	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	------	3.33	5.56
	U_{15} - L_{16}	-156.70	9.96	-93.82			0.90	1.17	10.48	-98.71	0.00	0.00	Vehicle	Vehicle	------	-417.57	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	------	3.10	5.16
	U_{16} - L_{17}	-147.91	9.70	-98.01			0.90	1.17	10.20	-103.12	0.00	0.00	Vehicle	Vehicle	------	-415.71	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	------	2.77	4.61
	U_{17} - L_{18}	-142.22	12.16	-86.30			0.90	1.17	12.80	-90.80	0.00	0.00	Vehicle	Vehicle	------	-381.62	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	------	2.87	4.79
	U_{18} - L_{19}	-111.48	13.56	-84.88			0.90	1.17	14.26	-89.30	0.00	0.00	Vehicle	Vehicle	------	-338.42	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	------	------	------	2.69	4.48
	U_{19} - L_{20}	-76.55	12.40	-74.80			0.90	1.17	13.04	-78.69	0.00	0.00	Vehicle	Vehicle	------	-270.02	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	------	------	------	2.28	3.79
	U_{20} - L_{21}	-44.31	19.31	-56.87			0.90	1.17	20.31	-59.83	0.00	0.00	Vehicle	Vehicle	------	-187.24	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	2.97	4.95
	U_{21} - L_{22}	-21.25	-13.64	-0.77			0.90	1.17	-0.81	-14.35	0.00	0.00	Vehicle	Vehicle	------	-58.72	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	13.40	22.33
	U_{22} - L_{23}	-39.07	-58.24	24.52			0.90	1.17	25.79	-61.27	0.00	0.00	Vehicle	Vehicle	5.10	-183.54	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	10.86	18.10	2.95	4.92
	U_{23} - L_{24}	-74.84	-73.33	22.56			0.90	1.17	23.73	-77.15	0.00	0.00	Vehicle	Vehicle	------	-264.45	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	------	------	------	2.34	3.89
	U_{24} - L_{25}	-103.27	-89.76	16.62			0.90	1.17	17.48	-94.43	0.00	0.00	Vehicle	Vehicle	------	-338.85	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	------	------	------	2.59	4.32
	U_{25} - L_{26}	-120.22	-99.72	15.68			0.90	1.17	16.49	-104.92	0.00	0.00	Vehicle	Vehicle	------	-383.61	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	------	2.61	4.36
	U_{26} - L_{27}	-123.93	-107.88	12.95			0.90	1.17	13.62	-113.50	0.00	0.00	Vehicle	Vehicle	------	-407.02	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	------	2.64	4.40
	U_{27} - L_{28}	-135.60	-114.42	11.78			0.90	1.17	12.39	-120.38	0.00	0.00	Vehicle	Vehicle	------	-437.10	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	------	2.64	4.41
	U_{28} - L_{29}	-116.87	-109.90	6.89			0.90	1.17	7.25	-115.63	0.00	0.00	Vehicle	Vehicle	------	-402.46	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	------	2.97	4.96
	U_{29} - L_{30}	-262.02	-110.22	-88.41			0.90	1.18	-94.13	-117.35	0.00	0.00	Vehicle	Vehicle	------	-594.88	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck

Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17

Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals	Structure 1	U$_1$ - L$_1$	87.33	-23.17	91.05			0.90	1.24	101.37	-25.80	0.00	0.00	Vehicle	Vehicle	333.15	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**2.95**	**4.92**	-----	-----
		U$_1$ - L$_2$	23.35	-24.46	72.07			0.90	1.24	80.23	-27.23	0.00	0.00	Vehicle	Vehicle	204.18	-28.66	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.02**	**5.04**	**7.90**	**13.17**
		U$_3$ - L$_3$	-37.85	-23.77	47.96			0.90	1.24	53.40	-26.47	0.00	0.00	Vehicle	Vehicle	66.48	-106.55	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**5.23**	**8.72**	**6.72**	**11.20**
		U$_3$ - L$_4$	-92.19	-23.00	1.80			0.90	1.24	2.00	-25.61	0.00	0.00	Vehicle	Vehicle	-----	-175.34	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**----**	**----**	**5.72**	**9.54**
		U$_5$ - L$_4$	143.37	15.41	102.49			0.90	1.24	114.10	17.16	0.00	0.00	Vehicle	Vehicle	433.59	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.00**	**3.34**	-----	-----
		U$_5$ - L$_5$	177.90	13.07	113.33			0.90	1.24	126.17	14.55	0.00	0.00	Vehicle	Vehicle	504.63	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.25**	**3.75**	-----	-----
		U$_7$ - L$_6$	184.42	1.21	124.01			0.90	1.24	138.06	1.35	0.00	0.00	Vehicle	Vehicle	538.87	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.03**	**3.38**	-----	-----
		U$_7$ - L$_7$	180.02	-1.65	125.43			0.90	1.24	139.64	-1.83	0.00	0.00	Vehicle	Vehicle	536.57	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.02**	**3.37**	-----	-----
		U$_9$ - L$_8$	268.98	1.97	116.74			0.90	1.20	125.87	2.12	0.00	0.00	Vehicle	Vehicle	622.38	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.30**	**5.51**	-----	-----
		U$_9$ - L$_{10}$	278.85	-12.27	90.26			0.90	1.20	97.32	-13.23	0.00	0.00	Vehicle	Vehicle	573.37	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.21**	**7.02**	-----	-----
		U$_{10}$ - L$_{11}$	285.04	12.32	122.12			0.90	1.20	131.67	13.29	0.00	0.00	Vehicle	Vehicle	655.83	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**2.85**	**4.75**	-----	-----
		U$_{12}$ - L$_{12}$	250.60	-3.43	100.08			0.90	1.20	107.91	-3.70	0.00	0.00	Vehicle	Vehicle	559.58	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.93**	**4.88**	-----	-----
		U$_{13}$ - L$_{13}$	189.65	-14.67	109.53			0.90	1.20	118.10	-15.82	0.00	0.00	Vehicle	Vehicle	502.42	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**2.24**	**3.74**	-----	-----
		U$_{14}$ - L$_{14}$	123.32	-22.02	83.17			0.90	1.20	89.67	-23.74	0.00	0.00	Vehicle	Vehicle	354.61	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.04**	**3.39**	-----	-----
		U$_{15}$ - L$_{14}$	-24.41	-50.52	53.30			0.90	1.20	57.47	-54.47	0.00	0.00	Vehicle	Vehicle	92.78	-149.75	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.72**	**7.87**	**3.35**	**5.58**
		U$_{15}$ - L$_{15}$	48.53	-33.07	73.20			0.90	1.20	78.93	-35.66	0.00	0.00	Vehicle	Vehicle	234.10	-14.16	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**2.88**	**4.80**	**6.28**	**10.46**
		U$_{17}$ - L$_{16}$	146.59	-17.50	108.30			0.90	1.20	116.77	-18.87	0.00	0.00	Vehicle	Vehicle	443.56	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**1.94**	**3.24**	-----	-----
		U$_{17}$ - L$_{17}$	182.46	-15.09	112.13			0.90	1.20	120.89	-16.27	0.00	0.00	Vehicle	Vehicle	499.13	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.32**	**3.87**	-----	-----
		U$_{19}$ - L$_{18}$	223.82	-12.65	116.52			0.90	1.20	125.63	-13.64	0.00	0.00	Vehicle	Vehicle	563.17	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.32**	**3.87**	-----	-----
		U$_{20}$ - L$_{19}$	232.72	3.22	98.54			0.90	1.20	106.24	3.47	0.00	0.00	Vehicle	Vehicle	532.73	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.70**	**4.49**	-----	-----
	Structure 2	U$_1$ - L$_1$	213.54	-13.65	104.44			0.90	1.18	111.19	-14.53	0.00	0.00	Vehicle	Vehicle	518.52	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.04**	**5.07**	-----	-----
		U$_1$ - L$_2$	200.48	-16.22	118.13			0.90	1.18	125.77	-17.27	0.00	0.00	Vehicle	Vehicle	533.12	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.75**	**4.59**	-----	-----
		U$_3$ - L$_3$	172.81	-18.15	104.82			0.90	1.18	111.60	-19.32	0.00	0.00	Vehicle	Vehicle	466.45	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.57**	**4.28**	-----	-----
		U$_3$ - L$_4$	147.16	-21.35	105.59			0.90	1.18	112.42	-22.73	0.00	0.00	Vehicle	Vehicle	434.89	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**2.29**	**3.82**	-----	-----
		U$_5$ - L$_5$	49.10	-21.37	88.23			0.90	1.18	93.94	-22.58	0.00	0.00	Vehicle	Vehicle	267.37	-----	0.00	16.85	16.8486	556.00	131.71	13.3954	1.9682	67.41	28.25	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.42**	**4.03**	-----	-----
		U$_5$ - L$_6$	2.96	-42.12	68.40			0.90	1.18	72.82	-44.85	0.00	0.00	Vehicle	Vehicle	161.63	-93.31	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.50**	**5.83**	**4.40**	**7.33**
		U$_7$ - L$_7$	-85.74	-69.53	48.66			0.90	1.18	51.81	-74.03	0.00	0.00	Vehicle	Vehicle	0.79	-271.86	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	**6.46**	**10.77**	**2.22**	**3.69**
		U$_7$ - L$_8$	140.30	-28.15	74.94			0.90	1.18	79.79	-29.97	0.00	0.00	Vehicle	Vehicle	355.26	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.48**	**5.80**	-----	-----
		U$_9$ - L$_8$	204.22	-13.16	108.16			0.90	1.18	115.16	-14.01	0.00	0.00	Vehicle	Vehicle	514.99	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.64**	**4.39**	-----	-----
		U$_9$ - L$_9$	234.87	10.01	113.98			0.90	1.18	121.35	10.66	0.00	0.00	Vehicle	Vehicle	568.25	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.68**	**4.47**	-----	-----
		U$_{11}$ - L$_{10}$	263.10	-1.03	123.18			0.90	1.18	131.15	-1.10	0.00	0.00	Vehicle	Vehicle	626.19	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**2.66**	**4.43**	-----	-----
		U$_{11}$ - L$_{11}$	274.02	-2.31	128.11			0.90	1.18	136.39	-2.45	0.00	0.00	Vehicle	Vehicle	651.75	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**2.51**	**4.18**	-----	-----
		U$_{13}$ - L$_{12}$	254.94	-13.86	123.74			0.90	1.18	131.75	-14.75	0.00	0.00	Vehicle	Vehicle	616.88	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.38**	**3.97**	-----	-----
		U$_{13}$ - L$_{13}$	217.71	-14.45	108.69			0.90	1.18	115.72	-15.38	0.00	0.00	Vehicle	Vehicle	533.75	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.90**	**4.84**	-----	-----
		U$_{15}$ - L$_{15}$	110.05	-9.05	89.89			0.90	1.17	94.57	-9.52	0.00	0.00	Vehicle	Vehicle	347.96	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.43**	**5.72**	-----	-----
		U$_{15}$ - L$_{16}$	132.30	-14.31	86.24			0.90	1.17	90.73	-15.06	0.00	0.00	Vehicle	Vehicle	368.57	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.43**	**5.71**	-----	-----
		U$_{17}$ - L$_{17}$	172.89	-8.40	116.12			0.90	1.17	122.17	-8.84	0.00	0.00	Vehicle	Vehicle	489.46	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.64**	**4.40**	-----	-----
		U$_{17}$ - L$_{18}$	160.19	-12.11	108.10			0.90	1.17	113.73	-12.75	0.00	0.00	Vehicle	Vehicle	454.65	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.59**	**4.31**	-----	-----
		U$_{19}$ - L$_{19}$	152.35	-15.84	112.36			0.90	1.17	118.22	-16.67	0.00	0.00	Vehicle	Vehicle	454.19	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.53**	**4.22**	-----	-----
		U$_{19}$ - L$_{20}$	120.69	-18.13	109.97			0.90	1.17	115.70	-19.07	0.00	0.00	Vehicle	Vehicle	407.57	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**2.50**	**4.17**	-----	-----
		U$_{20}$ - L$_{21}$	76.08	-19.18	83.67			0.90	1.17	88.03	-20.18	0.00	0.00	Vehicle	Vehicle	289.63	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.40**	**3.99**	-----	-----
		U$_{21}$ - L$_{22}$	31.46	-44.55	74.58			0.90	1.17	78.47	-46.88	0.00	0.00	Vehicle	Vehicle	210.91	-60.67	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.03**	**5.05**	**4.57**	**7.62**
		U$_{23}$ - L$_{23}$	24.30	-52.35	53.89			0.90	1.17	56.69	-55.08	0.00	0.00	Vehicle	Vehicle	154.42	-87.75	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.27**	**7.12**	**3.78**	**6.31**
		U$_{23}$ - L$_{24}$	72.26	-31.11	78.59			0.90	1.17	82.69	-32.73	0.00	0.00	Vehicle	Vehicle	273.10	-----	0.00	16.85	16.8486	556.00	131.71	13.8958	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.58**	**4.30**	-----	-----
		U$_{25}$ - L$_{25}$	180.76	-2.69	125.05			0.90	1.18	133.14	-2.87	0.00	0.00	Vehicle	Vehicle	523.46	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.69**	**4.48**	-----	-----
		U$_{25}$ - L$_{26}$	162.94	-1.46	111.37			0.90	1.18	118.58	-1.56	0.00	0.00	Vehicle	Vehicle	468.74	-----	0.00	27.98	27.9777	923.26	131.71	13.3125	2.8289	42.35	31.29	-744.20	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.77**	**4.62**	-----	-----
		U$_{27}$ - L$_{27}$	112.94	-16.72	99.55			0.90	1.18	105.99	-17.80	0.00	0.00	Vehicle	Vehicle	376.46	-----	3.00	23.77	20.7656	784.26	131.71	13.2708	2.1158	56.45	29.97	-605.39	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**2.78**	**4.63**	-----	-----
		U$_{27}$ - L$_{28}$	-73.86	-81.23	19.58			0.90	1.18	20.85	-86.48	0.00	0.00	Vehicle	Vehicle	-----	-283.39	0.00	18.61	18.6095	614.11	131.71	13.8229	1.9845	62.69	29.26	-462.87	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	**----**	**-----**	**1.96**	**3.26**
		U$_{29}$ - L$_{28}$	-4.37	-45.70	56.91			0.90	1.18	60.59	-48.66	0.00	0.00	Vehicle	Vehicle	125.59	-111.12	0.00	16.85	16.8486	556.00	131.71	13.6250	1.9682	62.30	29.31	-419.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.28**	**7.13**	**3.93**	**6.55**
		U$_{29}$ - L$_{29}$	29.28	-30.91	70.28			0.90	1.18	74.83	-32.91	0.00	0.00	Vehicle	Vehicle	200.20	-33.25	0.00	16.85	16.8486	556.00	131.71	13.8750	1.9682	63.45	29.17	-417.77	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.19**	**5.32**	**6.39**	**10.65**
		U$_{31}$ - L$_{30}$	101.12	-22.62	100.54			0.90	1.18	107.04	-24.08	0.00	0.00	Vehicle	Vehicle	363.38	-----	0.00	22.73	22.7330	750.19	131.71	14.1250	2.0170	63.03	29.22	-564.65	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**2.67**	**4.45**	-----	-----
		U$_{31}$ - L$_{31}$	121.87	-19.85	114.27			0.90	1.18	121.66	-21.13	0.00	0.00	Vehicle	Vehicle	422.03	-----	0.00	25.63	25.6315	845.84	131.71	14.4896	2.8057	46.48	30.95	-674.19	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.61**	**4.35**	-----	-----
		U$_{33}$ - L$_{32}$	156.17	-18.05	124.85			0.90	1.18	132.93	-19.21	0.00	0.00	Vehicle	Vehicle	491.04	-----	0.00	30.63	30.6305	1010.81	131.71	15.6875	2.8427	49.67	30.65	-798.10	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.80**	**4.67**	-----	-----
		U$_{33}$ - L$_{33}$	164.27	-9.66	90.95			0.90	1.18	96.83	-10.29	0.00	0.00	Vehicle	Vehicle	423.36	-----	0.00	30.63	30.6305	1010.81	131.71	17.1250	2.8427	54.22	30.20	-786.39	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.80**	**6.33**	-----	-----
	Structure 3	U$_1$ - L$_1$	186.23	-8.32	81.83			0.90	1.20	88.23	-8.97	0.00	0.00	Vehicle	Vehicle	433.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30, LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30, LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U$_0$ - U$_1$	-52.64	-67.50	-82.70			0.75	1.24	-62.62	-76.72	0.00	0.00	Vehicle	Vehicle	-----	-234.66	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**4.01**	**6.68**
		U$_1$ - U$_2$	-61.57	23.20	-137.50			0.75	1.24	21.52	-127.57	0.00	0.00	Vehicle	Vehicle	-----	-356.43	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**2.37**	**3.95**
		U$_2$ - U$_3$	-26.99	41.60	-100.10			0.75	1.24	38.59	-92.87	0.00	0.00	Vehicle	Vehicle	48.54	-236.30	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**10.85**	**18.09**	**3.48**	**5.80**
		U$_3$ - U$_4$	32.92	64.00	-94.10			0.75	1.24	59.38	-87.30	0.00	0.00	Vehicle	Vehicle	171.45	-146.35	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**6.45**	**10.75**	**4.11**	**6.85**
		U$_4$ - U$_5$	34.77	64.30	-141.90			0.75	1.24	59.65	-131.65	0.00	0.00	Vehicle	Vehicle	174.46	-240.03	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**6.40**	**10.67**	**2.74**	**4.56**
		U$_5$ - U$_6$	124.13	75.80	-115.00			0.75	1.24	70.32	-106.69	0.00	0.00	Vehicle	Vehicle	313.74	-69.79	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**4.67**	**7.78**	**3.88**	**6.46**
		U$_6$ - U$_7$	223.19	89.40	-73.90			0.75	1.24	82.94	-68.56	0.00	0.00	Vehicle	Vehicle	469.85	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	**4.20**	**7.01**	-----	-----
		U$_7$ - U$_8$	331.76	76.80	-25.40			0.75	1.24	71.25	-23.56	0.00	0.00	Vehicle	Vehicle	585.67	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**6.55**	**10.92**	-----	-----
		U$_8$ - U$_9$	267.61	-8.00	2.00			0.75	1.20	1.80	-7.19	0.00	0.00	Vehicle	Vehicle	351.79	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**224.11**	**373.52**	-----	-----
		U$_9$ - U$_{10}$	89.12	-10.20	-32.10			0.75	1.20	-9.16	-28.84	0.00	0.00	Vehicle	Vehicle	95.99	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{10}$ - U$_{11}$	-76.81	-67.30	-68.70			0.75	1.20	-60.47	-61.73	0.00	0.00	Vehicle	Vehicle	-----	-233.59	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**5.06**	**8.43**
		U$_{11}$ - U$_{12}$	-230.69	-104.90	-108.10			0.75	1.20	-94.25	-97.13	0.00	0.00	Vehicle	Vehicle	-----	-510.33	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	**3.59**	**5.99**
		U$_{12}$ - U$_{13}$	-341.88	-147.50	-140.40			0.75	1.20	-126.15	-132.53	0.00	0.00	Vehicle	Vehicle	-----	-731.59	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	**3.60**	**6.00**
		U$_{13}$ - U$_{14}$	-421.62	39.40	-159.80			0.75	1.20	35.40	-143.58	0.00	0.00	Vehicle	Vehicle	-----	-859.20	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**3.79**	**6.31**
		U$_{14}$ - U$_{15}$	-422.51	-151.50	-218.50			0.75	1.20	-136.12	-196.32	0.00	0.00	Vehicle	Vehicle	-----	-974.62	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.77**	**4.61**
		U$_{15}$ - U$_{16}$	-439.94	-150.60	-227.40			0.75	1.20	-135.31	-204.32	0.00	0.00	Vehicle	Vehicle	-----	-1014.62	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.62	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.61**	**4.34**
		U$_{16}$ - U$_{17}$	-422.43	22.70	-219.10			0.75	1.20	20.40	-196.86	0.00	0.00	Vehicle	Vehicle	-----	-975.69	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.76**	**4.60**
		U$_{17}$ - U$_{18}$	-340.94	14.40	-159.20			0.75	1.20	12.94	-143.04	0.00	0.00	Vehicle	Vehicle	-----	-753.14	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	44.33	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	**2.64**	**4.40**
		U$_{18}$ - U$_{19}$	-247.15	9.50	-126.00			0.75	1.20	8.54	-113.21	0.00	0.00	Vehicle	Vehicle	-----	-566.58	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	42.63	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.28**	**3.80**
		U$_{19}$ - U$_{20}$	-131.71	-7.20	-63.80			0.75	1.20	-6.47	-57.32	0.00	0.00	Vehicle	Vehicle	-----	-295.42	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**5.71**	**9.52**
	Structure 2	U$_0$ - U$_1$	-131.51	-49.60	-22.60			0.75	1.18	-20.05	-44.01	0.00	0.00	Vehicle	Vehicle	-----	-266.31	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**7.03**	**11.72**
		U$_1$ - U$_2$	-247.03	-110.00	-113.10			0.75	1.18	-97.60	-100.35	0.00	0.00	Vehicle	Vehicle	-----	-538.55	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**3.25**	**5.42**
		U$_2$ - U$_3$	-347.15	-134.70	-93.40			0.75	1.18	-82.87	-119.51	0.00	0.00	Vehicle	Vehicle	-----	-710.24	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**3.67**	**6.11**
		U$_3$ - U$_4$	-437.07	45.60	-203.40			0.75	1.18	40.46	-180.47	0.00	0.00	Vehicle	Vehicle	-----	-959.20	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**3.01**	**5.01**
		U$_4$ - U$_5$	-468.70	-175.80	-180.30			0.75	1.18	-155.98	-159.97	0.00	0.00	Vehicle	Vehicle	-----	-955.92	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**3.82**	**6.37**
		U$_5$ - U$_6$	-471.03	70.80	-236.90			0.75	1.18	62.82	-210.19	0.00	0.00	Vehicle	Vehicle	-----	-1067.75	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.90**	**4.83**
		U$_6$ - U$_7$	-414.41	78.60	-220.70			0.75	1.18	69.74	-195.82	0.00	0.00	Vehicle	Vehicle	-----	-963.00	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**2.84**	**4.73**
		U$_7$ - U$_8$	-413.45	78.90	-222.10			0.75	1.18	70.00	-197.06	0.00	0.00	Vehicle	Vehicle	-----	-964.44	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**2.83**	**4.71**
		U$_8$ - U$_9$	-321.98	86.10	-201.20			0.75	1.18	76.39	-178.51	0.00	0.00	Vehicle	Vehicle	-----	-805.36	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.70**	**4.50**
		U$_9$ - U$_{10}$	-182.11	91.10	-162.50			0.75	1.18	80.83	-144.18	0.00	0.00	Vehicle	Vehicle	-----	-549.12	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.93**	**4.88**
		U$_{10}$ - U$_{11}$	-32.58	95.00	-130.20			0.75	1.18	84.29	-115.52	0.00	0.00	Vehicle	Vehicle	140.28	-292.64	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**6.71**	**11.19**	**3.83**	**6.38**
		U$_{11}$ - U$_{12}$	133.59	98.90	-91.60			0.75	1.18	87.75	-81.27	0.00	0.00	Vehicle	Vehicle	363.79	-2.42	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**5.31**	**8.86**	**6.67**	**11.11**
		U$_{12}$ - U$_{13}$	289.99	99.20	-43.10			0.75	1.18	88.02	-38.24	0.00	0.00	Vehicle	Vehicle	567.68	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	**5.79**	**9.65**	-----	-----
		U$_{13}$ - U$_{14}$	434.76	86.70	-13.80			0.75	1.18	76.92	-12.24	0.00	0.00	Vehicle	Vehicle	731.86	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**8.81**	**14.68**	-----	-----
		U$_{14}$ - U$_{15}$	474.45	9.90	-21.40			0.75	1.17	8.68	-18.76	0.00	0.00	Vehicle	Vehicle	635.59	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**75.34**	**125.56**	-----	-----
		U$_{15}$ - U$_{16}$	383.28	50.40	-42.80			0.75	1.17	44.19	-37.52	0.00	0.00	Vehicle	Vehicle	594.00	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**12.07**	**20.12**	-----	-----
		U$_{16}$ - U$_{17}$	279.57	-23.40	-48.30			0.75	1.17	-20.52	-42.35	0.00	0.00	Vehicle	Vehicle	318.99	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{17}$ - U$_{18}$	172.63	-43.30	-68.90			0.75	1.17	-37.96	-60.41	0.00	0.00	Vehicle	Vehicle	142.16	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{18}$ - U$_{19}$	74.36	-70.80	-95.20			0.75	1.17	-62.07	-83.47	0.00	0.00	Vehicle	Vehicle	-----	-84.17	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	**9.73**	**16.22**	**4.10**	**6.83**
		U$_{19}$ - U$_{20}$	-10.01	58.40	-114.10			0.75	1.17	51.20	-100.04	0.00	0.00	Vehicle	Vehicle	97.92	-229.76	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	**9.73**	**16.22**	**4.10**	**6.83**
	Structure 3	U$_0$ - U$_1$	-62.06	-106.80	-126.90			0.75	1.17	-93.64	-111.26	0.00	0.00	Vehicle	Vehicle	-----	-321.74	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**4.18**	**6.96**
		U$_1$ - U$_2$	-88.74	42.50	-174.40			0.75	1.17	37.26	-152.91	0.00	0.00	Vehicle	Vehicle	-----	-446.65	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.94**	**4.89**
		U$_2$ - U$_3$	-88.92	-116.40	-174.60			0.75	1.17	-102.05	-153.08	0.00	0.00	Vehicle	Vehicle	-----	-447.26	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.93**	**4.89**
		U$_3$ - U$_4$	-76.67	27.30	-174.20			0.75	1.17	23.94	-152.73	0.00	0.00	Vehicle	Vehicle	-----	-430.58	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.99**	**4.98**
		U$_4$ - U$_5$	-37.64	61.00	-157.40			0.75	1.17	53.48	-138.00	0.00	0.00	Vehicle	Vehicle	66.94	-347.94	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	**9.62**	**16.04**	**2.85**	**4.75**
		U$_5$ - U$_6$	37.23	67.10	-136.40			0.75	1.17	58.83	-119.59	0.00	0.00	Vehicle	Vehicle	175.86	-210.71	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	**7.44**	**12.39**	**3.43**	**5.72**
		U$_6$ - U$_7$	128.02	72.40	-104.90			0.75	1.17	63.48	-91.97	0.00	0.00	Vehicle	Vehicle	303.95	-32.85	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	**6.03**	**10.06**	**5.06**	**8.43**
		U$_7$ - U$_8$	233.68	79.30	-77.00			0.75	1.17	69.53	-67.51	0.00	0.00	Vehicle	Vehicle	454.42	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	**6.99**	**11.65**	-----	-----
		U$_8$ - U$_9$	337.65	14.20	-40.20			0.75	1.17	12.45	-35.25	0.00	0.00	Vehicle	Vehicle	465.92	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**45.05**	**75.08**	-----	-----
		U$_9$ - U$_{10}$	437.10	73.30	-6.60			0.75	1.17	64.27	-5.79	0.00	0.00	Vehicle	Vehicle	707.47	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**10.52**	**17.54**	-----	-----
		U$_{10}$ - U$_{11}$	420.53	-6.10	38.50			0.75	1.18	34.16	-5.41	0.00	0.00	Vehicle	Vehicle	620.70	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**20.09**	**33.48**	-----	-----
		U$_{11}$ - U$_{12}$	300.69	71.40	-19.80			0.75	1.18	63.35	-17.57	0.00	0.00	Vehicle	Vehicle	528.15	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck

Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17

Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L_0 - L_1	8.49	-2.90	-3.70			0.75	1.24	-2.69	-3.43	0.00	0.00	Vehicle	Vehicle	5.21	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L_1 - L_2	50.81	67.10	67.80			0.75	1.24	62.90	62.25	0.00	0.00	Vehicle	Vehicle	202.34	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.31**	**7.18**	-----	-----
		L_2 - L_3	61.22	-31.70	129.70			0.75	1.24	120.33	-29.41	0.00	0.00	Vehicle	Vehicle	340.30	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**3.03**	**5.05**	-----	-----
		L_3 - L_4	25.70	73.70	146.20			0.75	1.24	135.64	68.38	0.00	0.00	Vehicle	Vehicle	327.29	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**2.84**	**4.74**	-----	-----
		L_4 - L_5	-118.45	-72.70	100.00			0.75	1.24	92.78	-67.45	0.00	0.00	Vehicle	Vehicle	47.02	-300.12	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**4.61**	**7.68**	**3.40**	**5.66**
		L_5 - L_6	-217.80	-85.60	62.60			0.75	1.24	58.08	-79.42	0.00	0.00	Vehicle	Vehicle	-----	-455.21	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.34**	**5.56**
		L_6 - L_7	-320.36	-92.70	20.70			0.75	1.24	19.20	-86.00	0.00	0.00	Vehicle	Vehicle	-----	-602.80	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.36**	**7.26**
		L_7 - L_8	-417.18	-44.50	-39.30			0.75	1.24	-36.46	-41.28	0.00	0.00	Vehicle	Vehicle	-----	-631.79	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**11.37**	**18.95**
		L_8 - L_9	-410.79	-63.40	-1.20			0.75	1.20	-1.08	-56.96	0.00	0.00	Vehicle	Vehicle	-----	-657.45	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.31**	**13.85**
		L_9 - L_{10}	-247.75	-36.40	18.80			0.75	1.20	16.89	-32.71	0.00	0.00	Vehicle	Vehicle	-----	-392.94	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.80**	**21.33**
		L_{10} - L_{11}	-65.21	-69.20	63.10			0.75	1.20	56.70	-62.18	0.00	0.00	Vehicle	Vehicle	38.06	-219.49	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**6.98**	**11.63**	**4.20**	**7.00**
		L_{11} - L_{12}	101.88	59.00	92.50			0.75	1.20	83.11	53.01	0.00	0.00	Vehicle	Vehicle	312.52	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.55**	**5.92**	-----	-----
		L_{12} - L_{13}	264.09	62.70	150.40			0.75	1.20	135.13	56.34	0.00	0.00	Vehicle	Vehicle	636.11	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.16**	**5.26**	-----	-----
		L_{13} - L_{14}	373.73	134.30	180.00			0.75	1.20	161.73	120.67	0.00	0.00	Vehicle	Vehicle	836.27	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.47**	**5.78**	-----	-----
		L_{14} - L_{15}	476.34	-28.70	206.70			0.75	1.20	185.72	-25.79	0.00	0.00	Vehicle	Vehicle	1021.64	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.55**	**5.91**	-----	-----
		L_{15} - L_{16}	459.97	-21.40	196.90			0.75	1.20	176.91	-19.23	0.00	0.00	Vehicle	Vehicle	981.27	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.78**	**6.30**	-----	-----
		L_{16} - L_{17}	381.37	-14.50	148.10			0.75	1.20	133.07	-13.03	0.00	0.00	Vehicle	Vehicle	784.09	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.77**	**6.28**	-----	-----
		L_{17} - L_{18}	288.98	-6.30	102.70			0.75	1.20	92.28	-5.66	0.00	0.00	Vehicle	Vehicle	575.60	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.86**	**6.44**	-----	-----
		L_{18} - L_{19}	176.20	-4.60	32.30			0.75	1.20	29.02	-4.13	0.00	0.00	Vehicle	Vehicle	291.94	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**6.75**	**11.25**	-----	-----
		L_{19} - L_{20}	69.74	0.10	-18.50			0.75	1.20	0.09	-16.62	0.00	0.00	Vehicle	Vehicle	90.86	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**2890.63**	**4817.71**	-----	-----
		L_0 - L_1	24.59	8.10	-1.50			0.75	1.18	7.19	-1.33	0.00	0.00	Vehicle	Vehicle	47.54	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**50.82**	**84.71**	-----	-----
		L_1 - L_2	138.59	44.20	39.90			0.75	1.18	39.22	35.40	0.00	0.00	Vehicle	Vehicle	265.13	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**7.57**	**12.62**	-----	-----
		L_2 - L_3	252.83	78.30	125.20			0.75	1.18	111.08	69.47	0.00	0.00	Vehicle	Vehicle	569.36	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.91**	**6.51**	-----	-----
		L_3 - L_4	352.30	121.90	156.90			0.75	1.18	139.21	108.16	0.00	0.00	Vehicle	Vehicle	759.61	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**4.12**	**6.87**	-----	-----
		L_4 - L_5	447.17	141.30	192.50			0.75	1.18	170.80	125.37	0.00	0.00	Vehicle	Vehicle	951.37	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.23**	**7.04**	-----	-----
		L_5 - L_6	477.93	-62.00	207.00			0.75	1.18	183.66	-55.01	0.00	0.00	Vehicle	Vehicle	1019.25	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.30**	**7.16**	-----	-----
		L_6 - L_7	482.68	-72.90	222.20			0.75	1.18	197.15	-64.68	0.00	0.00	Vehicle	Vehicle	1054.63	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**4.06**	**6.77**	-----	-----
		L_7 - L_8	336.61	-87.90	184.50			0.75	1.18	163.70	-77.99	0.00	0.00	Vehicle	Vehicle	792.28	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.68**	**6.14**	-----	-----
		L_8 - L_9	196.05	-91.50	154.30			0.75	1.18	136.90	-81.18	0.00	0.00	Vehicle	Vehicle	551.48	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**3.96**	**6.60**	-----	-----
		L_9 - L_{10}	45.60	-96.00	117.10			0.75	1.18	103.90	-85.18	0.00	0.00	Vehicle	Vehicle	284.38	-125.27	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**4.71**	**7.86**	**5.45**	**9.08**
		L_{10} - L_{11}	-126.26	-98.20	44.30			0.75	1.18	39.31	-87.13	0.00	0.00	Vehicle	Vehicle	-----	-352.91	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.61**	**6.02**
		L_{11} - L_{12}	-284.87	-99.00	6.00			0.75	1.18	5.32	-87.84	0.00	0.00	Vehicle	Vehicle	-----	-560.64	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.41**	**7.35**
		L_{12} - L_{13}	-433.79	-86.20	5.70			0.75	1.18	5.06	-76.48	0.00	0.00	Vehicle	Vehicle	-----	-729.64	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.60**	**11.00**
		L_{13} - L_{14}	-552.65	-38.60	-29.60			0.75	1.18	-26.26	-34.25	0.00	0.00	Vehicle	Vehicle	-----	-792.64	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.86**	**28.11**
		L_{14} - L_{15}	-573.48	-56.70	27.90			0.75	1.17	24.46	-49.71	0.00	0.00	Vehicle	Vehicle	-----	-853.23	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.37**	**18.94**
		L_{15} - L_{16}	-492.94	-72.10	-2.70			0.75	1.17	-2.37	-63.21	0.00	0.00	Vehicle	Vehicle	-----	-777.78	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.43**	**12.38**
		L_{16} - L_{17}	-395.30	-25.70	37.90			0.75	1.17	33.23	-22.53	0.00	0.00	Vehicle	Vehicle	-----	-562.71	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**17.37**	**28.94**
		L_{17} - L_{18}	-288.04	-2.00	63.10			0.75	1.17	55.32	-1.75	0.00	0.00	Vehicle	Vehicle	-----	-378.26	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**150.35**	**250.58**
		L_{18} - L_{19}	-175.85	34.20	98.30			0.75	1.17	86.18	29.98	0.00	0.00	Vehicle	Vehicle	-----	-163.63	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L_{19} - L_{20}	-78.08	67.40	121.00			0.75	1.17	106.09	59.09	0.00	0.00	Vehicle	Vehicle	128.36	-----	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.28**	**7.14**	-----	-----
	Structure 2	L_{20} - L_{21}	7.55	67.60	142.00			0.75	1.17	124.50	59.27	0.00	0.00	Vehicle	Vehicle	279.57	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.61**	**7.69**	-----	-----
		L_{21} - L_{22}	59.07	101.90	164.70			0.75	1.17	144.40	89.34	0.00	0.00	Vehicle	Vehicle	389.65	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.76**	**6.27**	-----	-----
		L_{22} - L_{23}	71.98	-28.90	125.20			0.75	1.17	109.77	-25.34	0.00	0.00	Vehicle	Vehicle	331.41	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.88**	**8.13**	-----	-----
		L_{23} - L_{24}	33.55	-61.80	147.80			0.75	1.17	129.58	-54.18	0.00	0.00	Vehicle	Vehicle	324.38	-73.79	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.31**	**7.19**	**9.39**	**15.65**
		L_{24} - L_{25}	-45.09	-68.70	119.00			0.75	1.17	104.33	-60.23	0.00	0.00	Vehicle	Vehicle	167.44	-189.11	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.16**	**6.94**	**5.26**	**8.77**
		L_{25} - L_{26}	-134.94	-74.80	84.70			0.75	1.17	74.26	-65.58	0.00	0.00	Vehicle	Vehicle	-----	-317.51	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**4.01**	**6.69**
		L_{26} - L_{27}	-245.90	-77.80	51.20			0.75	1.17	44.89	-68.21	0.00	0.00	Vehicle	Vehicle	-----	-467.46	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**4.24**	**7.06**
		L_{27} - L_{28}	-351.78	-81.20	22.40			0.75	1.17	19.64	-71.19	0.00	0.00	Vehicle	Vehicle	-----	-611.56	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.86**	**9.77**
		L_{28} - L_{29}	-458.29	-80.00	-8.10			0.75	1.17	-7.10	-70.14	0.00	0.00	Vehicle	Vehicle	-----	-747.75	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.99**	**11.65**
		L_{29} - L_{30}	-542.18	-32.50	-31.50			0.75	1.17	-27.62	-28.49	0.00	0.00	Vehicle	Vehicle	-----	-766.57	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**20.49**	**34.15**
		L_{30} - L_{31}	-514.03	-32.50	-55.30			0.75	1.18	-28.84	-49.06	0.00	0.00	Vehicle	Vehicle	-----	-774.55	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.24**	**20.40**
		L_{31} - L_{32}	-411.21	-67.40	3.60			0.75	1.18	3.19	-59.80	0.00	0.00	Vehicle	Vehicle	-----	-664.14	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.67**	**14.45**
		L_{32} - L_{33}	-287.47	-23.90	31.40			0.75	1.18	27.86	-21.21	0.00	0.00	Vehicle	Vehicle

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Axial Force Rating

Location	Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1																																															
	U_0 - L_0	-67.60	14.23	-119.52			0.75	1.24	13.20	-110.88	0.00	0.00	Vehicle	Vehicle	-----	-328.12	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	40.85	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	1.50	2.50
	U_1 - L_1	-24.06	13.80	-60.86			0.75	1.24	12.81	-56.46	0.00	0.00	Vehicle	Vehicle	-----	-153.60	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	3.49	5.81
	U_2 - L_2	12.88	8.64	-38.59			0.75	1.24	8.01	-35.80	0.00	0.00	Vehicle	Vehicle	34.09	-60.83	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	31.07	51.78	6.12	10.19
	U_3 - L_3	37.35	26.20	-33.16			0.75	1.24	24.30	-30.76	0.00	0.00	Vehicle	Vehicle	101.21	-18.10	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	9.64	16.06	7.58	12.63
	U_4 - L_4	-15.53	-2.46	3.77			0.75	1.24	3.50	-2.28	0.00	0.00	Vehicle	Vehicle	-----	-25.13	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	88.00	146.66
	U_5 - L_5	-92.52	-72.68	17.20			0.75	1.24	15.96	-67.43	0.00	0.00	Vehicle	Vehicle	-----	-266.37	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.96	4.93
	U_6 - L_6	-117.01	-86.41	0.36			0.75	1.24	0.33	-80.17	0.00	0.00	Vehicle	Vehicle	-----	-325.81	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.93	4.88
	U_7 - L_7	-127.49	-101.53	0.26			0.75	1.24	0.24	-94.19	0.00	0.00	Vehicle	Vehicle	-----	-369.82	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.12	3.53
	U_8 - L_8	-368.60	-144.04	-136.00			0.75	1.24	-126.17	-133.63	0.00	0.00	Vehicle	Vehicle	-----	-768.71	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.13	5.21
	U_9 - L_9	-214.45	6.39	-110.59			0.75	1.20	5.74	-99.36	0.00	0.00	Vehicle	Vehicle	-----	-494.08	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.60	4.33
	U_{10} - L_{10}	-198.57	-10.14	-97.35			0.75	1.20	-9.11	-87.47	0.00	0.00	Vehicle	Vehicle	-----	-447.66	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.73	6.22
	U_{11} - L_{11}	-171.30	5.90	-84.64			0.75	1.20	5.30	-76.04	0.00	0.00	Vehicle	Vehicle	-----	-387.45	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.71	6.18
	U_{12} - L_{12}	-128.27	13.22	-79.50			0.75	1.20	11.88	-71.43	0.00	0.00	Vehicle	Vehicle	-----	-321.52	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.40	5.66
	U_{13} - L_{13}	-96.55	24.37	-69.12			0.75	1.20	21.89	-62.10	0.00	0.00	Vehicle	Vehicle	-----	-260.08	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.74	4.57
	U_{14} - L_{14}	-11.04	-3.39	8.76			0.75	1.20	7.87	-3.04	0.00	0.00	Vehicle	Vehicle	2.69	-20.95	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	33.45	55.75	65.83	109.72
	U_{15} - L_{15}	-2.54	-53.13	43.32			0.75	1.20	38.92	-47.73	0.00	0.00	Vehicle	Vehicle	81.02	-106.73	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	6.63	11.05	4.28	7.14
	U_{16} - L_{16}	-31.31	-64.30	31.93			0.75	1.20	28.69	-57.77	0.00	0.00	Vehicle	Vehicle	21.46	-165.88	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	9.60	16.00	3.22	5.37
	U_{17} - L_{17}	-105.02	-85.78	13.61			0.75	1.20	12.22	-77.07	0.00	0.00	Vehicle	Vehicle	-----	-303.51	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.38	3.97
	U_{18} - L_{18}	-126.66	-94.30	6.61			0.75	1.20	5.94	-84.73	0.00	0.00	Vehicle	Vehicle	-----	-348.24	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.82	4.71
	U_{19} - L_{19}	-166.54	-103.20	-9.25			0.75	1.20	-8.31	-92.73	0.00	0.00	Vehicle	Vehicle	-----	-417.41	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.91	4.85
	U_{20} - L_{20}	-184.30	-118.73	-7.74			0.75	1.20	-6.96	-106.68	0.00	0.00	Vehicle	Vehicle	-----	-470.73	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.24	3.73
	Structure 2																																															
	U_0 - L_0	-203.39	15.52	-118.91			0.75	1.18	13.77	-105.50	0.00	0.00	Vehicle	Vehicle	-----	-492.99	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.50	4.16
	U_1 - L_1	-176.11	17.01	-105.50			0.75	1.18	15.09	-93.61	0.00	0.00	Vehicle	Vehicle	-----	-431.76	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.18	5.30
	U_2 - L_2	-137.45	16.10	-90.78			0.75	1.18	14.28	-80.54	0.00	0.00	Vehicle	Vehicle	-----	-353.19	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.25	5.42
	U_3 - L_3	-117.61	16.73	-81.05			0.75	1.18	14.84	-71.91	0.00	0.00	Vehicle	Vehicle	-----	-308.70	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.79	4.65
	U_4 - L_4	-50.97	18.03	-69.22			0.75	1.18	15.99	-61.41	0.00	0.00	Vehicle	Vehicle	-----	-199.31	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.82	4.69
	U_5 - L_5	-13.79	33.89	-59.71			0.75	1.18	30.07	-52.98	0.00	0.00	Vehicle	Vehicle	47.23	-132.71	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	8.81	14.68	3.70	6.17
	U_6 - L_6	45.46	47.91	-41.56			0.75	1.18	42.51	-36.88	0.00	0.00	Vehicle	Vehicle	151.20	-20.80	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	5.40	8.99	6.30	10.50
	U_7 - L_7	-22.33	-13.73	3.73			0.75	1.18	3.31	-12.18	0.00	0.00	Vehicle	Vehicle	-----	-55.43	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	15.67	26.12
	U_8 - L_8	-120.06	-76.22	30.25			0.75	1.18	26.84	-67.62	0.00	0.00	Vehicle	Vehicle	-----	-302.59	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.64	6.07
	U_9 - L_9	-177.00	-89.15	25.84			0.75	1.18	22.93	-79.10	0.00	0.00	Vehicle	Vehicle	-----	-401.49	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.90	6.50
	U_{10} - L_{10}	-205.85	-97.33	19.27			0.75	1.18	17.10	-86.35	0.00	0.00	Vehicle	Vehicle	-----	-454.71	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.98	6.63
	U_{11} - L_{11}	-239.21	-106.20	12.40			0.75	1.18	11.00	-94.22	0.00	0.00	Vehicle	Vehicle	-----	-515.13	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.35	5.58
	U_{12} - L_{12}	-257.92	-114.42	1.57			0.75	1.18	1.39	-101.52	0.00	0.00	Vehicle	Vehicle	-----	-555.26	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.21	5.36
	U_{13} - L_{13}	-243.80	-114.83	7.98			0.75	1.18	7.08	-101.88	0.00	0.00	Vehicle	Vehicle	-----	-537.68	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.63	4.38
	U_{14} - L_{14}	-420.84	-134.43	-120.50			0.75	1.18	-106.91	-119.27	0.00	0.00	Vehicle	Vehicle	-----	-805.52	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.17	5.29
	U_{15} - L_{15}	-158.85	13.13	-123.98			0.75	1.17	11.51	-108.70	0.00	0.00	Vehicle	Vehicle	-----	-442.02	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.93	4.89
	U_{16} - L_{16}	-174.03	10.37	-106.07			0.75	1.17	9.09	-92.99	0.00	0.00	Vehicle	Vehicle	-----	-427.72	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.17	5.29
	U_{17} - L_{17}	-156.46	11.91	-96.24			0.75	1.17	10.44	-84.38	0.00	0.00	Vehicle	Vehicle	-----	-386.22	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.32	5.53
	U_{18} - L_{18}	-142.20	8.48	-85.76			0.75	1.17	7.43	-75.19	0.00	0.00	Vehicle	Vehicle	-----	-347.78	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.47	5.79
	U_{19} - L_{19}	-113.66	10.76	-84.03			0.75	1.17	9.43	-73.68	0.00	0.00	Vehicle	Vehicle	-----	-307.39	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.24	5.40
	U_{20} - L_{20}	-76.52	24.73	-71.55			0.75	1.17	21.68	-62.73	0.00	0.00	Vehicle	Vehicle	-----	-235.38	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.86	4.76
	U_{21} - L_{21}	-45.78	27.41	-55.97			0.75	1.17	24.03	-49.08	0.00	0.00	Vehicle	Vehicle	-----	-165.84	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.60	6.01
	U_{22} - L_{22}	-17.71	-9.26	7.49			0.75	1.17	6.56	-8.12	0.00	0.00	Vehicle	Vehicle	-----	-40.61	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	23.96	39.93
	U_{23} - L_{23}	-30.66	-59.29	36.94			0.75	1.17	32.38	-51.98	0.00	0.00	Vehicle	Vehicle	30.30	-152.49	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	8.49	14.15	3.58	5.96
	U_{24} - L_{24}	-62.03	-70.04	35.84			0.75	1.17	31.42	-61.41	0.00	0.00	Vehicle	Vehicle	-----	-213.68	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.06	5.10
	U_{25} - L_{25}	-103.10	-84.21	25.70			0.75	1.17	22.54	-73.83	0.00	0.00	Vehicle	Vehicle	-----	-294.00	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.32	5.53
	U_{26} - L_{26}	-134.31	-92.83	11.88			0.75	1.17	10.41	-81.39	0.00	0.00	Vehicle	Vehicle	-----	-350.94	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.27	5.44
	U_{27} - L_{27}	-155.93	-102.64	10.23			0.75	1.17	8.97	-89.99	0.00	0.00	Vehicle	Vehicle	-----	-397.68	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.12	5.19
	U_{28} - L_{28}	-179.28	-110.44	2.63			0.75	1.17	2.30	-96.83	0.00	0.00	Vehicle	Vehicle	-----	-442.86	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.02	5.03
	U_{29} - L_{29}	-171.45	-110.34	6.28			0.75	1.17	5.51	-96.74	0.00	0.00	Vehicle	Vehicle	-----	-432.48	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.22	5.36
	U_{30} - L_{30}	-392.76	-131.94	-120.23			0.75	1.18	-106.68	-117.07	0.00	0.00	Vehicle	Vehicle

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.25	-20.62	86.17			0.75	1.24	79.94	-19.13	0.00	0.00	Vehicle	Vehicle	242.44	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**4.00**	**6.67**	-----	-----
		U_1 - L_2	10.78	-19.98	42.28			0.75	1.24	39.22	-18.54	0.00	0.00	Vehicle	Vehicle	98.99	-26.15	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.38**	**10.63**	**11.20**	**18.67**
		U_2 - L_3	-44.02	-17.46	7.38			0.75	1.24	6.85	-16.20	0.00	0.00	Vehicle	Vehicle	-----	-92.32	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**10.75**	**17.91**
		U_3 - L_4	-76.72	-55.27	-10.22			0.75	1.24	-9.48	-51.27	0.00	0.00	Vehicle	Vehicle	-----	-210.82	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**3.04**	**5.06**
		U_4 - L_4	118.39	-21.74	101.08			0.75	1.24	93.78	-20.17	0.00	0.00	Vehicle	Vehicle	357.09	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.60**	**4.33**	-----	-----
		U_5 - L_5	137.53	-8.76	110.52			0.75	1.24	102.54	-8.13	0.00	0.00	Vehicle	Vehicle	400.95	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U_6 - L_6	157.34	2.50	66.19			0.75	1.24	61.41	2.32	0.00	0.00	Vehicle	Vehicle	337.59	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.82**	**8.03**	-----	-----
		U_7 - L_7	149.30	8.49	137.83			0.75	1.24	127.88	7.88	0.00	0.00	Vehicle	Vehicle	471.15	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.35**	**3.92**	-----	-----
		U_8 - L_8	249.09	9.98	147.77			0.75	1.20	132.77	8.96	0.00	0.00	Vehicle	Vehicle	611.49	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.22**	**5.37**	-----	-----
		U_9 - L_{10}	260.26	-5.14	91.84			0.75	1.20	82.52	-4.61	0.00	0.00	Vehicle	Vehicle	517.13	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**5.10**	**8.51**	-----	-----
		U_{10} - L_{11}	236.30	8.73	134.75			0.75	1.20	121.08	7.85	0.00	0.00	Vehicle	Vehicle	569.53	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**3.34**	**5.57**	-----	-----
		U_{11} - L_{12}	211.92	6.46	85.79			0.75	1.20	77.09	5.81	0.00	0.00	Vehicle	Vehicle	442.52	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.40**	**7.34**	-----	-----
		U_{12} - L_{13}	151.66	-33.24	116.18			0.75	1.20	104.39	-29.87	0.00	0.00	Vehicle	Vehicle	423.33	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**2.76**	**4.59**	-----	-----
		U_{13} - L_{14}	108.60	-47.01	95.18			0.75	1.20	85.52	-42.24	0.00	0.00	Vehicle	Vehicle	326.48	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.24**	**3.73**	-----	-----
		U_{14} - L_{14}	-24.45	-65.08	57.45			0.75	1.20	51.62	-58.47	0.00	0.00	Vehicle	Vehicle	80.06	-158.48	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**5.26**	**8.76**	**3.12**	**5.20**
		U_{15} - L_{15}	23.99	-43.98	83.19			0.75	1.20	74.75	-39.52	0.00	0.00	Vehicle	Vehicle	193.15	-54.43	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.24**	**5.40**	**5.29**	**8.82**
		U_{17} - L_{16}	120.03	-16.84	103.97			0.75	1.20	93.41	-15.13	0.00	0.00	Vehicle	Vehicle	358.44	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.60**	**4.33**	-----	-----
		U_{18} - L_{17}	144.79	-9.53	109.90			0.75	1.20	98.74	-8.56	0.00	0.00	Vehicle	Vehicle	402.18	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{19} - L_{18}	193.05	1.85	119.11			0.75	1.20	107.02	1.66	0.00	0.00	Vehicle	Vehicle	482.85	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.90**	**4.83**	-----	-----
		U_{20} - L_{19}	193.51	9.49	95.04			0.75	1.20	85.39	8.52	0.00	0.00	Vehicle	Vehicle	436.58	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.63**	**6.05**	-----	-----
		U_0 - L_1	202.41	-17.47	87.35			0.75	1.18	77.50	-15.50	0.00	0.00	Vehicle	Vehicle	431.05	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.45**	**7.42**	-----	-----
		U_1 - L_2	190.86	-19.85	121.60			0.75	1.18	107.89	-17.62	0.00	0.00	Vehicle	Vehicle	481.87	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_2 - L_3	155.85	-19.30	112.77			0.75	1.18	100.05	-17.13	0.00	0.00	Vehicle	Vehicle	419.38	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.97**	**4.95**	-----	-----
		U_3 - L_4	134.05	-20.98	110.36			0.75	1.18	97.92	-18.62	0.00	0.00	Vehicle	Vehicle	386.43	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U_4 - L_5	46.02	-38.93	87.73			0.75	1.18	77.84	-34.54	0.00	0.00	Vehicle	Vehicle	228.47	-15.02	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**2.94**	**4.90**	**6.21**	**10.35**
		U_5 - L_6	3.45	-59.46	73.82			0.75	1.18	65.49	-52.75	0.00	0.00	Vehicle	Vehicle	146.38	-109.82	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.89**	**6.48**	**3.74**	**6.24**
		U_6 - L_7	-84.29	-75.30	62.72			0.75	1.18	55.65	-66.81	0.00	0.00	Vehicle	Vehicle	11.01	-254.32	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	**6.00**	**10.00**	**2.47**	**4.12**
		U_7 - L_7	137.30	-44.51	93.07			0.75	1.18	82.57	-39.49	0.00	0.00	Vehicle	Vehicle	357.39	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.39**	**5.64**	-----	-----
		U_8 - L_8	210.89	-29.77	104.57			0.75	1.18	92.78	-26.41	0.00	0.00	Vehicle	Vehicle	475.17	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.23**	**5.38**	-----	-----
		U_{10} - L_9	236.36	-18.94	110.16			0.75	1.18	97.74	-16.81	0.00	0.00	Vehicle	Vehicle	519.04	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.32**	**5.54**	-----	-----
		U_{11} - L_{10}	274.62	-13.58	121.03			0.75	1.18	107.39	-12.05	0.00	0.00	Vehicle	Vehicle	589.67	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.18**	**5.31**	-----	-----
		U_{12} - L_{11}	281.06	-4.54	126.78			0.75	1.18	112.48	-4.02	0.00	0.00	Vehicle	Vehicle	609.09	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.01**	**5.01**	-----	-----
		U_{13} - L_{12}	278.12	-8.53	118.00			0.75	1.18	104.70	-7.57	0.00	0.00	Vehicle	Vehicle	588.39	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
		U_{14} - L_{13}	235.45	-8.03	117.33			0.75	1.18	104.10	-7.12	0.00	0.00	Vehicle	Vehicle	531.64	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{15} - L_{15}	143.03	-3.39	112.08			0.75	1.17	98.26	-2.97	0.00	0.00	Vehicle	Vehicle	398.84	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.10**	**5.17**	-----	-----
		U_{16} - L_{16}	171.91	-13.06	120.76			0.75	1.17	105.88	-11.45	0.00	0.00	Vehicle	Vehicle	452.89	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U_{17} - L_{17}	181.04	-12.61	123.54			0.75	1.17	108.31	-11.05	0.00	0.00	Vehicle	Vehicle	470.02	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.93**	**4.89**	-----	-----
		U_{18} - L_{18}	171.16	-14.23	111.79			0.75	1.17	98.01	-12.47	0.00	0.00	Vehicle	Vehicle	434.87	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.94**	**4.89**	-----	-----
		U_{19} - L_{19}	150.64	-20.19	119.58			0.75	1.17	104.84	-17.70	0.00	0.00	Vehicle	Vehicle	422.99	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
	Structure 2	U_{20} - L_{20}	125.86	-33.87	104.17			0.75	1.17	91.33	-29.70	0.00	0.00	Vehicle	Vehicle	361.51	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.14**	**5.23**	-----	-----
		U_{21} - L_{21}	76.05	-39.42	91.94			0.75	1.17	80.61	-34.56	0.00	0.00	Vehicle	Vehicle	273.51	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.62**	**4.36**	-----	-----
		U_{21} - L_{22}	38.34	-54.60	81.17			0.75	1.17	71.16	-47.87	0.00	0.00	Vehicle	Vehicle	204.03	-53.88	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.28**	**5.47**	**4.56**	**7.60**
		U_{23} - L_{22}	18.02	-59.21	67.88			0.75	1.17	59.51	-51.91	0.00	0.00	Vehicle	Vehicle	152.38	-89.05	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.13**	**6.88**	**3.94**	**6.57**
		U_{24} - L_{23}	58.54	-37.91	84.29			0.75	1.17	73.90	-33.24	0.00	0.00	Vehicle	Vehicle	236.22	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U_{25} - L_{24}	114.92	-30.26	91.75			0.75	1.17	80.44	-26.53	0.00	0.00	Vehicle	Vehicle	323.68	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.64**	**6.07**	-----	-----
		U_{26} - L_{25}	142.93	-14.26	113.10			0.75	1.17	99.16	-12.50	0.00	0.00	Vehicle	Vehicle	400.66	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{27} - L_{26}	173.71	-12.02	114.28			0.75	1.17	100.20	-10.54	0.00	0.00	Vehicle	Vehicle	442.92	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.76**	-----	-----
		U_{28} - L_{27}	186.49	-2.76	116.64			0.75	1.17	102.26	-2.42	0.00	0.00	Vehicle	Vehicle	463.99	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{29} - L_{28}	190.57	-7.62	118.00			0.75	1.17	103.46	-6.68	0.00	0.00	Vehicle	Vehicle	471.90	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.67**	**4.45**	-----	-----
		U_{30} - L_{29}	161.74	-7.92	116.01			0.75	1.17	101.71	-6.94	0.00	0.00	Vehicle	Vehicle	430.63	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.88**	**4.81**	-----	-----
		U_{31} - L_{31}	191.49	-6.68	122.40			0.75	1.18	108.59	-5.93	0.00	0.00	Vehicle	Vehicle	484.22	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.24**	**5.40**	-----	-----
		U_{31} - L_{32}	226.17	-14.49	124.20			0.75	1.18	110.20	-12.86	0.00	0.00	Vehicle	Vehicle	532.78	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U_{32} - L_{33}	243.26	-3.84	125.53			0.75	1.18	111.37	-3.41	0.00	0.00	Vehicle	Vehicle	557.54	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.24**	**5.40**	-----	-----
		U_{33} - L_{34}	238.98	-2.90	128.44			0.75	1.18	113.96	-2.58	0.00	0.00	Vehicle	Vehicle	557.58	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.19**	**5.31**	-----	-----
		U_{34} - L_{35}	222.10	5.11	122.12			0.75	1.18	108.35	4.53	0.00	0.00	Vehicle	Vehicle	523.48	-----	0.00	30.63

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.77	-43.80	-48.72	-8.83	2.20	0.90	1.24	-48.76	-54.24	2.20	-8.83	Vehicle	Vehicle	-----	-204.32	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.51	9.19
		U_1 - U_2	-86.66	-10.20	-94.19	6.00	-16.34	0.90	1.24	-11.36	-104.86	6.00	-16.34	Vehicle	Vehicle	-----	-339.85	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.74	4.56
		U_2 - U_3	-48.28	46.55	-77.18	9.44	-19.05	0.90	1.24	51.83	-85.93	9.44	-19.05	Vehicle	Vehicle	49.54	-248.93	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	8.33	13.88	3.61	6.02
		U_3 - U_4	36.43	60.73	-85.36	12.72	-17.47	0.90	1.24	67.61	-95.03	12.72	-17.47	Vehicle	Vehicle	193.86	-158.54	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.63	9.39	3.80	6.33
		U_4 - U_5	38.78	59.73	-83.28	12.78	-17.37	0.90	1.24	66.50	-92.72	12.78	-17.37	Vehicle	Vehicle	194.50	-150.47	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.71	9.51	3.91	6.52
		U_5 - U_6	154.43	68.39	-55.74	15.13	-12.03	0.90	1.24	76.14	-62.06	15.13	-12.03	Vehicle	Vehicle	365.72	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	4.07	6.79	-----	-----
		U_6 - U_7	288.19	74.30	-22.75	17.11	-4.31	0.90	1.24	82.72	-25.32	17.11	-4.31	Vehicle	Vehicle	553.87	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.74	6.24	-----	-----
		U_7 - U_8	410.75	11.61	-0.30	18.24	4.35	0.90	1.24	12.92	-0.34	18.24	4.35	Pedestrian	Pedestrian	584.61	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	17.95	22.44	-----	-----
		U_8 - U_9	311.35	10.64	-2.23	19.05	0.00	0.90	1.20	11.47	-2.41	19.05	0.00	Pedestrian	Vehicle	454.34	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	16.45	20.56	-----	-----
		U_9 - U_{10}	78.25	-9.99	-19.33	5.45	0.00	0.90	1.20	-10.77	-20.84	5.45	0.00	Vehicle	Vehicle	78.39	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{10} - U_{11}	-141.75	54.30	-65.00	-7.34	0.00	0.90	1.20	58.54	-70.08	0.00	-7.34	Vehicle	Vehicle	-----	-336.12	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.90	6.50
		U_{11} - U_{12}	-338.40	50.00	-96.15	9.77	-27.96	0.90	1.20	53.91	-103.66	9.77	-27.96	Vehicle	Vehicle	-----	-664.53	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	43.10	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.74	4.57
		U_{12} - U_{13}	-480.50	43.77	-118.54	8.23	-34.35	0.90	1.20	47.19	-127.81	8.23	-34.35	Vehicle	Vehicle	-----	-901.57	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	43.86	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.08	5.14
		U_{13} - U_{14}	-571.10	37.17	-162.32	6.68	-37.24	0.90	1.20	40.08	-175.02	6.68	-37.24	Vehicle	Vehicle	-----	-1121.64	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.44	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.59	4.32
		U_{14} - U_{15}	-571.52	36.99	-167.61	6.65	-37.25	0.90	1.20	39.88	-180.71	6.65	-37.25	Vehicle	Vehicle	-----	-1134.53	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.20	Pass	25.60	49.97	Pass	6.40	12.00	Pass	-----	-----	2.51	4.18
		U_{15} - U_{16}	-582.34	28.87	-155.59	4.98	-36.14	0.90	1.20	31.13	-167.75	4.98	-36.14	Vehicle	Vehicle	-----	-1120.50	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.46	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.67	4.44
		U_{16} - U_{17}	-539.92	12.64	-130.26	3.53	-31.87	0.90	1.20	13.63	-140.45	3.53	-31.87	Vehicle	Vehicle	-----	-1006.20	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.81	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.36	5.61
		U_{17} - U_{18}	-422.72	13.95	-99.32	2.26	-25.07	0.90	1.20	15.05	-107.08	2.26	-25.07	Vehicle	Vehicle	-----	-781.55	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	43.52	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	3.07	5.12
		U_{18} - U_{19}	-286.53	7.87	-65.76	1.28	-16.97	0.90	1.20	8.49	-70.91	1.28	-16.97	Vehicle	Vehicle	-----	-526.12	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	44.24	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	3.31	5.51
		U_{19} - U_{20}	-140.97	2.12	-28.79	0.55	-8.68	0.90	1.20	2.28	-31.04	0.55	-8.68	Vehicle	Vehicle	-----	-250.51	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	10.37	17.29
	Structure 2	U_0 - U_1	-147.48	-26.60	-13.89	-4.88	0.36	0.90	1.18	-14.79	-28.32	0.36	-4.88	Vehicle	Vehicle	-----	-253.08	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.59	17.65
		U_1 - U_2	-319.09	-9.54	-77.17	1.96	-13.36	0.90	1.18	-10.15	-82.17	1.96	-13.36	Vehicle	Vehicle	-----	-592.84	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.99	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.45	5.75
		U_2 - U_3	-460.93	-101.24	-90.97	-20.95	3.77	0.90	1.18	-96.86	-107.79	3.77	-20.95	Vehicle	Vehicle	-----	-832.74	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	44.27	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.43	5.72
		U_3 - U_4	-580.02	38.88	-123.09	5.92	-27.68	0.90	1.18	41.40	-131.05	5.92	-27.68	Vehicle	Vehicle	-----	-1037.98	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.27	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.49	5.81
		U_4 - U_5	-616.47	50.36	-167.00	7.86	-31.35	0.90	1.18	53.62	-177.81	7.86	-31.35	Vehicle	Vehicle	-----	-1186.67	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.60	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.94	4.90
		U_5 - U_6	-604.69	62.82	-172.77	9.87	-32.88	0.90	1.18	66.89	-183.95	9.87	-32.88	Vehicle	Vehicle	-----	-1184.66	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.64	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.88	4.80
		U_6 - U_7	-514.75	71.78	-158.59	11.56	-31.23	0.90	1.18	76.42	-168.85	11.56	-31.23	Vehicle	Vehicle	-----	-1035.01	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.33	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.94	4.90
		U_7 - U_8	-512.80	71.84	-154.90	11.57	-31.18	0.90	1.18	76.49	-164.92	11.57	-31.18	Vehicle	Vehicle	-----	-1023.97	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.57	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.01	5.02
		U_8 - U_9	-373.48	79.74	-138.23	13.16	-27.41	0.90	1.18	84.90	-147.18	13.16	-27.41	Vehicle	Vehicle	-----	-804.41	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.07	5.11
		U_9 - U_{10}	-181.02	83.22	-105.04	14.25	-21.42	0.90	1.18	88.60	-111.84	14.25	-21.42	Vehicle	Vehicle	-----	-477.63	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.78	6.31
		U_{10} - U_{11}	26.21	85.78	-70.02	15.21	-14.40	0.90	1.18	91.33	-74.55	15.21	-14.40	Vehicle	Vehicle	231.96	-127.46	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	5.81	9.68	6.40	10.67
		U_{11} - U_{12}	237.41	85.05	-36.97	15.56	-6.85	0.90	1.18	90.55	-39.36	15.56	-6.85	Vehicle	Vehicle	504.82	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	4.46	7.44	-----	-----
		U_{12} - U_{13}	435.92	81.26	-14.10	15.82	0.56	0.90	1.18	86.52	-15.02	15.82	0.56	Vehicle	Vehicle	754.14	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.88	8.13	-----	-----
		U_{13} - U_{14}	595.85	6.03	6.71	15.74	6.92	0.90	1.18	7.15	6.42	15.74	6.92	Pedestrian	Pedestrian	811.80	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	33.85	42.32	-----	-----
		U_{14} - U_{15}	615.52	6.01	1.59	24.37	0.00	0.90	1.17	6.33	1.67	24.37	0.00	Pedestrian	Vehicle	850.06	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	24.73	30.91	-----	-----
		U_{15} - U_{16}	486.12	37.04	-13.32	14.17	3.09	0.90	1.17	38.97	-14.01	14.17	3.09	Pedestrian	Vehicle	718.31	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	11.84	14.80	-----	-----
		U_{16} - U_{17}	339.23	-1.31	-46.17	11.57	0.00	0.90	1.17	-1.38	-48.57	11.57	0.00	Pedestrian	Vehicle	457.56	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{17} - U_{18}	192.06	72.68	-64.44	4.46	0.00	0.90	1.17	76.47	-67.80	4.46	0.00	Vehicle	Vehicle	415.35	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.51	7.51	-----	-----
		U_{18} - U_{19}	53.73	66.59	-82.12	-2.79	-12.78	0.90	1.17	70.06	-86.40	-2.79	-12.78	Vehicle	Vehicle	221.64	-117.36	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.10	10.17	4.87	8.11
		U_{19} - U_{20}	-59.08	59.06	-119.23	15.07	-15.68	0.90	1.17	62.13	-125.44	15.07	-15.68	Vehicle	Vehicle	57.82	-348.59	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.49	14.15	3.03	5.05
	Structure 3	U_{20} - U_{21}	-125.50	49.25	-119.89	14.76	-16.53	0.90	1.17	51.82	-126.13	14.76	-16.53	Vehicle	Vehicle	-----	-436.43	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.38	5.64
		U_{21} - U_{22}	-146.93	40.71	-133.93	14.37	-22.74	0.90	1.17	42.83	-140.91	14.37	-22.74	Pedestrian	Vehicle	-----	-496.32	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.94	4.90
		U_{22} - U_{23}	-146.70	38.00	-131.79	14.36	-22.72	0.90	1.17	39.98	-138.66	14.36	-22.72	Pedestrian	Vehicle	-----	-491.14	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.99	4.98
		U_{23} - U_{24}	-112.76	26.30	-124.12	13.87	-21.04	0.90	1.17	27.67	-130.59	13.87	-21.04	Pedestrian	Vehicle	-----	-429.53	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.33	5.54
		U_{24} - U_{25}	-36.27	57.05	-107.28	13.40	-15.02	0.90	1.17	60.02	-112.87	13.40	-15.02	Vehicle	Vehicle	82.89	-291.72	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.56	14.27	3.49	5.82
		U_{25} - U_{26}	80.70	61.78	-76.56	12.92	-12.15	0.90	1.17	65.00	-80.54	12.92	-12.15	Vehicle	Vehicle	245.74	-69.61	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.33	10.55	5.42	9.04
		U_{26} - U_{27}	220.59	65.41	-53.12	12.57	-5.86	0.90	1.17	68.82	-55.89	12.57	-5.86	Vehicle	Vehicle	435.88	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.76	7.93	-----	-----
		U_{27} - U_{28}	363.31	65.60	-28.02	12.37	0.18	0.90	1.17	69.01	-29.48	12.37	0.18	Vehicle	Vehicle	621.83	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	5.92	9.86	-----	-----
		U_{28} - U_{29}	503.82	8.62	-2.90	12.23	3.11	0.90	1.17	9.07	-3.05	12.23	3.11	Pedestrian	Vehicle	689.58	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	28.86	36.08	-----	-----
		U_{29} - U_{30}	616.57	-2.52	0.63	0.00	7.42	0.90	1.17	0.66	-2.66	7.42	0.00	Pedestrian	Vehicle	814.66	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-2.01	0.35	1.42	-2.06	0.36	0.90	1.24	1.58	0.39	0.36	-2.06	Vehicle	Pedestrian	0.82	-5.32	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	191.39	318.98	-----	-----
		L_1 - L_2	67.91	43.16	47.77	0.00	5.87	0.90	1.24	53.18	48.05	5.87	0.00	Vehicle	Vehicle	203.50	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	4.90	8.17	-----	-----
		L_2 - L_3	78.84	-37.92	96.47	-7.39	15.48	0.90	1.24	107.39	-42.21	15.48	-7.39	Vehicle	Vehicle	335.18	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	3.30	5.49	-----	-----
		L_3 - L_4	39.14	-52.71	100.66	-10.83	18.09	0.90	1.24	112.06	-58.68	18.09	-10.83	Vehicle	Vehicle	293.68	-76.26	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	3.37	5.62	6.16	10.26
		L_4 - L_5	-166.38	-76.63	66.20	-16.90	10.96	0.90	1.24	73.70	-85.31	10.96	-16.90	Vehicle	Vehicle	-----	-401.13	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	43.54	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	2.35	3.91
		L_5 - L_6	-301.23	-82.76	21.03	-18.93	3.23	0.90	1.24	23.41	-92.14	3.23	-18.93	Vehicle	Vehicle	-----	-591.22	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	41.21	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	2.33	3.89
		L_6 - L_7	-438.94	-89.37	3.02	-21.52	-4.99	0.90	1.24	3.36	-99.49	-4.99	-21.52	Vehicle	Vehicle	-----	-786.18	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	42.78	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	3.05	5.09
		L_7 - L_8	-551.65	0.51	-22.10	0.00	-35.55	0.90	1.24	0.57	-24.61	0.00	-35.55	Vehicle	Pedestrian	-----	-814.89	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	8.62	10.77
		L_8 - L_9	-570.53	-90.99	10.83	-37.48	0.00	0.90	1.20	11.68	-98.10	0.00	-37.48	Vehicle	Pedestrian	-----	-962.00	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	43.60	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	3.71	4.64
		L_9 - L_{10}	-355.48	-39.98	-9.08	-13.03	-11.67	0.90	1.20	-9.79	-43.10	-11.67	-13.03	Pedestrian	Vehicle	-----	-555.51	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	8.21	13.68
		L_{10} - L_{11}	-118.48	-48.24	41.90	-12.43	0.00	0.90	1.20	45.17	-52.01	0.00	-12.43	Vehicle	Vehicle	-----	-266.72	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	4.41	7.34
		L_{11} - L_{12}	103.45	44.24	77.42	0.49	0.00	0.90	1.20	83.48	47.70	0.49	0.00	Vehicle	Vehicle	315.35	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	3.53	5.88	-----	-----
		L_{12} - L_{13}	300.60	-41.55	113.71	-8.14	17.83	0.90	1.20	122.60	-44.80	17.83	-8.14	Vehicle	Vehicle	656.41	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	3.30	5.50	-----	-----
		L_{13} - L_{14}	441.19	103.82	125.03	-6.61	24.15	0.90	1.20	134.80	111.94	24.15	-6.61	Vehicle	Vehicle	865.63	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	3.86	6.43	-----	-----
		L_{14} - L_{15}	547.00	-22.29	139.10	-3.49	24.57	0.90	1.20	149.98	-24.04	24.57	-3.49	Vehicle	Vehicle	1036.05	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	4.11	6.85	-----	-----
		L_{15} - L_{16}	506.09	-14.98	122.22	-2.03	20.32	0.90	1.20	131.77	-16.15	20.32	-2.03	Vehicle	Vehicle	943.43	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	4.86	8.11	-----	-----
		L_{16} - L_{17}	398.75	-19.05	97.02	-0.83	12.72	0.90	1.20	104.61	-20.54	12.72	-0.83	Vehicle	Vehicle	745.03	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	4.69	7.82	-----	-----
		L_{17} - L_{18}	263.81	-2.90	57.78	0.15	4.66	0.90	1.20	62.30	-3.13	4.66	0.15	Vehicle	Vehicle	477.93	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	5.97	9.95	-----	-----
		L_{18} - L_{19}	118.75	-12.18	23.83	0.71	-3.38	0.90	1.20	25.69	-13.14	0.71	-3.38	Vehicle	Vehicle	210.05	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	8.96	14.94	-----	-----
		L_{19} - L_{20}	-23.36	4.14	-6.43	1.28	-12.08	0.90	1.20	4.46	-6.93	1.28	-12.08	Vehicle	Pedestrian	-----	-61.27	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	16.83	21.04
		L_0- L_1	-36.12	0.73	5.04	-5.14	1.19	0.90	1.18	5.37	0.77	1.19	-5.14	Vehicle	Pedestrian	-----	-54.05	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	132.64	29.71	26.52	2.93	-0.06	0.90	1.18	31.63	28.24	2.93	-0.06	Vehicle	Vehicle	240.96	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	9.50	15.83	-----	-----
		L_2 - L_3	303.94	54.74	80.67	10.52	-1.79	0.90	1.18	85.89	58.28	10.52	-1.79	Vehicle	Vehicle	581.21	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	4.70	7.83	-----	-----
		L_3 - L_4	445.73	95.63	116.09	0.00	13.17	0.90	1.18	123.61	101.82	13.17	0.00	Vehicle	Vehicle	847.26	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	4.19	6.99	-----	-----
		L_4 - L_5	567.64	-33.47	149.16	-6.10	24.81	0.90	1.18	158.81	-35.64	24.81	-6.10	Vehicle	Vehicle	1082.02	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	4.09	6.82	-----	-----
		L_5 - L_6	603.43	-52.86	173.72	-8.06	28.47	0.90	1.18	184.96	-56.28	28.47	-8.06	Vehicle	Vehicle	1185.21	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	3.86	6.43	-----	-----
		L_6 - L_7	599.28	-67.88	183.00	-10.41	30.25	0.90	1.18	194.84	-72.27	30.25	-10.41	Vehicle	Vehicle	1201.22	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	3.75	6.25	-----	-----
		L_7 - L_8	373.73	-84.65	142.80	-13.66	24.92	0.90	1.18	152.04	-90.13	24.92	-13.66	Vehicle	Vehicle	815.26	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	3.82	6.37	-----	-----
		L_8 - L_9	195.51	-90.87	115.75	-15.12	19.51	0.90	1.18	123.23	-96.74	19.51	-15.12	Vehicle	Vehicle	521.17	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	4.40	7.34	-----	-----
		L_9 - L_{10}	-13.41	-93.60	71.83	-16.11	12.45	0.90	1.18	76.47	-99.66	12.45	-16.11	Vehicle	Vehicle	148.26	-233.36	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	6.87	11.44	4.30	7.17
		L_{10} - L_{11}	-217.51	-94.41	43.36	-17.02	5.50	0.90	1.18	46.17	-100.52	5.50	-17.02	Vehicle	Vehicle	-----	-500.55	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	44.38	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	2.58	4.31
		L_{11} - L_{12}	-420.12	-92.44	17.04	-17.31	-2.05	0.90	1.18	18.14	-98.42	-2.05	-17.31	Vehicle	Vehicle	-----	-759.41	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	43.13	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	3.11	5.19
		L_{12} - L_{13}	-591.61	-94.65	-2.69	-18.75	-7.10	0.90	1.18	-2.86	-100.77	-7.10	-18.75	Pedestrian	Vehicle	-----	-987.42	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	44.28	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	4.07	6.79
		L_{13} - L_{14}	-724.42	1.64	-17.07	0.00	-35.12	0.90	1.18	1.75	-18.18	0.00	-35.12	Vehicle	Pedestrian	-----	-1028.35	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.87	14.84
		L_{14} - L_{15}	-747.19	-67.74	17.60	-36.29	0.00	0.90	1.17	18.52	-71.27	0.00	-36.29	Vehicle	Pedestrian	-----	-1146.13	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	44.82	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	5.71	7.14
		L_{15} - L_{16}	-632.29	15.75	0.03	0.00	-31.22	0.90	1.17	16.57	0.03	0.00	-31.22	Vehicle	Pedestrian	-----	-872.65	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L_{16} - L_{17}	-488.73	-56.63	19.19	-25.40	0.00	0.90	1.17	20.18	-59.58	0.00	-25.40	Vehicle	Pedestrian	-----	-773.43	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	5.26	6.58
		L_{17} - L_{18}	-337.06	3.79	35.76	-18.13	0.00	0.90	1.17	37.63	3.99	0.00	-18.13	Vehicle	Pedestrian	-----	-461.14	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L_{18} - L_{19}	-183.64	-61.15	71.15	-11.34	4.48	0.90	1.17	74.86	-64.33	4.48	-11.34	Vehicle	Vehicle	-----	-378.11	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	3.64	6.06
		L_{19} - L_{20}	-45.76	-55.00	83.48	-9.58	8.92	0.90	1.17	87.83	-57.86	8.92	-9.58	Vehicle	Vehicle	130.82	-184.85	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.95	8.25	5.47	9.12
	Structure 2	L_{20} - L_{21}	68.06	-48.87	115.61	-9.12	11.57	0.90	1.17	121.63	-51.42	11.57	-9.12	Vehicle	Vehicle	352.02	-22.92	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.42	7.37	10.30	17.16
		L_{21} - L_{22}	134.01	-39.07	123.62	-8.81	13.61	0.90	1.17	130.06	-41.11	13.61	-8.81	Vehicle	Vehicle	456.00	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	3.83	6.39	-----	-----
		L_{22} - L_{23}	122.68	-18.45	116.16	-7.57	11.79	0.90	1.17	122.21	-19.41	11.79	-7.57	Vehicle	Pedestrian	424.28	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	4.13	6.89	-----	-----
		L_{23} - L_{24}	46.89	-48.20	99.80	-7.09	8.09	0.90	1.17	105.00	-50.71	8.09	-7.09	Vehicle	Vehicle	288.46	-48.92	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	5.24	8.74	10.19	16.98
		L_{24} - L_{25}	-66.54	-53.67	72.12	-6.23	2.64	0.90	1.17	75.88	-56.47	2.64	-6.23	Vehicle	Vehicle	77.91	-208.85	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	5.90	9.83	5.39	8.98
		L_{25} - L_{26}	-205.63	-57.42	48.02	-5.87	-3.61	0.90	1.17	50.52	-60.41	-3.61	-5.87	Vehicle	Vehicle	-----	-398.21	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	3.65	6.09
		L_{26} - L_{27}	-350.43	-58.51	22.99	-5.25	-6.72	0.90	1.17	24.19	-61.56	-5.25	-6.72	Vehicle	Vehicle	-----	-588.93	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.28	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	3.68	6.13
		L_{27} - L_{28}	-494.65	-58.30	-0.95	-5.10	-12.12	0.90	1.17	-1.00	-61.33	-5.10	-12.12	Pedestrian	Vehicle	-----	-775.93	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	5.41	9.02
		L_{28} - L_{29}	-620.83	-36.54	-9.66	-31.78	-17.19	0.90	1.17	-10.16	-38.45	-17.19	-31.78	Pedestrian	Pedestrian	-----	-921.20	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	7.46	9.32
		L_{29} - L_{30}	-716.91	-18.66	-22.36	0.00	-36.29	0.90	1.17	-19.63	-23.53	0.00	-36.29	Vehicle	Pedestrian	-----	-1029.19	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.68	13.34

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.72	5.05	-76.68	3.44	-12.32	0.90	1.24	5.62	-85.37	3.44	-12.32	Pedestrian	Vehicle	-----	-306.81	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	42.24	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.76	2.94
		U_1 - L_1	-46.53	14.94	-40.72	2.93	-9.05	0.90	1.24	16.63	-45.33	2.93	-9.05	Vehicle	Vehicle	-----	-158.72	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	4.04	6.74
		U_2 - L_2	-0.10	13.51	-26.70	2.84	-5.68	0.90	1.24	15.04	-29.72	2.84	-5.68	Vehicle	Vehicle	32.45	-64.53	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	17.07	28.45	7.10	11.84
		U_3 - L_3	39.60	11.89	-16.29	2.69	-2.12	0.90	1.24	13.23	-18.13	2.69	-2.12	Vehicle	Vehicle	80.14	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	17.60	29.33	-----	-----
		U_4 - L_4	-30.20	-9.33	0.24	-3.46	0.00	0.90	1.24	0.27	-10.39	0.00	-3.46	Vehicle	Pedestrian	-----	-61.77	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	18.46	23.08
		U_5 - L_5	-130.49	-43.41	2.77	-10.23	0.00	0.90	1.24	3.08	-48.33	0.00	-10.23	Vehicle	Vehicle	-----	-274.35	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	3.66	6.10
		U_6 - L_6	-158.18	-43.83	7.48	-13.06	0.00	0.90	1.24	8.33	-48.79	0.00	-13.06	Vehicle	Vehicle	-----	-311.36	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	4.30	7.17
		U_7 - L_7	-152.32	-43.94	14.52	-13.24	0.00	0.90	1.24	16.16	-48.92	0.00	-13.24	Vehicle	Vehicle	-----	-304.01	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	3.78	6.29
		U_8 - L_8	-455.55	-45.42	-75.13	-12.74	-18.97	0.90	1.24	-50.56	-83.65	-12.74	-18.97	Vehicle	Vehicle	-----	-773.44	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	4.37	7.29
		U_9 - L_9	-287.55	3.99	-74.85	0.00	-18.20	0.90	1.20	4.30	-80.70	0.00	-18.20	Vehicle	Vehicle	-----	-548.67	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.23	Pass	9.60	12.00	Pass	-----	-----	2.66	4.43
		U_{10} - L_{10}	-276.32	1.93	-69.54	0.00	-17.54	0.90	1.20	2.08	-74.98	0.00	-17.54	Vehicle	Vehicle	-----	-521.67	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	3.73	6.22
		U_{11} - L_{11}	-232.59	0.14	-62.80	0.00	-14.41	0.90	1.20	0.15	-67.71	0.00	-14.41	Vehicle	Vehicle	-----	-449.07	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.62	6.04
		U_{12} - L_{12}	-178.43	-2.21	-46.47	0.00	-11.20	0.90	1.20	-2.39	-50.10	0.00	-11.20	Vehicle	Vehicle	-----	-340.51	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	4.24	7.07
		U_{13} - L_{13}	-127.74	2.59	-37.12	0.00	-7.88	0.90	1.20	2.79	-40.02	0.00	-7.88	Vehicle	Vehicle	-----	-252.77	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.79	6.32
		U_{14} - L_{14}	-30.39	-6.88	-4.65	0.00	-3.03	0.90	1.20	-5.01	-7.42	0.00	-3.03	Vehicle	Pedestrian	-----	-56.49	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	24.06	30.08
		U_{15} - L_{15}	-28.94	-31.31	11.84	-4.54	1.55	0.90	1.20	12.77	-33.76	1.55	-4.54	Vehicle	Vehicle	-----	-110.76	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	5.59	9.31
		U_{16} - L_{16}	-76.03	-36.84	7.45	-7.08	1.39	0.90	1.20	8.04	-39.72	1.39	-7.08	Vehicle	Vehicle	-----	-184.90	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.01	6.68
		U_{17} - L_{17}	-161.89	-50.01	8.01	-10.66	1.30	0.90	1.20	8.63	-53.92	1.30	-10.66	Vehicle	Vehicle	-----	-327.28	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	2.78	4.63
		U_{18} - L_{18}	-190.28	-48.90	6.87	-12.71	1.12	0.90	1.20	7.40	-52.73	1.12	-12.71	Vehicle	Vehicle	-----	-361.61	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	3.81	6.35
		U_{19} - L_{19}	-228.17	-51.12	5.88	-14.98	0.97	0.90	1.20	6.34	-55.12	0.97	-14.98	Vehicle	Vehicle	-----	-416.04	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	4.23	7.04
		U_{20} - L_{20}	-242.83	-48.35	5.33	-15.63	0.95	0.90	1.20	5.75	-52.13	0.95	-15.63	Vehicle	Vehicle	-----	-428.61	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.90	6.51
	Structure 2	U_0 - L_0	-303.03	3.00	-81.02	2.22	-15.08	0.90	1.18	3.20	-86.26	2.22	-15.08	Pedestrian	Vehicle	-----	-580.84	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	43.14	Pass	5.62	12.00	Pass	-----	-----	2.36	3.94
		U_1 - L_1	-268.78	13.54	-69.87	2.12	-13.67	0.90	1.18	14.41	-74.39	2.12	-13.67	Vehicle	Vehicle	-----	-510.60	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.26	5.43
		U_2 - L_2	-220.87	14.58	-65.20	2.34	-12.32	0.90	1.18	15.52	-69.42	2.34	-12.32	Vehicle	Vehicle	-----	-437.54	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.06	5.09
		U_3 - L_3	-175.23	15.60	-60.23	2.49	-10.35	0.90	1.18	16.60	-64.12	2.49	-10.35	Vehicle	Vehicle	-----	-366.73	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	44.88	Pass	4.91	12.00	Pass	-----	-----	2.59	4.31
		U_4 - L_4	-82.08	13.52	-40.03	2.21	-6.62	0.90	1.18	14.40	-42.62	2.21	-6.62	Vehicle	Vehicle	-----	-199.03	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.62	6.03
		U_5 - L_5	-19.89	10.91	-31.63	2.23	-4.16	0.90	1.18	11.62	-33.68	2.23	-4.16	Vehicle	Vehicle	-----	-98.83	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	5.71	9.52
		U_6 - L_6	60.32	24.65	-17.99	1.75	-0.47	0.90	1.18	26.25	-19.15	1.75	-0.47	Vehicle	Vehicle	135.29	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	8.40	14.00	-----	-----
		U_7 - L_7	-41.77	-8.14	-2.09	-2.49	0.00	0.90	1.18	-2.22	-8.67	0.00	-2.49	Vehicle	Vehicle	-----	-73.09	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	20.68	34.46
		U_8 - L_8	-189.01	-46.73	6.02	-8.38	0.00	0.90	1.18	6.41	-49.76	0.00	-8.38	Vehicle	Vehicle	-----	-353.52	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	4.12	6.86
		U_9 - L_9	-253.99	-58.06	1.97	-10.55	0.00	0.90	1.18	2.10	-61.81	0.00	-10.55	Vehicle	Vehicle	-----	-464.12	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	4.24	7.07
		U_{10} - L_{10}	-290.02	-60.68	4.61	-12.18	0.00	0.90	1.18	4.91	-64.61	0.00	-12.18	Vehicle	Vehicle	-----	-517.01	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	4.54	7.56
		U_{11} - L_{11}	-312.18	-65.01	9.99	-12.59	0.00	0.90	1.18	10.64	-69.21	0.00	-12.59	Vehicle	Vehicle	-----	-555.79	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.92	6.54
		U_{12} - L_{12}	-327.28	-59.65	14.45	-13.01	-0.93	0.90	1.18	15.38	-63.51	-0.93	-13.01	Vehicle	Vehicle	-----	-563.06	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	4.48	7.47
		U_{13} - L_{13}	-277.21	-50.44	19.24	-11.39	0.00	0.90	1.18	20.48	-53.70	0.00	-11.39	Vehicle	Vehicle	-----	-476.73	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	4.61	7.69
		U_{14} - L_{14}	-505.44	-37.23	-59.13	-9.95	-11.34	0.90	1.18	-39.64	-62.95	-9.95	-11.34	Vehicle	Vehicle	-----	-793.47	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	5.21	8.68
		U_{15} - L_{15}	-232.94	3.26	-68.59	1.67	-11.17	0.90	1.17	3.42	-72.16	1.67	-11.17	Pedestrian	Vehicle	-----	-459.18	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.80	6.34
		U_{16} - L_{16}	-260.12	7.97	-68.60	0.83	-12.63	0.90	1.17	8.38	-72.17	0.83	-12.63	Vehicle	Vehicle	-----	-494.52	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.38	5.63
		U_{17} - L_{17}	-228.24	8.99	-66.25	0.66	-11.76	0.90	1.17	9.45	-69.70	0.66	-11.76	Vehicle	Vehicle	-----	-447.74	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.40	5.67
		U_{18} - L_{18}	-209.27	10.80	-61.59	-0.03	-11.28	0.90	1.17	11.37	-64.80	-0.03	-11.28	Vehicle	Vehicle	-----	-412.45	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.41	5.68
		U_{19} - L_{19}	-166.55	11.57	-51.62	-0.07	-9.53	0.90	1.17	12.17	-54.31	-0.07	-9.53	Vehicle	Vehicle	-----	-334.19	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	3.81	6.35
		U_{20} - L_{20}	-113.95	11.56	-41.16	-0.43	-7.50	0.90	1.17	12.16	-43.30	-0.43	-7.50	Vehicle	Vehicle	-----	-241.95	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.62	6.03
		U_{21} - L_{21}	-62.76	13.27	-33.13	0.00	-5.22	0.90	1.17	13.96	-34.85	0.00	-5.22	Vehicle	Vehicle	-----	-157.11	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.78	7.97
		U_{22} - L_{22}	-38.94	-8.73	-3.12	-2.04	-2.15	0.90	1.17	-3.29	-9.18	-2.04	-2.15	Pedestrian	Vehicle	-----	-70.51	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	19.79	32.99
		U_{23} - L_{23}	-74.43	-37.35	12.27	-6.10	0.48	0.90	1.17	12.91	-39.30	0.48	-6.10	Vehicle	Vehicle	-----	-181.91	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.06	6.77
		U_{24} - L_{24}	-121.36	-44.13	12.03	-8.17	0.37	0.90	1.17	12.65	-46.43	0.37	-8.17	Vehicle	Vehicle	-----	-258.37	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.28	5.47
		U_{25} - L_{25}	-169.12	-53.19	11.56	-9.94	0.43	0.90	1.17	12.17	-55.96	0.43	-9.94	Vehicle	Vehicle	-----	-341.10	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	3.67	6.12
		U_{26} - L_{26}	-207.97	-56.32	10.46	-11.42	0.14	0.90	1.17	11.00	-59.26	0.14	-11.42	Vehicle	Vehicle	-----	-398.76	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.74	6.23
		U_{27} - L_{27}	-219.96	-58.27	8.60	-11.49	0.16	0.90	1.17	9.05	-61.31	0.16	-11.49	Vehicle	Vehicle	-----	-418.79	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.95	6.58
		U_{28} - L_{28}	-240.91	-55.03	12.41	-12.60	-0.25	0.90	1.17	13.06	-57.90	-0.25	-12.60	Vehicle	Vehicle	-----	-438.63	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	4.41	7.34
		U_{29} - L_{29}	-202.73	-47.35	18.88	-10.35	0.00	0.90	1.17	19.86	-49.81	0.00	-10.35	Vehicle	Vehicle	-----	-371.47	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	5.87	9.78
		U_{30} - L_{30}	-518.05	-36.55	-63.66	-8.23	-13.79	0.90	1.18	-38.91	-67.78	-8.23	-13.79	Vehicle	Vehicle	-----	-820.32	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	4.73	7.88
		U_{31} - L_{31}	-318.43	8.72	-71.16	0.00	-12.95	0.90	1.18	9.29	-75.76	0.00	-12.95	Vehicle	Vehicle	-----	-578.11	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	2.94	4.91
		U_{32} - L_{32}	-358.67	2.82	-73.89	-0.26	-14.65	0.90	1.18	3.01	-78.67	-0.26	-14.65	Vehicle	Vehicle	-----	-636.72	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	3.38	5.63
		U_{33} - L_{33}	-325.88	4.30	-72.59	0.00	-13.51	0.90	1.18	4.58	-77.28	0.00	-13.51	Vehicle	Vehicle	-----	-591.09	2.42	38.13	35.7105

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.66	0.00	58.89	14.00	-4.60	0.90	1.24	65.56	0.00	14.00	-4.60	Vehicle	Pedestrian	256.01	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**4.56**	**7.61**	-----	-----
		U_1 - L_2	23.90	-22.94	46.91	-4.71	9.20	0.90	1.24	52.23	-25.54	9.20	-4.71	Vehicle	Vehicle	144.23	-24.27	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.64**	**7.73**	**8.44**	**14.07**
		U_2 - L_3	-49.02	-19.19	9.62	-4.32	3.33	0.90	1.24	10.71	-21.37	3.33	-4.32	Vehicle	Vehicle	-----	-110.02	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.01**	**13.35**
		U_3 - L_4	-108.88	-17.48	-12.29	-4.20	-2.10	0.90	1.24	-13.68	-19.46	-2.10	-4.20	Vehicle	Vehicle	-----	-183.70	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.02**	**11.69**
		U_4 - L_4	153.12	8.80	50.69	3.11	7.00	0.90	1.24	56.43	9.80	7.00	3.11	Vehicle	Vehicle	321.32	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.95**	**6.58**	-----	-----
		U_5 - L_5	186.35	1.96	59.79	2.78	10.66	0.90	1.24	66.56	2.19	10.66	2.78	Vehicle	Pedestrian	386.48	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.19**	**6.98**	-----	-----
		U_6 - L_6	177.52	-14.68	57.27	1.59	12.54	0.90	1.24	63.76	-16.34	12.54	1.59	Vehicle	Vehicle	368.92	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.45**	**7.42**	-----	-----
		U_7 - L_7	173.18	-3.24	49.79	0.41	13.46	0.90	1.24	55.43	-3.60	13.46	0.41	Vehicle	Vehicle	345.23	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.17**	**8.61**	-----	-----
		U_8 - L_8	328.11	-2.78	83.23	-0.13	19.45	0.90	1.20	89.74	-3.00	19.45	-0.13	Vehicle	Vehicle	620.98	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.24**	**7.07**	-----	-----
		U_9 - L_{10}	339.70	-1.24	82.82	0.85	18.90	0.90	1.20	89.29	-1.33	18.90	0.85	Vehicle	Vehicle	635.08	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.18**	**6.97**	-----	-----
		U_{10} - L_{11}	313.22	4.79	85.52	1.69	16.46	0.90	1.20	92.20	5.17	16.46	1.69	Vehicle	Vehicle	606.95	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**3.89**	**6.48**	-----	-----
		U_{11} - L_{12}	270.68	5.82	78.02	1.81	13.03	0.90	1.20	84.12	6.27	13.03	1.81	Vehicle	Vehicle	534.14	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.62**	**6.03**	-----	-----
		U_{12} - L_{13}	194.17	-1.38	52.68	0.00	10.79	0.90	1.20	56.80	-1.49	10.79	0.00	Vehicle	Vehicle	375.49	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**4.61**	**7.69**	-----	-----
		U_{13} - L_{14}	123.57	-14.33	46.87	0.00	5.96	0.90	1.20	50.53	-15.45	5.96	0.00	Vehicle	Vehicle	270.12	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.61**	**6.02**	-----	-----
		U_{15} - L_{14}	-16.32	-19.24	33.14	-2.35	1.48	0.90	1.20	35.73	-20.74	1.48	-2.35	Vehicle	Vehicle	56.19	-66.16	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.46**	**12.43**	**9.03**	**15.04**
		U_{15} - L_{15}	59.12	-10.47	44.16	-2.09	6.08	0.90	1.20	47.61	-11.29	6.08	-2.09	Vehicle	Vehicle	180.02	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.64**	**7.74**	-----	-----
		U_{17} - L_{16}	172.14	-11.17	61.07	-1.86	9.93	0.90	1.20	65.85	-12.04	9.93	-1.86	Vehicle	Vehicle	366.46	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.21**	**5.35**	-----	-----
		U_{18} - L_{17}	210.78	-9.46	59.23	-1.53	12.51	0.90	1.20	63.86	-10.20	12.51	-1.53	Vehicle	Vehicle	412.38	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.13**	**6.89**	-----	-----
		U_{19} - L_{18}	242.64	-7.56	61.72	-1.21	13.73	0.90	1.20	66.54	-8.15	13.73	-1.21	Vehicle	Vehicle	459.60	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.22**	**7.03**	-----	-----
		U_{20} - L_{19}	257.76	-6.21	50.21	-1.03	15.70	0.90	1.20	54.13	-6.69	15.70	-1.03	Vehicle	Vehicle	452.38	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.01**	**8.36**	-----	-----
		U_0 - L_1	298.99	-5.67	57.42	-2.21	14.21	0.90	1.18	61.14	-6.03	14.21	-2.21	Vehicle	Pedestrian	521.15	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.70**	**7.83**	-----	-----
		U_1 - L_2	284.21	-16.81	82.35	-2.66	14.05	0.90	1.18	87.68	-17.90	14.05	-2.66	Vehicle	Vehicle	559.44	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.38**	**5.63**	-----	-----
		U_2 - L_3	221.42	-17.93	74.14	-2.85	11.83	0.90	1.18	78.93	-19.09	11.83	-2.85	Vehicle	Vehicle	458.87	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_3 - L_4	178.30	-20.24	68.97	-3.23	10.08	0.90	1.18	73.43	-21.55	10.08	-3.23	Vehicle	Vehicle	390.89	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**3.26**	**5.43**	-----	-----
		U_4 - L_5	53.50	-17.28	45.46	-2.87	5.37	0.90	1.18	48.40	-18.40	5.37	-2.87	Vehicle	Vehicle	174.41	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.64**	**7.73**	-----	-----
		U_5 - L_6	-16.51	-24.07	37.60	-2.92	2.23	0.90	1.18	40.03	-25.63	2.23	-2.92	Vehicle	Vehicle	65.26	-76.99	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.66**	**11.10**	**7.24**	**12.07**
		U_6 - L_7	-133.21	-43.52	13.12	-2.50	-2.48	0.90	1.18	13.97	-46.33	-2.48	-2.50	Vehicle	Vehicle	-----	-273.56	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.93**	**4.88**
		U_7 - L_7	208.77	-11.40	54.05	0.00	8.33	0.90	1.18	57.54	-12.13	8.33	0.00	Vehicle	Vehicle	396.07	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**4.11**	**6.86**	-----	-----
		U_8 - L_8	289.58	0.25	69.19	0.00	8.99	0.90	1.18	73.66	0.27	8.99	0.00	Vehicle	Vehicle	536.05	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.43**	**5.71**	-----	-----
		U_{10} - L_9	327.97	0.02	69.27	1.53	11.09	0.90	1.18	73.75	0.03	11.09	1.53	Vehicle	Pedestrian	586.15	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.66**	**6.10**	-----	-----
		U_{11} - L_{10}	349.25	-4.54	76.06	0.55	12.45	0.90	1.18	80.98	-4.83	12.45	0.55	Vehicle	Vehicle	629.48	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.67**	**6.12**	-----	-----
		U_{12} - L_{11}	358.20	-10.94	69.95	0.48	13.32	0.90	1.18	74.48	-11.65	13.32	0.48	Vehicle	Vehicle	627.03	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.92**	**6.53**	-----	-----
		U_{13} - L_{12}	307.75	-21.34	58.06	-0.24	12.26	0.90	1.18	61.81	-22.72	12.26	-0.24	Vehicle	Vehicle	534.00	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.56**	**7.60**	-----	-----
		U_{14} - L_{13}	260.20	-13.56	48.04	-1.50	11.72	0.90	1.18	51.15	-14.44	11.72	-1.50	Vehicle	Vehicle	449.08	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.07**	**10.11**	-----	-----
		U_{15} - L_{15}	208.42	-9.07	66.30	-2.51	11.04	0.90	1.17	69.76	-9.54	11.04	-2.51	Vehicle	Vehicle	422.09	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.80**	**6.34**	-----	-----
		U_{16} - L_{16}	243.55	-6.24	74.30	-1.48	11.54	0.90	1.17	78.18	-6.56	11.54	-1.48	Vehicle	Vehicle	486.00	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{16} - L_{17}	255.86	-9.46	75.20	-0.85	11.67	0.90	1.17	79.11	-9.96	11.67	-0.85	Vehicle	Vehicle	504.04	-----	0.00	27.98	27.9777	923.26	131.71	18.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.45**	**5.74**	-----	-----
		U_{17} - L_{18}	235.29	-11.09	77.14	-0.75	10.45	0.90	1.17	81.16	-11.66	10.45	-0.75	Vehicle	Vehicle	481.72	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{18} - L_{19}	212.11	-13.54	67.16	0.01	8.95	0.90	1.17	70.65	-14.24	8.95	0.01	Vehicle	Vehicle	428.83	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.72**	**6.21**	-----	-----
		U_{19} - L_{20}	168.24	-14.99	62.84	0.06	9.14	0.90	1.17	66.11	-15.77	9.14	0.06	Vehicle	Vehicle	361.95	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.95**	**6.58**	-----	-----
		U_{20} - L_{21}	97.26	-14.61	46.97	0.46	6.66	0.90	1.17	49.42	-15.37	6.66	0.46	Vehicle	Vehicle	233.51	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.01**	**6.69**	-----	-----
	Structure 2	U_{21} - L_{22}	30.60	-27.72	35.15	0.58	3.66	0.90	1.17	36.98	-29.16	3.66	0.58	Vehicle	Vehicle	119.92	-23.40	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.44**	**10.74**	**7.33**	**12.22**
		U_{23} - L_{22}	49.78	-17.44	42.11	-0.72	5.11	0.90	1.17	44.31	-18.35	5.11	-0.72	Vehicle	Vehicle	160.71	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.12**	**8.53**	-----	-----
		U_{24} - L_{23}	115.07	-16.31	50.12	-0.72	8.00	0.90	1.17	52.73	-17.16	8.00	-0.72	Vehicle	Vehicle	263.83	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.56**	**5.93**	-----	-----
		U_{25} - L_{24}	179.22	-15.86	62.19	-0.73	10.10	0.90	1.17	65.43	-16.68	10.10	-0.73	Vehicle	Vehicle	374.75	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.89**	**6.48**	-----	-----
		U_{26} - L_{25}	220.97	-13.91	65.78	-0.57	11.89	0.90	1.17	69.20	-14.63	11.89	-0.57	Vehicle	Vehicle	437.21	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.73**	**6.21**	-----	-----
		U_{27} - L_{26}	234.87	-9.17	67.56	-0.35	11.45	0.90	1.17	71.08	-9.65	11.45	-0.35	Vehicle	Vehicle	459.34	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.51**	**5.85**	-----	-----
		U_{28} - L_{27}	253.15	-9.97	62.32	-0.28	12.25	0.90	1.17	65.56	-10.48	12.25	-0.28	Vehicle	Vehicle	471.15	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.18**	**6.97**	-----	-----
		U_{29} - L_{28}	215.91	-21.25	52.65	0.00	10.20	0.90	1.17	55.39	-22.36	10.20	0.00	Vehicle	Vehicle	400.70	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.71**	**7.85**	-----	-----
		U_{30} - L_{29}	180.73	-10.26	43.79	-0.90	8.90	0.90	1.17	46.07	-10.79	8.90	-0.90	Vehicle	Vehicle	334.78	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.12**	**10.20**	-----	-----
		U_{30} - L_{31}	294.99	-10.03	65.20	-1.64	12.90	0.90	1.18	69.41	-10.68	12.90	-1.64	Vehicle	Vehicle	533.88	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.17**	**6.95**	-----	-----
		U_{31} - L_{32}	342.70	-9.22	77.02	-0.55	13.70	0.90	1.18	82.01	-9.82	13.70	-0.55	Vehicle	Vehicle	623.20	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.18**	**5.30**	-----	-----
		U_{32} - L_{33}	363.39	-3.35	80.73	0.37	13.78	0.90	1.18	85.96	-3.57	13.78	0.37	Vehicle	Vehicle	658.65	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-In (k-ft)	Dead Load End-In (k-ft)	Live Load (Max) Start-In (k-ft)	Live Load (Max) End-In (k-ft)	Pedestrian Load (Max) Start-In (k-ft)	Pedestrian Load (Min) End-In (k-ft)	Lane Reduction & Impact Live Load Start-In (k-ft)	Lane Reduction & Impact Live Load End-In (k-ft)	Impact Pedestrian Load Max Start-In (k-ft)	Impact Pedestrian Load Max End-In (k-ft)
Structure 1	U_0 - U_1	-129.80	-23.02	4.09	-13.43	-10.98	-4.24	53.48	-179.39	-146.70	-56.58
	U_1 - U_2	-54.81	-51.14	9.59	-13.20	-9.23	-13.86	7.90	-3.06	-158.65	-185.20
	U_2 - U_3	-54.81	-51.14	9.59	-13.20	-9.23	-13.86	7.90	-3.06	-158.65	-185.20
	U_3 - U_4	-52.27	61.68	2.78	4.43	-12.40	-4.12	37.09	59.22	-165.66	-55.05
	U_4 - U_5	-27.43	50.17	3.10	4.27	-11.31	-3.77	41.37	57.11	-248.52	-40.90
	U_5 - U_6	1.19	145.97	3.63	0.45	-13.94	-3.33	106.73	306.88	-390.50	94.26
	U_6 - U_7	34.94	53.23	1.87	0.45	-11.69	-3.36	33.61	141.46	-214.03	-34.06
	U_7 - U_8	-70.13	598.66	2.36	4.39	-19.70	-22.37	31.56	58.65	-263.12	298.83
	U_8 - U_9	528.73	-128.77	12.78	-12.48	-0.45	0.74	165.35	-161.42	-5.76	9.59
	U_9 - U_{10}	69.10	44.97	3.05	-3.98	-2.20	-3.22	39.40	-34.84	-43.27	-26.11
	U_{10} - U_{11}	101.46	-177.08	3.86	3.68	-3.63	-3.24	49.98	39.82	-46.93	-41.93
	U_{11} - U_{12}	-160.19	4.37	3.68	2.03	-6.67	-4.39	57.02	-55.85	-50.89	-12.69
	U_{12} - U_{13}	-56.63	-218.18	3.43	1.17	-10.06	-4.27	44.40	-15.11	-130.21	-81.16
	U_{13} - U_{14}	-173.99	-44.22	2.25	1.80	-14.98	-4.76	24.12	-2.66	-153.86	-113.39
	U_{14} - U_{15}	-287.88	-237.50	2.98	1.71	-26.41	-16.54	38.52	22.16	-341.64	-213.94
	U_{15} - U_{16}	-196.26	-337.79	2.90	0.17	-17.34	-7.88	37.48	2.17	-224.31	-101.99
	U_{16} - U_{17}	-293.50	-154.89	1.25	0.20	-25.79	-4.59	24.12	2.82	-350.73	-188.55
	U_{17} - U_{18}	-190.08	-29.82	0.96	-0.89	-16.01	-3.69	12.36	-11.46	-207.10	-47.63
	U_{18} - U_{19}	-179.81	-40.24	0.80	-0.45	-13.89	-2.26	11.04	-8.52	-194.73	-54.42
	U_{19} - U_{20}	-290.19	260.74	0.83	-2.11	-17.44	-12.32	10.69	-27.25	-225.58	109.45
	U_{20} - U_{21}	-27.02	-172.57	1.49	-13.83	-6.14	-6.96	95.66	-178.67	-78.43	-85.08
	U_{21} - U_{22}	-25.34	-194.81	1.49	-14.02	-6.14	-4.39	95.66	-181.16	-78.43	-87.86
	U_{22} - U_{23}	-52.13	-282.61	6.07	-7.18	-10.22	-7.23	51.94	-91.72	-130.57	-92.31
	U_{23} - U_{24}	-33.19	-287.81	6.07	-7.18	-10.22	-7.23	51.94	-91.72	-130.57	-92.31
	U_{24} - U_{25}	-360.75	-390.17	0.96	1.92	-23.21	-13.67	12.23	24.47	-296.49	-174.63
	U_{25} - U_{26}	-403.61	-390.17	0.96	2.44	-23.21	-13.67	12.23	24.47	-296.49	-174.63
	U_{26} - U_{27}	-349.78	-208.78	4.55	6.49	-23.79	-33.25	58.13	57.38	-303.95	-424.87
	U_{27} - U_{28}	-253.89	-280.84	3.53	4.88	-33.50	-10.89	45.13	82.40	-427.98	-139.11
	U_{28} - U_{29}	-230.50	-84.91	3.53	4.88	-33.50	-13.53	45.13	82.40	-427.98	-139.11
	U_{29} - U_{30}	-237.13	39.43	5.08	6.43	-23.02	-2.63	84.94	82.10	-294.13	-36.09
	U_{30} - U_{31}	-152.22	56.82	5.08	5.65	-20.13	-3.48	84.94	70.10	-294.13	-44.14
	U_{31} - U_{32}	-116.81	170.72	5.43	4.37	-20.27	-1.38	69.35	55.87	-259.03	-17.68
	U_{32} - U_{33}	-51.38	-56.85	3.26	1.62	-4.39	-4.39	69.35	-55.87	-259.03	-17.68
	U_{33} - U_{34}	-52.09	55.53	4.07	4.35	-23.85	-29.79	51.94	-91.72	-130.57	-92.31
	U_{34} - U_{35}	1023.87	-26.76	26.52	-20.99	-1.26	1.15	334.85	-264.97	-15.84	14.48
	U_{35} - U_{36}	9.93	54.06	2.78	-1.62	-2.47	-12.84	46.71	7.46	-37.50	-182.13
	U_{36} - U_{37}	-271.35	25.12	7.62	-7.56	-5.26	-4.62	96.23	-95.50	-66.37	-58.34
	U_{37} - U_{38}	-271.35	25.12	7.62	-7.56	-5.26	-4.62	96.23	-95.50	-66.37	-58.34
	U_{38} - U_{39}	-196.48	-8.75	5.34	-6.34	-7.28	-6.26	67.46	-80.04	-91.94	-79.32
	U_{39} - U_{40}	-48.44	11.25	5.09	4.09	-13.41	-9.40	64.31	51.64	-169.35	-119.37
	U_{40} - U_{41}	-48.44	11.25	5.09	4.09	-13.41	-9.40	64.31	51.64	-169.35	-119.37
	U_{41} - U_{42}	-92.46	-55.91	2.04	2.23	-17.20	-26.19	25.74	28.20	-217.12	-330.59
	U_{42} - U_{43}	-48.21	-31.51	3.74	4.49	-21.98	-3.76	47.17	-6.03	-277.49	-47.45
	U_{43} - U_{44}	-48.21	-31.51	3.74	4.49	-21.98	-3.76	47.17	-6.03	-277.49	-47.45
	U_{44} - U_{45}	10.71	137.83	3.82	3.19	-4.74	-18.70	40.24	59.83	-236.04	6.72
	U_{45} - U_{46}	10.71	137.83	3.82	3.19	-4.74	-18.70	40.24	59.83	-236.04	6.72
	U_{46} - U_{47}	57.19	-122.64	4.05	3.56	-20.36	-2.44	51.18	44.88	-257.10	30.74
	U_{47} - U_{48}	57.19	-122.64	4.05	3.56	-20.36	-2.44	51.18	44.88	-257.10	30.74
	U_{48} - U_{49}	85.58	3.84	3.86	1.75	-18.76	-4.10	48.73	22.08	-236.85	-51.73
	U_{49} - U_{50}	14.12	816.64	5.35	2.20	-3.13	-20.13	46.71	7.46	-37.50	-182.13
	U_{50} - U_{51}	823.61	100.42	26.13	-19.80	-1.59	-0.69	333.53	249.53	-201.09	-8.76
	U_{51} - U_{52}	32.21	96.21	2.65	2.65	-3.13	-19.13	33.46	61.18	-189.39	-18.54
	U_{52} - U_{53}	150.29	-52.92	5.75	-7.69	-4.45	-3.54	73.49	-96.95	-56.84	-38.79
	U_{53} - U_{54}	17.33	-89.79	4.86	5.11	-7.58	-15.23	62.12	65.33	-86.83	-194.52
	U_{54} - U_{55}	69.48	-89.79	4.86	5.11	-7.58	-15.23	62.12	65.33	-86.83	-194.52
	U_{55} - U_{56}	-75.26	-230.76	5.12	3.16	-13.60	-6.85	65.42	40.32	-173.71	-87.67
	U_{56} - U_{57}	-206.29	-230.76	5.12	3.16	-13.60	-6.85	65.42	40.32	-173.71	-87.67
	U_{57} - U_{58}	-84.35	-278.75	5.06	4.39	-32.71	-13.95	64.58	56.05	-417.94	-178.26
	U_{58} - U_{59}	-84.35	-278.75	5.06	4.39	-32.71	-13.95	64.58	56.05	-417.94	-178.26
	U_{59} - U_{60}	-275.08	-274.62	3.21	0.45	-32.92	-27.95	41.01	-5.69	-420.55	-357.15
	U_{60} - U_{61}	-257.08	-269.13	3.29	-30.99	-11.19		24.59	3.74	-395.90	-142.92
	U_{61} - U_{62}	-254.75	-69.94	1.87	-2.30	-14.93		16.45	-3.94	-218.51	-28.72
	U_{62} - U_{63}	-154.97	-33.11	1.29	-0.31	-17.10	-2.25	16.45	-3.94	-218.51	-28.72
	U_{63} - U_{64}	-40.07	-167.86	6.48	-10.04	-8.47	-5.90	83.89	-129.88	-102.53	-76.39
	U_{64} - U_{65}	-10.53	-132.37	3.03	-13.38	-1.50	-2.69	39.18	-173.13	-19.39	-34.77
	U_{65} - U_{66}	-140.16	-260.93	0.46	-2.19	-13.46	-17.09	6.00	-28.30	-174.19	-221.08
	U_{66} - U_{67}	-187.10	-276.08	1.62	2.24	-16.19	-22.94	20.91	29.03	-209.41	-296.62
	U_{67} - U_{68}	-322.62	-148.39	1.74	2.77	-3.53	-11.54	20.91	29.03	-209.41	-296.62
	U_{68} - U_{69}	-162.95	-104.84	1.22	2.54	-13.43	-11.54	15.80	45.78	-199.69	-149.30
	U_{69} - U_{70}	-147.84	-26.72	2.68	4.20	-18.87	-1.08	34.73	54.32	-244.15	-13.96
	U_{70} - U_{71}	-134.97	-134.97	1.29	1.29	-9.44	-9.44	24.92	24.92	-163.56	-163.56
	U_{71} - U_{72}	-426.33	9.05	2.09	-12.63	-0.65	0.76	238.96	-168.73	-8.64	10.15
	U_{72} - U_{73}	-426.33	9.05	2.09	-12.63	-0.65	0.76	238.96	-168.73	-8.64	10.15
	U_{73} - U_{74}	-126.04	54.04	4.29	3.74	-3.65	-4.03	57.34	49.96	-48.72	-53.04
	U_{74} - U_{75}	-70.10	43.63	4.61	3.35	-9.01	-12.82	61.63	44.71	-120.33	-171.31
	U_{75} - U_{76}	-51.16	-13.92	3.80	2.92	-8.36	-4.06	61.63	44.71	-120.33	-171.31
	U_{76} - U_{77}	-8.36	-30.51	2.84	-4.06	-16.80	-11.29	37.93	-54.29	-224.40	-150.78

ZZ Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start-In (k-ft)	Max. Neg. Mom. End-In (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_x (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula (.8 Term * F_y*S_bot)	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(calc)}$	Equivalent Mom. Factor $C_{b(use)}$
Structure 1	U_0 - U_1	-92.94	-418.61	486.66	-152.01	90.2	90.24	72.24	127.46	2147	1328.6	f(x)	4206	0.99880041	2974.3	0.313	0.73
	U_1 - U_2	-58.54	14.54	-73.11	-336.67	-467.76	90.2	90.24	72.24	127.46	2147	1328.6	f(x)	4206	0.99880041	2974.3	0.656
	U_2 - U_3	-58.54	14.54	-73.11	-336.67	-467.76	90.2	90.24	72.24	127.46	2147	1328.6	f(x)	4206	0.99880041	2974.3	0.656
	U_3 - U_4	-18.71	-4.29	-33.16	-2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_4 - U_5	-6.36	-4.56	0.07	-0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_5 - U_6	-106.73	306.88	-390.50	93.26	90.2	90.24	76.71	127.46	2147	1328.6	f(x)	4206	0.99880041	2974.3	0.229	0.50
	U_6 - U_7	-33.61	141.46	-214.03	-34.06	97.1	97.15	78.18	142.56	2586	1648.1	f(x)	4704	0.99880041	3201.5	0.621	0.84
	U_7 - U_8	-22.80	909.33	-661.26	1425.72	138.2	138.17	111.77	198.97	3642	2197.7	f(x)	6999	0.998945	4564.8	-0.464	0.41
	U_8 - U_9	1045.67	-517.15	674.87	-146.53	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.99880041	4292.8	-0.495	0.40
	U_9 - U_{10}	175.18	-77.03	4.75	1.89	95.6	95.61	79.12	139.29	2172	1307.8	f(x)	4465	0.99873127	3184.1	-0.093	0.56
	U_{10} - U_{11}	240.19	-143.92	30.22	-321.06	96.6	96.61	83.55	130.29	2174	1387.9	f(x)	4465	0.99873127	3184.1	-0.094	0.56
	U_{11} - U_{12}	181.86	-136.70	-105.95	-32.53	104.5	104.52	90.24	156.25	3152	1864.4	f(x)	6028	0.99875083	4247.3	0.357	0.74
	U_{12} - U_{13}	29.41	-250.89	467.74	-459.48	151.6	151.76	130.94	219.77	4535	2532.6	f(x)	9252	0.99875083	5003.4	0.687	0.95
	U_{13} - U_{14}	163.11	-266.82	1.83	-183.11	106.2	106.21	91.67	157.53	2744.68	1647.6	f(x)	5476	0.99880041	3731.2	0.597	0.87
	U_{14} - U_{15}	-290.79	-260.73	-1114.46	-772.28	188.5	188.51	164.41	274.68	5476	3413.6	f(x)	9064	0.99899321	6214.6	0.693	0.88
	U_{15} - U_{16}	-173.92	-434.41	-741.15	-650.11	188.5	188.51	164.41	274.68	5476	3413.6	f(x)	9064	0.99899321	6214.6	0.891	0.96
	U_{16} - U_{17}	-349.77	-193.99	-1107.79	-333.02	188.5	188.51	157.55	274.68	5476	3413.6	f(x)	9064	0.99899321	6214.6	0.728	0.72
	U_{17} - U_{18}	-220.31	-63.60	-695.81	-141.96	127.3	127.32	110.40	186.23	3668	2526.5	f(x)	6146	0.99907116	4197.7	0.204	0.68
	U_{18} - U_{19}	-208.96	-64.93	-622.93	-58.72	104.5	104.52	86.43	156.25	2559	1554.3	f(x)	4971	0.99880041	3452.8	0.099	0.64
	U_{19} - U_{20}	-302.09	279.92	-814.00	684.44	104.4	104.44	104.75	86.43	192.63	2589	1554.3	1.44	4971	0.99880041	3452.8	-0.641
	U_{20} - U_{21}	172.13	-607.13	-255.07	-408.67	127.8	127.83	111.16	118.51	2762	1538.8	f(x)	5891	0.99861328	4212.5	-0.284	0.49
	U_{21} - U_{22}	16.61	-498.98	-194.35	-408.67	127.8	127.83	111.16	118.51	2762	1538.8	f(x)	5891	0.99861328	4212.5	-0.284	0.49
	U_{22} - U_{23}	-84.75	-566.12	-350.69	-567.39	212.6	212.59	170.43	297.57	4967	2491.6	f(x)	9620	0.99857	7005.5	0.618	0.85
	U_{23} - U_{24}	-84.75	-566.12	-350.69	-567.39	212.6	212.59	170.43	297.57	4967	2491.6	f(x)	9620	0.99857	7005.5	0.618	0.85
	U_{24} - U_{25}	-442.48	-454.21	-1111.37	-885.58	251.7	251.73	219.41	365.62	7161	3870.6	f(x)	14565	0.99899321	8298.1	0.797	0.92
	U_{25} - U_{26}	-442.48	-454.21	-1111.37	-885.58	251.7	251.73	219.41	365.62	7161	3870.6	f(x)	12066	0.99899321	8298.1	0.797	0.92
	U_{26} - U_{27}	-328.74	-147.07	-1113.25	-1191.93	232.2	232.20	189.45	340.10	6520	3217.6	f(x)	11223	0.99880035	7670.6	0.534	0.91
	U_{27} - U_{28}	-232.28	-229.89	-1257.36	-666.49	232.7	232.70	189.45	340.10	6520	3217.6	f(x)	11223	0.99880035	7670.6	0.530	0.91
	U_{28} - U_{29}	-324.48	-53.03	-1257.36	-666.49	232.7	232.70	189.45	340.10	6520	3217.6	f(x)	11223	0.99880035	7670.6	0.530	0.91
	U_{29} - U_{30}	-187.55	229.15	-945.53	-26.94	181.9	181.87	147.20	249.02	3787	2047.7	f(x)	7089	0.99864	5992.8	0.028	0.61
	U_{30} - U_{31}	-241.15	187.39	-945.53	-44.14	181.9	181.87	147.20	249.02	3787	2047.7	f(x)	7089	0.99864	5992.8	0.028	0.61
	U_{31} - U_{32}	-1.59	342.99	-713.08	260.25	156.8	156.80	126.72	214.81	3285	1852.3	f(x)	7089	0.99864	5168.9	-0.365	0.45
	U_{32} - U_{33}	-188.37	188.37	-713.08	-260.25	156.8	156.80	126.72	214.81	3285	1852.3	f(x)	7089	0.99864	5168.9	-0.365	0.45
	U_{33} - U_{34}	-360.69	-360.69	-1259.03	-17.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34} - U_{35}	1161.63	1078.74	-1259.03	-17.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35} - U_{36}	-161.63	1078.74	-1259.03	-17.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36} - U_{37}	-59.10	30.22	-321.06	96.6	96.61	83.55	130.29	2174	1387.9	f(x)	4465	0.99873127	3184.1	-0.094	0.56	0.55
	U_{37} - U_{38}	-59.10	30.22	-321.06	96.6	96.61	83.55	130.29	2174	1387.9	f(x)	4465	0.99873127	3184.1	-0.094	0.56	0.55
	U_{38} - U_{39}	-91.55	64.89	-1.89	0.10	0.24	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39} - U_{40}	-22.99	228.44	-1.20	-0.06	0.50	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{40} - U_{41}	-20.52	12.38	0.95	-0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{41} - U_{42}	-23.57	-3.66	40.84	41.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{42} - U_{43}	-15.47	-12.98	32.42	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{43} - U_{44}	-18.34	-4.54	119.85	40.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{44} - U_{45}	-20.52	12.38	0.95	-0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{45} - U_{46}	-23.57	-3.66	40.84	41.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{46} - U_{47}	-15.47	-12.98	32.42	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{47} - U_{48}	-18.34	-4.54	119.85	40.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{48} - U_{49}	-13.26	3.09	119.65	8.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{49} - U_{50}	-91.55	64.89	-1.89	0.10	0.24	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{50} - U_{51}	-27.51	-24.51	3.14	14.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{51} - U_{52}	-20.52	-22.38	0.95	-0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{52} - U_{53}	-23.57	-3.66	40.84	41.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{53} - U_{54}	-15.47	-12.98	32.42	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{54} - U_{55}	-18.34	-4.54	119.85	40.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{55} - U_{56}	-14.98	3.75	-122.00	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{56} - U_{57}	-3.74	4.18	159.07	35.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{57} - U_{58}	-13.26	3.09	119.65	8.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{58} - U_{59}	-17.52	-17.52	105.43	-7.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{59} - U_{60}	-4.61	0.49	118.26	70.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{60} - U_{61}	-21.84	8.31	14.08	57.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{61} - U_{62}	-8.53	-2.70	-130.42	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{62} - U_{63}	-2.11	-36.24	32.82	-36.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{63} - U_{64}	-45.72	-168.57	-0.16	-2.80	2.61	-2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{64} - U_{65}	-16.56	-16.56	23.97	23.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{65} - U_{66}	-53.05	-110.29	-21.20	-47.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{66} - U_{67}	-53.05	-110.29	-400.52	-559.62	181.9	181.87	147.20	249.02	3787	2047.7	f(x)	7089	0.99864	5992.8	0.684	0.87
	U_{67} - U_{68}	-380.97	-147.64	-1113.25	-1191.93	232.2	232.70	189.45	340.10	6520	3217.6	f(x)	11223	0.99880035	7670.6	0.534	0.91
	U_{68} - U_{69}	-187.62	-187.62	-1113.25	-1191.93	232.2	232.70	189.45	340.10	6520	3217.6	f(x)	11223	0.99880035	7670.6	0.534	0.91
	U_{69} - U_{70}	-187.62	-187.62	-1113.25	-1191.93	232.2	232.70	189.45	340.10	6520	3217.6	f(x)	11223	0.99880035	7670.6	0.534	0.91
	U_{70} - U_{71}	-116.95	152.42	-721.18	4.49	128.7	128.69	105.26	182.66	3153	1864.4	f(x)	6028	0.99875083	4241.5	-0.006	0.60
	U_{71} - U_{72}	-113.46	183.37	-695.62	-49.26	128.7	128.69	105.26	182.66	3153	1864.4	f(x)	6028	0.99875083	4241.5	-0.006	0.60
	U_{72} - U_{73}	-113.46	183.37	-695.62	-49.26	128.7	128.69	105.26	182.66	3153	1864.4	f(x)	6028	0.99875083	4241.5	-0.006	0.60
	U_{73} - U_{74}	-249.84	-87.19	-353.31	-310.91	90.2	90.24	76.71	127.46	2147	1328.6	f(x)	4206	0.99880041	2974.3	0.751	0.92
	U_{74} - U_{75}	-249.84	-87.19	-353.31	-310.91	90.2	90.24	72.24	127.46	2

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	L_0-L_1	-44.17	-99.07	5.51	-7.11	-0.97	1.00	73.61	-94.92	-12.89	13.41
	L_1-L_2	131.02	-112.64	2.32	-9.68	-6.10	5.09	31.02	-129.29	-81.43	-68.04
	L_2-L_3	132.75	-79.90	1.26	-7.85	-12.69	-14.21	16.79	-38.16	-169.47	-189.72
	L_3-L_4	18.36	16.12	1.38	5.16	-15.70	-8.02	18.40	-68.87	-209.76	-167.09
	L_4-L_5	-68.34	210.23	4.02	4.04	-3.97	3.21	53.04	134.51	-226.75	-28.99
	L_5-L_6	8.36	-229.14	3.10	5.97	-10.47	-4.09	41.43	-79.78	-139.85	64.13
	L_6-L_7	61.83	-137.52	4.18	-6.69	-11.71	-7.71	40.61	-102.94	-193.22	-116.47
	L_7-L_8	1.61	459.41	1.16	4.61	-7.35	11.10	15.43	61.60	-98.14	148.32
	L_8-L_9	439.88	-25.12	11.72	-1.29	-5.30	0.16	151.60	-16.70	-3.84	2.11
	L_9-L_{10}	204.03	-117.02	8.02	-10.07	-7.91	4.19	63.86	-163.36	-362.32	94.18
	L_{10}-L_{11}	168.12	-117.13	5.30	2.51	-4.11	-3.97	68.61	32.48	-53.23	-51.34
	L_{11}-L_{12}	29.72	-212.47	2.39	4.03	-4.53	-4.35	56.75	-103.63	-66.32	-60.73
	L_0-L_{13}	-19.73	-128.50	3.31	1.60	-6.40	-7.36	42.80	-20.73	-110.07	-95.10
	L_{13}-L_{14}	175.78	-425.21	5.84	-21.46	-11.47	-13.41	75.51	-277.68	-148.46	-173.52
	L_{14}-L_{15}	-409.28	-20.76	2.39	-12.02	-0.42	-0.49	44.06	-87.73	-322.48	-155.49
	L_{15}-L_{16}	-209.39	-318.68	1.24	0.18	-16.11	-15.32	16.08	2.29	-206.48	-198.27
	L_{16}-L_{17}	-374.86	83.54	1.98	-0.30	-17.06	-3.33	12.72	-3.93	-220.79	-43.02
	L_{17}-L_{18}	-171.07	19.86	0.49	-0.80	-10.19	-1.29	6.30	-10.40	-131.89	-16.72
	L_{18}-L_{19}	-208.33	253.78	0.63	-0.37	-13.04	4.90	8.10	4.76	-166.31	62.11
	L_{19}-L_{20}	-84.78	1.02	0.47	-0.49	-9.79	5.27	6.03	-6.35	-126.15	68.20
	L_{20}-L_{21}	10.35	-213.29	4.04	-10.53	-0.51	1.11	51.63	-134.57	-6.46	14.18
	L_{21}-L_{22}	56.16	-247.73	3.76	-12.95	-0.34	1.21	47.06	-153.94	-3.73	15.98
	L_{22}-L_{23}	-0.36	-194.33	4.00	-8.28	-6.60	-7.26	51.11	-109.81	-76.83	-82.81
	L_{23}-L_{24}	44.24	-280.21	3.68	-13.49	-4.19	-4.61	44.33	-148.39	-114.18	-126.31
	L_{24}-L_{25}	-287.80	-299.08	1.55	-12.51	-21.35	-13.92	19.77	-159.87	-272.80	-177.85
	L_{25}-L_{26}	-143.71	-416.21	1.43	-7.51	-12.68	-8.24	8.68	-87.36	-280.61	-182.52
	L_{26}-L_{27}	-467.54	-273.29	2.99	0.45	-28.48	-18.54	38.19	56.82	-353.85	-236.90
	L_{27}-L_{28}	-310.55	-45.89	3.66	6.74	-26.06	-13.54	46.76	86.15	-332.89	-166.66
	L_{28}-L_{29}	-272.22	-233.06	3.34	4.28	-24.37	-12.62	55.52	52.17	-294.35	-154.43
	L_{29}-L_{30}	-261.97	188.33	3.24	6.65	-14.69	-6.30	41.43	84.99	-187.66	-80.47
	L_{30}-L_{31}	-29.38	29.38	0.61	0.61	-2.68	-2.68	7.58	7.58	-32.29	-32.29
	L_{31}-L_{32}	-131.48	389.15	3.72	6.72	-12.95	4.69	47.50	85.91	-165.48	59.86
	L_{32}-L_{33}	-164.35	-140.48	1.88	-1.23	-18.27	-9.84	75.14	-15.73	-207.96	-125.67
	L_{33}-L_{34}	-267.47	646.41	2.68	14.21	-21.05	-7.15	91.26	316.18	-259.35	-89.39
	L_{34}-L_{35}	912.03	-326.86	23.11	-13.68	-0.97	-0.16	291.77	-172.78	-12.22	-1.99
	L_{35}-L_{36}	-289.13	419.50	4.91	-9.21	-6.34	4.77	56.50	96.14	-208.27	84.56
	L_{36}-L_{37}	515.59	-35.24	9.93	-10.65	-4.97	-6.96	125.32	-134.51	-62.72	-87.88
	L_{37}-L_{38}	253.16	-253.16	3.71	-3.71	-6.51	-6.51	63.87	-63.87	-93.60	-93.60
	L_{38}-L_{39}	-252.02	-29.09	6.27	2.73	-7.43	-6.10	79.10	34.47	-93.83	-37.93
	L_{39}-L_{40}	230.55	-46.37	4.54	-12.19	-8.98	-11.67	57.31	-163.95	-108.36	-147.39
	L_{40}-L_{41}	0.00	0.00	0.00	0.00	0.00	0.00	55.92	55.92	-224.26	-224.26
	L_{41}-L_{42}	41.53	-186.96	3.04	2.72	-15.90	-21.39	38.42	34.33	-200.69	-270.05
	L_{42}-L_{43}	-197.37	33.23	0.30	0.39	-13.79	3.77	23.63	-53.82	-247.21	-158.05
	L_{43}-L_{44}	-108.55	-10.73	1.87	5.06	-19.68	-12.52	23.63	-53.82	-247.21	-158.05
	L_{44}-L_{45}	-30.04	30.04	3.59	3.59	-16.84	-16.84	44.29	-44.29	-157.89	-157.89
	L_{45}-L_{46}	-65.47	173.47	2.40	5.56	-12.35	-5.09	30.30	70.16	-155.99	-64.21
	L_{46}-L_{47}	-30.98	151.24	4.33	2.22	-15.69	-0.55	78.23	257.29	-469.38	181.63
	L_{47}-L_{48}	-19.07	313.17	2.21	7.21	-11.08	15.25	34.60	169.83	-249.61	89.14
	L_{48}-L_{49}	-19.38	-193.41	3.70	-2.86	-15.23	-10.35	46.75	-36.08	-192.22	-130.68
	L_{49}-L_{50}	-273.02	178.20	3.29	4.53	-21.45	-9.31	76.09	52.62	-441.67	-334.58
	L_{50}-L_{51}	740.88	-268.17	23.69	-12.85	-1.38	0.11	302.65	-164.19	-17.67	1.37
	L_{51}-L_{52}	-140.43	-76.07	3.54	0.16	-16.41	-1.56	45.25	2.62	-209.67	-19.87
	L_{52}-L_{53}	-277.39	-114.86	3.50	0.91	-19.31	-6.35	43.52	5.91	-262.51	-85.32
	L_{53}-L_{54}	-147.94	-145.21	5.04	-10.48	-3.39	-8.80	83.52	-133.91	-43.35	-74.14
	L_{54}-L_{55}	-347.11	313.17	2.21	7.21	-11.08	15.25	34.60	169.83	-249.61	89.14
	L_{55}-L_{56}	95.37	-212.64	5.31	-8.79	-8.67	-10.47	67.83	-112.28	-110.81	-132.82
	L_{56}-L_{57}	-277.39	-114.86	3.50	0.91	-19.31	-6.35	43.52	5.91	-262.51	-85.32
	L_{57}-L_{58}	-182.93	-415.63	5.14	2.80	-27.07	-15.46	65.68	39.72	-340.82	-197.33
	L_{58}-L_{59}	-370.36	-165.17	3.49	0.85	-30.16	-17.93	44.58	10.81	-385.34	-229.07
	L_{59}-L_{60}	-224.72	-178.52	3.16	0.83	-18.71	-9.77	21.88	-3.81	-260.07	-170.64
	L_{60}-L_{61}	-304.19	-21.34	1.43	-0.33	-21.75	-6.48	15.74	-10.19	-277.93	-82.83
	L_{61}-L_{62}	-227.31	59.39	1.10	-0.88	-14.11	-5.17	14.09	-11.29	-180.31	-43.00
	L_{62}-L_{63}	-189.17	63.98	1.02	-0.82	-11.74	-4.30	14.09	-11.29	-180.31	-43.00
	L_0-L_{64}	43.83	-117.87	5.42	-9.18	-0.44	0.45	70.07	-118.72	-5.69	5.84
	L_{64}-L_{65}	-192.35	-177.82	5.15	-8.54	-0.53	0.49	66.65	-115.51	-6.83	6.31
	L_{65}-L_{66}	55.48	-331.31	5.40	-9.60	-0.44	0.41	71.50	-133.13	-5.62	5.19
	L_{66}-L_{67}	55.48	-320.94	3.68	-7.59	-6.88	-9.89	9.13	-78.05	-88.96	-127.84
	L_{67}-L_{68}	-64.07	-371.05	2.17	-25.22	-15.57	-16.66	28.02	-326.24	-201.50	-215.48
	L_{68}-L_{69}	-370.76	82.43	1.24	-23.18	-5.42	-4.21	21.07	39.43	-299.50	-60.43
	L_{69}-L_{70}	-200.77	-149.87	2.02	-3.24	-11.55	-2.88	26.12	-41.88	-149.46	-37.29
	L_{70}-L_{71}	-131.78	166.76	1.82	-0.29	-10.32	-0.98	49.39	-3.70	-133.49	-12.73
	L_{71}-L_{72}	-361.88	-178.02	12.72	-4.12	-0.52	0.11	169.91	-55.08	-4.21	1.32
	L_{72}-L_{73}	61.92	21.66	0.39	-0.43	-0.44	0.44	85.42	-88.63	-87.75	-87.00
	L_{73}-L_{74}	-189.90	5.62	0.34	-0.47	-6.05	-8.34	57.97	-126.54	-80.09	-111.39
	L_{74}-L_{75}	-38.98	-56.51	3.15	-1.45	-14.07	-6.23	42.10	-19.37	-187.96	-83.22
	L_{75}-L_{76}	-66.52	-29.78	0.89	-0.87	-8.41	-3.79	11.62	-11.62	-112.39	-52.17

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{bot}	M_z (k-in)	Equivalent Mem. Factor a	Equivalent Mem. Factor C_{mx}	Equivalent Mem. Factor C_{mx}/a
Structure 1	L_0-L_1	102.07	-334.40	-89.36	-99.73	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.305	0.48	0.48
	L_1-L_2	31.02	-129.29	-81.43	-68.04	0.00	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.057	0.38	0.38
	L_2-L_3	16.79	-38.16	-169.47	-189.72	0.00	83.58	82.89	-514.03	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99991188
	L_3-L_4	18.40	-68.87	-209.76	-167.09	0.00	0.00	63.73	170.18	-430.61	-211.07	99.9	99.93	84.14	125.49	3409	1372.0	1.26
	L_4-L_5	53.04	134.51	-226.75	-28.99	0.00	0.00	27.38	33.07	-340.37	342.12	92.6	92.58	76.68	114.47	3186	1282.0	1.24
	L_5-L_6	41.43	79.78	-139.85	64.13	0.00	0.00	100.63	470.75	-292.14	180.60	104.6	104.58	95.61	136.37	4040	1678.1	1.31
	L_6-L_7	40.61	102.94	-193.22	-116.47	0.00	0.00	40.61	102.94	-193.22	-116.47	104.6	104.58	95.61	136.37	4040	1678.1	1.31
	L_7-L_8	15.43	61.60	-98.14	148.32	0.00	0.00	35.53	730.70	-210.54	918.59	145.8	145.75	130.44	228.84	6500	2932.4	1.57
	L_8-L_9	151.60	-16.70	-3.84	2.11	0.00	0.00	900.31	-88.64	983.52	268.03	145.8	145.75	130.74	228.84	6500	2932.4	1.57
	L_9-L_{10}	63.86	-163.36	-362.32	94.18	0.00	0.00	633.86	-362.32	94.18	-143.05	144.9	144.85	129.09	192.84	9210	2379.8	1.33
	L_{10}-L_{11}	68.61	32.48	-53.23	-51.34	0.00	0.00	387.22	-81.90	103.23	-263.50	92.6	92.58	83.65	114.47	3295	1304.9	1.24
	L_{11}-L_{12}	56.75	-103.63	-66.32	-60.73	0.00	0.00	629.39	-524.19	196.40	-413.06	104.6	104.58	95.61	136.37	4040	1678.1	1.31
	L_0-L_{13}	42.80	-20.73	-110.07	-95.10	0.00	0.00	67.08	-122.13	-264.13	-373.10	130.1	130.08	121.10	170.72	3885	1793.2	1.31
	L_{13}-L_{14}	75.51	-277.68	-148.46	-173.52	0.00	0.00	392.12	-1154.36	-93.14	-928.72	162.9	162.89	147.19	219.93	6887	2613.8	1.35
	L_{14}-L_{15}	44.06	-87.73	-322.48	-155.49	0.00	0.00	44.06	-87.73	-322.48	-155.49	162.9	162.89	147.19	219.93	6887	2613.8	1.35
	L_{15}-L_{16}	16.08	2.29	-206.48	-198.27	0.00	0.00	237.36	-409.32	-723.87	-843.86	179.7	179.69	170.68	251.43	7453	3040.7	1.42
	L_{16}-L_{17}	12.72	-3.93	-220.79	-43.02	0.00	0.00	409.76	-100.60	-660.67	15.91	153.9	153.89	138.16	206.43	7057	2460.7	1.34
	L_{17}-L_{18}	6.30	-10.40	-131.89	-16.72	0.00	0.00	208.74	3.27	-508.16	-10.41	121.1	121.08	112.11	157.22	3591	1640.0	1.30
	L_{18}-L_{19}	8.10	4.76	-166.31	62.11	0.00	0.00	253.16	318.83	-564.16	495.54	83.6	83.58	74.62	100.97	2740	1096.2	1.21
	L_{19}-L_{20}	6.03	-6.35	-126.15	68.20	0.00	0.00	110.15	-52.44	-396.54	149.08	83.6	83.58	67.49	100.97	2740	1096.2	1.21
	L_{20}-L_{21}	51.63	-134.57	-6.46	14.18	0.00	0.00	125.32	-568.86	-9.55	-246.55	122.0	122.01	103.28	148.92	3592	1395.7	1.22
	L_{21}-L_{22}	47.06	-153.94	-3.73	15.98	0.00	0.00	359.16	-659.59	-38.18	-285.74	122.0	122.01	103.28	148.92	3592	1395.7	1.22
	L_{23}-L_{24}	51.11	-109.81	-76.83	-82.81	0.00	0.00	110.26	-681.89	-168.50	-853.71	162.9	162.89	151.98	209.67	4946	2152.2	1.29
	L_{24}-L_{25}	44.33	-148.39	-114.18	-126.31	0.00	0.00	44.33	-148.39	-114.18	-126.31	162.9	162.89	151.98	209.67	4946	2152.2	1.29
	L_{25}-L_{26}	19.77	-159.87	-272.80	-177.85	0.00	0.00	331.91	-735.18	-965.21	-774.62	174.3	174.28	163.71	320.70	7266	3127.5	1.84
	L_{26}-L_{27}	8.68	-87.36	-280.61	-182.52	0.00	0.00	331.91	-735.18	-965.21	-774.62	174.3	174.28	163.71	320.70	7266	3127.5	1.84
	L_{27}-L_{28}	38.19	56.82	-353.85	-236.90	0.00	0.00	525.07	-232.18	-1396.14	-868.56	216.3	216.33	205.74	344.19	7629	3425.8	1.99
	L_{28}-L_{29}	46.76	86.15	-332.89	-166.66	0.00	0.00	302.39	127.01	-1124.97	-420.74	205.7	205.71	195.15	274.47	5445	2642.2	1.33
	L_{29}-L_{30}	55.52	52.17	-294.35	-154.43	0.00	0.00	232.73	622.99	-931.45	-1142.48	188.5	188.54	149.99	232.42	6364	2700.7	1.43
	L_{30}-L_{31}	41.43	84.99	-187.66	-80.47	0.00	0.00	250.71	428.97	-747.68	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251
	L_{31}-L_{32}	7.58	7.58	-32.29	-32.29	0.00	0.00	47.44	47.44	-48.68	-48.68	149.0	149.01	133.21	189.42	4793	1908.4	1.27
	L_{32}-L_{33}	47.50	85.91	-165.48	59.86	0.00	0.00	48.00	692.04	-528.47	826.89	165.6	165.55	155.01	222.43	5842	2444.6	1.34
	L_{33}-L_{34}	75.14	-15.73	-207.96	-125.67	0.00	0.00	60.86	-216.70	-664.02	-454.91	226.0	225.96	211.39	364.54	8861	3749.1	1.66
	L_{34}-L_{35}	291.77	-172.78	-12.22	-1.99	0.00	0.00	1817.80	-799.24	1159.16	-429.24	249.4	249.40	238.81	367.03	8248	3698.4	1.39
	L_{35}-L_{36}	56.50	96.14	-208.27	84.56	0.00	0.00	252.09	511.47	-1124.84	1.49	249.4	249.40	238.81	367.03	8248	3698.4	1.39
	L_{36}-L_{37}	125.32	-134.51	-62.72	-87.88	0.00	0.00	941.78	-337.25	534.36	-226.23	180.3	180.26	169.70	249.67	6400	2721.8	1.36
	L_{37}-L_{38}	63.87	-63.87	-93.60	-93.60	0.00	0.00	644.86	-644.86	-247.19	-247.19	180.3	180.26	169.70	249.67	6400	2721.8	1.36
	L_{38}-L_{39}	79.10	34.47	-93.83	-37.93	0.00	0.00	499.00	42.06	124.33	-199.34	127.4	127.41	116.62	157.02	3868	1501.0	1.23
	L_{39}-L_{40}	57.31	-163.95	-108.36	-147.39	0.00	0.00	423.87	-415.50	84.93	374.61	127.4	127.41	108.77	157.02	3868	1501.0	1.23
	L_{40}-L_{41}	55.92	-224.26	-224.26	34.43	0.00	0.00	55.92	-224.26	-224.26	34.43	127.4	127.41	108.77	157.02	3868	1501.0	1.23
	L_{41}-L_{42}	38.42	34.33	-200.69	-270.05	0.00	0.00	137.22	-168.67	-380.84	-828.16	161.2	161.18	142.40	207.64	4574	2128.2	1.29
	L_{42}-L_{43}	23.63	-53.82	-247.21	-158.05	0.00	0.00	141.85	-53.82	-247.21	-158.05	161.2	161.18	142.40	207.64	4574	2128.2	1.29
	L_{43}-L_{44}	44.29	-44.29	-157.89	-157.89	0.00	0.00	63.70	-97.13	-324.03	-184.64	161.2	161.18	142.40	207.64	4574	2128.2	1.29
	L_{45}-L_{46}	30.30	70.16	-155.99	-64.21	0.00	0.00	-19.47	377.30	-422.92	86.31	127.4	127.41	112.92	157.02	3868	1501.0	1.23
	L_{46}-L_{47}	78.23	257.29	-469.38	181.63	0.00	0.00	149.01	-149.01	-380.61	189.42	149.0	149.01	130.61	189.42	4793	1908.4	1.27
	L_{47}-L_{48}	34.60	169.83	-249.61	89.14	0.00	0.00	149.01	-149.01	-380.61	189.42	149.0	149.01	130.61	189.42	4793	1908.4	1.27
	L_{48}-L_{49}	46.75	-36.08	-192.22	-130.68	0.00	0.00	76.09	-329.62	-441.67	-534.58	226.0	225.96	211.39	364.54	7460	3191.4	1.35
	L_{49}-L_{50}	76.09	52.62	-441.67	-334.58	226.0	225.96	211.39	364.54	7460	3191.4	1.35	10060	0.99898786	7449.1	0.826	0.93	0.93
	L_{50}-L_{51}	302.65	-164.19	-17.67	1.37	0.00	0.00	1618.89	704.28	924.86	-345.65	249.4	249.40	238.81	367.03	8248	3698.4	1.39
	L_{51}-L_{52}	45.25	2.62	-209.67	-19.87	0.00	0.00	-91.00	-94.51	-643.30	-141.93	226.0	225.96	211.39	364.54	7460	3191.4	1.35
	L_{52}-L_{53}	43.52	5.91	-262.51	-85.32	0.00	0.00	365.11	-528.88	-234.32	-1004.16	162.9	162.89	147.19	219.93	6887	2613.8	1.35
	L_{53}-L_{54}	83.52	-133.91	-43.35	-74.14	0.00	0.00	373.28	-678.91	86.40	-349.41	138.2	138.21	119.70	173.22	4364	1707.4	1.25
	L_{54}-L_{55}	34.60	169.83	-249.61	89.14	0.00	0.00	149.01	-149.01	-380.61	189.42	149.0	149.01	130.61	189.42	4793	1908.4	1.27
	L_{55}-L_{56}	67.83	-112.28	-110.81	-132.82	0.00	0.00	270.55	-519.70	-116.11	-566.37	168.0	168.04	149.99	224.57	5911	2429.7	1.33
	L_{56}-L_{57}	43.52	5.91	-262.51	-85.32	0.00	0.00	365.11	-528.88	-234.32	-1004.16	162.9	162.89	147.19	219.93	6887	2613.8	1.35
	L_{57}-L_{58}	65.68	39.72	-340.82	-197.33	0.00	0.00	65.50	-492.92	-667.08	-916.37	216.3	216.33	205.74	344.19	7629	3425.8	1.99
	L_{58}-L_{59}	44.58	10.81	-385.34	-229.07	0.00	0.00	-384.88	-191.30	-1316.36	-711.03	197.7	197.72	179.89	341.80	7583	3368.5	1.73
	L_{59}-L_{60}	21.88	-3.81	-260.07	-170.64	0.00	0.00	225.55	-370.84	-535.81	-1004.16	162.9	162.89	147.19	219.93	6887	2613.8	1.35
	L_{60}-L_{61}	15.74	-10.19	-277.93	-82.83	0.00	0.00	15.74	-10.19	-277.93	-82.83	0.00	0.00	0.00	0.00	0	0.0	0.00
	L_{61}-L_{62}	14.09	-11.29	-180.31	-43.00	0.00	0.00	-264.97	52.73	-686.19	72.64	122.0	122.01	103.28	148.92	3592	1395.7	1.22
	L_{62}-L_{63}	14.09	-11.29	-180.31	-43.00	0.00	0.00	-264.97	52.73	-686.19	72.64	122.0	122.01	103.28	148.92	3592	1395.7	1.22
	L_0-L_{64}	70.07	-118.72	-5.69	5.84	0.00	0.00	208.81	-410.47	44.65	-140.89	83.6	83.58	67.49	100.97	2740	1096.2	1.21
	L_{64}-L_{65}	66.65	-115.51	-6.83	6.31	0.00	0.00	342.45	-470.60	193.25	-217.48	83.6	83.58	74.62	100.97	2740	1096.2	1.21
	L_{65}-L_{66}	71.50	-133.13	-5.62	5.19	0.00	0.00	142.95	-603.73	187.63	-357.96	83.6	83.58	74.62	100.97	2740	1096.2	1.21
	L_{66}-L_{67}	9.13	-78.05	-88.96	-127.84	0.00	0.00	175.22	-630.10	-320.64	-894.22	153.9	153.89	138.16	206.43	5912	2460.7	1.34
	L_{67}-L_{68}	28.02	-326.24	-201.50	-215.48	0.00	0.00	-22.56	-1189.22	-619.87	-849.22	179.7	179.69	164.15	251.43	6743	3050.7	1.40
	L_{68}-L_{69}	21.07	39.43	-299.50	-60.43	0.00	0.00	435.93	39.13	-1121.86	45.67	162.9	162.89	147.19	219.93	6887	2613.8	1.35
	L_{69}-L_{70}	26.12	-41.88	-149.46	-37.29	0.00	0.00	204.40	285.57	-684.94	275.62	92.6	92.58	76.68	114.47	3295	1304.9	1.24
	L_{70}-L_{71}	49.39	-3.70	-133.49	-12.73	0.00	0.00	64.32	268.77	-460.54	189.20	144.9	144.85	129.09	192.84	9210	2379.8	1.33
	L_{71}-L_{72}	169.91	-55.08	-4.21	1.32	0.00	0.00	838.58	-142.64	461.32	199.89	145.8	145.75	130.44	228.84	6500	2932.4	1.57
	L_{72}-L_{73}	85.42	-88.63	-87.75	-87.00	0.00	0.00	1014.50	-1193.85	-1069.60	15.38	144.9	144.85	129.09	192.84	9210	2379.8	1.33
	L_{73}-L_{74}	57.97	-126.54	-80.09	-111.39	0.00	0.00	372.46	-268.87	-73.34	-234.05	92.6	92.58	76.68	114.47	3196	1261.9	1.24
	L_{74}-L_{75}	42.10	-19.37	-187.96	-83.22	0.00	0.00	42.10	-19.37	-187.96	-83.22	0.00	0.00	0.00	0.00	0	0.0	0.00
	L_{75}-L_{76}	11.

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.00	DL Factor:	1.00
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
See Figure 6.6.3.1-1 for Gusset Plate Boundary Locations

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

North/Truss Vehicle

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0–L_1	-56.29	86.22	0.70	-0.93	4.58	6.48				
	U_1–L_1	-14.44	23.27	0.92	-0.92	4.31	4.20				
	U_1–L_2	36.84	-5.85	1.10	-1.25	3.26	3.71				
	U_2–L_2	36.84	-39.22	1.73	-1.61	-2.72	2.97				
	U_2–L_3	47.77	-69.19	2.97	-2.61	-12.52	10.77				
	U_3–L_3	57.71	-69.80	3.84	-4.21	-0.04	0.48				
	U_3–L_4	47.73	-92.39	3.97	-4.90	-4.33	0.70				
	U_4–L_4	106.28	-118.16	5.85	-6.05	-0.16	0.14				
	U_4–L_5	-10.96	6.72	7.33	-8.73	-4.91	5.91				
	U_5–L_5	144.91	167.70	6.40	-6.38	-4.98	5.15				
	U_5–L_6	-102.02	95.66	0.19	-0.38	-4.09	4.41				
	U_6–L_6	-111.13	168.05	0.40	-0.18	-4.47	3.26				
	U_6–L_7	-96.42	93.90	0.67	-0.39	-4.42	4.41				
	U_7–L_7	-90.91	75.94	0.86	-0.78	-3.98	4.23				
	U_7–L_8	-33.93	39.56	0.83	-1.05	-2.63	2.85				
	U_8–L_8	8.32	-15.87	3.58	-2.03	-1.99					
	U_8–L_9	47.73	-60.39	3.97	-4.10	-6.05	0.70				
	U_9–L_9	61.55	-72.81	4.32	-4.41	-4.60	0.60				
	U_9–L_{10}	133.11	-138.25	6.87	-7.03	-4.83	1.82				
	U_{10}–L_{10}	157.87	-153.88	7.86	-7.72	-0.85	-0.76				
	U_{10}–L_{11}	-131.38	-213.66	5.89	-7.19	-0.52	-0.64				
	U_{11}–L_{11}	-147.13	191.00	5.46	-6.43	-0.63	-0.79				
	U_{11}–L_{12}	-122.87	130.77	0.80	-0.82	-6.42	6.35				
	U_{12}–L_{12}	117.97	23.70	0.98	-0.98	-4.42	4.51				
	U_{12}–L_{13}	-62.46	-69.03	0.63	-0.64	-3.44	3.47				
	U_{13}–L_{13}	37.86	-43.29	0.82	-0.82	-0.79	0.87				
	U_{13}–L_{14}	-9.11	15.69	1.52	-1.38	-3.43	3.66				
	U_{14}–L_{14}	14.84	-14.93	2.15	-2.12	-2.73	2.88				
	U_{14}–L_{15}	39.69	-45.43	2.32	-2.58	-2.63	2.85				
	U_{15}–L_{15}	88.81	-97.92	4.52	-5.08	-1.01	0.91				
	U_{15}–L_{16}	133.08	-133.02	6.32	-6.95	-0.70	1.30				
	U_{16}–L_{16}	140.09	-147.06	6.21	-6.44	-0.33	-0.19				
	U_{16}–L_{17}	148.96	-153.44	6.11	-6.32	-0.16	0.24				
	U_{17}–L_{17}	140.97	-139.96	6.43	-6.66	-0.75	-0.13				
	U_{17}–L_{18}	185.41	-182.32	7.28	-6.91	-0.71	0.70				
	U_{18}–L_{18}	72.60	-73.10	3.77	-3.97	-0.72	0.72				
	U_{18}–L_{19}	-128.28	-129.98	0.72	-0.64	-6.20	5.88				
	U_{19}–L_{19}	-125.94	122.64	0.73	-0.69	-4.87	4.85				
	U_{19}–L_{20}	-109.69	106.91	0.97	-0.95	-4.63	4.61				
	U_{20}–L_{20}	-93.25	90.01	0.97	-0.95	-4.63	4.61				
	U_{20}–L_{21}	-43.25	43.74	0.84	-0.66	-3.77	3.90				
	U_{21}–L_{21}	29.76	-34.19	0.81	-0.81	-0.78	0.83				
	U_{21}–L_{22}	-1.28	1.60	1.95	-2.07	-2.38	2.53				
	U_{22}–L_{22}	46.57	-51.84	3.79	-4.07	-2.63	2.85				
	U_{23}–L_{23}	46.57	-51.84	3.79	-4.07	-4.16	-1.14				
	U_{23}–L_{24}	62.68	-61.36	5.06	-4.95	-0.97	0.94				
	U_{24}–L_{24}	77.60	-77.60	6.27	-6.13	-0.96	0.96				
	U_{24}–L_{25}	106.60	-105.79	8.32	-8.39	-1.04	1.00				
	U_{25}–L_{25}	92.55	-94.80	7.39	-7.61	-0.96	0.94				
	U_{25}–L_{26}	114.56	-114.55	8.02	-7.61	-0.50	0.42				
	U_{26}–L_{26}	-13.74	5.73	8.53	-8.53	-0.91	0.91				
	U_{26}–L_{27}	-121.12	118.67	0.78	-0.73	-5.73	5.28				
	U_{27}–L_{27}	-92.37	86.40	0.86	-5.20	5.17					
	U_{27}–L_{28}	-53.43	53.43	0.84	-0.66	-3.77	3.90				
	U_{28}–L_{28}	-96.77	103.11	0.22	-0.11	-5.50	5.52				
	U_{28}–L_{29}	-21.56	21.56	0.53	-0.53	-0.47	0.47				
	U_{29}–L_{29}	-53.43	70.59	0.59	-0.47	-4.62	4.76				
	U_{29}–L_{30}	-32.66	38.67	0.94	-1.00	-2.87	3.21				
	U_{30}–L_{30}	46.57	-51.84	3.79	-4.07	-2.63	2.85				
	U_{30}–L_{31}	4.46	-6.40	3.32	-3.55	-2.11	1.99				
	U_{31}–L_{31}	47.22	-50.55	4.02	-4.18	-0.76	0.77				
	U_{31}–L_{32}	62.68	-61.36	5.06	-4.95	-0.97	0.94				
	U_{32}–L_{32}	77.60	-77.60	6.27	-6.13	-0.96	0.96				
	U_{32}–L_{33}	104.86	-112.00	7.99	-7.78	-1.10	1.03				
	U_{33}–L_{33}	108.12	-132.78	9.46	-7.64	-0.55	0.90				
	U_{33}–L_{34}	-24.18	24.18	0.53	-0.53	-0.47	0.47				
	U_{34}–L_{34}	-109.22	116.95	0.56	-0.53	-6.01	5.92				
	U_{34}–L_{35}	-92.37	86.40	0.86	-0.73	-5.20	5.17				
	U_{35}–L_{35}	-48.65	58.79	0.46	-0.47	-3.53	3.65				
	U_{35}–L_{36}	-21.56	42.89	0.78	-0.78	-1.06	1.06				
	U_{36}–L_{36}	-5.41	11.55	0.29	-1.22	-3.96	4.13				
	U_{37}–L_{37}	27.86	-30.67	2.42	-2.51	-2.00	2.16				
	U_{38}–L_{38}	31.34	-32.50	2.76	-2.98	-2.27	2.44				
	U_{39}–L_{39}	16.74	-15.77	1.47	-1.26	-2.34	2.52				
	U_{40}–L_{40}	31.34	-32.50	2.76	-2.98	-2.27	2.44				
	U_{41}–L_{41}	27.86	-30.67	2.42	-2.51	-2.00	2.16				
Structure 2	U_0–L_1	99.11	-131.59	5.20	-6.39	-0.25	-0.15				
	U_1–L_1	56.00	-87.91	4.95	-5.50	-0.08	0.21				
	U_1–L_{12}	139.46	-164.19	6.30	-6.80	-0.22	0.20				
	U_{12}–L_{12}	52.77	-74.32	3.51	-7.04	-5.86	6.85				
	U_{12}–L_2	-62.87	69.54	0.35	-0.34	-4.48	4.63				
	U_2–L_2	-41.65	35.38	0.20	-0.35	-3.93	4.10				
	U_2–L_3	-36.85	40.05	0.11	0.07	-3.19	3.61				
	U_3–L_3	-39.84	39.91	0.84	-0.65	-2.64	2.82				
	U_3–L_4	-38.87	40.30	2.21	-2.48	-2.69	2.77				
	U_4–L_4	-13.42	14.14	3.71	-4.34	-1.32	1.50				
	U_4–L_5	5.87	-8.62	5.32	-4.99	-1.39	1.23				
	U_5–L_5	20.19	-40.81	3.19	-5.39	-1.93	-0.62				

ZZ Axis Moment Properties

Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(x)}$	$C_{b(min)}$
U_0–L_1	-52.97	85.14	-255.66	270.68	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_1–L_1	7.89	3.62	-143.61	151.68	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_1–L_2	-60.15	-63.32	-65.99	100.05	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_2–L_2	97.94	-92.43	-30.79	40.09	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_2–L_3	-150.62	-148.04	-53.11	42.34	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_3–L_3	-186.11	-212.65	69.20	-89.69	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
U_3–L_4	-211.23	-228.68	93.40	-114.17	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
U_4–L_4	-307.44	-328.82	133.45	-149.53	18.5	18.45	18.38	30.78	7	1020.9	1.67	1016	1.5	913.3
U_4–L_5	-197.81	-244.05	-166.48	-179.71	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5	5302.3
U_5–L_5	-177.22	-207.35	-327.53	-362.24	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
U_5–L_6	-127.41	-114.21	-247.30	-248.07	39.5	39.52	39.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
U_6–L_6	-131.94	-208.74	-169.78	-181.86	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_6–L_7	-106.55	-111.02	-249.34	-245.72	21.1	21.09	21.09	39.46	10	1137.6	1.68	1170	1.5	1044.0
U_7–L_7	-64.96	-76.94	-160.81	-217.41	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
U_7–L_8	-77.73	-84.19	-177.23	-196.46	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_8–L_8	-127.11	-45.96	-35.15	154.15	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_8–L_9	-173.31	-180.39	33.30	-46.03	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_9–L_9	-201.23	-216.18	63.33	-77.77	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
U_9–L_{10}	-165.47	-176.60	149.85	-154.48	19.3	19.29	19.29	33.51	4	1187.7	1.57	1766	1.5	1737.2
U_{10}–L_{10}	-429.69	-416.29	181.49	-178.74	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{10}–L_{11}	-335.94	-479.37	156.11	-295.75	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{11}–L_{11}	-173.05	-238.75	339.91	-369.46	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{11}–L_{12}	-137.22	-147.44	-337.94	-345.81	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
U_{12}–L_{12}	-12.82	-18.03	-33.45	-38.63	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{12}–L_{13}	-63.73	-71.94	-176.45	-185.82	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2
U_{13}–L_{13}	-20.33	-20.33	-49.49	-49.49	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{13}–L_{14}	-107.61	-107.61	-261.92	-261.92	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{14}–L_{14}	-30.18	-17.83	-106.65	-122.16	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{14}–L_{15}	-78.92	-78.04	-56.17	60.32	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{15}–L_{15}	-115.82	-118.04	-172.73	-173.23	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{15}–L_{16}	-251.65	-267.92	87.46	-101.99	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6
U_{16}–L_{16}	-193.36	-200.20	13.61	-180.39	33.5	33.49	33.36	46.71	2	1212.1	1.45	1357	1.5	1329.2
U_{16}–L_{17}	-353.89	-369.40	172.87	-195.20	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{17}–L_{17}	-362.84	-374.39	189.33	-192.96	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{17}–L_{18}	-442.42	-428.42	221.49	-217.87	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{18}–L_{18}	-172.72	-172.72	-86.40	-86.40	24.9	24.92	24.92	39.17	2	1112.7	1.12	1122.60	1.5	1122.6
U_{18}–L_{19}	-146.93	-151.41	-336.20	-329.76	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{19}–L_{19}	-472.43	-464.83	243.93	-239.52	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{19}–L_{20}	-143.68	-140.55	-351.70	-347.79	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{20}–L_{20}	-116.17	-115.62	-323.82	-327.74	39.8	39.83	39.83	59.23	6	1264.6	1.53	1993	1.5	1922.1
U_{20}–L_{21}	-68.16	-70.79	-181.61	-183.24	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{21}–L_{21}	-33.22	38.95	-159.27	163.41	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
U_{21}–L_{22}	-15.26	15.26	-47.56	47.56	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{22}–L_{22}	51.71	-54.63	-66.68	71.29	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{23}–L_{23}	44.91	-48.52	-64.83	71.99	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{23}–L_{24}	171.16	-180.22	29.35	-39.48	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
U_{24}–L_{24}	200.47	-215.20	54.92	-54.10	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1
U_{24}–L_{25}	239.45	-255.90	94.27	-94.76	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1
U_{25}–L_{25}	366.20	-366.53	152.24	-110.07	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{25}–L_{26}	268.39	-268.39	111.83	-111.83	24.9	24.92	24.92	39.17	2	1112.7	1.12	1122.60	1.5	1122.6
U_{26}–L_{26}	368.39	-357.05	136.14	-137.45	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{26}–L_{27}	135.83	-134.09	-315.96	300.41	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{27}–L_{27}	-102.81	88.65	-263.89	256.49	43.2	43.24	43.16	70.66	19	1515.6	1.63	2182	1.5	2140.4
U_{27}–L_{28}	-127.06	-122.02	-279.74	-283.41	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{28}–L_{28}	-119.85	131.00	-289.16	297.79	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{28}–L_{29}	-53.43	53.43	-118.62	118.62	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{29}–L_{29}	-66.10	-78.64	-212.49	224.16	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6
U_{29}–L_{30}	-16.49	-22.70	-121.63	139.13	19.4	19.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{30}–L_{30}	-79.75	-87.29	-186.63	-186.63	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{30}–L_{31}	97.61	-109.08	-52.65	44.00	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{31}–L_{31}	-138.95	-140.33	3.61	-147.87	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{31}–L_{32}	172.78	-181.39	40.24	-44.37	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
U_{32}–L_{32}	200.47	-215.20	54.92	-54.10	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1
U_{32}–L_{33}	239.45	-255.90	94.27	-94.76	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1
U_{33}–L_{33}	291.68	-314.23	129.10	-110.07	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{34}–L_{34}	-24.18	24.18	-53.61	53.61	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{34}–L_{35}	-109.22	116.95	-256.92	253.17	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{35}–L_{35}	-48.65	58.79	-118.62	118.62	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{36}–L_{36}	-5.41	11.55	-29.12	29.12	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{37}–L_{37}	27.86	-30.67	2.42	-2.51	-2.00	2.16								
U_{38}–L_{38}	31.34	-32.50	2.76	-2.98	-2.27	2.44								
U_{39}–L_{39}	16.74	-15.77	1.47	-1.26	-2.34	2.52								
U_{40}–L_{40}	31.34	-32.50	2.76	-2.98	-2.27	2.44								
U_{41}–L_{41}	27.86	-30.67	2.42	-2.51	-2.00	2.16								
U_0–L_1	67.33	-82.72	-3.20	-1.98	0.00	0.00	0.00	0.00	0.00	274.72	-350.16	121.91	-175.24	42.7
U_1–L_1	64.03	-71.21	-1.06	2.68	0.00	0.00	0.00	0.00	0.00	262.24	-281.58	121.20	-121.48	36.5
U_1–L_{12}	81.52	-87.94	-2.86	2.52	0.00	0.00	0.00	0.00	0.00	352.73	-390.88	169.90	-194.87	33.1
U_{12}–L_{12}	73.58	-94.05	-16.29	88.63	0.00	0.00	0.00	0.00	0.00	228.04	-300.40	-101.02	96.84	-107.1
U_{12}–L_2	4.66	-4.48	-59.78	61.88	0.00	0.00	0.00	0.00	0.00	-21.63	80.70	-211.26	224.47	18.5
U_2–L_2	2.71	-4.61	-52.52	54.71	0.00	0.00	0.00	0.00	0.00	-48.27	36.01	-167.93	164.53	20.8
U_2–L_3	1.52	0.94	-42.55	48.17	0.00	0.00	0.00	0.00	0.00	-44.60	54.09	-140.10	156.44	19.4
U_3–L_3	11.28	-8.64	-37.94	37.69	0.00	0.00	0.00	0.00	0.00	-27.36	33.16	-134.00	133.54	15.4
U_3–L_4	29.51	-33.11	-35.88	37.55	0.00	0.00	0.00	0.00	0.00	13.41	-19.34	-126.28	132.65	15.4
U_4–L_4	49.62	-58.02	-17.67	20.00	0.00	0.00	0.00	0.00	0.00	90.06	-107.33	-55.74	61.71	15.4
U_4–L_5	73.74	-66.61	-18.54	16.47	0.00	0.00	0.00	0.00	0.00	167.41	-156.83	-32.55	23.18	15.4
U_5–L_5	42.63	-72.01	-25.77	8.24	0.00	0.00	0.00	0.00	0.00	118.61	-209.07	-29.59	-70.92	15.4

YY Axis Moments from STAAD

Member	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
U_0–L_1	-15.24	4.89	-240.43	-77.11
U_1–L_1	6.20	-1.59	-6.25	5.25
U_1–L_2	26.82	7.49	-54.43	-11.25
U_2–L_2	-13.61	-3.05	1.37	1.21
U_2–L_3	-53.72	-11.53	-21.01	17.19
U_3–L_3	-26.80	-36.58	25.17	23.61
U_3–L_4	-53.53	-8.32	18.50	33.51
U_4–L_4	-130.48	8.50	-38.30	9.90
U_4–L_5	-77.96	5.30	-3.34	-2.15
U_5–L_5	-7.41	8.03	-102.68	-61.16
U_5–L_6	-72.39	-32.28	-120.38	-84.13
U_6–L_6	-50.04	-5.10	-103.36	-69.97
U_6–L_7	-36.51	-13.37	-41.94	-39.27
U_7–L_7	-17.08	4.19	1.15	-12.95
U_7–L_8	0.00	0.00	0.00	0.00
U_8–L_8	36.10	-7.80	20.20	36.46
U_8–L_9	80.85	-8.32	58.50	40.03
U_9–L_9	62.73	-18.39	-5.30	5.99
U_9–L_{10}	81.73	-39.05	6.44	-2.01
U_{10}–L_{10}	83.36	-28.47	7.05	0.00
U_{10}–L_{11}	91.19	-11.17	-2.08	5.83
U_{11}–L_{11}	306.25	-40.16	-113.42	-14.87
U_{11}–L_{12}	0.00	0.00	0.00	0.00
U_{12}–L_{12}	39.59	5.20	23.67	3.10
U_{12}–L_2	0.00	0.00	0.00	0.00
U_2–L_2	0.00	0.00	0.00	0.00
U_2–L_3	0.00	0.00	0.00	0.00
U_3–L_3	0.00	0.00	0.00	0.00
U_3–L_4	0.00	0.00	0.00	0.00
U_4–L_4	0.00	0.00	0.00	0.00
U_4–L_5	0.00	0.00	0.00	0.00
U_5–L_5	0.00	0.00	0.00	0.00
U_5–L_6	0.00	0.00	0.00	0.00
U_6–L_6	0.00	0.00	0.00	0.00
U_6–L_7	0.00

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	-23.44	-7.53	3.09	-0.22	-2.03	1.16	3.74	-2.89	-27.15	15.50
	U_1-L_1	-3.41	-8.42	0.37	-0.15	-1.70	0.16	4.94	-1.96	-22.76	2.08
	U_1-L_2	-7.93	-13.37	0.42	0.11	-1.10	-0.90	5.60	1.40	-14.67	-11.98
	U_2-L_2	-14.61	-18.52	0.18	0.07	-0.63	-0.33	0.00	-13.73	-13.73	-13.73
	U_2-L_3	-37.44	-76.90	0.43	1.07	-3.45	-2.39	5.72	-44.53	-168.27	169.27
	U_3-L_3	-27.19	-31.19	0.41	0.07	-2.48	-1.23	5.44	-5.26	-71.49	66.49
	U_3-L_4	-8.75	-101.69	3.87	0.75	-2.31	4.07	11.66	9.99	-30.82	54.36
	U_4-L_4	-5.11	-118.70	1.83	1.08	-1.39	3.07	23.63	13.99	-17.96	39.67
	U_4-L_5	-77.69	-73.54	2.96	-0.15	-3.34	1.76	0.00	-89.27	51.39	-194.54
	U_5-L_5	-43.88	-73.22	0.50	1.07	-2.84	1.31	6.43	13.90	-36.71	16.94
	U_5-L_6	-22.22	-72.60	0.49	1.05	-1.44	0.95	5.14	3.45	-41.92	12.32
	U_6-L_6	-65.20	-48.77	0.17	0.44	-2.71	1.83	2.13	-5.73	-35.00	23.66
	U_6-L_7	-24.90	8.63	0.00	-0.54	-1.55	0.41	3.82	-6.92	-20.11	5.24
	U_7-L_7	-0.81	-22.83	0.00	-0.16	-0.48	0.21	0.00	-22.44	-55.57	-39.99
	U_7-L_8	-25.30	9.99	0.46	-0.86	-1.91	1.43	5.50	-11.14	-24.75	18.48
	U_8-L_8	-37.01	20.01	0.39	-0.55	-2.68	1.73	5.06	-4.57	-34.75	22.41
	U_8-L_9	-101.94	74.52	0.54	-0.54	-4.78	3.76	7.04	-6.96	-61.85	48.70
	U_9-L_9	-115.87	80.00	0.50	-0.45	-5.28	3.87	6.40	-6.35	-68.35	47.48
	U_9-L_{10}	-75.88	78.94	0.63	0.03	-4.43	3.65	8.20	0.43	-57.32	47.26
	U_{10}-L_{10}	-109.41	98.91	0.51	-0.53	-4.51	4.25	6.50	-6.73	-57.57	54.31
	U_{10}-L_{11}	-89.79	78.55	0.43	-0.54	-3.70	3.73	5.24	-7.32	-52.82	47.43
	U_{11}-L_{11}	-90.87	71.82	0.74	-0.64	-4.64	3.53	9.47	-8.16	-69.23	45.08
	U_{11}-L_{12}	-63.74	49.47	0.49	-0.55	-3.34	2.58	6.66	-6.42	-47.67	29.11
	U_{12}-L_{12}	-20.35	3.86	0.51	-0.44	-2.22	1.61	6.49	-5.62	-28.38	20.54
	U_{12}-L_{13}	-12.38	-1.20	0.00	-0.43	-1.01	-1.12	0.00	-12.59	-12.59	-12.59
	U_{13}-L_{13}	6.85	-23.87	1.02	1.57	-1.33	0.42	3.16	0.44	-37.16	7.44
	U_{13}-L_{14}	-44.41	35.31	0.40	-0.99	-2.46	0.93	5.12	-12.66	-31.47	11.87
	U_{14}-L_{14}	-96.57	69.69	0.51	-0.49	-4.68	3.21	2.24	-13.08	-56.73	39.29
	U_{14}-L_{15}	-85.40	67.30	0.35	-0.73	-4.19	2.54	4.50	9.33	-53.55	32.43
	U_{15}-L_{15}	-37.01	20.01	0.39	-0.55	-2.68	1.73	5.06	-4.57	-34.75	22.41
	U_{15}-L_{16}	-109.84	116.34	0.61	0.26	-5.04	3.97	7.82	3.26	-64.33	50.68
	U_{16}-L_{16}	-141.98	130.02	0.83	0.41	-6.27	5.11	10.58	-5.19	-80.07	60.26
	U_{16}-L_{17}	-82.19	133.47	0.49	-0.16	-4.06	3.75	8.37	19.73	-43.75	63.22
	U_{17}-L_{17}	-11.96	79.20	1.22	0.37	-3.17	3.90	15.34	4.67	-40.00	49.23
	U_{17}-L_{18}	-77.27	74.09	0.29	-0.99	-4.88	4.00	8.19	13.47	-61.90	57.92
	U_{18}-L_{18}	-66.19	89.97	0.52	-0.33	-4.79	4.31	6.59	-4.20	-60.45	54.36
	U_{19}-L_{19}	-56.07	72.69	0.47	-0.33	-4.15	3.27	5.97	-6.85	-52.34	41.30
	U_{19}-L_{20}	-56.07	72.69	0.47	-0.33	-4.15	3.27	5.97	-6.85	-52.34	41.30
	U_{20}-L_{20}	-37.84	37.59	0.47	-0.48	-3.17	2.20	5.92	-6.01	-39.97	27.83
	U_{20}-L_{21}	-29.07	21.01	0.38	-0.42	-2.61	1.70	5.92	-6.01	-39.97	27.83
	U_{21}-L_{21}	-10.03	3.77	0.99	-1.21	-1.63	0.68	7.50	-15.28	-20.58	8.57
	U_{21}-L_{22}	-8.79	2.44	0.99	-1.21	-1.63	0.68	7.50	-15.28	-20.58	8.57
	U_{22}-L_{22}	-19.43	19.57	0.57	-0.68	-2.05	1.39	7.20	-11.07	-25.89	17.50
	U_{23}-L_{23}	-36.13	43.38	0.68	-0.71	-2.38	1.61	8.02	-8.94	-30.88	24.34
	U_{24}-L_{24}	-54.32	68.37	0.52	-0.65	-4.73	3.67	8.02	-8.94	-30.88	24.34
	U_{24}-L_{25}	-69.49	72.12	0.37	-0.23	-5.65	4.88	6.60	-8.14	-39.74	46.33
	U_{25}-L_{25}	-35.84	33.55	1.58	0.52	-3.38	4.25	4.75	-2.87	-55.22	37.32
	U_{26}-L_{26}	-76.26	86.09	0.66	-0.26	-4.27	3.56	20.12	6.68	-43.17	54.26
	U_{27}-L_{27}	-76.64	55.13	0.25	0.23	-4.33	2.52	8.42	-3.35	-54.53	49.45
	U_{28}-L_{28}	-76.26	33.90	0.26	0.20	-4.27	2.30	7.65	-0.38	-52.11	39.30
	U_{29}-L_{29}	-78.38	71.14	0.60	-0.03	-4.08	3.08	7.65	-0.38	-52.11	39.30
	U_{30}-L_{30}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{31}-L_{31}	-76.64	55.13	0.25	0.23	-4.33	2.52	3.17	2.87	-55.22	37.32
	U_{32}-L_{32}	-76.26	33.90	0.26	0.20	-4.27	2.30	5.92	-6.01	-39.97	27.83
	U_{33}-L_{33}	-78.38	71.14	0.60	-0.03	-4.08	3.08	7.65	-0.38	-52.11	39.30
	U_{34}-L_{34}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{35}-L_{35}	-76.26	33.90	0.26	0.20	-4.27	2.30	5.92	-6.01	-39.97	27.83
	U_{36}-L_{36}	-76.26	-17.63	1.21	1.70	-5.11	-0.09	15.47	-21.72	-14.13	-1.16
	U_{37}-L_{37}	-76.64	-39.16	1.31	1.37	-1.54	0.61	14.19	-17.53	-19.64	9.89
	U_{38}-L_{38}	-76.26	-13.28	0.61	0.80	-2.66	0.26	6.26	-9.71	-13.79	4.78
	U_{39}-L_{39}	-33.71	19.61	0.55	-0.49	-2.76	1.76	7.08	-6.26	-30.30	22.54
	U_{40}-L_{40}	-76.64	55.13	0.25	0.23	-4.33	2.52	10.14	-6.72	-44.39	34.19
	U_{41}-L_{41}	-78.83	60.14	0.74	-0.67	-5.71	4.26	9.49	-8.52	-72.97	54.44
	U_{42}-L_{42}	-53.53	38.27	0.34	-0.46	-3.91	2.91	6.71	-6.03	-51.66	38.53
	U_{43}-L_{43}	-38.18	63.30	0.30	-0.29	-6.16	4.28	3.89	-3.71	-79.70	55.34
	U_{44}-L_{44}	-90.42	64.48	0.36	-0.33	-4.42	3.23	4.66	-4.26	-57.17	41.82
	U_{45}-L_{45}	-38.18	63.30	0.30	-0.29	-6.16	4.28	3.89	-3.55	-80.16	55.34
	U_{46}-L_{46}	-33.53	18.27	0.34	-0.31	-2.47	1.72	4.35	-4.02	-32.01	22.27
	U_{47}-L_{47}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{48}-L_{48}	-1.49	-18.89	0.53	-1.10	-1.66	0.27	6.88	-14.28	-20.20	5.22
	U_{49}-L_{49}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{50}-L_{50}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{51}-L_{51}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{52}-L_{52}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{53}-L_{53}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{54}-L_{54}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{55}-L_{55}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{56}-L_{56}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{57}-L_{57}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{58}-L_{58}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{59}-L_{59}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{60}-L_{60}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{61}-L_{61}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{62}-L_{62}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{63}-L_{63}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{64}-L_{64}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{65}-L_{65}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{66}-L_{66}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{67}-L_{67}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{68}-L_{68}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{69}-L_{69}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{70}-L_{70}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{71}-L_{71}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{72}-L_{72}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{73}-L_{73}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{74}-L_{74}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{75}-L_{75}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{76}-L_{76}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{77}-L_{77}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{78}-L_{78}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{79}-L_{79}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{80}-L_{80}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{81}-L_{81}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{82}-L_{82}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{83}-L_{83}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{84}-L_{84}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{85}-L_{85}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{86}-L_{86}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{87}-L_{87}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{88}-L_{88}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{89}-L_{89}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{90}-L_{90}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{91}-L_{91}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{92}-L_{92}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{93}-L_{93}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{94}-L_{94}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{95}-L_{95}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{96}-L_{96}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{97}-L_{97}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{98}-L_{98}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{99}-L_{99}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{100}-L_{100}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{101}-L_{101}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{102}-L_{102}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{103}-L_{103}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{104}-L_{104}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{105}-L_{105}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{106}-L_{106}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{107}-L_{107}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{108}-L_{108}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{109}-L_{109}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{110}-L_{110}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{111}-L_{111}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{112}-L_{112}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{113}-L_{113}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{114}-L_{114}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{115}-L_{115}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{116}-L_{116}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{117}-L_{117}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{118}-L_{118}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{119}-L_{119}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{120}-L_{120}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{121}-L_{121}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{122}-L_{122}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{123}-L_{123}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{124}-L_{124}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{125}-L_{125}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{126}-L_{126}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{127}-L_{127}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{128}-L_{128}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{129}-L_{129}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{130}-L_{130}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{131}-L_{131}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{132}-L_{132}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{133}-L_{133}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{134}-L_{134}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{135}-L_{135}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{136}-L_{136}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{137}-L_{137}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{138}-L_{138}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{139}-L_{139}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{140}-L_{140}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{141}-L_{141}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{142}-L_{142}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{143}-L_{143}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{144}-L_{144}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{145}-L_{145}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{146}-L_{146}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{147}-L_{147}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{148}-L_{148}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{149}-L_{149}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{150}-L_{150}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{151}-L_{151}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{152}-L_{152}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{153}-L_{153}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{154}-L_{154}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{155}-L_{155}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{156}-L_{156}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{157}-L_{157}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{158}-L_{158}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{159}-L_{159}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{160}-L_{160}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{161}-L_{161}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19.09	-34.03	21.52
	U_{162}-L_{162}	-76.64	55.13	0.25	0.23	-4.33	2.52	13.09	-13.84	-26.71	46.58
	U_{163}-L_{163}	-38.99	50.41	0.47	-0.13	-4.49	2.94	6.24	-7.78	-60.04	39.77
	U_{164}-L_{164}	-75.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{165}-L_{165}	-76.64	55.13	0.25	0.23	-4.33	2.52	5.43	-11.72	-52.53	34.19
	U_{166}-L_{166}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{167}-L_{167}	-61.82	22.38	0.34	-0.64	-3.62	0.72	4.35	12.18	-46.77	9.30
	U_{168}-L_{168}	-53.89	37.99	0.22	-0.81	-2.63	1.66	2.87	-10.51	-34.03	21.52
	U_{169}-L_{169}	-73.27	65.81	0.37	0.70	-3.57	2.66	4.81	9.10	-52.31	34.45
	U_{170}-L_{170}	-53.89	37.99	0.22	-0.81	-2.63	1.66	19.36	19

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max, Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start-A (k-in)	Dead Load End-A (k-in)	Live Load (Max) Start-A (k-in)	Live Load (Max) End-A (k-in)	Pedestrian Load (Max) Start-A (k-in)	Pedestrian Load (Max) End-A (k-in)	Lane Reduction & Impact Live Load Start-A (k-in)	Lane Reduction & Impact Live Load End-A (k-in)	Impact Pedestrian Load Max Start-A (k-in)	Impact Pedestrian Load Max End-A (k-in)
Structure 1	U_0-U_1	-75.12	-0.70	9.50	-9.40	-14.30	-9.90	105.76	-104.63	-199.20	-110.22
	U_1-U_2	-46.83	-20.16	0.40	-11.10	-14.00	-14.00	4.40	15.50	-123.56	-105.86
	U_2-U_3	-112.19	86.51	1.40	2.90	-13.20	-1.90	15.59	32.29	-146.96	21.15
	U_3-U_4	-15.88	66.14	2.30	2.90	-14.80	-2.30	25.61	35.76	-165.86	23.38
	U_4-U_5	-9.16	61.58	2.30	3.40	-19.00	-1.90	25.61	37.85	-211.53	21.15
	U_5-U_6	42.76	120.09	2.60	3.30	-15.60	-3.40	28.95	36.74	-173.67	-37.85
	U_6-U_7	76.79	43.54	3.00	3.40	-14.90	-3.30	30.92	24.49	-156.98	-3.34
	U_7-U_8	-47.40	525.96	1.40	3.90	-24.30	25.00	-27.84	777.83	-1267.79	138.2
	U_8-U_9	474.61	-124.27	16.60	-17.70	-2.10	0.20	178.98	-190.84	-1.08	2.34
	U_9-U_{10}	46.76	20.63	3.20	-2.30	-5.90	-0.80	34.50	-24.80	-63.61	-8.63
	$U_{10}-U_{11}$	64.51	-138.68	3.40	-4.80	-5.70	-0.70	43.13	-171.63	-62.83	-29.11
	$U_{11}-U_{12}$	27.83	-140.42	3.60	-3.60	-5.00	-0.60	38.82	-34.50	-91.65	-56.07
	$U_{12}-U_{13}$	-106.18	-154.99	4.20	-2.30	-13.80	-3.00	45.28	-24.80	-148.79	-22.35
	$U_{13}-U_{14}$	-137.97	-202.94	3.70	-3.10	-13.80	-3.00	45.28	-24.80	-148.79	-22.35
	$U_{14}-U_{15}$	-245.66	-182.98	3.00	-16.60	-27.50	-16.40	32.35	-178.98	-296.51	-176.82
	$U_{15}-U_{16}$	-123.52	-326.70	4.20	-19.30	-26.30	-3.10	42.49	-675.97	-774.97	-497.12
	$U_{16}-U_{17}$	-269.82	-144.58	0.80	0.10	-27.80	-4.20	8.63	1.08	-299.74	-45.28
	$U_{17}-U_{18}$	-144.16	-67.23	2.80	-2.30	-23.80	-4.40	8.63	-14.27	-197.93	-47.44
	$U_{18}-U_{19}$	-170.35	-20.48	0.70	-0.10	-17.10	1.50	7.55	-1.08	-184.37	-20.49
	$U_{19}-U_{20}$	-186.12	24.46	2.60	-18.00	-17.60	7.90	28.03	-194.08	-189.76	85.18
	$U_{20}-U_{21}$	-119.47	-209.21	11.20	-1.50	-12.20	-0.60	28.03	-194.08	-189.76	-6.39
	$U_{21}-U_{22}$	-70.88	-181.00	2.00	-7.20	-7.40	-13.60	28.03	-66.00	-401.40	-262.85
	$U_{22}-U_{23}$	-5.53	-252.12	6.80	-3.50	-13.20	-8.80	66.01	-66.00	-401.40	-262.85
	$U_{23}-U_{24}$	-327.18	-325.33	1.40	2.80	-23.60	-26.60	14.91	-29.81	-251.27	-283.21
	$U_{24}-U_{25}$	-338.53	-344.23	1.20	2.80	-21.00	-24.60	12.49	-117.12	-308.76	-87.31
	$U_{25}-U_{26}$	-396.09	-197.74	2.90	5.60	-34.20	-18.60	30.88	-59.62	-364.13	-166.03
	$U_{26}-U_{27}$	-344.15	-179.39	4.30	3.70	-24.40	-33.80	45.78	39.39	-299.75	-399.87
	$U_{27}-U_{28}$	-226.10	-291.71	3.20	4.30	-34.40	-24.80	39.39	51.11	-244.88	-25.55
	$U_{28}-U_{29}$	-350.17	-90.75	3.70	4.80	-23.00	-2.40	39.39	51.11	-244.88	-25.55
	$U_{29}-U_{30}$	-227.32	-27.13	4.30	4.30	-24.20	-1.50	50.04	47.91	-225.72	-24.49
	$U_{30}-U_{31}$	-167.07	39.82	4.70	4.50	-21.20	-2.30	50.04	47.91	-225.72	-24.49
	$U_{31}-U_{32}$	-109.77	170.72	4.20	3.80	-22.90	2.00	44.72	40.40	-243.82	-21.29
	$U_{32}-U_{33}$	-54.30	261.00	3.80	3.10	-19.70	7.70	44.72	40.40	-243.82	-21.29
	$U_{33}-U_{34}$	-261.00	1265.93	3.00	2.90	-31.70	34.40	31.94	30.88	-337.51	366.26
	$U_{34}-U_{35}$	-1192.75	6.27	0.00	0.00	-0.10	0.00	366.13	0.00	-24.20	2.10
	$U_{35}-U_{36}$	-25.30	71.62	3.10	-17.60	-13.80	-13.80	32.62	-5.26	-187.27	-145.19
	$U_{36}-U_{37}$	-150.58	33.05	5.00	-3.80	-11.70	-1.40	52.61	-39.98	-123.10	-14.73
	$U_{37}-U_{38}$	-147.30	4.36	5.90	-4.00	-10.00	-5.80	62.07	-42.08	-105.31	-61.02
	$U_{38}-U_{39}$	-57.67	1.49	4.00	-0.50	-4.00	-1.50	62.07	-42.08	-105.31	-61.02
	$U_{39}-U_{40}$	-31.67	-34.01	3.80	-4.30	-18.10	-1.50	39.98	-46.24	-190.43	-15.78
	$U_{40}-U_{41}$	-86.04	-71.70	3.20	-4.30	-14.60	-2.30	39.98	-46.24	-190.43	-15.78
	$U_{41}-U_{42}$	-60.95	-86.97	3.30	-18.20	-29.00	-7.20	34.72	-191.48	-305.11	-75.75
	$U_{42}-U_{43}$	-21.07	-21.07	3.10	-4.00	-22.60	-14.90	32.62	-42.08	-277.77	-156.76
	$U_{43}-U_{44}$	-32.99	-28.66	3.10	-4.00	-22.60	-14.90	32.62	-42.08	-277.77	-156.76
	$U_{44}-U_{45}$	-15.12	113.76	3.10	-4.00	-23.60	2.60	51.00	-239.36	-557.64	207.14
	$U_{45}-U_{46}$	-15.12	113.76	3.10	-4.00	-23.60	2.60	51.00	-239.36	-557.64	207.14
	$U_{46}-U_{47}$	-2.69	209.81	2.50	3.20	-19.30	-6.60	26.30	33.67	-203.06	-89.44
	$U_{47}-U_{48}$	-36.81	1.92	3.00	3.30	-16.70	-3.30	36.82	-181.63	-305.11	-75.75
	$U_{48}-U_{49}$	-122.28	1156.58	2.00	5.10	-32.20	37.50	21.64	53.66	-338.78	394.54
	$U_{49}-U_{50}$	-1153.78	-196.80	54.00	-29.50	-1.40	2.70	362.00	-314.09	-14.91	-28.75
	$U_{50}-U_{51}$	-67.81	62.60	3.70	-4.00	-12.70	-6.20	27.68	-183.63	-305.11	-75.75
	$U_{51}-U_{52}$	-178.87	-59.61	5.80	-1.70	-6.50	-2.70	59.62	-76.66	-69.21	-28.75
	$U_{52}-U_{53}$	-15.10	-15.10	3.00	-4.00	-15.10	-15.10	59.62	-76.66	-69.21	-28.75
	$U_{53}-U_{54}$	-68.77	-178.57	5.10	4.00	-12.70	-6.20	54.30	42.39	-135.22	-66.01
	$U_{54}-U_{55}$	-68.61	-67.81	5.10	4.00	-12.70	-6.20	54.30	42.39	-135.22	-66.01
	$U_{55}-U_{56}$	-236.40	-153.06	3.90	2.90	-17.70	-35.40	41.52	30.88	-188.45	-376.90
	$U_{56}-U_{57}$	-98.63	-313.14	4.40	-20.50	-43.70	7.80	46.65	-218.26	-465.27	-83.05
	$U_{57}-U_{58}$	-139.47	-392.96	7.20	-24.50	-39.50	-24.50	46.65	-218.26	-465.27	-83.05
	$U_{58}-U_{59}$	-350.27	-386.72	3.00	0.80	-38.80	-25.90	31.94	8.52	-413.10	-275.76
	$U_{59}-U_{60}$	-350.27	-386.72	3.00	0.80	-38.80	-25.90	31.94	8.52	-413.10	-275.76
	$U_{60}-U_{61}$	-278.82	-117.63	2.00	-0.50	-31.80	0.50	21.29	-5.32	-338.57	5.32
	$U_{61}-U_{62}$	-282.26	-37.51	3.00	-0.50	-31.80	0.50	21.29	-5.32	-338.57	5.32
	$U_{62}-U_{63}$	-186.18	-74.10	2.90	-14.40	-20.10	7.00	30.88	-133.32	-214.00	74.53
	$U_{63}-U_{64}$	-139.58	-187.78	10.20	-8.80	-19.10	-0.20	109.98	-94.88	-209.94	-2.16
	$U_{64}-U_{65}$	-47.42	-115.54	2.60	-3.40	-13.80	-3.00	61.46	-215.64	-85.18	-62.05
	$U_{65}-U_{66}$	-52.50	-128.95	5.70	-20.00	-7.50	-3.90	61.46	-215.64	-85.18	-62.05
	$U_{66}-U_{67}$	-277.57	-111.68	2.10	-2.50	-17.50	-10.40	22.64	-26.96	-188.69	-112.13
	$U_{67}-U_{68}$	-166.87	-240.33	1.80	2.50	-20.40	-19.60	16.37	21.56	-219.95	-211.33
	$U_{68}-U_{69}$	-287.50	-127.73	3.40	-14.40	-29.75	-3.70	37.16	-144.48	-320.25	-39.89
	$U_{69}-U_{70}$	-141.30	-113.93	1.30	2.40	-18.50	-10.90	14.02	-25.88	-197.47	-117.52
	$U_{70}-U_{71}$	-140.41	-56.98	2.20	2.50	-18.40	-1.70	23.72	-26.96	-198.39	-18.33
	$U_{71}-U_{72}$	-136.80	-70.88	1.20	3.30	-19.10	-16.80	12.94	-39.56	-205.94	-181.14
	$U_{72}-U_{73}$	-186.12	-74.10	2.90	-14.40	-20.10	7.00	30.88	-133.32	-214.00	74.53
	$U_{73}-U_{74}$	-139.58	-187.78	10.20	-8.80	-19.10	-0.20	109.98	-94.88	-209.94	-2.16
	$U_{74}-U_{75}$	-47.42	-115.54	2.60	-3.40	-13.80	-3.00	61.46	-215.64	-85.18	-62.05
	$U_{75}-U_{76}$	-52.50	-128.95	5.70	-20.00	-7.50	-3.90	61.46	-215.64	-85.18	-62.05
	$U_{76}-U_{77}$	-277.57	-111.68	2.10	-2.50	-17.50	-10.40	22.64	-26.96	-188.69	-112.13
	$U_{77}-U_{78}$	-166.87	-240.33	1.80	2.50	-20.40	-19.60	16.37	21.56	-219.95	-211.33
	$U_{78}-U_{79}$	-287.50	-127.73	3.40	-14.40	-29.75	-3.70	37.16	-144.48	-320.25	-39.89
	$U_{79}-U_{80}$	-141.30	-113.93	1.30	2.40	-18.50	-10.90	14.02	-25.88	-197.47	-117.52
	$U_{80}-U_{81}$	-140.41	-56.98	2.20	2.50	-18.40	-1.70	23.72	-26.96	-198.39	-18.33
	$U_{81}-U_{82}$	-136.80	-70.88	1.20	3.30	-19.10	-16.80	12.94	-39.56	-205.94	-181.14
	$U_{82}-U_{83}$	-497.19	-34.44	22.40	-18.20	-0.10	0.10	249.38	-202.62	-1.11	1.11
	$U_{83}-U_{84}$	113.01	44.44	5.00	-5.30	-5.30	-3.20	55.67	-99.00	-59.00	-35.63
	$U_{84}-U_{85}$	-59.30	15.07	3.50	2.10	-9.60	-3.30	38.57	23.38	-106.88	-36.74
	$U_{85}-U_{86}$	86.04	-19.79	6.50	-14.30	-14.70	-5.80	72.36	-109.20	-163.66	-64.57
	$U_{86}-U_{87}$	80.24	-119.59	3.40	0.10	-19.70	-3.10	37.85	7.79	-219.32	-34.51
	$U_{87}-U_{88}$	-24.67	-27.08	3.90	-8.20	-20.80	-3.10	43.42	-91.29	-231.57	-34.51
	$U_{88}-U_{89}$	29.36	-160.66	1.50	-2.20	-13.80	2.90	16.15	-24.49	-175.90	32.29

Location	Member	ZZ Axis Moments from STAAD: Lane Reduction & Impact Live Load End-A (k-in)	Impact Pedestrian Load Max Start-A (k-in)	Impact Pedestrian Load Max End-A (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	S_{tb} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor f	M_z (k-in)	Formula 1.8 Term = F/S_{bb}	M_z k-in	Equivalent Mom. Factor: a	$C_{m(a)}$	$C_{m(b)}$
Structure 1	U_0-U_1	-110.22	0.00	0.00	138.00	-227.65	-436.09	-239.71	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.062	0.82
	U_1-U_2	-105.86	0.00	0.00	-51.20	7.58	-328.60	-363.91	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.060	0.82
	U_2-U_3	21.15	0.00	0.00	-112.07	182.41	-664.26	66.63	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.144	0.54
	U_3-U_4	23.38	0.00	0.00	35.10	19.21	-165.86	-23.38	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.060	0.82
	U_4-U_5	21.15	0.00	0.00	43.57	152.07	-470.22	34.22	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.073	0.57
	U_5-U_6	-37.85	0.00	0.00	118.31	235.72	-320.70	74.11	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.9988001	2974.3	-0.231	0.51
	U_6-U_7	79.12	0.00	0.00	186.19	159.57	-219.05	0.00	90.2	90.24	78.18	142.56	2586	1649.1	1.47	4704	0.9990136	3201.5	-0.599	0.36
	U_7-U_8	-1267.79	138.2	138.17	-27.84	777.83	-1267.79	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6099	0.9989545	4564.8	-0.408	0.44
	U_8-U_9	2.34	0.00	0.00	178.98	-190.84	-1.08	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5955	0.9989555	4268.9	-0.572	0.37
	U_9-U_{10}	-63.61	-8.63	-8.63	34.50	-24.80	-63.61	-8.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4465	0.9987316	3184.1	-0.199	0.52
	$U_{10}-U_{11}$	-29.11	-29.11	-29.11	43.13	-171.63	-62.83	-29.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4465	0.9987316	3184.1	-0.199	0.52
	$U_{11}-U_{12}$	-56.07	-56.07	-56.07	38.82	-34.50	-91.65	-56.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4465	0.9987316	3184.1	-0.199	0.52
	$U_{12}-U_{13}$	-22.35	-22.35	-22.35	45.28	-24.80	-148.79	-22.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4465	0.9987316	3184.1	-0.199	0.52
	$U_{13}-U_{14}$	-22.35	-22.35	-22.35	45.28	-24.80	-148.79	-22.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4465	0.9987316	3184.1	-0.199	0.52
	$U_{14}-U_{15}$	-176.82	-176.82	-176.82	32.35	-178.98	-296.51	-176.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.9990136	3201.5	-0.599	0.36
	$U_{15}-U_{16}$	-497.12	-497.12	-497.12	42.49	-675.97	-774.97	-497.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.9990136	3201.5	-0.599	0.36
	$U_{16}-U_{17}$	-45.28	-45.28	-45.28	8.63	1.08	-299.74	-45.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.9990136	3201.5	-0.599	0.36
	$U_{17}-U_{18}$	-47.44	-47.44	-47.44	8.63	-14.27	-197.93	-47.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.9990136	3201.5	-0.599	0.36
	$U_{18}-U_{19}$	-20.49	-20.49	-20.49	7.55	-1.08	-184.37	-20.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.9990136	3201.5	-0.599	0.36
	$U_{19}-U_{20}$	85.18	85.18	85.18	28.03	-194.08	-189.76	85.18	85.18	85.18	85.18	85.18	85.18	85.18	85.18	4465	0.9987316	3184.1	-0.199	0.52
	$U_{20}-U_{21}$	-6.39	-6.39	-6.39	28.03	-194.08	-189.76	-6.39	-6.39	-6.39	-6.39	-6.39	-6.39	-6.39	-6.39	4465	0.9987316	3184.1	-0.199	0.52
	$U_{21}-U_{22}$	-262.85	-262.85	-262.85	28.03	-66.00	-401.40	-262.85	-649.04	-138.2	-138.15	-119.05	-199.70	3434	1990.9	1.45	6099	0.9989545	4553.8	0.479
	$U_{22}-U_{23}$	-283.21	-283.21	-283.21	66.01	-66.00	-401.40	-262.85	-649.04	-138.2	-138.15	-119.05	-199.70	3434	1990.9	1.45	6099	0.9989545	4553.8	0.479
	$U_{23}-U_{24}$	-251.27	-251.27	-283.21	14.91	-29.81	-251.27	-283.21	-393.03	-338.34	-669.74	-1036.55	232.7	232.70	198.86	340.10	6520	3217.6	0.936	0.97
	$U_{24}-U_{25}$	-308.76	-87.31	-87.31	12.49	-117.12	-308.76	-87.31	-393.03	-338.34	-669.74	-1036.55	232.7	232.70	198.86	340.10	6520	3217.6	0.936	0.97
	$U_{25}-U_{26}$	-364.13	-166.03	-166.03	30.88	-59.62	-364.13	-166.03	-468.02	-127.88	-1303.86	-686.13	251.1	251.73	219.41	365.62	7161	3870.6	1.45	1.25
	$U_{26}-U_{27}$	-399.87	-25.55	-25.55	45.78	39.39	-299.75	-399.87	-348.20	-147.86	-1010.27	-1012.92	232.7	232.70	199.45	340.10	6520	3217.6	1.46	1.11
	$U_{27}-U_{28}$	-244.88	-25.55	-25.55	-226.10	-291.71	-230.23	-1265.11	-1265.11	-412.84	910.37	232.7	232.70	199.45	340.10	6520	3217.6	1.46	1.11	
	$U_{28}-U_{29}$	-244.88	-25.55	-25.55	-350.17	-90.75	-369.87	-7.25	-885.80	-173.34	-198.9	-198.88	169.65	285.08	5137	2713.1	1.43	9408	0.9989551	6555.5
	$U_{29}-U_{30}$	-224.49	-224.49	-224.49	-227.32	-27.13	-369.87	-7.25	-885.80	-173.34	-198.9	-198.88	169.65	285.08	5137	2713.1	1.43	9408	0.9989551	6555.5
	$U_{30}-U_{31}$	-225.72	-24.49	-24.49	-167.07	39.82	-225.72	-24.49	-109.77	-155.58	-708.24	-1.29	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{31}-U_{32}$	-243.82	-21.29	-21.29	-109.77	170.72	-243.82	-21.29	-109.77	-155.58	-708.24	-1.29	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{32}-U_{33}$	-54.30	-54.30	-54.30	-54.30	261.00	-337.51	-366.26	-261.00	-1265.93	-3000.56	-2439.26	221.8	221.77	190.91	327.26	6244	3427.0	1.48	1.19
	$U_{33}-U_{34}$	-24.20	2.10	2.10	366.13	0.00	-24.20	2.10	-1192.75	-6.27	-2343.86	-638.93	221.8	221.77	190.91	327.26	6244	3427.0	1.48	1.19
	$U_{34}-U_{35}$	-187.27	-145.19	-145.19	32.62	-5.26	-187.27	-145.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8796	0.9988004	2974.3	-0.725	0.31
	$U_{35}-U_{36}$	-123.10	-14.73	-14.73	52.61	-39.98	-123.10	-14.73	-150.58	-33.05	-603.27	-1.40	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{36}-U_{37}$	-105.31	-61.02	-61.02	62.07	-42.08	-105.31	-61.02	-147.30	-4.36	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{37}-U_{38}$	-105.31	-61.02	-61.02	62.07	-42.08	-105.31	-61.02	-57.67	1.49	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{38}-U_{39}$	-190.43	-15.78	-15.78	39.98	-46.24	-190.43	-15.78	-31.67	-34.01	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{39}-U_{40}$	-190.43	-15.78	-15.78	39.98	-46.24	-190.43	-15.78	-86.04	-71.70	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{40}-U_{41}$	-305.11	-75.75	-75.75	32.62	-42.08	-248.30	-37.35	-60.95	-86.97	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{41}-U_{42}$	-277.77	-156.76	-156.76	32.62	-42.08	-248.30	-37.35	-21.07	-21.07	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{42}-U_{43}$	-277.77	-156.76	-156.76	32.62	-42.08	-248.30	-37.35	-32.99	-28.66	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{43}-U_{44}$	-557.64	-207.14	-207.14	51.00	-239.36	-557.64	-207.14	-15.12	113.76	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{44}-U_{45}$	-557.64	-207.14	-207.14	51.00	-239.36	-557.64	-207.14	-15.12	113.76	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{45}-U_{46}$	-203.06	-89.44	-89.44	26.30	33.67	-203.06	-89.44	-2.69	209.81	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{46}-U_{47}$	-305.11	-75.75	-75.75	36.82	-181.63	-305.11	-75.75	-36.81	1.92	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{47}-U_{48}$	-338.78	394.54	394.54	21.64	53.66	-338.78	394.54	-122.28	1156.58	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{48}-U_{49}$	-14.91	-28.75	-28.75	362.00	-314.09	-14.91	-28.75	-1153.78	-196.80	-54.00	-29.50	-1.40	2.70	362.00	-314.09	-14.91	-28.75
	$U_{49}-U_{50}$	-183.63	-75.75	-75.75	27.68	-183.63	-305.11	-75.75	-67.81	62.60	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{50}-U_{51}$	-69.21	-28.75	-28.75	59.62	-76.66	-69.21	-28.75	-178.87	-59.61	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{51}-U_{52}$	-69.21	-28.75	-28.75	59.62	-76.66	-69.21	-28.75	-15.10	-15.10	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{52}-U_{53}$	-135.22	-66.01	-66.01	54.30	42.39	-135.22	-66.01	-68.77	-178.57	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{53}-U_{54}$	-135.22	-66.01	-66.01	54.30	42.39	-135.22	-66.01	-68.61	-67.81	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{54}-U_{55}$	-188.45	-376.90	-376.90	41.52	30.88	-188.45	-376.90	-236.40	-153.06	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{55}-U_{56}$	-465.27	-83.05	-83.05	46.65	-218.26	-465.27	-83.05	-98.63	-313.14	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{56}-U_{57}$	-465.27	-83.05	-83.05	46.65	-218.26	-465.27	-83.05	-139.47	-392.96	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{57}-U_{58}$	-413.10	-275.76	-275.76	31.94	8.52	-413.10	-275.76	-350.27	-386.72	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{58}-U_{59}$	-413.10	-275.76	-275.76	31.94	8.52	-413.10	-275.76	-350.27	-386.72	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{59}-U_{60}$	-338.57	5.32	5.32	21.29	-5.32	-338.57	5.32	-278.82	-117.63	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709
	$U_{60}-U_{61}$	-338.57	5.32	5.32	21.29	-5.32	-338.57	5.32	-282.26	-37.51	-536.40	-127.8	156.8	156.80	134.92	214.81	3285	1852.3	1.37	709

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-In	Dead Load End-In	Live Load (Max) Start-In	Live Load (Max) End-In	Live Load (Min) Start-In	Live Load (Min) End-In	Pedestrian Load (Max)	Pedestrian Load (Min)	Lane Reduction & Impact Live Load Start-In	Lane Reduction & Impact Live Load End-In	Impact Pedestrian Load Max Start-In	Impact Pedestrian Load Max End-In	Max. Proc. Moms. Start-In	Max. Proc. Moms. End-In	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I (in^4)	$I_{x/c}$ (in^3)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_2 (k-in)	Equivalent Mom. Factors a	Equivalent Mom. Factors C_{mx}	Equivalent Mom. Factors C_{mx}/a	Pass
Structure 1	L_0-L_1	-15.54	-73.33	5.70	-8.80	-1.00	1.00			63.46	-97.97	-11.13	11.13	0.00	0.00	117.29	-307.60	-44.32	-71.21	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_1-L_2	39.76	-87.96	3.70	-12.50	-11.60	-5.40			41.19	-139.16	-129.14	60.12	0.00	0.00	140.94	-415.87	-228.12	-244.61	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.439	0.46	0.46	—
	L_2-L_3	53.59	-62.20	1.40	-2.60	-14.20	-7.10			15.99	22.27	-158.05	-79.04	0.00	0.00	169.78	-81.62	-449.05	-229.33	99.5	99.53	91.00	120.49	3433	1367.0	1.21	4141	0.99991186	3294.8	0.162	0.66	0.66	—
	L_3-L_4	-11.34	11.55	2.10	-14.50	-19.60	-3.90			23.38	-161.43	-218.21	-43.42	0.00	0.00	35.92	-334.74	-467.52	-79.05	99.9	99.93	84.14	120.49	3409	1372.0	1.26	4141	0.99991186	3294.8	0.162	0.66	0.66	—
	L_4-L_5	-49.11	208.03	3.00	-3.50	-33.40	-33.62			33.40	-33.62	-188.15	-26.72	0.00	0.00	212.12	-52.62	-452.14	-92.58	76.68	76.68	114.47	3186	1259.1	1.21	3332	0.99000394	3052.4	-0.451	0.42	0.42	—
	L_5-L_6	-0.46	181.07	2.20	5.20	-11.50	-3.60			24.49	57.89	-128.03	-40.08	0.00	0.00	52.47	360.83	-277.59	148.55	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952346	3448.5	0.145	0.66	0.66	—
	L_6-L_7	41.44	39.72	2.80	5.20	-12.60	-4.50			16.08	127.15	-165.74	-50.14	0.00	0.00	127.15	16.08	-165.74	-50.14	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952346	4706.0	0.043	0.22	0.22	—
	L_7-L_8	-25.11	448.74	1.00	2.60	-10.30	14.00			11.13	29.95	-114.67	156.86	0.00	0.00	-8.53	646.07	-281.10	921.06	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952916	4806.3	-0.305	0.48	0.48	—
	L_8-L_9	425.89	-36.02	13.90	-2.10	-5.10	0.10			145.56	-22.64	-1.08	1.08	0.00	0.00	869.03	-95.88	551.32	-44.49	145.8	145.75	130.74	228.84	6500	2932.4	1.57	7552	0.99926146	4806.4	-0.110	0.56	0.56	—
	L_9-L_{10}	150.02	-126.53	3.50	-7.80	-7.90	-6.50			332.86	-346.70	-16.48	-70.08	0.00	0.00	332.86	-346.70	-16.48	-70.08	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	4706.1	-0.960	0.22	0.22	—
	L_{10}-L_{11}	120.44	-115.99	4.40	1.60	-5.50	-4.50			47.44	17.25	-59.30	-48.52	0.00	0.00	259.36	-113.41	-28.09	-255.91	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.437	0.43	0.43	—
	L_{11}-L_{12}	39.08	-58.07	2.10	2.10	-2.10	-2.10			54.99	-81.16	-65.71	-45.52	0.00	0.00	324.34	-467.81	-34.20	-342.68	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.437	0.43	0.43	—
	L_{12}-L_{13}	-45.24	-121.26	3.00	3.00	-10.70	-7.60			32.35	3.23	-115.37	-81.94	0.00	0.00	11.27	-150.63	-308.78	-335.19	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99952916	4288.6	0.521	0.91	0.91	—
	L_{13}-L_{14}	96.32	-264.98	8.40	-20.50	-15.20	-11.10			90.57	-221.03	-163.89	-119.68	0.00	0.00	221.45	-940.37	-229.67	-720.19	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99991006	5370.6	-0.342	0.46	0.46	—
	L_{14}-L_{15}	-352.24	66.09	2.10	-2.10	-2.10	-2.10			413.26	-53.31	-153.67	22.13	0.00	0.00	413.26	-53.31	-153.67	22.13	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.5	-0.691	0.37	0.37	—
	L_{15}-L_{16}	-191.89	-318.35	0.90	0.40	-17.80	-16.30			228.43	-404.51	-665.28	-794.64	0.00	0.00	779.47	-1.77	-179.69	170.68	251.43	8743	3050.7	1.40	8297	0.99912252	5524.6	0.837	0.93	0.93	—
	L_{16}-L_{17}	-339.58	44.88	3.60	-4.40	-8.63	-3.23			422.76	51.34	-868.96	-44.44	103.9	103.89	138.16	298.43	597.2	2460.7	1.34	8297	0.99912252	4776.0	0.543	0.62	0.62	—
	L_{17}-L_{18}	-154.50	-31.26	0.40	-0.30	-11.80	-1.60			4.31	-3.23	-127.23	-17.25	0.00	0.00	-191.51	-47.65	-476.51	-78.02	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904482	3891.8	0.164	0.67	0.67	—
	L_{18}-L_{19}	-215.80	145.76	0.60	-0.40	-15.00	5.20			6.47	-24.23	-160.37	-133.13	0.00	0.00	-266.52	182.48	-530.50	310.37	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.5	-0.686	0.37	0.37	—
	L_{19}-L_{20}	-136.32	-69.67	0.40	-0.20	-10.60	5.40			4.31	-32.30	-113.21	58.22	0.00	0.00	-187.87	89.90	-372.60	190.73	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.5	-0.491	0.42	0.42	—
	L_0-L_1	-2.68	-185.02	4.60	-12.30	-0.70	1.40			48.58	-130.96	-7.45	14.91	0.00	0.00	102.64	-524.26	-19.63	-208.23	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.196	0.52	0.52	—
	L_1-L_2	13.75	-249.23	5.10	-16.40	-0.90	1.80			58.56	-157.36	-9.58	19.16	0.00	0.00	326.75	-687.79	-25.19	-267.32	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.252	0.51	0.51	—
	L_2-L_3	-4.23	-180.72	5.60	-9.50	-8.30	-9.20			123.60	-134.68	-156.97	-447.16	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99904436	5267.2	-0.272	0.49	0.49	—
	L_3-L_4	-11.34	11.55	2.10	-14.50	-19.60	-3.90			23.38	-161.43	-218.21	-43.42	0.00	0.00	35.92	-334.74	-467.52	-79.05	99.9	99.93	84.14	120.49	3409	1372.0	1.26	4141	0.99991186	3294.8	0.162	0.66	0.66	—
	L_4-L_5	-252.89	295.03	5.50	-17.40	-24.50	-14.10			58.56	-185.26	-260.85	-152.12	0.00	0.00	-251.82	-784.93	-893.88	-708.80	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	6746.8	0.793	0.92	0.92	—
	L_5-L_6	-475.08	292.78	3.80	-28.70	-14.70	-10.70			40.46	40.46	-305.57	-156.51	0.00	0.00	529.94	-244.13	-1279.67	-666.93	216.3	216.33	205.74	784.79	7629	3425.8	1.99	11778	0.99991186	7132.6	0.521	0.91	0.91	—
	L_6-L_7	-280.47	-64.51	3.10	5.40	-27.50	-10.70			33.01	57.49	-292.75	-113.50	0.00	0.00	293.10	40.71	-999.05	-330.70	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.331	0.73	0.73	—
	L_7-L_8	-292.36	219.74	4.50	-5.00	-41.50	-33.01			41.52	33.01	-197.39	-86.37	0.00	0.00	260.10	30.13	-786.07	-264.16	168.2	168.24	149.99	224.62	5524	2155.1	1.30	7340	0.99912252	5524.6	0.837	0.93	0.93	—
	L_8-L_9	-225.83	141.30	2.70	5.20	-15.00	-5.40			28.75	55.36	-159.71	-57.49	0.00	0.00	231.30	303.64	-639.61	59.11	149.0	149.01	130.01	189.42	4793	1908.4	1.27	6051	0.99908468	4912.7	-0.092	0.56	0.56	—
	L_9-L_{10}	-203.52	-29.03	4.30	3.60	-12.10	-5.30			45.75	70.70	-182.80	-68.34	0.00	0.00	182.80	68.34	-545.75	-182.80	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{10}-L_{11}	-160.03	387.16	2.80	5.70	-13.70	6.00			29.81	60.69	-145.86	63.88	0.00	0.00	-143.45	634.79	-524.08	641.72	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916215	5468.6	-0.817	0.27	0.27	—
	L_{11}-L_{12}	-202.71	204.45	4.50	5.10	-18.30	-13.60			47.91	1.06	-194.94	-144.80	0.00	0.00	-159.71	-263.48	-585.68	-579.51	226.0	225.99	214.96	320.70	7629	3425.8	1.99	11778	0.99991186	7449.1	0.545	0.94	0.94	—
	L_{12}-L_{13}	-375.70	103.34	2.70	-27.00	-14.70	-10.70			40.46	40.46	-305.57	-156.51	0.00	0.00	529.94	-244.13	-1279.67	-666.93	216.3	216.33	205.74	784.79	7629	3425.8	1.99	11778	0.99991186	7132.6	0.521	0.91	0.91	—
	L_{13}-L_{14}	-1072.48	-412.35	29.60	-17.20	-1.80	-5.10			311.42	-180.96	-18.94	-1.05	0.00	0.00	2068.94	-928.14	1353.16	-538.34	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99900208	8222.0	-0.449	0.42	0.42	—
	L_{14}-L_{15}	-337.46	47.19	3.10	3.10	-3.10	-3.10			31.56	31.56	-226.20	-99.95	0.00	0.00	226.20	-99.95	-31.56	-31.56	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{15}-L_{16}	-475.57	-49.03	11.40	-11.60	-7.50	-8.20			119.94	-122.04	-78.91	-86.27	0.00	0.00	119.94	-122.04	-78.91	-86.27	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{16}-L_{17}	-1072.48	-412.35	29.60	-17.20	-1.80	-5.10			311.42	-180.96	-18.94	-1.05	0.00	0.00	2068.94	-928.14	1353.16	-538.34	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99900208	8222.0	-0.449	0.42	0.42	—
	L_{17}-L_{18}	-337.46	47.19	3.10	3.10	-3.10	-3.10			31.56	31.56	-226.20	-99.95	0.00	0.00	226.20	-99.95	-31.56	-31.56	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{18}-L_{19}	-475.57	-49.03	11.40	-11.60	-7.50	-8.20			119.94	-122.04	-78.91	-86.27	0.00	0.00	119.94	-122.04	-78.91	-86.27	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{19}-L_{20}	-226.51	-41.81	5.60	-11.20	-9.90	-7.10			69.44	-117.84	-104.16	-74.70	0.00	0.00	117.84	-104.16	-74.70	-69.44	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_0-L_1	-214.45	-56.43	5.00	-10.90	-12.10	-10.30			52.61	-114.68	-127.30	-108.37	0.00	0.00	114.68	-127.30	-108.37	-52.61	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_1-L_2	-49.45	-49.45	4.30	4.30	-8.70	-8.70			49.45	-49.45	-96.56	-96.56	0.00	0.00	96.56	-96.56	-49.45	-49.45	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_2-L_3	-49.27	-202.49	3.60	-24.20	-21.00	-15.20			37.88	-254.61	-229.94	-159.92	0.00	0.00	146.12	-514.88	-414.68	-609.72	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	-0.179	0.53	0.53	—
	L_3-L_4	-197.10	-84.39	7.10	-9.70	-5.10	-3.60			24.49	-187.80	-63.23	-39.10	0.00	0.00	-187.80	-63.23	-39.10	-24.49	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_4-L_5	-111.92	0.86	2.00	4.30	-21.90	-11.30			21.04	45.24	-230.41	-118.89	0.00	0.00	-69.90	89.13	-644.71	-256.48	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.398	0.76	0.76	—
	L_5-L_6	-0.46	181.07	2.20	5.20	-11.50	-3.60			24.49	57.89	-128.03	-40.08	0.00	0.00	52.47	360.83	-277.59	148.55	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952346	3448.5	0.145	0.66	0.66	—
	L_6-L_7	-60.78	179.81	2.10	4.90	-13.40	-6.20			22.09	51.55	-140.96	-69.23	0.00	0.00	-31.14	349.45	-384.47	92.42	127.4	127.41	116.92	157.02	3868	1601.0	1.23	5182	0.99896888	4200.3	-0.240	0.50	0.50	—
	L_7-L_8	-81.80	265.56	3.70	2.10	-16.10	-2.70			38.93	22.09	-169.39	-28.41	0.00	0.00	21.99	393.10	-473.34	263.68	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99905227	4912.7	-0.599	0.36	0.36	—
	L_8-L_9	-29.58	413.39	1.90	1.90	-5.10	-5.10			11.13	11.13	-114.67	-114.67	0.00	0.00	156.86	-281.10	-114.67	-114.67	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952916	4806.3	-0.305	0.48	0.48	—
	L_9-L_{10}	-99.81	-279.28	3.30	-2.20	-17.50	-15.50			34.72	-23.13	-184.12	-163.08	0.00	0.00	-54.53	-413.22	-528.67	-716.40	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99895786	7449.1	0.738	0.90	0.90	—
	L_{10}-L_{11}	-337.46	47.19	3.10	3.10	-3.10	-3.10			31.56	31.56	-226.20	-99.95	0.00	0.00	226.20	-99.95	-31.56	-31.56	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{11}-L_{12}	-1026.29	-362.30	28.50	-15.60	-2.60	-5.10			299.80	-162.00	-25.62	-1.08	0.00	0.00	1991.62	-855.43	1292.65	-429.46	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99900208	8222.0	-0.449	0.42	0.42	—
	L_{12}-L_{13}	-226.76	-125.36	2.10	-1.40	-20.80	-11.00			22.36	-14.91	-221.46	-117.12	0.00	0.00	-246.34	-195.29	-774.61	-416.14	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99896824	7449.9	0.538	0.92	0.92	—
	L_{13}-L_{14}	-1072.48	-412.35	29.60	-17.20	-1.80	-5.10			311.42	-180.96	-18.94	-1.05	0.00	0.00	2068.94	-928.14	1353.16	-538.34	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99900208	8222.0	-0.449	0.42	0.42	—
	L_{14}-L_{15}	-278.05	-132.91	6.80	-12.10	-6.00	-8.40			72.40	-128.83	-63.88	-89.43	0.00	0.00	518.33	-451.91	223.05	-366.55	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5716	0.99905227	4598.4	-0.872	0.25	0.25	—
	L_{15}-L_{16}	-178.86	-38.61	3.70	-4.50	-9.80	-3.30			61.75	14.53	-83.09	-14.53	0.00	0.00	83.09	-14.53	-61.75	-14.53	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{16}-L_{17}	-222.98	-243.21	5.60	-6.10	-12.40	-10.00			59.62	-86.24	-132.02	-106.47	0.00	0.00	419.06	-503.02	3.62	-646.85	168.0	168.04	148.99	224.57	5911	2429.7	1.33	7411	0.99914872	5557.1	-0.007	0.60	0.60	—
	L_{17}-L_{18}	-154.57	-83.01	2.50	-4.50	-8.10	-3.20			73.27	-82.63	-98.53	-111.16	0.00	0.00	98.53	-111.16	-73.27	-82.63	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{18}-L_{19}	-167.98	-470.72	4.50	-9.80	-31.20	-6.80			47.91	-104.34	-332.19	-72.40	0.00	0.00	104.34	-332.19	-72.40	-47.91	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{19}-L_{20}	-445.06	-93.48	3.90	0.80	-29.90	-20.50			35.14	8.52	-318.35	-216.26	0.00	0.00	602.46	-103.07	-1268.33	-994.43	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917361	6519.3	0.489	0.79	0.79	—
	L_0-L_1	-2.68	-185.02	4.60	-12.30	-0.70	1.40			48.58	-130.96	-7.45	14.91	0.00	0.00	102.64	-524.26	-19.63	-208.23	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.196	0.52	0.52	—
	L_1-L_2	-333.07	-402.82	7.60	-9.70	-5.10	-3.60			24.49	-187.80	-63.23	-39.10	0.00	0.00	-333.07	-402.82	-187.80	-63.23	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_2-L_3	-473.04	-40.96	-1009.92	-137.06	176.7	176.70	198.45	268.88	6704	2849.3	1.47	9143	0.99952346	5626.4	0.136	0.65	0.65	—									
	L_3-L_4	-392.27	38.30	1.60	-0.40	-21.50	-8.10			17.71	-4.26	-228.91	-86.24	0.00	0.00	-473.04	-40.96	-1009.92	-137.06	176.7	176.70	158.45	268.88	6704	2849.3	1.47	9143	0.99952346	5626.4	0.136	0.65	0.65	—
	L_4-L_5	-297.04	199.10	1.30	-0.50	-14.10	-6.80			13.84	-5.32	-150.12	-8.52	0.00	0.00	-396.16	195.30	-711.42	188.38	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.265	0.49	0.49	—
	L_5-L_6	-201.01	192.50	1.20	-0.30	-9.50	-4.60			11.71	-3.84	-101.49	-5.76	0.00	0.00	-267.57	132.04	-480.56	127.33	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.491	0.42	0.42	—
	L_6-L_7	-24.53	-109.42	5.60	-9.20	-0.40	0.60			60.38	-99.16	-1.40	1.40	0.00	0.00	162.71	-357.16	22.54	-128.23	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.5	-0.406	0.42	0.42	—
	L_7-L_8	-139.90	-177.77	5.70	-9.70	-1.50	5.40			61.46	-104.59	-16.17	-58.22	0.00	0.00	309.83	-457.71	141.63	-357.25	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.5	-0.677	0.33	0.33	—
	L_8-L_9	-11.57	-138.51	5.10	-8.10	-0.10	0.10			47.96	-110.44	-1.08	1.08	0.00	0.00	110.44	-138.51	-47.96	-110.44	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_9-L_{10}	-47.96	-293.64	4.50	-8.20	-9.40	-10.70			48.52	-88.41	-103.35	-115.37	0.00	0.00	167.48	-573.29	-157.24	-631.69	153.3	153.29	138.16	208.43	5012	2460.7	1.34	8297	0.99912252	5524.6	0.041	0.58	0.58	—
	L_{10}-L_{11}	-47.68	-343.07	4.00	-22.30	-19.20	-12.50			43.13	-240.44	-207.01	-134.78	0.00	0.00	39.26	-966.94	-602.72	-758.00	179.7	179.69	166.15	251.43	6743	3050.7	1.40	8297	0.99912252	5524.6	-0.041	0.58	0.58	—
	L_{11}-L_{12}	-341.10	86.20	1.80	-21.50	-7.40	-2.70			19.45	15.09	-231.81	-79.79	0.00	0.00	-401.38	144.19	-784.84	-268.63	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99910006	5370.6	-0.342	0.46	0.46	—
	L_{12}-L_{13}	-201.09	192.50	1.20	-0.30	-9.50	-4.60			16.17	23.72	-111.05	-63.97	0.00	0.00	-267.57	132.04	-480.56	127.33	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.491	0.42	0.42	—
	L_{13}-L_{14}	-1072.48	-412.35	29.60	-17.20	-1.80	-5.10			311.42	-180.96	-18.94	-1.05	0.00	0.00	2068.94	-928.14	1353.16	-538.34	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452	0.99900208	8222.0	-0.449	0.42	0.42	—
	L_{14}-L_{15}	-148.24	148.96	2.80	-0.10	-11.50	-2.70			30.19	-1.08	-123.99	-29.11	0.00	0.00	-127.30	191.31	-461.36	-130.57	144.8	144.85	129.09	192.84	5010	2379.6	1.33	6364	0.99916846	4776.1	-0.283	0.49	0.49	—
	L_{15}-L_{16}	-178.86	-38.61	3.70	-4.50	-9.80	-3.30			61.75	14.53	-83.09	-14.53	0.00	0.00	83.09	-14.53	-61.75	-14.53	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.381	0.45	0.45	—
	L_{16}-L_{17}	-428.31	-26.46	-10.70	-6.00	-0.00	0.00			174.79	-66.80	0.00	0.00	0.00	0.00	555.51	-179.12	556.80	-34.39	145.8	145.75	130.44

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Member
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 w/ 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_z (in^4) | I_{xx} (in^4) | Shape Factor f | M_p (k-in) | Formula (LB Terms * F_y/S_xx) | M_n (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(x)}$ | Equivalent Mom. Factor $C_{b(m)}$ | YY Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | P_{crit} (kips) | Formula (LB Terms * F_y/S_xx) | M_n (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(x)}$ | Equivalent Mom. Factor $C_{b(m)}$ | Pass |
|---|---|---|---

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
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& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

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*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_x Information

M_y Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | End (k-in) | Live Load (Max) Start (k-in) | End (k-in) | Live Load (Min) Start (k-in) | End (k-in) | Pedestrian Load (Max) Start (k-in) | End (k-in) | Pedestrian Load (Min) Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Min Start (k-in) | End (k-in) | Impact Pedestrian Load Max Start (k-in) | End (k-in) | Impact Pedestrian Load Min Start (k-in) | End (k-in) | ZZ Axis Moments from STAAD: Max. Pos. Mom. Start (k-in) | End (k-in) | Max. Neg. Mom. Start (k-in) | End (k-in) | S_{xx} (in^3) | S_{tx} (in^3) | Z_x (in^3) | I_x (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{xx} | M_x (k-in) | Equivalent Mem. Factor a | $C_{b(x)}$ | $C_{max(x)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | End (k-in) | Live Load (Max) Start (k-in) | End (k-in) | Live Load (Min) Start (k-in) | End (k-in) | Pedestrian Load (Max) Start (k-in) | End (k-in) | Pedestrian Load (Min) Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Max Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Min Start (k-in) | End (k-in) | Impact Pedestrian Load Max Start (k-in) | End (k-in) | Impact Pedestrian Load Min Start (k-in) | End (k-in) | YY Axis Moments from STAAD: Max. Pos. Mom. Start (k-in) | End (k-in) | Max. Neg. Mom. Start (k-in) | End (k-in) | S_{xx} (in^3) | S_{tx} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F$_y$/S_{xx} | M_y (k-in) | Equivalent Mem. Factor a | $C_{b(y)}$ | $C_{max(y)}$ | Tension: Axial Yielding | Moment Yielding | Total | Pass | Fracture: Axial Fracture | Moment Fracture | Total | Pass | Compression: Buckle: Axial Buckling | Moment Buckling | Total | Pass | Yield: Axial Yielding | Moment Yielding | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-U_1	89.33	-98.19	5.92	-5.06	-7.85	-5.32	2.38	-2.03	-6.65	0.45
	U_1-U_2	89.33	-98.19	5.92	-5.06	-7.27	-4.49	-10.30	0.37	0.51	-1.04
	U_2-U_3	-130.88	58.71	1.33	3.67	-8.71	-2.49	0.20	0.80	-1.36	-17.71
	U_3-U_4	-46.29	76.63	2.37	1.15	-3.18	-0.17	0.12	0.47	-0.42	-8.45
	U_4-U_5	-26.07	74.96	2.67	3.37	-8.35	-4.09	0.47	0.77	1.36	-0.71
	U_5-U_6	19.43	119.86	3.06	3.66	-7.70	1.44	0.62	0.72	4.27	0.17
	U_6-U_7	131.07	62.39	1.33	3.67	-4.69	-1.20	0.20	0.80	0.41	-2.80
	U_7-U_8	-71.37	656.06	2.36	-2.60	-6.38	7.93	0.24	1.55	-1.57	2.45
	U_8-U_9	624.62	-195.24	9.39	-11.71	-1.16	0.20	3.57	-1.52	0.00	-0.01
	U_9-U_{10}	71.38	-13.83	1.93	-2.80	-1.55	-2.07	0.51	0.00	-5.76	0.00
	U_{10}-U_{11}	97.26	223.12	2.21	3.89	-1.42	0.00	0.00	0.00	19.53	27.05
	U_{11}-U_{12}	35.32	221.77	2.57	1.91	-5.01	-5.64	0.96	0.33	0.24	-1.72
	U_{12}-U_{13}	-120.58	-238.24	2.22	0.85	-6.93	-4.48	0.44	0.14	-5.62	-28.76
	U_{13}-U_{14}	201.64	-432.99	4.47	1.41	-14.07	0.00	1.36	0.47	-11.36	-41.91
	U_{14}-U_{15}	-380.63	263.81	1.95	1.13	-18.71	-5.81	0.32	0.20	-28.37	-5.61
	U_{15}-U_{16}	-227.35	-997.00	1.88	0.19	-12.06	-4.70	0.36	-0.03	-7.84	-12.24
	U_{16}-U_{17}	-353.36	-172.80	1.21	0.48	-11.38	-6.21	0.05	-0.04	-1.64	-0.73
	U_{17}-U_{18}	-227.35	-24.62	2.70	0.47	-5.91	-1.26	0.10	0.08	-1.40	0.22
	U_{18}-U_{19}	-214.14	19.61	0.57	-0.23	-3.04	7.34	-2.95	-0.87	14.57	0.07
	U_{19}-U_{20}	-232.24	7.36	0.69	-0.59	-5.00	2.74	0.06	-0.04	-1.35	0.05
	U_{20}-U_{21}	-420.38	-218.15	2.18	-0.55	-10.78	-5.61	0.41	0.11	39.77	-26.27
	U_{21}-U_{22}	-113.13	-299.08	1.19	-1.01	-3.83	-10.47	0.00	0.18	-0.50	-1.31
	U_{22}-U_{23}	-433.72	-494.87	0.70	-0.33	-6.83	-12.68	0.00	0.09	-5.44	-24.50
	U_{23}-U_{24}	-433.72	-494.87	0.70	2.19	-12.68	-10.46	0.08	0.31	-1.29	-2.04
	U_{24}-U_{25}	-485.37	542.61	0.70	3.08	-14.44	-0.04	0.08	0.44	-1.29	5.48
	U_{25}-U_{26}	-543.26	-229.84	2.03	5.55	-16.24	-13.30	0.37	0.87	1.05	-1.77
	U_{26}-U_{27}	-414.57	-306.81	4.17	3.59	-15.63	-13.94	0.64	0.56	-1.77	-2.26
	U_{27}-U_{28}	-388.32	-328.14	3.30	4.22	-14.76	-15.27	0.51	0.65	-2.71	-2.44
	U_{28}-U_{29}	-443.90	-59.15	3.72	4.76	-13.14	-3.69	0.49	0.82	2.01	-0.82
	U_{29}-U_{30}	-165.92	34.56	1.39	1.34	-5.92	-1.08	0.19	0.21	0.78	-0.34
	U_{30}-U_{31}	-165.92	-101.76	3.06	4.30	-10.09	-1.13	0.77	0.79	1.44	-0.29
	U_{31}-U_{32}	-149.71	264.88	4.43	3.19	-8.64	0.64	0.73	0.60	-1.58	0.39
	U_{32}-U_{33}	-80.76	264.88	4.43	3.19	-8.64	0.64	0.73	0.60	-1.58	0.39
	U_{33}-U_{34}	-291.45	1663.41	3.65	-5.33	-6.42	12.76	0.30	2.41	-1.79	2.99
	U_{34}-U_{35}	1538.34	-1833.74	9.39	-11.71	-1.16	0.20	3.57	-1.52	0.00	-0.01
	U_{35}-U_{36}	-27.62	20.42	2.04	-0.79	-7.29	-2.89	0.13	0.62	-0.37	-0.96
	U_{36}-U_{37}	301.51	-342.02	4.17	3.59	-15.63	-13.94	0.64	0.56	-1.77	-2.26
	U_{37}-U_{38}	186.23	-23.02	2.96	3.49	-3.75	-6.69	0.80	-0.55	0.00	0.00
	U_{38}-U_{39}	179.28	-73.30	3.90	2.81	-6.66	-5.09	0.81	-0.78	-0.16	-1.19
	U_{39}-U_{40}	76.61	-111.17	3.39	0.26	-10.28	-4.62	0.57	0.45	-0.85	-0.88
	U_{40}-U_{41}	-158.30	-160.50	2.22	-1.98	-5.92	-6.20	0.29	0.00	-1.61	-1.61
	U_{41}-U_{42}	-164.26	-164.79	2.49	1.62	-15.85	-8.83	0.68	0.50	-1.67	-1.21
	U_{42}-U_{43}	-80.76	-80.76	2.49	1.62	-15.85	-8.83	0.68	0.50	-1.67	-1.21
	U_{43}-U_{44}	-44.20	54.61	3.24	3.41	-12.80	-2.57	0.49	0.43	0.66	-0.49
	U_{44}-U_{45}	-69.18	212.29	3.76	3.41	-9.85	-2.84	0.53	0.34	-1.17	0.41
	U_{45}-U_{46}	-40.52	345.50	2.45	2.24	-9.65	2.84	0.26	0.18	-3.97	0.69
	U_{46}-U_{47}	-157.04	640.76	2.22	-1.98	-5.92	6.22	0.09	1.35	-1.56	2.21
	U_{47}-U_{48}	-149.00	1535.72	3.53	4.84	-8.98	12.44	0.00	0.00	-1.14	2.73
	U_{48}-U_{49}	1621.12	-341.75	17.23	-10.16	-3.64	0.00	1.68	-1.53	0.00	0.00
	U_{49}-U_{50}	-68.85	-137.71	3.90	2.81	-6.66	-5.09	0.81	-0.78	-0.16	-1.19
	U_{50}-U_{51}	253.89	-149.73	3.20	-4.35	-2.01	4.95	1.04	-0.73	0.00	0.00
	U_{51}-U_{52}	84.18	-327.28	4.47	3.75	-6.25	-11.22	0.74	0.58	-0.40	-1.98
	U_{52}-U_{53}	-68.85	-137.71	3.90	2.81	-6.66	-5.09	0.81	-0.78	-0.16	-1.19
	U_{53}-U_{54}	-358.58	-362.06	3.57	3.20	-12.70	-9.25	0.54	0.55	-1.52	-2.40
	U_{54}-U_{55}	-300.98	-456.96	3.92	3.47	-17.21	-13.11	0.69	0.52	-2.51	-2.67
	U_{55}-U_{56}	-358.58	-362.06	3.57	3.20	-12.70	-9.25	0.54	0.55	-1.52	-2.40
	U_{56}-U_{57}	-569.52	-449.99	2.58	0.39	-20.86	-6.79	0.36	-0.04	-2.55	-1.21
	U_{57}-U_{58}	-406.59	-54.41	1.60	-0.84	-11.53	-5.72	0.21	-0.18	1.89	0.04
	U_{58}-U_{59}	-406.59	-54.41	1.60	-0.84	-11.53	-5.72	0.21	-0.18	1.89	0.04
	U_{59}-U_{60}	-290.66	-12.32	1.25	1.28	-6.69	3.42	0.20	-0.01	-1.64	0.87
	U_{60}-U_{61}	-434.97	-311.66	7.10	-5.97	-8.99	-1.14	3.50	-2.00	0.25	0.87
	U_{61}-U_{62}	-53.48	-205.27	1.68	-1.18	-5.92	-6.20	0.29	0.00	-1.61	-1.61
	U_{62}-U_{63}	-21.73	-219.22	2.32	-3.88	-3.06	-3.91	0.40	-1.52	2.10	0.10
	U_{63}-U_{64}	-361.44	-188.09	0.71	-1.50	-11.57	-2.39	0.00	0.00	0.00	0.00
	U_{64}-U_{65}	-252.08	-374.95	1.46	-2.33	18.68	28.76	-126.65	-115.60	2.42	3.26
	U_{65}-U_{66}	-444.50	-197.91	1.46	-15.76	-4.56	0.12	2.63	-1.36	-1.38	-29.20
	U_{66}-U_{67}	-235.24	-84.04	1.24	2.53	-9.56	-1.24	0.14	0.46	-1.65	-0.50
	U_{67}-U_{68}	-214.94	20.20	2.40	2.35	-7.74	0.58	0.39	0.42	-1.79	0.34
	U_{68}-U_{69}	-214.94	128.20	2.40	2.35	-7.74	0.58	0.39	0.42	-1.79	0.34
	U_{69}-U_{70}	-187.04	640.76	2.22	-1.98	-5.92	6.22	0.09	1.35	-1.56	2.21
	U_{70}-U_{71}	-290.66	-12.32	1.25	1.28	-6.69	3.42	0.20	-0.01	-1.64	0.87
	U_{71}-U_{72}	-434.97	-311.66	7.10	-5.97	-8.99	-1.14	3.50	-2.00	0.25	0.87
	U_{72}-U_{73}	-53.48	-205.27	1.68	-1.18	-5.92	-6.20	0.29	0.00	-1.61	-1.61
	U_{73}-U_{74}	-21.73	-219.22	2.32	-3.88	-3.06	-3.91	0.40	-1.52	2.10	0.10
	U_{74}-U_{75}	-361.44	-188.09	0.71	-1.50	-11.57	-2.39	0.00	0.00	0.00	0.00
	U_{75}-U_{76}	-252.08	-374.95	1.46	-2.33	18.68	28.76	-126.65	-115.60	2.42	3.26
	U_{76}-U_{77}	-444.50	-197.91	1.46	-15.76	-4.56	0.12	2.63	-1.36	-1.38	-29.20
	U_{77}-U_{78}	-235.24	-84.04	1.24	2.53	-9.56	-1.24	0.14	0.46	-1.65	-0.50
	U_{78}-U_{79}	-214.94	20.20	2.40	2.35	-7.74	0.58	0.39	0.42	-1.79	0.34
	U_{79}-U_{80}	-214.94	128.20	2.40	2.35	-7.74	0.58	0.39	0.42	-1.79	0.34
	U_{80}-U_{81}	-187.04	640.76	2.22	-1.98	-5.92	6.22	0.09	1.35	-1.56	2.21
Structure 2	U_0-U_1	-202.01	70.38	2.30	2.87	-8.92	-0.25	0.30	0.99	-1.62	-0.15
	U_1-U_2	-214.94	128.20	2.40	2.35	-7.74	0.58	0.39	0.52	-1.79	0.34
	U_2-U_3	22.83	83.58	2.58	1.21	-4.79	0.45	0.48	0.31	-0.85	0.25
	U_3-U_4	-167.04	640.76	2.22	-1.98	-5.92	6.22	0.09	1.35	-1.56	2.21
	U_4-U_5	705.88	-108.92	12.90	-10.62	-1.67	0.06	3.95	-1.35	0.00	0.00
	U_5-U_6	53.55	84.28	1.71	2.78	-3.58	-2.03	0.40	0.65	-0.20	-0.87
	U_6-U_7	156.29	-12.44	2.68	2.56	-2.13	-6.35	0.84	-0.72	0.00	0.00
	U_7-U_8	46.88	-46.33	2.97	2.58	-5.32	-5.93	0.74	0.52	-0.74	-1.39
	U_8-U_9	57.85	-78.76	2.49	1.90	-9.68	-4.22	0.74	0.46	-1.03	-1.25
	U_9-U_{10}	20.60	-172.49	3.19	0.83	-8.16	-3.36	0.76	0.23	-1.42	-1.15
	U_{10}-U_{11}	-101.33	-63.04	2.25	0.18	-9.22	-0.90	0.53	0.02	-1.79	-0.65
	U_{11}-U_{12}	-55.82	-170.13	1.36	-0.61	-4.70	-1.07	0.26	0.12	-1.52	-0.15

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_z (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y*S_top	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(UU)}$	Equivalent Mom. Factor $C_{b(SS)}$
Structure 1	U_0-U_1	89.33	-98.19	5.92	-5.06	-7.85	-5.32	2.38	-2.03	-6.65	0.45	79.12	-67.55	-104.99	-211.18	-261.52	0.80
	U_1-U_2	89.33	-98.19	5.92	-5.06	-7.27	-4.49	-10.30	0.37	0.51	-1.04	-6.65	-13.88	-104.99	-211.18	-261.52	0.80
	U_2-U_3	-130.88	58.71	1.33	3.67	-8.71	-2.49	0.20	0.80	-1.36	-17.71	49.07	-116.42	-33.29	2.40	9.54	-16.26
	U_3-U_4	-46.29	76.63	2.37	1.15	-3.18	-0.17	0.12	0.47	-0.42	-8.45	-82.55	0.68	9.58	-31.81	-43.7	8.32
	U_4-U_5	-26.07	74.96	2.67	3.37	-8.35	-4.09	0.47	0.77	1.36	-0.71	85.56	-16.32	-8.51	-43.37	-194.88	-275.50
	U_5-U_6	19.43	119.86	3.06	3.66	-7.70	1.44	0.62	0.72	4.27	0.17	110.91	-15.23	2.03	110.91	322.25	-197.54
	U_6-U_7	131.07	62.39	1.33	3.67	-4.69	-1.20	0.20	0.80	0.41	-2.80	-82.55	-13.88	-34.80	-34.80	-129.68	-34.51
	U_7-U_8	-71.37	656.06	2.36	-2.60	-6.38	7.93	0.24	1.55	-1.57	2.45	31.48	-34.76	-85.22	105.91	2.86	18.55
	U_8-U_9	624.62	-195.24	9.39	-11.71	-1.16	0.20	3.57	-1.52	0.00	-0.01	121.48	-92.00	-15.09	0.00	0.00	5079.96
	U_9-U_{10}	71.38	-13.83	1.93	-2.80	-1.55	-2.07	0.51	0.00	-5.76	0.00	0.00	146.88	-96.55	49.26	-75.87	96.6
	U_{10}-U_{11}	97.26	223.12	2.21	3.89	-1.42	0.00	0.00	0.00	19.53	27.05	-22.89	-17.05	0.00	188.26	-237.55	19.85
	U_{11}-U_{12}	35.32	221.77	2.57	1.91	-5.01	-5.64	0.96	0.33	0.24	-1.72	33.28	24.71	-64.86	-12.99	0.66	3.99
	U_{12}-U_{13}	-120.58	-238.24	2.22	0.85	-6.93	-4.48	0.44	0.14	-5.62	-28.76	11.02	-89.71	-97.90	5.30	1.66	-7.49
	U_{13}-U_{14}	201.64	-432.99	4.47	1.41	-14.07	0.00	1.36	0.47	-11.36	-41.91	-27.61	-26.97	-27.16	-27.16	-69.39	-27.16
	U_{14}-U_{15}	-380.63	263.81	1.95	1.13	-18.71	-5.81	0.32	0.20	-28.37	-5.61	-24.07	-22.38	-12.53	-242.82	-671.14	-597.51
	U_{15}-U_{16}	-227.35	-997.00	1.88	0.19	-12.06	-4.70	0.36	-0.03	-7.84	-12.24	0.47	-22.38	-12.53	-242.82	-671.14	-597.51
	U_{16}-U_{17}	-353.36	-172.80	1.21	0.48	-11.38	-6.21	0.05	-0.04	-1.64	-0.73	15.63	6.20	-155.01	-80.37	-649.0	-47.64
	U_{17}-U_{18}	-227.35	-24.62	2.70	0.47	-5.91	-1.26	0.10	0.08	-1.40	0.22	19.07	23.42	-134.05	16.66	13.71	-0.66
	U_{18}-U_{19}	-214.14	19.61	0.57	-0.23	-3.04	7.34	-2.95	-0.87	14.57	0.07	0.04	-17.68	-2.68	270.84	-45.21	-564.27
	U_{19}-U_{20}	-232.24	7.36	0.69	-0.59	-5.00	2.74	0.06	-0.04	-1.35	0.05	8.93	-7.63	-64.65	35.48	104.8	104.75
	U_{20}-U_{21}	-420.38	-218.15	2.18	-0.55	-10.78	-5.61	0.41	0.11	39.77	-26.27	-6.59	-6.40	-78.22	-692.05	-822.11	-1019.32
	U_{21}-U_{22}	-113.13	-299.08	1.19	-1.01	-3.83	-10.47	0.00	0.18	-0.50	-1.31	15.17	-12.88	-98.58	-133.76	0.04	2.10
	U_{22}-U_{23}	-433.72	-494.87	0.70	-0.33	-6.83	-12.68	0.00	0.09	-5.44	-24.50	-6.33	-6.33	-64.98	-692.83	-1019.32	-1019.32
	U_{23}-U_{24}	-433.72	-494.87	0.70	2.19	-12.68	-10.46	0.08	0.31	-1.29	-2.04	8.93	-25.96	-64.98	-692.83	-1019.32	-1019.32
	U_{24}-U_{25}	-485.37	542.61	0.70	3.08	-14.44	-0.04	0.08	0.44	-1.29	5.48	8.93	-19.16	-64.98	-692.99	-1019.32	-1019.32
	U_{25}-U_{26}	-543.26	-229.84	2.03	5.55	-16.24	-13.30	0.37	0.87	1.05	-1.77	32.27	70.95	-201.08	-694.52	-1019.32	-1019.32
	U_{26}-U_{27}	-414.57	-306.81	4.17	3.59	-15.63	-13.94	0.64	0.56	-1.77	-2.26	53.33	45.84	-199.73	-178.12	7.69	7.01
	U_{27}-U_{28}	-388.32	-328.14	3.30	4.22	-14.76	-15.27	0.51	0.65	-2.71	-2.44	45.84	-22.48	-198.59	-207.06	-1019.32	-1019.32
	U_{28}-U_{29}	-443.90	-59.15	3.72	4.76	-13.14	-3.69	0.49	0.82	2.01	-0.82	47.57	60.84	-167.93	-40.23	50.53	-174.15
	U_{29}-U_{30}	-165.92	34.56	1.39	1.34	-5.92	-1.08	0.19	0.21	0.78	-0.34	9.86	-24.13	-8.85	-474.01	54.53	-940.53
	U_{30}-U_{31}	-165.92	-101.76	3.06	4.30	-10.09	-1.13	0.77	0.79	1.44	-0.29	44.92	-22.48	-100.89	-256.48	-1019.32	-1019.32
	U_{31}-U_{32}	-149.71	264.88	4.43	3.19	-8.64	0.64	0.73	0.60	-1.58	0.39	56.56	40.69	-170.07	8.72	7.21	-19.96
	U_{32}-U_{33}	-80.76	264.88	4.43	3.19	-8.64	0.64	0.73	0.60	-1.58	0.39	56.56	40.69	-170.07	8.72	7.21	-19.96
	U_{33}-U_{34}	-291.45	1663.41	3.65	-5.33	-6.42	12.76	0.30	2.41	-1.79	2.99	46.63	-68.05	-120.39	182.68	3.60	28.96
	U_{34}-U_{35}	1538.34	-1833.74	9.39	-11.71	-1.16	0.20	3.57	-1.52	0.00	-0.01	121.48	-92.00	-15.09	0.00	0.00	5079.96
	U_{35}-U_{36}	-27.62	20.42	2.04	-0.79	-7.29	-2.89	0.13	0.62	-0.37	-0.96	25.78	-9.94	-91.99	36.47	1.52	7.45
	U_{36}-U_{37}	301.51	-342.02	4.17	3.59	-15.63	-13.94	0.64	0.56	-1.77	-2.26	53.33	45.84	-199.73	-178.12	7.69	7.01
	U_{37}-U_{38}	186.23	-23.02	2.96	3.49	-3.75	-6.69	0.80	-0.55	0.00	0.00	0.00	0.00	0.00	323.08	66.49	139.62
	U_{38}-U_{39}	179.28	-73.30	3.90	2.81	-6.66	-5.09	0.81	-0.78	-0.16	-1.19	49.26	35.45	-84.05	-64.31	9.68	-9.35
	U_{39}-U_{40}	76.61	-111.17	3.39	0.26	-10.28	-4.62	0.57	0.45	-0.85	-0.88	42.81	32.32	-129.84	-58.29	6.89	5.36
	U_{40}-U_{41}	-158.30	-160.50	2.22	-1.98	-5.92	-6.20	0.29	0.00	-1.61	-1.61	-6.33	-6.33	-64.98	-692.83	-1019.32	-1019.32
	U_{41}-U_{42}	-164.26	-164.79	2.49	1.62	-15.85	-8.83	0.68	0.50	-1.67	-1.21	31.40	20.49	-200.13	-111.46	8.17	5.95
	U_{42}-U_{43}	-80.76	-80.76	2.49	1.62	-15.85	-8.83	0.68	0.50	-1.67	-1.21	31.40	20.49	-200.13	-111.46	8.17	5.95
	U_{43}-U_{44}	-44.20	54.61	3.24	3.41	-12.80	-2.57	0.49	0.43	0.66	-0.49	40.89	43.06	-161.62	-32.46	5.86	4.75
	U_{44}-U_{45}	-69.18	212.29	3.76	3.41	-9.85	-2.84	0.53	0.34	-1.17	0.41	34.88	43.05	-124.40	-35.81	6.41	4.02
	U_{45}-U_{46}	-40.52	345.50	2.45	2.24	-9.65	2.84	0.26	0.18	-3.97	0.69	34.88	-24.30	-35.81	35.81	-124.40	-35.81
	U_{46}-U_{47}	-157.04	640.76	2.22	-1.98	-5.92	6.22	0.09	1.35	-1.56	2.21	31.48	-34.76	-85.22	105.91	2.86	18.55
	U_{47}-U_{48}	-149.00	1535.72	3.53	4.84	-8.98	12.44	0.00	0.00	-1.14	2.73	44.55	40.13	-113.36	157.04	0.00	0.00
	U_{48}-U_{49}	1621.12	-341.75	17.23	-10.16	-3.64	0.00	1.68	-1.53	0.00	0.00	220.09	-129.60	-46.51	0.00	68.15	-18.32
	U_{49}-U_{50}	-68.85	-137.71	3.90	2.81	-6.66	-5.09	0.81	-0.78	-0.16	-1.19	49.26	35.45	-84.05	-64.31	9.68	-9.35
	U_{50}-U_{51}	253.89	-149.73	3.20	-4.35	-2.01	4.95	1.04	-0.73	0.00	0.00	40.86	-55.58	-29.49	-63.27	12.52	-6.77
	U_{51}-U_{52}	84.18	-327.28	4.47	3.75	-6.25	-11.22	0.74	0.58	-0.40	-1.98	57.66	47.92	-79.87	-143.38	8.82	6.57
	U_{52}-U_{53}	-68.85	-137.71	3.90	2.81	-6.66	-5.09	0.81	-0.78	-0.16	-1.19	49.26	35.45	-84.05	-64.31	9.68	-9.35
	U_{53}-U_{54}	-358.58	-362.06	3.57	3.20	-12.70	-9.25	0.54	0.55	-1.52	-2.40	45.64	40.91	-193.42	-118.18	6.49	6.65
	U_{54}-U_{55}	-300.98	-456.96	3.92	3.47	-17.21	-13.11	0.69	0.52	-2.51	-2.67	52.69	46.22	-274.67	-182.61	-896.99	232.7
	U_{55}-U_{56}	-358.58	-362.06	3.57	3.20	-12.70	-9.25	0.54	0.55	-1.52	-2.40	45.64	40.91	-193.42	-118.18	6.49	6.65
	U_{56}-U_{57}	-569.52	-449.99	2.58	0.39	-20.86	-6.79	0.36	-0.04	-2.55	-1.21	32.99	4.93	-266.53	-86.61	6.60	-0.43
	U_{57}-U_{58}	-406.59	-54.41	1.60	-0.84	-11.53	-5.72	0.21	-0.18	1.89	0.04	20.47	-10.71	-147.26	-9.19	2.57	-2.18
	U_{58}-U_{59}	-406.59	-54.41	1.60	-0.84	-11.53	-5.72	0.21	-0.18	1.89	0.04	20.47	-10.71	-147.26	-9.19	2.57	-2.18
	U_{59}-U_{60}	-290.66	-12.32	1.25	1.28	-6.69	3.42	0.20	-0.01	-1.64	0.87	16.92	-16.31	-77.81	43.79	2.34	-3.76
	U_{60}-U_{61}	-434.97	-311.66	7.10	-5.97	-8.99	-1.14	3.50	-2.00	0.25	0.87	91.88	-77.27	-116.32	-14.74	42.00	-24.05
	U_{61}-U_{62}	-53.48	-205.27	1.68	-1.18	-5.92	-6.20	0.29	0.00	-1.61	-1.61	-6.33	-6.33	-64.98	-692.83	-1019.32	-1019.32
	U_{62}-U_{63}	-21.73	-219.22	2.32	-3.88	-3.06	-3.91	0.40	-1.52	2.10	0.10	30.04	-50.15	-39.58	-59.56	4.79	-18.23
	U_{63}-U_{64}	-361.44	-188.09	0.71	-1.50	-11.57	-2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{64}-U_{65}	-252.08	-374.95	1.46	-2.33	18.68	28.76	-126.65	-115.60	2.42	3.26	-18.19	-27.64	-3.79	-66.69	-76.79	-398.67
	U_{65}-U_{66}	-444.50	-197.

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **HS20 Truck**
Condition: **As-Built**

Vehicle Load Factors: DL Factor: 1.30, LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30, LL Factor: 1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{bb}	M_u Equivalent Mom. Factor A	B	$C_{m(x)}$	C_{com}	YY Axis Moments from STAAD: Dead Load (k-in)	Live Load (Max) (k-in)	Live Load (Min) (k-in)	Pedestrian Load (Max) (k-in)	Pedestrian Load (Min) (k-in)	Lane Reduction & Impact Live Load Max (k-in)	Lane Reduction & Impact Live Load Min (k-in)	Impact Pedestrian Load (Max) (k-in)	Impact Pedestrian Load (Min) (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	P_{crit} (kip)	Formula 1.8 Term * F'c/S_{bb}	M_u Equivalent Mom. Factor A	B	$C_{m(y)}$	C_{com}	Pass
Structure 1	L_0-L_1	-19.48	-91.71	3.77	-4.56	-0.70	0.73	0.30	-0.64	-0.11	0.13	50.42	-66.06	-9.31	9.77	3.54	-7.68	-1.37	1.50	83.92	-282.30	42.67	-7.01	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.320	0.47	0.47	0.00	36.09	129.06	-8.60	-16.91	0.09	0.35	0.46	1.68	-0.03	-0.11	-61.45	-225.90	1.26	4.61	6.78	24.94	-0.48	-1.68	-87.53	-321.66	46.91	50.38	128.3	128.29	121.63	141.18	626.8	1.10	4659	—	0.99805042	4225.3	0.272	0.71	0.71	0.00	0.548	0.18	Yes	0.001	0.588	0.09	Yes	0.010	0.099	0.11	Yes	0.010	0.079	0.09	Yes	
	L_1-L_2	30.33	-116.64	1.97	-8.15	-3.69	-3.81	0.00	0.00	-0.22	-0.91	26.33	-108.85	-49.26	-77.58	0.00	0.00	-2.66	-10.86	56.48	-437.28	-617.29	-319.72	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.249	0.50	0.50	0.00	169.01	-70.76	-6.38	6.19	-21.70	8.62	0.00	2.11	-0.99	-85.19	82.70	-289.85	88.46	0.00	0.00	0.00	-0.58	-26.18	14.38	-178.17	108.52	105.08	46.07	116.5	117.42	93.38	188.27	749.5	1.10	6220	—	0.99789161	5653.3	0.414	0.25	0.25	0.00	0.223	0.075	Yes	0.004	0.223	0.076	Yes								
	L_2-L_3	-69.05	14.64	1.32	-4.17	-8.25	-4.49	0.23	0.86	-1.19	-1.34	17.65	-55.70	-110.15	-59.97	2.75	10.32	-14.24	-16.13	-46.32	139.85	-323.22	-110.91	99.9	99.93	84.14	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	0.343	0.74	0.74	0.00	-139.73	-144.72	1.81	-0.77	-15.69	2.65	0.04	0.09	1.79	-1.01	24.21	-10.22	-209.04	35.36	0.62	1.38	26.53	-10.02	228.89	-210.28	-276.47	-111.52	171.6	171.62	158.81	188.47	749.5	1.10	6220	—	0.99795195	5651.9	0.403	0.76	0.76	0.00	0.338	0.123	0.47	Yes	0.201	0.077	0.28	Yes	0.104	0.102	0.22	Yes	0.103	0.078	0.19	Yes	
	L_3-L_4	-60.77	-234.10	3.29	-10.01	-8.26	-4.32	0.23	0.86	-2.62	-3.00	42.35	-137.62	-41.18	-7.75	8.68	3.31	-18.76	-5.35	84.64	-295.33	-76.62	-26.66	83.6	83.58	74.47	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.320	0.47	0.47	0.00	36.09	129.06	-8.60	-16.91	0.09	0.35	0.46	1.68	-0.03	-0.11	-61.45	-225.90	1.26	4.61	6.78	24.94	-0.48	-1.68	-87.53	-321.66	46.91	50.38	128.3	128.29	121.63	141.18	626.8	1.10	4659	—	0.99805042	4225.3	0.272	0.71	0.71	0.00	0.548	0.18	Yes	0.001	0.588	0.09	Yes	0.010	0.099	0.11	Yes	0.010	0.079	0.09	Yes	
	L_4-L_5	-2.22	-209.06	2.47	-4.65	-4.41	-1.32	0.53	1.12	-0.84	-0.05	32.97	-62.51	-58.89	17.62	6.35	13.38	-10.07	5.55	148.39	-484.26	-130.42	-387.66	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99925442	5142	0.66	0.66	0.66	0.00	140.89	-140.80	-3.09	-0.81	-4.03	4.38	0.28	-0.37	1.33	-0.87	-5.26	-10.78	-12.93	111.88	-23.15	66.78	-85.47	200.5	206.53	176.18	226.18	784.3	1.10	7464	—	0.99789788	6800.4	0.788	0.32	0.32	0.00	0.183	0.062	Yes	0.082	0.102	0.07	Yes								
	L_5-L_6	-1.28	58.33	1.00	-1.47	-0.02	-0.42	0.17	0.36	-0.27	-0.02	15.25	-16.52	-17.27	-5.66	2.04	4.30	-3.24	-1.78	47.89	-127.81	-39.99	-124.51	33.6	33.58	30.69	43.85	1298	539.2	1.31	1452	0.99925442	4716.0	-0.020	0.43	0.43	0.00	45.25	41.61	-1.00	-0.26	-1.30	1.41	0.09	-0.12	0.43	-0.28	-1.69	-3.46	-4.15	35.94	-7.44	21.46	-27.46	64.4	66.36	56.62	72.68	252.0	1.10	2398	—	0.99797326	2184.7	0.087	0.23	0.23	0.00	0.059	0.020	Yes	0.026	0.102	0.02	Yes								
	L_6-L_7	-38.40	570.96	0.76	-1.56	-3.00	5.17	0.00	0.00	-0.35	3.65	10.09	-26.18	-40.03	69.04	0.00	0.00	-0.16	43.81	-28.07	685.52	-121.73	133.46	140.8	140.75	130.44	228.84	6500	2932.4	1.57	7552	0.99925915	4806.3	-0.041	0.58	0.58	0.00	271.29	194.07	4.02	0.46	-9.25	3.78	-0.09	-0.77	0.00	0.64	-0.77	-0.09	53.64	-6.17	-122.63	-23.61	0.00	0.00	11.40	-1.34	398.43	227.44	99.84	241.68	355.4	355.44	352.52	403.40	1093.1	1.13	13312	—	0.99771797	11898.3	0.375	0.83	0.83	0.00	0.523	0.144	0.64	Yes	0.516	0.091	0.61	Yes								
	L_7-L_8	555.48	-39.57	8.02	-0.61	-1.40	0.37	3.40	-0.27	0.00	0.00	103.77	-7.91	-19.17	4.84	48.84	-3.23	0.00	0.00	546.95	-68.56	884.36	-4.23	0.00	0.00	0.00	0.00	6500	2932.4	1.57	7552	0.99925915	4806.3	-0.041	0.58	0.58	0.00	271.29	194.07	4.02	0.46	-9.25	3.78	-0.09	-0.77	0.00	0.64	-0.77	-0.09	53.64	-6.17	-122.63	-23.61	0.00	0.00	-0.00	-1.34	398.43	227.44	99.84	241.68	355.4	355.44	352.52	403.40	1093.1	1.13	13312	—	0.99771797	11898.3	0.375	0.83	0.83	0.00	0.523	0.144	0.64	Yes	0.516	0.091	0.61	Yes								
	L_8-L_9	186.35	-153.68	2.11	-4.91	-2.27	-0.81	0.70	-0.95	-0.36	0.45	63.16	-63.46	-29.36	-12.47	5.55	5.42	-9.25	-3.85	342.29	-321.50	-178.65	-222.70	133.2	133.21	120.13	180.97	5202	2375.8	1.33	6364	0.99914964	4178.1	0.509	0.22	0.22	0.00	189.42	-144.65	-4.36	5.92	-20.22	4.72	1.48	-2.00	0.00	0.00	-0.16	0.91	-11.41	10.01	-108.16	-92.60	288.5	288.45	248.71	327.90	1086.4	1.12	10626	—	0.99784191	9553.3	0.614	0.35	0.35	0.00	0.408	0.132	0.54	Yes	0.329	0.109	0.44	Yes								
	L_9-L_{10}	164.35	-164.49	2.94	-1.65	-2.23	-3.85	1.92	-0.73	0.00	0.00	38.02	-21.37	-30.28	-10.89	-11.99	-8.75	0.00	0.00	299.99	-167.52	148.48	-321.76	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.661	0.42	0.42	0.00	-135.95	67.91	-1.09	-0.45	3.75	-0.80	1.06	0.00	-0.00	-0.00	-207.42	75.15	-70.49	-86.83	158.2	158.16	151.51	173.24	694.3	1.10	5717	—	0.99798353	5208.8	-0.362	0.46	0.46	0.00	0.410	0.063	0.48	Yes	0.406	0.085	0.50	Yes								
	L_{10}-L_{11}	178.34	-251.25	2.28	-5.78	-2.67	0.38	-1.50	0.00	0.00	0.00	29.47	-44.78	-26.44	-64.17	5.67	-12.02	0.00	0.00	297.01	-488.70	194.29	-460.72	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.668	0.36	0.36	0.00	74.10	-12.73	5.82	-20.22	4.72	1.48	-2.00	0.00	0.00	-0.00	-58.59	13.11	-13.47	15.25	0.00	0.00	0.00	0.00	5717	—	0.99798353	5208.8	-0.362	0.46	0.46	0.00	0.408	0.212	0.62	Yes	0.240	0.135	0.39	Yes								
	L_{11}-L_{12}	-57.28	-170.48	2.14	-7.07	-5.95	-4.69	0.43	0.20	-0.57	-0.37	27.69	-13.87	-76.96	-60.72	5.15	2.41	-6.78	-11.66	-14.47	-191.57	241.20	-353.19	130.3	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99922446	6883	0.83	0.87	0.87	0.00	-96.77	102.89	-5.04	-2.04	7.06	-3.86	0.00	-0.04	-1.11	1.63	-14.84	141.00	-128.47	72.03	-26.74	-23.03	233.26	231.34	209.94	975.8	1.11	8978	—	0.99789968	7679.8	0.492	0.31	0.31	0.00	0.348	0.138	Yes	0.319	0.079	0.60	Yes								
	L_{12}-L_{13}	70.09	-469.84	2.93	-12.10	-5.35	-7.91	0.35	0.23	-0.45	-2.28	37.91	-156.58	-69.19	-102.30	4.18	2.75	-5.44	-27.35	173.26	-550.04	-58.80	-832.45	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99910036	5370.6	-0.182	0.53	0.53	0.00	148.62	40.42	-3.16	3.48	-9.63	2.90	-0.02	0.08	1.76	-1.05	-40.94	44.97	-127.20	37.53	-0.68	1.19	25.56	-15.04	49.65	149.99	-137.25	133.87	321.7	321.70	275.89	363.71	1221.7	1.13	12002	—	0.99741170	10568.7	0.331	0.73	0.73	0.00	0.509	0.143	0.66	Yes	0.330	0.088	0.42	Yes								
	L_{13}-L_{14}	-488.80	137.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-373.96	96.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spreadsheet
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.00	DL Factor:	1.00
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information | M_y Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | ZZ Axis Moment Properties: Max. Neg. Moments — Start (k-in) | Max. Neg. Moments — End (k-in) | S_{top} (in^3) | S_b (in^3) | Z_z (in^3) | Z_z (in^4) | I_{xx} (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term * F$_y$/S$_{top}$ | M_z Equivalent Mom. Factor (k-in) | a | $C_{b(a)}$ | $C_{b(b)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | YY Axis Moment Properties: Max. Neg. Moments — Start (k-in) | Max. Neg. Moments — End (k-in) | S_{top} (in^3) | S_b (in^3) | Z_y (in^3) | I_{yy} (in^4) | r_{min} (in) | Formula 1.8 Term * F$_y$/S$_{top}$ | M_y Equivalent Mom. Factor (k-in) | a | $C_{b(a)}$ | $C_{b(b)}$ | Compression: Yield Axial Axial Factor | Yield Moment Portion | Yield Total | Pass | Tension: Fracture Axial Axial Factor | Fracture Moment Portion | Fracture Total | Pass | Buckle Axial Axial Factor | Buckle Moment Portion | Buckle Total | Pass | Yield Axial Axial Factor | Yield Moment Portion | Yield Total | Pass |
|---|---|---|---

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.83

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

Location		Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) Start (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Min Start (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_x (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term = F_y*S_bot	M_y (k-in)	Equivalent Mom. Factor a	C_{m2}	C_{m3}	Pass
Structure 1		U_0-L_1	3.65	-1.42	3.23	0.11	-1.72	0.87	0.15	0.01	-0.03	-0.02	3.09	1.48	-23.03	11.56	1.75	0.12	-0.34	-0.23	11.35	1.37	33.23	23.15	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.697	0.32	0.32	Yes
		U_1-L_1	-11.48	-3.33	3.09	-0.16	-1.09	0.10	0.08	-0.04	-0.25	0.07	5.24	2.15	-14.52	1.08	0.36	-0.47	-2.95	0.84	-37.65	-13.25	44.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.029	0.61	0.61	Yes
		L_1-L_2	-11.78	-3.33	3.09	-0.10	-0.83	-0.24	0.09	0.03	-0.13	-0.13	5.24	2.15	-14.52	1.08	0.36	-0.47	-1.52	-0.37	12.16	-18.69	44.11	-22.27	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.923	0.97	0.97	Yes
		L_1-U_2	9.81	-15.01	3.34	0.10	-0.57	-0.60	0.08	0.01	-0.08	-0.12	4.59	1.28	-7.55	4.00	0.90	0.13	-0.94	-1.40	22.69	-16.73	-3.60	-36.85	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.098	0.64	0.64	Yes
		U_2-L_2	-16.21	25.06	0.19	0.00	-0.12	0.12	-0.17	0.01	-0.03	-0.03	0.65	0.36	1.42	-0.95	-0.13	-0.09	0.65	0.36	-15.49	-40.93	-0.07	-33.05	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.088	0.32	0.32	Yes
		L_2-L_3	-34.06	79.08	0.38	0.46	-1.74	1.23	0.26	0.21	-0.33	0.22	0.98	0.72	6.63	2.96	-4.00	-2.69	-33.31	16.07	-88.54	-13.22	61.95	24.69	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.527	0.84	0.84	Yes
		U_2-U_3	-21.70	52.83	0.27	1.66	-0.02	0.11	-0.57	0.41	1.01	-0.16	-30.30	22.10	0.38	1.73	-0.83	4.97	-21.62	-19.85	35.39	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.894	0.21	0.21	Yes
		L_3-U_3	-1.39	10.62	0.65	0.51	-0.93	1.70	0.15	0.18	0.24	0.47	8.72	6.84	-12.41	22.67	1.76	2.16	-2.83	5.62	17.10	149.52	-28.69	183.83	35.1	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.156	0.54	0.54	Yes
		U_3-L_3	-12.27	139.07	0.74	0.06	-1.04	2.26	0.21	0.13	0.19	0.58	4.68	13.48	-13.48	29.25	0.47	2.74	-1.96	-2.32	6.95	4.76	150.43	47.92	25	1610.3	1.65	2165	1.5	2116.6	-0.234	0.47	0.47	Yes
		L_3-L_4	-100.92	90.29	1.30	0.36	-2.44	1.55	0.03	0.08	-0.54	0.33	3.82	4.33	-37.90	20.11	0.00	0.98	-5.43	5.10	-122.92	-28.77	-193.97	160.94	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2116.6	-0.609	0.28	0.28	Yes
		U_3-U_4	-73.43	69.78	0.37	0.58	-2.01	1.00	0.06	0.14	-0.38	0.21	4.81	7.47	-26.06	12.93	0.77	1.68	-4.54	2.56	-65.03	106.89	-151.92	118.72	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.781	0.29	0.29	Yes
		L_4-U_4	-82.30	82.30	0.26	0.26	-1.94	1.94	0.12	0.12	-0.43	-0.43	3.35	3.35	-29.61	29.61	0.57	0.57	-4.07	-4.07	-103.11	125.26	-88.33	88.34	-170.87	37.05	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2116.6	-0.234	0.47	0.47	Yes
		U_4-L_4	-69.90	47.85	0.09	0.00	-1.62	0.94	0.00	0.00	-0.31	0.21	1.22	-0.03	-21.01	12.14	0.00	0.00	-3.79	2.56	-88.24	62.15	-129.40	88.60	20.0	20.00	20.00	34.66	1	1076.0	1.67	1444	1.5	1029.6	-0.649	0.34	0.34	Yes
		U_4-L_5	-27.40	6.37	0.08	0.50	-0.86	0.20	0.00	0.00	-0.15	0.03	1.01	-0.40	-11.06	2.61	0.00	0.00	-1.70	0.34	-33.43	-5.60	-59.58	13.94	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.234	0.51	0.51	Yes
		L_4-L_5	-0.38	-27.40	0.50	0.08	0.20	-0.86	0.00	0.00	0.03	-0.15	0.20	1.01	-2.61	-11.06	0.00	0.00	0.34	-1.70	-5.60	-33.43	-13.94	59.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.527	0.39	0.39	Yes
		L_5-U_5	-31.05	12.71	0.25	-0.22	-1.18	0.79	0.05	-0.04	-0.19	0.11	3.29	-2.79	-15.32	10.26	0.56	-0.52	-2.29	1.32	-23.40	14.84	-53.21	33.83	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.527	0.39	0.39	Yes
		U_5-L_5	-46.66	27.26	0.25	-0.22	-1.47	1.03	0.04	-0.04	-0.28	0.19	3.72	-2.79	-19.69	13.27	0.00	0.00	-2.93	1.32	-29.97	-14.84	-68.32	53.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.894	0.21	0.21	Yes
		L_5-U_6	-118.88	89.32	0.35	-0.33	-2.61	1.95	0.06	-0.05	-0.55	0.42	4.58	-4.24	-33.81	25.28	0.67	-0.62	-6.59	5.04	-144.36	101.72	-227.54	165.69	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.728	0.31	0.31	Yes
		U_5-L_6	-118.21	87.78	0.35	-0.40	-2.61	1.91	0.04	-0.04	-0.57	0.48	3.84	-3.20	-32.04	24.71	0.62	-0.58	-6.63	5.47	-143.34	106.57	-223.08	166.08	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.728	0.31	0.31	Yes
		L_6-U_6	-146.00	120.15	0.19	-0.29	-2.36	1.91	0.04	-0.04	-0.77	0.62	2.50	-2.61	-30.51	25.42	0.50	-0.46	-6.29	7.49	-184.38	132.03	-250.90	211.28	38.8	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.826	0.22	0.27	Yes
		U_6-L_6	-86.84	116.71	0.44	-0.30	-3.66	2.98	0.01	-0.06	-0.13	-0.38	5.04	-0.70	-1.51	4.57	-100.71	143.55	-191.38	-43.63	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.228	0.69	0.69	Yes
		L_6-L_7	-118.22	92.25	0.73	-0.65	-3.25	2.54	0.11	-0.10	-0.52	0.43	9.38	-8.28	-41.56	32.46	-1.37	-1.25	-6.28	5.11	-133.38	101.99	-243.73	190.27	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.781	0.29	0.29	Yes
		U_6-L_7	-58.22	58.22	0.23	-0.23	-1.83	1.83	0.05	-0.05	-0.26	0.26	3.17	-3.17	-20.78	20.78	0.00	0.00	-3.54	3.54	-72.47	72.47	-121.95	121.95	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.441	0.46	0.46	Yes
		L_7-U_7	-24.32	8.82	0.44	-0.36	-1.27	0.90	0.07	-0.06	-0.18	-0.51	1.63	-0.63	-16.16	11.47	0.86	-0.72	-2.14	1.27	-19.41	1.16	-66.64	36.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38	Yes
		U_7-L_7	-1.48	14.62	0.50	-0.50	-0.07	0.07	-0.01	0.01	-0.03	0.03	0.51	0.51	-2.58	2.58	-0.01	0.01	-0.52	0.52	-2.58	-2.58	-46.46	46.46	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.441	0.46	0.46	Yes
		L_7-U_8	-13.33	-37.03	0.56	0.94	-0.66	-0.51	0.06	-0.04	-0.03	-0.09	7.18	-12.05	-0.41	-0.18	0.71	-0.44	-0.34	-1.03	32.89	-74.24	-0.89	-88.93	17.2	17.24	17.24	26.54	1	824.7	1.54	876	1.5	853.4	-0.443	0.42	0.42	Yes
		U_7-L_8	-66.01	54.01	0.10	-0.46	-1.59	0.93	0.00	0.00	-0.23	0.17	-1.21	-5.90	-20.29	11.89	0.00	0.00	-2.80	2.04	-83.18	57.43	-129.77	96.99	20.0	20.00	20.00	34.66	1	1076.0	1.67	1444	1.5	1029.6	-0.741	0.30	0.30	Yes
		L_8-U_8	-133.76	104.33	0.21	-0.29	-2.36	1.91	0.04	-0.04	-0.77	0.62	2.50	-2.61	-30.51	25.42	0.50	-0.46	-6.29	7.49	-184.38	132.03	-250.90	211.28	38.8	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.826	0.22	0.27	Yes
		U_8-L_8	-116.16	105.67	0.41	0.27	-2.52	1.53	0.04	0.11	-0.41	0.24	5.25	3.42	-32.25	19.56	0.47	1.30	-4.96	2.84	-139.63	144.29	-214.48	114.69	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.542	0.82	0.82	Yes
		L_8-L_9	-133.98	104.33	0.57	0.20	-2.61	1.97	0.04	-0.04	-0.78	0.62	3.34	-3.23	-33.88	25.78	0.18	-0.10	-6.50	4.22	-151.71	118.59	-241.39	192.13	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.728	0.31	0.31	Yes
		U_8-L_9	-131.93	101.03	0.63	-0.33	-2.89	2.26	0.05	0.08	-0.49	0.43	8.09	-4.25	-33.07	28.81	0.58	0.94	-5.99	5.20	-153.98	187.12	-243.15	258.76	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.940	0.22	0.22	Yes
		L_9-U_9	-175.29	162.92	1.03	-1.14	-2.77	2.46	0.04	-0.02	-0.64	0.56	13.15	9.47	-35.44	31.39	0.42	-0.22	-7.64	6.67	-199.39	191.28	304.66	279.81	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.918	0.23	0.23	Yes
		U_9-L_9	-84.32	84.32	0.44	0.44	-2.17	2.17	0.09	0.09	-0.47	0.47	6.33	6.33	-27.45	27.45	0.00	0.00	-5.23	5.23	-140.68	140.68	-172.22	172.22	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.176	0.76	0.76	Yes
		L_9-U_{10}	-45.28	135.72	0.69	-0.15	-2.52	2.54	0.18	-0.02	-0.36	0.49	8.67	-1.94	-29.23	39.87	2.17	-0.28	-4.34	5.62	-40.08	172.22	-122.19	254.15	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.481	0.41	0.41	Yes
		U_9-L_{10}	-143.91	99.49	0.29	-0.29	-2.77	2.46	0.04	-0.02	-0.64	0.56	13.15	9.47	-35.44	31.39	0.42	-0.22	-7.64	6.67	-199.39	191.28	304.66	279.81	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.918	0.23	0.23	Yes
		L_{10}-L_{11}	-112.48	130.84	0.33	-0.40	-3.24	3.01	0.07	0.00	-0.59	0.49	4.18	-5.02	-40.94	37.99	0.83	0.01	-6.04	5.89	-137.16	165.71	-234.53	258.91	38.8	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.907	0.24	0.24	Yes
		U_{10}-L_{11}	-83.68	94.68	0.44	-0.45	-2.89	1.97	0.06	0.06	-0.37	0.27	5.59	-5.72	-35.93	24.87	0.77	0.68	-4.49	3.26	-96.66	110.69	-166.63	176.97	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.948	0.22	0.22	Yes
		L_{11}-U_{11}	-91.76	54.22	0.40	-0.37	-1.84	1.25	0.03	0.05	-0.27	0.25	5.08	-4.72	-23.27	15.63	0.34	0.56	-3.26	3.01	-66.30	92.26	-111.77	104.79	20.5	20.51	20.51	20.43	32.89	8	1011.2	1.65	1118	1.5	1019.2	-0.890	0.24	0.24	Yes
		U_{11}-L_{11}	-133.76	104.33	0.21	-0.29	-2.36	1.91	0.04	-0.04	-0.77	0.62	2.50	-2.61	-30.51	25.42	0.50	-0.46	-6.29	7.49	-184.38	132.03	-250.90	211.28	38.8	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.826	0.22	0.27	Yes
		L_{11}-L_{12}	-14.01	1.02	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-0.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.97	-39.08	-43.36	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55	Yes
		U_{11}-L_{12}	-18.16	2.54	0.39	-0.69	-1.14	0.14	0.00	0.00	-0.14	0.02	5.31	-0.39	-14.42	1.80	0.00	0.00	-1.69	0.38	-14.19	-36.27	-54.18	5.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55	Yes
		L_{12}-L_{13}	-32.82	30.90	0.38	-0.35	-1.29	0.99	0.03	0.00	-0.20	0.17	4.76	-4.42	-16.25	12.50	0.40	0.04	-2.36	2.08	-32.36	30.99	-77.88	67.25	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.051	0.70	0.70	Yes
		U_{12}-L_{13}	-33.53	19.42	0.41	-0.48	-1.29	0.99	0.03	0.00	-0.20	0.17	4.76	-4.42	-16.25	12.50	0.40	0.04	-2.36	2.08	-32.36	30.99	-77.88	67.25	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55	Yes
		L_{13}-U_{13}	-83.39	100.03	0.44	-0.48	-2.68	2.00	0.06	0.03	-0.39	0.44	5.53	-6.10	-33.53	25.26	0.72	0.32	-4.67	3.27	-97.12	118.63	-181.73	184.78	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.983	0.21	0.21	Yes
		U_{13}-L_{13}	-98.58	117.15	0.44	-0.16	-2.65	2.25	0.05	0.02	-0.42	0.49	5.61	-1.96	-33.49	28.41	0.55	0.28	-5.02	5.86	-116.00	148.05	-200.70	232.73	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.939	0.22	0.22	Yes
		L_{13}-L_{14}	-126.17	124.51	1.02	-0.79	-2.63	2.35	0.00	0.00	-0.52	0.49	12.84	-9.96	-33.15	29.61	0.00	0.00	-6.23	5.52	-136.21	139.81	-255.88	225.54	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.956	0.22	0.22	Yes
		U_{13}-L_{14}	-29.24	123.38	0.69	-0.15	-2.52	2.54	0.18	-0.02	-0.36	0.49	8.67	-1.94	-29.23	39.87	2.17	-0.28	-4.34	5.62	-40.08	172.22	-122.19	254.15	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.481	0.41	0.41	Yes
		L_{14}-L_{15}	-82.40	185.99	0.83	-0.18	-2.40	2.97	0.17	0.01	-0.44	0.60	10.60	-2.29	-30.55	37.33	3.03	2.03	-4.11	5.32	-84.15	236.84	-173.53	323.98	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.535	0.81	0.81	Yes
		U_{14}-L_{15}	-138.42	160.32	0.47	0.00	-3.00	2.50	0.04	0.06	-0.51	0.45	5.28	-0.91	-38.32	31.93	0.48	0.74	-6.08	5.42	-168.51	197.38	-262.97	264.09	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.994	0.20	0.20	Yes
		L_{15}-L_{16}	-128.98	123.04	0.40	-0.29	-2.82	1.85	0.04	0.09	-0.46	0.33	5.14	3.68	-33.48	23.64	0.49	1.12	-5.51	3.92	-156.54	167.92	-245.84	211.16	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.899	0.26	0.26	Yes
		U_{15}-L_{16}	-34.98	34.98	0.30	0.30	-1.74	1.74	0.09	0.09	-0.46	0.46	3.30	3.30	-16.44	16.44	0.00	0.00	-3.07	3.07	-69.96	69.96	-107.47	107.47	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.176	0.76	0.76	Yes
		L_{16}-L_{17}	-128.43	95.01	0.18	0.20	-2.70	1.89	0.00	0.00	-0.50	0.33	0.00	0.00	-4.96	4.16	-162.08	128.96	-241.78	175.21	38.8	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.704	0.32	0.32	Yes
		U_{16}-L_{17}	-89.38	90.85	0.36	-0.14	-2.61	2.01	0.05	0.02	-0.45	0.47	5.02	-1.54	-33.49	28.41	0.55	0.28	-5.02	5.86	-116.00	148.05	-200.70	232.73	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.939	0.22	0.22	Yes
		L_{17}-L_{18}	-8.89	-32.25	0.57	-0.84	-0.70	0.03	0.06	-0.04	-0.04	-0.07	10.78	-8.99	0.91	0.70	-0.43	-0.48	-0.84	-27.41	-60.29	-7.84	-39.66	72.12	17.24	17.24	17.24	26.54	1	824.7	1.54	876	1.5	853.4	-0.420	0.42	0.42	Yes
		U_{17}-L_{18}	-4.65	-13.30	0.47	-0.66	-1.00	0.55	0.07	-0.06	-0.11	0.03	5.94	-8.48	-12.73	7.05	0.89	-0.71	-1.30	0.36	6.83	-35.67	-31.62	-2.01	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.191	0.52	0.52	Yes
		L_{18}-L_{19}	-43.22	40.48	0.44	-0.38	-1.64	1.11	0.07	-0.07	-0.27	0.19	5.63	-4.91	-20.95	14.93	0.84	0.84	-2.78	2.20	-49.98	41.99	-127.58	104.63	20.5	20.51	20.51	20.43	32.89	8	1011.2	1.65	1118	1.5	1019.2	-0.788	0.29	0.29	Yes
		U_{18}-L_{19}	-4.65	-13.30	0.47	-0.66	-1.00	0.55	0.07	-0.06	-0.11	0.03	5.94	-8.48	-12.73	7.05	0.89	-0.71	-1.30	0.36	6.83	-35.67	-31.62	-2.01	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.191	0.52	0.52	Yes
		L_{19}-L_{20}	-135.94	107.53	0.55	-0.49	-2.63	2.14	0.08	-0.08	-0.55	0.45	6.99	-6.30	-33.63	27.39	1.91	-0.96	-6.59	5.39	-161.60	126.14	-249.98	199.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.798	0.28	0.28	Yes
		U_{19}-L_{20}	-134.14	143.64	0.47	-0.05	-2.61	2.61	0.05	0.05	-0.47	0.47	5.28	-5.28	-33.49	33.49	0.00	0.00	-5.02	5.02	-116.00	116.00	-200.70	200.70	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.939	0.22	0.22	Yes
		L_{20}-L_{21}	-65.25	88.28	0.27	-0.17	-3.98	2.85	0.01	-0.03	-0.12	0.37	3.49	-2.24	-31.47	37.37	0.07	-0.31	-1.44	4.44	-27.25	109.61	-28.20	156.96	38.8	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.997	0.20	0.20	Yes
		U_{20}-L_{21}	-138.22	96.74	0.43	-0.36	-3.30	2.31	0.05	-0.05	-0.75	0.56	5.50	-4.59	-42.68	29.89	0.00	0.00	-6.83	5.03	-167.78	115.91	-272.17	190.52	38.8	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.700	0.32	0.32	Yes
		L_{21}-L_{22}	-43.91	24.73	0.30	-0.25	-1.62	1.06	0.05	-0.04	-0.20	0.20	3.91	-3.25	-20.93	13.74	0.55	-0.53	-3.54	2.40	-48.61	25.11	-102.44	61.92	19.4	19.37	19.37	29.87	1	907.0	1.54	986	1.5	958.8	-0.604	0.36	0.36	Yes
		U_{21}-L_{22}	-2.65	25.30	0.30	-0.79	-0.73	-0.07	0.04	-0.03	-0.09	-0.06	3.89	-10.27	-0.42	-0.84	0.52	-0.40	-1.12	-0.77	5.00	-55.14	-23.85	-34.71	19.4	19.37	19.37	29.87	1	907.0	1.54	986	1.5	958.8	-0.604	0.36	0.36	Yes
		L_{22}-L_{23}	-41.40	53.68	0.14	-0.64	-1.64	1.04	0.00	0.00	-0.32	0.23	1.75	-0.56	-16.71	12.39	0.00	0.00	-3.80	2.80	-49.04	70.99	-138.74	98.85	20.8	20.80	20.80	34.66	1	1076.0	1.67	1444	1.5	1029.6	-0.752	0.32	0.32	Yes
		U_{22}-L_{23}	-81.44	41.31	0.40	0.50	-2.04	0.68	0.03	0.14	-0.42	0.12	5.16	0.48	-26.43	8.81	0.36	1.84	-4.99	1.42	-94.69	67.74	-156.94	89.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.798	0.28	0.28	Yes
		L_{23}-L_{24}	-49.43	12.52	0.37	-0.13	-0.81	0.04	0.09	-0.03	-0.14	-0.04	4.92	-1.72	-10.62	2.52	0.47	0.06	-1.72	0.16	-24.68	-9.64	-21.61	-4.46	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.514	0.81	0.81	Yes
		U_{23}-$L_

Moment (Start) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-569.93	63	-808	-805	-275	-57	72	418	-436	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.223	1.00	Yes	0.769	0.192	0.97	Yes	1.00	**2.00**
		$U_1 - U_2$	-----	-573.62	-48	-75	-387	-605	-118	-34	-219	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.217	1.00	Yes	0.774	0.144	0.92	Yes	1.00	**1.34**
		$U_2 - U_3$	87.99	-580.47	-137	212	-633	-409	6	27	-33	210	0.101	0.186	0.29	Yes	0.068	0.121	0.19	Yes	0.790	0.206	1.00	Yes	0.783	0.150	0.94	Yes	1.00	**1.19**
		$U_3 - U_4$	376.04	-582.32	90	332	-774	-154	-4	31	209	39	0.431	0.219	0.66	Yes	0.296	0.150	0.45	Yes	0.792	0.200	1.00	Yes	0.785	0.184	0.97	Yes	1.00	**1.97**
		$U_4 - U_5$	301.25	-584.49	102	255	-863	-88	22	-28	70	-18	0.345	0.217	0.57	Yes	0.237	0.149	0.39	Yes	0.795	0.193	0.99	Yes	0.788	0.205	1.00	Yes	1.00	**1.54**
		$U_5 - U_6$	634.33	-481.56	236	450	-871	-25	-138	-59	340	-52	0.727	0.265	1.00	Yes	0.490	0.173	0.67	Yes	0.655	0.184	0.84	Yes	0.649	0.207	0.86	Yes	1.00	**2.23**
		$U_6 - U_7$	841.93	-59.71	368	227	-619	-30	-288	-109	410	-109	0.805	0.188	1.00	Yes	0.563	0.129	0.70	Yes	0.068	0.216	0.29	Yes	0.067	0.132	0.20	Yes	1.00	**2.19**
		$U_7 - U_8$	925.39	-----	42	1026	-1203	2041	-422	-1	162	-254	0.641	0.352	1.00	Yes	0.447	0.240	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		$U_8 - U_9$	435.14	-----	3143	-2565	602	-25	-553	376	-878	-141	0.357	0.635	1.00	Yes	0.244	0.432	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		$U_9 - U_{10}$	-----	-563.80	972	-722	-888	-526	4	1159	-929	1268	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.271	1.00	Yes	0.719	0.218	0.94	Yes	1.00	**10.34**
		$U_{10} - U_{11}$	689.55	-664.75	542	97	-253	-574	-83	105	144	206	0.748	0.162	0.91	Yes	0.498	0.104	0.61	Yes	0.856	0.143	1.00	Yes	0.848	0.129	0.98	Yes	1.00	**3.79**
		$U_{11} - U_{12}$	105.80	-873.08	352	-38	-380	-551	52	388	193	663	0.084	0.171	0.26	Yes	0.057	0.114	0.18	Yes	0.826	0.169	1.00	Yes	0.819	0.091	0.92	Yes	1.00	**2.38**
		$U_{12} - U_{13}$	-----	-1215.75	50	-224	-640	-604	316	211	594	391	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.176	1.00	Yes	0.812	0.088	0.91	Yes	1.00	**1.82**
		$U_{13} - U_{14}$	-----	-1383.80	-118	-359	-950	-872	206	164	375	561	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1.00	Yes	0.793	0.105	0.90	Yes	1.00	**1.72**
		$U_{14} - U_{15}$	-----	-1341.55	-272	-250	-1281	-877	213	31	580	151	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.220	1.00	Yes	0.769	0.141	0.92	Yes	1.00	**1.23**
		$U_{15} - U_{16}$	-----	-1421.02	-149	-433	-892	-729	85	38	470	185	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.171	1.00	Yes	0.815	0.098	0.92	Yes	1.00	**1.31**
		$U_{16} - U_{17}$	-----	-1372.82	-336	-191	-1403	-383	156	-49	616	103	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1.00	Yes	0.787	0.155	0.95	Yes	1.00	**1.41**
		$U_{17} - U_{18}$	-----	-1033.03	-207	-76	-912	-192	-7	-61	420	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.179	1.00	Yes	0.808	0.148	0.96	Yes	1.00	**1.48**
		$U_{18} - U_{19}$	-----	-722.25	-200	-70	-781	-63	25	-120	383	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1.00	Yes	0.813	0.157	0.97	Yes	1.00	**1.41**
		$U_{19} - U_{20}$	-----	-559.54	-255	159	-1816	1393	-109	-45	376	-536	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.188	0.83	Yes	0.630	0.365	1.00	Yes	1.00	**3.05**
	Structure 2	$U_0 - U_1$	-----	-626.19	660	-1508	-605	-842	-39	59	500	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.211	0.96	Yes	0.740	0.256	1.00	Yes	1.00	**3.35**
		$U_1 - U_2$	-----	-885.40	75	-786	-384	-481	-117	-337	-330	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.137	1.00	Yes	0.855	0.119	0.98	Yes	1.00	**2.17**
		$U_2 - U_3$	-----	-1223.40	184	-812	-701	-815	-34	7	-322	427	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.120	1.00	Yes	0.868	0.083	0.96	Yes	1.00	**2.24**
		$U_3 - U_4$	-----	-1312.58	-413	-408	-1252	-1593	341	515	393	619	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.239	1.00	Yes	0.747	0.142	0.89	Yes	1.00	**1.45**
		$U_4 - U_5$	-----	-1510.77	-420	-409	-1662	-1210	412	140	453	223	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.213	1.00	Yes	0.776	0.138	0.92	Yes	1.00	**1.86**
		$U_5 - U_6$	-----	-1524.61	-428	-10	-1770	-986	186	-209	249	446	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.209	1.00	Yes	0.783	0.147	0.93	Yes	1.00	**1.44**
		$U_6 - U_7$	-----	-1360.62	-286	-105	-1337	-1505	-134	-185	301	158	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1.00	Yes	0.775	0.134	0.91	Yes	1.00	**1.34**
		$U_7 - U_8$	-----	-1394.17	-193	-176	-1628	-787	-106	-185	246	96	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.193	1.00	Yes	0.794	0.145	0.94	Yes	1.00	**1.40**
		$U_8 - U_9$	-----	-1180.83	-276	114	-1461	-670	-94	-198	360	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.192	1.00	Yes	0.801	0.155	0.96	Yes	1.00	**1.46**
		$U_9 - U_{10}$	149.23	-964.58	-77	344	-1358	-78	-139	-153	262	-29	0.109	0.194	0.31	Yes	0.074	0.131	0.21	Yes	0.837	0.156	1.00	Yes	0.832	0.165	1.00	Yes	1.00	**1.65**
		$U_{10} - U_{11}$	498.47	-797.63	175	372	-1393	-159	-178	-163	440	-3	0.421	0.250	0.68	Yes	0.287	0.162	0.45	Yes	0.797	0.201	1.00	Yes	0.793	0.197	0.99	Yes	1.00	**2.14**
		$U_{11} - U_{12}$	830.19	-419.91	242	539	-1623	322	-349	-126	519	86	0.701	0.292	1.00	Yes	0.471	0.195	0.67	Yes	0.420	0.201	0.63	Yes	0.417	0.229	0.65	Yes	1.00	**2.62**
		$U_{12} - U_{13}$	1161.25	-----	480	153	-1265	-450	-438	-386	538	-251	0.784	0.211	1.00	Yes	0.559	0.143	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{13} - U_{14}$	1194.46	-----	51	1805	-2177	3835	-782	-417	-5	-773	0.587	0.408	1.00	Yes	0.416	0.268	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
		$U_{14} - U_{15}$	577.85	-----	6571	-4177	1090	192	-1158	41	-1466	-554	0.284	0.708	1.00	Yes	0.201	0.465	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		$U_{15} - U_{16}$	1161.15	-----	527	276	-1719	-1594	-477	371	-318	1149	0.702	0.293	1.00	Yes	0.499	0.199	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		$U_{16} - U_{17}$	-----	-743.54	2594	-2191	-1193	-1326	683	247	1068	769	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.342	1.00	Yes	0.645	0.326	0.98	Yes	1.00	**10.75**
		$U_{17} - U_{18}$	-----	-638.30	893	-788	-1097	-467	91	831	99	963	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.241	1.00	Yes	0.754	0.186	0.95	Yes	1.00	**5.52**
		$U_{18} - U_{19}$	-----	-710.61	771	-685	-570	-679	313	236	534	379	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.151	1.00	Yes	0.839	0.131	0.98	Yes	1.00	**3.88**
		$U_{19} - U_{20}$	383.02	-702.30	369	260	-742	-553	3	-3	181	444	0.359	0.179	0.54	Yes	0.238	0.117	0.36	Yes	0.780	0.213	1.00	Yes	0.775	0.119	0.90	Yes	1.00	**2.19**
		$U_{20} - U_{21}$	265.00	-869.55	242	-16	-1037	-278	-54	-72	360	252	0.206	0.190	0.40	Yes	0.144	0.123	0.27	Yes	0.799	0.198	1.00	Yes	0.794	0.150	0.95	Yes	1.00	**2.26**
		$U_{21} - U_{22}$	68.41	-808.12	-39	4	-808	-1133	-2	66	152	392	0.053	0.207	0.27	Yes	0.038	0.139	0.18	Yes	0.743	0.254	1.00	Yes	0.738	0.164	0.91	Yes	1.00	**1.46**
		$U_{22} - U_{23}$	72.25	-822.50	68	-39	-1162	-546	58	-2	463	144	0.056	0.219	0.28	Yes	0.040	0.147	0.19	Yes	0.756	0.241	1.00	Yes	0.751	0.168	0.92	Yes	1.00	**1.49**
		$U_{23} - U_{24}$	59.36	-873.28	111	-63	-1084	-216	-41	6	377	93	0.046	0.198	0.25	Yes	0.032	0.129	0.17	Yes	0.803	0.192	1.00	Yes	0.797	0.157	0.96	Yes	1.00	**1.70**
		$U_{24} - U_{25}$	268.49	-710.26	174	268	-958	-537	-57	-86	390	-126	0.252	0.206	0.46	Yes	0.167	0.135	0.31	Yes	0.789	0.202	1.00	Yes	0.784	0.153	0.94	Yes	1.00	**1.64**
		$U_{25} - U_{26}$	501.25	-687.99	200	455	-1077	210	-159	-76	316	-24	0.503	0.229	0.74	Yes	0.330	0.146	0.48	Yes	0.817	0.161	0.98	Yes	0.812	0.183	1.00	Yes	1.00	**2.13**
		$U_{26} - U_{27}$	713.99	-454.67	343	396	-1277	321	-235	-70	425	-77	0.717	0.279	1.00	Yes	0.477	0.185	0.67	Yes	0.540	0.185	0.73	Yes	0.537	0.217	0.76	Yes	1.00	**2.43**
		$U_{27} - U_{28}$	1050.67	-211.25	326	569	-1433	619	-369	-10	419	-17	0.774	0.224	1.00	Yes	0.515	0.148	0.67	Yes	0.184	0.090	0.28	Yes	0.183	0.180	0.37	Yes	1.00	**3.33**
		$U_{28} - U_{29}$	1233.44	-----	492	178	-1740	-399	-380	-254	573	-146	0.746	0.246	1.00	Yes	0.531	0.166	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{29} - U_{30}$	1188.48	-----	195	1610	-2246	3966	-663	-336	114	-497	0.584	0.412	1.00	Yes	0.414	0.270	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		$U_{30} - U_{31}$	576.36	-93.62	6810	-4479	722	-281	-1212	162	-83	90	0.283	0.713	1.00	Yes	0.201	0.468	0.67	Yes	0.055	0.489	0.55	Yes	0.054	0.631	0.69	Yes	1.00	**7.93**
		$U_{31} - U_{32}$	1021.86	-----	383	134	-1824	-65	-312	479	-470	827	0.690	0.308	1.00	Yes	0.492	0.210	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		$U_{32} - U_{33}$	-----	-707.41	1702	-2056	-970	-864	811	447	686	819	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.222	0.93	Yes	0.703	0.290	1.00	Yes	1.00	**9.46**
		$U_{33} - U_{34}$	710.62	-704.16	385	266	-542	-1250	17	255	349	1057	0.600	0.305	0.91	Yes	0.408	0.201	0.61	Yes	0.704	0.295	1.00	Yes	0.700	0.176	0.88	Yes	1.00	**2.69**
		$U_{34} - U_{35}$	538.43	-930.11	464	163	-663	-863	139	134	597	566	0.395	0.170	0.57	Yes	0.267	0.115	0.39	Yes	0.807	0.187	1.00	Yes	0.803	0.105	0.91	Yes	1.00	**2.77**
		$U_{35} - U_{36}$	272.28	-1159.65	249	-86	-1018	-764	73	79	334	530	0.157	0.152	0.31	Yes	0.110	0.101	0.22	Yes	0.792	0.206	1.00	Yes	0.787	0.108	0.90	Yes	1.00	**2.44**
		$U_{36} - U_{37}$	-----	-1330.51	-66	28	-1072	-1762	89	0	383	344	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.232	1.00	Yes	0.758	0.157	0.92	Yes	1.00	**1.71**
		$U_{37} - U_{38}$	-----	-1336.02	118	-154	-1677	-1026	46	18	410	325	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.229	1.00	Yes	0.761	0.149	0.92	Yes	1.00	**1.72**
		$U_{38} - U_{39}$	-----	-1512.89	108	-296	-1534	-1134	132	-34	708	249	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.215	1.00	Yes	0.777	0.127	0.91	Yes	1.00	**1.77**
		$U_{39} - U_{40}$	-----	-1441.31	-207	-336	-1899	-1666	32	-28	482	193	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.248	1.00	Yes	0.740	0.157	0.90	Yes	1.00	**1.69**
		$U_{40} - U_{41}$	-----	-1350.24	-246	-337	-1747	-860	47	-115	566	61	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1.00	Yes	0.769	0.156	0.93	Yes	1.00	**1.65**
		$U_{41} - U_{42}$	-----	-1092.76	-135	-139	-1830	-604	-69	-96	440	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1.00	Yes	0.776	0.186	0.97	Yes	1.00	**2.08**
		$U_{42} - U_{43}$	-----	-838.06	-130	-60	-1146	-167	-40	-93	376	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1.00	Yes	0.809	0.174	0.99	Yes	1.00	**1.99**
		$U_{43} - U_{44}$	-----	-564.31	-9	-220	-1921	1039	-69	38	292	-410	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.231	0.91	Yes	0.666	0.326	1.00	Yes	1.00	**3.24**
	Structure 3	$U_0 - U_1$	-----	-648.44	764	-1320	-987	-866	-71	-96	1107	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.257	1.00	Yes	0.730	0.265	1.00	Yes	1.00	**3.91**
		$U_1 - U_2$	-----	-731.33	123	-774	-81	-293	-67	-345	58	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.167	1.00	Yes	0.823	0.156	0.98	Yes	1.00	**1.61**
		$U_2 - U_3$	-----	-1062.17	135	-991	-291	-397	7	390	-299	405	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.155	1.00	Yes	0.831	0.161	1.00	Yes	1.00	**1.52**
		$U_3 - U_4$	-----	-1369.45	-161	-439	-794	-1116	284	385	326	614	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.204	1.00	Yes	0.785	0.123	0.91	Yes	1.00	**1.62**
		$U_4 - U_5$	-----	-1401.13	-373	-136	-967	-896	518	158	471	289	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1.00	Yes	0.803	0.107	0.91	Yes	1.00	**1.42**
		$U_5 - U_6$	-----	-1363.99	-182	-274	-854	-1225	140	-152	228	362	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.207	1.00	Yes	0.782	0.135	0.92	Yes	1.00	**1.35**
		$U_6 - U_7$	-----	-1341.50	-376	-100	-1536	-646	-90	-187	378	49	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.215	1.00	Yes	0.769	0.169	0.94	Yes	1.00	**1.35**
		$U_7 - U_8$	-----	-1230.60	-163	6	-832	-600	-61	-177	300	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.165	1.00	Yes	0.822	0.115	0.94	Yes	1.00	**1.43**
		$U_8 - U_9$	-----	-909.29	-101	178	-835	-2	-31	-154	294	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.139	1.00	Yes	0.853	0.139	1.00	Yes	1.00	**1.22**
		$U_9 - U_{10}$	152.89	-619.15	-76	228	-897	131	-99	-104	221	-51	0.166	0.237	0.41	Yes	0.111	0.152	0.27	Yes	0.797	0.172	0.97	Yes	0.790	0.201	1.00	Yes	1.00	**1.44**
		$U_{10} - U_{11}$	685.73	-398.04	314	231	-792	153	-240	-138	432	-223	0.744	0.247	1.00	Yes	0.504	0.166	0.67	Yes	0.513	0.140	0.66	Yes	0.508	0.177	0.69	Yes	1.00	**2.79**
		$U_{11} - U_{12}$	826.81	-----	-23	908	-1238	1577	-414	-105	183	-370	0.677	0.315	1.00	Yes	0.463	0.215	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{12} - U_{13}$	560.79	-----	3470	-2047	449	136	-752	91	-646	-265	0.389	0.602	1.00	Yes	0.271	0.411	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		$U_{13} - U_{14}$	870.95	-38.40	237	440	-300	-402	-342	-226	-173	494	0.833	0.161	1.00	Yes	0.582	0.111	0.70	Yes	0.044	0.167	0.22	Yes	0.043	0.093	0.14	Yes	1.00	**2.36**
		$U_{14} - U_{15}$	745.38	-219.72	481	344	-100	-225	-160	-41	127	19	0.854	0.141	1.00	Yes	0.576	0.092	0.67	Yes	0.299	0.154	0.46	Yes	0.296	0.114	0.42	Yes	1.00	**2.53**
		$U_{15} - U_{16}$	422.62	-559.39	331	231	-377	-610	-66	132	6	476	0.484	0.225	0.71	Yes	0.332	0.154	0.49	Yes	0.761	0.229	1.00	Yes	0.754	0.145	0.90	Yes	1.00	**1.80**
		$U_{16} - U_{17}$	480.55	-578.50	445	159	-569	-377	61	71	449	214	0.551	0.211	0.77	Yes	0.378	0.144	0.53	Yes	0.787	0.207	1.00	Yes	0.780	0.135	0.92	Yes	1.00	**2.12**
		$U_{17} - U_{18}$	191.67	-563.31	300	-74	-570	-377	-43	71	279	209	0.220	0.183	0.41	Yes	0.148	0.120	0.27	Yes	0.766	0.231	1.00	Yes	0.760	0.135	0.90	Yes	1.00	**1.35**
		$U_{18} - U_{19}$	76.15	-546.31	148	-42	-768	-267	-24	28	451	16	0.087	0.259	0.35	Yes	0.060	0.177	0.24	Yes	0.743	0.254	1.00	Yes	0.737	0.183	0.92	Yes	1.00	**1.33**
		$U_{19} - U_{20}$	38.95	-536.24	177	-309	-1124	708	-119	114	368	-357	0.045	0.329	0.38	Yes	0.031	0.226	0.26	Yes	0.730	0.162	0.90	Yes	0.723	0.267	1.00	Yes	1.00	**2.29**

Moment (Start) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-75.70	2051	-2847	-427	255	-400	-1472	-32	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.137	0.744	0.89	Yes	0.136	0.855	1.00	Yes	1.00	**13.22**
		L_1 - L_2	464.48	-----	320	-772	-224	-476	-241	-149	190	-79	0.711	0.283	1.00	Yes	0.434	0.189	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		L_2 - L_3	688.54	-26.57	-20	21	-628	-722	-32	22	-150	40	0.792	0.199	1.00	Yes	0.458	0.119	0.58	Yes	0.036	0.221	0.26	Yes	0.036	0.174	0.22	Yes	1.00	**1.50**
		L_3 - L_4	706.01	-143.75	86	254	-686	-341	62	69	118	121	0.812	0.185	1.00	Yes	0.482	0.120	0.61	Yes	0.196	0.186	0.39	Yes	0.195	0.166	0.37	Yes	1.00	**1.56**
		L_4 - L_5	319.34	-500.00	99	592	-884	302	54	36	-196	306	0.414	0.288	0.71	Yes	0.248	0.188	0.44	Yes	0.769	0.131	0.90	Yes	0.762	0.234	1.00	Yes	1.00	**1.62**
		L_5 - L_6	-----	-720.00	162	588	-498	101	72	126	251	64	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.152	1.00	Yes	0.831	0.130	0.97	Yes	1.00	**1.68**
		L_6 - L_7	-----	-1067.54	202	176	-870	107	119	-110	-19	483	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.119	0.99	Yes	0.859	0.137	1.00	Yes	1.00	**2.33**
		L_7 - L_8	-----	-1259.44	97	978	-604	1513	60	199	335	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.173	0.99	Yes	0.798	0.200	1.00	Yes	1.00	**2.85**
		L_8 - L_9	-----	-1178.04	1758	-163	542	-16	-255	43	-206	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.238	1.00	Yes	0.746	0.233	0.98	Yes	1.00	**3.61**
		L_9 - L_{10}	-----	-939.52	1366	-1524	-851	-93	-681	-910	690	299	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.172	0.94	Yes	0.756	0.240	1.00	Yes	1.00	**6.53**
		L_{10} - L_{11}	105.35	-560.70	530	-5	-23	-385	140	49	55	-28	0.136	0.165	0.31	Yes	0.079	0.099	0.18	Yes	0.862	0.109	0.98	Yes	0.854	0.140	1.00	Yes	1.00	**2.09**
		L_{11} - L_{12}	568.28	-----	587	-835	27	-583	-215	-185	117	45	0.736	0.259	1.00	Yes	0.442	0.169	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**
		L_{12} - L_{13}	1096.92	-----	183	-66	-563	-631	11	37	81	154	0.866	0.130	1.00	Yes	0.554	0.078	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		L_{13} - L_{14}	1275.05	-----	519	-1623	-344	-1221	-46	-174	306	95	0.750	0.249	1.00	Yes	0.486	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		L_{14} - L_{15}	1549.36	-----	-371	-27	-1845	-649	-118	-66	-169	219	0.757	0.238	1.00	Yes	0.492	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.85**
		L_{15} - L_{16}	1643.04	-----	-190	-403	-1331	-1422	-89	-40	88	-294	0.803	0.192	1.00	Yes	0.515	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		L_{16} - L_{17}	1156.38	-----	-426	90	-1547	-97	-89	-57	-455	214	0.731	0.268	1.00	Yes	0.474	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		L_{17} - L_{18}	880.63	-----	-184	-38	-1035	-77	-57	9	131	-215	0.767	0.227	1.00	Yes	0.491	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.84**
		L_{18} - L_{19}	242.59	-----	-196	286	-1509	909	-21	-35	-831	94	0.371	0.625	1.00	Yes	0.251	0.396	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		L_{19} - L_{20}	133.07	-366.60	-75	-49	-1124	543	-23	-5	297	67	0.204	0.399	0.61	Yes	0.124	0.268	0.40	Yes	0.666	0.236	0.91	Yes	0.660	0.337	1.00	Yes	1.00	**3.66**
	Structure 2	L_0 - L_1	43.82	-188.49	1282	-3583	-145	71	-348	-1210	-21	-73	0.053	0.928	0.99	Yes	0.032	0.592	0.63	Yes	0.271	0.617	0.89	Yes	0.269	0.729	1.00	Yes	1.00	**11.34**
		L_1 - L_2	540.28	-----	705	-1450	29	-597	-243	-229	-121	144	0.656	0.335	1.00	Yes	0.390	0.215	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		L_2 - L_3	1019.69	-----	395	-1072	-594	-971	-131	-184	277	334	0.804	0.190	1.00	Yes	0.527	0.114	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		L_3 - L_4	1347.55	-----	296	-1309	-555	-1561	-254	-128	264	102	0.792	0.204	1.00	Yes	0.533	0.126	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		L_4 - L_5	1710.92	-----	-269	-1240	-1826	-1335	138	-386	-35	75	0.798	0.199	1.00	Yes	0.528	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.46**
		L_5 - L_6	1882.48	-----	-141	-362	-1659	-1919	117	-15	215	52	0.808	0.184	1.00	Yes	0.542	0.112	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**
		L_6 - L_7	1822.45	-----	-433	-96	-2271	-1438	-164	45	-129	358	0.771	0.222	1.00	Yes	0.513	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		L_7 - L_8	1374.71	-----	-211	296	-1779	-748	-131	8	133	-88	0.788	0.207	1.00	Yes	0.518	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		L_8 - L_9	1090.45	-265.69	-94	533	-1444	36	-27	16	-226	407	0.763	0.233	1.00	Yes	0.514	0.146	0.66	Yes	0.220	0.149	0.37	Yes	0.219	0.195	0.42	Yes	1.00	**2.15**
		L_9 - L_{10}	825.10	-614.57	-105	728	-1408	-213	17	93	280	-190	0.736	0.259	1.00	Yes	0.429	0.161	0.59	Yes	0.650	0.172	0.83	Yes	0.645	0.225	0.88	Yes	1.00	**2.62**
		L_{10} - L_{11}	70.76	-686.35	93	531	-1071	623	57	1	-413	96	0.071	0.243	0.32	Yes	0.041	0.151	0.20	Yes	0.812	0.101	0.92	Yes	0.806	0.187	1.00	Yes	1.00	**2.03**
		L_{11} - L_{12}	-----	-1025.69	96	989	-1101	842	83	238	156	77	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.134	0.99	Yes	0.841	0.150	1.00	Yes	1.00	**2.59**
		L_{12} - L_{13}	-----	-1321.28	305	-291	-1650	-1051	178	-140	-197	185	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.203	1.00	Yes	0.790	0.164	0.96	Yes	1.00	**3.19**
		L_{13} - L_{14}	-----	-1354.69	-225	1291	-2256	3551	-93	-63	325	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.205	0.90	Yes	0.682	0.310	1.00	Yes	1.00	**3.95**
		L_{14} - L_{15}	-----	-1239.52	4262	-2247	1057	-446	-50	285	-307	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.244	0.88	Yes	0.624	0.372	1.00	Yes	1.00	**4.87**
		L_{15} - L_{16}	-----	-1339.45	18	254	-1803	-531	-410	-284	249	195	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.188	1.00	Yes	0.801	0.179	0.99	Yes	1.00	**3.19**
		L_{16} - L_{17}	-----	-919.06	2622	-2140	-306	-1414	-687	-690	-82	62	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.242	0.92	Yes	0.669	0.323	1.00	Yes	1.00	**7.19**
		L_{17} - L_{18}	603.00	-543.15	2032	-2112	-937	-1716	-959	-525	654	292	0.538	0.453	1.00	Yes	0.313	0.279	0.60	Yes	0.574	0.278	0.86	Yes	0.570	0.338	0.91	Yes	1.00	**8.02**
		L_{18} - L_{19}	108.46	-647.33	671	117	-80	-367	-5	33	126	129	0.123	0.149	0.28	Yes	0.071	0.089	0.16	Yes	0.868	0.124	1.00	Yes	0.863	0.130	1.00	Yes	1.00	**2.01**
		L_{19} - L_{20}	637.79	-----	645	-1049	-353	-949	-27	-233	456	-5	0.723	0.272	1.00	Yes	0.427	0.172	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_{20} - L_{21}	993.08	-497.70	593	63	-1230	-1087	-104	-107	-12	215	0.792	0.203	1.00	Yes	0.519	0.121	0.65	Yes	0.470	0.232	0.71	Yes	0.467	0.179	0.65	Yes	1.00	**3.12**
		L_{21} - L_{22}	924.99	-232.05	244	-73	-940	-1581	-93	-32	279	10	0.738	0.261	1.00	Yes	0.493	0.164	0.66	Yes	0.219	0.256	0.48	Yes	0.218	0.231	0.45	Yes	1.00	**2.29**
		L_{22} - L_{23}	811.23	-70.01	26	49	-2235	-211	5	-25	-238	137	0.647	0.352	1.00	Yes	0.433	0.220	0.66	Yes	0.066	0.274	0.35	Yes	0.066	0.326	0.40	Yes	1.00	**2.46**
		L_{23} - L_{24}	914.85	-302.41	6	376	-1651	-981	11	78	253	-196	0.730	0.268	1.00	Yes	0.478	0.160	0.64	Yes	0.286	0.265	0.56	Yes	0.284	0.241	0.53	Yes	1.00	**2.82**
		L_{24} - L_{25}	563.40	-436.34	241	359	-1433	-256	62	0	-325	521	0.638	0.356	1.00	Yes	0.378	0.225	0.61	Yes	0.585	0.243	0.83	Yes	0.582	0.277	0.86	Yes	1.00	**2.81**
		L_{25} - L_{26}	215.34	-595.45	99	651	-1031	-164	36	119	234	-165	0.244	0.235	0.48	Yes	0.141	0.140	0.29	Yes	0.799	0.146	0.95	Yes	0.794	0.199	1.00	Yes	1.00	**2.80**
		L_{26} - L_{27}	-----	-740.85	317	380	-1334	151	164	56	-361	299	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.136	0.92	Yes	0.778	0.213	1.00	Yes	1.00	**3.02**
		L_{27} - L_{28}	-----	-1062.53	203	1064	-1703	265	260	534	341	-463	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1.00	Yes	0.774	0.210	0.99	Yes	1.00	**4.31**
		L_{28} - L_{29}	-----	-1185.34	467	-632	-2050	-1628	461	-161	-464	423	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.280	1.00	Yes	0.709	0.204	0.92	Yes	1.00	**4.86**
		L_{29} - L_{30}	-----	-1016.13	-204	1360	-4581	5540	-516	-1094	1036	565	-----	-----	-----	-----	-----	-----	-----	-----	0.516	0.311	0.83	Yes	0.511	0.484	1.00	Yes	1.00	**7.78**
		L_{30} - L_{31}	-----	-1075.56	5141	-2615	719	-330	547	617	-85	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.546	0.310	0.86	Yes	0.541	0.449	1.00	Yes	1.00	**6.37**
		L_{31} - L_{32}	-----	-1307.39	199	-82	-1986	-269	-336	92	360	131	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.203	1.00	Yes	0.782	0.197	0.98	Yes	1.00	**3.96**
		L_{32} - L_{33}	28.27	-922.22	1720	-1239	-414	-1053	685	-548	265	346	0.020	0.298	0.32	Yes	0.013	0.180	0.20	Yes	0.762	0.148	0.92	Yes	0.756	0.234	1.00	Yes	1.00	**6.14**
		L_{33} - L_{34}	555.31	-----	1374	-2084	-421	-1238	-452	-436	577	171	0.554	0.442	1.00	Yes	0.325	0.277	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		L_{34} - L_{35}	869.22	-684.19	695	68	-636	-1055	-46	63	242	412	0.776	0.218	1.00	Yes	0.452	0.135	0.59	Yes	0.723	0.197	0.93	Yes	0.718	0.169	0.89	Yes	1.00	**3.71**
		L_{35} - L_{36}	1116.38	-----	549	-980	-570	-1115	-6	-191	666	158	0.781	0.213	1.00	Yes	0.526	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.89**
		L_{36} - L_{37}	1430.28	-142.91	335	70	-1179	-1406	-114	1	-126	220	0.820	0.173	1.00	Yes	0.539	0.102	0.65	Yes	0.097	0.192	0.29	Yes	0.096	0.155	0.26	Yes	1.00	**2.81**
		L_{37} - L_{38}	1834.05	-----	160	-324	-2335	-1737	7	-46	220	-130	0.776	0.219	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		L_{38} - L_{39}	1785.52	-----	-256	-160	-2427	-1371	-56	5	-158	249	0.766	0.231	1.00	Yes	0.514	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.33**
		L_{39} - L_{40}	1705.84	-----	-142	-382	-1835	-1604	-25	-39	112	-352	0.795	0.197	1.00	Yes	0.526	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		L_{40} - L_{41}	1291.62	-----	-305	-48	-1765	-436	-58	-11	-373	366	0.759	0.236	1.00	Yes	0.511	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		L_{41} - L_{42}	997.15	-----	-123	-130	-1315	-346	-32	-36	178	-205	0.786	0.212	1.00	Yes	0.515	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_{42} - L_{43}	511.76	-----	-205	4	-1459	64	-68	-72	-412	495	0.622	0.378	1.00	Yes	0.370	0.241	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.98**
		L_{43} - L_{44}	248.25	-193.73	-42	-28	-2685	854	-177	-52	883	258	0.302	0.691	1.00	Yes	0.179	0.441	0.63	Yes	0.279	0.431	0.71	Yes	0.277	0.546	0.83	Yes	1.00	**7.26**
	Structure 3	L_0 - L_1	191.68	-265.00	984	-1725	-18	-76	-139	-631	-9	-42	0.293	0.648	0.95	Yes	0.179	0.433	0.62	Yes	0.481	0.353	0.84	Yes	0.477	0.518	1.00	Yes	1.00	**6.11**
		L_1 - L_2	336.39	-----	946	-1472	121	-160	-173	-62	-59	17	0.515	0.478	1.00	Yes	0.348	0.297	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		L_2 - L_3	874.75	-----	408	-982	-333	-768	-36	67	330	347	0.762	0.234	1.00	Yes	0.488	0.141	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		L_3 - L_4	1235.33	-----	375	-1042	-494	-1231	-245	-113	416	240	0.781	0.218	1.00	Yes	0.507	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		L_4 - L_5	1662.52	-----	-326	-213	-1470	-1045	78	113	-49	97	0.812	0.185	1.00	Yes	0.521	0.108	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.66**
		L_5 - L_6	1539.50	-----	35	-1859	-934	-1392	-184	-163	281	138	0.752	0.244	1.00	Yes	0.489	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		L_6 - L_7	1269.87	-----	-405	236	-1570	-148	-183	17	-99	344	0.747	0.245	1.00	Yes	0.484	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		L_7 - L_8	1053.94	-----	-88	109	-781	-490	-30	38	198	19	0.832	0.162	1.00	Yes	0.532	0.097	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		L_8 - L_9	548.81	-182.50	-151	371	-888	351	-9	46	-269	242	0.711	0.282	1.00	Yes	0.426	0.184	0.62	Yes	0.281	0.133	0.42	Yes	0.278	0.235	0.52	Yes	1.00	**1.94**
		L_9 - L_{10}	65.72	-510.38	-4	478	-804	256	69	134	222	127	0.085	0.252	0.34	Yes	0.050	0.152	0.21	Yes	0.785	0.148	0.94	Yes	0.778	0.213	1.00	Yes	1.00	**2.38**
		L_{10} - L_{11}	-----	-997.60	221	187	-1232	116	135	-214	-152	683	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.149	0.97	Yes	0.803	0.194	1.00	Yes	1.00	**3.67**
		L_{11} - L_{12}	-----	-1197.90	115	1061	-650	1766	-97	-28	160	-313	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.212	0.99	Yes	0.759	0.234	1.00	Yes	1.00	**3.77**
		L_{12} - L_{13}	-----	-1134.75	2074	-543	431	-9	-204	7	-211	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.259	0.99	Yes	0.719	0.275	1.00	Yes	1.00	**4.36**
		L_{13} - L_{14}	-----	-989.22	1291	-1227	-1162	-55	-731	-655	335	208	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.159	0.97	Yes	0.796	0.203	1.00	Yes	1.00	**6.54**
		L_{14} - L_{15}	-----	-744.29	568	166	17	-218	148	-7	46	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.130	1.00	Yes	0.859	0.126	0.99	Yes	1.00	**1.64**
		L_{15} - L_{16}	550.53	-----	633	-836	-287	-735	-359	-350	141	72	0.713	0.285	1.00	Yes	0.428	0.185	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		L_{16} - L_{17}	692.20	-316.20	409	51	-733	-468	90	-45	47	149	0.796	0.201	1.00	Yes	0.473	0.130	0.61	Yes	0.432	0.219	0.66	Yes	0.428	0.177	0.61	Yes	1.00	**2.02**
		L_{17} - L_{18}	661.48	-160.34	126	8	-841	-423	5	8	169	-18	0.761	0.230	1.00	Yes	0.440	0.138	0.58	Yes	0.219	0.229	0.45	Yes	0.217	0.203	0.43	Yes	1.00	**1.94**
		L_{18} - L_{19}	421.23	-31.40	64	-5	-838	-128	25	-110	-152	451	0.645	0.348	1.00	Yes	0.393	0.231	0.63	Yes	0.057	0.243	0.31	Yes	0.057	0.252	0.31	Yes	1.00	**1.77**
		L_{19} - L_{20}	57.50	-44.72	108	-225	-1940	794	-7	-2	1498	408	0.088	0.904	1.00	Yes	0.052	0.545	0.60	Yes	0.081	0.611	0.70	Yes	0.081	0.582	0.67	Yes	1.00	**7.61**

Moment (Start) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.245	0.96	Yes	0.670	0.322	1.00	Yes	1.00	**0.88**
North Truss - Verticals	Structure 1	U_0 - L_0	-----	-316.65	-55	88	-190	252	-34	-11	-464	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.245	0.96	Yes	0.670	0.322	1.00	Yes	1.00	**0.88**
		U_1 - L_1	20.25	-325.07	27	-15	-231	237	0	-2	-46	23	0.036	0.316	0.36	Yes	0.020	0.174	0.20	Yes	0.710	0.082	0.80	Yes	0.688	0.302	1.00	Yes	1.00	**1.70**
		U_2 - L_2	121.17	-280.69	104	-116	-276	317	98	39	-433	-83	0.218	0.530	0.75	Yes	0.120	0.292	0.42	Yes	0.613	0.218	0.84	Yes	0.594	0.405	1.00	Yes	1.00	**3.02**
		U_3 - L_3	219.14	-264.89	275	-257	-309	344	162	155	-334	-56	0.394	0.536	0.94	Yes	0.217	0.295	0.52	Yes	0.580	0.189	0.77	Yes	0.560	0.439	1.00	Yes	1.00	**4.54**
		U_4 - L_4	-----	-204.10	441	-432	-54	38	-514	-132	-5	141	-----	-----	-----	-----	-----	-----	-----	-----	0.449	0.265	0.72	Yes	0.432	0.563	1.00	Yes	1.00	**4.38**
		U_5 - L_5	-----	-421.03	237	-269	67	-89	-144	-170	20	21	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.132	0.90	Yes	0.726	0.273	1.00	Yes	1.00	**1.46**
		U_6 - L_6	-----	-518.93	269	-286	81	-90	78	-58	94	104	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.097	0.89	Yes	0.744	0.250	1.00	Yes	1.00	**1.43**
		U_7 - L_7	-----	-437.16	302	-323	134	-150	199	35	-155	19	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.144	0.88	Yes	0.674	0.318	1.00	Yes	1.00	**0.97**
		U_8 - L_8	-----	-1202.64	481	-582	-347	408	912	290	-118	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.124	1.00	Yes	0.834	0.108	0.95	Yes	1.00	**2.34**
		U_9 - L_9	-----	-656.64	-169	200	-424	462	-361	-149	-711	-395	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.205	0.99	Yes	0.742	0.257	1.00	Yes	1.00	**1.69**
		U_{10} - L_{10}	-----	-732.82	-122	104	-358	368	-793	-449	-997	-670	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.238	1.00	Yes	0.723	0.191	0.92	Yes	1.00	**1.97**
		U_{11} - L_{11}	-----	-652.55	-119	214	-395	500	-550	-280	-759	-544	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1.00	Yes	0.759	0.232	1.00	Yes	1.00	**2.00**
		U_{12} - L_{12}	-----	-511.41	-93	103	-339	335	-253	-161	-346	-258	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.160	0.90	Yes	0.702	0.289	1.00	Yes	1.00	**1.72**
		U_{13} - L_{13}	-----	-365.12	-46	69	-232	262	-96	17	-41	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.108	0.85	Yes	0.699	0.299	1.00	Yes	1.00	**1.37**
		U_{14} - L_{14}	-----	-157.98	255	-256	-472	515	-36	117	37	198	-----	-----	-----	-----	-----	-----	-----	-----	0.353	0.213	0.57	Yes	0.334	0.659	1.00	Yes	1.00	**5.81**
		U_{15} - L_{15}	167.44	-305.29	249	-274	-124	112	130	-117	59	111	0.301	0.388	0.69	Yes	0.166	0.213	0.38	Yes	0.684	0.131	0.82	Yes	0.646	0.350	1.00	Yes	1.00	**2.38**
		U_{16} - L_{16}	-----	-321.86	240	-249	19	-34	237	-150	148	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.107	0.84	Yes	0.681	0.318	1.00	Yes	1.00	**1.60**
		U_{17} - L_{17}	-----	-432.47	229	-246	60	-74	61	-177	-120	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.111	0.93	Yes	0.746	0.250	1.00	Yes	1.00	**1.23**
		U_{18} - L_{18}	-----	-534.89	432	-445	142	-148	124	-219	-133	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.090	0.88	Yes	0.744	0.252	1.00	Yes	1.00	**1.35**
		U_{19} - L_{19}	-----	-642.85	537	-525	170	-168	187	-99	-116	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.100	0.91	Yes	0.748	0.249	1.00	Yes	1.00	**1.50**
		U_{20} - L_{20}	-----	-566.72	352	-499	155	-297	779	102	-218	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.248	1.00	Yes	0.660	0.232	0.90	Yes	1.00	**1.10**
	Structure 2	U_0 - L_0	-----	-679.33	-162	211	-450	568	-42	-7	-542	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.184	1.00	Yes	0.728	0.241	0.97	Yes	1.00	**1.59**
		U_1 - L_1	-----	-717.19	-114	123	-531	537	-107	-6	-185	32	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.080	0.91	Yes	0.769	0.228	1.00	Yes	1.00	**2.09**
		U_2 - L_2	-----	-587.32	-105	115	-470	479	-107	-38	-153	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.086	0.88	Yes	0.748	0.245	1.00	Yes	1.00	**1.78**
		U_3 - L_3	-----	-488.89	-52	60	-241	251	83	-46	-196	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.124	0.96	Yes	0.767	0.229	1.00	Yes	1.00	**1.68**
		U_4 - L_4	-----	-336.88	-12	21	-224	223	249	76	-181	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.149	0.92	Yes	0.713	0.287	1.00	Yes	1.00	**1.63**
		U_5 - L_5	76.25	-326.94	77	-60	-213	235	-3	97	13	-31	0.137	0.329	0.47	Yes	0.075	0.181	0.26	Yes	0.739	0.130	0.87	Yes	0.692	0.301	1.00	Yes	1.00	**2.11**
		U_6 - L_6	345.43	-239.15	217	-214	-232	245	120	203	-62	-25	0.621	0.372	1.00	Yes	0.342	0.205	0.55	Yes	0.538	0.147	0.69	Yes	0.506	0.313	0.82	Yes	1.00	**3.32**
		U_7 - L_7	-----	-210.58	381	-427	-145	154	279	64	-126	234	-----	-----	-----	-----	-----	-----	-----	-----	0.476	0.227	0.71	Yes	0.446	0.546	1.00	Yes	1.00	**5.13**
		U_8 - L_8	-----	-465.04	354	-374	66	-83	101	-143	-4	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.100	0.78	Yes	0.670	0.327	1.00	Yes	1.00	**1.75**
		U_9 - L_9	-----	-689.40	601	-607	152	-176	121	-174	-8	12	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.078	0.85	Yes	0.739	0.258	1.00	Yes	1.00	**2.10**
		U_{10} - L_{10}	-----	-787.91	553	-576	162	-200	225	-198	11	7	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.090	0.87	Yes	0.737	0.254	1.00	Yes	1.00	**2.16**
		U_{11} - L_{11}	-----	-809.66	516	-533	185	-187	149	-142	-173	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.097	0.92	Yes	0.757	0.235	1.00	Yes	1.00	**1.91**
		U_{12} - L_{12}	-----	-881.23	535	-542	156	-134	173	-52	-154	7	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.098	0.95	Yes	0.764	0.232	1.00	Yes	1.00	**1.97**
		U_{13} - L_{13}	-----	-742.74	580	-559	208	-205	277	40	-169	20	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.162	0.99	Yes	0.716	0.277	1.00	Yes	1.00	**1.68**
		U_{14} - L_{14}	-----	-1154.74	675	-643	-449	417	743	305	258	266	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.151	1.00	Yes	0.766	0.119	0.89	Yes	1.00	**2.74**
		U_{15} - L_{15}	-----	-730.64	-116	124	-604	584	-307	9	-191	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.160	0.98	Yes	0.704	0.289	1.00	Yes	1.00	**2.58**
		U_{16} - L_{16}	-----	-655.15	-89	63	-516	486	-807	-260	-1165	-470	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.238	1.00	Yes	0.702	0.219	0.93	Yes	1.00	**2.11**
		U_{17} - L_{17}	-----	-640.85	-123	122	-541	538	-275	-184	-534	-427	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.169	0.97	Yes	0.746	0.251	1.00	Yes	1.00	**2.01**
		U_{18} - L_{18}	-----	-577.84	-90	90	-505	513	-114	-126	-439	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.157	0.93	Yes	0.736	0.263	1.00	Yes	1.00	**2.00**
		U_{19} - L_{19}	-----	-469.50	-54	58	-307	300	-66	-32	-235	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.125	0.84	Yes	0.701	0.295	1.00	Yes	1.00	**1.68**
		U_{20} - L_{20}	-----	-381.63	-18	27	-227	233	-69	-11	-29	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.094	0.88	Yes	0.731	0.266	1.00	Yes	1.00	**1.65**
		U_{21} - L_{21}	30.33	-316.60	27	-12	-236	253	3	120	-99	-52	0.055	0.358	0.42	Yes	0.030	0.197	0.23	Yes	0.715	0.127	0.85	Yes	0.670	0.323	1.00	Yes	1.00	**2.00**
		U_{22} - L_{22}	-----	-215.70	321	-341	-395	421	417	149	-12	266	-----	-----	-----	-----	-----	-----	-----	-----	0.485	0.200	0.69	Yes	0.456	0.538	1.00	Yes	1.00	**6.05**
		U_{23} - L_{23}	59.49	-312.74	242	-259	-49	38	148	-57	173	117	0.107	0.381	0.49	Yes	0.059	0.209	0.27	Yes	0.706	0.152	0.86	Yes	0.662	0.331	1.00	Yes	1.00	**1.97**
		U_{24} - L_{24}	-----	-370.32	241	-252	10	-22	197	-63	76	27	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.109	0.87	Yes	0.709	0.288	1.00	Yes	1.00	**1.63**
		U_{25} - L_{25}	-----	-469.63	309	-302	38	-38	241	-75	-89	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.097	0.81	Yes	0.701	0.297	1.00	Yes	1.00	**1.64**
		U_{26} - L_{26}	-----	-568.47	511	-538	66	-70	329	-44	-123	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.106	0.87	Yes	0.724	0.275	1.00	Yes	1.00	**1.81**
		U_{27} - L_{27}	-----	-629.11	572	-574	85	-85	267	-55	-136	3	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.101	0.88	Yes	0.732	0.266	1.00	Yes	1.00	**1.90**
		U_{28} - L_{28}	-----	-710.49	559	-552	74	-71	359	-21	-156	17	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.105	0.93	Yes	0.761	0.237	1.00	Yes	1.00	**2.05**
		U_{29} - L_{29}	-----	-713.63	641	-616	118	-123	420	42	-118	28	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.197	1.00	Yes	0.688	0.307	1.00	Yes	1.00	**2.24**
		U_{30} - L_{30}	-----	-1162.06	745	-730	-627	565	830	50	-72	297	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.141	1.00	Yes	0.771	0.132	0.91	Yes	1.00	**3.23**
		U_{31} - L_{31}	-----	-700.77	-106	107	-531	499	-309	-33	-591	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1.00	Yes	0.676	0.254	0.93	Yes	1.00	**2.36**
		U_{32} - L_{32}	-----	-808.73	-80	57	-457	448	-697	-279	-840	-428	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.216	1.00	Yes	0.701	0.196	0.90	Yes	1.00	**2.34**
		U_{33} - L_{33}	-----	-797.81	-117	105	-487	481	-466	-351	-685	-521	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1.00	Yes	0.746	0.215	0.97	Yes	1.00	**2.42**
		U_{34} - L_{34}	-----	-801.80	-110	126	-547	556	-234	-196	-441	-395	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.147	0.94	Yes	0.750	0.246	1.00	Yes	1.00	**2.58**
		U_{35} - L_{35}	-----	-707.50	-110	125	-550	564	-156	-15	-49	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.067	0.86	Yes	0.758	0.239	1.00	Yes	1.00	**2.30**
		U_{36} - L_{36}	-----	-479.93	-51	66	-332	350	13	70	-68	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.093	0.79	Yes	0.691	0.306	1.00	Yes	1.00	**1.95**
		U_{37} - L_{37}	-----	-185.28	80	-80	-417	469	82	101	-164	192	-----	-----	-----	-----	-----	-----	-----	-----	0.419	0.231	0.65	Yes	0.392	0.600	1.00	Yes	1.00	**4.72**
		U_{38} - L_{38}	338.41	-176.94	168	-173	-241	248	178	-73	236	115	0.609	0.385	1.00	Yes	0.335	0.212	0.55	Yes	0.398	0.133	0.54	Yes	0.374	0.317	0.70	Yes	1.00	**2.79**
		U_{39} - L_{39}	152.79	-321.29	224	-244	-133	119	160	-101	50	71	0.275	0.358	0.64	Yes	0.151	0.197	0.35	Yes	0.726	0.110	0.84	Yes	0.680	0.312	1.00	Yes	1.00	**2.37**
		U_{40} - L_{40}	23.07	-339.44	217	-216	-19	1	165	-123	22	3	0.041	0.325	0.37	Yes	0.023	0.179	0.21	Yes	0.770	0.087	0.86	Yes	0.718	0.277	1.00	Yes	1.00	**1.74**
		U_{41} - L_{41}	-----	-487.98	246	-258	26	-30	143	-132	8	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.084	0.92	Yes	0.765	0.235	1.00	Yes	1.00	**1.66**
		U_{42} - L_{42}	-----	-581.28	492	-498	60	-69	164	-170	11	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.075	0.86	Yes	0.741	0.255	1.00	Yes	1.00	**1.76**
		U_{43} - L_{43}	-----	-707.19	567	-565	77	-90	261	-40	-50	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.086	0.90	Yes	0.758	0.241	1.00	Yes	1.00	**1.95**
		U_{44} - L_{44}	-----	-633.86	376	-502	117	-134	958	162	-132	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.233	1.00	Yes	0.679	0.213	0.90	Yes	1.00	**1.56**
	Structure 3	U_0 - L_0	-----	-579.72	-145	194	-410	469	-57	-7	-826	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.232	1.00	Yes	0.675	0.218	0.90	Yes	1.00	**1.24**
		U_1 - L_1	-----	-654.88	-110	122	-489	494	-124	-3	-132	109	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.075	0.90	Yes	0.762	0.229	1.00	Yes	1.00	**2.06**
		U_2 - L_2	-----	-535.13	-108	114	-440	444	-149	-46	-304	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.112	0.90	Yes	0.744	0.251	1.00	Yes	1.00	**1.70**
		U_3 - L_3	-----	-445.16	-45	58	-203	221	45	-64	-37	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.080	0.92	Yes	0.768	0.224	1.00	Yes	1.00	**1.41**
		U_4 - L_4	-----	-321.14	-12	30	-243	248	-49	90	-208	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.159	0.89	Yes	0.680	0.317	1.00	Yes	1.00	**1.80**
		U_5 - L_5	79.68	-305.54	74	-62	-256	275	-20	125	-157	-30	0.143	0.397	0.54	Yes	0.079	0.218	0.30	Yes	0.685	0.153	0.84	Yes	0.647	0.351	1.00	Yes	1.00	**2.24**
		U_6 - L_6	-----	-200.72	427	-445	-287	308	-160	51	253	106	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.216	0.67	Yes	0.425	0.569	1.00	Yes	1.00	**5.76**
		U_7 - L_7	-----	-359.58	244	-266	12	-26	-2	-153	-11	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.120	0.85	Yes	0.689	0.303	1.00	Yes	1.00	**1.56**
		U_8 - L_8	-----	-514.41	339	-340	63	-69	90	-177	-14	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.102	0.85	Yes	0.706	0.291	1.00	Yes	1.00	**1.86**
		U_9 - L_9	-----	-648.46	405	-510	116	-179	40	-201	-246	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.122	0.90	Yes	0.755	0.237	1.00	Yes	1.00	**1.89**
		U_{10} - L_{10}	-----	-776.82	404	-439	119	-116	199	-53	-215	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.105	0.92	Yes	0.766	0.228	1.00	Yes	1.00	**2.02**
		U_{11} - L_{11}	-----	-648.09	430	-474	167	-192	296	57	-167	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.125	0.90	Yes	0.732	0.264	1.00	Yes	1.00	**1.44**
		U_{12} - L_{12}	-----	-1179.82	491	-636	-381	413	983	376	459	182	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.144	1.00	Yes	0.818	0.119	0.94	Yes	1.00	**2.65**
		U_{13} - L_{13}	-----	-458.88	-67	76	-273	288	-297	-42	-215	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.154	0.93	Yes	0.708	0.284	1.00	Yes	1.00	**1.48**
		U_{14} - L_{14}	-----	-469.03	-44	29	-251	252	-668	-324	-1001	-531	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.281	1.00	Yes	0.673	0.220	0.90	Yes	1.00	**1.73**
		U_{15} - L_{15}	-----	-437.78	-42	56	-209	235	-371	-206	-471	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.755	0.238	1.00	Yes	1.00	**1.75**
		U_{16} - L_{16}	-----	-158.77	87	-54	-517	514	-934	-413	-518	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.349	0.416	0.77	Yes	0.336	0.661	1.00	Yes	1.00	**5.66**
		U_{17} - L_{17}	283.87	-184.03	156	-180	-302	312	-295	-196	-121	100	0.511	0.484	1.00	Yes	0.281	0.266	0.55	Yes	0.403	0.175	0.58	Yes	0.389	0.399	0.79	Yes	1.00	**3.23**
		U_{18} - L_{18}	122.04	-290.99	252	-297	-113	127	51	-121	-111	18	0.219	0.415	0.64	Yes	0.121	0.228	0.35	Yes	0.636	0.141	0.78	Yes	0.616	0.380	1.00	Yes	1.00	**2.51**
		U_{19} - L_{19}	48.47	-310.26	264	-244	-57	45	57	-65	-84	-3	0.087	0.362	0.45	Yes	0.048	0.199	0.25	Yes	0.678	0.106	0.79	Yes	0.657	0.338	1.00	Yes	1.00	**1.61**
		U_{20} - L_{20}	-----	-324.99	97	-172	-16	-67	532	171	-589	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.266	1.00	Yes	0.688	0.220	0.91	Yes	1.00	**0.77**

Moment (Start) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

				Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
						Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
				Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
				(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	U_0 - L_1		518.44	-----	-16	-2	-139	72	-5	13	-613	-128	0.680	0.317	1.00	Yes	0.411	0.174	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		U_1 - L_2		388.31	-91.15	18	-20	-106	-2	-8	-17	-552	-323	0.698	0.295	1.00	Yes	0.384	0.162	0.55	Yes	0.209	0.265	0.48	Yes	0.193	0.135	0.33	Yes	1.00	**2.06**
		U_2 - L_3		394.89	-269.33	52	-30	-159	-22	38	28	-276	-108	0.710	0.283	1.00	Yes	0.391	0.156	0.55	Yes	0.620	0.276	0.90	Yes	0.570	0.203	0.78	Yes	1.00	**3.84**
		U_3 - L_4		-----	-320.88	54	-6	-105	-111	119	122	29	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.261	1.00	Yes	0.679	0.142	0.83	Yes	1.00	**3.62**
		U_4 - L_5		565.48	-----	-11	54	-98	23	24	-22	-200	-290	0.829	0.166	1.00	Yes	0.456	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.53**
		U_5 - L_6		687.21	-----	-28	152	-215	216	202	77	-352	-340	0.812	0.187	1.00	Yes	0.447	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		U_7 - L_8		640.40	-----	-77	118	-300	235	349	162	-282	-224	0.757	0.234	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.34**
		U_8 - L_7		652.89	-----	24	162	-104	295	286	163	-115	-181	0.772	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.38**
		U_8 - L_9		987.82	-----	113	225	-98	355	358	54	329	376	0.790	0.206	1.00	Yes	0.489	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		U_9 - L_{10}		929.92	-----	-69	84	-353	230	139	141	741	556	0.743	0.252	1.00	Yes	0.460	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.69**
		U_{10} - L_{11}		983.73	-----	-53	160	-254	174	137	192	-4	350	0.831	0.163	1.00	Yes	0.514	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		U_{11} - L_{12}		834.59	-----	-67	55	-289	97	23	130	143	250	0.826	0.171	1.00	Yes	0.454	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		U_{12} - L_{13}		648.22	-----	-78	44	-204	144	-117	-91	-67	118	0.790	0.201	1.00	Yes	0.497	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.57**
		U_{13} - L_{14}		455.03	-----	-20	-12	-98	28	-181	-180	-40	-15	0.818	0.178	1.00	Yes	0.450	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.52**
		U_{15} - L_{14}		262.81	-310.91	55	-115	-92	-16	-268	-125	-401	-321	0.473	0.263	0.74	Yes	0.260	0.144	0.41	Yes	0.728	0.269	1.00	Yes	0.658	0.146	0.81	Yes	1.00	**2.37**
		U_{16} - L_{15}		385.04	-82.35	-9	-32	-134	88	-376	-147	-444	-306	0.693	0.300	1.00	Yes	0.381	0.165	0.55	Yes	0.195	0.214	0.41	Yes	0.174	0.171	0.35	Yes	1.00	**1.88**
		U_{17} - L_{16}		508.81	-----	-34	14	-143	87	-110	-130	-452	-409	0.746	0.250	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.26**
		U_{18} - L_{17}		600.89	-----	-111	76	-319	243	-111	-118	-575	-492	0.710	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.39**
		U_{19} - L_{18}		666.28	-----	-132	87	-355	246	-64	-105	-565	-481	0.722	0.274	1.00	Yes	0.397	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.38**
		U_{20} - L_{19}		643.39	-----	-72	104	-283	254	82	-84	-941	-233	0.697	0.299	1.00	Yes	0.383	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.48**
	Structure 2	U_0 - L_1		759.06	-----	-114	99	-392	364	-59	-47	-420	-60	0.751	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		U_1 - L_2		784.37	-----	-95	72	-391	300	-100	-29	-219	37	0.776	0.214	1.00	Yes	0.427	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**
		U_2 - L_3		659.21	-----	-81	62	-349	269	-22	92	-127	114	0.779	0.221	1.00	Yes	0.429	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		U_3 - L_4		597.26	-----	-37	16	-183	131	105	61	-159	11	0.796	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		U_4 - L_5		420.98	-22.03	-2	-9	-134	91	73	-91	-224	74	0.757	0.236	1.00	Yes	0.416	0.130	0.55	Yes	0.054	0.108	0.17	Yes	0.047	0.172	0.22	Yes	1.00	**1.75**
		U_5 - L_6		429.48	-258.26	60	-108	-135	59	-174	-164	-110	96	0.772	0.223	1.00	Yes	0.425	0.122	0.55	Yes	0.610	0.182	0.80	Yes	0.546	0.172	0.72	Yes	1.00	**2.70**
		U_6 - L_7		79.49	-384.33	57	-105	-54	-11	-96	-297	-159	-82	0.129	0.197	0.33	Yes	0.071	0.108	0.18	Yes	0.823	0.174	1.00	Yes	0.736	0.120	0.86	Yes	1.00	**1.70**
		U_8 - L_7		555.96	-----	-34	-13	-205	101	-235	-196	-365	-503	0.709	0.286	1.00	Yes	0.446	0.163	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		U_8 - L_9		689.05	-----	-117	42	-334	212	-281	-212	-485	-473	0.746	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.70**
		U_{10} - L_9		777.79	-----	-94	124	-319	214	0	-63	-509	-489	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		U_{11} - L_{10}		844.91	-----	-99	147	-352	256	166	29	-559	-542	0.770	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.77**
		U_{12} - L_{11}		853.83	-----	-109	163	-372	336	290	121	-386	-438	0.778	0.218	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.68**
		U_{13} - L_{12}		749.30	-----	-151	153	-439	377	344	133	-253	-213	0.741	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.46**
		U_{14} - L_{13}		746.95	-----	-5	181	-278	427	361	137	-312	-161	0.739	0.252	1.00	Yes	0.406	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.85**
		U_{14} - L_{15}		636.80	-----	65	127	-224	360	128	-77	237	163	0.753	0.247	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		U_{15} - L_{16}		623.09	-----	-57	65	-407	358	-48	14	130	164	0.737	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**
		U_{16} - L_{17}		711.84	-----	-60	100	-327	334	-166	116	-296	315	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		U_{17} - L_{18}		648.71	-----	-66	79	-303	276	-26	102	3	322	0.767	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**
		U_{18} - L_{19}		667.68	-----	-49	68	-281	258	34	20	68	254	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.83**
		U_{19} - L_{20}		607.12	-----	-18	25	-197	157	-31	-29	24	231	0.774	0.223	1.00	Yes	0.426	0.126	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		U_{20} - L_{21}		442.90	-----	-6	7	-132	106	-68	-48	36	117	0.797	0.202	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		U_{21} - L_{22}		440.53	-197.84	25	-73	-118	49	-41	-178	-32	98	0.792	0.202	1.00	Yes	0.436	0.111	0.55	Yes	0.467	0.142	0.61	Yes	0.419	0.151	0.57	Yes	1.00	**2.35**
		U_{23} - L_{22}		362.71	-290.10	43	-92	-126	20	-305	-22	-397	-349	0.652	0.276	0.93	Yes	0.359	0.152	0.52	Yes	0.691	0.306	1.00	Yes	0.614	0.161	0.78	Yes	1.00	**2.70**
		U_{24} - L_{23}		414.42	-32.92	3	-17	-126	93	-155	-59	-309	-281	0.745	0.250	1.00	Yes	0.410	0.137	0.55	Yes	0.079	0.156	0.24	Yes	0.070	0.161	0.24	Yes	1.00	**1.79**
		U_{25} - L_{24}		563.25	-----	-13	27	-198	163	71	7	-467	-376	0.718	0.272	1.00	Yes	0.395	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.87**
		U_{26} - L_{25}		630.93	-----	-27	38	-296	240	119	46	-434	-415	0.746	0.246	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		U_{27} - L_{26}		642.92	-----	-46	58	-298	265	177	68	-331	-351	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.75**
		U_{28} - L_{27}		703.93	-----	-47	65	-352	352	203	113	-330	-308	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		U_{29} - L_{28}		620.15	-----	-72	83	-378	334	268	133	-238	-211	0.733	0.263	1.00	Yes	0.403	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		U_{30} - L_{29}		637.25	-----	40	107	-228	350	214	139	-175	-231	0.753	0.240	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		U_{30} - L_{31}		744.61	-----	64	158	-284	420	397	9	151	182	0.737	0.254	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		U_{31} - L_{32}		759.61	-----	-73	77	-437	379	-27	42	-190	252	0.751	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		U_{32} - L_{33}		870.54	-----	-57	94	-370	336	-144	135	-216	337	0.793	0.203	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**
		U_{33} - L_{34}		875.37	-----	-66	91	-344	275	26	203	-38	366	0.797	0.196	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		U_{34} - L_{35}		821.87	-----	-64	80	-313	224	80	87	16	267	0.813	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		U_{35} - L_{36}		735.22	-----	-86	84	-344	236	-15	0	73	146	0.796	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		U_{36} - L_{37}		611.95	-----	-33	9	-195	144	-194	-208	-111	76	0.780	0.217	1.00	Yes	0.491	0.122	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		U_{38} - L_{37}		-----	-390.99	61	-97	-40	-27	-250	-68	-242	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.155	1.00	Yes	0.749	0.111	0.86	Yes	1.00	**1.57**
		U_{38} - L_{39}		364.19	-302.74	88	-120	-119	40	-215	-107	-425	-396	0.655	0.276	0.94	Yes	0.360	0.152	0.52	Yes	0.721	0.273	1.00	Yes	0.641	0.153	0.80	Yes	1.00	**2.82**
		U_{40} - L_{39}		386.87	-115.35	18	-44	-139	91	-242	-132	-404	-340	0.696	0.294	1.00	Yes	0.383	0.162	0.55	Yes	0.276	0.220	0.50	Yes	0.244	0.178	0.43	Yes	1.00	**2.15**
		U_{41} - L_{40}		542.24	-----	-17	1	-179	112	-92	-77	-513	-433	0.723	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.77**
		U_{42} - L_{41}		607.80	-----	-49	32	-328	247	-67	-64	-475	-487	0.719	0.274	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.70**
		U_{43} - L_{42}		733.60	-----	-65	44	-394	295	-4	-46	-558	-498	0.726	0.266	1.00	Yes	0.399	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		U_{44} - L_{43}		669.42	-----	-89	82	-338	324	-8	-10	-1165	-182	0.662	0.331	1.00	Yes	0.364	0.182	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
	Structure 3	U_0 - L_1		570.24	-----	-113	94	-424	314	-62	-53	-988	63	0.618	0.379	1.00	Yes	0.340	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.72**
		U_1 - L_2		673.63	-----	-99	67	-346	251	-123	-44	-540	-187	0.730	0.266	1.00	Yes	0.401	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		U_2 - L_3		645.05	-----	-97	63	-331	242	-48	78	-253	126	0.763	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.63**
		U_3 - L_4		553.11	-----	-28	9	-159	104	76	50	-67	6	0.811	0.179	1.00	Yes	0.446	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		U_4 - L_5		424.08	-75.59	-8	-29	-132	90	-101	-164	-211	26	0.763	0.230	1.00	Yes	0.419	0.127	0.55	Yes	0.179	0.120	0.30	Yes	0.160	0.169	0.33	Yes	1.00	**1.85**
		U_5 - L_6		418.20	-295.09	36	-103	-112	-5	-220	-330	-240	-11	0.752	0.239	1.00	Yes	0.414	0.132	0.55	Yes	0.691	0.218	0.91	Yes	0.624	0.144	0.77	Yes	1.00	**2.52**
		U_7 - L_6		427.73	-8.91	-4	-35	-98	19	-213	-190	-299	-360	0.769	0.230	1.00	Yes	0.423	0.126	0.55	Yes	0.021	0.182	0.21	Yes	0.019	0.125	0.15	Yes	1.00	**1.77**
		U_8 - L_7		590.73	-----	-59	8	-204	134	-348	-224	-491	-438	0.720	0.274	1.00	Yes	0.453	0.156	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		U_8 - L_9		779.57	-----	-62	79	-273	67	-93	-141	-639	-631	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		U_{10} - L_9		933.90	-----	-45	127	-268	148	87	-11	-590	-646	0.789	0.209	1.00	Yes	0.488	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		U_{11} - L_{10}		970.42	-----	-74	125	-319	236	353	187	-598	-503	0.776	0.218	1.00	Yes	0.481	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.01**
		U_{12} - L_{11}		988.56	-----	75	179	-117	348	375	219	-414	-382	0.790	0.208	1.00	Yes	0.490	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		U_{12} - L_{13}		660.79	-----	66	147	-114	295	-3	-116	275	183	0.781	0.218	1.00	Yes	0.430	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		U_{13} - L_{14}		643.87	-----	-21	57	-339	254	-23	53	232	235	0.761	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		U_{14} - L_{15}		709.62	-----	-1	130	-196	193	-23	107	-205	244	0.839	0.156	1.00	Yes	0.461	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		U_{15} - L_{16}		506.37	-----	7	85	-164	8	173	235	351	245	0.743	0.248	1.00	Yes	0.408	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.89**
		U_{17} - L_{16}		-----	-320.17	49	-2	-67	-92	162	156	-502	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.260	1.00	Yes	0.677	0.118	0.80	Yes	1.00	**2.71**
		U_{18} - L_{17}		387.72	-275.15	59	-31	-131	-30	278	184	-464	-394	0.697	0.302	1.00	Yes	0.384	0.166	0.55	Yes	0.633	0.346	0.98	Yes	0.582	0.168	0.76	Yes	1.00	**3.38**
		U_{19} - L_{18}		411.80	-124.49	24	-19	-101	12	153	118	-445	-374	0.741	0.258	1.00	Yes	0.407	0.142	0.55	Yes	0.286	0.237	0.53	Yes	0.263	0.129	0.40	Yes	1.00	**1.74**
		U_{20} - L_{19}		391.52	-----	166	-14	-165	78	1145	38	-1118	-560	0.514	0.482	1.00	Yes	0.310	0.265	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**

Moment (Start) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
	Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-500.47	504	-590	-988	-622	-26	-291	319	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.315	1	Yes	0.675	0.235	0.91	Yes	1.00	**2.60**
		$U_1 - U_2$	2.14	-567.10	-44	33	-533	-621	-4	-115	30	-13	0.002	0.167	0.17	Yes	0.002	0.115	0.12	Yes	0.772	0.224	1	Yes	0.765	0.148	0.92	Yes	1.00	**1.76**
		$U_2 - U_3$	185.24	-565.24	-57	297	-985	-8	4	-97	264	-186	0.212	0.279	0.50	Yes	0.143	0.182	0.33	Yes	0.769	0.197	0.97	Yes	0.762	0.234	1.00	Yes	1.00	**2.63**
		$U_3 - U_4$	438.26	-538.65	150	331	-1125	242	-131	-100	129	-18	0.502	0.290	0.80	Yes	0.345	0.199	0.55	Yes	0.733	0.199	0.94	Yes	0.726	0.268	1.00	Yes	1.00	**3.07**
		$U_4 - U_5$	320.74	-562.86	106	255	-989	-18	-173	-25	-81	-102	0.368	0.264	0.64	Yes	0.252	0.181	0.44	Yes	0.766	0.220	0.99	Yes	0.759	0.235	1.00	Yes	1.00	**2.13**
		$U_5 - U_6$	600.60	-505.00	236	386	-1029	-80	-349	-25	-134	-345	0.688	0.304	1.00	Yes	0.464	0.198	0.67	Yes	0.687	0.228	0.92	Yes	0.681	0.245	0.93	Yes	1.00	**2.88**
		$U_6 - U_7$	786.61	-120.24	301	203	-819	37	-318	102	-471	-164	0.752	0.239	1.00	Yes	0.526	0.164	0.69	Yes	0.137	0.182	0.32	Yes	0.135	0.174	0.31	Yes	1.00	**2.76**
		$U_7 - U_8$	860.73	-----	32	945	-1692	2361	-161	435	-322	147	0.596	0.402	1.00	Yes	0.416	0.274	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		$U_8 - U_9$	378.71	-----	3686	-3434	599	-125	105	517	13	166	0.310	0.682	1.00	Yes	0.212	0.464	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.91**
		$U_9 - U_{10}$	-----	-511.06	811	-512	-1322	-161	462	747	157	653	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.336	1	Yes	0.652	0.296	0.95	Yes	1.00	**10.03**
		$U_{10} - U_{11}$	-----	-632.21	456	-859	-372	-431	420	-1	327	157	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.163	0.98	Yes	0.807	0.192	1.00	Yes	1.00	**3.98**
		$U_{11} - U_{12}$	-----	-865.05	262	-383	-497	-509	275	-193	689	240	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1	Yes	0.812	0.084	0.90	Yes	1.00	**2.69**
		$U_{12} - U_{13}$	-----	-1179.02	113	-339	-963	-381	243	-357	506	67	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.195	1	Yes	0.787	0.133	0.93	Yes	1.00	**2.56**
		$U_{13} - U_{14}$	-----	-1359.98	-76	-332	-1271	-576	148	88	306	39	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.209	1	Yes	0.780	0.140	0.92	Yes	1.00	**2.61**
		$U_{14} - U_{15}$	-----	-1340.90	-189	-960	-1515	-951	128	-210	137	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.222	1	Yes	0.769	0.167	0.94	Yes	1.00	**1.86**
		$U_{15} - U_{16}$	-----	-1429.41	29	-1298	-1351	-565	-114	-462	230	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.167	1	Yes	0.819	0.149	0.97	Yes	1.00	**1.94**
		$U_{16} - U_{17}$	-----	-1372.09	-314	-184	-1604	-378	46	-173	-62	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.205	1	Yes	0.787	0.177	0.97	Yes	1.00	**1.93**
		$U_{17} - U_{18}$	-----	-995.46	-167	-104	-1041	-271	-157	-220	-86	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.204	1	Yes	0.779	0.169	0.95	Yes	1.00	**1.78**
		$U_{18} - U_{19}$	-----	-716.29	-195	-30	-865	45	-196	-171	-46	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1	Yes	0.806	0.174	0.98	Yes	1.00	**1.61**
		$U_{19} - U_{20}$	-----	-590.35	-37	-1387	-1629	655	-106	-631	375	15	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.324	1	Yes	0.664	0.328	1.00	Yes	1.00	**3.37**
	Structure 2	$U_0 - U_1$	-----	-603.57	1322	-1476	-1650	-335	96	-80	693	119	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.221	0.94	Yes	0.713	0.280	1.00	Yes	1.00	**4.54**
		$U_1 - U_2$	-----	-809.06	11	-608	-475	-939	130	-98	322	249	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.206	1	Yes	0.781	0.143	0.93	Yes	1.00	**2.24**
		$U_2 - U_3$	-----	-1165.62	318	-564	-917	-774	635	-15	380	86	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.162	1	Yes	0.827	0.093	0.93	Yes	1.00	**2.76**
		$U_3 - U_4$	-----	-1348.82	-361	-294	-1512	-1648	124	-310	230	-121	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1	Yes	0.768	0.147	0.92	Yes	1.00	**2.00**
		$U_4 - U_5$	-----	-1454.26	-308	-1096	-2068	-939	-20	-610	312	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.240	1	Yes	0.747	0.171	0.92	Yes	1.00	**2.44**
		$U_5 - U_6$	-----	-1498.18	-385	-6	-2050	-1092	-108	-299	36	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1	Yes	0.769	0.170	0.94	Yes	1.00	**1.95**
		$U_6 - U_7$	-----	-1315.83	-266	-77	-1478	-1661	-85	-265	-98	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.237	1	Yes	0.749	0.148	0.90	Yes	1.00	**1.83**
		$U_7 - U_8$	-----	-1338.52	-155	-198	-2116	-588	-184	-220	-89	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.762	0.189	0.96	Yes	1.00	**1.88**
		$U_8 - U_9$	-----	-1193.79	-284	104	-1519	-229	-230	-185	-50	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.180	1	Yes	0.810	0.161	0.98	Yes	1.00	**2.00**
		$U_9 - U_{10}$	138.54	-906.15	-83	295	-1497	-520	-282	-132	-173	-241	0.102	0.213	0.32	Yes	0.069	0.144	0.22	Yes	0.787	0.209	1	Yes	0.782	0.182	0.97	Yes	1.00	**2.14**
		$U_{10} - U_{11}$	478.82	-756.63	92	348	-1613	-100	-339	-137	-102	-183	0.404	0.269	0.68	Yes	0.275	0.174	0.45	Yes	0.756	0.235	1	Yes	0.752	0.228	0.98	Yes	1.00	**2.85**
		$U_{11} - U_{12}$	798.23	-404.80	176	510	-1878	373	-346	-163	-202	-436	0.674	0.318	1.00	Yes	0.453	0.213	0.67	Yes	0.405	0.219	0.63	Yes	0.402	0.265	0.67	Yes	1.00	**3.29**
		$U_{12} - U_{13}$	1110.35	-----	344	83	-1342	-556	-435	-40	-763	-519	0.750	0.242	1.00	Yes	0.534	0.165	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{13} - U_{14}$	1118.06	-----	-110	1868	-2765	4278	-228	358	-656	-94	0.550	0.441	1.00	Yes	0.389	0.289	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_{14} - U_{15}$	729.47	-----	6304	-3344	1236	-93	-52	733	-284	132	0.359	0.634	1.00	Yes	0.254	0.415	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		$U_{15} - U_{16}$	1049.64	-----	374	27	-2370	-1719	653	905	430	1023	0.635	0.356	1.00	Yes	0.451	0.240	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{16} - U_{17}$	-----	-758.36	2576	-2028	-2357	-746	1074	16	1130	601	-----	-----	-----	-----	-----	-----	-----	-----	0.662	0.338	1	Yes	0.657	0.324	0.99	Yes	1.00	**12.23**
		$U_{17} - U_{18}$	-----	-619.79	931	-516	-1525	-163	194	-76	223	291	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.245	0.99	Yes	0.732	0.259	1.00	Yes	1.00	**6.45**
		$U_{18} - U_{19}$	-----	-683.26	772	-388	-792	-565	102	-324	869	128	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1	Yes	0.807	0.134	0.95	Yes	1.00	**4.31**
		$U_{19} - U_{20}$	332.94	-688.94	359	204	-1170	-343	-4	184	245	120	0.312	0.220	0.54	Yes	0.207	0.145	0.36	Yes	0.765	0.230	1	Yes	0.760	0.187	0.95	Yes	1.00	**3.12**
		$U_{20} - U_{21}$	-----	-853.65	237	-359	-1364	-154	159	-350	232	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.208	1	Yes	0.779	0.198	0.98	Yes	1.00	**3.21**
		$U_{21} - U_{22}$	55.93	-818.23	-10	18	-1069	-1152	-17	-52	7	-90	0.043	0.177	0.23	Yes	0.031	0.118	0.15	Yes	0.752	0.247	1	Yes	0.747	0.167	0.92	Yes	1.00	**2.12**
		$U_{22} - U_{23}$	-----	-805.64	77	-976	-1455	-455	-41	-264	92	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.254	1	Yes	0.735	0.211	0.95	Yes	1.00	**2.08**
		$U_{23} - U_{24}$	18.29	-852.34	128	-90	-1386	-137	-110	-40	25	-154	0.014	0.218	0.24	Yes	0.010	0.139	0.15	Yes	0.784	0.213	1	Yes	0.778	0.201	0.98	Yes	1.00	**2.27**
		$U_{24} - U_{25}$	195.71	-680.20	106	230	-1131	-680	-228	-37	-171	-177	0.184	0.212	0.40	Yes	0.122	0.139	0.27	Yes	0.755	0.238	1	Yes	0.750	0.181	0.94	Yes	1.00	**2.11**
		$U_{25} - U_{26}$	384.52	-634.86	167	388	-1438	304	-272	33	-116	-51	0.386	0.284	0.67	Yes	0.253	0.181	0.44	Yes	0.754	0.184	0.94	Yes	0.750	0.244	1.00	Yes	1.00	**2.64**
		$U_{26} - U_{27}$	664.29	-554.94	253	433	-1793	350	-171	50	-171	-132	0.667	0.329	1.00	Yes	0.444	0.219	0.67	Yes	0.659	0.204	0.87	Yes	0.655	0.304	0.96	Yes	1.00	**3.62**
		$U_{27} - U_{28}$	951.80	-325.44	242	587	-1896	-374	-283	11	-283	-538	0.701	0.295	1.00	Yes	0.467	0.194	0.67	Yes	0.284	0.212	0.5	Yes	0.282	0.238	0.53	Yes	1.00	**4.30**
		$U_{28} - U_{29}$	662.56	-194.08	674	-2051	-4239	-596	-1366	300	-1215	-701	0.401	0.597	1.00	Yes	0.285	0.402	0.69	Yes	0.139	0.565	0.71	Yes	0.138	0.482	0.62	Yes	1.00	**8.29**
		$U_{29} - U_{30}$	1071.11	-----	6	1923	-2810	4591	-17	606	-461	145	0.527	0.466	1.00	Yes	0.373	0.306	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{30} - U_{31}$	912.86	-----	5380	-3623	1340	52	232	676	-407	-135	0.449	0.544	1.00	Yes	0.318	0.356	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{31} - U_{32}$	1009.93	-----	183	508	-1877	133	-119	149	328	815	0.682	0.314	1.00	Yes	0.486	0.214	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_{32} - U_{33}$	-----	-753.63	1505	-1713	-1244	-691	952	92	793	455	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.208	0.97	Yes	0.749	0.242	1.00	Yes	1.00	**9.85**
		$U_{33} - U_{34}$	641.03	-783.74	431	229	-717	-1292	123	198	193	113	0.541	0.206	0.75	Yes	0.368	0.133	0.51	Yes	0.784	0.210	1	Yes	0.779	0.182	0.97	Yes	1.00	**3.36**
		$U_{34} - U_{35}$	375.55	-972.77	496	87	-923	-727	57	-64	360	16	0.275	0.151	0.43	Yes	0.186	0.102	0.29	Yes	0.844	0.150	1	Yes	0.839	0.112	0.96	Yes	1.00	**3.46**
		$U_{35} - U_{36}$	115.01	-1158.66	238	-200	-1243	-552	90	123	314	62	0.066	0.158	0.23	Yes	0.047	0.104	0.16	Yes	0.791	0.206	1	Yes	0.786	0.132	0.92	Yes	1.00	**2.93**
		$U_{36} - U_{37}$	-----	-1340.04	-121	-60	-1155	-1895	137	-82	194	19	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.230	1	Yes	0.763	0.169	0.94	Yes	1.00	**2.08**
		$U_{37} - U_{38}$	-----	-1316.48	74	-1351	-2140	-766	-34	-216	242	10	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.242	1	Yes	0.750	0.191	0.95	Yes	1.00	**2.00**
		$U_{38} - U_{39}$	-----	-1638.95	188	-1764	-1800	-1185	52	-402	264	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.152	1	Yes	0.841	0.149	1.00	Yes	1.00	**2.41**
		$U_{39} - U_{40}$	-----	-1404.27	-325	-468	-2147	-1632	-117	-138	-165	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.267	1	Yes	0.721	0.178	0.90	Yes	1.00	**1.89**
		$U_{40} - U_{41}$	-----	-1344.23	-395	-427	-1926	-795	-90	-129	-95	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.222	1	Yes	0.765	0.172	0.94	Yes	1.00	**1.88**
		$U_{41} - U_{42}$	-----	-1141.52	-273	-175	-1780	-131	-98	38	-71	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.176	1	Yes	0.810	0.181	1.00	Yes	1.00	**1.93**
		$U_{42} - U_{43}$	-----	-790.17	-257	-54	-1377	-397	127	-45	247	-236	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.230	1	Yes	0.763	0.209	0.98	Yes	1.00	**2.36**
		$U_{43} - U_{44}$	-----	-572.56	-24	-1179	-1753	430	-133	-530	288	4	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.320	1	Yes	0.676	0.298	0.98	Yes	1.00	**3.26**
	Structure 3	$U_0 - U_1$	-----	-548.18	1287	-1198	-1888	-266	167	-29	850	68	-----	-----	-----	-----	-----	-----	-----	-----	0.622	0.244	0.87	Yes	0.617	0.380	1.00	Yes	1.00	**4.64**
		$U_1 - U_2$	-----	-690.47	38	-776	-245	-573	198	289	474	124	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.209	1	Yes	0.777	0.156	0.94	Yes	1.00	**1.64**
		$U_2 - U_3$	-----	-1019.92	184	-1051	-417	-340	615	-15	447	29	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1	Yes	0.798	0.171	0.97	Yes	1.00	**1.89**
		$U_3 - U_4$	-----	-1400.78	-79	-263	-952	-1178	233	-331	206	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.185	1	Yes	0.803	0.130	0.94	Yes	1.00	**2.28**
		$U_4 - U_5$	-----	-1382.28	-257	-269	-1228	-661	-16	-643	698	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.198	1	Yes	0.792	0.136	0.93	Yes	1.00	**2.12**
		$U_5 - U_6$	-----	-1359.62	-147	-223	-1165	-1227	-53	-211	-20	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1	Yes	0.779	0.135	0.92	Yes	1.00	**1.99**
		$U_6 - U_7$	-----	-1342.87	-212	-784	-1743	-337	-50	-370	24	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.221	1	Yes	0.770	0.192	0.97	Yes	1.00	**1.97**
		$U_7 - U_8$	-----	-1160.18	-124	-38	-1036	-650	-214	-206	-140	-358	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.775	0.143	0.92	Yes	1.00	**1.97**
		$U_8 - U_9$	-----	-888.59	-109	155	-956	46	-190	-122	-51	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.154	1	Yes	0.834	0.159	1.00	Yes	1.00	**1.80**
		$U_9 - U_{10}$	109.92	-601.11	-82	190	-1037	153	-271	-140	-142	-196	0.119	0.276	0.40	Yes	0.079	0.177	0.26	Yes	0.774	0.220	1	Yes	0.767	0.232	1.00	Yes	1.00	**1.99**
		$U_{10} - U_{11}$	659.52	-458.43	252	230	-980	53	-324	-51	-395	-166	0.715	0.283	1.00	Yes	0.484	0.190	0.68	Yes	0.590	0.221	0.82	Yes	0.585	0.220	0.81	Yes	1.00	**3.80**
		$U_{11} - U_{12}$	746.20	-----	-82	876	-1706	1956	-223	176	-423	1	0.611	0.380	1.00	Yes	0.418	0.259	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		$U_{12} - U_{13}$	424.16	-----	4277	-2995	630	-29	-50	541	-147	55	0.294	0.703	1.00	Yes	0.205	0.479	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		$U_{13} - U_{14}$	127.50	-510.68	663	16	-1995	-350	471	530	252	799	0.122	0.534	0.66	Yes	0.085	0.366	0.46	Yes	0.581	0.311	0.9	Yes	0.575	0.424	1.00	Yes	1.00	**10.11**
		$U_{14} - U_{15}$	-----	-574.55	783	-616	-527	-349	501	-304	552	154	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.212	1	Yes	0.775	0.186	0.97	Yes	1.00	**5.27**
		$U_{15} - U_{16}$	465.61	-563.52	364	192	-711	-251	-35	170	203	220	0.534	0.206	0.74	Yes	0.366	0.141	0.51	Yes	0.767	0.230	1	Yes	0.760	0.169	0.93	Yes	1.00	**3.40**
		$U_{16} - U_{17}$	-----	-595.68	461	-795	-679	-338	23	-97	260	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.116	0.93	Yes	0.803	0.189	1.00	Yes	1.00	**2.23**
		$U_{17} - U_{18}$	119.10	-573.46	242	-127	-692	-281	-68	146	33	-113	0.137	0.189	0.33	Yes	0.092	0.123	0.22	Yes	0.780	0.213	1	Yes	0.773	0.165	0.94	Yes	1.00	**1.68**
		$U_{18} - U_{19}$	-----	-565.08	117	-349	-827	-154	21	233	124	23	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.227	1	Yes	0.762	0.197	0.96	Yes	1.00	**1.58**
		$U_{19} - U_{20}$	-----	-529.34	126	-340	-902	-37	-58	27	322	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.273	1	Yes	0.714	0.214	0.93	Yes	1.00	**2.46**

Moment (Start) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-84.15	1740	-2812	-329	213	-376	-1347	57	197	-----	-----	-----	-----	-----	-----	-----	-----	0.153	0.687	0.84	Yes	0.152	0.844	1.00	Yes	1.00	**12.80**
		L_1 - L_2	438.39	-----	296	-938	-713	-470	7	-89	-185	56	0.671	0.321	1.00	Yes	0.409	0.216	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.73**
		L_2 - L_3	656.13	-61.32	-28	52	-860	-434	7	0	226	-48	0.755	0.244	1.00	Yes	0.437	0.146	0.59	Yes	0.084	0.232	0.32	Yes	0.083	0.208	0.30	Yes	1.00	**2.21**
		L_3 - L_4	627.89	-----	88	-692	-971	-175	-137	-10	-78	219	0.722	0.270	1.00	Yes	0.429	0.174	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		L_4 - L_5	297.01	-481.86	99	444	-978	141	132	-124	-154	-37	0.385	0.287	0.68	Yes	0.231	0.189	0.42	Yes	0.741	0.147	0.89	Yes	0.734	0.259	1.00	Yes	1.00	**2.24**
		L_5 - L_6	40.36	-725.50	136	558	-714	12	10	68	22	68	0.040	0.167	0.21	Yes	0.026	0.101	0.13	Yes	0.846	0.147	1	Yes	0.837	0.158	1.00	Yes	1.00	**2.57**
		L_6 - L_7	-----	-1024.71	174	118	-1070	-283	164	45	62	76	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.154	0.99	Yes	0.825	0.168	1.00	Yes	1.00	**3.26**
		L_7 - L_8	-----	-1048.17	104	938	-1438	2493	-177	-78	41	72	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.269	0.95	Yes	0.664	0.330	1.00	Yes	1.00	**5.65**
		L_8 - L_9	-----	-1132.06	2082	-285	542	-36	-8	-59	49	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.252	0.98	Yes	0.717	0.276	1.00	Yes	1.00	**4.85**
		L_9 - L_{10}	-----	-912.31	1343	-1682	-1342	-1429	-15	-419	24	9	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.097	0.84	Yes	0.734	0.264	1.00	Yes	1.00	**8.33**
		L_{10} - L_{11}	352.01	-563.78	522	-18	-300	-525	69	2	2	76	0.456	0.152	0.61	Yes	0.265	0.092	0.36	Yes	0.867	0.086	0.96	Yes	0.859	0.139	1.00	Yes	1.00	**3.56**
		L_{11} - L_{12}	586.72	-----	507	-788	-153	-523	-109	1	50	154	0.760	0.236	1.00	Yes	0.456	0.155	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		L_{12} - L_{13}	1083.81	-----	118	-140	-691	-607	-175	-122	32	73	0.855	0.143	1.00	Yes	0.547	0.085	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		L_{13} - L_{14}	1290.96	-----	576	-1562	-691	-1057	-287	-11	8	262	0.759	0.239	1.00	Yes	0.492	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		L_{14} - L_{15}	1566.59	-----	-353	-83	-1816	-787	-67	-47	-210	118	0.765	0.234	1.00	Yes	0.497	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		L_{15} - L_{16}	1667.48	-----	-191	-388	-1410	-1476	-73	15	-60	-18	0.815	0.183	1.00	Yes	0.523	0.106	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_{16} - L_{17}	1207.91	-----	-395	41	-1497	-196	-37	-65	-163	-24	0.764	0.234	1.00	Yes	0.496	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
		L_{17} - L_{18}	915.80	-----	-176	-60	-946	-142	-73	-14	-16	-134	0.797	0.199	1.00	Yes	0.510	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.70**
		L_{18} - L_{19}	424.02	-----	-237	168	-1056	566	-4	-31	-141	5	0.649	0.346	1.00	Yes	0.439	0.215	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		L_{19} - L_{20}	92.23	-197.84	-102	27	-2142	1075	-42	-1	651	149	0.141	0.778	0.92	Yes	0.086	0.521	0.61	Yes	0.359	0.434	0.8	Yes	0.356	0.643	1.00	Yes	1.00	**8.01**
	Structure 2	L_0 - L_1	156.66	-----	846	-2513	-133	18	-522	-1810	13	38	0.190	0.809	1.00	Yes	0.113	0.509	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		L_1 - L_2	507.92	-----	689	-1333	-209	-933	66	70	-628	301	0.617	0.374	1.00	Yes	0.367	0.238	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		L_2 - L_3	1049.75	-----	382	-891	-579	-871	18	51	377	-32	0.827	0.169	1.00	Yes	0.543	0.102	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_3 - L_4	1358.93	-----	418	-1329	-815	-1529	-63	95	-43	274	0.798	0.201	1.00	Yes	0.538	0.124	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		L_4 - L_5	1691.68	-----	52	-1588	-2025	-1360	-184	-97	203	152	0.789	0.205	1.00	Yes	0.522	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_5 - L_6	1868.26	-----	-19	-308	-2072	-1876	-95	59	35	226	0.802	0.198	1.00	Yes	0.538	0.120	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		L_6 - L_7	1812.95	-----	-374	-85	-2455	-1269	53	-12	85	192	0.767	0.228	1.00	Yes	0.510	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_7 - L_8	1327.84	-----	-185	229	-1957	-703	-72	77	-251	25	0.761	0.237	1.00	Yes	0.500	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		L_8 - L_9	1103.81	-248.56	-123	490	-1542	-84	41	-125	-98	26	0.772	0.220	1.00	Yes	0.520	0.137	0.66	Yes	0.206	0.152	0.36	Yes	0.205	0.208	0.42	Yes	1.00	**2.86**
		L_9 - L_{10}	842.36	-582.71	-77	601	-1497	-250	-38	31	10	-50	0.752	0.246	1.00	Yes	0.438	0.154	0.60	Yes	0.616	0.176	0.8	Yes	0.612	0.240	0.86	Yes	1.00	**3.48**
		L_{10} - L_{11}	67.67	-677.99	8	560	-1147	717	123	-59	-2	-15	0.068	0.217	0.29	Yes	0.040	0.137	0.18	Yes	0.802	0.070	0.88	Yes	0.796	0.201	1.00	Yes	1.00	**2.72**
		L_{11} - L_{12}	-----	-1002.89	7	940	-1258	963	16	49	85	172	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.077	0.91	Yes	0.822	0.171	1.00	Yes	1.00	**3.32**
		L_{12} - L_{13}	-----	-1229.99	154	-257	-1960	-1527	92	47	-103	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.256	1	Yes	0.736	0.195	0.94	Yes	1.00	**4.02**
		L_{13} - L_{14}	-----	-1131.28	-232	1421	-3684	4899	-527	-496	-129	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.274	0.85	Yes	0.569	0.428	1.00	Yes	1.00	**5.56**
		L_{14} - L_{15}	-----	-1215.66	4339	-2247	1215	-546	-257	-148	-277	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.612	0.245	0.87	Yes	0.612	0.379	1.00	Yes	1.00	**4.36**
		L_{15} - L_{16}	-----	-1221.84	-141	197	-2510	-973	186	177	80	51	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.260	1	Yes	0.731	0.250	0.99	Yes	1.00	**4.24**
		L_{16} - L_{17}	69.75	-909.66	2718	-2207	-774	-1579	-403	-115	317	144	0.043	0.369	0.42	Yes	0.029	0.218	0.25	Yes	0.668	0.237	0.91	Yes	0.663	0.335	1.00	Yes	1.00	**8.11**
		L_{17} - L_{18}	686.79	-408.09	1989	-2105	-1463	-1621	-258	-113	408	412	0.613	0.386	1.00	Yes	0.357	0.240	0.60	Yes	0.432	0.219	0.66	Yes	0.429	0.337	0.77	Yes	1.00	**8.85**
		L_{18} - L_{19}	621.17	-----	979	-1216	-733	-791	-145	-109	374	-68	0.704	0.292	1.00	Yes	0.406	0.173	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		L_{19} - L_{20}	685.02	-----	669	-926	-665	-879	-252	-86	-73	219	0.776	0.217	1.00	Yes	0.459	0.138	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		L_{20} - L_{21}	976.54	-----	443	-656	-1321	-1056	-179	-144	49	150	0.779	0.212	1.00	Yes	0.511	0.126	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		L_{21} - L_{22}	895.69	-----	279	-1707	-1189	-1170	-217	5	-73	249	0.714	0.276	1.00	Yes	0.478	0.173	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		L_{22} - L_{23}	823.82	-74.99	-46	53	-2223	18	1	-51	1	117	0.657	0.337	1.00	Yes	0.439	0.210	0.65	Yes	0.071	0.256	0.33	Yes	0.070	0.324	0.40	Yes	1.00	**3.07**
		L_{23} - L_{24}	926.15	-325.41	-2	309	-1715	-809	-8	64	-79	71	0.739	0.259	1.00	Yes	0.484	0.153	0.64	Yes	0.307	0.250	0.56	Yes	0.305	0.250	0.56	Yes	1.00	**3.14**
		L_{24} - L_{25}	627.25	-454.57	105	452	-1382	-171	96	-94	-111	100	0.711	0.284	1.00	Yes	0.420	0.182	0.61	Yes	0.610	0.177	0.79	Yes	0.606	0.267	0.88	Yes	1.00	**3.03**
		L_{25} - L_{26}	307.91	-602.26	65	569	-997	-191	7	79	41	38	0.349	0.204	0.56	Yes	0.201	0.122	0.33	Yes	0.808	0.129	0.94	Yes	0.803	0.192	1.00	Yes	1.00	**3.00**
		L_{26} - L_{27}	-----	-766.65	149	490	-1216	159	131	-23	-55	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.100	0.92	Yes	0.805	0.195	1.00	Yes	1.00	**3.02**
		L_{27} - L_{28}	-----	-1095.17	81	1044	-1607	431	77	147	48	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.168	0.98	Yes	0.798	0.198	1.00	Yes	1.00	**4.14**
		L_{28} - L_{29}	-----	-1248.90	194	-579	-1844	-1882	209	163	-134	26	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.244	1	Yes	0.747	0.187	0.94	Yes	1.00	**4.30**
		L_{29} - L_{30}	-----	-1089.13	-171	1178	-4173	5123	-419	-526	-50	27	-----	-----	-----	-----	-----	-----	-----	-----	0.553	0.271	0.83	Yes	0.548	0.447	1.00	Yes	1.00	**6.22**
		L_{30} - L_{31}	-----	-1190.06	4561	-2849	1130	-267	62	152	-368	-267	-----	-----	-----	-----	-----	-----	-----	-----	0.604	0.256	0.87	Yes	0.599	0.398	1.00	Yes	1.00	**4.91**
		L_{31} - L_{32}	-----	-1146.32	-66	-315	-2560	-1361	136	81	103	222	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.301	1	Yes	0.686	0.255	0.95	Yes	1.00	**4.72**
		L_{32} - L_{33}	207.22	-815.89	2372	-2324	-981	-1592	-177	-84	511	515	0.144	0.371	0.52	Yes	0.096	0.222	0.32	Yes	0.674	0.225	0.9	Yes	0.669	0.323	1.00	Yes	1.00	**9.62**
		L_{33} - L_{34}	612.38	-----	1323	-1684	-487	-1361	-101	82	82	379	0.611	0.381	1.00	Yes	0.358	0.239	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		L_{34} - L_{35}	827.78	-----	760	-1449	-685	-949	-141	-5	177	122	0.739	0.253	1.00	Yes	0.430	0.158	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		L_{35} - L_{36}	1162.74	-----	746	-976	-720	-1130	-269	-25	89	268	0.813	0.178	1.00	Yes	0.548	0.111	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		L_{36} - L_{37}	1368.53	-----	445	-1674	-1074	-1248	-116	32	323	113	0.785	0.211	1.00	Yes	0.515	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		L_{37} - L_{38}	1739.47	-----	141	-1395	-2713	-1156	-350	-138	-87	269	0.736	0.260	1.00	Yes	0.489	0.152	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		L_{38} - L_{39}	1784.86	-----	-364	-69	-2527	-1457	1	-55	-45	95	0.766	0.230	1.00	Yes	0.514	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
		L_{39} - L_{40}	1707.51	-----	-247	-382	-2068	-1449	-61	-2	-41	-75	0.796	0.201	1.00	Yes	0.527	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.87**
		L_{40} - L_{41}	1295.73	-----	-410	25	-1856	-457	-4	-14	-154	5	0.761	0.230	1.00	Yes	0.513	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		L_{41} - L_{42}	1007.46	-----	-180	-98	-1362	-326	15	73	-6	-10	0.794	0.205	1.00	Yes	0.521	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_{42} - L_{43}	525.44	-----	-296	172	-1362	151	55	15	-125	492	0.638	0.358	1.00	Yes	0.380	0.228	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_{43} - L_{44}	40.09	-124.20	10	-100	-3825	1115	-96	-23	1011	301	0.049	0.944	1.00	Yes	0.029	0.604	0.64	Yes	0.179	0.623	0.81	Yes	0.177	0.778	0.96	Yes	1.00	**11.71**
	Structure 3	L_0 - L_1	145.73	-----	990	-1716	-37	-40	-265	-1218	-8	-21	0.223	0.767	1.00	Yes	0.136	0.506	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.32**
		L_1 - L_2	408.49	-----	615	-977	61	-646	73	168	-388	298	0.625	0.374	1.00	Yes	0.423	0.235	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
		L_2 - L_3	891.19	-----	397	-819	-387	-706	4	117	489	270	0.776	0.220	1.00	Yes	0.497	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		L_3 - L_4	1256.74	-----	407	-1011	-659	-1202	-80	91	127	298	0.795	0.203	1.00	Yes	0.516	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		L_4 - L_5	1626.35	-----	-223	-278	-1568	-950	-165	-147	206	182	0.795	0.203	1.00	Yes	0.510	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_5 - L_6	1548.57	-----	179	-1747	-1174	-1175	-289	56	-33	365	0.757	0.236	1.00	Yes	0.492	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		L_6 - L_7	1297.90	-----	-348	186	-1585	-281	-3	-31	-104	70	0.763	0.227	1.00	Yes	0.494	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		L_7 - L_8	1048.27	-----	-92	47	-901	-481	-21	70	17	107	0.827	0.172	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		L_8 - L_9	559.47	-169.40	-165	340	-923	442	62	-126	55	9	0.725	0.266	1.00	Yes	0.435	0.175	0.62	Yes	0.260	0.124	0.39	Yes	0.258	0.244	0.51	Yes	1.00	**2.75**
		L_9 - L_{10}	98.27	-504.67	-33	461	-855	316	-27	13	104	166	0.127	0.255	0.39	Yes	0.074	0.154	0.23	Yes	0.776	0.137	0.92	Yes	0.769	0.226	1.00	Yes	1.00	**3.11**
		L_{10} - L_{11}	-----	-971.67	93	183	-1367	-82	84	-118	63	36	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.149	0.94	Yes	0.782	0.215	1.00	Yes	1.00	**4.37**
		L_{11} - L_{12}	-----	-1192.66	71	1071	-939	1796	52	92	-63	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.193	0.96	Yes	0.755	0.238	1.00	Yes	1.00	**4.50**
		L_{12} - L_{13}	-----	-1122.16	2112	-629	557	-34	-199	-88	-129	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.255	0.98	Yes	0.711	0.280	1.00	Yes	1.00	**4.11**
		L_{13} - L_{14}	-----	-924.72	1331	-1608	-1517	-1145	5	-130	209	18	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.099	0.86	Yes	0.744	0.253	1.00	Yes	1.00	**7.67**
		L_{14} - L_{15}	668.23	-329.46	1239	-1358	-986	-969	-312	47	129	135	0.655	0.342	1.00	Yes	0.424	0.208	0.64	Yes	0.384	0.196	0.58	Yes	0.380	0.300	0.69	Yes	1.00	**7.32**
		L_{15} - L_{16}	543.32	-----	761	-859	-479	-670	-191	55	153	347	0.704	0.289	1.00	Yes	0.422	0.188	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		L_{16} - L_{17}	643.20	-211.93	320	22	-1004	-265	41	-83	20	61	0.740	0.256	1.00	Yes	0.440	0.166	0.61	Yes	0.290	0.233	0.53	Yes	0.287	0.242	0.53	Yes	1.00	**2.83**
		L_{17} - L_{18}	661.92	-42.32	49	-73	-864	-672	16	102	-17	140	0.762	0.231	1.00	Yes	0.441	0.139	0.58	Yes	0.058	0.261	0.32	Yes	0.057	0.209	0.27	Yes	1.00	**2.24**
		L_{18} - L_{19}	441.17	-----	-17	31	-853	-213	49	-76	-9	311	0.675	0.323	1.00	Yes	0.412	0.215	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		L_{19} - L_{20}	53.64	-----	57	-142	-2216	1072	-138	-36	1153	311	0.082	0.913	1.00	Yes	0.048	0.553	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.99**

Moment (Start) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

				Axial Force		ZZ Axis Bending				YY Axis Bending				Tension						Compression											
						Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
				Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
				(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$		-----	-312.47	-20	43	-161	192	-93	-30	-795	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.301	1	Yes	0.661	0.245	0.91	Yes	1.00	**0.93**
		$U_1 - L_1$		32.26	-311.40	28	-23	-260	243	52	22	255	161	0.058	0.407	0.47	Yes	0.032	0.224	0.26	Yes	0.680	0.156	0.84	Yes	0.659	0.333	1.00	Yes	1.00	**2.29**
		$U_2 - L_2$		80.22	-266.96	125	-118	-306	338	-131	-24	112	118	0.144	0.469	0.62	Yes	0.079	0.258	0.34	Yes	0.583	0.144	0.73	Yes	0.565	0.431	1.00	Yes	1.00	**3.66**
		$U_3 - L_3$		262.70	-222.51	283	-279	-285	303	-466	-190	68	236	0.472	0.522	1.00	Yes	0.260	0.287	0.55	Yes	0.488	0.200	0.69	Yes	0.471	0.387	0.86	Yes	1.00	**4.07**
		$U_4 - L_4$		35.58	-56.56	677	-650	-253	217	-159	-170	163	234	0.064	0.933	1.00	Yes	0.035	0.513	0.55	Yes	0.124	0.252	0.38	Yes	0.120	0.865	0.99	Yes	1.00	**7.36**
		$U_5 - L_5$		-----	-420.65	250	-269	21	-36	-75	-86	-119	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.102	0.87	Yes	0.726	0.272	1.00	Yes	1.00	**2.06**
		$U_6 - L_6$		-----	-515.30	281	-294	43	-61	10	43	-67	42	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.082	0.87	Yes	0.739	0.257	1.00	Yes	1.00	**2.09**
		$U_7 - L_7$		-----	-436.29	304	-323	118	-132	-122	61	-129	46	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.119	0.85	Yes	0.673	0.318	1.00	Yes	1.00	**1.33**
		$U_8 - L_8$		-----	-1275.56	504	-602	-411	489	-140	-46	-211	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.921	0.056	0.98	Yes	0.884	0.112	1.00	Yes	1.00	**2.75**
		$U_9 - L_9$		-----	-652.73	-164	188	-415	456	-220	-156	-256	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.129	0.91	Yes	0.737	0.254	1.00	Yes	1.00	**1.74**
		$U_{10} - L_{10}$		-----	-793.01	-100	136	-404	411	-317	-222	-162	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.118	0.94	Yes	0.782	0.213	1.00	Yes	1.00	**2.82**
		$U_{11} - L_{11}$		-----	-661.02	-60	146	-408	492	-123	19	-82	37	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.087	0.89	Yes	0.769	0.228	1.00	Yes	1.00	**2.66**
		$U_{12} - L_{12}$		-----	-513.43	-40	53	-345	339	-93	57	-56	104	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.093	0.84	Yes	0.704	0.295	1.00	Yes	1.00	**2.24**
		$U_{13} - L_{13}$		-----	-362.34	2	17	-240	261	-85	84	-15	138	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.104	0.84	Yes	0.694	0.297	1.00	Yes	1.00	**1.76**
		$U_{14} - L_{14}$		105.51	-60.69	342	-341	-573	613	59	78	19	54	0.190	0.807	1.00	Yes	0.104	0.444	0.55	Yes	0.135	0.213	0.35	Yes	0.128	0.784	0.92	Yes	1.00	**7.03**
		$U_{15} - L_{15}$		245.09	-307.95	249	-266	-200	193	-31	-177	-110	-135	0.441	0.391	0.84	Yes	0.242	0.215	0.46	Yes	0.690	0.162	0.86	Yes	0.652	0.340	1.00	Yes	1.00	**2.95**
		$U_{16} - L_{16}$		93.54	-311.00	260	-263	-49	33	-128	-192	-58	-78	0.168	0.391	0.56	Yes	0.093	0.215	0.31	Yes	0.701	0.160	0.87	Yes	0.658	0.336	1.00	Yes	1.00	**2.16**
		$U_{17} - L_{17}$		-----	-433.27	231	-244	33	-55	-76	-103	-89	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.108	0.92	Yes	0.747	0.247	1.00	Yes	1.00	**1.78**
		$U_{18} - L_{18}$		-----	-530.26	448	-455	121	-126	72	-62	-160	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.093	0.87	Yes	0.738	0.257	1.00	Yes	1.00	**1.99**
		$U_{19} - L_{19}$		-----	-647.33	525	-530	129	-186	55	-32	55	331	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.111	0.92	Yes	0.753	0.246	1.00	Yes	1.00	**2.14**
		$U_{20} - L_{20}$		-----	-578.20	422	-494	154	-223	797	104	198	26	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.673	0.229	0.91	Yes	1.00	**1.46**
	Structure 2	$U_0 - L_0$		-----	-601.34	-115	180	-419	496	-265	-45	-1335	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.276	1	Yes	0.644	0.210	0.86	Yes	1.00	**1.47**
		$U_1 - L_1$		-----	-713.71	-109	117	-543	546	43	-65	-5	6	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.069	0.89	Yes	0.765	0.232	1.00	Yes	1.00	**2.39**
		$U_2 - L_2$		-----	-581.21	-79	88	-491	489	99	44	1	84	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.080	0.86	Yes	0.741	0.251	1.00	Yes	1.00	**2.31**
		$U_3 - L_3$		-----	-486.71	-41	47	-254	258	20	130	-12	133	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.094	0.93	Yes	0.763	0.235	1.00	Yes	1.00	**2.14**
		$U_4 - L_4$		3.79	-335.24	15	8	-227	224	-56	100	-60	126	0.007	0.327	0.34	Yes	0.004	0.180	0.19	Yes	0.760	0.094	0.86	Yes	0.709	0.290	1.00	Yes	1.00	**2.02**
		$U_5 - L_5$		155.66	-323.76	137	-114	-227	244	-128	78	-44	150	0.280	0.355	0.64	Yes	0.154	0.195	0.35	Yes	0.731	0.115	0.85	Yes	0.685	0.311	1.00	Yes	1.00	**2.66**
		$U_6 - L_6$		361.94	-203.62	232	-230	-224	228	-52	157	-88	125	0.651	0.342	1.00	Yes	0.358	0.188	0.55	Yes	0.458	0.090	0.55	Yes	0.431	0.296	0.73	Yes	1.00	**3.29**
		$U_7 - L_7$		15.49	-193.17	412	-458	-196	209	25	-27	-93	88	0.028	0.613	0.65	Yes	0.015	0.337	0.36	Yes	0.436	0.187	0.63	Yes	0.409	0.586	1.00	Yes	1.00	**6.22**
		$U_8 - L_8$		-----	-458.15	377	-386	22	-42	-202	-182	-103	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.664	0.128	0.8	Yes	0.660	0.338	1.00	Yes	1.00	**2.06**
		$U_9 - L_9$		-----	-687.70	611	-613	80	-115	-101	-144	-129	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.082	0.85	Yes	0.737	0.260	1.00	Yes	1.00	**2.67**
		$U_{10} - L_{10}$		-----	-791.88	562	-578	107	-144	-53	-77	-53	10	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.083	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**2.80**
		$U_{11} - L_{11}$		-----	-810.56	529	-530	158	-172	-118	-37	-47	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.083	0.9	Yes	0.758	0.234	1.00	Yes	1.00	**2.45**
		$U_{12} - L_{12}$		-----	-876.22	543	-545	153	-170	81	101	16	95	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.086	0.93	Yes	0.759	0.234	1.00	Yes	1.00	**2.46**
		$U_{13} - L_{13}$		-----	-743.96	584	-569	242	-240	35	87	-88	42	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.117	0.95	Yes	0.717	0.279	1.00	Yes	1.00	**1.93**
		$U_{14} - L_{14}$		-----	-1296.05	634	-605	-504	468	-93	-5	-41	147	-----	-----	-----	-----	-----	-----	-----	-----	0.948	0.047	1	Yes	0.859	0.112	0.98	Yes	1.00	**2.90**
		$U_{15} - L_{15}$		-----	-735.64	-165	166	-598	590	-80	-45	-152	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.139	0.96	Yes	0.709	0.286	1.00	Yes	1.00	**2.25**
		$U_{16} - L_{16}$		-----	-709.88	-112	101	-552	526	-154	-89	-248	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.111	0.94	Yes	0.761	0.234	1.00	Yes	1.00	**2.40**
		$U_{17} - L_{17}$		-----	-637.13	-126	123	-547	538	-97	-33	-68	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.081	0.87	Yes	0.742	0.254	1.00	Yes	1.00	**2.37**
		$U_{18} - L_{18}$		-----	-572.47	-87	125	-520	523	-129	10	-99	4	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.082	0.85	Yes	0.729	0.267	1.00	Yes	1.00	**2.38**
		$U_{19} - L_{19}$		-----	-474.77	-40	57	-301	290	-111	29	-116	33	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.087	0.81	Yes	0.709	0.290	1.00	Yes	1.00	**2.05**
		$U_{20} - L_{20}$		-----	-376.52	13	3	-237	240	-171	5	-71	67	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.112	0.89	Yes	0.721	0.275	1.00	Yes	1.00	**2.04**
		$U_{21} - L_{21}$		65.38	-314.54	63	-50	-246	257	-141	32	-103	68	0.118	0.369	0.49	Yes	0.065	0.203	0.27	Yes	0.711	0.122	0.84	Yes	0.666	0.328	1.00	Yes	1.00	**2.40**
		$U_{22} - L_{22}$		89.17	-161.79	402	-422	-486	512	20	25	17	150	0.160	0.698	0.86	Yes	0.088	0.384	0.48	Yes	0.364	0.200	0.57	Yes	0.342	0.654	1.00	Yes	1.00	**7.89**
		$U_{23} - L_{23}$		129.38	-311.54	254	-264	-102	93	-125	-119	-65	-45	0.233	0.373	0.61	Yes	0.128	0.205	0.34	Yes	0.704	0.135	0.84	Yes	0.659	0.337	1.00	Yes	1.00	**2.41**
		$U_{24} - L_{24}$		67.23	-369.59	251	-255	-39	29	-55	-71	-72	-62	0.109	0.310	0.42	Yes	0.060	0.171	0.24	Yes	0.758	0.099	0.86	Yes	0.708	0.292	1.00	Yes	1.00	**2.17**
		$U_{25} - L_{25}$		-----	-468.25	305	-299	20	-34	-44	-39	-79	2	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.082	0.79	Yes	0.699	0.293	1.00	Yes	1.00	**2.09**
		$U_{26} - L_{26}$		-----	-563.68	533	-550	87	-122	-140	-47	-37	37	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.092	0.85	Yes	0.718	0.282	1.00	Yes	1.00	**2.21**
		$U_{27} - L_{27}$		-----	-627.12	573	-574	139	-163	-47	29	-70	44	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.073	0.85	Yes	0.730	0.266	1.00	Yes	1.00	**2.18**
		$U_{28} - L_{28}$		-----	-705.41	565	-556	132	-129	55	91	-32	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.075	0.89	Yes	0.756	0.240	1.00	Yes	1.00	**2.25**
		$U_{29} - L_{29}$		-----	-701.12	657	-636	204	-210	-68	58	-116	25	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.127	0.91	Yes	0.676	0.315	1.00	Yes	1.00	**2.28**
		$U_{30} - L_{30}$		-----	-1293.46	665	-657	-613	548	-22	-83	-162	68	-----	-----	-----	-----	-----	-----	-----	-----	0.946	0.052	1	Yes	0.858	0.118	0.98	Yes	1.00	**3.09**
		$U_{31} - L_{31}$		-----	-743.70	-178	174	-571	550	-115	-57	-185	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.146	0.98	Yes	0.717	0.273	1.00	Yes	1.00	**2.23**
		$U_{32} - L_{32}$		-----	-889.04	-125	99	-522	508	-187	-97	-212	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.115	0.97	Yes	0.771	0.224	1.00	Yes	1.00	**2.88**
		$U_{33} - L_{33}$		-----	-823.74	-148	181	-520	508	-147	6	-109	5	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.086	0.92	Yes	0.770	0.230	1.00	Yes	1.00	**2.85**
		$U_{34} - L_{34}$		-----	-799.71	-106	149	-550	556	-117	48	-92	79	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.076	0.87	Yes	0.748	0.245	1.00	Yes	1.00	**2.94**
		$U_{35} - L_{35}$		-----	-701.87	-90	149	-576	580	-215	29	10	170	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.077	0.86	Yes	0.752	0.246	1.00	Yes	1.00	**2.80**
		$U_{36} - L_{36}$		-----	-467.68	-31	56	-360	369	-143	75	-50	126	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.094	0.78	Yes	0.674	0.323	1.00	Yes	1.00	**2.22**
		$U_{37} - L_{37}$		-----	-171.94	137	-141	-444	497	2	28	-58	143	-----	-----	-----	-----	-----	-----	-----	-----	0.388	0.208	0.6	Yes	0.364	0.635	1.00	Yes	1.00	**5.85**
		$U_{38} - L_{38}$		350.99	-139.14	165	-164	-240	247	-139	-169	-71	-104	0.631	0.364	1.00	Yes	0.347	0.200	0.55	Yes	0.313	0.134	0.45	Yes	0.294	0.316	0.61	Yes	1.00	**2.57**
		$U_{39} - L_{39}$		254.06	-315.86	237	-253	-196	183	-29	-141	-110	-107	0.457	0.364	0.83	Yes	0.251	0.200	0.46	Yes	0.714	0.146	0.86	Yes	0.668	0.324	1.00	Yes	1.00	**2.95**
		$U_{40} - L_{40}$		83.91	-331.83	229	-227	-53	30	-60	-108	-87	-75	0.151	0.324	0.48	Yes	0.083	0.178	0.27	Yes	0.753	0.117	0.87	Yes	0.702	0.292	1.00	Yes	1.00	**2.22**
		$U_{41} - L_{41}$		-----	-477.50	257	-265	41	-62	-110	-90	7	39	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.103	0.92	Yes	0.749	0.241	1.00	Yes	1.00	**2.04**
		$U_{42} - L_{42}$		-----	-572.38	518	-516	102	-112	97	-32	-84	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.081	0.85	Yes	0.729	0.265	1.00	Yes	1.00	**2.16**
		$U_{43} - L_{43}$		-----	-706.79	549	-563	136	-153	250	17	-40	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.098	0.91	Yes	0.757	0.239	1.00	Yes	1.00	**2.28**
		$U_{44} - L_{44}$		-----	-624.03	466	-537	195	-241	1137	193	-27	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.252	1	Yes	0.669	0.228	0.90	Yes	1.00	**1.52**
	Structure 3	$U_0 - L_0$		-----	-551.63	-102	167	-392	453	-252	-33	-1033	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.265	1	Yes	0.642	0.210	0.86	Yes	1.00	**1.53**
		$U_1 - L_1$		-----	-652.59	-108	115	-517	511	6	-75	55	19	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.074	0.89	Yes	0.760	0.240	1.00	Yes	1.00	**2.41**
		$U_2 - L_2$		-----	-537.48	-90	95	-426	433	82	32	-84	59	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.077	0.87	Yes	0.748	0.245	1.00	Yes	1.00	**2.12**
		$U_3 - L_3$		-----	-442.10	-31	62	-213	226	-130	41	37	183	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.115	0.95	Yes	0.763	0.230	1.00	Yes	1.00	**1.94**
		$U_4 - L_4$		57.89	-315.31	36	-16	-259	259	-128	126	-103	173	0.104	0.381	0.49	Yes	0.057	0.210	0.27	Yes	0.711	0.105	0.82	Yes	0.667	0.331	1.00	Yes	1.00	**2.34**
		$U_5 - L_5$		155.26	-300.23	138	-125	-266	281	-85	118	-88	165	0.279	0.406	0.69	Yes	0.154	0.223	0.38	Yes	0.673	0.117	0.79	Yes	0.635	0.359	1.00	Yes	1.00	**2.94**
		$U_6 - L_6$		-----	-73.25	634	-661	-429	450	-301	-122	56	121	-----	-----	-----	-----	-----	-----	-----	-----	0.163	0.275	0.44	Yes	0.155	0.845	1.00	Yes	1.00	**8.04**
		$U_7 - L_7$		24.87	-356.89	250	-269	-31	19	-154	-167	-175	-141	0.040	0.352	0.40	Yes	0.022	0.194	0.22	Yes	0.722	0.142	0.87	Yes	0.684	0.307	1.00	Yes	1.00	**1.90**
		$U_8 - L_8$		-----	-511.97	339	-340	16	-20	-238	-213	-136	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.133	0.88	Yes	0.702	0.291	1.00	Yes	1.00	**2.32**
		$U_9 - L_9$		-----	-650.14	415	-506	65	-136	-197	-130	-47	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.106	0.89	Yes	0.757	0.235	1.00	Yes	1.00	**2.48**
		$U_{10} - L_{10}$		-----	-778.82	412	-437	90	-108	27	96	3	82	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.071	0.88	Yes	0.768	0.227	1.00	Yes	1.00	**2.62**
		$U_{11} - L_{11}$		-----	-647.82	426	-481	182	-211	-32	94	-52	61	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.095	0.87	Yes	0.732	0.268	1.00	Yes	1.00	**1.65**
		$U_{12} - L_{12}$		-----	-1276.63	433	-567	-404	434	-127	-11	52	75	-----	-----	-----	-----	-----	-----	-----	-----	0.922	0.048	0.97	Yes	0.885	0.106	1.00	Yes	1.00	**2.69**
		$U_{13} - L_{13}$		-----	-460.96	-105	116	-269	289	-141	-96	-160	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.138	0.91	Yes	0.711	0.285	1.00	Yes	1.00	**1.28**
		$U_{14} - L_{14}$		-----	-523.59	-52	66	-272	277	-174	-140	-231	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.121	0.92	Yes	0.751	0.242	1.00	Yes	1.00	**2.17**
		$U_{15} - L_{15}$		-----	-432.23	-24	47	-225	244	-176	-56	-73	39	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.111	0.9	Yes	0.746	0.248	1.00	Yes	1.00	**2.17**
		$U_{16} - L_{16}$		103.01	-74.88	176	-136	-597	580	-151	-76	-106	56	0.185	0.807	1.00	Yes	0.102	0.444	0.55	Yes	0.165	0.206	0.38	Yes	0.158	0.763	0.93	Yes	1.00	**6.55**
		$U_{17} - L_{17}$		289.37	-175.91	174	-194	-289	300	-310	-252	-112	-24	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.385	0.180	0.57	Yes	0.372	0.384	0.76	Yes	1.00	**3.19**
		$U_{18} - L_{18}$		80.25	-271.67	294	-327	-120	124	-212	-162	112	10	0.144	0.479	0.63	Yes	0.079	0.264	0.35	Yes	0.594	0.174	0.77	Yes	0.575	0.418	1.00	Yes	1.00	**3.16**
		$U_{19} - L_{19}$		21.61	-315.65	259	-252	-35	23	-140	-113	-167	-90	0.039	0.380	0.42	Yes	0.021	0.209	0.24	Yes	0.690	0.125	0.82	Yes	0.668	0.332	1.00	Yes	1.00	**2.16**
		$U_{20} - L_{20}$		-----	-351.72	162	-196	48	-74	379	122	-110	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.192	0.98	Yes	0.744	0.251	1.00	Yes	1.00	**0.82**

Moment (Start) AB Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Inventory Loads - HS20 Truck																													
			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
	Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	490.67	-31.64	8	-9	-184	77	-45	-15	-532	-207	0.644	0.349	1.00	Yes	0.389	0.192	0.59	Yes	0.054	0.237	0.3	Yes	0.049	0.215	0.27	Yes	1.00	**2.43**
		$U_1 - L_2$	327.48	-134.14	23	-15	-157	-12	48	38	-719	-322	0.589	0.410	1.00	Yes	0.324	0.225	0.55	Yes	0.308	0.372	0.68	Yes	0.284	0.201	0.49	Yes	1.00	**3.69**
		$U_2 - L_3$	27.45	-257.57	56	-24	-176	-86	126	104	-315	-382	0.049	0.336	0.39	Yes	0.027	0.185	0.22	Yes	0.593	0.399	1	Yes	0.545	0.226	0.78	Yes	1.00	**5.71**
		$U_3 - L_4$	-----	-354.88	32	-55	-54	-55	-161	-119	-286	-247	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.185	1	Yes	0.751	0.071	0.83	Yes	1.00	**2.30**
		$U_4 - L_4$	581.90	-----	-2	-1	-97	22	58	-31	-69	-181	0.853	0.140	1.00	Yes	0.469	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_4 - L_5$	705.55	-----	-2	49	-214	201	186	103	47	-102	0.834	0.156	1.00	Yes	0.459	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_5 - L_6$	578.11	-----	-69	105	-437	255	343	223	119	119	0.683	0.312	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		$U_6 - L_7$	655.80	-----	27	169	-110	291	299	233	303	154	0.775	0.221	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_8 - L_9$	998.07	-----	93	217	-107	354	293	257	255	210	0.798	0.195	1.00	Yes	0.494	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_9 - L_{10}$	968.97	-----	-65	103	-434	240	88	110	221	154	0.775	0.222	1.00	Yes	0.480	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		$U_{10} - L_{11}$	1011.05	-----	-48	115	-260	161	8	0	-122	-118	0.854	0.136	1.00	Yes	0.529	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		$U_{11} - L_{12}$	799.03	-----	-59	69	-321	88	-113	-79	-343	-347	0.790	0.201	1.00	Yes	0.435	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{12} - L_{13}$	619.78	-----	-53	10	-191	129	-274	-250	-347	-316	0.755	0.235	1.00	Yes	0.475	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.87**
		$U_{13} - L_{14}$	441.36	-7.07	-5	-29	-91	33	-277	-297	-292	-296	0.794	0.203	1.00	Yes	0.437	0.111	0.55	Yes	0.016	0.155	0.18	Yes	0.015	0.117	0.14	Yes	1.00	**1.62**
		$U_{15} - L_{16}$	232.11	-330.73	65	-104	-78	-9	-195	-299	-269	-359	0.417	0.237	0.66	Yes	0.230	0.130	0.36	Yes	0.775	0.220	1	Yes	0.700	0.133	0.84	Yes	1.00	**2.36**
		$U_{16} - L_{15}$	416.71	-172.62	25	-60	-135	74	-187	-176	-245	-257	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	0.409	0.183	0.6	Yes	0.365	0.172	0.54	Yes	1.00	**2.38**
		$U_{17} - L_{18}$	539.32	-----	-17	-10	-153	89	-95	-123	-153	-230	0.791	0.209	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{18} - L_{17}$	641.41	-----	-98	60	-347	245	6	-45	-198	-184	0.758	0.232	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$U_{19} - L_{20}$	724.06	-----	-91	65	-365	247	-136	-16	-150	-140	0.784	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{20} - L_{19}$	617.97	-----	-116	115	-408	312	-61	178	-716	-113	0.669	0.327	1.00	Yes	0.368	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.98**
	Structure 2	$U_0 - L_1$	640.12	-----	-65	76	-447	367	-121	53	-1004	-166	0.633	0.358	1.00	Yes	0.348	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_1 - L_2$	787.97	-----	-86	58	-412	306	43	11	-112	-166	0.780	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_2 - L_3$	648.25	-----	-65	49	-330	254	-76	-178	-206	-199	0.766	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**
		$U_3 - L_4$	573.43	-----	-33	16	-176	123	-235	-213	-313	-282	0.764	0.226	1.00	Yes	0.420	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.88**
		$U_4 - L_5$	411.45	-96.22	12	-37	-129	84	-234	-201	-309	-266	0.740	0.254	1.00	Yes	0.407	0.140	0.55	Yes	0.238	0.182	0.42	Yes	0.204	0.164	0.37	Yes	1.00	**2.09**
		$U_5 - L_6$	399.94	-314.07	86	-117	-120	59	-365	-246	-436	-267	0.719	0.280	1.00	Yes	0.396	0.154	0.55	Yes	0.742	0.257	1	Yes	0.665	0.154	0.82	Yes	1.00	**2.79**
		$U_6 - L_7$	109.16	-372.15	66	-102	-54	-8	-273	-257	-329	-280	0.178	0.202	0.39	Yes	0.098	0.111	0.21	Yes	0.797	0.201	1	Yes	0.713	0.117	0.83	Yes	1.00	**1.81**
		$U_8 - L_7$	596.63	-21.50	-10	-28	-203	112	-170	-234	-140	-261	0.761	0.235	1.00	Yes	0.479	0.132	0.62	Yes	0.036	0.122	0.16	Yes	0.032	0.182	0.22	Yes	1.00	**2.34**
		$U_8 - L_9$	723.45	-----	-78	15	-345	225	-90	-139	-140	-226	0.784	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{10} - L_9$	821.92	-----	-87	43	-334	228	-20	-55	-62	-170	0.813	0.181	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{11} - L_{10}$	892.63	-----	-103	96	-370	272	202	86	56	-50	0.813	0.185	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_{12} - L_{11}$	879.30	-----	-110	136	-378	332	243	154	161	24	0.801	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_{13} - L_{12}$	751.46	-----	-180	174	-445	377	271	153	267	124	0.743	0.247	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.72**
		$U_{14} - L_{13}$	757.33	-----	-14	221	-279	430	293	192	272	156	0.749	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		$U_{14} - L_{15}$	639.53	-----	20	171	-221	365	149	108	157	134	0.756	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		$U_{15} - L_{16}$	641.00	-----	-99	104	-373	334	50	67	121	89	0.758	0.233	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{16} - L_{17}$	747.82	-----	-73	98	-358	353	9	5	9	-7	0.810	0.185	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		$U_{17} - L_{18}$	677.66	-----	-64	81	-310	283	-58	-32	-101	-58	0.801	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{18} - L_{19}$	682.12	-----	-43	38	-282	248	-109	-98	-150	-148	0.806	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{19} - L_{20}$	605.52	-----	-16	1	-203	165	-167	-130	-222	-188	0.772	0.227	1.00	Yes	0.425	0.127	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		$U_{20} - L_{21}$	432.44	-44.17	7	-20	-121	98	-207	-147	-224	-145	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	0.105	0.113	0.22	Yes	0.093	0.154	0.25	Yes	1.00	**1.91**
		$U_{21} - L_{22}$	432.62	-207.65	35	-66	-112	49	-217	-214	-266	-242	0.778	0.220	1.00	Yes	0.428	0.121	0.55	Yes	0.491	0.180	0.68	Yes	0.439	0.143	0.59	Yes	1.00	**2.48**
		$U_{22} - L_{23}$	421.91	-324.17	64	-92	-134	37	-153	-226	-135	-232	0.759	0.238	1.00	Yes	0.417	0.131	0.55	Yes	0.772	0.206	0.98	Yes	0.686	0.171	0.86	Yes	1.00	**3.09**
		$U_{24} - L_{23}$	438.10	-86.71	24	-35	-127	91	-50	-79	-66	-154	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	0.207	0.090	0.3	Yes	0.183	0.162	0.35	Yes	1.00	**2.26**
		$U_{25} - L_{24}$	606.47	-1.36	8	-21	-216	167	-15	-56	-15	-119	0.773	0.217	1.00	Yes	0.425	0.121	0.55	Yes	0.002	0.070	0.08	Yes	0.002	0.193	0.20	Yes	1.00	**2.62**
		$U_{26} - L_{25}$	672.60	-----	-36	44	-303	242	135	47	60	-23	0.795	0.196	1.00	Yes	0.437	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		$U_{27} - L_{26}$	668.23	-----	-60	73	-309	270	160	82	147	8	0.790	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{28} - L_{27}$	716.58	-----	-77	115	-356	350	205	142	173	71	0.776	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{29} - L_{28}$	625.51	-----	-125	119	-372	327	217	110	251	118	0.740	0.256	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.69**
		$U_{30} - L_{29}$	637.95	-----	12	161	-220	357	226	150	216	76	0.754	0.243	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.94**
		$U_{30} - L_{31}$	767.22	-----	19	210	-282	440	196	117	121	67	0.759	0.234	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		$U_{31} - L_{32}$	778.73	-----	-129	130	-458	386	36	47	56	39	0.770	0.221	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		$U_{32} - L_{33}$	900.63	-----	-86	132	-375	338	-25	0	-148	-60	0.820	0.179	1.00	Yes	0.451	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**
		$U_{33} - L_{34}$	895.46	-----	-85	128	-348	271	-76	-40	-248	-220	0.816	0.182	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_{34} - L_{35}$	815.42	-----	-84	113	-307	218	-106	-81	-292	-291	0.807	0.186	1.00	Yes	0.444	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{35} - L_{36}$	705.27	-----	-90	20	-321	230	-376	-268	-387	-277	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_{36} - L_{37}$	598.45	-----	-25	-8	-185	130	-281	-301	-306	-334	0.763	0.233	1.00	Yes	0.480	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{38} - L_{37}$	24.30	-391.59	75	-101	-43	-22	-157	-229	-162	-235	0.040	0.177	0.22	Yes	0.022	0.097	0.12	Yes	0.846	0.153	1	Yes	0.750	0.115	0.87	Yes	1.00	**1.68**
		$U_{39} - L_{38}$	319.55	-338.85	105	-126	-109	46	-142	-188	-225	-250	0.575	0.233	0.81	Yes	0.316	0.128	0.45	Yes	0.807	0.184	1	Yes	0.717	0.161	0.88	Yes	1.00	**2.90**
		$U_{40} - L_{39}$	417.04	-188.24	43	-69	-141	88	-88	-112	-147	-225	0.750	0.246	1.00	Yes	0.413	0.135	0.55	Yes	0.451	0.165	0.62	Yes	0.398	0.180	0.58	Yes	1.00	**2.70**
		$U_{41} - L_{40}$	590.58	-----	-26	7	-193	121	18	-20	-101	-143	0.787	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		$U_{42} - L_{41}$	655.13	-----	-74	50	-351	253	-1	-4	-129	-128	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{43} - L_{42}$	781.87	-----	-94	64	-407	301	-6	-30	-223	-172	0.774	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{44} - L_{43}$	629.68	-----	-135	118	-475	379	36	1	-1014	-96	0.623	0.372	1.00	Yes	0.343	0.205	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
	Structure 3	$U_0 - L_1$	590.66	-----	-68	71	-432	318	-132	50	-837	-201	0.640	0.359	1.00	Yes	0.352	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_1 - L_2$	721.05	-----	-91	57	-363	253	37	13	-61	-149	0.781	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_2 - L_3$	639.82	-----	-78	48	-333	242	-73	-168	-256	-267	0.756	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		$U_3 - L_4$	523.68	-----	-19	-13	-148	97	-302	-219	-329	-298	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.93**
		$U_4 - L_5$	405.88	-120.19	10	-42	-120	79	-294	-226	-376	-298	0.730	0.263	1.00	Yes	0.401	0.144	0.55	Yes	0.285	0.196	0.49	Yes	0.254	0.154	0.41	Yes	1.00	**2.01**
		$U_5 - L_6$	349.37	-311.12	47	-95	-87	1	-326	-317	-449	-343	0.628	0.251	0.88	Yes	0.346	0.138	0.49	Yes	0.729	0.265	1	Yes	0.658	0.121	0.78	Yes	1.00	**2.42**
		$U_7 - L_6$	435.87	-51.26	11	-36	-96	26	-97	-240	-127	-301	0.784	0.210	1.00	Yes	0.431	0.115	0.55	Yes	0.119	0.143	0.27	Yes	0.108	0.123	0.24	Yes	1.00	**1.99**
		$U_8 - L_7$	626.95	-----	-31	-10	-206	139	-141	-158	-186	-264	0.764	0.232	1.00	Yes	0.481	0.130	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_8 - L_9$	844.36	-----	-54	-6	-288	89	112	10	-53	-192	0.835	0.162	1.00	Yes	0.459	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		$U_{10} - L_9$	974.54	-----	-50	74	-272	147	358	223	114	-53	0.823	0.173	1.00	Yes	0.510	0.097	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.66**
		$U_{11} - L_{10}$	982.29	-----	-90	113	-344	227	327	219	415	241	0.785	0.206	1.00	Yes	0.486	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		$U_{12} - L_{11}$	983.54	-----	78	206	-111	349	377	309	395	280	0.786	0.206	1.00	Yes	0.487	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.33**
		$U_{13} - L_{13}$	666.36	-----	32	175	-114	299	176	155	200	167	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		$U_{13} - L_{14}$	635.50	-----	-55	100	-377	257	133	168	132	92	0.751	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{14} - L_{15}$	653.01	-----	-11	137	-314	186	192	191	-201	-216	0.772	0.218	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_{15} - L_{16}$	508.13	-----	-3	11	-184	10	-40	-14	-185	-280	0.745	0.252	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{17} - L_{16}$	-----	-369.72	52	-60	-55	-65	-66	-116	-134	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.152	1	Yes	0.782	0.084	0.87	Yes	1.00	**2.54**
		$U_{18} - L_{17}$	429.96	-194.02	34	-25	-110	-18	82	131	-183	-285	0.773	0.223	1.00	Yes	0.425	0.123	0.55	Yes	0.447	0.211	0.66	Yes	0.411	0.141	0.56	Yes	1.00	**3.57**
		$U_{19} - L_{18}$	444.36	-12.19	21	-31	-92	1	284	6	-96	-192	0.799	0.199	1.00	Yes	0.440	0.110	0.55	Yes	0.028	0.136	0.17	Yes	0.026	0.117	0.15	Yes	1.00	**2.35**
		$U_{20} - L_{19}$	474.98	-----	6	4	-177	90	-34	46	-674	-138	0.623	0.376	1.00	Yes	0.376	0.207	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**

Moment (Start) AB Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

			Inventory Loads - HS20 Truck																															
			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression													
	Vehicle	Pedestrian	Max.	Max.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:	1.300	1.300	Tension	Comp.	Start	End	Start	End	Start	End	Start	End																						
LL Factor:	2.167	1.625	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-588.95	849	-754	-855	-785	502	-634	769	-1100	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.111	0.92	Yes	0.794	0.203	1.00	Yes	1.00	**4.27**
		$U_1 - U_2$	-----	-549.53	-78	-128	-386	-631	-8	39	121	-444	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1	Yes	0.741	0.150	0.90	Yes	1.00	**1.92**
		$U_2 - U_3$	244.72	-572.52	-65	367	-861	-121	-128	168	482	-571	0.280	0.301	0.59	Yes	0.189	0.198	0.39	Yes	0.779	0.220	1	Yes	0.772	0.205	0.98	Yes	1.00	**2.74**
		$U_3 - U_4$	485.92	-569.06	145	408	-679	-436	-222	-9	263	-371	0.557	0.224	0.79	Yes	0.382	0.153	0.54	Yes	0.774	0.221	1	Yes	0.767	0.161	0.93	Yes	1.00	**2.99**
		$U_4 - U_5$	493.99	-568.05	204	397	-778	-267	-98	-21	-404	100	0.566	0.253	0.82	Yes	0.389	0.173	0.57	Yes	0.773	0.224	1	Yes	0.766	0.185	0.96	Yes	1.00	**3.08**
		$U_5 - U_6$	678.32	-188.48	273	490	-620	355	98	132	-296	-422	0.778	0.219	1.00	Yes	0.524	0.144	0.67	Yes	0.256	0.218	0.48	Yes	0.254	0.147	0.41	Yes	1.00	**2.89**
		$U_6 - U_7$	898.06	-----	419	223	-226	98	319	286	-195	4	0.859	0.133	1.00	Yes	0.600	0.091	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**
		$U_7 - U_8$	813.37	-----	215	710	-1026	2068	1154	1034	-195	505	0.564	0.431	1.00	Yes	0.393	0.295	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_8 - U_9$	655.41	-----	2162	-1159	648	-226	629	-219	459	805	0.537	0.461	1.00	Yes	0.367	0.314	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		$U_9 - U_{10}$	-----	-445.90	748	-971	-435	-720	664	-683	2569	-1118	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.422	1	Yes	0.569	0.217	0.79	Yes	1.00	**12.13**
		$U_{10} - U_{11}$	203.94	-649.02	316	-111	-26	-733	33	143	552	-587	0.221	0.259	0.48	Yes	0.147	0.168	0.32	Yes	0.836	0.160	1	Yes	0.828	0.164	1.00	Yes	1.00	**3.06**
		$U_{11} - U_{12}$	-----	-892.61	191	-180	-237	-607	9	117	689	-216	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.151	1	Yes	0.837	0.101	0.94	Yes	1.00	**2.02**
		$U_{12} - U_{13}$	-----	-1268.58	-12	-254	-609	-601	83	19	600	-423	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.137	1	Yes	0.847	0.084	0.94	Yes	1.00	**2.33**
		$U_{13} - U_{14}$	-----	-1407.13	-190	-500	-653	-1286	-43	-6	169	-216	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.178	1	Yes	0.807	0.142	0.95	Yes	1.00	**1.75**
		$U_{14} - U_{15}$	-----	-1375.35	-406	-292	-1342	-606	41	-277	-124	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.788	0.148	0.94	Yes	1.00	**1.62**
		$U_{15} - U_{16}$	-----	-1437.32	-197	-467	-850	-724	-114	-428	-319	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.165	1	Yes	0.824	0.094	0.92	Yes	1.00	**1.87**
		$U_{16} - U_{17}$	-----	-1402.13	-381	-194	-1232	-625	-35	-241	-216	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.182	1	Yes	0.804	0.136	0.94	Yes	1.00	**2.30**
		$U_{17} - U_{18}$	-----	-1066.64	-252	-61	-895	48	-115	71	-213	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.154	1	Yes	0.835	0.146	0.99	Yes	1.00	**2.23**
		$U_{18} - U_{19}$	-----	-743.34	-240	10	-769	102	363	-139	79	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.155	1	Yes	0.836	0.155	1.00	Yes	1.00	**2.41**
		$U_{19} - U_{20}$	-----	-652.47	-167	-106	-1279	546	-62	-104	-181	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.220	0.97	Yes	0.734	0.257	1.00	Yes	1.00	**6.98**
	Structure 2	$U_0 - U_1$	-----	-559.53	1978	-1686	-1158	-553	948	-320	1653	-496	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.274	0.94	Yes	0.661	0.336	1.00	Yes	1.00	**5.99**
		$U_1 - U_2$	-----	-821.00	-72	-452	-389	-1050	137	129	471	-375	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.193	1	Yes	0.792	0.159	0.96	Yes	1.00	**2.28**
		$U_2 - U_3$	-----	-1194.40	25	-1019	-510	-1108	-38	-571	518	-601	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.141	1	Yes	0.848	0.113	0.97	Yes	1.00	**2.55**
		$U_3 - U_4$	-----	-1395.43	-520	-507	-1356	-1297	-126	-29	409	-365	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.191	1	Yes	0.795	0.121	0.92	Yes	1.00	**2.26**
		$U_4 - U_5$	-----	-1511.18	-579	-548	-1470	-1523	-124	-83	137	-613	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.209	1	Yes	0.776	0.126	0.91	Yes	1.00	**1.84**
		$U_5 - U_6$	-----	-1560.87	-570	0	-1580	-1015	-196	-48	-80	-531	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.191	1	Yes	0.801	0.131	0.94	Yes	1.00	**1.94**
		$U_6 - U_7$	-----	-1396.90	-309	-200	-1400	-1165	-172	-92	28	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1	Yes	0.795	0.125	0.93	Yes	1.00	**1.99**
		$U_7 - U_8$	-----	-1378.37	-339	-192	-1506	-988	-80	-180	-328	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.204	1	Yes	0.785	0.134	0.92	Yes	1.00	**1.99**
		$U_8 - U_9$	-----	-1190.11	-349	214	-1381	-303	-19	-196	-448	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.186	1	Yes	0.807	0.147	0.96	Yes	1.00	**2.21**
		$U_9 - U_{10}$	291.49	-900.26	-85	533	-1514	16	-124	-240	-599	-619	0.214	0.251	0.47	Yes	0.145	0.170	0.32	Yes	0.781	0.211	1	Yes	0.777	0.184	0.97	Yes	1.00	**2.74**
		$U_{10} - U_{11}$	832.58	-617.73	349	612	-1342	6	-191	-101	-828	-487	0.703	0.290	1.00	Yes	0.479	0.190	0.67	Yes	0.618	0.242	0.86	Yes	0.614	0.189	0.81	Yes	1.00	**4.04**
		$U_{11} - U_{12}$	940.92	-----	200	654	-965	445	34	38	-495	-483	0.795	0.197	1.00	Yes	0.534	0.131	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_{12} - U_{13}$	1247.23	-----	453	58	-621	-212	293	414	-735	-88	0.842	0.148	1.00	Yes	0.600	0.102	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{13} - U_{14}$	1010.91	-----	140	1629	-1844	4086	1418	1755	149	863	0.497	0.498	1.00	Yes	0.352	0.328	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.35**
		$U_{14} - U_{15}$	1025.10	-----	4234	-1569	1494	-116	700	-71	640	1437	0.504	0.490	1.00	Yes	0.357	0.322	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_{15} - U_{16}$	1199.28	-----	256	0	-1345	-493	469	169	1401	-35	0.725	0.271	1.00	Yes	0.516	0.186	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.57**
		$U_{16} - U_{17}$	628.90	-752.81	1619	-1164	-664	-2386	146	-559	1848	-2229	0.463	0.534	1.00	Yes	0.308	0.351	0.66	Yes	0.657	0.314	0.98	Yes	0.653	0.300	0.96	Yes	1.00	**11.34**
		$U_{17} - U_{18}$	810.49	-247.56	516	293	-105	-641	-62	303	522	-263	0.814	0.185	1.00	Yes	0.542	0.122	0.67	Yes	0.294	0.149	0.45	Yes	0.292	0.109	0.41	Yes	1.00	**3.38**
		$U_{18} - U_{19}$	693.13	-698.81	671	220	-515	-667	1	184	970	-602	0.696	0.256	0.96	Yes	0.456	0.165	0.63	Yes	0.830	0.163	1	Yes	0.825	0.114	0.94	Yes	1.00	**4.11**
		$U_{19} - U_{20}$	252.57	-741.76	281	114	-505	-864	-55	137	381	-359	0.237	0.190	0.43	Yes	0.157	0.125	0.29	Yes	0.824	0.167	1	Yes	0.818	0.138	0.96	Yes	1.00	**2.45**
		$U_{20} - U_{21}$	130.31	-877.45	143	-126	-835	-475	-5	23	330	-502	0.101	0.176	0.28	Yes	0.071	0.115	0.19	Yes	0.807	0.184	1	Yes	0.801	0.121	0.93	Yes	1.00	**2.61**
		$U_{21} - U_{22}$	6.65	-840.24	-109	-75	-822	-988	-182	-102	113	-246	0.005	0.170	0.18	Yes	0.004	0.114	0.12	Yes	0.772	0.226	1	Yes	0.767	0.143	0.92	Yes	1.00	**2.13**
		$U_{22} - U_{23}$	-----	-831.64	-76	-123	-1139	-729	-54	-166	-176	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.232	1	Yes	0.759	0.165	0.93	Yes	1.00	**2.13**
		$U_{23} - U_{24}$	24.26	-862.74	-9	-62	-905	-343	-2	-94	-474	-201	0.019	0.183	0.21	Yes	0.013	0.120	0.14	Yes	0.793	0.198	1	Yes	0.787	0.131	0.92	Yes	1.00	**2.53**
		$U_{24} - U_{25}$	309.98	-718.76	186	327	-1019	-122	-12	-80	-406	-246	0.291	0.218	0.51	Yes	0.193	0.143	0.34	Yes	0.798	0.199	1	Yes	0.793	0.163	0.96	Yes	1.00	**2.75**
		$U_{25} - U_{26}$	670.31	-595.70	214	650	-1172	-35	17	-47	-769	-203	0.673	0.312	0.99	Yes	0.441	0.200	0.65	Yes	0.708	0.284	1	Yes	0.704	0.199	0.91	Yes	1.00	**4.01**
		$U_{26} - U_{27}$	761.76	-98.94	293	473	-820	277	-47	12	-652	-179	0.765	0.235	1.00	Yes	0.509	0.155	0.67	Yes	0.118	0.226	0.35	Yes	0.117	0.139	0.26	Yes	1.00	**3.19**
		$U_{27} - U_{28}$	1082.34	-----	220	700	-1152	766	238	257	-548	-519	0.798	0.202	1.00	Yes	0.531	0.133	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{28} - U_{29}$	1056.65	-----	1108	318	-1910	-150	479	1643	-1172	169	0.639	0.356	1.00	Yes	0.454	0.243	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.60**
		$U_{29} - U_{30}$	898.76	-----	343	1261	-2013	4517	1645	1992	-183	1003	0.442	0.554	1.00	Yes	0.313	0.365	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.41**
		$U_{30} - U_{31}$	988.11	-----	4361	-1602	1624	-444	1013	8	1116	1575	0.486	0.511	1.00	Yes	0.344	0.336	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		$U_{31} - U_{32}$	1234.06	-----	110	377	-784	-842	185	387	614	-604	0.833	0.165	1.00	Yes	0.594	0.113	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{32} - U_{33}$	-----	-787.72	1153	-1314	-264	-1469	355	-896	1709	-1617	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.179	0.97	Yes	0.783	0.207	1.00	Yes	1.00	**9.30**
		$U_{33} - U_{34}$	797.78	-788.40	576	275	-468	-929	-37	257	1122	-263	0.674	0.268	0.95	Yes	0.459	0.178	0.64	Yes	0.788	0.206	1	Yes	0.783	0.131	0.92	Yes	1.00	**4.32**
		$U_{34} - U_{35}$	121.72	-989.19	405	-177	-304	-1168	43	48	517	-505	0.089	0.198	0.29	Yes	0.060	0.134	0.20	Yes	0.859	0.140	1	Yes	0.854	0.142	1.00	Yes	1.00	**2.39**
		$U_{35} - U_{36}$	-----	-1238.11	127	-445	-578	-1111	-18	100	456	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.148	1	Yes	0.840	0.118	0.96	Yes	1.00	**2.11**
		$U_{36} - U_{37}$	-----	-1452.72	-260	-286	-1199	-1004	-20	-114	549	-309	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.163	1	Yes	0.827	0.107	0.94	Yes	1.00	**2.08**
		$U_{37} - U_{38}$	-----	-1423.00	-200	-424	-1233	-1235	-94	-198	-235	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.177	1	Yes	0.810	0.110	0.93	Yes	1.00	**1.77**
		$U_{38} - U_{39}$	-----	-1587.32	-163	-632	-1163	-1286	8	-210	-403	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.171	1	Yes	0.815	0.107	0.93	Yes	1.00	**1.83**
		$U_{39} - U_{40}$	-----	-1526.24	-610	-566	-1793	-927	13	-85	-300	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.204	1	Yes	0.784	0.149	0.94	Yes	1.00	**1.82**
		$U_{40} - U_{41}$	-----	-1382.02	-512	-490	-1607	-1107	86	-162	12	12	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.200	1	Yes	0.787	0.143	0.94	Yes	1.00	**2.09**
		$U_{41} - U_{42}$	-----	-1183.53	-413	-131	-1356	-122	64	-30	-157	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.146	1	Yes	0.840	0.138	0.98	Yes	1.00	**2.59**
		$U_{42} - U_{43}$	-----	-835.28	-276	-27	-1162	23	209	-195	-17	-415	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1	Yes	0.806	0.176	0.99	Yes	1.00	**2.93**
		$U_{43} - U_{44}$	-----	-641.97	-168	-230	-1397	557	-124	-129	-220	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.218	0.99	Yes	0.758	0.237	1.00	Yes	1.00	**6.05**
	Structure 3	$U_0 - U_1$	-----	-572.71	1754	-1404	-939	-596	891	-552	1578	-660	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.298	0.95	Yes	0.644	0.353	1.00	Yes	1.00	**5.97**
		$U_1 - U_2$	-----	-727.42	-4	-588	-206	-698	69	-227	449	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.168	1	Yes	0.818	0.141	0.96	Yes	1.00	**2.07**
		$U_2 - U_3$	-----	-1078.99	126	-542	-231	-544	-22	-642	501	-475	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.142	1	Yes	0.844	0.089	0.94	Yes	1.00	**2.37**
		$U_3 - U_4$	-----	-1431.59	-204	-379	-748	-1083	-183	-177	377	-423	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.169	1	Yes	0.821	0.119	0.95	Yes	1.00	**2.57**
		$U_4 - U_5$	-----	-1427.11	-426	-153	-1176	-388	-106	-51	421	-568	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.168	1	Yes	0.818	0.130	0.95	Yes	1.00	**2.18**
		$U_5 - U_6$	-----	-1390.40	-250	-370	-846	-1206	-186	-147	116	-333	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.194	1	Yes	0.797	0.133	0.94	Yes	1.00	**1.89**
		$U_6 - U_7$	-----	-1365.50	-495	-156	-1431	-473	-121	-302	-262	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1	Yes	0.783	0.158	0.95	Yes	1.00	**1.82**
		$U_7 - U_8$	-----	-1223.34	-234	36	-859	-182	-108	-317	-526	-531	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.172	1	Yes	0.817	0.118	0.94	Yes	1.00	**2.06**
		$U_8 - U_9$	-----	-884.29	-124	265	-802	76	-216	-185	-427	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.158	1	Yes	0.830	0.133	0.97	Yes	1.00	**2.16**
		$U_9 - U_{10}$	314.29	-605.32	-48	387	-1007	221	5	4	-311	-406	0.341	0.291	0.64	Yes	0.227	0.187	0.42	Yes	0.779	0.209	0.99	Yes	0.772	0.226	1.00	Yes	1.00	**3.35**
		$U_{10} - U_{11}$	716.85	-122.14	330	250	-527	161	100	175	-631	-191	0.778	0.219	1.00	Yes	0.527	0.147	0.68	Yes	0.157	0.243	0.41	Yes	0.156	0.118	0.28	Yes	1.00	**4.14**
		$U_{11} - U_{12}$	628.85	-----	87	728	-1303	2021	1176	1114	-93	409	0.515	0.484	1.00	Yes	0.352	0.329	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		$U_{12} - U_{13}$	657.34	-----	2928	-1587	744	-132	82	-925	733	841	0.455	0.538	1.00	Yes	0.318	0.367	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		$U_{13} - U_{14}$	837.73	-----	223	358	-251	-72	-107	375	835	-110	0.801	0.191	1.00	Yes	0.560	0.132	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		$U_{14} - U_{15}$	631.82	-438.49	454	224	4	-612	-61	257	641	-762	0.724	0.274	1.00	Yes	0.488	0.181	0.67	Yes	0.597	0.175	0.78	Yes	0.591	0.146	0.74	Yes	1.00	**3.24**
		$U_{15} - U_{16}$	340.31	-573.87	294	142	-356	-525	-74	215	526	-21	0.390	0.214	0.61	Yes	0.268	0.146	0.42	Yes	0.781	0.211	1	Yes	0.774	0.125	0.90	Yes	1.00	**2.71**
		$U_{16} - U_{17}$	289.07	-581.97	313	31	-586	-390	175	-71	156	-79	0.331	0.169	0.51	Yes	0.227	0.116	0.35	Yes	0.792	0.203	1	Yes	0.785	0.139	0.93	Yes	1.00	**2.36**
		$U_{17} - U_{18}$	82.01	-613.10	217	-174	-460	-425	70	35	22	-213	0.094	0.145	0.24	Yes	0.063	0.095	0.16	Yes	0.834	0.156	1	Yes	0.827	0.109	0.94	Yes	1.00	**2.06**
		$U_{18} - U_{19}$	-----	-586.40	22	-70	-764	-144	205	-197	-42	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.197	1	Yes	0.791	0.182	0.98	Yes	1.00	**2.37**
		$U_{19} - U_{20}$	7.25	-510.46	87	-293	-625	-347	-148	-110	556	-54	0.008	0.243	0.26	Yes	0.006	0.166	0.18	Yes	0.695	0.299	1	Yes	0.688	0.149	0.84	Yes	1.00	**4.06**

Moment (Start) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

				Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
		Vehicle	Pedestrian	Max.	Max.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
				Tension	Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
				(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1		19.85	-20.36	690	-1057	-139	1	-827	-3039	54	199	0.030	0.969	1.00	Yes	0.018	0.573	0.60	Yes	0.037	0.692	0.73	Yes	0.037	0.317	0.36	Yes	1.00	**6.55**
		L_1 - L_2		348.02	-----	168	-683	-201	-531	-196	312	-1196	340	0.533	0.462	1.00	Yes	0.325	0.297	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		L_2 - L_3		640.49	-108.97	-37	66	-778	-468	-188	130	463	-226	0.737	0.262	1.00	Yes	0.426	0.156	0.59	Yes	0.149	0.232	0.39	Yes	0.147	0.188	0.34	Yes	1.00	**2.31**
		L_3 - L_4		609.90	-241.84	3	297	-634	-280	297	-239	-866	-12	0.702	0.292	1.00	Yes	0.417	0.183	0.60	Yes	0.330	0.262	0.6	Yes	0.327	0.153	0.49	Yes	1.00	**2.30**
		L_4 - L_5		77.84	-556.74	102	465	-549	288	-73	202	181	-176	0.101	0.181	0.29	Yes	0.060	0.118	0.18	Yes	0.856	0.133	0.99	Yes	0.848	0.145	1.00	Yes	1.00	**1.84**
		L_5 - L_6		-----	-747.54	124	590	-230	418	163	-236	-24	0	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.127	1	Yes	0.862	0.130	1.00	Yes	1.00	**1.78**
		L_6 - L_7		-----	-1160.51	235	-19	-345	22	-198	405	43	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.945	0.052	1	Yes	0.934	0.054	0.99	Yes	1.00	**2.74**
		L_7 - L_8		-----	-1156.40	48	487	-373	1566	804	274	-537	32	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.257	1	Yes	0.732	0.207	0.94	Yes	1.00	**4.49**
		L_8 - L_9		-----	-1246.58	1237	-91	654	-33	542	428	198	389	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.200	1	Yes	0.790	0.164	0.96	Yes	1.00	**2.29**
		L_9 - L_{10}		-----	-1043.14	865	-957	-153	-341	494	751	-586	50	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.098	0.95	Yes	0.840	0.150	1.00	Yes	1.00	**6.22**
		L_{10} - L_{11}		191.37	-551.74	504	-50	-16	-595	-285	43	198	-528	0.248	0.250	0.50	Yes	0.144	0.149	0.30	Yes	0.848	0.131	0.98	Yes	0.841	0.157	1.00	Yes	1.00	**3.53**
		L_{11} - L_{12}		497.33	-----	361	-652	75	-606	-134	274	-1041	223	0.644	0.355	1.00	Yes	0.386	0.224	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.01**
		L_{12} - L_{13}		1079.85	-----	81	-144	-507	-563	-165	118	387	-146	0.852	0.145	1.00	Yes	0.545	0.088	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		L_{13} - L_{14}		1278.43	-----	289	-1430	-271	-1146	-76	288	-527	249	0.752	0.241	1.00	Yes	0.487	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		L_{14} - L_{15}		1539.51	-----	-489	-170	-1817	-258	-184	92	317	101	0.752	0.241	1.00	Yes	0.489	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		L_{15} - L_{16}		1596.14	-----	-281	-439	-1186	-1235	-4	-186	-882	35	0.780	0.211	1.00	Yes	0.501	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
		L_{16} - L_{17}		1219.00	-----	-421	54	-1293	-26	-127	170	183	-384	0.771	0.224	1.00	Yes	0.500	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		L_{17} - L_{18}		877.04	-----	-225	-16	-776	5	84	-113	-674	-177	0.764	0.236	1.00	Yes	0.489	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		L_{18} - L_{19}		411.67	-----	-244	228	-987	552	-159	110	339	233	0.630	0.367	1.00	Yes	0.426	0.230	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{19} - L_{20}		61.87	-325.25	-150	54	-1244	792	126	28	110	25	0.095	0.400	0.50	Yes	0.058	0.270	0.33	Yes	0.591	0.399	1	Yes	0.586	0.373	0.96	Yes	1.00	**9.54**
	Structure 2	L_0 - L_1		55.10	-109.27	705	-2218	-51	-153	-843	-2928	36	125	0.067	0.932	1.00	Yes	0.040	0.579	0.62	Yes	0.157	0.668	0.83	Yes	0.156	0.451	0.61	Yes	1.00	**8.78**
		L_1 - L_2		435.41	-----	621	-1307	92	-954	-105	618	-1198	411	0.529	0.463	1.00	Yes	0.315	0.290	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		L_2 - L_3		1024.59	-----	194	-751	-376	-912	-51	124	547	-266	0.807	0.190	1.00	Yes	0.530	0.116	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		L_3 - L_4		1273.41	-----	127	-1207	-382	-1405	0	500	-1043	294	0.748	0.248	1.00	Yes	0.504	0.157	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		L_4 - L_5		1698.98	-----	-429	-426	-1549	-1210	-58	176	793	5	0.792	0.200	1.00	Yes	0.524	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_5 - L_6		1802.78	-----	-220	-495	-1166	-1810	193	-92	-931	95	0.774	0.219	1.00	Yes	0.519	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		L_6 - L_7		1837.21	-----	-569	-208	-2239	-1058	-161	219	285	-314	0.778	0.216	1.00	Yes	0.517	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		L_7 - L_8		1321.55	-9.57	-303	381	-1512	-582	217	-143	-844	135	0.758	0.236	1.00	Yes	0.498	0.142	0.65	Yes	0.007	0.208	0.22	Yes	0.006	0.167	0.18	Yes	1.00	**2.54**
		L_8 - L_9		1059.12	-377.76	-97	590	-1283	243	-88	184	192	-824	0.741	0.251	1.00	Yes	0.499	0.159	0.66	Yes	0.313	0.155	0.47	Yes	0.311	0.173	0.49	Yes	1.00	**3.01**
		L_9 - L_{10}		556.82	-765.78	-124	837	-1194	366	146	-154	-714	30	0.497	0.277	0.78	Yes	0.289	0.170	0.46	Yes	0.810	0.134	0.95	Yes	0.804	0.191	1.00	Yes	1.00	**3.47**
		L_{10} - L_{11}		-----	-738.31	14	563	-716	548	-83	83	256	32	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.089	0.97	Yes	0.867	0.125	1.00	Yes	1.00	**2.09**
		L_{11} - L_{12}		-----	-1033.14	-71	1100	-603	759	65	-366	-169	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.127	0.99	Yes	0.847	0.150	1.00	Yes	1.00	**2.28**
		L_{12} - L_{13}		-----	-1513.30	138	-689	-755	-614	-333	156	291	73	-----	-----	-----	-----	-----	-----	-----	-----	0.913	0.077	1	Yes	0.905	0.075	0.99	Yes	1.00	**3.41**
		L_{13} - L_{14}		-----	-1393.46	-265	1011	-1830	3359	1156	899	-952	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.272	0.98	Yes	0.701	0.293	1.00	Yes	1.00	**5.22**
		L_{14} - L_{15}		-----	-1457.93	2953	-896	1508	-467	345	272	417	376	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.201	0.95	Yes	0.734	0.258	1.00	Yes	1.00	**2.78**
		L_{15} - L_{16}		-----	-1197.92	225	-18	-1794	-1024	816	-406	-1408	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.269	1	Yes	0.717	0.178	0.90	Yes	1.00	**7.42**
		L_{16} - L_{17}		-----	-1145.94	1330	-412	565	-418	-394	-90	283	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.144	0.99	Yes	0.835	0.164	1.00	Yes	1.00	**3.70**
		L_{17} - L_{18}		213.62	-621.80	1519	-2158	74	-878	-150	1804	-1035	415	0.191	0.562	0.76	Yes	0.111	0.343	0.46	Yes	0.658	0.277	0.94	Yes	0.653	0.345	1.00	Yes	1.00	**8.00**
		L_{18} - L_{19}		228.02	-639.82	717	34	-150	-566	-211	60	352	-313	0.258	0.192	0.46	Yes	0.149	0.114	0.27	Yes	0.858	0.117	0.98	Yes	0.853	0.138	1.00	Yes	1.00	**2.88**
		L_{19} - L_{20}		621.45	-508.07	532	154	-190	-859	151	-181	-833	389	0.704	0.293	1.00	Yes	0.416	0.182	0.60	Yes	0.681	0.125	0.81	Yes	0.677	0.166	0.85	Yes	1.00	**3.58**
		L_{20} - L_{21}		990.98	-293.02	411	-76	-985	-1018	-186	69	498	-382	0.790	0.202	1.00	Yes	0.518	0.123	0.65	Yes	0.277	0.184	0.47	Yes	0.275	0.149	0.43	Yes	1.00	**3.42**
		L_{21} - L_{22}		884.49	-50.28	110	-290	-811	-1245	136	-103	-988	107	0.705	0.288	1.00	Yes	0.472	0.184	0.66	Yes	0.048	0.256	0.31	Yes	0.047	0.182	0.23	Yes	1.00	**2.52**
		L_{22} - L_{23}		922.45	-----	-196	-42	-1575	-480	-119	158	1	-281	0.736	0.260	1.00	Yes	0.492	0.163	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
		L_{23} - L_{24}		891.14	-340.02	-56	465	-1240	-691	163	-139	-943	-3	0.711	0.282	1.00	Yes	0.466	0.173	0.64	Yes	0.321	0.257	0.58	Yes	0.319	0.181	0.50	Yes	1.00	**3.65**
		L_{24} - L_{25}		550.75	-560.72	206	530	-1162	67	-105	150	278	-955	0.624	0.370	1.00	Yes	0.369	0.231	0.60	Yes	0.752	0.207	0.96	Yes	0.747	0.224	0.98	Yes	1.00	**3.88**
		L_{25} - L_{26}		46.30	-642.34	29	729	-664	220	102	-166	-488	40	0.052	0.215	0.27	Yes	0.030	0.127	0.16	Yes	0.861	0.131	1	Yes	0.856	0.141	1.00	Yes	1.00	**2.87**
		L_{26} - L_{27}		-----	-833.71	193	497	-727	483	-50	222	256	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.109	1	Yes	0.875	0.116	1.00	Yes	1.00	**2.84**
		L_{27} - L_{28}		-----	-1155.14	29	1219	-749	1033	226	-49	-296	134	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.128	0.98	Yes	0.841	0.150	1.00	Yes	1.00	**3.85**
		L_{28} - L_{29}		-----	-1451.54	458	-630	-754	-1082	-78	839	120	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.118	1	Yes	0.868	0.108	0.98	Yes	1.00	**5.65**
		L_{29} - L_{30}		-----	-1404.01	-441	1121	-1800	3275	1114	1153	-569	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.260	0.98	Yes	0.706	0.286	1.00	Yes	1.00	**4.86**
		L_{30} - L_{31}		-----	-1490.31	2761	-880	1674	-481	256	201	558	490	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.201	0.96	Yes	0.750	0.241	1.00	Yes	1.00	**2.21**
		L_{31} - L_{32}		-----	-1261.29	272	-432	-1557	-959	1011	-487	-874	14	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.235	1	Yes	0.754	0.155	0.91	Yes	1.00	**7.49**
		L_{32} - L_{33}		-----	-1034.50	1090	-507	521	-558	-92	40	195	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.111	0.97	Yes	0.848	0.149	1.00	Yes	1.00	**2.98**
		L_{33} - L_{34}		394.26	-566.66	1282	-1710	162	-1245	-164	1599	-2221	659	0.394	0.598	1.00	Yes	0.231	0.365	0.60	Yes	0.670	0.186	0.86	Yes	0.666	0.299	0.97	Yes	1.00	**7.57**
		L_{34} - L_{35}		621.64	-753.68	838	-100	-241	-943	-217	96	932	-50	0.555	0.263	0.82	Yes	0.323	0.160	0.49	Yes	0.797	0.202	1	Yes	0.791	0.151	0.95	Yes	1.00	**4.22**
		L_{35} - L_{36}		967.52	-----	574	-1209	-62	-1202	-136	653	-1655	319	0.677	0.319	1.00	Yes	0.456	0.205	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		L_{36} - L_{37}		1392.16	-----	316	-249	-959	-1383	-207	150	550	-234	0.798	0.198	1.00	Yes	0.524	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		L_{37} - L_{38}		1792.39	-----	-137	-637	-1762	-2008	66	-198	-939	476	0.759	0.234	1.00	Yes	0.504	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		L_{38} - L_{39}		1750.05	-----	-585	-232	-2163	-1082	-117	181	39	-764	0.751	0.240	1.00	Yes	0.504	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		L_{39} - L_{40}		1726.60	-----	-402	-429	-1628	-1162	117	-163	-478	321	0.805	0.186	1.00	Yes	0.533	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		L_{40} - L_{41}		1306.29	-----	-463	28	-1681	-155	-44	273	270	-383	0.768	0.227	1.00	Yes	0.517	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		L_{41} - L_{42}		962.32	-----	-251	-62	-1133	-93	140	-74	-706	-31	0.758	0.239	1.00	Yes	0.497	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_{42} - L_{43}		514.58	-----	-276	214	-1307	555	125	345	631	334	0.625	0.370	1.00	Yes	0.372	0.234	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
		L_{43} - L_{44}		-----	-327.84	-84	-26	-2046	772	623	182	121	35	-----	-----	-----	-----	-----	-----	-----	-----	0.471	0.525	1	Yes	0.468	0.416	0.89	Yes	1.00	**13.18**
	Structure 3	L_0 - L_1		16.72	-307.53	695	-1255	28	-142	-346	-1569	26	116	0.026	0.702	0.73	Yes	0.016	0.456	0.48	Yes	0.559	0.440	1	Yes	0.554	0.377	0.94	Yes	1.00	**6.20**
		L_1 - L_2		315.32	-----	673	-1001	139	-673	-19	744	-1020	466	0.483	0.512	1.00	Yes	0.326	0.329	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_2 - L_3		876.76	-----	256	-725	-221	-649	164	-253	714	-112	0.763	0.231	1.00	Yes	0.489	0.141	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		L_3 - L_4		1147.39	-----	238	-1145	-222	-1172	17	704	-1045	424	0.725	0.265	1.00	Yes	0.471	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		L_4 - L_5		1602.10	-----	-372	-259	-1382	-869	-32	231	599	-191	0.783	0.209	1.00	Yes	0.502	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		L_5 - L_6		1613.68	-----	-135	-462	-757	-1364	264	-69	-536	342	0.788	0.202	1.00	Yes	0.512	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		L_6 - L_7		1265.96	-----	-485	243	-1623	252	-53	272	350	-145	0.745	0.253	1.00	Yes	0.482	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		L_7 - L_8		983.85	-39.38	-97	173	-735	-350	143	-169	-744	24	0.776	0.217	1.00	Yes	0.497	0.132	0.63	Yes	0.037	0.208	0.25	Yes	0.037	0.130	0.17	Yes	1.00	**3.07**
		L_8 - L_9		526.21	-342.66	-152	452	-860	442	-109	163	474	221	0.681	0.311	1.00	Yes	0.409	0.201	0.62	Yes	0.527	0.166	0.7	Yes	0.522	0.228	0.75	Yes	1.00	**3.34**
		L_9 - L_{10}		-----	-560.92	-65	517	-529	310	145	-153	-25	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.083	0.95	Yes	0.855	0.140	1.00	Yes	1.00	**2.73**
		L_{10} - L_{11}		-----	-1106.46	97	28	-677	298	-274	-20	554	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.053	0.96	Yes	0.891	0.106	1.00	Yes	1.00	**4.49**
		L_{11} - L_{12}		-----	-1159.26	41	695	-466	1521	870	269	-1119	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.255	1	Yes	0.734	0.201	0.94	Yes	1.00	**5.91**
		L_{12} - L_{13}		-----	-1227.16	1646	-276	677	-7	285	-365	0	338	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.209	1	Yes	0.777	0.218	1.00	Yes	1.00	**3.29**
		L_{13} - L_{14}		-----	-1078.53	665	-789	-312	-200	173	524	-575	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.087	0.97	Yes	0.868	0.124	1.00	Yes	1.00	**6.35**
		L_{14} - L_{15}		-----	-733.04	575	112	91	-346	-263	84	196	-467	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.138	1	Yes	0.846	0.127	0.98	Yes	1.00	**2.39**
		L_{15} - L_{16}		268.78	-492.70	450	99	66	-596	251	-203	-1163	375	0.348	0.365	0.72	Yes	0.209	0.229	0.44	Yes	0.757	0.235	1	Yes	0.751	0.158	0.91	Yes	1.00	**2.27**
		L_{16} - L_{17}		660.13	-156.01	282	-62	-738	-335	-172	190	365	188	0.759	0.237	1.00	Yes	0.451	0.151	0.61	Yes	0.213	0.219	0.44	Yes	0.211	0.178	0.39	Yes	1.00	**2.56**
		L_{17} - L_{18}		652.48	-34.43	11	-109	-719	-593	112	-113	-436	287	0.751	0.244	1.00	Yes	0.434	0.145	0.58	Yes	0.047	0.228	0.28	Yes	0.047	0.174	0.23	Yes	1.00	**2.64**
		L_{18} - L_{19}		433.85	-2.79	-29	-20	-780	85	-104	206	451	137	0.664	0.331	1.00	Yes	0.405	0.219	0.63	Yes	0.005	0.201	0.21	Yes	0.005	0.234	0.24	Yes	1.00	**3.19**
		L_{19} - L_{20}		87.32	-82.91	298	-411	-2042	1576	110	30	-1163	-316	0.134	0.862	1.00	Yes	0.079	0.522	0.61	Yes	0.151	0.753	0.91	Yes	0.149	0.613	0.77	Yes	1.00	**22.44**

Moment (Start) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension					Compression											
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-283.08	-11	60	-107	164	167	53	-998	-320	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.359	1	Yes	0.599	0.209	0.81	Yes	1.00	**0.87**
		$U_1 - L_1$	34.27	-318.84	39	-31	-253	238	586	205	-302	-56	0.062	0.493	0.56	Yes	0.034	0.271	0.31	Yes	0.697	0.239	0.94	Yes	0.675	0.323	1.00	Yes	1.00	**2.63**
		$U_2 - L_2$	142.74	-282.56	127	-141	-221	270	852	228	-971	-306	0.257	0.627	0.89	Yes	0.141	0.345	0.49	Yes	0.617	0.374	1	Yes	0.598	0.346	0.95	Yes	1.00	**4.39**
		$U_3 - L_3$	185.27	-131.86	226	-217	-76	103	-1184	-740	-1280	-284	0.333	0.659	1.00	Yes	0.183	0.363	0.55	Yes	0.289	0.330	0.62	Yes	0.279	0.289	0.57	Yes	1.00	**4.67**
		$U_4 - L_4$	-----	-159.15	329	-326	29	-37	-1638	-832	910	238	-----	-----	-----	-----	-----	-----	-----	-----	0.350	0.644	1	Yes	0.337	0.420	0.76	Yes	1.00	**5.33**
		$U_5 - L_5$	-----	-396.42	198	-225	73	-88	17	195	863	288	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.277	1	Yes	0.684	0.228	0.92	Yes	1.00	**2.17**
		$U_6 - L_6$	-----	-417.30	218	-224	76	-65	905	440	1469	730	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.363	1	Yes	0.598	0.196	0.80	Yes	1.00	**2.00**
		$U_7 - L_7$	-----	-383.33	262	-280	102	-115	621	195	1232	307	-----	-----	-----	-----	-----	-----	-----	-----	0.641	0.353	1	Yes	0.591	0.276	0.87	Yes	1.00	**1.75**
		$U_8 - L_8$	-----	-1199.08	222	-272	-402	478	-50	-96	-1289	-587	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.130	1	Yes	0.831	0.089	0.93	Yes	1.00	**3.35**
		$U_9 - L_9$	-----	-659.45	-228	259	-404	449	623	238	-611	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.180	0.97	Yes	0.745	0.249	1.00	Yes	1.00	**1.63**
		$U_{10} - L_{10}$	-----	-797.99	-157	154	-378	405	630	287	-300	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.171	1	Yes	0.787	0.210	1.00	Yes	1.00	**2.70**
		$U_{11} - L_{11}$	-----	-660.93	-165	221	-376	485	613	381	-294	128	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.176	0.97	Yes	0.769	0.225	1.00	Yes	1.00	**2.44**
		$U_{12} - L_{12}$	-----	-525.57	-127	140	-316	324	-8	138	-77	153	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.111	0.88	Yes	0.721	0.277	1.00	Yes	1.00	**2.70**
		$U_{13} - L_{13}$	-----	-369.12	-63	87	-226	253	-120	-29	44	187	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.148	0.9	Yes	0.707	0.289	1.00	Yes	1.00	**2.34**
		$U_{14} - L_{14}$	-----	-145.70	121	-126	-236	257	-1263	-501	475	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.325	0.667	1	Yes	0.308	0.329	0.64	Yes	1.00	**6.25**
		$U_{15} - L_{15}$	64.76	-308.32	249	-270	-54	46	-766	-181	395	-187	0.116	0.567	0.69	Yes	0.064	0.312	0.38	Yes	0.691	0.284	0.98	Yes	0.652	0.345	1.00	Yes	1.00	**3.70**
		$U_{16} - L_{16}$	-----	-318.14	245	-252	44	-49	-34	-22	474	106	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.218	0.94	Yes	0.673	0.323	1.00	Yes	1.00	**2.55**
		$U_{17} - L_{17}$	-----	-419.00	205	-223	79	-92	198	109	504	199	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.210	1	Yes	0.723	0.226	0.95	Yes	1.00	**1.79**
		$U_{18} - L_{18}$	-----	-529.92	448	-457	171	-177	213	-5	676	171	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.183	0.96	Yes	0.737	0.259	1.00	Yes	1.00	**2.47**
		$U_{19} - L_{19}$	-----	-649.41	497	-514	178	-192	205	39	584	112	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.157	0.97	Yes	0.756	0.238	1.00	Yes	1.00	**2.95**
		$U_{20} - L_{20}$	-----	-612.85	467	-553	232	-279	118	15	451	59	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1	Yes	0.713	0.256	0.97	Yes	1.00	**2.63**
	Structure 2	$U_0 - L_0$	-----	-607.80	-161	280	-317	452	-14	-2	-1212	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.265	1	Yes	0.651	0.192	0.85	Yes	1.00	**1.14**
		$U_1 - L_1$	-----	-713.88	-204	212	-550	550	629	160	-31	51	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.146	0.97	Yes	0.765	0.233	1.00	Yes	1.00	**2.26**
		$U_2 - L_2$	-----	-593.37	-152	167	-455	472	624	284	41	239	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.176	0.98	Yes	0.756	0.241	1.00	Yes	1.00	**2.04**
		$U_3 - L_3$	-----	-459.97	-75	86	-215	232	546	265	-44	213	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.721	0.211	0.94	Yes	1.00	**1.67**
		$U_4 - L_4$	-----	-323.65	-15	26	-198	206	568	234	-33	168	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.259	1	Yes	0.685	0.263	0.95	Yes	1.00	**2.35**
		$U_5 - L_5$	75.08	-318.43	94	-68	-207	234	-484	-284	-452	66	0.135	0.439	0.58	Yes	0.074	0.241	0.32	Yes	0.719	0.272	1	Yes	0.674	0.299	0.98	Yes	1.00	**4.01**
		$U_6 - L_6$	307.68	-88.87	183	-186	-106	115	-501	-231	-694	-63	0.553	0.439	1.00	Yes	0.304	0.241	0.55	Yes	0.200	0.235	0.44	Yes	0.188	0.238	0.43	Yes	1.00	**4.03**
		$U_7 - L_7$	-----	-188.04	380	-425	-12	10	-1731	-923	-291	-476	-----	-----	-----	-----	-----	-----	-----	-----	0.425	0.567	1	Yes	0.398	0.544	0.95	Yes	1.00	**7.12**
		$U_8 - L_8$	-----	-470.11	334	-358	149	-170	-6	0	419	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.149	0.84	Yes	0.677	0.313	1.00	Yes	1.00	**2.08**
		$U_9 - L_9$	-----	-695.20	587	-597	267	-281	-65	112	673	185	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.149	0.93	Yes	0.745	0.253	1.00	Yes	1.00	**2.73**
		$U_{10} - L_{10}$	-----	-744.63	509	-531	233	-234	-7	216	1178	693	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.696	0.234	0.94	Yes	1.00	**2.63**
		$U_{11} - L_{11}$	-----	-732.71	458	-462	226	-220	526	492	1185	667	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.259	1	Yes	0.685	0.204	0.89	Yes	1.00	**2.18**
		$U_{12} - L_{12}$	-----	-720.67	417	-410	186	-168	1012	506	1490	652	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.305	1	Yes	0.625	0.179	0.81	Yes	1.00	**2.15**
		$U_{13} - L_{13}$	-----	-624.81	497	-485	222	-221	515	178	1161	318	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.301	1	Yes	0.602	0.238	0.85	Yes	1.00	**2.27**
		$U_{14} - L_{14}$	-----	-1225.87	432	-416	-594	551	723	-67	-736	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.097	1	Yes	0.813	0.105	0.92	Yes	1.00	**4.17**
		$U_{15} - L_{15}$	-----	-674.59	-268	264	-595	573	783	95	-362	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.244	1	Yes	0.650	0.285	0.94	Yes	1.00	**2.38**
		$U_{16} - L_{16}$	-----	-718.56	-185	173	-522	506	671	192	8	61	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.160	0.99	Yes	0.770	0.222	1.00	Yes	1.00	**2.43**
		$U_{17} - L_{17}$	-----	-643.22	-195	196	-537	537	594	193	-53	144	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.156	0.96	Yes	0.749	0.249	1.00	Yes	1.00	**2.29**
		$U_{18} - L_{18}$	-----	-579.00	-159	164	-470	496	622	214	-302	60	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.94	Yes	0.738	0.253	1.00	Yes	1.00	**2.19**
		$U_{19} - L_{19}$	-----	-478.85	-85	87	-289	287	521	194	-84	145	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.168	0.89	Yes	0.715	0.278	1.00	Yes	1.00	**2.23**
		$U_{20} - L_{20}$	-----	-376.21	-36	41	-218	229	517	179	-88	67	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.220	1	Yes	0.721	0.261	0.99	Yes	1.00	**2.43**
		$U_{21} - L_{21}$	15.15	-323.17	22	-10	-225	245	-248	-168	-470	44	0.027	0.449	0.48	Yes	0.015	0.247	0.27	Yes	0.730	0.228	0.96	Yes	0.684	0.313	1.00	Yes	1.00	**3.20**
		$U_{22} - L_{22}$	-----	-257.89	298	-318	-276	303	-1190	-942	-1051	-936	-----	-----	-----	-----	-----	-----	-----	-----	0.580	0.418	1	Yes	0.546	0.406	0.96	Yes	1.00	**10.42**
		$U_{23} - L_{23}$	-----	-320.57	230	-249	11	-14	-99	33	524	165	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.247	0.98	Yes	0.678	0.318	1.00	Yes	1.00	**2.63**
		$U_{24} - L_{24}$	-----	-371.05	228	-235	51	-56	132	108	583	204	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1	Yes	0.711	0.269	0.98	Yes	1.00	**2.12**
		$U_{25} - L_{25}$	-----	-471.19	302	-299	99	-101	-33	118	588	223	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.184	0.9	Yes	0.704	0.291	1.00	Yes	1.00	**2.07**
		$U_{26} - L_{26}$	-----	-571.89	499	-523	168	-175	226	273	707	301	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.190	0.96	Yes	0.729	0.267	1.00	Yes	1.00	**2.35**
		$U_{27} - L_{27}$	-----	-632.91	556	-560	200	-203	504	436	769	313	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.193	0.98	Yes	0.737	0.260	1.00	Yes	1.00	**2.61**
		$U_{28} - L_{28}$	-----	-614.28	467	-451	156	-129	899	389	1651	558	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.290	1	Yes	0.658	0.198	0.86	Yes	1.00	**2.40**
		$U_{29} - L_{29}$	-----	-619.40	579	-562	150	-154	460	135	1189	197	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.304	1	Yes	0.597	0.277	0.88	Yes	1.00	**3.30**
		$U_{30} - L_{30}$	-----	-1200.89	270	-285	-564	500	425	-156	-959	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.116	1	Yes	0.796	0.100	0.90	Yes	1.00	**3.59**
		$U_{31} - L_{31}$	-----	-710.25	-305	298	-530	512	507	95	-563	13	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.205	1	Yes	0.685	0.254	0.94	Yes	1.00	**1.80**
		$U_{32} - L_{32}$	-----	-853.63	-218	191	-475	468	621	191	-131	59	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1	Yes	0.740	0.204	0.95	Yes	1.00	**2.27**
		$U_{33} - L_{33}$	-----	-829.37	-247	234	-501	502	443	203	-475	101	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.144	0.98	Yes	0.775	0.221	1.00	Yes	1.00	**2.42**
		$U_{34} - L_{34}$	-----	-804.12	-236	251	-527	547	552	338	-362	78	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.158	0.96	Yes	0.752	0.241	1.00	Yes	1.00	**2.86**
		$U_{35} - L_{35}$	-----	-694.53	-254	269	-570	587	630	377	-312	109	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.152	0.93	Yes	0.744	0.249	1.00	Yes	1.00	**2.73**
		$U_{36} - L_{36}$	-----	-480.39	-135	157	-323	350	222	173	-330	64	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.147	0.85	Yes	0.692	0.306	1.00	Yes	1.00	**2.26**
		$U_{37} - L_{37}$	-----	-138.52	27	-25	-279	323	-974	-335	181	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.313	0.685	1	Yes	0.293	0.413	0.71	Yes	1.00	**6.58**
		$U_{38} - L_{38}$	289.06	-146.47	153	-164	-180	184	-821	-258	-174	-499	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.330	0.219	0.55	Yes	0.310	0.236	0.55	Yes	1.00	**4.28**
		$U_{39} - L_{39}$	42.87	-322.62	222	-243	-59	41	-400	-38	-20	-348	0.077	0.427	0.51	Yes	0.042	0.235	0.28	Yes	0.729	0.194	0.93	Yes	0.683	0.311	1.00	Yes	1.00	**3.58**
		$U_{40} - L_{40}$	-----	-326.75	221	-224	34	-42	-59	-18	598	172	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.256	1	Yes	0.691	0.287	0.98	Yes	1.00	**2.26**
		$U_{41} - L_{41}$	-----	-462.19	236	-249	86	-95	216	112	579	192	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1	Yes	0.725	0.226	0.96	Yes	1.00	**1.88**
		$U_{42} - L_{42}$	-----	-577.53	496	-502	169	-178	323	135	668	171	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.172	0.95	Yes	0.736	0.257	1.00	Yes	1.00	**2.47**
		$U_{43} - L_{43}$	-----	-705.38	536	-555	187	-205	483	224	620	185	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.152	0.96	Yes	0.756	0.235	1.00	Yes	1.00	**2.97**
		$U_{44} - L_{44}$	-----	-656.37	477	-594	245	-313	248	42	735	125	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.214	1	Yes	0.703	0.252	0.96	Yes	1.00	**2.47**
	Structure 3	$U_0 - L_0$	-----	-566.19	-134	236	-298	417	110	14	-879	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.248	1	Yes	0.659	0.194	0.86	Yes	1.00	**1.22**
		$U_1 - L_1$	-----	-652.42	-206	205	-507	501	620	142	-364	71	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.161	0.98	Yes	0.759	0.235	1.00	Yes	1.00	**2.09**
		$U_2 - L_2$	-----	-544.89	-155	166	-402	420	663	304	20	241	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.194	1	Yes	0.758	0.238	1.00	Yes	1.00	**2.01**
		$U_3 - L_3$	-----	-408.30	-68	83	-191	209	566	270	47	230	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.229	1	Yes	0.704	0.212	0.92	Yes	1.00	**1.56**
		$U_4 - L_4$	-----	-323.18	-30	36	-217	229	613	223	-569	89	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.270	1	Yes	0.684	0.293	0.98	Yes	1.00	**2.48**
		$U_5 - L_5$	46.43	-253.40	50	-34	-165	190	-423	-264	-1292	-54	0.084	0.617	0.71	Yes	0.046	0.340	0.39	Yes	0.568	0.425	1	Yes	0.536	0.243	0.78	Yes	1.00	**3.07**
		$U_6 - L_6$	-----	-148.78	340	-367	-79	81	-1552	-720	-223	-466	-----	-----	-----	-----	-----	-----	-----	-----	0.332	0.663	1	Yes	0.315	0.470	0.79	Yes	1.00	**6.83**
		$U_7 - L_7$	-----	-365.36	232	-257	79	-98	-377	-81	159	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.175	0.92	Yes	0.700	0.293	1.00	Yes	1.00	**2.01**
		$U_8 - L_8$	-----	-509.77	334	-335	133	-134	-58	44	898	373	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.259	1	Yes	0.699	0.286	0.99	Yes	1.00	**2.43**
		$U_9 - L_9$	-----	-622.84	380	-477	160	-220	450	423	1159	420	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.725	0.221	0.95	Yes	1.00	**2.52**
		$U_{10} - L_{10}$	-----	-628.27	318	-331	151	-140	1088	679	1707	946	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.346	1	Yes	0.620	0.172	0.80	Yes	1.00	**2.25**
		$U_{11} - L_{11}$	-----	-567.37	376	-423	189	-219	743	423	1508	675	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.322	1	Yes	0.641	0.235	0.88	Yes	1.00	**1.87**
		$U_{12} - L_{12}$	-----	-1174.74	275	-374	-407	435	716	210	-1257	-526	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.148	1	Yes	0.814	0.081	0.90	Yes	1.00	**3.47**
		$U_{13} - L_{13}$	-----	-450.06	-154	168	-286	303	670	120	-258	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.240	1	Yes	0.694	0.298	1.00	Yes	1.00	**1.35**
		$U_{14} - L_{14}$	-----	-499.43	-97	90	-220	239	725	230	-858	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.236	1	Yes	0.716	0.209	0.93	Yes	1.00	**1.84**
		$U_{15} - L_{15}$	-----	-435.75	-78	87	-218	243	535	241	67	149	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1	Yes	0.752	0.246	1.00	Yes	1.00	**2.75**
		$U_{16} - L_{16}$	-----	-166.73	-19	32	-278	279	-1007	-454	-2016	-942	-----	-----	-----	-----	-----	-----	-----	-----	0.367	0.624	1	Yes	0.353	0.356	0.71	Yes	1.00	**5.02**
		$U_{17} - L_{17}$	106.56	-242.49	155	-180	-201	190	-259	-149	-1520	-730	0.192	0.697	0.89	Yes	0.105	0.384	0.49	Yes	0.531	0.459	1	Yes	0.513	0.257	0.78	Yes	1.00	**6.34**
		$U_{18} - L_{18}$	108.27	-291.94	258	-299	-114	123	-191	-187	460	146	0.195	0.515	0.71	Yes	0.107	0.283	0.40	Yes	0.638	0.233	0.88	Yes	0.618	0.382	1.00	Yes	1.00	**4.51**
		$U_{19} - L_{19}$	-----	-328.20	232	-238	-30	14	224	125	424	219	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.204	0.93	Yes	0.694	0.304	1.00	Yes	1.00	**3.05**
		$U_{20} - L_{20}$	-----	-319.96	199	-248	78	-90	274	88	604	194	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.276	1	Yes	0.677	0.317	1.00	Yes	1.00	**1.73**

Moment (Start) AB Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

			Inventory Loads - HS20 Truck																													
			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:	Vehicle 1.300	Pedestrian 1.300	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
LL Factor:	2.167	1.625	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$	508.78	-----	23	7	-101	49	-200	-46	-848	-387	0.667	0.331	1.00	Yes	0.403	0.182	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		$U_1 - L_2$	311.34	-105.98	13	-16	-93	3	379	205	-1082	-530	0.560	0.432	1.00	Yes	0.308	0.238	0.55	Yes	0.243	0.407	0.66	Yes	0.224	0.119	0.35	Yes	1.00	**2.48**
		$U_2 - L_3$	11.15	-213.13	40	-27	-77	-38	447	228	-1311	-451	0.020	0.479	0.50	Yes	0.011	0.263	0.28	Yes	0.491	0.505	1	Yes	0.451	0.099	0.55	Yes	1.00	**3.23**
		$U_3 - L_4$	-----	-252.90	39	-12	-30	-65	455	249	-1105	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.578	0.421	1	Yes	0.535	0.083	0.62	Yes	1.00	**2.64**
		$U_4 - L_5$	572.82	-----	-4	76	-108	37	-139	118	186	144	0.840	0.153	1.00	Yes	0.462	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_5 - L_6$	684.93	-----	-11	143	-180	198	-247	64	-392	242	0.810	0.184	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_6 - L_7$	588.97	-----	-39	85	-263	232	-798	-110	-262	142	0.696	0.295	1.00	Yes	0.383	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		$U_7 - L_8$	624.22	-----	61	184	-91	298	457	-83	42	196	0.738	0.253	1.00	Yes	0.406	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_8 - L_9$	947.75	-----	40	208	-94	351	553	286	-199	-609	0.758	0.234	1.00	Yes	0.469	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		$U_9 - L_{10}$	933.21	-----	-110	141	-305	228	647	295	-894	-626	0.746	0.250	1.00	Yes	0.462	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		$U_{10} - L_{11}$	921.96	-----	-69	132	-241	163	311	44	-379	-820	0.779	0.219	1.00	Yes	0.482	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		$U_{11} - L_{12}$	769.47	-----	-90	78	-254	75	205	-20	-618	-784	0.761	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**
		$U_{12} - L_{13}$	550.86	-----	-84	62	-201	126	112	-27	-760	-710	0.671	0.324	1.00	Yes	0.423	0.186	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**
		$U_{13} - L_{14}$	406.79	-----	-31	-23	-90	21	-454	-259	-161	-515	0.732	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_{15} - L_{16}$	387.58	-258.53	35	-104	-134	-33	-245	-269	142	434	0.697	0.297	1.00	Yes	0.383	0.164	0.55	Yes	0.606	0.304	0.91	Yes	0.547	0.171	0.72	Yes	1.00	**5.28**
		$U_{16} - L_{15}$	401.97	-0.23	-18	-3	-145	86	-288	-127	-255	153	0.723	0.269	1.00	Yes	0.398	0.148	0.55	Yes	0.001	0.153	0.16	Yes	0.000	0.185	0.19	Yes	1.00	**3.15**
		$U_{17} - L_{18}$	526.59	-----	-46	23	-148	96	-305	-105	-247	-44	0.772	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$U_{18} - L_{17}$	620.53	-----	-129	88	-338	248	-400	-113	-295	143	0.734	0.264	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		$U_{19} - L_{18}$	692.06	-----	-132	95	-335	254	-455	-203	-373	-131	0.750	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		$U_{20} - L_{19}$	691.90	-----	-173	139	-391	324	-259	-140	-159	21	0.749	0.243	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
	Structure 2	$U_0 - L_1$	678.67	-----	-86	134	-285	303	-333	-95	-1236	-363	0.671	0.325	1.00	Yes	0.369	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		$U_1 - L_2$	735.64	-----	-162	116	-389	294	146	-29	-384	-605	0.728	0.271	1.00	Yes	0.400	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.93**
		$U_2 - L_3$	588.97	-----	-118	88	-312	244	126	-27	-285	-658	0.696	0.296	1.00	Yes	0.383	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.76**
		$U_3 - L_4$	533.76	-----	-52	25	-172	110	169	9	-450	-581	0.711	0.279	1.00	Yes	0.391	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_4 - L_5$	365.23	-42.85	3	-17	-130	81	239	38	-274	-599	0.657	0.340	1.00	Yes	0.361	0.187	0.55	Yes	0.106	0.211	0.32	Yes	0.091	0.167	0.26	Yes	1.00	**2.82**
		$U_5 - L_6$	341.55	-253.89	60	-114	-106	26	-779	-185	-449	-801	0.614	0.378	1.00	Yes	0.338	0.208	0.55	Yes	0.600	0.292	0.9	Yes	0.537	0.146	0.69	Yes	1.00	**4.19**
		$U_6 - L_7$	-----	-385.63	50	-103	-21	-49	-278	-38	-93	-430	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.174	1	Yes	0.739	0.118	0.86	Yes	1.00	**2.12**
		$U_8 - L_7$	606.01	-----	-79	36	-204	139	-58	-143	-172	202	0.773	0.224	1.00	Yes	0.486	0.125	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		$U_8 - L_9$	716.37	-----	-162	155	-338	244	-303	-90	-63	57	0.776	0.223	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		$U_{10} - L_9$	828.30	-----	-122	156	-303	229	-183	26	-131	231	0.819	0.175	1.00	Yes	0.451	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		$U_{11} - L_{10}$	881.10	-----	-129	193	-349	295	-253	59	-110	353	0.803	0.196	1.00	Yes	0.441	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{12} - L_{11}$	846.59	-----	-130	175	-341	344	-587	63	-412	308	0.771	0.226	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		$U_{13} - L_{12}$	731.61	-----	-157	161	-418	380	-541	0	-355	120	0.724	0.275	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		$U_{14} - L_{13}$	738.43	-----	39	212	-252	430	425	-66	-21	55	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{14} - L_{15}$	598.50	-----	-18	167	-196	345	526	238	153	-394	0.708	0.291	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
		$U_{15} - L_{16}$	585.37	-----	-171	168	-349	316	589	179	78	-263	0.692	0.304	1.00	Yes	0.381	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.59**
		$U_{16} - L_{17}$	691.36	-----	-127	154	-332	349	373	110	42	-415	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		$U_{17} - L_{18}$	637.74	-----	-111	127	-285	271	358	88	-39	-427	0.754	0.239	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{18} - L_{19}$	613.24	-----	-82	96	-280	242	290	77	-246	-618	0.725	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		$U_{19} - L_{20}$	569.15	-----	-40	45	-191	154	294	84	-268	-485	0.726	0.269	1.00	Yes	0.399	0.153	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		$U_{20} - L_{21}$	384.38	-----	-16	14	-120	92	234	65	-90	-516	0.691	0.303	1.00	Yes	0.380	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{21} - L_{22}$	351.46	-205.96	18	-78	-116	18	-573	-58	-467	-727	0.632	0.359	1.00	Yes	0.348	0.197	0.55	Yes	0.487	0.252	0.74	Yes	0.436	0.148	0.59	Yes	1.00	**3.89**
		$U_{23} - L_{22}$	414.82	-80.26	11	-17	-128	44	-293	-105	1	124	0.746	0.248	1.00	Yes	0.410	0.136	0.55	Yes	0.191	0.165	0.36	Yes	0.170	0.163	0.34	Yes	1.00	**3.65**
		$U_{24} - L_{23}$	420.82	-----	-18	17	-126	104	-255	-63	-79	130	0.757	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_{25} - L_{24}$	590.41	-----	-41	49	-199	163	-300	-82	54	257	0.753	0.239	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		$U_{26} - L_{25}$	657.91	-----	-79	97	-289	265	-253	-56	-9	321	0.778	0.222	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
		$U_{27} - L_{26}$	642.71	-----	-102	143	-287	287	-395	115	-161	250	0.760	0.234	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		$U_{28} - L_{27}$	676.22	-----	-93	147	-313	338	-549	42	-376	378	0.732	0.263	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		$U_{29} - L_{28}$	590.53	-----	-92	106	-349	327	-548	-41	-259	190	0.698	0.297	1.00	Yes	0.384	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		$U_{30} - L_{29}$	628.51	-----	54	161	-198	365	274	-113	82	219	0.743	0.256	1.00	Yes	0.409	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{30} - L_{31}$	729.03	-----	-54	230	-260	431	472	205	-111	-510	0.721	0.276	1.00	Yes	0.397	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_{31} - L_{32}$	732.83	-----	-233	218	-421	371	504	141	14	-296	0.725	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.62**
		$U_{32} - L_{33}$	838.22	-----	-157	199	-343	331	422	116	-182	-651	0.764	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
		$U_{33} - L_{34}$	835.38	-----	-145	176	-327	264	343	78	-561	-707	0.761	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{34} - L_{35}$	740.38	-----	-132	139	-300	218	140	-10	-823	-704	0.732	0.262	1.00	Yes	0.403	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
		$U_{35} - L_{36}$	678.64	-----	-157	134	-314	215	151	14	-360	-612	0.735	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_{36} - L_{37}$	521.05	-----	-78	33	-185	116	-254	-201	-302	-821	0.664	0.333	1.00	Yes	0.418	0.191	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		$U_{38} - L_{37}$	-----	-383.51	54	-104	-40	-37	-33	-229	-188	12	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.163	1	Yes	0.735	0.119	0.86	Yes	1.00	**2.65**
		$U_{39} - L_{38}$	422.32	-230.37	56	-105	-138	56	192	-94	86	91	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	0.549	0.182	0.74	Yes	0.487	0.176	0.67	Yes	1.00	**4.79**
		$U_{40} - L_{39}$	392.74	-14.74	-5	-10	-139	85	-381	-103	-165	252	0.706	0.288	1.00	Yes	0.389	0.158	0.55	Yes	0.035	0.166	0.21	Yes	0.031	0.177	0.21	Yes	1.00	**2.96**
		$U_{41} - L_{40}$	558.35	-----	-56	30	-179	121	-413	-179	-262	22	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$U_{42} - L_{41}$	624.11	-----	-120	89	-329	261	-403	-171	-315	36	0.738	0.259	1.00	Yes	0.406	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{43} - L_{42}$	770.44	-----	-134	101	-382	307	-376	-195	-262	8	0.762	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		$U_{44} - L_{43}$	785.10	-----	-157	150	-401	378	-168	18	-112	186	0.777	0.214	1.00	Yes	0.427	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
	Structure 3	$U_0 - L_1$	606.56	-----	-71	106	-294	267	-236	-58	-1145	-437	0.657	0.339	1.00	Yes	0.361	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.88**
		$U_1 - L_2$	655.38	-----	-158	108	-347	243	164	-40	-548	-628	0.710	0.281	1.00	Yes	0.390	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_2 - L_3$	556.93	-----	-123	84	-314	234	136	-24	-884	-719	0.658	0.338	1.00	Yes	0.362	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.01**
		$U_3 - L_4$	493.33	-----	-42	20	-138	85	154	-25	-342	-563	0.723	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**
		$U_4 - L_5$	349.94	-17.14	-12	-6	-134	78	202	12	-578	-689	0.629	0.370	1.00	Yes	0.346	0.204	0.55	Yes	0.041	0.265	0.31	Yes	0.036	0.171	0.21	Yes	1.00	**2.98**
		$U_5 - L_6$	122.22	-230.40	22	-100	-65	-38	-666	-225	-911	-475	0.220	0.391	0.62	Yes	0.121	0.215	0.34	Yes	0.540	0.451	1	Yes	0.488	0.127	0.62	Yes	1.00	**2.99**
		$U_7 - L_6$	444.47	-----	-30	-7	-97	34	-237	-173	-106	-95	0.799	0.193	1.00	Yes	0.440	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		$U_8 - L_7$	619.16	-----	-83	73	-208	143	-303	-107	-111	239	0.755	0.241	1.00	Yes	0.475	0.136	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		$U_8 - L_9$	839.57	-----	-73	95	-254	102	-215	8	-288	74	0.831	0.161	1.00	Yes	0.457	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		$U_{10} - L_9$	999.43	-----	-46	159	-236	183	-98	86	-337	264	0.844	0.153	1.00	Yes	0.523	0.086	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$U_{11} - L_{10}$	929.75	-----	-64	100	-295	240	-945	-235	21	427	0.743	0.252	1.00	Yes	0.460	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_{12} - L_{11}$	936.41	-----	125	231	-85	351	699	70	245	478	0.749	0.245	1.00	Yes	0.464	0.139	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{12} - L_{13}$	604.26	-----	15	166	-88	284	634	316	109	-382	0.714	0.277	1.00	Yes	0.393	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_{13} - L_{14}$	600.89	-----	-98	131	-276	223	700	286	-259	-279	0.710	0.284	1.00	Yes	0.391	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.76**
		$U_{14} - L_{15}$	586.62	-----	-32	147	-200	179	565	243	-1025	-642	0.694	0.299	1.00	Yes	0.381	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.49**
		$U_{15} - L_{16}$	444.29	-----	-14	63	-94	15	423	195	-1047	-675	0.652	0.339	1.00	Yes	0.358	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{17} - L_{16}$	-----	-330.61	53	-9	-76	-100	-238	1	401	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.239	1	Yes	0.700	0.128	0.83	Yes	1.00	**4.83**
		$U_{18} - L_{17}$	375.61	-282.56	52	-37	-133	-10	-194	-72	-525	-136	0.676	0.322	1.00	Yes	0.372	0.177	0.55	Yes	0.650	0.332	0.99	Yes	0.598	0.170	0.77	Yes	1.00	**5.42**
		$U_{19} - L_{18}$	452.08	-106.85	19	-21	-92	12	-204	-116	-225	-224	0.813	0.183	1.00	Yes	0.447	0.101	0.55	Yes	0.245	0.155	0.41	Yes	0.226	0.118	0.35	Yes	1.00	**3.50**
		$U_{20} - L_{19}$	575.71	-----	-16	4	-125	70	267	45	-365	-68	0.755	0.238	1.00	Yes	0.456	0.131	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**

Moment (Start) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-570.66	64	-809	-806	-276	-57	72	419	-437	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.223	1.00	Yes	0.770	0.192	0.97	Yes	1.00	**3.34**
		U_1 - U_2			-----	-573.54	-48	-75	-387	-605	-118	-34	-219	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.217	1.00	Yes	0.773	0.144	0.92	Yes	1.00	**2.24**
		U_2 - U_3			87.67	-579.53	-137	212	-632	-408	6	27	-33	209	0.100	0.186	0.29	Yes	0.068	0.121	0.19	Yes	0.789	0.205	1.00	Yes	0.781	0.150	0.94	Yes	1.00	**1.98**
		U_3 - U_4			377.51	-584.74	91	333	-776	-155	-4	31	209	39	0.433	0.220	0.66	Yes	0.297	0.151	0.45	Yes	0.796	0.201	1.00	Yes	0.789	0.185	0.98	Yes	1.00	**3.29**
		U_4 - U_5			301.20	-584.40	102	255	-863	-88	22	-28	70	-18	0.345	0.217	0.57	Yes	0.237	0.149	0.39	Yes	0.795	0.193	0.99	Yes	0.788	0.205	1.00	Yes	1.00	**2.56**
		U_5 - U_6			638.21	-486.78	238	453	-878	-27	-139	-60	343	-52	0.732	0.267	1.00	Yes	0.493	0.174	0.67	Yes	0.662	0.185	0.85	Yes	0.656	0.209	0.87	Yes	1.00	**3.74**
		U_6 - U_7			842.37	-60.04	369	227	-620	-30	-288	-109	410	-109	0.806	0.188	1.00	Yes	0.563	0.129	0.70	Yes	0.068	0.216	0.29	Yes	0.068	0.132	0.20	Yes	1.00	**3.65**
		U_7 - U_8			928.25	-----	43	1028	-1210	2049	-423	0	165	-255	0.643	0.353	1.00	Yes	0.449	0.241	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		U_8 - U_9			435.24	-----	3156	-2577	601	-24	-555	378	-882	-141	0.357	0.637	1.00	Yes	0.244	0.434	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.48**
		U_9 - U_{10}			-----	-559.78	968	-718	-883	-523	3	1153	-924	1262	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.270	1.00	Yes	0.714	0.217	0.94	Yes	1.00	**17.14**
		U_{10} - U_{11}			690.37	-665.35	542	97	-254	-575	-83	105	144	207	0.749	0.162	0.92	Yes	0.499	0.104	0.61	Yes	0.857	0.143	1.00	Yes	0.849	0.129	0.98	Yes	1.00	**6.32**
		U_{11} - U_{12}			105.47	-872.66	352	-38	-380	-551	52	388	193	663	0.084	0.171	0.26	Yes	0.057	0.114	0.18	Yes	0.826	0.169	1.00	Yes	0.819	0.091	0.92	Yes	1.00	**3.96**
		U_{12} - U_{13}			-----	-1216.58	50	-224	-641	-605	316	211	594	391	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.176	1.00	Yes	0.813	0.088	0.91	Yes	1.00	**3.04**
		U_{13} - U_{14}			-----	-1384.19	-117	-359	-950	-872	206	164	375	562	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1.00	Yes	0.794	0.105	0.90	Yes	1.00	**2.87**
		U_{14} - U_{15}			-----	-1339.28	-272	-250	-1278	-875	213	31	579	150	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.220	1.00	Yes	0.768	0.141	0.91	Yes	1.00	**2.04**
		U_{15} - U_{16}			-----	-1421.38	-149	-433	-893	-729	85	38	470	185	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.171	1.00	Yes	0.815	0.098	0.92	Yes	1.00	**2.19**
		U_{16} - U_{17}			-----	-1375.47	-335	-191	-1407	-383	156	-49	617	104	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.201	1.00	Yes	0.789	0.155	0.95	Yes	1.00	**2.36**
		U_{17} - U_{18}			-----	-1029.59	-208	-75	-907	-191	-7	-61	417	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1.00	Yes	0.806	0.148	0.96	Yes	1.00	**2.45**
		U_{18} - U_{19}			-----	-721.46	-200	-70	-780	-63	25	-120	382	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1.00	Yes	0.812	0.157	0.97	Yes	1.00	**2.34**
		U_{19} - U_{20}			-----	-559.47	-255	159	-1816	1393	-109	-45	376	-536	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.188	0.83	Yes	0.629	0.365	1.00	Yes	1.00	**5.08**
	Structure 2	U_0 - U_1			-----	-627.45	662	-1511	-606	-844	-40	59	501	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.211	0.96	Yes	0.741	0.257	1.00	Yes	1.00	**5.60**
		U_1 - U_2			-----	-884.77	74	-786	-384	-481	-117	-337	-330	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.137	1.00	Yes	0.854	0.119	0.98	Yes	1.00	**3.61**
		U_2 - U_3			-----	-1228.61	186	-815	-705	-818	-35	5	-324	427	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.120	1.00	Yes	0.872	0.083	0.96	Yes	1.00	**3.75**
		U_3 - U_4			-----	-1312.79	-413	-408	-1252	-1593	341	515	393	619	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.239	1.00	Yes	0.748	0.142	0.89	Yes	1.00	**2.41**
		U_4 - U_5			-----	-1510.29	-420	-409	-1661	-1210	412	140	453	223	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.213	1.00	Yes	0.775	0.138	0.92	Yes	1.00	**3.09**
		U_5 - U_6			-----	-1527.76	-427	-9	-1775	-989	186	-209	249	448	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.210	1.00	Yes	0.784	0.147	0.94	Yes	1.00	**2.40**
		U_6 - U_7			-----	-1361.19	-286	-105	-1338	-1506	-134	-185	302	159	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1.00	Yes	0.775	0.134	0.91	Yes	1.00	**2.23**
		U_7 - U_8			-----	-1393.65	-193	-176	-1627	-787	-106	-185	246	95	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1.00	Yes	0.794	0.145	0.94	Yes	1.00	**2.33**
		U_8 - U_9			-----	-1179.08	-277	114	-1459	-669	-93	-198	359	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1.00	Yes	0.800	0.155	0.96	Yes	1.00	**2.43**
		U_9 - U_{10}			147.57	-961.72	-77	343	-1353	-77	-139	-153	261	-29	0.108	0.193	0.31	Yes	0.073	0.131	0.21	Yes	0.835	0.155	0.99	Yes	0.830	0.165	1.00	Yes	1.00	**2.73**
		U_{10} - U_{11}			495.79	-794.17	173	371	-1388	-158	-178	-163	438	-4	0.419	0.249	0.67	Yes	0.285	0.162	0.45	Yes	0.794	0.200	1.00	Yes	0.789	0.196	0.99	Yes	1.00	**3.56**
		U_{11} - U_{12}			829.77	-419.57	242	539	-1622	322	-348	-126	518	86	0.701	0.292	1.00	Yes	0.471	0.195	0.67	Yes	0.419	0.200	0.62	Yes	0.417	0.229	0.65	Yes	1.00	**4.37**
		U_{12} - U_{13}			1158.46	-----	479	153	-1261	-449	-437	-386	536	-251	0.782	0.210	1.00	Yes	0.558	0.143	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		U_{13} - U_{14}			1194.50	-----	51	1805	-2177	3836	-782	-417	-5	-773	0.587	0.408	1.00	Yes	0.416	0.268	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		U_{14} - U_{15}			577.90	-----	6605	-4204	1088	193	-1162	44	-1472	-554	0.284	0.712	1.00	Yes	0.201	0.467	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.10**
		U_{15} - U_{16}			1163.50	-----	529	276	-1725	-1601	-478	372	-318	1153	0.703	0.294	1.00	Yes	0.500	0.199	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.49**
		U_{16} - U_{17}			-----	-744.38	2595	-2193	-1194	-1327	683	248	1068	770	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.342	1.00	Yes	0.645	0.326	0.98	Yes	1.00	**17.93**
		U_{17} - U_{18}			-----	-638.06	893	-787	-1096	-467	91	831	99	963	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.241	1.00	Yes	0.754	0.186	0.94	Yes	1.00	**9.19**
		U_{18} - U_{19}			-----	-707.28	768	-682	-567	-676	313	236	533	378	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.150	1.00	Yes	0.835	0.130	0.97	Yes	1.00	**6.44**
		U_{19} - U_{20}			383.66	-703.42	369	260	-743	-554	3	-4	182	445	0.360	0.179	0.54	Yes	0.238	0.117	0.36	Yes	0.781	0.214	1.00	Yes	0.776	0.119	0.90	Yes	1.00	**3.66**
	Structure 3	U_{20} - U_{21}			263.07	-865.11	240	-17	-1032	-277	-53	-72	359	251	0.204	0.189	0.40	Yes	0.143	0.122	0.27	Yes	0.795	0.197	1.00	Yes	0.790	0.149	0.94	Yes	1.00	**3.75**
		U_{21} - U_{22}			68.65	-809.07	-39	4	-809	-1134	-3	66	152	393	0.053	0.207	0.27	Yes	0.038	0.139	0.18	Yes	0.744	0.255	1.00	Yes	0.738	0.164	0.91	Yes	1.00	**2.44**
		U_{22} - U_{23}			71.74	-820.45	67	-39	-1159	-545	58	-2	462	144	0.056	0.218	0.28	Yes	0.039	0.147	0.19	Yes	0.754	0.240	1.00	Yes	0.749	0.168	0.92	Yes	1.00	**2.48**
		U_{23} - U_{24}			59.38	-873.40	111	-63	-1084	-216	-41	6	377	93	0.046	0.198	0.25	Yes	0.032	0.129	0.17	Yes	0.803	0.192	1.00	Yes	0.797	0.157	0.96	Yes	1.00	**2.83**
		U_{24} - U_{25}			268.39	-710.02	174	268	-958	-537	-57	-86	390	-126	0.252	0.206	0.46	Yes	0.167	0.135	0.31	Yes	0.788	0.202	1.00	Yes	0.783	0.153	0.94	Yes	1.00	**2.74**
		U_{25} - U_{26}			502.34	-689.91	200	456	-1080	210	-160	-76	317	-24	0.504	0.230	0.74	Yes	0.331	0.146	0.48	Yes	0.820	0.162	0.99	Yes	0.815	0.183	1.00	Yes	1.00	**3.56**
		U_{26} - U_{27}			714.42	-455.17	344	396	-1278	321	-235	-70	426	-77	0.717	0.279	1.00	Yes	0.477	0.185	0.67	Yes	0.541	0.185	0.73	Yes	0.538	0.217	0.76	Yes	1.00	**4.05**
		U_{27} - U_{28}			1050.58	-211.19	326	569	-1433	619	-369	-10	418	-17	0.774	0.224	1.00	Yes	0.515	0.148	0.67	Yes	0.184	0.090	0.28	Yes	0.183	0.180	0.37	Yes	1.00	**5.55**
		U_{28} - U_{29}			1236.19	-----	493	178	-1746	-401	-381	-254	576	-146	0.747	0.247	1.00	Yes	0.532	0.166	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		U_{29} - U_{30}			1189.28	-----	195	1611	-2248	3969	-664	-336	115	-497	0.585	0.413	1.00	Yes	0.414	0.271	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		U_{30} - U_{31}			576.32	-93.46	6808	-4478	722	-281	-1212	162	-83	90	0.283	0.713	1.00	Yes	0.201	0.468	0.67	Yes	0.054	0.489	0.55	Yes	0.054	0.630	0.69	Yes	1.00	**13.22**
		U_{31} - U_{32}			1017.63	-----	381	134	-1813	-64	-311	477	-468	823	0.687	0.307	1.00	Yes	0.490	0.209	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.61**
		U_{32} - U_{33}			-----	-707.41	1702	-2056	-970	-864	811	447	686	819	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.222	0.93	Yes	0.703	0.290	1.00	Yes	1.00	**15.77**
		U_{33} - U_{34}			706.30	-699.70	383	263	-539	-1243	18	256	348	1053	0.597	0.304	0.91	Yes	0.406	0.200	0.61	Yes	0.700	0.294	1.00	Yes	0.695	0.175	0.88	Yes	1.00	**4.46**
		U_{34} - U_{35}			535.01	-926.10	462	161	-659	-860	141	134	596	564	0.392	0.169	0.57	Yes	0.266	0.114	0.38	Yes	0.804	0.187	1.00	Yes	0.799	0.105	0.91	Yes	1.00	**4.60**
		U_{35} - U_{36}			272.95	-1160.71	249	-86	-1019	-764	73	79	334	530	0.157	0.152	0.31	Yes	0.110	0.101	0.22	Yes	0.793	0.206	1.00	Yes	0.787	0.108	0.90	Yes	1.00	**4.08**
		U_{36} - U_{37}			-----	-1329.54	-66	28	-1071	-1760	89	0	383	344	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.232	1.00	Yes	0.757	0.157	0.92	Yes	1.00	**2.85**
		U_{37} - U_{38}			-----	-1336.92	118	-154	-1679	-1026	46	18	410	326	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.229	1.00	Yes	0.761	0.150	0.92	Yes	1.00	**2.86**
		U_{38} - U_{39}			-----	-1511.89	108	-296	-1533	-1133	132	-34	708	249	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.214	1.00	Yes	0.776	0.127	0.91	Yes	1.00	**2.95**
		U_{39} - U_{40}			-----	-1445.83	-207	-336	-1906	-1672	32	-28	484	194	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1.00	Yes	0.742	0.158	0.91	Yes	1.00	**2.83**
		U_{40} - U_{41}			-----	-1349.01	-247	-337	-1745	-859	47	-115	565	61	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1.00	Yes	0.768	0.156	0.93	Yes	1.00	**2.74**
		U_{41} - U_{42}			-----	-1094.55	-135	-139	-1834	-605	-69	-96	441	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.215	1.00	Yes	0.777	0.187	0.97	Yes	1.00	**3.47**
		U_{42} - U_{43}			-----	-838.87	-130	-60	-1147	-167	-40	-93	376	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1.00	Yes	0.810	0.174	0.99	Yes	1.00	**3.33**
		U_{43} - U_{44}			-----	-563.88	-9	-220	-1920	1037	-69	37	291	-410	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.231	0.91	Yes	0.666	0.326	1.00	Yes	1.00	**5.40**
	Structure 3	U_0 - U_1			-----	-649.54	765	-1322	-989	-867	-71	-96	1109	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.258	1.00	Yes	0.731	0.266	1.00	Yes	1.00	**6.54**
		U_1 - U_2			-----	-731.21	123	-774	-81	-293	-67	-345	58	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.167	1.00	Yes	0.823	0.156	0.98	Yes	1.00	**2.68**
		U_2 - U_3			-----	-1057.08	134	-985	-289	-395	7	389	-297	404	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.154	1.00	Yes	0.827	0.160	0.99	Yes	1.00	**2.52**
		U_3 - U_4			-----	-1370.22	-161	-439	-795	-1117	284	384	326	614	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.204	1.00	Yes	0.786	0.123	0.91	Yes	1.00	**2.71**
		U_4 - U_5			-----	-1404.46	-373	-136	-969	-899	517	158	470	289	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.183	1.00	Yes	0.805	0.107	0.92	Yes	1.00	**2.38**
		U_5 - U_6			-----	-1357.23	-183	-275	-849	-1218	140	-151	228	359	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.206	1.00	Yes	0.778	0.134	0.92	Yes	1.00	**2.23**
		U_6 - U_7			-----	-1348.28	-376	-100	-1546	-650	-91	-187	381	50	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1.00	Yes	0.773	0.171	0.95	Yes	1.00	**2.27**
		U_7 - U_8			-----	-1224.55	-163	5	-827	-597	-61	-177	297	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.164	1.00	Yes	0.818	0.114	0.94	Yes	1.00	**2.37**
		U_8 - U_9			-----	-905.42	-101	177	-831	-2	-31	-154	292	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.138	1.00	Yes	0.849	0.138	0.99	Yes	1.00	**2.01**
		U_9 - U_{10}			155.21	-622.99	-75	229	-903	132	-99	-104	224	-51	0.168	0.238	0.41	Yes	0.112	0.153	0.27	Yes	0.802	0.173	0.98	Yes	0.795	0.202	1.00	Yes	1.00	**2.41**
		U_{10} - U_{11}			690.56	-401.72	317	233	-798	154	-242	-138	436	-224	0.749	0.249	1.00	Yes	0.507	0.167	0.68	Yes	0.517	0.141	0.66	Yes	0.513	0.179	0.70	Yes	1.00	**4.68**
		U_{11} - U_{12}			825.23	-----	-24	907	-1235	1574	-413	-105	182	-370	0.676	0.315	1.00	Yes	0.463	0.214	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		U_{12} - U_{13}			562.64	-----	3502	-2070	447	137	-757	95	-650	-265	0.390	0.608	1.00	Yes	0.272	0.414	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.49**
		U_{13} - U_{14}			872.03	-39.03	237	440	-301	-403	-342	-226	-173	495	0.834	0.162	1.00	Yes	0.583	0.111	0.70	Yes	0.044	0.167	0.22	Yes	0.044	0.094	0.14	Yes	1.00	**3.95**
		U_{14} - U_{15}			745.10	-219.52	480	344	-100	-224	-160	-41	127	19	0.854	0.141	1.00	Yes	0.576	0.092	0.67	Yes	0.299	0.154	0.46	Yes	0.296	0.114	0.42	Yes	1.00	**4.21**
		U_{15} - U_{16}			422.94	-559.99	331	231	-378	-611	-66	132	6	476	0.485	0.226	0.72	Yes	0.333	0.154	0.49	Yes	0.762	0.229	1.00	Yes	0.755	0.145	0.91	Yes	1.00	**3.00**
		U_{16} - U_{17}			482.05	-580.95	446	159	-572	-378	61	70	450	215	0.553	0.212	0.77	Yes	0.379	0.145	0.53	Yes	0.790	0.208	1.00	Yes	0.783	0.136	0.92	Yes	1.00	**3.55**
		U_{17} - U_{18}			191.66	-563.27	300	-74	-570	-377	-43	71	279	209	0.220	0.183	0.41	Yes	0.148	0.120	0.27	Yes	0.766	0.231	1.00	Yes	0.760	0.135	0.90	Yes	1.00	**2.25**
		U_{18} - U_{19}			75.94	-545.46	148	-42	-767	-267	-23	28	450	16	0.087	0.258	0.35	Yes	0.060	0.177	0.24	Yes	0.742	0.253	1.00	Yes	0.736	0.182	0.92	Yes	1.00	**2.21**
		U_{19} - U_{20}			39.20	-537.67	178	-310	-1128	710	-120	115	369	-358	0.045	0.330	0.38	Yes	0.031	0.226	0.26	Yes	0.732	0.162	0.90	Yes	0.725	0.268	1.00	Yes	1.00	**3.83**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 (Vehicle) 1.300 (Pedestrian)
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-75.79	2053	-2850	-427	256	-401	-1474	-32	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.138	0.745	0.89	Yes	0.136	0.856	1.00	Yes	1.00	**22.06**
		L_1 - L_2	463.37	-----	320	-770	-222	-475	-240	-148	189	-79	0.709	0.283	1.00	Yes	0.433	0.189	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		L_2 - L_3	694.05	-28.08	-20	22	-633	-728	-33	23	-152	41	0.798	0.200	1.00	Yes	0.462	0.120	0.59	Yes	0.038	0.223	0.27	Yes	0.038	0.176	0.22	Yes	1.00	**2.53**
		L_3 - L_4	702.70	-142.52	86	253	-682	-339	61	69	117	121	0.808	0.184	1.00	Yes	0.480	0.119	0.60	Yes	0.195	0.185	0.38	Yes	0.193	0.165	0.36	Yes	1.00	**2.59**
		L_4 - L_5	318.41	-499.27	99	592	-882	302	53	36	-195	305	0.412	0.288	0.71	Yes	0.247	0.188	0.44	Yes	0.768	0.130	0.90	Yes	0.761	0.234	1.00	Yes	1.00	**2.69**
		L_5 - L_6	-----	-720.38	162	589	-499	101	72	126	252	64	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.152	1.00	Yes	0.831	0.130	0.97	Yes	1.00	**2.80**
		L_6 - L_7	-----	-1066.84	201	176	-869	107	119	-110	-19	482	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.118	0.99	Yes	0.859	0.137	1.00	Yes	1.00	**3.88**
		L_7 - L_8	-----	-1259.54	97	978	-604	1513	60	199	335	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.173	0.99	Yes	0.798	0.200	1.00	Yes	1.00	**4.75**
		L_8 - L_9	-----	-1175.48	1753	-163	542	-16	-254	42	-205	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.237	1.00	Yes	0.744	0.232	0.98	Yes	1.00	**5.99**
		L_9 - L_{10}	-----	-939.07	1365	-1523	-851	-93	-681	-909	690	298	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.172	0.94	Yes	0.756	0.239	1.00	Yes	1.00	**10.87**
		L_{10} - L_{11}	105.96	-561.78	531	-5	-24	-386	140	49	55	-28	0.137	0.165	0.31	Yes	0.080	0.100	0.18	Yes	0.864	0.109	0.98	Yes	0.856	0.140	1.00	Yes	1.00	**3.50**
		L_{11} - L_{12}	566.13	-----	586	-832	29	-582	-214	-184	116	45	0.733	0.258	1.00	Yes	0.440	0.169	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		L_{12} - L_{13}	1099.25	-----	184	-66	-564	-633	11	37	81	155	0.867	0.130	1.00	Yes	0.555	0.078	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		L_{13} - L_{14}	1270.31	-----	518	-1616	-340	-1217	-46	-173	304	95	0.747	0.248	1.00	Yes	0.484	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		L_{14} - L_{15}	1551.56	-----	-370	-27	-1848	-650	-118	-66	-169	220	0.758	0.238	1.00	Yes	0.493	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		L_{15} - L_{16}	1644.68	-----	-190	-403	-1333	-1423	-89	-39	88	-295	0.804	0.192	1.00	Yes	0.516	0.113	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		L_{16} - L_{17}	1157.51	-----	-426	90	-1549	-98	-89	-57	-455	214	0.732	0.268	1.00	Yes	0.475	0.165	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		L_{17} - L_{18}	881.14	-----	-184	-38	-1036	-77	-57	9	131	-215	0.767	0.227	1.00	Yes	0.491	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		L_{18} - L_{19}	242.58	-----	-196	286	-1508	909	-21	-35	-831	94	0.371	0.625	1.00	Yes	0.251	0.396	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.03**
		L_{19} - L_{20}	132.22	-364.64	-76	-49	-1119	540	-23	-5	295	66	0.202	0.397	0.60	Yes	0.123	0.266	0.39	Yes	0.662	0.234	0.90	Yes	0.657	0.336	1.00	Yes	1.00	**6.07**
	Structure 2	L_0 - L_1	43.85	-188.74	1283	-3587	-146	72	-349	-1212	-21	-73	0.053	0.929	0.99	Yes	0.032	0.592	0.63	Yes	0.271	0.617	0.89	Yes	0.270	0.730	1.00	Yes	1.00	**18.92**
		L_1 - L_2	544.62	-----	711	-1464	27	-600	-245	-232	-123	145	0.661	0.338	1.00	Yes	0.393	0.217	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_2 - L_3	1016.86	-----	393	-1068	-591	-968	-130	-183	276	333	0.801	0.190	1.00	Yes	0.526	0.114	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		L_3 - L_4	1349.15	-----	296	-1311	-557	-1563	-254	-129	264	102	0.793	0.204	1.00	Yes	0.534	0.126	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		L_4 - L_5	1706.59	-----	-269	-1237	-1821	-1332	138	-384	-34	75	0.796	0.198	1.00	Yes	0.527	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		L_5 - L_6	1895.46	-----	-141	-359	-1674	-1933	118	-15	217	53	0.813	0.185	1.00	Yes	0.546	0.113	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		L_6 - L_7	1826.57	-----	-433	-95	-2276	-1442	-164	45	-129	359	0.773	0.222	1.00	Yes	0.514	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		L_7 - L_8	1367.84	-----	-212	294	-1769	-743	-131	8	131	-88	0.784	0.206	1.00	Yes	0.515	0.120	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		L_8 - L_9	1090.31	-265.61	-94	533	-1443	36	-27	16	-226	407	0.763	0.233	1.00	Yes	0.514	0.146	0.66	Yes	0.220	0.149	0.37	Yes	0.219	0.195	0.42	Yes	1.00	**3.58**
		L_9 - L_{10}	826.70	-615.95	-104	729	-1410	-214	17	93	280	-190	0.738	0.259	1.00	Yes	0.430	0.161	0.60	Yes	0.651	0.172	0.83	Yes	0.647	0.226	0.88	Yes	1.00	**4.38**
		L_{10} - L_{11}	70.60	-686.00	93	531	-1070	623	57	1	-413	96	0.070	0.243	0.32	Yes	0.041	0.151	0.20	Yes	0.811	0.101	0.92	Yes	0.806	0.187	1.00	Yes	1.00	**3.39**
		L_{11} - L_{12}	-----	-1027.86	97	990	-1104	843	83	238	156	76	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.135	0.99	Yes	0.843	0.150	1.00	Yes	1.00	**4.34**
		L_{12} - L_{13}	-----	-1314.21	301	-290	-1636	-1043	177	-140	-194	182	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.201	1.00	Yes	0.786	0.163	0.95	Yes	1.00	**5.26**
		L_{13} - L_{14}	-----	-1354.91	-225	1291	-2257	3552	-93	-63	326	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.205	0.90	Yes	0.682	0.310	1.00	Yes	1.00	**6.59**
		L_{14} - L_{15}	-----	-1242.81	4281	-2258	1056	-446	-48	288	-306	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.245	0.88	Yes	0.625	0.374	1.00	Yes	1.00	**8.16**
		L_{15} - L_{16}	-----	-1339.23	18	253	-1803	-530	-410	-284	248	195	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.188	1.00	Yes	0.801	0.179	0.99	Yes	1.00	**5.32**
		L_{16} - L_{17}	-----	-919.03	2621	-2140	-306	-1414	-687	-690	-82	62	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.242	0.92	Yes	0.669	0.323	1.00	Yes	1.00	**11.98**
		L_{17} - L_{18}	602.33	-543.03	2031	-2110	-937	-1715	-958	-525	654	292	0.538	0.453	1.00	Yes	0.313	0.279	0.60	Yes	0.574	0.278	0.86	Yes	0.570	0.338	0.91	Yes	1.00	**13.36**
		L_{18} - L_{19}	108.77	-647.72	672	117	-80	-367	-5	33	126	129	0.123	0.149	0.28	Yes	0.071	0.089	0.16	Yes	0.869	0.124	1.00	Yes	0.863	0.130	1.00	Yes	1.00	**3.35**
		L_{19} - L_{20}	637.41	-----	645	-1048	-353	-948	-26	-233	455	-5	0.722	0.272	1.00	Yes	0.427	0.171	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_{20} - L_{21}	994.83	-498.59	594	63	-1232	-1088	-104	-107	-12	215	0.793	0.203	1.00	Yes	0.520	0.121	0.65	Yes	0.471	0.232	0.71	Yes	0.468	0.180	0.65	Yes	1.00	**5.21**
		L_{21} - L_{22}	922.73	-231.24	244	-73	-938	-1577	-93	-32	278	10	0.736	0.260	1.00	Yes	0.492	0.163	0.66	Yes	0.218	0.255	0.48	Yes	0.217	0.230	0.45	Yes	1.00	**3.80**
		L_{22} - L_{23}	807.86	-69.31	25	49	-2226	-209	5	-25	-237	136	0.644	0.350	1.00	Yes	0.431	0.219	0.65	Yes	0.065	0.273	0.34	Yes	0.065	0.325	0.39	Yes	1.00	**4.08**
		L_{23} - L_{24}	912.29	-301.48	6	375	-1646	-978	10	78	253	-195	0.728	0.267	1.00	Yes	0.477	0.159	0.64	Yes	0.285	0.264	0.55	Yes	0.283	0.240	0.53	Yes	1.00	**4.69**
		L_{24} - L_{25}	563.09	-436.16	241	359	-1432	-256	62	0	-325	521	0.638	0.356	1.00	Yes	0.377	0.225	0.61	Yes	0.585	0.243	0.83	Yes	0.581	0.276	0.86	Yes	1.00	**4.68**
		L_{25} - L_{26}	214.82	-594.90	98	651	-1030	-164	36	119	233	-165	0.243	0.234	0.48	Yes	0.140	0.139	0.28	Yes	0.798	0.146	0.95	Yes	0.793	0.199	1.00	Yes	1.00	**4.66**
		L_{26} - L_{27}	-----	-740.62	317	380	-1334	151	164	56	-360	299	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.136	0.92	Yes	0.778	0.213	1.00	Yes	1.00	**5.02**
		L_{27} - L_{28}	-----	-1061.94	203	1063	-1702	265	260	533	341	-462	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1.00	Yes	0.773	0.210	0.99	Yes	1.00	**7.17**
		L_{28} - L_{29}	-----	-1188.89	470	-633	-2060	-1635	463	-162	-467	425	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.282	1.00	Yes	0.711	0.205	0.92	Yes	1.00	**8.14**
		L_{29} - L_{30}	-----	-1015.28	-204	1359	-4573	5532	-515	-1092	1034	564	-----	-----	-----	-----	-----	-----	-----	-----	0.515	0.310	0.83	Yes	0.511	0.483	1.00	Yes	1.00	**12.94**
		L_{30} - L_{31}	-----	-1081.87	5183	-2638	717	-330	554	625	-84	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.549	0.313	0.87	Yes	0.544	0.453	1.00	Yes	1.00	**10.73**
		L_{31} - L_{32}	-----	-1308.78	199	-82	-1989	-269	-336	93	361	131	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.203	1.00	Yes	0.783	0.198	0.99	Yes	1.00	**6.60**
		L_{32} - L_{33}	28.66	-923.26	1722	-1240	-415	-1055	686	-548	265	346	0.020	0.299	0.32	Yes	0.013	0.180	0.20	Yes	0.763	0.148	0.92	Yes	0.757	0.235	1.00	Yes	1.00	**10.24**
		L_{33} - L_{34}	556.79	-----	1377	-2088	-423	-1241	-453	-437	578	171	0.556	0.443	1.00	Yes	0.326	0.277	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.91**
		L_{34} - L_{35}	869.44	-684.41	695	69	-636	-1055	-46	63	242	412	0.776	0.218	1.00	Yes	0.452	0.135	0.59	Yes	0.724	0.197	0.93	Yes	0.719	0.169	0.89	Yes	1.00	**6.19**
		L_{35} - L_{36}	1116.23	-----	549	-980	-570	-1114	-6	-191	666	158	0.781	0.213	1.00	Yes	0.526	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.82**
		L_{36} - L_{37}	1431.70	-143.58	335	70	-1180	-1407	-114	1	-126	220	0.821	0.173	1.00	Yes	0.539	0.102	0.65	Yes	0.098	0.192	0.29	Yes	0.097	0.155	0.26	Yes	1.00	**4.69**
		L_{37} - L_{38}	1835.48	-----	161	-323	-2337	-1738	7	-46	220	-130	0.777	0.219	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		L_{38} - L_{39}	1785.81	-----	-256	-160	-2428	-1372	-56	5	-158	249	0.766	0.231	1.00	Yes	0.514	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		L_{39} - L_{40}	1709.17	-----	-142	-382	-1839	-1608	-25	-39	112	-353	0.797	0.198	1.00	Yes	0.528	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_{40} - L_{41}	1288.34	-----	-305	-48	-1760	-434	-58	-11	-372	364	0.757	0.236	1.00	Yes	0.510	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**
		L_{41} - L_{42}	997.51	-----	-123	-130	-1315	-346	-32	-36	178	-205	0.786	0.212	1.00	Yes	0.516	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_{42} - L_{43}	511.64	-----	-205	4	-1459	64	-68	-72	-412	495	0.621	0.378	1.00	Yes	0.370	0.241	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		L_{43} - L_{44}	248.93	-194.50	-41	-28	-2693	857	-177	-52	886	259	0.302	0.694	1.00	Yes	0.180	0.443	0.63	Yes	0.280	0.432	0.72	Yes	0.278	0.548	0.83	Yes	1.00	**12.15**
	Structure 3	L_0 - L_1	191.81	-265.27	985	-1726	-18	-76	-139	-631	-9	-42	0.294	0.649	0.95	Yes	0.179	0.433	0.62	Yes	0.482	0.353	0.84	Yes	0.478	0.518	1.00	Yes	1.00	**10.19**
		L_1 - L_2	336.42	-----	947	-1472	121	-160	-173	-62	-59	17	0.515	0.478	1.00	Yes	0.348	0.297	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.64**
		L_2 - L_3	874.64	-----	408	-982	-333	-768	-36	67	330	347	0.762	0.234	1.00	Yes	0.488	0.141	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.84**
		L_3 - L_4	1234.73	-----	375	-1042	-494	-1230	-245	-113	416	240	0.781	0.218	1.00	Yes	0.507	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		L_4 - L_5	1663.32	-----	-326	-213	-1471	-1046	78	113	-49	97	0.813	0.185	1.00	Yes	0.522	0.108	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		L_5 - L_6	1538.46	-----	35	-1858	-933	-1391	-184	-163	281	138	0.752	0.244	1.00	Yes	0.488	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		L_6 - L_7	1274.45	-----	-404	236	-1576	-149	-183	17	-98	346	0.750	0.246	1.00	Yes	0.486	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		L_7 - L_8	1055.56	-----	-88	109	-783	-491	-30	38	199	19	0.833	0.162	1.00	Yes	0.533	0.097	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		L_8 - L_9	550.34	-183.68	-151	371	-891	352	-9	46	-269	243	0.713	0.283	1.00	Yes	0.428	0.185	0.62	Yes	0.282	0.134	0.42	Yes	0.280	0.236	0.52	Yes	1.00	**3.24**
		L_9 - L_{10}	65.82	-510.68	-4	478	-804	256	69	134	222	127	0.085	0.252	0.34	Yes	0.050	0.152	0.21	Yes	0.785	0.148	0.94	Yes	0.778	0.213	1.00	Yes	1.00	**3.96**
		L_{10} - L_{11}	-----	-998.32	221	187	-1233	116	135	-214	-152	684	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.149	0.97	Yes	0.804	0.194	1.00	Yes	1.00	**6.12**
		L_{11} - L_{12}	-----	-1203.66	116	1066	-655	1777	-97	-26	163	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.213	0.99	Yes	0.762	0.235	1.00	Yes	1.00	**6.33**
		L_{12} - L_{13}	-----	-1134.03	2072	-542	431	-9	-204	6	-211	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.259	0.99	Yes	0.718	0.274	1.00	Yes	1.00	**7.25**
		L_{13} - L_{14}	-----	-989.01	1290	-1227	-1162	-55	-731	-655	335	207	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.159	0.97	Yes	0.796	0.203	1.00	Yes	1.00	**10.89**
		L_{14} - L_{15}	-----	-742.74	567	165	18	-217	148	-7	46	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.129	1.00	Yes	0.857	0.125	0.99	Yes	1.00	**2.72**
		L_{15} - L_{16}	546.80	-----	631	-831	-284	-731	-358	-348	140	72	0.708	0.284	1.00	Yes	0.425	0.184	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_{16} - L_{17}	690.65	-315.46	408	51	-732	-467	90	-45	47	149	0.795	0.201	1.00	Yes	0.472	0.130	0.61	Yes	0.431	0.218	0.65	Yes	0.427	0.177	0.61	Yes	1.00	**3.36**
		L_{17} - L_{18}	663.68	-161.12	127	8	-844	-425	5	8	170	-18	0.764	0.231	1.00	Yes	0.442	0.139	0.59	Yes	0.220	0.230	0.46	Yes	0.218	0.204	0.43	Yes	1.00	**3.25**
		L_{18} - L_{19}	423.32	-31.92	64	-6	-843	-129	25	-111	-153	454	0.648	0.350	1.00	Yes	0.395	0.232	0.63	Yes	0.058	0.244	0.31	Yes	0.057	0.253	0.32	Yes	1.00	**2.97**
		L_{19} - L_{20}	57.67	-44.94	109	-226	-1947	797	-7	-2	1504	409	0.088	0.907	1.00	Yes	0.052	0.547	0.60	Yes	0.082	0.613	0.70	Yes	0.081	0.584	0.67	Yes	1.00	**12.73**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
	Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Controlling Bi-Axial Moment & Axial Value	Rating
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-318.30	-55	88	-191	253	-34	-11	-468	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.247	0.96	Yes	0.674	0.323	1.00	Yes	1.00	**1.48**
		$U_1 - L_1$	20.59	-326.56	27	-15	-232	238	0	-2	-46	23	0.037	0.317	0.36	Yes	0.020	0.174	0.20	Yes	0.714	0.083	0.80	Yes	0.691	0.304	1.00	Yes	1.00	**2.85**
		$U_2 - L_2$	120.80	-279.69	104	-116	-275	316	98	39	-432	-83	0.217	0.528	0.75	Yes	0.119	0.291	0.42	Yes	0.611	0.218	0.83	Yes	0.592	0.403	1.00	Yes	1.00	**5.01**
		$U_3 - L_3$	218.64	-263.89	274	-257	-308	343	162	154	-333	-56	0.393	0.534	0.93	Yes	0.216	0.294	0.52	Yes	0.578	0.188	0.77	Yes	0.558	0.438	1.00	Yes	1.00	**7.54**
		$U_4 - L_4$	-----	-203.30	439	-430	-53	38	-512	-131	-5	140	-----	-----	-----	-----	-----	-----	-----	-----	0.447	0.264	0.72	Yes	0.430	0.561	1.00	Yes	1.00	**7.26**
		$U_5 - L_5$	-----	-420.95	237	-269	67	-89	-144	-170	20	21	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.132	0.90	Yes	0.726	0.273	1.00	Yes	1.00	**2.43**
		$U_6 - L_6$	-----	-520.26	270	-287	80	-90	79	-58	95	105	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.098	0.89	Yes	0.746	0.251	1.00	Yes	1.00	**2.39**
		$U_7 - L_7$	-----	-439.81	304	-325	134	-150	202	35	-156	19	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.145	0.89	Yes	0.678	0.320	1.00	Yes	1.00	**1.63**
		$U_8 - L_8$	-----	-1203.97	482	-583	-347	409	914	290	-118	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.125	1.00	Yes	0.835	0.109	0.95	Yes	1.00	**3.90**
		$U_9 - L_9$	-----	-656.66	-169	200	-424	462	-361	-149	-711	-395	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.205	0.99	Yes	0.742	0.257	1.00	Yes	1.00	**2.82**
		$U_{10} - L_{10}$	-----	-730.30	-122	105	-357	366	-791	-448	-995	-668	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.237	1.00	Yes	0.721	0.190	0.92	Yes	1.00	**3.26**
		$U_{11} - L_{11}$	-----	-655.16	-119	214	-396	502	-552	-280	-762	-546	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.209	1.00	Yes	0.763	0.233	1.00	Yes	1.00	**3.35**
		$U_{12} - L_{12}$	-----	-512.62	-93	103	-339	336	-254	-162	-347	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.161	0.91	Yes	0.703	0.290	1.00	Yes	1.00	**2.88**
		$U_{13} - L_{13}$	-----	-362.36	-46	69	-231	260	-95	17	-41	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.107	0.84	Yes	0.694	0.296	1.00	Yes	1.00	**2.26**
		$U_{14} - L_{14}$	-----	-158.58	256	-257	-473	517	-36	118	38	199	-----	-----	-----	-----	-----	-----	-----	-----	0.354	0.214	0.57	Yes	0.336	0.661	1.00	Yes	1.00	**9.72**
		$U_{15} - L_{15}$	167.23	-304.93	249	-273	-124	112	130	-117	59	111	0.301	0.387	0.69	Yes	0.165	0.213	0.38	Yes	0.683	0.130	0.82	Yes	0.645	0.349	1.00	Yes	1.00	**3.96**
		$U_{16} - L_{16}$	-----	-321.89	240	-249	19	-34	238	-150	148	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.107	0.84	Yes	0.681	0.318	1.00	Yes	1.00	**2.66**
		$U_{17} - L_{17}$	-----	-431.24	228	-246	60	-74	60	-177	-120	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.111	0.92	Yes	0.744	0.249	1.00	Yes	1.00	**2.04**
		$U_{18} - L_{18}$	-----	-532.67	431	-443	142	-149	122	-219	-133	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.089	0.87	Yes	0.741	0.251	1.00	Yes	1.00	**2.23**
		$U_{19} - L_{19}$	-----	-642.69	537	-525	170	-168	187	-99	-116	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.100	0.91	Yes	0.748	0.249	1.00	Yes	1.00	**2.51**
		$U_{20} - L_{20}$	-----	-566.01	351	-498	155	-297	777	102	-217	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.248	1.00	Yes	0.659	0.231	0.90	Yes	1.00	**1.82**
	Structure 2	$U_0 - L_0$	-----	-676.63	-162	211	-448	566	-42	-7	-538	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.183	1.00	Yes	0.725	0.240	0.97	Yes	1.00	**2.63**
		$U_1 - L_1$	-----	-719.20	-114	123	-533	539	-107	-6	-186	32	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.081	0.91	Yes	0.771	0.229	1.00	Yes	1.00	**3.50**
		$U_2 - L_2$	-----	-590.52	-104	115	-473	481	-107	-38	-154	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.086	0.88	Yes	0.752	0.246	1.00	Yes	1.00	**3.00**
		$U_3 - L_3$	-----	-489.39	-52	60	-241	251	83	-46	-196	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.125	0.96	Yes	0.767	0.229	1.00	Yes	1.00	**2.80**
		$U_4 - L_4$	-----	-336.91	-12	21	-224	223	249	76	-181	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.149	0.92	Yes	0.713	0.287	1.00	Yes	1.00	**2.72**
		$U_5 - L_5$	76.91	-328.88	78	-61	-214	237	-4	97	12	-32	0.138	0.331	0.47	Yes	0.076	0.182	0.26	Yes	0.743	0.130	0.88	Yes	0.696	0.303	1.00	Yes	1.00	**3.55**
		$U_6 - L_6$	346.50	-240.21	218	-215	-233	246	120	203	-62	-25	0.623	0.373	1.00	Yes	0.343	0.205	0.55	Yes	0.541	0.147	0.69	Yes	0.508	0.315	0.83	Yes	1.00	**5.55**
		$U_7 - L_7$	-----	-210.62	381	-427	-145	155	279	64	-127	234	-----	-----	-----	-----	-----	-----	-----	-----	0.476	0.227	0.71	Yes	0.446	0.546	1.00	Yes	1.00	**8.56**
		$U_8 - L_8$	-----	-465.22	354	-374	66	-83	101	-143	-4	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.101	0.78	Yes	0.670	0.327	1.00	Yes	1.00	**2.92**
		$U_9 - L_9$	-----	-688.03	600	-606	152	-176	121	-174	-9	12	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.078	0.85	Yes	0.737	0.257	1.00	Yes	1.00	**3.49**
		$U_{10} - L_{10}$	-----	-792.54	556	-580	162	-200	228	-199	12	8	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.091	0.88	Yes	0.741	0.256	1.00	Yes	1.00	**3.63**
		$U_{11} - L_{11}$	-----	-812.54	518	-535	185	-187	150	-142	-173	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.098	0.92	Yes	0.760	0.236	1.00	Yes	1.00	**3.20**
		$U_{12} - L_{12}$	-----	-881.93	535	-542	156	-134	173	-52	-154	7	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.099	0.95	Yes	0.764	0.232	1.00	Yes	1.00	**3.28**
		$U_{13} - L_{13}$	-----	-742.26	579	-558	208	-205	277	40	-169	20	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.162	0.99	Yes	0.716	0.277	1.00	Yes	1.00	**2.80**
		$U_{14} - L_{14}$	-----	-1154.39	674	-643	-449	417	742	305	258	266	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.151	1.00	Yes	0.765	0.119	0.89	Yes	1.00	**4.56**
		$U_{15} - L_{15}$	-----	-732.85	-115	123	-606	586	-307	9	-191	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.161	0.98	Yes	0.707	0.290	1.00	Yes	1.00	**4.32**
		$U_{16} - L_{16}$	-----	-654.50	-89	63	-515	485	-807	-260	-1164	-469	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.238	1.00	Yes	0.701	0.219	0.93	Yes	1.00	**3.51**
		$U_{17} - L_{17}$	-----	-637.14	-124	122	-538	534	-275	-184	-532	-425	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.168	0.96	Yes	0.742	0.250	1.00	Yes	1.00	**3.32**
		$U_{18} - L_{18}$	-----	-575.89	-90	90	-503	512	-114	-126	-438	-354	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.157	0.93	Yes	0.734	0.262	1.00	Yes	1.00	**3.31**
		$U_{19} - L_{19}$	-----	-467.44	-54	58	-306	299	-66	-32	-233	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.124	0.83	Yes	0.698	0.294	1.00	Yes	1.00	**2.78**
		$U_{20} - L_{20}$	-----	-380.99	-18	27	-226	233	-69	-11	-29	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.094	0.88	Yes	0.730	0.266	1.00	Yes	1.00	**2.75**
	Structure 3	$U_{21} - L_{21}$	30.49	-317.08	27	-12	-237	253	3	120	-99	-52	0.055	0.359	0.42	Yes	0.030	0.197	0.23	Yes	0.716	0.128	0.85	Yes	0.671	0.324	1.00	Yes	1.00	**3.34**
		$U_{22} - L_{22}$	-----	-215.62	321	-341	-395	420	417	149	-12	265	-----	-----	-----	-----	-----	-----	-----	-----	0.485	0.200	0.69	Yes	0.456	0.537	1.00	Yes	1.00	**10.07**
		$U_{23} - L_{23}$	59.73	-313.30	243	-259	-49	39	148	-57	174	118	0.107	0.381	0.49	Yes	0.059	0.210	0.27	Yes	0.708	0.152	0.87	Yes	0.663	0.331	1.00	Yes	1.00	**3.30**
		$U_{24} - L_{24}$	-----	-370.28	241	-252	10	-22	197	-63	76	27	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.109	0.87	Yes	0.709	0.288	1.00	Yes	1.00	**2.72**
		$U_{25} - L_{25}$	-----	-466.25	306	-300	38	-38	238	-74	-88	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.096	0.80	Yes	0.696	0.295	1.00	Yes	1.00	**2.70**
		$U_{26} - L_{26}$	-----	-565.46	508	-535	67	-70	326	-44	-122	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.105	0.86	Yes	0.721	0.274	1.00	Yes	1.00	**3.00**
		$U_{27} - L_{27}$	-----	-629.09	572	-574	85	-85	267	-55	-136	3	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.101	0.88	Yes	0.732	0.266	1.00	Yes	1.00	**3.17**
		$U_{28} - L_{28}$	-----	-706.32	556	-548	75	-72	356	-20	-156	17	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.104	0.92	Yes	0.757	0.236	1.00	Yes	1.00	**3.39**
		$U_{29} - L_{29}$	-----	-717.07	644	-618	118	-123	423	42	-118	27	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1.00	Yes	0.691	0.308	1.00	Yes	1.00	**3.76**
		$U_{30} - L_{30}$	-----	-1171.30	753	-738	-634	571	840	49	-72	299	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.143	1.00	Yes	0.777	0.133	0.92	Yes	1.00	**5.45**
		$U_{31} - L_{31}$	-----	-700.74	-106	107	-531	499	-309	-33	-591	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.213	1.00	Yes	0.676	0.254	0.93	Yes	1.00	**3.93**
		$U_{32} - L_{32}$	-----	-808.63	-80	57	-457	448	-697	-279	-840	-428	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.216	1.00	Yes	0.701	0.196	0.90	Yes	1.00	**3.91**
		$U_{33} - L_{33}$	-----	-791.98	-117	105	-483	478	-463	-349	-680	-517	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.195	1.00	Yes	0.740	0.213	0.96	Yes	1.00	**4.00**
		$U_{34} - L_{34}$	-----	-801.88	-110	126	-547	557	-234	-196	-441	-395	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.147	0.94	Yes	0.750	0.246	1.00	Yes	1.00	**4.30**
		$U_{35} - L_{35}$	-----	-707.49	-110	125	-550	564	-156	-15	-49	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.067	0.86	Yes	0.758	0.239	1.00	Yes	1.00	**3.83**
		$U_{36} - L_{36}$	-----	-479.55	-51	66	-332	349	13	70	-68	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.093	0.79	Yes	0.691	0.306	1.00	Yes	1.00	**3.24**
		$U_{37} - L_{37}$	-----	-185.37	80	-80	-417	470	82	101	-164	192	-----	-----	-----	-----	-----	-----	-----	-----	0.419	0.231	0.65	Yes	0.392	0.600	1.00	Yes	1.00	**7.87**
		$U_{38} - L_{38}$	338.91	-177.31	168	-174	-241	248	178	-73	236	116	0.610	0.386	1.00	Yes	0.335	0.212	0.55	Yes	0.399	0.134	0.54	Yes	0.375	0.317	0.70	Yes	1.00	**4.66**
		$U_{39} - L_{39}$	153.14	-321.90	224	-244	-133	120	161	-102	50	71	0.275	0.359	0.64	Yes	0.151	0.197	0.35	Yes	0.727	0.110	0.84	Yes	0.681	0.312	1.00	Yes	1.00	**3.96**
		$U_{40} - L_{40}$	23.11	-339.57	217	-216	-19	1	165	-123	22	3	0.042	0.325	0.37	Yes	0.023	0.179	0.21	Yes	0.770	0.087	0.86	Yes	0.719	0.277	1.00	Yes	1.00	**2.91**
		$U_{41} - L_{41}$	-----	-487.51	246	-257	26	-30	143	-131	8	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.084	0.92	Yes	0.765	0.234	1.00	Yes	1.00	**2.76**
		$U_{42} - L_{42}$	-----	-581.39	492	-498	60	-69	164	-170	11	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.075	0.86	Yes	0.741	0.255	1.00	Yes	1.00	**2.94**
		$U_{43} - L_{43}$	-----	-707.56	567	-566	77	-90	261	-40	-50	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.086	0.90	Yes	0.758	0.241	1.00	Yes	1.00	**3.25**
		$U_{44} - L_{44}$	-----	-635.13	376	-503	117	-134	961	163	-133	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.234	1.00	Yes	0.681	0.213	0.90	Yes	1.00	**2.60**
	Structure 4	$U_0 - L_0$	-----	-576.78	-145	194	-408	467	-57	-7	-820	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.230	1.00	Yes	0.671	0.217	0.89	Yes	1.00	**2.06**
		$U_1 - L_1$	-----	-656.86	-110	121	-491	496	-124	-3	-132	109	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.075	0.90	Yes	0.765	0.230	1.00	Yes	1.00	**3.45**
		$U_2 - L_2$	-----	-536.77	-108	114	-441	445	-149	-46	-305	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.112	0.90	Yes	0.747	0.252	1.00	Yes	1.00	**2.85**
		$U_3 - L_3$	-----	-447.40	-45	58	-204	222	45	-64	-38	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.081	0.92	Yes	0.772	0.225	1.00	Yes	1.00	**2.37**
		$U_4 - L_4$	-----	-321.64	-11	30	-244	248	-50	90	-209	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.160	0.89	Yes	0.681	0.317	1.00	Yes	1.00	**3.01**
		$U_5 - L_5$	79.41	-304.75	74	-61	-255	274	-20	125	-156	-29	0.143	0.395	0.54	Yes	0.079	0.217	0.30	Yes	0.683	0.152	0.84	Yes	0.645	0.350	1.00	Yes	1.00	**3.73**
		$U_6 - L_6$	-----	-201.77	430	-448	-289	310	-161	51	254	107	-----	-----	-----	-----	-----	-----	-----	-----	0.450	0.217	0.67	Yes	0.427	0.572	1.00	Yes	1.00	**9.65**
		$U_7 - L_7$	-----	-358.86	243	-265	12	-26	-2	-153	-11	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.120	0.85	Yes	0.687	0.303	1.00	Yes	1.00	**2.59**
		$U_8 - L_8$	-----	-514.58	339	-341	63	-69	90	-177	-14	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.102	0.85	Yes	0.706	0.291	1.00	Yes	1.00	**3.10**
		$U_9 - L_9$	-----	-650.71	407	-512	116	-179	41	-201	-247	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.122	0.91	Yes	0.757	0.238	1.00	Yes	1.00	**3.17**
		$U_{10} - L_{10}$	-----	-779.00	405	-440	119	-116	200	-53	-215	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.106	0.92	Yes	0.769	0.228	1.00	Yes	1.00	**3.38**
		$U_{11} - L_{11}$	-----	-647.90	430	-474	167	-192	296	57	-167	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.125	0.90	Yes	0.732	0.264	1.00	Yes	1.00	**2.39**
		$U_{12} - L_{12}$	-----	-1180.96	492	-637	-381	414	985	377	460	182	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.144	1.00	Yes	0.819	0.119	0.94	Yes	1.00	**4.42**
		$U_{13} - L_{13}$	-----	-459.48	-67	76	-273	289	-297	-42	-215	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.154	0.93	Yes	0.709	0.284	1.00	Yes	1.00	**2.46**
		$U_{14} - L_{14}$	-----	-472.66	-44	28	-254	254	-670	-325	-1007	-534	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.283	1.00	Yes	0.678	0.222	0.90	Yes	1.00	**2.92**
		$U_{15} - L_{15}$	-----	-438.01	-42	56	-210	235	-371	-206	-472	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.756	0.238	1.00	Yes	1.00	**2.92**
		$U_{16} - L_{16}$	-----	-158.37	86	-54	-516	513	-932	-412	-516	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.348	0.414	0.77	Yes	0.335	0.660	1.00	Yes	1.00	**9.41**
		$U_{17} - L_{17}$	283.41	-183.58	156	-179	-301	311	-294	-196	-121	100	0.510	0.483	1.00	Yes	0.280	0.266	0.55	Yes	0.402	0.174	0.58	Yes	0.388	0.398	0.79	Yes	1.00	**5.38**
		$U_{18} - L_{18}$	121.91	-290.61	252	-297	-113	127	51	-121	-111	18	0.219	0.414	0.64	Yes	0.121	0.228	0.35	Yes	0.635	0.140	0.78	Yes	0.615	0.379	1.00	Yes	1.00	**4.18**
		$U_{19} - L_{19}$	48.14	-308.95	263	-243	-57	45	56	-65	-84	-3	0.087	0.361	0.45	Yes	0.048	0.198	0.25	Yes	0.675	0.105	0.79	Yes	0.654	0.337	1.00	Yes	1.00	**2.67**
		$U_{20} - L_{20}$	-----	-326.09	97	-173	-17	-67	534	171	-591	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.267	1.00	Yes	0.690	0.221	0.92	Yes	1.00	**1.28**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																			
North Truss - Diagonals	Structure 1	$U_0 - L_1$	517.64	-----	-16	-2	-139	72	-5	13	-611	-128	0.679	0.316	1.00	Yes	0.410	0.174	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_1 - L_2$	387.84	-90.99	18	-20	-106	-2	-8	-17	-552	-322	0.698	0.295	1.00	Yes	0.384	0.162	0.55	Yes	0.209	0.264	0.48	Yes	0.193	0.135	0.33	Yes	1.00	**3.43**
		$U_2 - L_3$	393.99	-268.88	52	-30	-159	-22	38	28	-276	-108	0.709	0.283	1.00	Yes	0.390	0.155	0.55	Yes	0.619	0.275	0.90	Yes	0.569	0.203	0.78	Yes	1.00	**6.38**
		$U_3 - L_4$	-----	-320.93	54	-6	-105	-111	119	122	29	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.261	1.00	Yes	0.679	0.142	0.83	Yes	1.00	**6.04**
		$U_4 - L_4$	565.85	-----	-11	54	-98	23	24	-21	-200	-290	0.830	0.167	1.00	Yes	0.456	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		$U_4 - L_5$	685.33	-----	-28	152	-215	215	201	76	-350	-339	0.810	0.186	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.77**
		$U_5 - L_6$	640.77	-----	-77	118	-300	235	349	163	-283	-225	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		$U_6 - L_7$	653.30	-----	24	162	-104	295	286	164	-116	-181	0.772	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_5 - L_8$	988.00	-----	113	225	-98	355	358	54	329	376	0.790	0.206	1.00	Yes	0.489	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_9 - L_{10}$	930.29	-----	-69	84	-353	230	139	141	742	556	0.744	0.252	1.00	Yes	0.461	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{10} - L_{11}$	985.92	-----	-53	160	-255	174	137	192	-4	350	0.833	0.164	1.00	Yes	0.516	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		$U_{11} - L_{12}$	834.40	-----	-67	55	-289	97	23	130	143	250	0.825	0.171	1.00	Yes	0.454	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{12} - L_{13}$	650.31	-----	-77	44	-204	144	-118	-92	-68	119	0.793	0.202	1.00	Yes	0.499	0.113	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		$U_{13} - L_{14}$	453.70	-----	-20	-11	-98	28	-181	-180	-40	-16	0.816	0.178	1.00	Yes	0.449	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		$U_{15} - L_{14}$	262.36	-310.48	54	-114	-92	-16	-268	-125	-401	-320	0.472	0.262	0.74	Yes	0.260	0.144	0.41	Yes	0.727	0.268	1.00	Yes	0.657	0.146	0.81	Yes	1.00	**3.94**
		$U_{16} - L_{15}$	387.02	-83.25	-9	-33	-134	89	-377	-147	-446	-307	0.696	0.301	1.00	Yes	0.383	0.165	0.55	Yes	0.197	0.215	0.42	Yes	0.176	0.172	0.35	Yes	1.00	**3.16**
		$U_{17} - L_{16}$	509.69	-----	-34	14	-143	87	-110	-130	-452	-409	0.747	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		$U_{18} - L_{17}$	602.04	-----	-111	76	-319	244	-111	-117	-576	-493	0.712	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		$U_{19} - L_{18}$	667.48	-----	-131	86	-355	246	-64	-104	-567	-482	0.723	0.275	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_{20} - L_{19}$	644.20	-----	-72	104	-283	255	82	-84	-943	-233	0.698	0.300	1.00	Yes	0.384	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
	Structure 2	$U_0 - L_1$	757.71	-----	-114	100	-391	363	-59	-47	-419	-60	0.750	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_1 - L_2$	790.58	-----	-95	71	-394	303	-100	-29	-221	38	0.782	0.216	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		$U_2 - L_3$	658.82	-----	-81	62	-349	269	-22	92	-127	114	0.779	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		$U_3 - L_4$	594.49	-----	-38	16	-183	130	105	61	-157	11	0.792	0.199	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.76**
		$U_4 - L_5$	420.78	-21.98	-2	-9	-134	91	73	-91	-224	74	0.757	0.236	1.00	Yes	0.416	0.130	0.55	Yes	0.054	0.108	0.17	Yes	0.047	0.172	0.22	Yes	1.00	**2.92**
		$U_5 - L_6$	428.84	-257.87	60	-108	-135	59	-174	-164	-110	95	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	0.609	0.182	0.80	Yes	0.546	0.172	0.72	Yes	1.00	**4.49**
		$U_6 - L_7$	78.28	-382.60	57	-104	-53	-12	-96	-296	-159	-83	0.127	0.196	0.33	Yes	0.070	0.108	0.18	Yes	0.819	0.173	1.00	Yes	0.733	0.119	0.86	Yes	1.00	**2.82**
		$U_8 - L_7$	556.98	-----	-34	-14	-205	102	-235	-196	-366	-504	0.710	0.287	1.00	Yes	0.447	0.163	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_8 - L_8$	686.95	-----	-117	43	-333	212	-280	-212	-484	-471	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		$U_{10} - L_9$	781.13	-----	-93	124	-321	215	1	-63	-512	-491	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{11} - L_{10}$	844.72	-----	-99	147	-352	256	166	29	-559	-542	0.769	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		$U_{12} - L_{11}$	851.47	-----	-109	163	-371	335	289	120	-384	-436	0.776	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_{13} - L_{12}$	749.93	-----	-151	153	-439	377	344	133	-253	-214	0.742	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		$U_{14} - L_{13}$	747.39	-----	-4	181	-278	427	361	137	-312	-161	0.739	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		$U_{14} - L_{15}$	636.16	-----	64	127	-224	360	128	-77	236	163	0.752	0.246	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		$U_{15} - L_{16}$	619.89	-----	-57	65	-404	356	-48	14	129	163	0.733	0.258	1.00	Yes	0.403	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		$U_{16} - L_{17}$	712.17	-----	-60	100	-327	334	-166	116	-296	315	0.771	0.223	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_{17} - L_{18}$	645.25	-----	-66	79	-301	274	-26	102	3	320	0.763	0.229	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		$U_{18} - L_{19}$	667.74	-----	-49	68	-281	258	34	20	68	254	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_{19} - L_{20}$	604.10	-----	-19	26	-196	156	-31	-29	24	230	0.770	0.222	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		$U_{20} - L_{21}$	441.66	-----	-6	8	-131	105	-68	-48	36	117	0.794	0.202	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{21} - L_{22}$	440.72	-197.95	25	-73	-118	49	-41	-178	-32	98	0.793	0.202	1.00	Yes	0.436	0.111	0.55	Yes	0.468	0.142	0.61	Yes	0.419	0.151	0.57	Yes	1.00	**3.92**
		$U_{23} - L_{22}$	361.65	-289.07	43	-91	-126	20	-304	-22	-396	-348	0.650	0.276	0.93	Yes	0.358	0.152	0.51	Yes	0.688	0.305	1.00	Yes	0.612	0.161	0.78	Yes	1.00	**4.48**
		$U_{24} - L_{23}$	413.00	-32.36	3	-17	-125	93	-154	-59	-307	-280	0.743	0.249	1.00	Yes	0.409	0.137	0.55	Yes	0.077	0.155	0.24	Yes	0.068	0.160	0.23	Yes	1.00	**2.97**
		$U_{25} - L_{24}$	564.51	-----	-13	27	-199	163	72	8	-468	-377	0.720	0.273	1.00	Yes	0.396	0.155	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**
		$U_{26} - L_{25}$	632.62	-----	-26	38	-297	240	119	46	-435	-416	0.748	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		$U_{27} - L_{26}$	643.21	-----	-45	58	-298	265	177	68	-331	-351	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{28} - L_{27}$	701.89	-----	-47	66	-351	351	203	113	-328	-307	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_{29} - L_{28}$	620.71	-----	-72	83	-378	334	268	133	-239	-212	0.734	0.263	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{30} - L_{29}$	636.17	-----	40	107	-228	350	214	139	-175	-230	0.752	0.240	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{30} - L_{31}$	750.21	-----	65	159	-286	423	400	9	152	184	0.742	0.256	1.00	Yes	0.408	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{31} - L_{32}$	759.24	-----	-73	77	-437	379	-27	42	-190	252	0.751	0.240	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{32} - L_{33}$	869.48	-----	-57	94	-370	336	-144	135	-216	337	0.792	0.203	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{33} - L_{34}$	878.31	-----	-66	91	-346	276	26	204	-39	367	0.800	0.197	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		$U_{34} - L_{35}$	820.77	-----	-64	80	-313	224	80	87	16	267	0.812	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{35} - L_{36}$	735.45	-----	-86	84	-344	236	-15	0	73	146	0.797	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{36} - L_{37}$	612.67	-----	-33	9	-195	144	-194	-209	-111	76	0.781	0.217	1.00	Yes	0.492	0.122	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{38} - L_{37}$	-----	-388.32	60	-96	-40	-27	-249	-69	-241	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.153	1.00	Yes	0.744	0.110	0.86	Yes	1.00	**2.60**
		$U_{39} - L_{38}$	365.29	-303.62	88	-120	-119	40	-215	-107	-426	-397	0.657	0.277	0.94	Yes	0.361	0.152	0.52	Yes	0.723	0.274	1.00	Yes	0.642	0.154	0.80	Yes	1.00	**4.71**
		$U_{40} - L_{39}$	388.80	-116.20	19	-44	-140	91	-243	-132	-405	-341	0.699	0.296	1.00	Yes	0.385	0.163	0.55	Yes	0.278	0.221	0.50	Yes	0.246	0.178	0.43	Yes	1.00	**3.61**
		$U_{41} - L_{40}$	541.63	-----	-17	1	-179	112	-92	-78	-512	-432	0.722	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		$U_{42} - L_{41}$	609.07	-----	-49	32	-329	248	-67	-64	-476	-488	0.720	0.275	1.00	Yes	0.396	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_{43} - L_{42}$	735.19	-----	-64	44	-395	296	-4	-45	-559	-499	0.727	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_{44} - L_{43}$	669.26	-----	-89	82	-338	324	-8	-10	-1164	-182	0.662	0.331	1.00	Yes	0.364	0.182	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
	Structure 3	$U_0 - L_1$	570.80	-----	-113	94	-424	314	-62	-53	-989	64	0.618	0.380	1.00	Yes	0.340	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.87**
		$U_1 - L_2$	670.70	-----	-99	67	-344	249	-123	-44	-538	-186	0.726	0.264	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_2 - L_3$	645.40	-----	-97	63	-331	242	-48	78	-253	126	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		$U_3 - L_4$	553.42	-----	-28	9	-159	104	76	50	-67	6	0.812	0.179	1.00	Yes	0.446	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		$U_4 - L_5$	426.86	-76.51	-8	-29	-133	91	-102	-165	-213	27	0.768	0.232	1.00	Yes	0.422	0.128	0.55	Yes	0.181	0.121	0.31	Yes	0.162	0.170	0.34	Yes	1.00	**3.11**
		$U_5 - L_6$	418.82	-295.48	36	-103	-113	-5	-220	-330	-240	-11	0.753	0.240	1.00	Yes	0.414	0.132	0.55	Yes	0.692	0.218	0.92	Yes	0.625	0.144	0.77	Yes	1.00	**4.21**
		$U_7 - L_6$	426.40	-8.30	-4	-35	-98	19	-213	-190	-298	-359	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	0.019	0.181	0.21	Yes	0.018	0.125	0.15	Yes	1.00	**2.94**
		$U_8 - L_7$	589.63	-----	-59	8	-204	134	-348	-224	-490	-437	0.719	0.274	1.00	Yes	0.452	0.156	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_8 - L_8$	779.72	-----	-62	79	-273	67	-93	-141	-639	-631	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		$U_{10} - L_9$	927.64	-----	-46	127	-266	147	86	-12	-585	-641	0.784	0.207	1.00	Yes	0.485	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{11} - L_{10}$	971.90	-----	-74	125	-319	236	354	187	-600	-504	0.777	0.219	1.00	Yes	0.481	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		$U_{12} - L_{11}$	989.88	-----	75	179	-117	348	376	219	-415	-383	0.791	0.208	1.00	Yes	0.490	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{12} - L_{13}$	660.45	-----	66	147	-114	294	-3	-116	275	183	0.781	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{13} - L_{14}$	642.99	-----	-21	57	-338	254	-23	52	231	234	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{14} - L_{15}$	710.02	-----	-1	130	-196	193	-23	107	-205	244	0.839	0.156	1.00	Yes	0.462	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_{15} - L_{16}$	507.32	-----	8	86	-164	8	173	235	352	245	0.744	0.249	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{17} - L_{16}$	-----	-320.18	49	-2	-67	-92	162	156	-502	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.260	1.00	Yes	0.677	0.118	0.80	Yes	1.00	**4.52**
		$U_{18} - L_{17}$	385.60	-274.12	58	-31	-131	-30	277	183	-462	-392	0.694	0.301	1.00	Yes	0.381	0.166	0.55	Yes	0.631	0.344	0.98	Yes	0.580	0.167	0.75	Yes	1.00	**5.61**
		$U_{19} - L_{18}$	409.25	-123.70	24	-19	-100	12	152	117	-443	-372	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	0.284	0.236	0.52	Yes	0.262	0.128	0.39	Yes	1.00	**2.89**
		$U_{20} - L_{19}$	389.74	-----	165	-14	-164	78	1139	37	-1112	-557	0.511	0.479	1.00	Yes	0.309	0.264	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.90**

Moment (Start) AB Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$			-----	-498.95	502	-588	-984	-619	-26	-290	318	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.314	1	Yes	0.673	0.234	0.91	Yes	1.00	**4.32**
		$U_1 - U_2$			2.26	-567.84	-44	33	-533	-622	-4	-115	30	-13	0.003	0.167	0.17	Yes	0.002	0.115	0.12	Yes	0.773	0.225	1	Yes	0.766	0.148	0.92	Yes	1.00	**2.94**
		$U_2 - U_3$			183.72	-561.60	-57	296	-979	-7	4	-97	263	-185	0.211	0.277	0.49	Yes	0.142	0.181	0.33	Yes	0.764	0.196	0.96	Yes	0.757	0.233	1.00	Yes	1.00	**4.36**
		$U_3 - U_4$			438.84	-539.50	150	331	-1127	242	-131	-100	129	-18	0.503	0.290	0.80	Yes	0.345	0.199	0.55	Yes	0.734	0.199	0.94	Yes	0.728	0.268	1.00	Yes	1.00	**5.13**
		$U_4 - U_5$			321.13	-563.71	107	255	-990	-18	-174	-25	-81	-102	0.368	0.265	0.64	Yes	0.253	0.182	0.44	Yes	0.767	0.221	0.99	Yes	0.760	0.235	1.00	Yes	1.00	**3.56**
		$U_5 - U_6$			600.91	-505.47	237	386	-1030	-80	-350	-25	-134	-345	0.689	0.304	1.00	Yes	0.465	0.198	0.67	Yes	0.688	0.228	0.92	Yes	0.682	0.245	0.93	Yes	1.00	**4.81**
		$U_6 - U_7$			786.99	-120.56	301	203	-819	37	-318	102	-471	-164	0.753	0.239	1.00	Yes	0.526	0.164	0.70	Yes	0.137	0.182	0.32	Yes	0.136	0.174	0.31	Yes	1.00	**4.61**
		$U_7 - U_8$			855.80	-----	31	942	-1673	2342	-162	432	-322	147	0.593	0.399	1.00	Yes	0.414	0.272	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		$U_8 - U_9$			379.04	-----	3719	-3469	599	-124	106	521	13	166	0.311	0.687	1.00	Yes	0.212	0.468	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.33**
		$U_9 - U_{10}$			-----	-510.91	811	-512	-1322	-161	462	747	157	653	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.336	1	Yes	0.652	0.296	0.95	Yes	1.00	**16.72**
		$U_{10} - U_{11}$			-----	-626.84	452	-852	-367	-429	418	0	326	156	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.161	0.97	Yes	0.800	0.191	1.00	Yes	1.00	**6.57**
		$U_{11} - U_{12}$			-----	-871.80	265	-386	-503	-513	275	-196	694	242	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.174	1	Yes	0.818	0.085	0.91	Yes	1.00	**4.53**
		$U_{12} - U_{13}$			-----	-1183.97	115	-340	-968	-382	243	-359	508	68	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.196	1	Yes	0.791	0.134	0.93	Yes	1.00	**4.29**
		$U_{13} - U_{14}$			-----	-1360.31	-76	-332	-1271	-576	148	88	307	39	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.209	1	Yes	0.780	0.140	0.93	Yes	1.00	**4.35**
		$U_{14} - U_{15}$			-----	-1340.31	-189	-959	-1514	-950	128	-210	137	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.222	1	Yes	0.768	0.167	0.94	Yes	1.00	**3.10**
		$U_{15} - U_{16}$			-----	-1429.54	30	-1298	-1351	-565	-114	-462	230	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.167	1	Yes	0.820	0.149	0.97	Yes	1.00	**3.23**
		$U_{16} - U_{17}$			-----	-1366.59	-315	-184	-1595	-377	46	-173	-61	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1	Yes	0.783	0.176	0.96	Yes	1.00	**3.19**
		$U_{17} - U_{18}$			-----	-996.23	-167	-104	-1042	-271	-157	-220	-86	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.204	1	Yes	0.780	0.170	0.95	Yes	1.00	**2.97**
		$U_{18} - U_{19}$			-----	-719.03	-195	-30	-869	45	-196	-170	-44	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.184	1	Yes	0.809	0.175	0.99	Yes	1.00	**2.70**
		$U_{19} - U_{20}$			-----	-590.26	-37	-1387	-1629	654	-106	-631	375	15	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.324	1	Yes	0.664	0.328	1.00	Yes	1.00	**5.62**
	Structure 2	$U_0 - U_1$			-----	-606.97	1332	-1485	-1664	-335	96	-81	698	119	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.222	0.95	Yes	0.717	0.283	1.00	Yes	1.00	**7.62**
		$U_1 - U_2$			-----	-808.33	11	-607	-475	-938	131	-97	322	249	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.206	1	Yes	0.780	0.142	0.93	Yes	1.00	**3.73**
		$U_2 - U_3$			-----	-1167.52	319	-564	-919	-775	635	-16	380	87	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.162	1	Yes	0.829	0.094	0.93	Yes	1.00	**4.61**
		$U_3 - U_4$			-----	-1350.04	-361	-294	-1514	-1650	124	-310	230	-121	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1	Yes	0.769	0.147	0.92	Yes	1.00	**3.33**
		$U_4 - U_5$			-----	-1462.35	-307	-1102	-2084	-943	-21	-613	314	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.242	1	Yes	0.751	0.173	0.93	Yes	1.00	**4.10**
		$U_5 - U_6$			-----	-1508.01	-383	-3	-2067	-1101	-109	-300	36	-305	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.774	0.171	0.95	Yes	1.00	**3.28**
		$U_6 - U_7$			-----	-1322.44	-264	-76	-1487	-1674	-86	-266	-99	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1	Yes	0.753	0.149	0.91	Yes	1.00	**3.08**
		$U_7 - U_8$			-----	-1335.10	-156	-199	-2108	-587	-184	-220	-89	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.228	1	Yes	0.760	0.188	0.95	Yes	1.00	**3.11**
		$U_8 - U_9$			-----	-1193.46	-284	104	-1518	-229	-230	-185	-50	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.180	1	Yes	0.809	0.161	0.98	Yes	1.00	**3.34**
		$U_9 - U_{10}$			137.60	-904.47	-83	295	-1494	-519	-282	-132	-173	-241	0.101	0.212	0.32	Yes	0.068	0.144	0.22	Yes	0.785	0.208	1	Yes	0.781	0.182	0.97	Yes	1.00	**3.56**
		$U_{10} - U_{11}$			478.82	-756.63	92	348	-1613	-100	-339	-137	-102	-183	0.404	0.269	0.68	Yes	0.275	0.174	0.45	Yes	0.756	0.235	1	Yes	0.752	0.228	0.98	Yes	1.00	**4.76**
		$U_{11} - U_{12}$			798.39	-404.95	176	510	-1879	374	-346	-163	-202	-436	0.674	0.318	1.00	Yes	0.453	0.213	0.67	Yes	0.405	0.219	0.63	Yes	0.402	0.265	0.67	Yes	1.00	**5.48**
		$U_{12} - U_{13}$			1117.88	-----	347	85	-1356	-560	-435	-38	-766	-522	0.755	0.244	1.00	Yes	0.538	0.167	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.48**
		$U_{13} - U_{14}$			1126.07	-----	-106	1871	-2800	4316	-224	363	-659	-95	0.554	0.445	1.00	Yes	0.392	0.291	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		$U_{14} - U_{15}$			729.98	-----	6326	-3359	1235	-93	-52	735	-285	131	0.359	0.636	1.00	Yes	0.254	0.416	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.03**
		$U_{15} - U_{16}$			1054.94	-----	378	27	-2392	-1736	657	909	432	1028	0.638	0.359	1.00	Yes	0.454	0.242	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.69**
		$U_{16} - U_{17}$			-----	-753.60	2567	-2019	-2346	-742	1071	17	1126	599	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.336	1	Yes	0.653	0.322	0.98	Yes	1.00	**20.29**
		$U_{17} - U_{18}$			-----	-619.79	931	-516	-1525	-163	194	-76	223	291	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.245	0.99	Yes	0.732	0.259	1.00	Yes	1.00	**10.75**
		$U_{18} - U_{19}$			-----	-681.43	770	-387	-789	-563	102	-323	867	128	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.182	1	Yes	0.805	0.134	0.94	Yes	1.00	**7.17**
		$U_{19} - U_{20}$			331.41	-685.94	357	203	-1164	-342	-3	183	244	119	0.311	0.219	0.54	Yes	0.206	0.144	0.36	Yes	0.762	0.228	1	Yes	0.757	0.186	0.95	Yes	1.00	**5.17**
		$U_{20} - U_{21}$			-----	-852.46	236	-358	-1362	-154	159	-349	232	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.208	1	Yes	0.778	0.197	0.98	Yes	1.00	**5.34**
		$U_{21} - U_{22}$			55.38	-815.99	-11	18	-1066	-1149	-17	-52	7	-90	0.043	0.176	0.22	Yes	0.030	0.117	0.15	Yes	0.750	0.246	1	Yes	0.745	0.166	0.92	Yes	1.00	**3.52**
		$U_{22} - U_{23}$			-----	-809.72	78	-981	-1463	-457	-41	-265	92	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.255	1	Yes	0.739	0.212	0.96	Yes	1.00	**3.49**
		$U_{23} - U_{24}$			18.00	-850.50	128	-90	-1383	-136	-110	-40	24	-154	0.014	0.217	0.24	Yes	0.010	0.139	0.15	Yes	0.782	0.213	1	Yes	0.776	0.200	0.98	Yes	1.00	**3.78**
		$U_{24} - U_{25}$			196.86	-683.16	107	231	-1136	-683	-229	-37	-171	-177	0.185	0.213	0.40	Yes	0.122	0.140	0.27	Yes	0.758	0.239	1	Yes	0.754	0.182	0.94	Yes	1.00	**3.54**
		$U_{25} - U_{26}$			384.43	-634.68	167	388	-1438	304	-272	33	-116	-51	0.386	0.284	0.67	Yes	0.253	0.180	0.44	Yes	0.754	0.184	0.94	Yes	0.750	0.244	1.00	Yes	1.00	**4.39**
		$U_{26} - U_{27}$			666.42	-558.03	255	434	-1801	351	-171	50	-171	-132	0.669	0.331	1.00	Yes	0.445	0.219	0.67	Yes	0.663	0.205	0.87	Yes	0.659	0.306	0.97	Yes	1.00	**6.06**
		$U_{27} - U_{28}$			949.60	-323.30	241	585	-1890	-372	-283	11	-283	-536	0.700	0.294	1.00	Yes	0.466	0.193	0.66	Yes	0.282	0.212	0.5	Yes	0.280	0.237	0.52	Yes	1.00	**7.15**
		$U_{28} - U_{29}$			661.21	-190.26	670	-2039	-4214	-592	-1359	298	-1209	-698	0.400	0.594	1.00	Yes	0.284	0.399	0.69	Yes	0.136	0.562	0.7	Yes	0.135	0.479	0.62	Yes	1.00	**13.73**
		$U_{29} - U_{30}$			1069.94	-----	5	1922	-2804	4584	-17	605	-461	145	0.526	0.466	1.00	Yes	0.372	0.305	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		$U_{30} - U_{31}$			911.86	-----	5370	-3613	1341	51	231	675	-406	-133	0.448	0.543	1.00	Yes	0.317	0.356	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		$U_{31} - U_{32}$			1008.95	-----	182	507	-1875	133	-119	150	328	815	0.681	0.314	1.00	Yes	0.486	0.214	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.50**
		$U_{32} - U_{33}$			-----	-753.63	1505	-1713	-1244	-691	952	92	793	455	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.208	0.97	Yes	0.749	0.242	1.00	Yes	1.00	**16.42**
		$U_{33} - U_{34}$			643.74	-787.22	433	231	-721	-1297	122	199	193	113	0.544	0.207	0.76	Yes	0.370	0.134	0.51	Yes	0.787	0.210	1	Yes	0.782	0.183	0.97	Yes	1.00	**5.63**
		$U_{34} - U_{35}$			375.07	-972.06	496	87	-922	-726	57	-64	360	15	0.275	0.151	0.43	Yes	0.186	0.102	0.29	Yes	0.844	0.150	1	Yes	0.839	0.112	0.96	Yes	1.00	**5.76**
		$U_{35} - U_{36}$			115.32	-1159.20	238	-200	-1244	-552	90	123	314	62	0.066	0.158	0.23	Yes	0.047	0.104	0.16	Yes	0.792	0.206	1	Yes	0.786	0.132	0.92	Yes	1.00	**4.89**
		$U_{36} - U_{37}$			-----	-1339.30	-121	-60	-1154	-1893	137	-82	194	19	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.230	1	Yes	0.763	0.169	0.94	Yes	1.00	**3.46**
		$U_{37} - U_{38}$			-----	-1317.42	75	-1352	-2142	-767	-34	-216	242	10	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.243	1	Yes	0.750	0.191	0.95	Yes	1.00	**3.33**
		$U_{38} - U_{39}$			-----	-1630.44	185	-1754	-1787	-1179	53	-400	262	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.151	1	Yes	0.837	0.148	0.99	Yes	1.00	**3.99**
		$U_{39} - U_{40}$			-----	-1402.59	-325	-468	-2143	-1629	-117	-138	-165	-386	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.266	1	Yes	0.720	0.178	0.90	Yes	1.00	**3.14**
		$U_{40} - U_{41}$			-----	-1349.86	-394	-426	-1936	-798	-90	-128	-95	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1	Yes	0.769	0.173	0.95	Yes	1.00	**3.16**
		$U_{41} - U_{42}$			-----	-1143.93	-273	-175	-1785	-131	-98	38	-71	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1	Yes	0.812	0.182	1.00	Yes	1.00	**3.23**
		$U_{42} - U_{43}$			-----	-790.92	-257	-54	-1379	-397	128	-45	247	-236	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.230	1	Yes	0.763	0.209	0.98	Yes	1.00	**3.93**
		$U_{43} - U_{44}$			-----	-569.55	-26	-1170	-1741	426	-133	-526	285	4	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.317	1	Yes	0.673	0.296	0.97	Yes	1.00	**5.39**
	Structure 3	$U_0 - U_1$			-----	-546.30	1282	-1193	-1879	-266	167	-28	846	69	-----	-----	-----	-----	-----	-----	-----	-----	0.620	0.242	0.87	Yes	0.615	0.378	1.00	Yes	1.00	**7.70**
		$U_1 - U_2$			-----	-690.32	38	-776	-245	-573	198	289	474	124	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.209	1	Yes	0.777	0.156	0.94	Yes	1.00	**2.73**
		$U_2 - U_3$			-----	-1019.84	184	-1051	-417	-340	615	-15	447	29	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1	Yes	0.798	0.171	0.97	Yes	1.00	**3.15**
		$U_3 - U_4$			-----	-1394.11	-79	-263	-946	-1171	232	-330	206	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.184	1	Yes	0.799	0.129	0.93	Yes	1.00	**3.77**
		$U_4 - U_5$			-----	-1378.53	-257	-268	-1225	-658	-16	-641	695	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1	Yes	0.790	0.135	0.93	Yes	1.00	**3.52**
		$U_5 - U_6$			-----	-1360.24	-147	-223	-1165	-1228	-53	-211	-20	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1	Yes	0.780	0.135	0.92	Yes	1.00	**3.32**
		$U_6 - U_7$			-----	-1339.66	-213	-781	-1737	-336	-49	-369	24	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.220	1	Yes	0.768	0.192	0.96	Yes	1.00	**3.28**
		$U_7 - U_8$			-----	-1158.69	-124	-38	-1034	-649	-214	-206	-140	-358	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1	Yes	0.774	0.143	0.92	Yes	1.00	**3.28**
		$U_8 - U_9$			-----	-888.74	-109	155	-957	46	-190	-122	-51	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.154	1	Yes	0.834	0.159	1.00	Yes	1.00	**2.99**
		$U_9 - U_{10}$			108.97	-599.02	-82	190	-1034	153	-271	-140	-142	-195	0.118	0.275	0.40	Yes	0.079	0.176	0.26	Yes	0.771	0.219	1	Yes	0.764	0.232	1.00	Yes	1.00	**3.29**
		$U_{10} - U_{11}$			657.78	-456.74	251	230	-977	53	-323	-51	-394	-166	0.713	0.282	1.00	Yes	0.483	0.189	0.68	Yes	0.588	0.220	0.81	Yes	0.583	0.219	0.81	Yes	1.00	**6.31**
		$U_{11} - U_{12}$			750.66	-----	-81	879	-1722	1970	-222	178	-425	0	0.615	0.382	1.00	Yes	0.421	0.260	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		$U_{12} - U_{13}$			424.10	-----	4264	-2984	630	-29	-50	539	-147	55	0.294	0.701	1.00	Yes	0.205	0.477	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.16**
		$U_{13} - U_{14}$			128.33	-506.35	660	16	-1984	-347	469	529	250	796	0.123	0.531	0.66	Yes	0.086	0.364	0.46	Yes	0.576	0.309	0.89	Yes	0.570	0.422	1.00	Yes	1.00	**16.76**
		$U_{14} - U_{15}$			-----	-573.75	782	-616	-526	-349	501	-303	551	154	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.212	1	Yes	0.774	0.186	0.96	Yes	1.00	**8.78**
		$U_{15} - U_{16}$			465.25	-563.00	364	192	-711	-251	-35	170	202	219	0.533	0.206	0.74	Yes	0.366	0.141	0.51	Yes	0.766	0.230	1	Yes	0.759	0.169	0.93	Yes	1.00	**5.67**
		$U_{16} - U_{17}$			-----	-598.31	463	-798	-682	-339	23	-98	261	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.116	0.94	Yes	0.807	0.190	1.00	Yes	1.00	**3.73**
		$U_{17} - U_{18}$			119.48	-574.78	242	-127	-694	-281	-68	146	34	-113	0.137	0.190	0.33	Yes	0.092	0.123	0.22	Yes	0.782	0.214	1	Yes	0.775	0.165	0.95	Yes	1.00	**2.80**
		$U_{18} - U_{19}$			-----	-563.04	116	-347	-824	-153	21	232	124	23	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.226	1	Yes	0.759	0.196	0.96	Yes	1.00	**2.63**
		$U_{19} - U_{20}$			-----	-528.04	126	-339	-899	-37	-58	27	321	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.272	1	Yes	0.712	0.214	0.93	Yes	1.00	**4.09**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1			-----	-83.69	1731	-2799	-327	212	-374	-1340	56	196	-----	-----	-----	-----	-----	-----	-----	-----	0.152	0.684	0.84	Yes	0.151	0.840	1.00	Yes	1.00	**21.23**
		L_1 - L_2			438.00	-----	295	-937	-712	-470	7	-89	-184	56	0.670	0.321	1.00	Yes	0.409	0.216	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		L_2 - L_3			655.99	-61.29	-28	52	-860	-434	7	0	226	-48	0.755	0.244	1.00	Yes	0.437	0.146	0.59	Yes	0.084	0.232	0.32	Yes	0.083	0.208	0.30	Yes	1.00	**3.68**
		L_3 - L_4			630.26	-----	88	-695	-975	-176	-137	-10	-78	220	0.725	0.271	1.00	Yes	0.431	0.175	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		L_4 - L_5			299.24	-483.48	99	444	-983	140	133	-124	-155	-37	0.388	0.288	0.68	Yes	0.233	0.189	0.43	Yes	0.743	0.148	0.9	Yes	0.737	0.260	1.00	Yes	1.00	**3.76**
		L_5 - L_6			38.92	-723.52	135	556	-711	13	9	68	22	68	0.038	0.166	0.21	Yes	0.025	0.100	0.13	Yes	0.844	0.146	1	Yes	0.835	0.157	1.00	Yes	1.00	**4.27**
		L_6 - L_7			-----	-1027.97	176	118	-1075	-286	164	45	62	77	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.154	1	Yes	0.827	0.169	1.00	Yes	1.00	**5.47**
		L_7 - L_8			-----	-1047.47	104	938	-1436	2490	-177	-78	41	72	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.269	0.95	Yes	0.663	0.330	1.00	Yes	1.00	**9.41**
		L_8 - L_9			-----	-1131.74	2081	-284	542	-36	-8	-59	49	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.252	0.98	Yes	0.717	0.276	1.00	Yes	1.00	**8.07**
		L_9 - L_{10}			-----	-911.79	1342	-1681	-1341	-1428	-14	-419	24	9	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.097	0.84	Yes	0.734	0.264	1.00	Yes	1.00	**13.87**
		L_{10} - L_{11}			348.33	-559.75	519	-19	-296	-521	69	2	3	76	0.451	0.151	0.61	Yes	0.263	0.092	0.36	Yes	0.861	0.085	0.95	Yes	0.853	0.138	1.00	Yes	1.00	**5.88**
		L_{11} - L_{12}			588.45	-----	509	-790	-154	-524	-109	1	50	155	0.762	0.236	1.00	Yes	0.457	0.155	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		L_{12} - L_{13}			1079.59	-----	117	-140	-687	-604	-174	-121	31	73	0.852	0.142	1.00	Yes	0.545	0.085	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		L_{13} - L_{14}			1286.43	-----	574	-1556	-686	-1054	-286	-11	7	261	0.757	0.238	1.00	Yes	0.490	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		L_{14} - L_{15}			1561.21	-----	-354	-83	-1808	-783	-67	-47	-209	117	0.763	0.233	1.00	Yes	0.496	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		L_{15} - L_{16}			1660.48	-----	-191	-388	-1402	-1469	-73	15	-60	-18	0.811	0.182	1.00	Yes	0.521	0.106	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{16} - L_{17}			1201.57	-----	-396	41	-1488	-193	-37	-65	-162	-25	0.760	0.233	1.00	Yes	0.493	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		L_{17} - L_{18}			913.68	-----	-176	-59	-943	-141	-73	-14	-16	-133	0.796	0.199	1.00	Yes	0.509	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		L_{18} - L_{19}			424.44	-----	-237	168	-1057	567	-4	-31	-142	5	0.650	0.347	1.00	Yes	0.439	0.215	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		L_{19} - L_{20}			92.23	-198.05	-102	27	-2144	1076	-42	-1	651	149	0.141	0.778	0.92	Yes	0.086	0.521	0.61	Yes	0.360	0.434	0.8	Yes	0.357	0.643	1.00	Yes	1.00	**13.36**
	Structure 2	L_0 - L_1			156.37	-----	844	-2507	-132	18	-521	-1806	13	37	0.190	0.807	1.00	Yes	0.113	0.508	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.32**
		L_1 - L_2			510.90	-----	694	-1342	-213	-938	66	69	-634	303	0.621	0.377	1.00	Yes	0.369	0.239	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		L_2 - L_3			1050.93	-----	382	-893	-580	-872	18	51	378	-32	0.828	0.169	1.00	Yes	0.543	0.102	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		L_3 - L_4			1357.20	-----	417	-1327	-814	-1527	-63	95	-42	274	0.797	0.201	1.00	Yes	0.537	0.124	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		L_4 - L_5			1693.10	-----	52	-1589	-2027	-1361	-185	-97	203	152	0.789	0.205	1.00	Yes	0.523	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_5 - L_6			1868.94	-----	-19	-308	-2073	-1877	-95	59	35	226	0.802	0.198	1.00	Yes	0.538	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		L_6 - L_7			1818.23	-----	-373	-83	-2463	-1273	53	-13	85	193	0.770	0.228	1.00	Yes	0.511	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		L_7 - L_8			1325.71	-----	-186	228	-1953	-702	-72	77	-251	25	0.760	0.236	1.00	Yes	0.499	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_8 - L_9			1102.53	-247.81	-123	490	-1540	-84	41	-125	-98	26	0.771	0.220	1.00	Yes	0.519	0.136	0.66	Yes	0.205	0.152	0.36	Yes	0.204	0.208	0.42	Yes	1.00	**4.76**
		L_9 - L_{10}			839.58	-580.43	-78	599	-1493	-248	-38	31	10	-49	0.749	0.245	1.00	Yes	0.436	0.153	0.59	Yes	0.614	0.176	0.79	Yes	0.610	0.239	0.85	Yes	1.00	**5.78**
		L_{10} - L_{11}			66.89	-676.24	7	560	-1144	716	123	-59	-2	-16	0.067	0.217	0.29	Yes	0.039	0.137	0.18	Yes	0.800	0.070	0.87	Yes	0.794	0.200	1.00	Yes	1.00	**4.52**
		L_{11} - L_{12}			-----	-1004.72	7	942	-1262	965	17	49	86	172	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.077	0.91	Yes	0.824	0.172	1.00	Yes	1.00	**5.56**
		L_{12} - L_{13}			-----	-1229.15	153	-257	-1958	-1525	92	47	-103	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.256	1	Yes	0.735	0.195	0.93	Yes	1.00	**6.69**
		L_{13} - L_{14}			-----	-1129.70	-233	1421	-3672	4886	-526	-494	-129	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.273	0.85	Yes	0.568	0.427	1.00	Yes	1.00	**9.24**
		L_{14} - L_{15}			-----	-1219.51	4364	-2261	1214	-546	-258	-149	-278	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.619	0.246	0.87	Yes	0.614	0.381	1.00	Yes	1.00	**7.33**
		L_{15} - L_{16}			-----	-1225.05	-139	199	-2521	-978	187	178	80	52	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.261	1	Yes	0.733	0.251	0.99	Yes	1.00	**7.11**
		L_{16} - L_{17}			64.16	-905.87	2698	-2187	-761	-1565	-399	-114	315	143	0.040	0.366	0.41	Yes	0.026	0.217	0.25	Yes	0.665	0.235	0.91	Yes	0.660	0.333	1.00	Yes	1.00	**13.38**
		L_{17} - L_{18}			682.14	-407.95	1981	-2096	-1455	-1614	-257	-112	406	410	0.609	0.385	1.00	Yes	0.355	0.239	0.60	Yes	0.431	0.218	0.65	Yes	0.428	0.335	0.77	Yes	1.00	**14.69**
		L_{18} - L_{19}			621.17	-----	979	-1216	-733	-791	-145	-109	374	-68	0.704	0.292	1.00	Yes	0.406	0.173	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.58**
		L_{19} - L_{20}			685.77	-----	669	-927	-666	-880	-252	-86	-73	219	0.777	0.217	1.00	Yes	0.460	0.138	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_{20} - L_{21}			980.18	-----	445	-658	-1326	-1060	-180	-144	50	151	0.782	0.213	1.00	Yes	0.513	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		L_{21} - L_{22}			900.86	-----	280	-1716	-1197	-1176	-218	4	-73	250	0.718	0.277	1.00	Yes	0.480	0.174	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		L_{22} - L_{23}			823.07	-74.81	-46	53	-2221	18	1	-51	1	117	0.656	0.337	1.00	Yes	0.439	0.210	0.65	Yes	0.071	0.256	0.33	Yes	0.070	0.324	0.40	Yes	1.00	**5.11**
		L_{23} - L_{24}			921.86	-323.61	-3	308	-1707	-805	-8	64	-79	71	0.735	0.258	1.00	Yes	0.482	0.152	0.64	Yes	0.306	0.249	0.56	Yes	0.304	0.249	0.56	Yes	1.00	**5.21**
		L_{24} - L_{25}			629.52	-455.88	105	452	-1387	-172	96	-94	-112	100	0.713	0.285	1.00	Yes	0.422	0.183	0.61	Yes	0.611	0.178	0.79	Yes	0.608	0.268	0.88	Yes	1.00	**5.07**
		L_{25} - L_{26}			308.94	-603.17	65	570	-999	-192	7	79	41	38	0.350	0.205	0.56	Yes	0.202	0.122	0.33	Yes	0.809	0.130	0.94	Yes	0.804	0.193	1.00	Yes	1.00	**5.02**
		L_{26} - L_{27}			-----	-762.82	147	489	-1207	161	131	-23	-54	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.099	0.91	Yes	0.801	0.193	1.00	Yes	1.00	**5.00**
		L_{27} - L_{28}			-----	-1094.94	81	1044	-1606	431	77	147	48	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.167	0.98	Yes	0.797	0.198	1.00	Yes	1.00	**6.89**
		L_{28} - L_{29}			-----	-1245.65	192	-578	-1836	-1874	209	162	-133	26	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.243	1	Yes	0.745	0.186	0.94	Yes	1.00	**7.13**
		L_{29} - L_{30}			-----	-1087.05	-173	1179	-4153	5102	-417	-523	-50	27	-----	-----	-----	-----	-----	-----	-----	-----	0.552	0.269	0.83	Yes	0.547	0.446	1.00	Yes	1.00	**10.32**
		L_{30} - L_{31}			-----	-1188.27	4550	-2841	1131	-268	62	152	-367	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.603	0.255	0.86	Yes	0.598	0.397	1.00	Yes	1.00	**8.15**
		L_{31} - L_{32}			-----	-1150.28	-65	-316	-2575	-1369	137	81	104	224	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.303	1	Yes	0.688	0.256	0.95	Yes	1.00	**7.92**
		L_{32} - L_{33}			205.77	-814.78	2367	-2319	-977	-1588	-176	-84	510	514	0.143	0.371	0.52	Yes	0.095	0.221	0.32	Yes	0.674	0.224	0.9	Yes	0.668	0.322	1.00	Yes	1.00	**16.00**
		L_{33} - L_{34}			612.38	-----	1323	-1884	-487	-1361	-101	82	82	379	0.611	0.381	1.00	Yes	0.358	0.239	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.22**
		L_{34} - L_{35}			833.66	-----	763	-1457	-692	-954	-143	-6	178	123	0.744	0.255	1.00	Yes	0.433	0.159	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		L_{35} - L_{36}			1172.64	-----	751	-982	-730	-1139	-271	-26	91	270	0.820	0.179	1.00	Yes	0.552	0.112	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		L_{36} - L_{37}			1365.98	-----	444	-1670	-1071	-1246	-116	32	322	113	0.783	0.211	1.00	Yes	0.514	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		L_{37} - L_{38}			1744.84	-----	143	-1399	-2724	-1158	-352	-139	-86	270	0.738	0.261	1.00	Yes	0.491	0.153	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		L_{38} - L_{39}			1786.00	-----	-363	-69	-2529	-1459	1	-55	-45	95	0.766	0.230	1.00	Yes	0.514	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		L_{39} - L_{40}			1706.93	-----	-247	-382	-2068	-1448	-61	-2	-41	-75	0.796	0.200	1.00	Yes	0.527	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_{40} - L_{41}			1302.16	-----	-409	25	-1867	-462	-4	-14	-155	5	0.765	0.231	1.00	Yes	0.515	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_{41} - L_{42}			1002.51	-----	-181	-98	-1353	-324	14	73	-6	-9	0.790	0.203	1.00	Yes	0.518	0.120	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		L_{42} - L_{43}			527.12	-----	-296	172	-1367	151	55	15	-125	495	0.640	0.359	1.00	Yes	0.381	0.229	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_{43} - L_{44}			40.09	-124.20	10	-100	-3825	1115	-96	-23	1011	301	0.049	0.945	1.00	Yes	0.029	0.604	0.64	Yes	0.179	0.623	0.81	Yes	0.177	0.778	0.96	Yes	1.00	**19.51**
	Structure 3	L_0 - L_1			145.95	-----	992	-1720	-37	-39	-266	-1221	-8	-21	0.223	0.769	1.00	Yes	0.136	0.507	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.23**
		L_1 - L_2			407.36	-----	613	-973	62	-644	73	167	-386	297	0.623	0.372	1.00	Yes	0.422	0.234	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		L_2 - L_3			891.64	-----	397	-820	-387	-706	4	117	489	270	0.776	0.221	1.00	Yes	0.497	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		L_3 - L_4			1257.12	-----	408	-1011	-659	-1203	-80	91	127	298	0.795	0.203	1.00	Yes	0.516	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		L_4 - L_5			1624.36	-----	-223	-278	-1566	-949	-165	-147	206	182	0.794	0.203	1.00	Yes	0.509	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_5 - L_6			1553.21	-----	180	-1753	-1179	-1178	-290	56	-33	366	0.759	0.237	1.00	Yes	0.493	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		L_6 - L_7			1309.72	-----	-346	187	-1601	-286	-2	-31	-105	71	0.770	0.229	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		L_7 - L_8			1047.46	-----	-92	47	-900	-481	-21	70	17	107	0.827	0.172	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		L_8 - L_9			559.85	-169.68	-165	340	-923	442	62	-126	56	9	0.725	0.266	1.00	Yes	0.435	0.176	0.62	Yes	0.261	0.124	0.39	Yes	0.259	0.244	0.51	Yes	1.00	**4.59**
		L_9 - L_{10}			98.83	-506.20	-32	462	-857	316	-27	13	104	166	0.128	0.256	0.39	Yes	0.075	0.155	0.23	Yes	0.778	0.138	0.92	Yes	0.771	0.227	1.00	Yes	1.00	**5.21**
		L_{10} - L_{11}			-----	-972.07	93	183	-1368	-82	84	-118	63	36	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.149	0.95	Yes	0.782	0.215	1.00	Yes	1.00	**7.29**
		L_{11} - L_{12}			-----	-1197.90	72	1075	-946	1806	53	93	-63	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.194	0.97	Yes	0.759	0.239	1.00	Yes	1.00	**7.56**
		L_{12} - L_{13}			-----	-1128.57	2129	-635	557	-34	-199	-87	-129	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.257	0.99	Yes	0.715	0.282	1.00	Yes	1.00	**6.92**
		L_{13} - L_{14}			-----	-925.26	1332	-1610	-1519	-1147	5	-130	209	18	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.099	0.86	Yes	0.745	0.253	1.00	Yes	1.00	**12.79**
		L_{14} - L_{15}			665.51	-329.31	1236	-1354	-983	-966	-311	46	129	134	0.653	0.341	1.00	Yes	0.422	0.207	0.63	Yes	0.384	0.195	0.58	Yes	0.380	0.300	0.68	Yes	1.00	**12.17**
		L_{15} - L_{16}			543.41	-----	761	-859	-479	-670	-192	55	153	347	0.704	0.289	1.00	Yes	0.422	0.188	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_{16} - L_{17}			642.37	-211.59	320	22	-1003	-265	41	-83	20	61	0.739	0.255	1.00	Yes	0.439	0.166	0.61	Yes	0.289	0.233	0.53	Yes	0.286	0.242	0.53	Yes	1.00	**4.71**
		L_{17} - L_{18}			661.92	-42.32	49	-73	-864	-672	16	102	-17	140	0.762	0.231	1.00	Yes	0.441	0.139	0.58	Yes	0.058	0.261	0.32	Yes	0.057	0.209	0.27	Yes	1.00	**3.73**
		L_{18} - L_{19}			438.04	-----	-18	31	-847	-211	49	-76	-8	307	0.670	0.320	1.00	Yes	0.409	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		L_{19} - L_{20}			53.73	-----	58	-142	-2223	1075	-138	-36	1157	312	0.082	0.915	1.00	Yes	0.048	0.555	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.36**

Moment (Start) AB Operating

Operating Loads - HS20 Truck | **Calc:** BKC **Date:** 10/28/2009 | **Check:** NRF **Date:** 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-311.54	-20	43	-161	191	-93	-30	-792	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.300	1	Yes	0.659	0.245	0.91	Yes	1.00	**1.55**
		$U_1 - L_1$	32.65	-313.12	29	-23	-262	245	52	22	257	162	0.059	0.409	0.47	Yes	0.032	0.225	0.26	Yes	0.684	0.157	0.85	Yes	0.663	0.335	1.00	Yes	1.00	**3.84**
		$U_2 - L_2$	80.14	-266.61	125	-117	-306	337	-131	-24	111	118	0.144	0.469	0.62	Yes	0.079	0.258	0.34	Yes	0.583	0.144	0.73	Yes	0.564	0.431	1.00	Yes	1.00	**6.09**
		$U_3 - L_3$	262.51	-222.28	282	-279	-285	303	-466	-190	68	236	0.472	0.522	1.00	Yes	0.260	0.287	0.55	Yes	0.487	0.200	0.69	Yes	0.470	0.387	0.86	Yes	1.00	**6.77**
		$U_4 - L_4$	35.35	-56.41	674	-648	-252	216	-159	-170	162	233	0.064	0.929	1.00	Yes	0.035	0.511	0.55	Yes	0.124	0.251	0.38	Yes	0.119	0.862	0.99	Yes	1.00	**12.22**
		$U_5 - L_5$	-----	-421.34	251	-269	21	-36	-75	-86	-119	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.102	0.87	Yes	0.727	0.273	1.00	Yes	1.00	**3.43**
		$U_6 - L_6$	-----	-517.35	282	-295	43	-61	11	43	-67	42	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.082	0.87	Yes	0.742	0.258	1.00	Yes	1.00	**3.50**
		$U_7 - L_7$	-----	-436.45	305	-323	118	-132	-122	61	-129	46	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.120	0.85	Yes	0.673	0.318	1.00	Yes	1.00	**2.21**
		$U_8 - L_8$	-----	-1269.95	500	-597	-408	486	-141	-46	-212	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.917	0.055	0.98	Yes	0.880	0.111	1.00	Yes	1.00	**4.55**
		$U_9 - L_9$	-----	-654.53	-164	187	-416	457	-220	-156	-256	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.129	0.91	Yes	0.739	0.254	1.00	Yes	1.00	**2.91**
		$U_{10} - L_{10}$	-----	-788.98	-100	136	-402	409	-316	-221	-163	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.118	0.94	Yes	0.778	0.212	1.00	Yes	1.00	**4.67**
		$U_{11} - L_{11}$	-----	-658.27	-61	146	-406	490	-123	19	-82	37	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.087	0.88	Yes	0.766	0.227	1.00	Yes	1.00	**4.41**
		$U_{12} - L_{12}$	-----	-508.78	-41	54	-342	336	-93	56	-57	103	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.092	0.83	Yes	0.698	0.292	1.00	Yes	1.00	**3.68**
		$U_{13} - L_{13}$	-----	-363.77	3	17	-241	262	-84	84	-14	139	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.105	0.85	Yes	0.697	0.299	1.00	Yes	1.00	**2.95**
		$U_{14} - L_{14}$	104.81	-60.41	339	-339	-570	610	57	78	18	53	0.188	0.802	1.00	Yes	0.104	0.441	0.55	Yes	0.135	0.212	0.35	Yes	0.128	0.780	0.91	Yes	1.00	**11.65**
		$U_{15} - L_{15}$	246.64	-309.86	251	-267	-202	194	-31	-177	-110	-135	0.444	0.393	0.84	Yes	0.244	0.216	0.47	Yes	0.695	0.163	0.86	Yes	0.656	0.342	1.00	Yes	1.00	**4.94**
		$U_{16} - L_{16}$	93.75	-311.44	260	-263	-49	33	-128	-192	-58	-78	0.169	0.392	0.57	Yes	0.093	0.215	0.31	Yes	0.702	0.160	0.87	Yes	0.659	0.336	1.00	Yes	1.00	**3.60**
		$U_{17} - L_{17}$	-----	-434.41	232	-244	33	-55	-76	-103	-88	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.108	0.93	Yes	0.749	0.248	1.00	Yes	1.00	**2.97**
		$U_{18} - L_{18}$	-----	-530.64	448	-455	121	-126	72	-62	-160	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.093	0.88	Yes	0.738	0.258	1.00	Yes	1.00	**3.32**
		$U_{19} - L_{19}$	-----	-643.52	521	-527	129	-186	54	-31	54	328	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.110	0.92	Yes	0.749	0.245	1.00	Yes	1.00	**3.54**
		$U_{20} - L_{20}$	-----	-578.25	422	-494	154	-223	797	104	198	26	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.673	0.229	0.91	Yes	1.00	**2.44**
	Structure 2	$U_0 - L_0$	-----	-602.02	-115	180	-419	497	-265	-45	-1337	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.277	1	Yes	0.645	0.211	0.86	Yes	1.00	**2.46**
		$U_1 - L_1$	-----	-712.42	-109	117	-542	545	43	-65	-6	6	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.069	0.89	Yes	0.763	0.231	1.00	Yes	1.00	**3.97**
		$U_2 - L_2$	-----	-583.49	-79	88	-493	491	99	44	1	85	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.080	0.87	Yes	0.744	0.252	1.00	Yes	1.00	**3.87**
		$U_3 - L_3$	-----	-487.24	-41	47	-254	259	20	130	-12	133	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.094	0.93	Yes	0.764	0.236	1.00	Yes	1.00	**3.58**
		$U_4 - L_4$	3.25	-333.15	14	8	-226	223	-56	100	-60	125	0.006	0.325	0.34	Yes	0.003	0.179	0.19	Yes	0.756	0.093	0.85	Yes	0.705	0.289	1.00	Yes	1.00	**3.34**
		$U_5 - L_5$	154.72	-322.11	137	-113	-226	242	-127	78	-44	149	0.278	0.353	0.64	Yes	0.153	0.194	0.35	Yes	0.728	0.114	0.85	Yes	0.682	0.310	1.00	Yes	1.00	**4.42**
		$U_6 - L_6$	363.86	-205.29	233	-231	-226	230	-52	157	-87	126	0.654	0.343	1.00	Yes	0.360	0.189	0.55	Yes	0.462	0.090	0.56	Yes	0.434	0.298	0.74	Yes	1.00	**5.52**
		$U_7 - L_7$	15.50	-193.18	412	-458	-196	209	25	-27	-93	88	0.028	0.613	0.65	Yes	0.015	0.337	0.36	Yes	0.436	0.187	0.63	Yes	0.409	0.586	1.00	Yes	1.00	**10.36**
		$U_8 - L_8$	-----	-458.69	378	-386	21	-42	-202	-182	-103	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.128	0.8	Yes	0.661	0.338	1.00	Yes	1.00	**3.44**
		$U_9 - L_9$	-----	-687.01	610	-613	80	-115	-101	-144	-129	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.082	0.85	Yes	0.736	0.260	1.00	Yes	1.00	**4.44**
		$U_{10} - L_{10}$	-----	-789.03	560	-576	107	-144	-54	-77	-53	10	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.082	0.87	Yes	0.738	0.254	1.00	Yes	1.00	**4.64**
		$U_{11} - L_{11}$	-----	-816.69	533	-534	157	-172	-118	-38	-46	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.084	0.91	Yes	0.764	0.236	1.00	Yes	1.00	**4.13**
		$U_{12} - L_{12}$	-----	-882.03	547	-549	152	-169	83	102	17	95	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.087	0.94	Yes	0.765	0.235	1.00	Yes	1.00	**4.14**
		$U_{13} - L_{13}$	-----	-743.83	584	-569	242	-240	35	87	-88	42	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.117	0.95	Yes	0.717	0.279	1.00	Yes	1.00	**3.22**
		$U_{14} - L_{14}$	-----	-1300.79	638	-609	-508	471	-93	-5	-40	147	-----	-----	-----	-----	-----	-----	-----	-----	0.951	0.047	1	Yes	0.863	0.113	0.98	Yes	1.00	**4.86**
		$U_{15} - L_{15}$	-----	-736.71	-165	166	-598	591	-80	-44	-152	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.140	0.97	Yes	0.710	0.286	1.00	Yes	1.00	**3.75**
		$U_{16} - L_{16}$	-----	-706.96	-112	101	-549	524	-154	-90	-247	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.110	0.93	Yes	0.758	0.233	1.00	Yes	1.00	**3.98**
		$U_{17} - L_{17}$	-----	-636.96	-126	123	-547	538	-97	-33	-68	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.081	0.87	Yes	0.741	0.254	1.00	Yes	1.00	**3.95**
		$U_{18} - L_{18}$	-----	-571.81	-87	125	-519	522	-129	9	-99	3	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.082	0.85	Yes	0.729	0.267	1.00	Yes	1.00	**3.96**
		$U_{19} - L_{19}$	-----	-473.12	-41	57	-300	289	-111	29	-116	33	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.087	0.8	Yes	0.706	0.288	1.00	Yes	1.00	**3.40**
		$U_{20} - L_{20}$	-----	-376.51	13	3	-237	240	-171	5	-71	67	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.112	0.89	Yes	0.721	0.275	1.00	Yes	1.00	**3.40**
	Structure 3	$U_{21} - L_{21}$	65.10	-313.98	63	-50	-246	256	-141	32	-103	68	0.117	0.368	0.49	Yes	0.064	0.203	0.27	Yes	0.709	0.121	0.84	Yes	0.664	0.328	1.00	Yes	1.00	**3.99**
		$U_{22} - L_{22}$	88.45	-160.91	400	-419	-483	509	19	24	16	148	0.159	0.693	0.86	Yes	0.087	0.381	0.47	Yes	0.362	0.198	0.57	Yes	0.340	0.650	1.00	Yes	1.00	**13.07**
		$U_{23} - L_{23}$	129.99	-312.51	255	-265	-102	93	-125	-119	-65	-45	0.234	0.374	0.61	Yes	0.129	0.206	0.34	Yes	0.706	0.135	0.85	Yes	0.661	0.338	1.00	Yes	1.00	**4.03**
		$U_{24} - L_{24}$	66.54	-368.26	250	-255	-39	28	-55	-71	-72	-62	0.108	0.309	0.42	Yes	0.060	0.170	0.23	Yes	0.755	0.099	0.86	Yes	0.705	0.291	1.00	Yes	1.00	**3.60**
		$U_{25} - L_{25}$	-----	-469.67	305	-300	19	-34	-43	-39	-79	2	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.082	0.79	Yes	0.701	0.294	1.00	Yes	1.00	**3.50**
		$U_{26} - L_{26}$	-----	-560.41	529	-547	88	-123	-140	-47	-38	36	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.092	0.84	Yes	0.714	0.280	1.00	Yes	1.00	**3.65**
		$U_{27} - L_{27}$	-----	-625.31	571	-572	140	-163	-48	29	-70	44	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.073	0.85	Yes	0.728	0.266	1.00	Yes	1.00	**3.61**
		$U_{28} - L_{28}$	-----	-704.95	564	-556	132	-129	55	91	-32	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.075	0.89	Yes	0.755	0.239	1.00	Yes	1.00	**3.75**
		$U_{29} - L_{29}$	-----	-702.47	659	-637	204	-210	-67	58	-116	25	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.127	0.92	Yes	0.677	0.315	1.00	Yes	1.00	**3.81**
		$U_{30} - L_{30}$	-----	-1292.14	664	-656	-612	547	-22	-83	-162	68	-----	-----	-----	-----	-----	-----	-----	-----	0.945	0.052	1	Yes	0.857	0.118	0.98	Yes	1.00	**5.14**
		$U_{31} - L_{31}$	-----	-744.75	-178	174	-572	551	-115	-57	-185	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.147	0.98	Yes	0.718	0.274	1.00	Yes	1.00	**3.73**
		$U_{32} - L_{32}$	-----	-892.92	-125	98	-525	510	-187	-97	-213	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.116	0.98	Yes	0.774	0.225	1.00	Yes	1.00	**4.84**
		$U_{33} - L_{33}$	-----	-820.27	-149	180	-518	506	-146	6	-109	5	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.085	0.92	Yes	0.767	0.229	1.00	Yes	1.00	**4.72**
		$U_{34} - L_{34}$	-----	-800.38	-106	149	-550	556	-117	48	-92	79	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.076	0.87	Yes	0.748	0.245	1.00	Yes	1.00	**4.91**
		$U_{35} - L_{35}$	-----	-702.10	-90	149	-576	580	-215	29	10	170	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.077	0.86	Yes	0.752	0.246	1.00	Yes	1.00	**4.67**
		$U_{36} - L_{36}$	-----	-468.62	-31	56	-360	370	-143	76	-50	127	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.094	0.78	Yes	0.675	0.323	1.00	Yes	1.00	**3.71**
		$U_{37} - L_{37}$	-----	-171.31	137	-140	-442	495	2	28	-58	142	-----	-----	-----	-----	-----	-----	-----	-----	0.387	0.207	0.6	Yes	0.362	0.633	1.00	Yes	1.00	**9.70**
		$U_{38} - L_{38}$	350.48	-138.73	165	-164	-239	246	-139	-169	-71	-104	0.630	0.364	1.00	Yes	0.347	0.200	0.55	Yes	0.312	0.134	0.45	Yes	0.294	0.315	0.61	Yes	1.00	**4.28**
		$U_{39} - L_{39}$	254.93	-316.99	238	-254	-197	184	-29	-141	-110	-107	0.458	0.365	0.83	Yes	0.252	0.201	0.46	Yes	0.716	0.146	0.87	Yes	0.671	0.325	1.00	Yes	1.00	**4.94**
		$U_{40} - L_{40}$	84.55	-333.27	230	-228	-54	30	-60	-108	-87	-75	0.152	0.325	0.48	Yes	0.084	0.179	0.27	Yes	0.756	0.117	0.88	Yes	0.705	0.294	1.00	Yes	1.00	**3.71**
		$U_{41} - L_{41}$	-----	-481.96	260	-267	40	-62	-110	-90	8	40	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.104	0.93	Yes	0.756	0.244	1.00	Yes	1.00	**3.44**
		$U_{42} - L_{42}$	-----	-571.07	517	-514	102	-112	96	-32	-84	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.081	0.85	Yes	0.728	0.264	1.00	Yes	1.00	**3.60**
		$U_{43} - L_{43}$	-----	-707.12	549	-563	136	-153	250	17	-40	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.098	0.91	Yes	0.758	0.239	1.00	Yes	1.00	**3.80**
		$U_{44} - L_{44}$	-----	-621.17	464	-535	195	-241	1128	191	-27	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.250	1	Yes	0.666	0.227	0.90	Yes	1.00	**2.51**
	Structure 4	$U_0 - L_0$	-----	-552.09	-102	167	-393	454	-251	-33	-1035	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.265	1	Yes	0.643	0.211	0.86	Yes	1.00	**2.55**
		$U_1 - L_1$	-----	-650.14	-108	115	-515	509	6	-75	54	19	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.074	0.89	Yes	0.757	0.239	1.00	Yes	1.00	**3.99**
		$U_2 - L_2$	-----	-540.79	-89	95	-429	436	82	32	-85	59	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.078	0.87	Yes	0.752	0.247	1.00	Yes	1.00	**3.57**
		$U_3 - L_3$	-----	-442.20	-31	62	-213	226	-130	41	37	183	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.115	0.95	Yes	0.763	0.230	1.00	Yes	1.00	**3.24**
		$U_4 - L_4$	57.53	-314.34	36	-16	-258	258	-128	126	-103	173	0.103	0.380	0.49	Yes	0.057	0.209	0.27	Yes	0.708	0.104	0.82	Yes	0.665	0.330	1.00	Yes	1.00	**3.89**
		$U_5 - L_5$	155.78	-301.14	138	-126	-267	281	-85	119	-88	165	0.280	0.408	0.69	Yes	0.154	0.224	0.38	Yes	0.675	0.117	0.8	Yes	0.637	0.360	1.00	Yes	1.00	**4.92**
		$U_6 - L_6$	-----	-72.78	629	-656	-426	446	-300	-122	55	120	-----	-----	-----	-----	-----	-----	-----	-----	0.162	0.273	0.44	Yes	0.154	0.839	1.00	Yes	1.00	**13.29**
		$U_7 - L_7$	25.68	-358.41	251	-270	-32	19	-154	-167	-175	-141	0.042	0.354	0.40	Yes	0.023	0.194	0.22	Yes	0.725	0.143	0.87	Yes	0.687	0.308	1.00	Yes	1.00	**3.18**
		$U_8 - L_8$	-----	-514.65	341	-342	15	-19	-238	-214	-136	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.134	0.88	Yes	0.706	0.292	1.00	Yes	1.00	**3.90**
		$U_9 - L_9$	-----	-652.05	416	-508	64	-136	-197	-131	-47	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.106	0.89	Yes	0.759	0.236	1.00	Yes	1.00	**4.15**
		$U_{10} - L_{10}$	-----	-779.60	412	-438	90	-108	28	96	3	82	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.071	0.88	Yes	0.769	0.227	1.00	Yes	1.00	**4.38**
		$U_{11} - L_{11}$	-----	-646.52	425	-480	182	-211	-32	94	-52	61	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.095	0.87	Yes	0.730	0.267	1.00	Yes	1.00	**2.75**
		$U_{12} - L_{12}$	-----	-1279.82	435	-569	-406	436	-127	-11	53	75	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.048	0.98	Yes	0.887	0.106	1.00	Yes	1.00	**4.50**
		$U_{13} - L_{13}$	-----	-458.22	-105	116	-267	288	-141	-96	-159	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.137	0.91	Yes	0.707	0.283	1.00	Yes	1.00	**2.12**
		$U_{14} - L_{14}$	-----	-525.85	-52	66	-273	278	-174	-140	-231	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.121	0.92	Yes	0.754	0.243	1.00	Yes	1.00	**3.64**
		$U_{15} - L_{15}$	-----	-433.60	-24	47	-226	245	-177	-56	-73	40	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.112	0.9	Yes	0.748	0.248	1.00	Yes	1.00	**3.62**
		$U_{16} - L_{16}$	103.27	-75.00	176	-137	-598	581	-151	-76	-106	56	0.186	0.808	1.00	Yes	0.102	0.444	0.55	Yes	0.165	0.207	0.38	Yes	0.159	0.764	0.93	Yes	1.00	**10.95**
		$U_{17} - L_{17}$	291.21	-177.60	175	-195	-291	302	-311	-254	-111	-23	0.524	0.476	1.00	Yes	0.288	0.262	0.55	Yes	0.389	0.180	0.57	Yes	0.376	0.386	0.77	Yes	1.00	**5.35**
		$U_{18} - L_{18}$	80.48	-272.76	295	-328	-121	124	-212	-163	113	10	0.145	0.481	0.63	Yes	0.080	0.264	0.35	Yes	0.596	0.174	0.78	Yes	0.577	0.419	1.00	Yes	1.00	**5.28**
		$U_{19} - L_{19}$	21.32	-313.90	258	-250	-35	22	-140	-113	-167	-90	0.038	0.378	0.42	Yes	0.021	0.208	0.23	Yes	0.686	0.125	0.82	Yes	0.664	0.330	1.00	Yes	1.00	**3.57**
		$U_{20} - L_{20}$	-----	-351.98	162	-196	48	-74	379	122	-110	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.192	0.98	Yes	0.745	0.251	1.00	Yes	1.00	**1.36**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	U_0 - L_1	490.22	-31.53	8	-9	-184	77	-45	-15	-532	-207	0.643	0.349	1.00	Yes	0.388	0.192	0.59	Yes	0.054	0.237	0.3	Yes	0.049	0.215	0.27	Yes	1.00	**4.05**
		U_1 - L_2	326.67	-133.76	23	-15	-157	-12	47	38	-718	-322	0.588	0.408	1.00	Yes	0.323	0.225	0.55	Yes	0.307	0.371	0.68	Yes	0.283	0.201	0.49	Yes	1.00	**6.13**
		U_2 - L_3	28.01	-258.91	57	-24	-178	-87	128	105	-316	-384	0.050	0.338	0.39	Yes	0.028	0.186	0.22	Yes	0.596	0.402	1	Yes	0.548	0.227	0.78	Yes	1.00	**9.58**
		U_3 - L_4	-----	-355.16	32	-55	-54	-55	-161	-120	-286	-247	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.185	1	Yes	0.751	0.071	0.83	Yes	1.00	**3.83**
		U_4 - L_4	582.25	-----	-2	-1	-97	22	58	-31	-69	-181	0.854	0.140	1.00	Yes	0.470	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		U_4 - L_5	706.29	-----	-2	49	-214	201	186	103	46	-102	0.835	0.156	1.00	Yes	0.459	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		U_5 - L_6	577.12	-----	-69	105	-436	254	343	223	119	119	0.682	0.311	1.00	Yes	0.375	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		U_6 - L_7	656.92	-----	27	169	-111	291	299	234	303	154	0.777	0.221	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		U_8 - L_9	1002.22	-----	94	217	-108	355	294	257	256	211	0.801	0.196	1.00	Yes	0.496	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		U_9 - L_{10}	969.77	-----	-65	103	-434	241	88	110	221	154	0.775	0.222	1.00	Yes	0.480	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		U_{10} - L_{11}	1017.49	-----	-47	116	-262	161	8	0	-123	-118	0.859	0.137	1.00	Yes	0.532	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		U_{11} - L_{12}	801.81	-----	-59	69	-322	88	-112	-79	-344	-348	0.793	0.201	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		U_{12} - L_{13}	622.85	-----	-53	10	-192	130	-274	-250	-348	-317	0.759	0.236	1.00	Yes	0.478	0.133	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		U_{13} - L_{14}	439.98	-6.39	-5	-29	-91	33	-276	-297	-291	-295	0.791	0.202	1.00	Yes	0.435	0.111	0.55	Yes	0.015	0.155	0.17	Yes	0.014	0.116	0.13	Yes	1.00	**2.69**
		U_{15} - L_{16}	231.77	-330.34	65	-104	-78	-9	-195	-298	-269	-359	0.417	0.237	0.66	Yes	0.229	0.130	0.36	Yes	0.774	0.219	1	Yes	0.699	0.133	0.84	Yes	1.00	**3.93**
		U_{16} - L_{15}	417.29	-172.92	25	-60	-135	74	-188	-176	-246	-257	0.751	0.247	1.00	Yes	0.413	0.136	0.55	Yes	0.410	0.184	0.6	Yes	0.366	0.172	0.54	Yes	1.00	**3.97**
		U_{17} - L_{18}	537.74	-----	-17	-10	-152	89	-95	-123	-152	-230	0.789	0.208	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		U_{18} - L_{17}	645.22	-----	-97	60	-349	247	6	-45	-200	-185	0.763	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		U_{19} - L_{18}	723.45	-----	-91	65	-365	246	-136	-16	-150	-140	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		U_{20} - L_{19}	616.78	-----	-116	115	-407	311	-61	177	-714	-113	0.668	0.326	1.00	Yes	0.367	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
	Structure 2	U_0 - L_1	639.59	-----	-66	76	-447	367	-121	53	-1003	-166	0.633	0.357	1.00	Yes	0.348	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		U_1 - L_2	787.66	-----	-86	58	-412	306	43	11	-112	-166	0.779	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		U_2 - L_3	648.74	-----	-65	49	-330	254	-76	-178	-206	-199	0.767	0.225	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		U_3 - L_4	576.16	-----	-33	16	-177	124	-235	-213	-313	-283	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		U_4 - L_5	411.40	-96.19	12	-37	-129	84	-234	-201	-309	-266	0.740	0.254	1.00	Yes	0.407	0.140	0.55	Yes	0.237	0.182	0.42	Yes	0.204	0.164	0.37	Yes	1.00	**3.47**
		U_5 - L_6	396.97	-311.68	85	-116	-119	59	-364	-245	-434	-266	0.714	0.279	1.00	Yes	0.393	0.153	0.55	Yes	0.736	0.255	1	Yes	0.660	0.153	0.82	Yes	1.00	**4.61**
		U_6 - L_7	109.74	-372.84	67	-102	-54	-8	-273	-258	-329	-280	0.179	0.203	0.39	Yes	0.098	0.112	0.21	Yes	0.798	0.201	1	Yes	0.714	0.117	0.84	Yes	1.00	**3.03**
		U_8 - L_7	596.17	-21.28	-10	-28	-203	112	-170	-233	-140	-261	0.760	0.235	1.00	Yes	0.478	0.132	0.62	Yes	0.035	0.122	0.16	Yes	0.032	0.181	0.22	Yes	1.00	**3.89**
		U_9 - L_8	721.02	-----	-78	15	-344	224	-89	-139	-139	-225	0.781	0.213	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		U_{10} - L_9	824.71	-----	-86	43	-336	229	-21	-55	-63	-171	0.816	0.181	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		U_{11} - L_{10}	893.07	-----	-103	96	-370	272	202	86	56	-50	0.814	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		U_{12} - L_{11}	883.25	-----	-110	136	-380	333	243	155	160	23	0.805	0.194	1.00	Yes	0.443	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		U_{13} - L_{12}	753.72	-----	-180	174	-446	378	271	153	267	124	0.746	0.248	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
		U_{14} - L_{13}	755.72	-----	-15	221	-278	429	293	192	272	156	0.748	0.243	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		U_{14} - L_{15}	639.71	-----	20	171	-222	365	150	108	157	134	0.756	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		U_{15} - L_{16}	641.92	-----	-99	104	-374	335	50	67	121	89	0.759	0.234	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		U_{16} - L_{17}	745.41	-----	-73	98	-357	352	9	5	9	-7	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		U_{17} - L_{18}	676.99	-----	-64	81	-310	283	-58	-32	-101	-58	0.800	0.194	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		U_{18} - L_{19}	683.14	-----	-43	38	-282	248	-109	-98	-150	-148	0.808	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		U_{19} - L_{20}	605.55	-----	-16	1	-203	165	-167	-130	-222	-188	0.772	0.227	1.00	Yes	0.425	0.127	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		U_{20} - L_{21}	432.64	-44.26	7	-20	-121	98	-208	-147	-224	-145	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	0.105	0.113	0.22	Yes	0.094	0.154	0.25	Yes	1.00	**3.19**
		U_{21} - L_{22}	432.00	-207.23	35	-66	-112	49	-217	-214	-266	-242	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	0.490	0.180	0.67	Yes	0.438	0.143	0.59	Yes	1.00	**4.13**
		U_{23} - L_{22}	421.45	-323.77	64	-92	-133	37	-153	-226	-135	-232	0.758	0.238	1.00	Yes	0.417	0.131	0.55	Yes	0.771	0.206	0.98	Yes	0.685	0.170	0.86	Yes	1.00	**5.14**
		U_{24} - L_{23}	440.29	-87.69	25	-36	-128	91	-51	-80	-67	-155	0.792	0.208	1.00	Yes	0.436	0.114	0.55	Yes	0.210	0.091	0.31	Yes	0.186	0.163	0.35	Yes	1.00	**3.79**
		U_{25} - L_{24}	607.46	-1.69	8	-21	-216	167	-16	-57	-16	-119	0.775	0.218	1.00	Yes	0.426	0.121	0.55	Yes	0.003	0.071	0.08	Yes	0.003	0.194	0.20	Yes	1.00	**4.38**
		U_{26} - L_{25}	673.93	-----	-36	44	-304	243	135	47	60	-24	0.797	0.197	1.00	Yes	0.438	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		U_{27} - L_{26}	668.17	-----	-60	73	-309	270	160	82	147	8	0.790	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		U_{28} - L_{27}	717.09	-----	-77	115	-356	351	205	142	173	70	0.777	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		U_{29} - L_{28}	625.60	-----	-125	119	-372	327	217	110	251	118	0.740	0.256	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		U_{30} - L_{29}	638.00	-----	12	161	-220	357	226	150	216	76	0.754	0.243	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		U_{30} - L_{31}	769.03	-----	20	210	-283	441	196	118	121	67	0.761	0.234	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		U_{31} - L_{32}	780.59	-----	-129	130	-459	387	36	47	56	39	0.772	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		U_{32} - L_{33}	898.93	-----	-86	132	-375	337	-25	0	-147	-60	0.819	0.179	1.00	Yes	0.450	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		U_{33} - L_{34}	893.26	-----	-85	128	-347	270	-76	-40	-248	-220	0.814	0.181	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		U_{34} - L_{35}	813.84	-----	-84	113	-306	218	-106	-81	-291	-291	0.805	0.186	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		U_{35} - L_{36}	705.73	-----	-90	20	-322	230	-376	-268	-387	-277	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		U_{36} - L_{37}	599.96	-----	-25	-9	-185	131	-281	-301	-306	-334	0.765	0.234	1.00	Yes	0.482	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		U_{38} - L_{37}	24.01	-391.13	75	-101	-43	-22	-157	-229	-161	-235	0.039	0.177	0.22	Yes	0.022	0.097	0.12	Yes	0.845	0.152	1	Yes	0.749	0.115	0.87	Yes	1.00	**2.80**
		U_{39} - L_{38}	320.12	-339.36	105	-126	-109	46	-142	-188	-226	-251	0.576	0.233	0.81	Yes	0.317	0.128	0.45	Yes	0.809	0.184	1	Yes	0.718	0.161	0.88	Yes	1.00	**4.84**
		U_{40} - L_{39}	418.63	-189.13	43	-69	-142	88	-88	-112	-147	-226	0.753	0.247	1.00	Yes	0.414	0.136	0.55	Yes	0.453	0.166	0.62	Yes	0.400	0.181	0.59	Yes	1.00	**4.52**
		U_{41} - L_{40}	590.63	-----	-26	7	-193	121	18	-20	-101	-143	0.787	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		U_{42} - L_{41}	650.87	-----	-75	50	-349	252	-1	-4	-127	-127	0.769	0.221	1.00	Yes	0.423	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		U_{43} - L_{42}	778.35	-----	-94	64	-405	299	-6	-30	-221	-170	0.770	0.221	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		U_{44} - L_{43}	628.10	-----	-135	118	-473	378	36	2	-1009	-96	0.621	0.371	1.00	Yes	0.342	0.204	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
	Structure 3	U_0 - L_1	590.82	-----	-68	71	-433	318	-132	50	-837	-201	0.640	0.359	1.00	Yes	0.352	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		U_1 - L_2	722.23	-----	-91	57	-364	253	37	13	-61	-149	0.782	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		U_2 - L_3	640.24	-----	-78	48	-333	242	-73	-168	-256	-267	0.757	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		U_3 - L_4	523.05	-----	-19	-13	-148	97	-302	-219	-329	-298	0.767	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		U_4 - L_5	408.12	-121.16	10	-42	-121	79	-294	-226	-377	-299	0.734	0.264	1.00	Yes	0.404	0.145	0.55	Yes	0.287	0.197	0.49	Yes	0.256	0.154	0.42	Yes	1.00	**3.38**
		U_5 - L_6	350.88	-312.32	47	-95	-88	1	-326	-317	-450	-344	0.631	0.252	0.89	Yes	0.347	0.138	0.49	Yes	0.732	0.266	1	Yes	0.661	0.121	0.79	Yes	1.00	**4.05**
		U_7 - L_6	437.92	-52.39	11	-36	-96	26	-97	-240	-128	-302	0.788	0.211	1.00	Yes	0.433	0.116	0.55	Yes	0.122	0.144	0.27	Yes	0.111	0.123	0.24	Yes	1.00	**3.35**
		U_8 - L_7	625.47	-----	-31	-10	-206	139	-141	-158	-185	-263	0.762	0.231	1.00	Yes	0.480	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		U_8 - L_9	841.91	-----	-54	-6	-287	89	112	10	-53	-191	0.833	0.162	1.00	Yes	0.458	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		U_{10} - L_9	974.27	-----	-50	74	-272	147	358	223	114	-53	0.823	0.173	1.00	Yes	0.509	0.097	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		U_{11} - L_{10}	983.02	-----	-90	113	-344	228	327	219	415	241	0.786	0.206	1.00	Yes	0.487	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		U_{12} - L_{11}	986.71	-----	79	206	-111	350	377	310	396	280	0.789	0.207	1.00	Yes	0.489	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		U_{12} - L_{13}	667.89	-----	33	176	-114	299	176	156	201	168	0.790	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		U_{13} - L_{14}	635.00	-----	-55	100	-377	257	133	168	132	92	0.751	0.245	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		U_{14} - L_{15}	656.45	-----	-11	137	-316	187	193	192	-202	-217	0.776	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		U_{15} - L_{16}	507.54	-----	-3	11	-184	10	-40	-14	-184	-280	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.56**
		U_{17} - L_{16}	-----	-368.90	51	-60	-55	-65	-65	-116	-133	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.152	1	Yes	0.781	0.083	0.87	Yes	1.00	**4.22**
		U_{18} - L_{17}	427.67	-193.38	34	-25	-109	-18	82	130	-182	-284	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	0.445	0.210	0.66	Yes	0.409	0.140	0.55	Yes	1.00	**5.92**
		U_{19} - L_{18}	441.17	-12.01	21	-31	-91	1	282	6	-95	-191	0.793	0.198	1.00	Yes	0.436	0.109	0.55	Yes	0.028	0.135	0.17	Yes	0.025	0.116	0.15	Yes	1.00	**3.88**
		U_{20} - L_{19}	474.50	-----	6	4	-177	90	-34	46	-673	-138	0.622	0.376	1.00	Yes	0.376	0.207	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**

Moment (Start) AB Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-588.61	848	-754	-854	-785	502	-633	769	-1099	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.111	0.92	Yes	0.794	0.203	1.00	Yes	1.00	**7.12**
		U_1 - U_2			-----	-552.12	-78	-128	-388	-634	-7	39	122	-447	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.248	1	Yes	0.745	0.151	0.90	Yes	1.00	**3.22**
		U_2 - U_3			244.35	-571.91	-65	367	-860	-121	-128	167	481	-570	0.280	0.301	0.59	Yes	0.189	0.198	0.39	Yes	0.778	0.219	1	Yes	0.771	0.204	0.98	Yes	1.00	**4.56**
		U_3 - U_4			484.30	-566.77	144	407	-677	-434	-222	-10	261	-370	0.555	0.223	0.78	Yes	0.381	0.153	0.54	Yes	0.771	0.221	1	Yes	0.764	0.161	0.93	Yes	1.00	**4.97**
		U_4 - U_5			492.77	-566.35	203	397	-776	-266	-98	-22	-404	99	0.565	0.253	0.82	Yes	0.388	0.173	0.57	Yes	0.771	0.223	1	Yes	0.764	0.184	0.95	Yes	1.00	**5.12**
		U_5 - U_6			675.33	-186.04	272	488	-616	354	97	131	-293	-420	0.774	0.217	1.00	Yes	0.522	0.143	0.67	Yes	0.253	0.217	0.48	Yes	0.251	0.146	0.40	Yes	1.00	**4.79**
		U_6 - U_7			898.93	-----	419	223	-227	98	319	286	-196	4	0.860	0.133	1.00	Yes	0.601	0.091	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		U_7 - U_8			814.71	-----	216	709	-1031	2074	1158	1037	-198	505	0.565	0.432	1.00	Yes	0.394	0.295	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		U_8 - U_9			661.41	-----	2194	-1181	686	-232	637	-231	422	680	0.542	0.451	1.00	Yes	0.371	0.307	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		U_9 - U_{10}			-----	-444.63	747	-969	-434	-718	663	-681	2563	-1115	-----	-----	-----	-----	-----	-----	-----	-----	0.572	0.421	1	Yes	0.567	0.217	0.79	Yes	1.00	**20.16**
		U_{10} - U_{11}			205.51	-650.90	316	-110	-27	-735	33	143	554	-590	0.223	0.259	0.49	Yes	0.149	0.168	0.32	Yes	0.838	0.161	1	Yes	0.831	0.165	1.00	Yes	1.00	**5.12**
		U_{11} - U_{12}			-----	-888.63	190	-181	-235	-604	9	117	683	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.150	1	Yes	0.834	0.100	0.94	Yes	1.00	**3.33**
		U_{12} - U_{13}			-----	-1265.50	-13	-254	-607	-600	82	19	598	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.136	1	Yes	0.845	0.084	0.93	Yes	1.00	**3.86**
		U_{13} - U_{14}			-----	-1409.48	-190	-500	-655	-1289	-43	-6	169	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.178	1	Yes	0.808	0.142	0.96	Yes	1.00	**2.93**
		U_{14} - U_{15}			-----	-1370.63	-407	-292	-1336	-604	41	-277	-123	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.199	1	Yes	0.786	0.147	0.94	Yes	1.00	**2.67**
		U_{15} - U_{16}			-----	-1438.24	-197	-467	-850	-724	-114	-428	-319	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.165	1	Yes	0.825	0.094	0.92	Yes	1.00	**3.12**
		U_{16} - U_{17}			-----	-1406.84	-381	-194	-1237	-628	-33	-240	-214	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1	Yes	0.807	0.137	0.95	Yes	1.00	**3.86**
		U_{17} - U_{18}			-----	-1059.24	-252	-61	-886	47	-116	71	-212	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.152	1	Yes	0.829	0.144	0.98	Yes	1.00	**3.66**
		U_{18} - U_{19}			-----	-738.74	-240	10	-763	101	363	-139	83	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.154	1	Yes	0.831	0.154	0.99	Yes	1.00	**3.97**
		U_{19} - U_{20}			-----	-656.34	-166	-107	-1287	550	-62	-104	-182	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.221	0.97	Yes	0.738	0.259	1.00	Yes	1.00	**11.72**
	Structure 2	U_0 - U_1			-----	-556.82	1967	-1677	-1146	-553	943	-318	1643	-492	-----	-----	-----	-----	-----	-----	-----	-----	0.662	0.272	0.94	Yes	0.658	0.334	1.00	Yes	1.00	**9.92**
		U_1 - U_2			-----	-821.38	-72	-453	-389	-1051	138	129	471	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.193	1	Yes	0.793	0.159	0.96	Yes	1.00	**3.81**
		U_2 - U_3			-----	-1194.54	25	-1019	-510	-1108	-38	-571	518	-601	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.141	1	Yes	0.848	0.113	0.97	Yes	1.00	**4.25**
		U_3 - U_4			-----	-1401.09	-520	-505	-1363	-1303	-126	-29	413	-367	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.192	1	Yes	0.798	0.121	0.92	Yes	1.00	**3.80**
		U_4 - U_5			-----	-1517.65	-579	-547	-1477	-1531	-125	-82	139	-617	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.210	1	Yes	0.779	0.127	0.91	Yes	1.00	**3.10**
		U_5 - U_6			-----	-1556.30	-571	-2	-1575	-1010	-196	-48	-81	-529	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1	Yes	0.799	0.131	0.93	Yes	1.00	**3.22**
		U_6 - U_7			-----	-1395.55	-310	-200	-1398	-1164	-172	-92	27	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.195	1	Yes	0.795	0.125	0.92	Yes	1.00	**3.31**
		U_7 - U_8			-----	-1378.27	-339	-192	-1506	-988	-80	-180	-328	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.204	1	Yes	0.785	0.134	0.92	Yes	1.00	**3.32**
		U_8 - U_9			-----	-1180.95	-352	211	-1371	-300	-20	-197	-443	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.184	1	Yes	0.801	0.146	0.95	Yes	1.00	**3.63**
		U_9 - U_{10}			294.21	-903.69	-83	535	-1520	15	-124	-239	-601	-621	0.216	0.252	0.47	Yes	0.146	0.171	0.32	Yes	0.784	0.212	1	Yes	0.780	0.185	0.97	Yes	1.00	**4.60**
		U_{10} - U_{11}			836.32	-620.77	352	614	-1348	5	-191	-100	-830	-488	0.706	0.291	1.00	Yes	0.481	0.191	0.68	Yes	0.621	0.243	0.87	Yes	0.617	0.190	0.81	Yes	1.00	**6.76**
		U_{11} - U_{12}			943.03	-----	202	655	-968	445	35	39	-496	-484	0.797	0.197	1.00	Yes	0.535	0.131	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		U_{12} - U_{13}			1254.21	-----	456	59	-628	-213	296	417	-742	-90	0.847	0.150	1.00	Yes	0.604	0.103	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		U_{13} - U_{14}			1008.55	-----	135	1633	-1829	4065	1407	1744	151	861	0.496	0.495	1.00	Yes	0.351	0.326	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.86**
		U_{14} - U_{15}			1039.00	-----	4372	-1651	1597	-141	712	-102	612	1232	0.511	0.489	1.00	Yes	0.362	0.321	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		U_{15} - U_{16}			1261.01	-----	287	-3	-1125	-405	505	165	1189	7	0.762	0.228	1.00	Yes	0.542	0.156	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.11**
		U_{16} - U_{17}			673.91	-668.84	1913	-1429	-589	-2222	179	-723	1719	-2063	0.497	0.496	1.00	Yes	0.330	0.326	0.66	Yes	0.583	0.291	0.88	Yes	0.580	0.279	0.86	Yes	1.00	**17.58**
		U_{17} - U_{18}			809.47	-246.66	516	292	-104	-639	-62	303	521	-262	0.813	0.185	1.00	Yes	0.541	0.122	0.67	Yes	0.293	0.148	0.45	Yes	0.291	0.109	0.40	Yes	1.00	**5.63**
		U_{18} - U_{19}			693.14	-698.82	671	220	-515	-667	1	184	970	-602	0.696	0.256	0.96	Yes	0.456	0.165	0.63	Yes	0.830	0.163	1	Yes	0.825	0.114	0.94	Yes	1.00	**6.84**
		U_{19} - U_{20}			253.54	-743.71	282	115	-506	-867	-55	137	383	-360	0.238	0.190	0.43	Yes	0.158	0.125	0.29	Yes	0.826	0.168	1	Yes	0.821	0.139	0.96	Yes	1.00	**4.09**
		U_{20} - U_{21}			133.25	-884.60	145	-126	-842	-478	-4	24	334	-507	0.103	0.177	0.29	Yes	0.072	0.116	0.19	Yes	0.813	0.186	1	Yes	0.807	0.122	0.93	Yes	1.00	**4.40**
		U_{21} - U_{22}			71.96	-838.82	-77	-31	-821	-987	-189	-102	112	-245	0.056	0.170	0.23	Yes	0.040	0.114	0.16	Yes	0.771	0.225	1	Yes	0.766	0.143	0.91	Yes	1.00	**3.54**
		U_{22} - U_{23}			61.50	-834.23	-30	-92	-1142	-731	-42	-159	-176	-80	0.048	0.185	0.24	Yes	0.034	0.123	0.16	Yes	0.767	0.233	1	Yes	0.761	0.165	0.93	Yes	1.00	**3.57**
		U_{23} - U_{24}			80.90	-861.74	47	-65	-904	-343	0	-86	-473	-201	0.063	0.183	0.25	Yes	0.044	0.120	0.17	Yes	0.792	0.198	1	Yes	0.786	0.131	0.92	Yes	1.00	**4.21**
		U_{24} - U_{25}			311.04	-720.75	187	328	-1022	-123	-12	-80	-407	-246	0.292	0.219	0.52	Yes	0.193	0.143	0.34	Yes	0.800	0.199	1	Yes	0.795	0.164	0.96	Yes	1.00	**4.59**
		U_{25} - U_{26}			672.15	-597.98	214	652	-1176	-36	17	-47	-771	-203	0.675	0.312	0.99	Yes	0.443	0.200	0.65	Yes	0.711	0.285	1	Yes	0.706	0.200	0.91	Yes	1.00	**6.71**
		U_{26} - U_{27}			759.07	-96.76	292	471	-815	277	-47	12	-649	-178	0.762	0.233	1.00	Yes	0.507	0.154	0.67	Yes	0.115	0.225	0.34	Yes	0.114	0.138	0.26	Yes	1.00	**5.28**
		U_{27} - U_{28}			1079.01	-----	219	698	-1146	764	237	256	-545	-516	0.795	0.201	1.00	Yes	0.529	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		U_{28} - U_{29}			1103.72	-----	1224	359	-1581	-131	520	1809	-962	178	0.667	0.333	1.00	Yes	0.475	0.228	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.20**
		U_{29} - U_{30}			915.88	-----	437	1131	-1798	4220	1853	2221	-107	966	0.450	0.542	1.00	Yes	0.319	0.358	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.89**
		U_{30} - U_{31}			999.02	-----	4455	-1650	1730	-444	1030	-9	1008	1318	0.491	0.502	1.00	Yes	0.348	0.330	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		U_{31} - U_{32}			1231.31	-----	110	376	-782	-839	185	387	612	-601	0.831	0.164	1.00	Yes	0.593	0.112	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		U_{32} - U_{33}			-----	-791.18	1156	-1318	-266	-1474	356	-899	1714	-1622	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.179	0.98	Yes	0.786	0.208	1.00	Yes	1.00	**15.55**
		U_{33} - U_{34}			796.97	-787.71	575	274	-467	-928	-37	256	1121	-262	0.673	0.268	0.95	Yes	0.458	0.178	0.64	Yes	0.788	0.206	1	Yes	0.783	0.131	0.92	Yes	1.00	**7.19**
		U_{34} - U_{35}			122.31	-990.04	405	-177	-305	-1169	43	48	517	-505	0.090	0.198	0.29	Yes	0.061	0.134	0.20	Yes	0.859	0.140	1	Yes	0.854	0.142	1.00	Yes	1.00	**3.99**
		U_{35} - U_{36}			-----	-1236.25	126	-445	-577	-1110	-18	99	455	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.148	1	Yes	0.838	0.118	0.96	Yes	1.00	**3.51**
		U_{36} - U_{37}			-----	-1451.82	-260	-286	-1198	-1004	-20	-114	549	-309	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.163	1	Yes	0.827	0.107	0.94	Yes	1.00	**3.47**
		U_{37} - U_{38}			-----	-1422.23	-200	-425	-1232	-1235	-95	-198	-235	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.177	1	Yes	0.810	0.110	0.92	Yes	1.00	**2.94**
		U_{38} - U_{39}			-----	-1592.56	-162	-632	-1168	-1290	8	-210	-405	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.172	1	Yes	0.818	0.107	0.93	Yes	1.00	**3.08**
		U_{39} - U_{40}			-----	-1530.15	-609	-565	-1799	-929	14	-84	-302	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.205	1	Yes	0.786	0.149	0.94	Yes	1.00	**3.05**
		U_{40} - U_{41}			-----	-1386.45	-511	-489	-1615	-1111	87	-161	13	14	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.200	1	Yes	0.789	0.144	0.94	Yes	1.00	**3.50**
		U_{41} - U_{42}			-----	-1185.65	-413	-131	-1359	-123	64	-30	-157	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.146	1	Yes	0.841	0.138	0.98	Yes	1.00	**4.34**
		U_{42} - U_{43}			-----	-839.30	-275	-27	-1170	24	209	-195	-20	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.180	1	Yes	0.810	0.178	0.99	Yes	1.00	**4.93**
		U_{43} - U_{44}			-----	-642.68	-168	-231	-1399	558	-124	-129	-220	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.218	0.99	Yes	0.759	0.237	1.00	Yes	1.00	**10.09**
	Structure 3	U_0 - U_1			-----	-573.40	1756	-1406	-941	-596	892	-553	1581	-662	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.298	0.95	Yes	0.645	0.353	1.00	Yes	1.00	**9.97**
		U_1 - U_2			-----	-727.46	-4	-588	-206	-698	69	-227	449	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.168	1	Yes	0.818	0.141	0.96	Yes	1.00	**3.45**
		U_2 - U_3			-----	-1080.76	126	-543	-232	-545	-22	-644	503	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.142	1	Yes	0.846	0.089	0.94	Yes	1.00	**3.96**
		U_3 - U_4			-----	-1429.56	-204	-379	-747	-1081	-183	-177	376	-422	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.168	1	Yes	0.820	0.119	0.94	Yes	1.00	**4.27**
		U_4 - U_5			-----	-1423.52	-427	-154	-1172	-387	-106	-51	419	-565	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.167	1	Yes	0.816	0.129	0.95	Yes	1.00	**3.61**
		U_5 - U_6			-----	-1379.35	-252	-371	-838	-1194	-186	-147	111	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.192	1	Yes	0.791	0.132	0.93	Yes	1.00	**3.10**
		U_6 - U_7			-----	-1365.74	-495	-156	-1431	-473	-121	-302	-262	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1	Yes	0.783	0.158	0.95	Yes	1.00	**3.03**
		U_7 - U_8			-----	-1214.35	-235	34	-851	-181	-109	-317	-521	-528	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.170	1	Yes	0.811	0.117	0.93	Yes	1.00	**3.39**
		U_8 - U_9			-----	-885.95	-123	266	-804	76	-216	-185	-428	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.159	1	Yes	0.831	0.133	0.97	Yes	1.00	**3.61**
		U_9 - U_{10}			311.50	-602.14	-50	386	-1002	220	5	4	-309	-405	0.338	0.290	0.63	Yes	0.225	0.186	0.42	Yes	0.775	0.208	0.99	Yes	0.768	0.225	1.00	Yes	1.00	**5.56**
		U_{10} - U_{11}			713.24	-120.20	328	249	-523	161	99	173	-627	-190	0.774	0.218	1.00	Yes	0.524	0.146	0.68	Yes	0.155	0.242	0.4	Yes	0.153	0.117	0.28	Yes	1.00	**6.86**
		U_{11} - U_{12}			625.62	-----	81	730	-1283	1999	1157	1099	-89	407	0.513	0.477	1.00	Yes	0.351	0.325	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.39**
		U_{12} - U_{13}			657.34	-----	2928	-1587	787	-135	82	-925	593	693	0.455	0.538	1.00	Yes	0.318	0.367	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		U_{13} - U_{14}			839.95	-----	223	359	-252	-73	-107	376	838	-111	0.803	0.192	1.00	Yes	0.561	0.132	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		U_{14} - U_{15}			630.44	-436.83	453	224	4	-610	-61	257	639	-760	0.723	0.273	1.00	Yes	0.487	0.181	0.67	Yes	0.594	0.175	0.77	Yes	0.589	0.145	0.74	Yes	1.00	**5.39**
		U_{15} - U_{16}			341.59	-575.87	295	143	-358	-527	-74	216	528	-21	0.392	0.215	0.61	Yes	0.269	0.147	0.42	Yes	0.784	0.212	1	Yes	0.777	0.125	0.91	Yes	1.00	**4.53**
		U_{16} - U_{17}			288.12	-580.23	312	30	-583	-389	175	-72	156	-80	0.330	0.168	0.50	Yes	0.227	0.115	0.35	Yes	0.790	0.202	1	Yes	0.782	0.139	0.93	Yes	1.00	**3.92**
		U_{17} - U_{18}			84.19	-618.18	219	-174	-465	-427	70	35	22	-216	0.096	0.147	0.25	Yes	0.065	0.096	0.17	Yes	0.841	0.158	1	Yes	0.834	0.111	0.95	Yes	1.00	**3.47**
		U_{18} - U_{19}			-----	-584.62	22	-70	-761	-144	206	-197	-40	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.197	1	Yes	0.788	0.181	0.97	Yes	1.00	**3.93**
		U_{19} - U_{20}			7.12	-510.10	87	-293	-625	-347	-148	-110	555	-54	0.008	0.242	0.26	Yes	0.006	0.166	0.18	Yes	0.694	0.298	1	Yes	0.688	0.149	0.84	Yes	1.00	**6.77**

Moment (Start) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1	19.81	-26.24	689	-1056	-177	40	-825	-3034	57	209	0.030	0.968	1.00	Yes	0.018	0.572	0.60	Yes	0.048	0.691	0.74	Yes	0.047	0.317	0.37	Yes	1.00	**10.90**
		L_1 - L_2	349.13	-----	169	-686	-202	-532	-198	314	-1202	342	0.534	0.464	1.00	Yes	0.326	0.298	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		L_2 - L_3	639.97	-108.77	-37	66	-778	-468	-188	130	462	-226	0.736	0.262	1.00	Yes	0.426	0.156	0.59	Yes	0.149	0.231	0.39	Yes	0.147	0.188	0.34	Yes	1.00	**3.85**
		L_3 - L_4	607.51	-240.59	3	296	-632	-279	297	-239	-862	-12	0.699	0.291	1.00	Yes	0.415	0.182	0.60	Yes	0.329	0.261	0.59	Yes	0.326	0.153	0.48	Yes	1.00	**3.82**
		L_4 - L_5	78.27	-557.24	102	466	-550	288	-73	202	181	-177	0.101	0.181	0.29	Yes	0.061	0.118	0.18	Yes	0.857	0.133	1	Yes	0.849	0.146	1.00	Yes	1.00	**3.07**
		L_5 - L_6	-----	-746.79	124	589	-230	418	163	-236	-24	0	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.127	1	Yes	0.862	0.130	1.00	Yes	1.00	**2.97**
		L_6 - L_7	-----	-1161.64	235	-19	-345	22	-199	405	43	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.946	0.053	1	Yes	0.935	0.054	0.99	Yes	1.00	**4.57**
		L_7 - L_8	-----	-1167.41	26	546	-381	1587	684	260	-558	27	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.250	1	Yes	0.739	0.210	0.95	Yes	1.00	**5.76**
		L_8 - L_9	-----	-1266.15	1124	-82	652	-33	470	396	197	394	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.802	0.149	0.96	Yes	1.00	**2.98**
		L_9 - L_{10}	-----	-1010.49	1025	-1153	-131	-333	560	976	-539	40	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.123	0.95	Yes	0.813	0.181	1.00	Yes	1.00	**9.79**
		L_{10} - L_{11}	192.04	-552.51	505	-50	-17	-595	-285	43	199	-530	0.249	0.250	0.50	Yes	0.145	0.149	0.30	Yes	0.849	0.131	0.99	Yes	0.842	0.158	1.00	Yes	1.00	**5.89**
		L_{11} - L_{12}	497.20	-----	361	-652	75	-606	-134	274	-1040	223	0.644	0.355	1.00	Yes	0.386	0.224	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		L_{12} - L_{13}	1076.85	-----	80	-144	-505	-561	-165	118	385	-145	0.850	0.145	1.00	Yes	0.544	0.087	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		L_{13} - L_{14}	1284.88	-----	291	-1437	-274	-1151	-78	290	-533	251	0.756	0.242	1.00	Yes	0.490	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		L_{14} - L_{15}	1539.94	-----	-489	-170	-1818	-258	-184	92	317	101	0.752	0.241	1.00	Yes	0.489	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		L_{15} - L_{16}	1602.39	-----	-281	-439	-1191	-1240	-4	-186	-888	36	0.783	0.212	1.00	Yes	0.503	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		L_{16} - L_{17}	1225.05	-----	-420	54	-1300	-27	-127	171	186	-388	0.775	0.225	1.00	Yes	0.503	0.139	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		L_{17} - L_{18}	875.85	-----	-225	-16	-775	5	84	-113	-673	-177	0.763	0.235	1.00	Yes	0.488	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.58**
		L_{18} - L_{19}	409.58	-----	-245	228	-981	549	-160	110	335	232	0.627	0.364	1.00	Yes	0.424	0.229	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		L_{19} - L_{20}	39.26	-327.16	-174	73	-1251	796	130	29	110	25	0.060	0.402	0.47	Yes	0.037	0.272	0.31	Yes	0.594	0.402	1	Yes	0.589	0.375	0.97	Yes	1.00	**12.00**
	Structure 2	L_0 - L_1	54.40	-129.48	701	-2205	-79	-93	-837	-2907	38	133	0.066	0.926	1.00	Yes	0.039	0.575	0.62	Yes	0.186	0.664	0.86	Yes	0.185	0.449	0.64	Yes	1.00	**14.53**
		L_1 - L_2	435.13	-----	621	-1306	92	-953	-105	618	-1196	411	0.528	0.462	1.00	Yes	0.314	0.289	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.39**
		L_2 - L_3	1021.25	-----	193	-749	-374	-909	-51	124	544	-264	0.805	0.189	1.00	Yes	0.528	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		L_3 - L_4	1275.12	-----	127	-1208	-383	-1407	0	501	-1046	295	0.749	0.248	1.00	Yes	0.504	0.157	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		L_4 - L_5	1699.36	-----	-429	-426	-1550	-1210	-58	176	793	5	0.792	0.200	1.00	Yes	0.524	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		L_5 - L_6	1807.62	-----	-219	-494	-1170	-1815	193	-93	-936	96	0.776	0.219	1.00	Yes	0.521	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		L_6 - L_7	1836.04	-----	-569	-209	-2238	-1058	-161	219	284	-314	0.777	0.216	1.00	Yes	0.516	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_7 - L_8	1321.93	-9.80	-303	381	-1513	-582	217	-143	-844	135	0.758	0.236	1.00	Yes	0.498	0.142	0.65	Yes	0.007	0.208	0.22	Yes	0.007	0.167	0.18	Yes	1.00	**4.23**
		L_8 - L_9	1060.90	-379.16	-96	590	-1285	242	-88	184	193	-826	0.742	0.251	1.00	Yes	0.500	0.159	0.66	Yes	0.314	0.155	0.47	Yes	0.312	0.173	0.49	Yes	1.00	**5.04**
		L_9 - L_{10}	556.56	-765.44	-124	837	-1194	366	146	-154	-714	30	0.497	0.277	0.78	Yes	0.289	0.170	0.46	Yes	0.809	0.134	0.95	Yes	0.804	0.191	1.00	Yes	1.00	**5.77**
		L_{10} - L_{11}	-----	-736.65	13	563	-715	548	-83	84	255	33	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.089	0.97	Yes	0.865	0.125	1.00	Yes	1.00	**3.47**
		L_{11} - L_{12}	-----	-1027.06	-74	1096	-598	759	66	-364	-165	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.126	0.98	Yes	0.842	0.149	1.00	Yes	1.00	**3.76**
		L_{12} - L_{13}	-----	-1508.32	238	-795	-751	-613	-391	152	288	74	-----	-----	-----	-----	-----	-----	-----	-----	0.910	0.083	1	Yes	0.902	0.079	0.99	Yes	1.00	**5.64**
		L_{13} - L_{14}	-----	-1390.99	-354	1200	-1823	3350	922	731	-945	-450	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.257	0.97	Yes	0.700	0.293	1.00	Yes	1.00	**6.48**
		L_{14} - L_{15}	-----	-1504.42	2741	-850	1484	-451	324	261	435	392	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.190	0.96	Yes	0.757	0.239	1.00	Yes	1.00	**3.81**
		L_{15} - L_{16}	-----	-1199.35	55	-35	-1799	-1028	651	-347	-1414	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.270	1	Yes	0.717	0.179	0.90	Yes	1.00	**9.31**
		L_{16} - L_{17}	-----	-1167.31	1204	-353	557	-429	-364	-60	306	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.131	0.99	Yes	0.850	0.148	1.00	Yes	1.00	**4.82**
		L_{17} - L_{18}	137.80	-654.54	1389	-1918	16	-1017	-120	1583	-1239	506	0.123	0.497	0.63	Yes	0.072	0.303	0.38	Yes	0.692	0.245	0.94	Yes	0.687	0.307	1.00	Yes	1.00	**11.78**
		L_{18} - L_{19}	228.20	-639.97	717	34	-150	-566	-211	60	352	-313	0.259	0.192	0.46	Yes	0.149	0.114	0.27	Yes	0.858	0.117	0.98	Yes	0.853	0.138	1.00	Yes	1.00	**4.80**
		L_{19} - L_{20}	620.98	-507.76	532	154	-190	-858	151	-181	-832	388	0.703	0.293	1.00	Yes	0.416	0.182	0.60	Yes	0.681	0.125	0.81	Yes	0.677	0.166	0.85	Yes	1.00	**5.96**
		L_{20} - L_{21}	996.62	-295.40	413	-75	-991	-1023	-186	69	502	-385	0.795	0.203	1.00	Yes	0.521	0.123	0.65	Yes	0.279	0.185	0.47	Yes	0.277	0.149	0.43	Yes	1.00	**5.74**
		L_{21} - L_{22}	884.90	-50.41	110	-290	-811	-1245	136	-103	-988	107	0.706	0.288	1.00	Yes	0.472	0.184	0.66	Yes	0.048	0.257	0.31	Yes	0.047	0.182	0.23	Yes	1.00	**4.20**
		L_{22} - L_{23}	859.25	-----	-215	-41	-1831	-579	-116	160	21	-384	0.685	0.309	1.00	Yes	0.458	0.194	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		L_{23} - L_{24}	891.28	-340.09	-56	465	-1240	-691	163	-139	-943	-3	0.711	0.283	1.00	Yes	0.466	0.173	0.64	Yes	0.321	0.257	0.58	Yes	0.319	0.181	0.51	Yes	1.00	**6.08**
		L_{24} - L_{25}	549.30	-559.65	205	530	-1160	67	-105	150	277	-953	0.622	0.370	1.00	Yes	0.368	0.230	0.60	Yes	0.750	0.206	0.96	Yes	0.746	0.224	0.97	Yes	1.00	**6.45**
		L_{25} - L_{26}	45.98	-641.96	29	728	-663	221	102	-166	-488	40	0.052	0.215	0.27	Yes	0.030	0.127	0.16	Yes	0.861	0.131	1	Yes	0.856	0.141	1.00	Yes	1.00	**4.77**
		L_{26} - L_{27}	-----	-833.10	193	497	-726	483	-50	222	256	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.109	0.99	Yes	0.875	0.116	1.00	Yes	1.00	**4.72**
		L_{27} - L_{28}	-----	-1143.78	77	1335	-736	1028	240	-17	-285	128	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.139	0.98	Yes	0.833	0.165	1.00	Yes	1.00	**6.28**
		L_{28} - L_{29}	-----	-1452.44	459	-630	-755	-1083	-78	840	120	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.118	1	Yes	0.869	0.108	0.98	Yes	1.00	**7.07**
		L_{29} - L_{30}	-----	-1409.89	-501	1268	-1814	3294	906	935	-580	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.246	0.97	Yes	0.709	0.288	1.00	Yes	1.00	**6.15**
		L_{30} - L_{31}	-----	-1521.59	2588	-825	1659	-473	253	207	584	511	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.193	0.97	Yes	0.766	0.226	1.00	Yes	1.00	**2.99**
		L_{31} - L_{32}	-----	-1266.55	134	-385	-1576	-969	809	-391	-889	15	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.233	1	Yes	0.758	0.157	0.92	Yes	1.00	**9.50**
		L_{32} - L_{33}	-----	-1048.24	1003	-451	515	-569	-111	52	207	-310	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.104	0.98	Yes	0.860	0.137	1.00	Yes	1.00	**3.85**
		L_{33} - L_{34}	331.76	-614.66	1213	-1588	97	-1462	-142	1463	-2734	810	0.331	0.646	0.98	Yes	0.194	0.392	0.59	Yes	0.727	0.197	0.93	Yes	0.722	0.278	1.00	Yes	1.00	**11.56**
		L_{34} - L_{35}	622.02	-754.08	838	-100	-241	-944	-217	96	932	-50	0.555	0.263	0.82	Yes	0.323	0.160	0.49	Yes	0.797	0.202	1	Yes	0.792	0.151	0.95	Yes	1.00	**7.04**
		L_{35} - L_{36}	967.99	-----	574	-1210	-62	-1203	-136	653	-1656	319	0.677	0.319	1.00	Yes	0.456	0.205	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		L_{36} - L_{37}	1392.52	-----	316	-248	-960	-1384	-207	150	551	-234	0.798	0.198	1.00	Yes	0.524	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		L_{37} - L_{38}	1790.58	-----	-138	-637	-1760	-2006	66	-198	-937	475	0.758	0.234	1.00	Yes	0.504	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		L_{38} - L_{39}	1758.29	-----	-584	-232	-2175	-1089	-117	182	40	-772	0.754	0.241	1.00	Yes	0.506	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		L_{39} - L_{40}	1727.59	-----	-402	-429	-1629	-1163	117	-163	-478	322	0.805	0.186	1.00	Yes	0.533	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_{40} - L_{41}	1307.17	-----	-463	28	-1683	-155	-44	273	270	-384	0.768	0.228	1.00	Yes	0.517	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_{41} - L_{42}	961.28	-----	-252	-62	-1132	-93	140	-74	-704	-31	0.758	0.239	1.00	Yes	0.497	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		L_{42} - L_{43}	516.64	-----	-275	214	-1312	557	127	346	635	335	0.627	0.371	1.00	Yes	0.373	0.235	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.43**
		L_{43} - L_{44}	-----	-332.31	-156	1	-2071	782	522	153	120	35	-----	-----	-----	-----	-----	-----	-----	-----	0.478	0.517	1	Yes	0.475	0.421	0.90	Yes	1.00	**16.73**
	Structure 3	L_0 - L_1	-----	-337.60	610	-1108	20	-133	-294	-1332	25	115	-----	-----	-----	-----	-----	-----	-----	-----	0.613	0.381	1	Yes	0.608	0.333	0.95	Yes	1.00	**8.89**
		L_1 - L_2	315.65	-----	674	-1002	139	-674	-19	745	-1022	467	0.483	0.513	1.00	Yes	0.327	0.330	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.19**
		L_2 - L_3	877.09	-----	256	-725	-221	-649	165	-253	714	-112	0.764	0.231	1.00	Yes	0.489	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		L_3 - L_4	1147.91	-----	238	-1145	-223	-1172	17	704	-1046	424	0.726	0.265	1.00	Yes	0.471	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_4 - L_5	1602.01	-----	-372	-259	-1382	-869	-32	231	599	-191	0.783	0.209	1.00	Yes	0.502	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		L_5 - L_6	1615.41	-----	-135	-462	-758	-1365	264	-69	-537	343	0.789	0.202	1.00	Yes	0.513	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		L_6 - L_7	1267.37	-----	-485	244	-1625	252	-53	272	351	-146	0.745	0.253	1.00	Yes	0.483	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		L_7 - L_8	983.13	-38.95	-97	173	-734	-350	143	-169	-743	24	0.776	0.217	1.00	Yes	0.496	0.132	0.63	Yes	0.037	0.208	0.25	Yes	0.036	0.130	0.17	Yes	1.00	**5.10**
		L_8 - L_9	529.27	-345.93	-150	453	-864	443	-109	163	478	221	0.685	0.312	1.00	Yes	0.411	0.202	0.62	Yes	0.532	0.167	0.7	Yes	0.527	0.229	0.76	Yes	1.00	**5.61**
		L_9 - L_{10}	-----	-560.50	-65	516	-529	310	145	-153	-25	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.083	0.95	Yes	0.854	0.140	1.00	Yes	1.00	**4.55**
		L_{10} - L_{11}	-----	-1107.87	186	-33	-678	298	-331	-88	555	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.053	0.96	Yes	0.892	0.107	1.00	Yes	1.00	**7.50**
		L_{11} - L_{12}	-----	-1157.33	41	695	-465	1517	867	268	-1113	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.254	1	Yes	0.733	0.201	0.94	Yes	1.00	**7.35**
		L_{12} - L_{13}	-----	-1261.59	1476	-230	669	-5	215	-278	4	356	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.189	1	Yes	0.799	0.195	1.00	Yes	1.00	**4.39**
		L_{13} - L_{14}	-----	-1078.47	665	-789	-312	-200	173	524	-575	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.087	0.97	Yes	0.868	0.124	1.00	Yes	1.00	**7.94**
		L_{14} - L_{15}	-----	-733.02	575	112	91	-346	-263	84	196	-467	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.138	1	Yes	0.846	0.127	0.98	Yes	1.00	**3.99**
		L_{15} - L_{16}	268.90	-492.79	450	99	66	-596	251	-203	-1163	375	0.348	0.365	0.72	Yes	0.209	0.229	0.44	Yes	0.758	0.235	1	Yes	0.751	0.158	0.91	Yes	1.00	**3.78**
		L_{16} - L_{17}	657.06	-154.55	280	-63	-734	-334	-172	191	362	189	0.756	0.236	1.00	Yes	0.449	0.151	0.60	Yes	0.211	0.218	0.43	Yes	0.209	0.177	0.39	Yes	1.00	**4.24**
		L_{17} - L_{18}	652.38	-34.39	11	-109	-719	-593	112	-113	-436	287	0.751	0.244	1.00	Yes	0.434	0.145	0.58	Yes	0.047	0.228	0.28	Yes	0.047	0.174	0.23	Yes	1.00	**4.40**
		L_{18} - L_{19}	434.11	-2.89	-29	-20	-781	86	-104	206	452	137	0.664	0.331	1.00	Yes	0.405	0.219	0.63	Yes	0.005	0.201	0.21	Yes	0.005	0.234	0.24	Yes	1.00	**5.32**
		L_{19} - L_{20}	66.53	-85.29	195	-306	-2099	1623	135	37	-1204	-328	0.102	0.888	1.00	Yes	0.060	0.538	0.60	Yes	0.155	0.776	0.94	Yes	0.154	0.630	0.79	Yes	1.00	**28.90**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-283.72	-8	56	-107	164	169	54	-1003	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.361	1	Yes	0.600	0.210	0.82	Yes	1.00	**1.46**
		$U_1 - L_1$	34.32	-318.96	39	-31	-253	238	586	205	-302	-56	0.062	0.493	0.56	Yes	0.034	0.271	0.31	Yes	0.697	0.239	0.94	Yes	0.675	0.323	1.00	Yes	1.00	**4.39**
		$U_2 - L_2$	142.71	-282.50	127	-141	-221	270	852	228	-970	-306	0.257	0.626	0.89	Yes	0.141	0.345	0.49	Yes	0.617	0.374	1	Yes	0.598	0.345	0.95	Yes	1.00	**7.31**
		$U_3 - L_3$	185.54	-132.23	226	-218	-76	103	-1187	-741	-1284	-285	0.334	0.661	1.00	Yes	0.184	0.363	0.55	Yes	0.290	0.331	0.63	Yes	0.280	0.289	0.57	Yes	1.00	**7.79**
		$U_4 - L_4$	-----	-186.66	309	-307	18	-28	-1457	-741	961	217	-----	-----	-----	-----	-----	-----	-----	-----	0.410	0.582	1	Yes	0.395	0.395	0.79	Yes	1.00	**8.19**
		$U_5 - L_5$	-----	-395.41	198	-225	73	-88	20	196	862	289	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.277	1	Yes	0.682	0.228	0.92	Yes	1.00	**3.59**
		$U_6 - L_6$	-----	-419.24	219	-225	75	-64	905	440	1474	733	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.365	1	Yes	0.601	0.197	0.80	Yes	1.00	**3.37**
		$U_7 - L_7$	-----	-383.39	262	-281	102	-115	621	195	1232	307	-----	-----	-----	-----	-----	-----	-----	-----	0.641	0.354	1	Yes	0.591	0.276	0.87	Yes	1.00	**2.91**
		$U_8 - L_8$	-----	-1200.38	223	-272	-403	479	-51	-96	-1293	-589	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.130	1	Yes	0.832	0.089	0.93	Yes	1.00	**5.59**
		$U_9 - L_9$	-----	-660.92	-228	259	-405	450	624	238	-616	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.181	0.97	Yes	0.747	0.250	1.00	Yes	1.00	**2.74**
		$U_{10} - L_{10}$	-----	-798.13	-157	154	-378	405	630	287	-300	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.171	1	Yes	0.788	0.210	1.00	Yes	1.00	**4.50**
		$U_{11} - L_{11}$	-----	-661.59	-165	221	-377	485	613	381	-295	128	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.176	0.97	Yes	0.770	0.225	1.00	Yes	1.00	**4.08**
		$U_{12} - L_{12}$	-----	-525.51	-127	140	-316	324	-8	138	-77	153	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.111	0.88	Yes	0.721	0.277	1.00	Yes	1.00	**4.51**
		$U_{13} - L_{13}$	-----	-369.43	-63	87	-226	253	-121	-30	43	187	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.148	0.9	Yes	0.708	0.289	1.00	Yes	1.00	**3.91**
		$U_{14} - L_{14}$	-----	-164.20	102	-105	-270	293	-1048	-422	464	-232	-----	-----	-----	-----	-----	-----	-----	-----	0.366	0.631	1	Yes	0.347	0.375	0.73	Yes	1.00	**9.18**
		$U_{15} - L_{15}$	63.94	-306.13	248	-268	-53	46	-757	-179	395	-185	0.115	0.562	0.68	Yes	0.063	0.309	0.38	Yes	0.686	0.281	0.97	Yes	0.648	0.343	1.00	Yes	1.00	**6.12**
		$U_{16} - L_{16}$	-----	-318.13	245	-252	44	-49	-34	-22	474	106	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.218	0.94	Yes	0.673	0.323	1.00	Yes	1.00	**4.25**
		$U_{17} - L_{17}$	-----	-418.85	205	-223	79	-92	198	109	504	199	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.210	1	Yes	0.723	0.226	0.95	Yes	1.00	**2.97**
		$U_{18} - L_{18}$	-----	-528.16	447	-455	171	-177	216	-4	677	171	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.183	0.96	Yes	0.735	0.258	1.00	Yes	1.00	**4.10**
		$U_{19} - L_{19}$	-----	-648.44	496	-513	178	-192	206	39	584	112	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.156	0.97	Yes	0.755	0.238	1.00	Yes	1.00	**4.91**
		$U_{20} - L_{20}$	-----	-610.21	465	-550	233	-279	121	16	451	59	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.188	1	Yes	0.710	0.255	0.97	Yes	1.00	**4.35**
	Structure 2	$U_0 - L_0$	-----	-608.12	-157	275	-317	452	-16	-3	-1213	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.265	1	Yes	0.652	0.192	0.85	Yes	1.00	**1.91**
		$U_1 - L_1$	-----	-711.48	-205	212	-548	548	629	161	-27	52	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.146	0.96	Yes	0.762	0.233	1.00	Yes	1.00	**3.74**
		$U_2 - L_2$	-----	-593.05	-152	168	-455	471	624	284	41	239	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.176	0.98	Yes	0.756	0.241	1.00	Yes	1.00	**3.39**
		$U_3 - L_3$	-----	-461.05	-75	86	-215	232	546	265	-47	212	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.211	0.94	Yes	1.00	**2.80**
		$U_4 - L_4$	-----	-323.37	-16	26	-198	206	568	234	-32	168	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.259	1	Yes	0.684	0.263	0.95	Yes	1.00	**3.91**
		$U_5 - L_5$	75.18	-318.72	94	-68	-208	234	-485	-285	-453	66	0.135	0.439	0.58	Yes	0.074	0.242	0.32	Yes	0.720	0.273	1	Yes	0.674	0.299	0.98	Yes	1.00	**6.69**
		$U_6 - L_6$	308.28	-89.31	183	-187	-106	115	-504	-232	-697	-64	0.554	0.440	1.00	Yes	0.305	0.242	0.55	Yes	0.201	0.236	0.44	Yes	0.189	0.239	0.43	Yes	1.00	**6.74**
		$U_7 - L_7$	-----	-188.57	381	-427	-12	10	-1740	-927	-294	-478	-----	-----	-----	-----	-----	-----	-----	-----	0.426	0.570	1	Yes	0.399	0.546	0.95	Yes	1.00	**11.91**
		$U_8 - L_8$	-----	-473.47	336	-361	148	-170	-15	-3	416	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.149	0.84	Yes	0.682	0.316	1.00	Yes	1.00	**3.52**
		$U_9 - L_9$	-----	-693.86	586	-596	267	-281	-62	113	673	186	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.148	0.93	Yes	0.744	0.253	1.00	Yes	1.00	**4.53**
		$U_{10} - L_{10}$	-----	-745.81	509	-531	233	-233	-9	216	1179	694	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.256	1	Yes	0.697	0.235	0.94	Yes	1.00	**4.39**
		$U_{11} - L_{11}$	-----	-733.67	459	-462	226	-220	526	492	1187	668	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.259	1	Yes	0.686	0.204	0.90	Yes	1.00	**3.64**
		$U_{12} - L_{12}$	-----	-720.98	417	-410	186	-168	1012	506	1490	653	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.306	1	Yes	0.625	0.179	0.81	Yes	1.00	**3.58**
		$U_{13} - L_{13}$	-----	-624.69	497	-485	222	-221	515	178	1160	318	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.301	1	Yes	0.602	0.238	0.85	Yes	1.00	**3.79**
		$U_{14} - L_{14}$	-----	-1230.28	435	-419	-599	556	725	-67	-746	-385	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.098	1	Yes	0.816	0.106	0.93	Yes	1.00	**7.00**
		$U_{15} - L_{15}$	-----	-663.37	-262	258	-585	565	861	102	-336	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.255	1	Yes	0.640	0.280	0.92	Yes	1.00	**3.84**
		$U_{16} - L_{16}$	-----	-721.86	-185	173	-525	509	671	192	2	60	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.161	1	Yes	0.774	0.223	1.00	Yes	1.00	**4.09**
		$U_{17} - L_{17}$	-----	-642.47	-196	196	-536	537	594	193	-51	144	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.156	0.95	Yes	0.748	0.249	1.00	Yes	1.00	**3.82**
		$U_{18} - L_{18}$	-----	-579.82	-159	164	-471	496	622	214	-305	60	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.168	0.95	Yes	0.739	0.254	1.00	Yes	1.00	**3.65**
		$U_{19} - L_{19}$	-----	-481.50	-85	86	-290	288	522	194	-90	144	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.169	0.9	Yes	0.719	0.279	1.00	Yes	1.00	**3.75**
		$U_{20} - L_{20}$	-----	-376.18	-36	41	-218	229	517	179	-88	68	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.220	1	Yes	0.721	0.261	0.99	Yes	1.00	**4.05**
	Structure 3	$U_0 - L_0$	21.36	-321.21	22	-9	-224	243	-242	-165	-462	45	0.026	0.445	0.48	Yes	0.014	0.245	0.26	Yes	0.726	0.225	0.96	Yes	0.680	0.311	1.00	Yes	1.00	**5.29**
		$U_1 - L_1$	-----	-227.14	338	-360	-234	257	-1434	-1096	-805	-769	-----	-----	-----	-----	-----	-----	-----	-----	0.511	0.488	1	Yes	0.481	0.460	0.95	Yes	1.00	**14.79**
		$U_2 - L_2$	-----	-320.51	230	-249	11	-14	-99	33	524	165	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.247	0.98	Yes	0.678	0.318	1.00	Yes	1.00	**4.38**
		$U_3 - L_3$	-----	-371.43	228	-236	51	-56	131	107	583	204	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.236	1	Yes	0.712	0.269	0.99	Yes	1.00	**3.54**
		$U_4 - L_4$	-----	-471.85	303	-300	99	-100	-34	118	588	223	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.184	0.9	Yes	0.705	0.291	1.00	Yes	1.00	**3.46**
		$U_5 - L_5$	-----	-570.04	497	-521	168	-176	229	273	707	301	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.189	0.95	Yes	0.726	0.267	1.00	Yes	1.00	**3.89**
		$U_6 - L_6$	-----	-631.53	555	-558	200	-203	505	436	769	313	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.193	0.98	Yes	0.735	0.259	1.00	Yes	1.00	**4.34**
		$U_7 - L_7$	-----	-611.77	465	-449	156	-130	900	388	1646	556	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.288	1	Yes	0.656	0.197	0.86	Yes	1.00	**3.97**
		$U_8 - L_8$	-----	-618.02	577	-561	150	-154	460	135	1187	197	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.303	1	Yes	0.596	0.276	0.88	Yes	1.00	**5.47**
		$U_9 - L_9$	-----	-1206.37	274	-289	-569	505	425	-157	-973	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.117	1	Yes	0.800	0.101	0.91	Yes	1.00	**6.05**
		$U_{10} - L_{10}$	-----	-711.66	-305	298	-531	513	508	95	-567	12	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.206	1	Yes	0.686	0.254	0.95	Yes	1.00	**3.02**
		$U_{11} - L_{11}$	-----	-855.60	-218	191	-476	469	622	191	-134	59	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.173	1	Yes	0.742	0.204	0.95	Yes	1.00	**3.81**
		$U_{12} - L_{12}$	-----	-826.32	-247	234	-499	500	444	204	-467	102	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.142	0.98	Yes	0.773	0.221	1.00	Yes	1.00	**4.01**
		$U_{13} - L_{13}$	-----	-803.69	-236	251	-527	546	552	338	-361	79	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.158	0.96	Yes	0.751	0.241	1.00	Yes	1.00	**4.76**
		$U_{14} - L_{14}$	-----	-697.16	-254	269	-572	589	630	378	-319	107	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.152	0.93	Yes	0.747	0.250	1.00	Yes	1.00	**4.58**
		$U_{15} - L_{15}$	-----	-480.77	-135	157	-323	350	221	173	-332	64	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.147	0.85	Yes	0.693	0.306	1.00	Yes	1.00	**3.77**
		$U_{16} - L_{16}$	-----	-150.21	14	-10	-309	358	-770	-270	140	-223	-----	-----	-----	-----	-----	-----	-----	-----	0.339	0.652	1	Yes	0.318	0.458	0.78	Yes	1.00	**9.42**
		$U_{17} - L_{17}$	288.90	-146.33	153	-164	-180	184	-820	-258	-173	-499	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.329	0.219	0.55	Yes	0.310	0.235	0.55	Yes	1.00	**7.13**
		$U_{18} - L_{18}$	43.48	-324.54	223	-245	-60	41	-406	-39	-24	-351	0.078	0.431	0.51	Yes	0.043	0.237	0.28	Yes	0.733	0.197	0.93	Yes	0.687	0.313	1.00	Yes	1.00	**6.00**
		$U_{19} - L_{19}$	-----	-326.98	231	-237	-30	14	225	125	425	219	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.204	0.92	Yes	0.692	0.303	1.00	Yes	1.00	**5.06**
		$U_{20} - L_{20}$	-----	-319.58	199	-248	78	-90	275	88	604	194	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.276	1	Yes	0.676	0.317	1.00	Yes	1.00	**2.87**

Moment (Start) AB Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass				
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																			
South Truss - Diagonals	Structure 1	$U_0 - L_1$	1.300	1.300	461.69	-----	21	6	-119	58	-189	-45	-976	-448	0.606	0.385	1.00	Yes	0.366	0.212	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_1 - L_2$			311.01	-105.82	13	-16	-93	3	379	205	-1081	-529	0.559	0.431	1.00	Yes	0.308	0.237	0.55	Yes	0.243	0.406	0.65	Yes	0.224	0.119	0.35	Yes	1.00	**4.12**
		$U_2 - L_3$			10.94	-212.71	40	-27	-77	-38	446	228	-1307	-449	0.020	0.477	0.50	Yes	0.011	0.262	0.28	Yes	0.490	0.503	1	Yes	0.450	0.099	0.55	Yes	1.00	**5.36**
		$U_3 - L_4$			-----	-252.16	39	-12	-30	-65	453	248	-1096	-349	-----	-----	-----	-----	-----	-----	-----	-----	0.577	0.417	1	Yes	0.534	0.083	0.62	Yes	1.00	**4.37**
		$U_4 - L_4$			575.34	-----	-4	77	-108	37	-139	119	188	145	0.844	0.154	1.00	Yes	0.464	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		$U_4 - L_5$			665.56	-----	-12	142	-218	224	-247	63	-431	300	0.787	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_5 - L_6$			591.98	-----	-39	84	-264	233	-802	-111	-261	144	0.700	0.296	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_6 - L_7$			625.64	-----	61	184	-91	299	459	-83	43	197	0.740	0.253	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
		$U_8 - L_9$			947.47	-----	40	208	-94	351	553	286	-199	-608	0.757	0.234	1.00	Yes	0.469	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_9 - L_{10}$			936.32	-----	-110	141	-306	229	649	297	-902	-630	0.749	0.251	1.00	Yes	0.464	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{10} - L_{11}$			918.28	-----	-69	132	-240	162	309	43	-376	-814	0.776	0.218	1.00	Yes	0.480	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{11} - L_{12}$			768.36	-----	-90	78	-253	75	204	-21	-616	-783	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{12} - L_{13}$			549.49	-----	-85	62	-201	126	112	-27	-757	-707	0.670	0.323	1.00	Yes	0.421	0.185	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		$U_{13} - L_{14}$			407.02	-----	-31	-23	-90	21	-455	-259	-161	-515	0.732	0.264	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_{15} - L_{14}$			387.78	-258.65	35	-104	-134	-33	-244	-269	143	435	0.697	0.297	1.00	Yes	0.384	0.164	0.55	Yes	0.606	0.304	0.92	Yes	0.547	0.172	0.72	Yes	1.00	**8.81**
		$U_{16} - L_{15}$			402.17	-0.28	-18	-3	-145	87	-288	-127	-255	153	0.723	0.269	1.00	Yes	0.398	0.148	0.55	Yes	0.001	0.153	0.16	Yes	0.001	0.185	0.19	Yes	1.00	**5.26**
		$U_{17} - L_{16}$			530.20	-----	-46	22	-149	97	-305	-105	-247	-43	0.778	0.222	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{18} - L_{17}$			617.67	-----	-130	88	-336	247	-400	-112	-296	141	0.730	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{19} - L_{18}$			689.75	-----	-132	96	-334	253	-455	-203	-373	-132	0.747	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{20} - L_{19}$			697.49	-----	-173	139	-394	326	-259	-140	-158	24	0.755	0.244	1.00	Yes	0.416	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
	Structure 2	$U_0 - L_1$			639.76	-----	-90	136	-311	327	-321	-88	-1388	-413	0.633	0.359	1.00	Yes	0.348	0.198	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_1 - L_2$			732.12	-----	-163	116	-387	292	145	-29	-380	-600	0.724	0.269	1.00	Yes	0.398	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_2 - L_3$			590.59	-----	-118	88	-313	244	126	-27	-287	-661	0.698	0.297	1.00	Yes	0.384	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		$U_3 - L_4$			536.62	-----	-52	25	-173	111	170	10	-455	-586	0.715	0.281	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_4 - L_5$			363.31	-42.12	3	-17	-130	81	238	37	-271	-595	0.653	0.338	1.00	Yes	0.359	0.186	0.55	Yes	0.104	0.210	0.32	Yes	0.089	0.166	0.26	Yes	1.00	**4.67**
		$U_5 - L_6$			343.12	-254.89	61	-115	-107	26	-783	-185	-451	-804	0.617	0.380	1.00	Yes	0.339	0.209	0.55	Yes	0.602	0.293	0.9	Yes	0.539	0.147	0.69	Yes	1.00	**7.01**
		$U_6 - L_7$			-----	-383.80	50	-103	-21	-49	-274	-37	-91	-426	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.173	1	Yes	0.735	0.117	0.86	Yes	1.00	**3.50**
		$U_8 - L_7$			604.21	-----	-79	36	-203	139	-60	-143	-173	200	0.770	0.223	1.00	Yes	0.485	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_8 - L_9$			715.28	-----	-162	155	-337	244	-303	-90	-64	56	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{10} - L_9$			801.41	-----	-124	155	-340	251	-185	23	-114	294	0.793	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_{11} - L_{10}$			875.23	-----	-130	192	-346	294	-254	59	-113	349	0.797	0.195	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{12} - L_{11}$			847.72	-----	-130	175	-341	344	-587	63	-412	309	0.772	0.226	1.00	Yes	0.425	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_{13} - L_{12}$			732.10	-----	-157	161	-418	380	-542	0	-355	121	0.724	0.275	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{14} - L_{13}$			737.90	-----	39	212	-252	430	425	-66	-21	55	0.730	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		$U_{14} - L_{15}$			598.55	-----	-18	167	-196	345	526	238	153	-394	0.708	0.291	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{15} - L_{16}$			587.35	-----	-171	168	-350	317	590	180	75	-265	0.694	0.305	1.00	Yes	0.382	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.66**
		$U_{16} - L_{17}$			690.76	-----	-127	154	-332	349	373	110	43	-415	0.748	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_{17} - L_{18}$			637.81	-----	-111	127	-285	271	358	88	-39	-427	0.754	0.239	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_{18} - L_{19}$			614.09	-----	-82	96	-281	242	290	77	-248	-620	0.726	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{19} - L_{20}$			569.36	-----	-40	45	-191	154	294	84	-268	-485	0.726	0.270	1.00	Yes	0.399	0.153	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{20} - L_{21}$			384.22	-----	-16	14	-120	92	234	65	-90	-516	0.691	0.303	1.00	Yes	0.380	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		$U_{21} - L_{22}$			353.32	-207.43	18	-79	-117	18	-578	-59	-471	-732	0.635	0.361	1.00	Yes	0.350	0.199	0.55	Yes	0.490	0.254	0.75	Yes	0.439	0.149	0.59	Yes	1.00	**6.52**
		$U_{23} - L_{22}$			417.35	-81.31	11	-17	-128	44	-293	-105	3	126	0.751	0.249	1.00	Yes	0.413	0.137	0.55	Yes	0.194	0.166	0.36	Yes	0.172	0.164	0.34	Yes	1.00	**6.12**
		$U_{24} - L_{23}$			423.62	-----	-18	17	-127	105	-255	-63	-77	132	0.762	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{25} - L_{24}$			590.75	-----	-41	49	-199	163	-300	-82	54	257	0.753	0.239	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_{26} - L_{25}$			657.25	-----	-80	97	-288	265	-253	-56	-10	320	0.777	0.221	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{27} - L_{26}$			643.96	-----	-101	143	-288	288	-395	116	-161	251	0.761	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_{28} - L_{27}$			675.88	-----	-93	147	-313	338	-549	42	-376	378	0.732	0.263	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_{29} - L_{28}$			592.02	-----	-92	105	-350	328	-549	-41	-259	191	0.700	0.298	1.00	Yes	0.385	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{30} - L_{29}$			626.35	-----	53	161	-197	363	272	-113	80	217	0.741	0.255	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		$U_{30} - L_{31}$			729.09	-----	-54	230	-260	431	472	205	-111	-510	0.721	0.276	1.00	Yes	0.397	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_{31} - L_{32}$			732.41	-----	-233	218	-421	371	503	141	15	-296	0.725	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.69**
		$U_{32} - L_{33}$			836.53	-----	-158	199	-342	331	421	115	-180	-648	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		$U_{33} - L_{34}$			831.07	-----	-145	176	-325	263	341	76	-553	-700	0.757	0.234	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		$U_{34} - L_{35}$			741.24	-----	-132	139	-300	218	140	-10	-825	-705	0.733	0.263	1.00	Yes	0.403	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{35} - L_{36}$			677.71	-----	-157	134	-314	215	151	14	-359	-611	0.734	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_{36} - L_{37}$			520.97	-----	-78	33	-185	116	-254	-201	-302	-821	0.664	0.333	1.00	Yes	0.418	0.191	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{38} - L_{37}$			-----	-384.37	54	-104	-40	-37	-32	-229	-188	13	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.163	1	Yes	0.736	0.119	0.86	Yes	1.00	**4.44**
		$U_{39} - L_{38}$			422.32	-230.36	56	-105	-138	56	192	-94	86	91	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	0.549	0.182	0.74	Yes	0.487	0.176	0.67	Yes	1.00	**7.98**
		$U_{40} - L_{39}$			393.19	-14.90	-5	-10	-139	86	-381	-103	-165	253	0.707	0.288	1.00	Yes	0.389	0.158	0.55	Yes	0.036	0.166	0.21	Yes	0.032	0.178	0.21	Yes	1.00	**4.93**
		$U_{41} - L_{40}$			557.90	-----	-56	30	-179	121	-413	-179	-262	21	0.744	0.249	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{42} - L_{41}$			621.50	-----	-120	90	-328	260	-403	-171	-316	35	0.735	0.259	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_{43} - L_{42}$			767.73	-----	-134	102	-381	306	-376	-195	-263	6	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{44} - L_{43}$			790.00	-----	-157	150	-403	380	-168	19	-111	189	0.782	0.215	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
	Structure 3	$U_0 - L_1$			606.20	-----	-71	106	-294	267	-236	-58	-1143	-436	0.657	0.338	1.00	Yes	0.361	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_1 - L_2$			658.27	-----	-158	108	-349	244	165	-39	-554	-632	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_2 - L_3$			554.17	-----	-123	84	-313	233	135	-25	-875	-713	0.655	0.336	1.00	Yes	0.360	0.185	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_3 - L_4$			493.73	-----	-42	20	-138	86	154	-25	-342	-564	0.724	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		$U_4 - L_5$			348.96	-16.87	-12	-6	-133	77	202	12	-576	-687	0.628	0.369	1.00	Yes	0.345	0.203	0.55	Yes	0.040	0.264	0.31	Yes	0.036	0.170	0.21	Yes	1.00	**4.95**
		$U_5 - L_6$			122.28	-230.46	22	-100	-65	-38	-666	-225	-911	-476	0.220	0.391	0.62	Yes	0.121	0.215	0.34	Yes	0.540	0.451	1	Yes	0.488	0.127	0.62	Yes	1.00	**4.99**
		$U_7 - L_6$			444.08	-----	-30	-7	-97	34	-237	-173	-106	-95	0.799	0.193	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_8 - L_7$			619.12	-----	-83	73	-208	143	-303	-107	-111	239	0.755	0.241	1.00	Yes	0.475	0.136	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_8 - L_9$			822.21	-----	-75	93	-297	116	-217	6	-294	105	0.813	0.182	1.00	Yes	0.447	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{10} - L_9$			968.83	-----	-48	156	-274	205	-104	84	-372	320	0.818	0.176	1.00	Yes	0.507	0.099	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{11} - L_{10}$			927.01	-----	-65	101	-294	239	-941	-234	20	424	0.741	0.251	1.00	Yes	0.459	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{12} - L_{11}$			940.21	-----	126	232	-85	352	705	71	248	482	0.752	0.247	1.00	Yes	0.466	0.139	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		$U_{12} - L_{13}$			608.94	-----	15	166	-89	285	638	318	105	-390	0.720	0.278	1.00	Yes	0.396	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		$U_{13} - L_{14}$			598.68	-----	-98	131	-275	222	698	285	-254	-276	0.708	0.283	1.00	Yes	0.389	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		$U_{14} - L_{15}$			586.88	-----	-32	147	-200	179	566	243	-1026	-643	0.694	0.300	1.00	Yes	0.382	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_{15} - L_{16}$			446.90	-----	-14	63	-95	15	425	197	-1061	-683	0.655	0.343	1.00	Yes	0.360	0.189	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_{17} - L_{16}$			-----	-331.28	53	-9	-77	-100	-238	1	404	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.241	1	Yes	0.701	0.128	0.83	Yes	1.00	**8.08**
		$U_{18} - L_{17}$			374.03	-281.73	52	-36	-132	-10	-195	-72	-524	-136	0.673	0.321	1.00	Yes	0.370	0.177	0.55	Yes	0.648	0.331	0.98	Yes	0.596	0.169	0.77	Yes	1.00	**9.00**
		$U_{19} - L_{18}$			450.32	-106.19	19	-21	-92	12	-204	-116	-225	-224	0.810	0.183	1.00	Yes	0.445	0.101	0.55	Yes	0.244	0.155	0.4	Yes	0.225	0.118	0.35	Yes	1.00	**5.81**
		$U_{20} - L_{19}$			547.14	-----	-18	5	-145	82	245	41	-438	-83	0.718	0.280	1.00	Yes	0.433	0.154	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

North Truss - Upper Chord

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_1 - U_2	-71.64	19.48	-97.46			0.90	1.24	21.68	-108.50	0.00	0.00	Vehicle	Vehicle	-----	-328.22	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.73	4.55
	U_2 - U_3	-90.83	39.28	-162.82			0.90	1.24	43.73	-181.27	0.00	0.00	Vehicle	Vehicle	-----	-510.82	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	41.01	Pass	42.67	48.56	Pass	9.33	12.00	Pass	-----	-----	1.57	2.62
	U_3 - U_4	-61.13	58.32	-160.28			0.90	1.24	64.92	-178.44	0.00	0.00	Vehicle	Vehicle	61.20	-466.08	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	42.93	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.77	11.28	1.70	2.83
	U_4 - U_5	10.71	76.43	-154.26			0.90	1.24	85.09	-171.74	0.00	0.00	Vehicle	Vehicle	198.28	-358.18	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.66	7.76	2.01	3.35
	U_5 - U_6	12.86	76.77	-111.93			0.90	1.24	85.47	-124.61	0.00	0.00	Vehicle	Vehicle	201.91	-253.27	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.62	7.70	2.78	4.64
	U_6 - U_8	121.37	88.74	-46.58			0.90	1.24	98.79	-51.85	0.00	0.00	Vehicle	Vehicle	371.84	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	3.34	5.56	-----	-----
	U_7 - U_7	249.49	98.07	-68.69			0.90	1.24	109.18	-76.47	0.00	0.00	Vehicle	Vehicle	560.89	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.05	5.08	-----	-----
	U_8 - U_9	376.92	-13.25	5.09			0.90	1.24	5.67	-14.76	0.00	0.00	Vehicle	Vehicle	502.28	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	77.61	129.35	-----	-----
	U_9 - U_9	319.74	5.79	-2.75			0.90	1.20	6.24	-2.96	0.00	0.00	Vehicle	Vehicle	429.17	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	59.55	99.26	-----	-----
	U_9 - U_{10}	128.77	98.09	-64.66			0.90	1.20	105.76	-69.71	0.00	0.00	Vehicle	Vehicle	396.55	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	3.29	5.49	-----	-----
	U_{10} - U_{11}	-70.90	86.95	-124.19			0.90	1.20	93.75	-133.90	0.00	0.00	Vehicle	Vehicle	110.95	-382.28	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	4.99	8.32	2.36	3.93
	U_{11} - U_{12}	-252.96	76.73	-167.14			0.90	1.20	82.73	-180.21	0.00	0.00	Vehicle	Vehicle	-----	-719.32	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	41.43	Pass	28.44	49.06	Pass	8.00	12.00	Pass	-----	-----	1.86	3.11
	U_{12} - U_{13}	-391.95	66.36	-219.91			0.90	1.20	71.55	-237.11	0.00	0.00	Vehicle	Vehicle	-----	-1023.26	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	41.17	Pass	28.44	48.75	Pass	8.00	12.00	Pass	-----	-----	1.89	3.14
	U_{13} - U_{14}	-482.99	55.81	-248.13			0.90	1.20	60.18	-267.53	0.00	0.00	Vehicle	Vehicle	-----	-1207.55	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.90	Pass	25.60	48.44	Pass	6.40	12.00	Pass	-----	-----	1.89	3.16
	U_{14} - U_{15}	-454.44	55.61	-248.72			0.90	1.20	59.96	-268.17	0.00	0.00	Vehicle	Vehicle	-----	-1210.81	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.85	Pass	25.60	48.37	Pass	6.40	12.00	Pass	-----	-----	1.89	3.14
	U_{15} - U_{16}	-502.02	24.80	-179.28			0.90	1.20	26.74	-193.30	0.00	0.00	Vehicle	Vehicle	-----	-1071.44	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	43.43	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.56	4.27
	U_{16} - U_{17}	-467.99	-105.80	-157.57			0.90	1.20	-114.08	-169.89	0.00	0.00	Vehicle	Vehicle	-----	-976.47	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.04	5.06
	U_{17} - U_{18}	-368.86	-158.62	-69.32			0.90	1.20	-74.74	-171.02	0.00	0.00	Vehicle	Vehicle	-----	-850.07	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	41.73	Pass	32.00	49.42	Pass	10.67	12.00	Pass	-----	-----	2.11	3.52
	U_{18} - U_{19}	-251.56	-105.50	-101.60			0.90	1.20	-109.54	-113.74	0.00	0.00	Vehicle	Vehicle	-----	-573.47	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	42.37	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	2.25	3.75
	U_{19} - U_{20}	-117.89	-44.37	-8.39			0.90	1.20	-9.05	-47.84	0.00	0.00	Vehicle	Vehicle	-----	-256.92	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	7.02	11.70
Structure 2	U_1 - U_1	-118.23	7.62	-58.57			0.90	1.18	8.11	-62.36	0.00	0.00	Vehicle	Vehicle	-----	-288.81	4.88	30.19	25.3075	996.19	131.71	10.6328	5.6806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.09	8.49
	U_1 - U_2	-239.56	17.34	-128.12			0.90	1.18	18.46	-136.41	0.00	0.00	Vehicle	Vehicle	-----	-606.99	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.47	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.43	4.04
	U_2 - U_3	-350.44	28.92	-182.24			0.90	1.18	30.79	-194.03	0.00	0.00	Vehicle	Vehicle	-----	-875.96	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	43.17	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.25	3.75
	U_3 - U_4	-449.15	26.64	-218.26			0.90	1.18	28.36	-232.38	0.00	0.00	Vehicle	Vehicle	-----	-1087.37	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	43.25	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.39	3.84
	U_4 - U_5	-483.26	51.55	-269.54			0.90	1.18	61.55	-292.64	0.00	0.00	Vehicle	Vehicle	-----	-1212.45	15.50	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.14	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.23	3.72
	U_5 - U_6	-485.85	73.15	-267.33			0.90	1.18	77.88	-284.62	0.00	0.00	Vehicle	Vehicle	-----	-1248.29	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	42.51	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.11	3.52
	U_6 - U_7	-428.85	86.68	-259.81			0.90	1.18	92.28	-276.62	0.00	0.00	Vehicle	Vehicle	-----	-1156.85	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.93	Pass	23.27	49.66	Pass	5.82	12.00	Pass	-----	-----	1.98	3.30
	U_7 - U_8	-428.37	86.88	-194.53			0.90	1.18	92.51	-207.12	0.00	0.00	Vehicle	Vehicle	-----	-1005.63	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.98	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.64	4.41
	U_8 - U_9	-335.42	99.64	-179.76			0.90	1.18	106.09	-191.39	0.00	0.00	Vehicle	Vehicle	-----	-850.71	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	44.80	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.48	4.13
	U_9 - U_{10}	-200.29	107.82	-183.78			0.90	1.18	114.79	-195.67	0.00	0.00	Vehicle	Vehicle	-----	-684.32	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	44.29	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.10	3.51
	U_{10} - U_{11}	-52.14	114.46	-87.10			0.90	1.18	121.86	-92.73	0.00	0.00	Vehicle	Vehicle	196.26	-268.71	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	4.74	7.90	4.64	7.73
	U_{11} - U_{12}	107.02	-36.03	-54.86			0.90	1.18	-38.36	-58.41	0.00	0.00	Vehicle	Vehicle	56.01	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{12} - U_{13}	259.33	110.00	-45.46			0.90	1.18	117.12	-48.40	0.00	0.00	Vehicle	Vehicle	590.89	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.51	7.51	-----	-----
	U_{13} - U_{14}	391.98	25.04	-21.55			0.90	1.18	26.66	-22.95	0.00	0.00	Vehicle	Vehicle	567.34	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	26.38	43.97	-----	-----
	U_{14} - U_{15}	439.40	15.19	-2.68			0.90	1.17	15.98	-2.82	0.00	0.00	Vehicle	Vehicle	605.84	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	42.24	70.40	-----	-----
	U_{15} - U_{16}	369.66	104.49	-16.65			0.90	1.17	109.93	-17.52	0.00	0.00	Vehicle	Vehicle	718.75	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	9.34	8.21	-----	-----
	U_{16} - U_{17}	271.39	101.74	-58.71			0.90	1.17	107.04	-61.76	0.00	0.00	Vehicle	Vehicle	584.72	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	4.33	7.22	-----	-----
	U_{17} - U_{18}	171.75	95.71	-98.87			0.90	1.17	100.69	-104.02	0.00	0.00	Vehicle	Vehicle	441.44	-2.10	5.25	30.19	24.9375	996.19	131.71	10.6302	5.6806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	3.54	5.90	4.72	7.87
	U_{18} - U_{19}	72.78	88.36	-138.92			0.90	1.17	92.96	-146.15	0.00	0.00	Vehicle	Vehicle	296.03	-222.05	4.88	30.19	25.3075	996.19	131.71	10.6302	5.6806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	4.48	7.46	2.96	4.93
	U_{19} - U_{20}	-8.11	78.71	-171.79			0.90	1.17	82.81	-180.74	0.00	0.00	Vehicle	Vehicle	168.88	-402.14	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.00	10.00	2.27	3.79
	U_{20} - U_{21}	-60.13	36.73	-197.55			0.90	1.17	38.64	-207.84	0.00	0.00	Vehicle	Vehicle	5.56	-528.49	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	16.33	27.22	2.24	3.74
	U_{21} - U_{22}	-82.18	51.03	-210.44			0.90	1.17	53.68	-221.40	0.00	0.00	Vehicle	Vehicle	9.47	-586.54	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	12.00	20.00	2.04	3.41
	U_{22} - U_{23}	-82.40	52.69	-208.29			0.90	1.17	55.44	-219.14	0.00	0.00	Vehicle	Vehicle	12.98	-581.92	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	11.62	19.37	2.07	3.44
	U_{23} - U_{24}	-65.94	65.26	-162.67			0.90	1.17	68.66	-171.15	0.00	0.00	Vehicle	Vehicle	63.04	-456.55	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.24	15.40	2.70	4.50
	U_{24} - U_{25}	61.51	78.08	-147.18			0.90	1.17	81.88	-153.86	0.00	0.00	Vehicle	Vehicle	154.06	-440.92	5.25	32.31	26.8125	1066.31	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.15	6.92	2.30	3.83
	U_{25} - U_{26}	55.02	-85.70	-103.87			0.90	1.17	-90.17	-109.28	0.00	0.00	Vehicle	Vehicle	-----	-165.24	4.88	30.19	25.3075	996.19	131.71	10.6302	5.6806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.86	6.43
	U_{26} - U_{27}	136.02	-44.02	-82.57			0.90	1.17	-46.31	-86.87	0.00	0.00	Vehicle	Vehicle	76.47	-11.39	5.25	30.19	24.9375	996.19	131.71	10.6302	5.6806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.41	9.02
	U_{27} - U_{28}	216.87	-19.67	-76.34			0.90	1.17	-20.69	-80.32	0.00	0.00	Vehicle	Vehicle	237.10	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{28} - U_{29}	293.76	59.73	-7.13			0.90	1.17	62.84	-7.50	0.00	0.00	Vehicle	Vehicle	518.03	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	9.34	15.57	-----	-----
	U_{29} - U_{30}	358.11	-1.11	-25.60			0.90	1.17	-1.17	-26.94	0.00	0.00	Vehicle	Vehicle	463.02	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{30} - U_{31}	339.33	22.68	7.39			0.90	1.18	24.15	7.87	0.00	0.00	Vehicle	Vehicle	493.44	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	30.44	50.73	-----	-----
	U_{31} - U_{32}	251.17	114.13	-29.46			0.90	1.18	121.51	-31.37	0.00	0.00	Vehicle	Vehicle	589.79	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.38	7.31	-----	-----
	U_{32} - U_{33}	136.17	114.14

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0- L_1	4.85	-2.57	-4.54			0.90	1.24	-2.86	-5.05	0.00	0.00	Vehicle	Vehicle	0.10	-4.64	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	**50.87**	**84.78**
	L_1 - L_2	74.27	-22.43	83.26			0.90	1.24	92.70	-24.97	0.00	0.00	Vehicle	Vehicle	297.38	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**2.77**	**4.62**	-----	-----
	L_2 - L_3	97.77	-42.33	154.66			0.90	1.24	172.18	-47.13	0.00	0.00	Vehicle	Vehicle	500.16	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**1.99**	**3.32**	-----	-----
	L_3 - L_4	66.93	-61.27	116.97			0.90	1.24	130.23	-68.21	0.00	0.00	Vehicle	Vehicle	369.17	-60.77	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**2.77**	**4.62**	**5.54**	**9.24**
	L_4 - L_5	-108.46	79.80	114.27			0.90	1.24	127.21	88.84	0.00	0.00	Vehicle	Vehicle	134.63	-----	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.31**	**5.52**	-----	-----
	L_5 - L_6	-237.28	-100.83	65.30			0.90	1.24	72.70	-112.26	0.00	0.00	Vehicle	Vehicle	-----	-551.69	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	42.66	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.26**	**3.76**
	L_6 - L_7	-362.27	-54.33	4.23			0.90	1.24	4.71	-60.48	0.00	0.00	Vehicle	Vehicle	-----	-602.00	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.78**	**9.63**
	L_7 - L_8	-478.66	-94.98	-0.68			0.90	1.24	-0.76	-105.74	0.00	0.00	Vehicle	Vehicle	-----	-851.35	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.09**	**6.82**
	L_8 - L_9	-477.02	-97.43	-38.35			0.90	1.20	-41.34	-105.04	0.00	0.00	Vehicle	Vehicle	-----	-847.72	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.13**	**6.88**
	L_9 - L_{10}	-301.43	-98.29	5.86			0.90	1.20	6.32	-105.98	0.00	0.00	Vehicle	Vehicle	-----	-621.48	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.65**	**6.08**
	L_{10} - L_{11}	-104.46	-86.88	16.81			0.90	1.20	18.13	-93.67	0.00	0.00	Vehicle	Vehicle	-----	-338.75	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.54**	**4.23**
	L_{11} - L_{12}	97.11	-76.32	103.20			0.90	1.20	111.27	-82.29	0.00	0.00	Vehicle	Vehicle	367.32	-52.05	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**2.68**	**4.47**	**4.36**	**7.26**
	L_{12} - L_{13}	268.74	-66.44	147.76			0.90	1.20	159.32	-71.63	0.00	0.00	Vehicle	Vehicle	694.55	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.66**	**4.43**	-----	-----
	L_{13} - L_{14}	405.66	-55.99	186.73			0.90	1.20	201.33	-60.37	0.00	0.00	Vehicle	Vehicle	963.56	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.69**	**4.48**	-----	-----
	L_{14} - L_{15}	502.77	77.99	202.77			0.90	1.20	218.83	84.08	0.00	0.00	Vehicle	Vehicle	1127.30	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.94**	**4.90**	-----	-----
	L_{15} - L_{16}	469.25	-25.35	169.15			0.90	1.20	182.38	-27.33	0.00	0.00	Vehicle	Vehicle	1005.17	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.64**	**6.06**	-----	-----
	L_{16} - L_{17}	365.43	61.02	122.90			0.90	1.20	132.51	65.79	0.00	0.00	Vehicle	Vehicle	762.16	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.85**	**6.42**	-----	-----
	L_{17} - L_{18}	248.67	35.91	55.72			0.90	1.20	60.08	38.72	0.00	0.00	Vehicle	Vehicle	453.45	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**6.34**	**10.56**	-----	-----
	L_{18} - L_{19}	112.99	-18.62	24.40			0.90	1.20	26.31	-20.08	0.00	0.00	Vehicle	Vehicle	203.89	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.89**	**14.81**	-----	-----
	L_{19} - L_{20}	-14.26	-40.67	18.00			0.90	1.20	19.41	-43.85	0.00	0.00	Vehicle	Vehicle	23.53	-113.55	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**15.98**	**26.63**	**5.60**	**9.33**
	L_0- L_1	15.26	0.54	-7.97			0.90	1.18	0.58	-8.48	0.00	0.00	Vehicle	Vehicle	21.08	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**643.84**	**1073.06**	-----	-----
	L_1 - L_2	136.12	-7.30	46.56			0.90	1.18	49.57	-7.78	0.00	0.00	Vehicle	Vehicle	284.36	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.02**	**10.03**	-----	-----
	L_2 - L_3	262.92	-14.95	110.69			0.90	1.18	117.86	-15.92	0.00	0.00	Vehicle	Vehicle	597.15	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.63**	**6.05**	-----	-----
	L_3 - L_4	373.32	-19.70	163.40			0.90	1.18	173.97	-20.97	0.00	0.00	Vehicle	Vehicle	862.26	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.23**	**5.38**	-----	-----
	L_4 - L_5	456.80	-40.33	205.84			0.90	1.18	219.15	-42.94	0.00	0.00	Vehicle	Vehicle	1068.68	-----	11.08	65.05	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.27**	**5.44**	-----	-----
	L_5 - L_6	489.63	-54.81	232.85			0.90	1.18	247.92	-58.35	0.00	0.00	Vehicle	Vehicle	1173.67	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.15**	**5.26**	-----	-----
	L_6 - L_7	479.27	-69.58	245.51			0.90	1.18	261.39	-74.08	0.00	0.00	Vehicle	Vehicle	1189.40	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.07**	**5.12**	-----	-----
	L_7 - L_8	330.30	-95.52	201.80			0.90	1.18	214.86	-101.70	0.00	0.00	Vehicle	Vehicle	894.92	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**2.82**	**4.71**	-----	-----
	L_8 - L_9	189.19	91.45	163.10			0.90	1.18	173.65	97.36	0.00	0.00	Vehicle	Vehicle	622.18	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**3.15**	**5.24**	-----	-----
	L_9 - L_{10}	39.95	-110.08	106.44			0.90	1.18	113.32	-117.20	0.00	0.00	Vehicle	Vehicle	297.47	-202.00	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**4.35**	**7.25**	**3.93**	**6.55**
	L_{10} - L_{11}	-127.23	11.27	71.79			0.90	1.18	76.43	12.00	0.00	0.00	Vehicle	Vehicle	0.21	-139.39	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**7.05**	**11.74**	-----	-----
	L_{11} - L_{12}	-282.51	-39.41	36.62			0.90	1.18	38.99	-41.96	0.00	0.00	Vehicle	Vehicle	-----	-458.18	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.27**	**15.45**
	L_{12} - L_{13}	-426.62	-101.23	-6.61			0.90	1.18	-7.04	-107.78	0.00	0.00	Vehicle	Vehicle	-----	-788.13	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.73**	**7.88**
	L_{13} - L_{14}	-536.34	-98.95	13.58			0.90	1.18	14.46	-105.36	0.00	0.00	Vehicle	Vehicle	-----	-925.51	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.57**	**9.29**
	L_{14} - L_{15}	-537.64	-95.29	-28.31			0.90	1.17	-29.78	-100.26	0.00	0.00	Vehicle	Vehicle	-----	-916.16	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.85**	**9.75**
	L_{15} - L_{16}	-475.53	-113.67	-5.10			0.90	1.17	-5.36	-119.59	0.00	0.00	Vehicle	Vehicle	-----	-877.29	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.01**	**6.69**
	L_{16} - L_{17}	-384.21	-104.83	17.65			0.90	1.17	18.56	-110.29	0.00	0.00	Vehicle	Vehicle	-----	-738.43	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.61**	**6.01**
	L_{17} - L_{18}	-281.70	-100.66	42.92			0.90	1.17	45.15	-105.91	0.00	0.00	Vehicle	Vehicle	-----	-595.68	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.03	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**2.53**	**4.21**
	L_{18} - L_{19}	-174.99	-91.84	76.93			0.90	1.17	80.94	-96.63	0.00	0.00	Vehicle	Vehicle	-----	-436.84	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	44.60	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**2.48**	**4.13**
	L_{19} - L_{20}	-76.34	-83.17	113.85			0.90	1.17	119.78	-87.50	0.00	0.00	Vehicle	Vehicle	160.28	-288.83	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.78**	**6.31**	**3.41**	**5.68**
	L_{20} - L_{21}	4.59	-70.78	137.59			0.90	1.17	144.76	-74.47	0.00	0.00	Vehicle	Vehicle	319.62	-155.38	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.98**	**6.63**	**6.60**	**11.00**
	L_{21} - L_{22}	56.15	-14.10	161.83			0.90	1.17	170.26	-14.83	0.00	0.00	Vehicle	Vehicle	441.89	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.20**	**5.34**	-----	-----
	L_{22} - L_{23}	63.16	-37.63	148.85			0.90	1.17	156.61	-39.59	0.00	0.00	Vehicle	Vehicle	421.42	-3.66	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.45**	**5.76**	**13.30**	**22.16**
	L_{23} - L_{24}	15.68	-50.16	134.28			0.90	1.17	141.27	-52.77	0.00	0.00	Vehicle	Vehicle	326.48	-93.95	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.03**	**6.72**	**9.44**	**15.73**
	L_{24} - L_{25}	-55.90	11.55	87.55			0.90	1.17	92.11	12.15	0.00	0.00	Vehicle	Vehicle	126.91	-46.34	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.79**	**7.98**	-----	-----
	L_{25} - L_{26}	-136.32	-28.63	71.88			0.90	1.17	75.62	-30.12	0.00	0.00	Vehicle	Vehicle	-----	-242.49	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.71**	**14.52**
	L_{26} - L_{27}	-217.71	-65.42	40.02			0.90	1.17	42.11	-68.82	0.00	0.00	Vehicle	Vehicle	-----	-432.14	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**4.44**	**7.41**
	L_{27} - L_{28}	-296.28	-107.37	16.98			0.90	1.17	17.86	-112.96	0.00	0.00	Vehicle	Vehicle	-----	-629.91	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.99**	**6.65**
	L_{28} - L_{29}	-364.24	-167.19	-0.56			0.90	1.17	-0.59	-175.90	0.00	0.00	Vehicle	Vehicle	-----	-854.62	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.11**	**5.18**
	L_{29} - L_{30}	-418.31	-113.44	48.93			0.90	1.17	51.48	-119.35	0.00	0.00	Vehicle	Vehicle	-----	-802.39	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.51**	**9.19**
	L_{30} - L_{31}	-350.66	-89.30	-36.10			0.90	1.18	-38.43	-95.07	0.00	0.00	Vehicle	Vehicle	-----	-661.86	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.35**	**12.24**
	L_{31} - L_{32}	-275.63	-50.87	-14.70			0.90	1.18	-15.65	-54.16	0.00	0.00	Vehicle	Vehicle	-----	-475.67	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 2.17 — LL Factor: 1.63

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals	Structure 1	U$_1$ - L$_0$	-77.20	-101.77	17.50			0.90	1.24	19.48	-113.30	0.00	0.00	Vehicle	Vehicle	-----	-345.85	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	39.78	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.42	2.36
		U$_1$ - L$_1$	-33.88	-68.57	15.69			0.90	1.24	17.47	-76.34	0.00	0.00	Vehicle	Vehicle	-----	-209.45	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.50	4.17
		U$_2$ - L$_2$	10.41	-52.70	14.79			0.90	1.24	16.46	-58.67	0.00	0.00	Vehicle	Vehicle	49.19	-113.60	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	15.21	25.35	3.71	6.18
		U$_3$ - L$_3$	44.37	-29.48	14.75			0.90	1.24	16.43	-32.82	0.00	0.00	Vehicle	Vehicle	93.27	-13.42	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	14.00	23.34	7.23	12.05
		U$_4$ - L$_4$	-16.71	-8.14	-17.27			0.90	1.24	-9.06	-19.23	0.00	0.00	Vehicle	Vehicle	-----	-63.39	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.39	17.32
		U$_5$ - L$_5$	-109.52	3.48	-79.15			0.90	1.24	3.87	-88.12	0.00	0.00	Vehicle	Vehicle	-----	-333.29	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	44.88	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	2.15	3.58
		U$_6$ - L$_6$	-143.61	-1.30	-96.64			0.90	1.24	-1.45	-107.58	0.00	0.00	Vehicle	Vehicle	-----	-419.79	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	43.86	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	2.03	3.39
		U$_7$ - L$_7$	-142.76	3.05	-107.77			0.90	1.24	3.39	-119.98	0.00	0.00	Vehicle	Vehicle	-----	-445.54	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	41.05	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	1.59	2.65
		U$_8$ - L$_8$	-391.96	-97.04	-122.97			0.90	1.24	-108.03	-136.90	0.00	0.00	Vehicle	Vehicle	-----	-806.16	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	2.95	4.92
		U$_9$ - L$_9$	-223.26	-106.47	10.35			0.90	1.20	11.16	-114.80	0.00	0.00	Vehicle	Vehicle	-----	-538.96	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.62	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	2.20	3.67
		U$_{10}$ - L$_{10}$	-225.85	-95.61	-6.76			0.90	1.20	-7.29	-103.09	0.00	0.00	Vehicle	Vehicle	-----	-516.97	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	3.01	5.01
		U$_{11}$ - L$_{11}$	-198.80	-95.13	5.30			0.90	1.20	5.71	-102.57	0.00	0.00	Vehicle	Vehicle	-----	-480.67	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	2.59	4.31
		U$_{12}$ - L$_{12}$	-154.81	-77.20	9.36			0.90	1.20	10.10	-83.23	0.00	0.00	Vehicle	Vehicle	-----	-381.59	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	2.72	4.54
		U$_{13}$ - L$_{13}$	-109.06	-69.64	16.50			0.90	1.20	17.79	-75.08	0.00	0.00	Vehicle	Vehicle	-----	-304.46	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	44.56	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	2.17	3.61
		U$_{14}$ - L$_{14}$	-12.31	0.61	-10.46			0.90	1.20	0.66	-11.28	0.00	0.00	Vehicle	Vehicle	-----	-40.44	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	17.68	29.47
		U$_{15}$ - L$_{15}$	-5.62	31.47	-53.67			0.90	1.20	33.93	-57.87	0.00	0.00	Vehicle	Vehicle	66.22	-132.68	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	7.66	12.77	3.50	5.83
		U$_{16}$ - L$_{16}$	-51.73	12.40	-68.24			0.90	1.20	13.37	-73.57	0.00	0.00	Vehicle	Vehicle	-----	-226.66	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.36	3.94
		U$_{17}$ - L$_{17}$	-127.32	12.79	-93.10			0.90	1.20	13.79	-100.38	0.00	0.00	Vehicle	Vehicle	-----	-383.00	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	41.87	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	1.70	2.83
		U$_{18}$ - L$_{18}$	-159.94	11.82	-103.89			0.90	1.20	12.75	-112.02	0.00	0.00	Vehicle	Vehicle	-----	-450.63	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	42.99	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	1.96	3.26
		U$_{19}$ - L$_{19}$	-191.17	10.02	-112.26			0.90	1.20	10.80	-121.04	0.00	0.00	Vehicle	Vehicle	-----	-510.76	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	44.14	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	2.11	3.51
		U$_{20}$ - L$_{20}$	-212.33	10.03	-118.43			0.90	1.20	10.81	-127.69	0.00	0.00	Vehicle	Vehicle	-----	-552.70	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	42.43	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	1.74	2.90
	Structure 2	U$_1$ - L$_0$	-206.69	-112.00	12.95			0.90	1.18	13.78	-119.25	0.00	0.00	Vehicle	Vehicle	-----	-527.07	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	2.19	3.65
		U$_1$ - L$_1$	-188.76	-97.90	13.29			0.90	1.18	14.15	-104.23	0.00	0.00	Vehicle	Vehicle	-----	-471.22	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	2.78	4.64
		U$_2$ - L$_2$	-155.92	-93.51	14.02			0.90	1.18	14.93	-99.55	0.00	0.00	Vehicle	Vehicle	-----	-418.40	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.52	4.20
		U$_3$ - L$_3$	-134.58	-92.02	15.89			0.90	1.18	16.92	-97.97	0.00	0.00	Vehicle	Vehicle	-----	-387.22	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	43.67	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	1.94	3.24
		U$_4$ - L$_4$	-64.49	-67.15	15.18			0.90	1.18	16.16	-71.50	0.00	0.00	Vehicle	Vehicle	-----	-238.75	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.31	3.84
		U$_5$ - L$_5$	-19.94	-61.73	20.95			0.90	1.18	22.31	-65.73	0.00	0.00	Vehicle	Vehicle	22.42	-168.33	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	12.04	20.06	2.93	4.88
		U$_6$ - L$_6$	40.08	-38.05	38.32			0.90	1.18	40.80	-40.51	0.00	0.00	Vehicle	Vehicle	140.51	-35.67	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	5.70	9.50	5.66	9.43
		U$_7$ - L$_7$	-26.04	-2.15	-14.93			0.90	1.18	-2.29	-15.89	0.00	0.00	Vehicle	Vehicle	-----	-68.28	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.87	19.79
		U$_8$ - L$_8$	-125.25	19.70	-74.81			0.90	1.18	20.98	-79.65	0.00	0.00	Vehicle	Vehicle	-----	-335.40	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	3.05	5.09
		U$_9$ - L$_9$	-174.53	8.65	-95.34			0.90	1.18	9.21	-101.51	0.00	0.00	Vehicle	Vehicle	-----	-446.84	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.05	5.09
		U$_{10}$ - L$_{10}$	-202.66	-0.89	-105.23			0.90	1.18	-0.95	-112.04	0.00	0.00	Vehicle	Vehicle	-----	-506.21	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.08	5.14
		U$_{11}$ - L$_{11}$	-229.53	3.07	-116.25			0.90	1.18	3.27	-123.77	0.00	0.00	Vehicle	Vehicle	-----	-566.56	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	2.59	4.32
		U$_{12}$ - L$_{12}$	-250.85	2.22	-122.33			0.90	1.18	2.36	-130.24	0.00	0.00	Vehicle	Vehicle	-----	-608.30	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	2.54	4.23
		U$_{13}$ - L$_{13}$	-223.32	12.66	-116.62			0.90	1.18	13.48	-124.17	0.00	0.00	Vehicle	Vehicle	-----	-559.35	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.26	3.76
		U$_{14}$ - L$_{14}$	-343.31	-93.00	-112.13			0.90	1.18	-99.02	-119.38	0.00	0.00	Vehicle	Vehicle	-----	-704.97	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	3.56	5.93
		U$_{15}$ - L$_{15}$	-123.14	-96.98	12.92			0.90	1.17	13.59	-102.01	0.00	0.00	Vehicle	Vehicle	-----	-381.10	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.33	5.56
		U$_{16}$ - L$_{16}$	-156.70	-93.82	9.96			0.90	1.17	10.48	-98.71	0.00	0.00	Vehicle	Vehicle	-----	-417.57	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.10	5.16
		U$_{17}$ - L$_{17}$	-147.91	-98.01	9.70			0.90	1.17	10.20	-103.12	0.00	0.00	Vehicle	Vehicle	-----	-415.71	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	2.77	4.61
		U$_{18}$ - L$_{18}$	-142.22	-96.85	12.16			0.90	1.17	12.80	-101.89	0.00	0.00	Vehicle	Vehicle	-----	-405.66	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.56	4.27
		U$_{19}$ - L$_{19}$	-111.48	-84.88	13.56			0.90	1.17	14.26	-89.30	0.00	0.00	Vehicle	Vehicle	-----	-338.42	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	2.69	4.48
		U$_{20}$ - L$_{20}$	-76.55	-74.80	14.44			0.90	1.17	15.20	-78.69	0.00	0.00	Vehicle	Vehicle	-----	-270.02	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	2.28	3.79
		U$_{21}$ - L$_{21}$	-44.31	-66.37	21.84			0.90	1.17	22.98	-69.83	0.00	0.00	Vehicle	Vehicle	-----	-208.90	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.54	4.24
		U$_{22}$ - L$_{22}$	-21.25	-0.77	-13.64			0.90	1.17	-0.81	-14.35	0.00	0.00	Vehicle	Vehicle	-----	-58.72	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	13.40	22.33
		U$_{23}$ - L$_{23}$	-39.07	29.65	-58.24			0.90	1.17	31.20	-61.27	0.00	0.00	Vehicle	Vehicle	16.81	-183.54	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	8.98	14.96	2.95	4.92
		U$_{24}$ - L$_{24}$	-74.84	22.56	-73.33			0.90	1.17	23.73	-77.15	0.00	0.00	Vehicle	Vehicle	-----	-264.45	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	2.34	3.89
		U$_{25}$ - L$_{25}$	-103.27	16.62	-89.76			0.90	1.17	17.48	-94.43	0.00	0.00	Vehicle	Vehicle	-----	-338.85	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	2.59	4.32
		U$_{26}$ - L$_{26}$	-120.22	15.68	-99.72			0.90	1.17	16.49	-104.92	0.00	0.00	Vehicle	Vehicle	-----	-383.61	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.61	4.36
		U$_{27}$ - L$_{27}$	-123.93	12.95	-107.88			0.90	1.17	13.62	-113.50	0.00	0.00	Vehicle	Vehicle	-----	-407.02	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	2.64	4.40
		U$_{28}$ - L$_{28}$	-135.60	11.78	-114.42			0.90	1.17	12.39	-120.38	0.00	0.00	Vehicle	Vehicle	-----	-437.10	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	2.64	4.41
		U$_{29}$ - L$_{29}$	-116.87	6.89	-109.90			0.90	1.17	7.25	-115.63	0.00	0.00	Vehicle	Vehicle	-----	-402.46	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.97	4.96
		U$_{30}$ - L$_{30}$	-262.02	-88.41	-110.22			0.90	1.18	-94.13	-117.35	0.00	0.00	Vehicle	Vehicle	-----	-594.88	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	4.04	6.73
		U$_{31}$ - L$_{31}$	-156.38	-104.82	16.20			0.90	1.18	17.25	-111.60	0.00	0.00	Vehicle	Vehicle	-----	-445.09	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.87	4.78
		U$_{32}$ - L$_{32}$	-185.51	-104.96	11.24			0.90	1.18	11.97	-111.75	0.00	0.00	Vehicle	Vehicle	-----	-483.29	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals	Structure 1	U$_1$ - L$_1$	87.33	91.05	-24.54			0.90	1.24	101.37	-27.32	0.00	0.00	Vehicle	Vehicle	333.15	------	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	------	------	10.00	------	------	32.00	------	------	6.56	------	------	------	------	------	2.95	4.92	------	------
		U$_1$ - L$_2$	23.35	67.71	5.55			0.90	1.24	75.38	6.18	0.00	0.00	Vehicle	Vehicle	193.68	------	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	3.22	5.36	------	------
		U$_3$ - L$_3$	-37.85	49.59	-11.43			0.90	1.24	55.21	-12.73	0.00	0.00	Vehicle	Vehicle	70.40	-76.78	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	5.06	8.43	13.97	23.29
		U$_3$ - L$_4$	-92.19	-23.04	-20.25			0.90	1.24	-22.54	-25.65	0.00	0.00	Vehicle	Vehicle	------	-175.43	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.71	9.52
		U$_3$ - L$_4$	143.37	16.01	41.58			0.90	1.24	46.29	17.83	0.00	0.00	Vehicle	Vehicle	286.67	------	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	------	------	5.37	------	------	------	------	------	4.94	8.24	------	------
		U$_5$ - L$_5$	177.90	106.93	-4.10			0.90	1.24	119.05	-4.56	0.00	0.00	Vehicle	Vehicle	489.20	------	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.38	3.97	------	------
		U$_5$ - L$_6$	184.42	124.26	0.10			0.90	1.24	138.34	0.11	0.00	0.00	Vehicle	Vehicle	539.48	------	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.02	3.37	------	------
		U$_7$ - L$_7$	180.02	119.93	-1.30			0.90	1.24	133.52	-1.45	0.00	0.00	Vehicle	Vehicle	523.32	------	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.11	3.52	------	------
		U$_9$ - L$_8$	268.98	116.74	-12.00			0.90	1.20	125.87	-12.94	0.00	0.00	Vehicle	Vehicle	622.38	------	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	------	------	16.25	------	------	26.00	------	------	8.00	------	------	------	------	------	3.30	5.51	------	------
		U$_9$ - L$_{10}$	278.85	111.38	-11.20			0.90	1.20	120.09	-12.07	0.00	0.00	Vehicle	Vehicle	622.70	------	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	------	------	16.25	------	------	26.00	------	------	8.00	------	------	------	------	------	3.41	5.69	------	------
		U$_{10}$ - L$_{11}$	285.04	107.62	2.54			0.90	1.20	116.03	2.74	0.00	0.00	Vehicle	Vehicle	621.96	------	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	------	------	16.25	------	------	32.50	------	------	8.00	------	------	------	------	------	3.24	5.39	------	------
		U$_{11}$ - L$_{12}$	250.60	105.64	-3.17			0.90	1.20	113.90	-3.42	0.00	0.00	Vehicle	Vehicle	572.55	------	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	------	------	6.06	------	------	------	------	------	2.78	4.63	------	------
		U$_{12}$ - L$_{13}$	189.65	98.19	-22.69			0.90	1.20	105.87	-24.46	0.00	0.00	Vehicle	Vehicle	475.93	------	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	------	------	8.89	------	------	------	------	------	2.50	4.17	------	------
		U$_{13}$ - L$_{14}$	123.32	71.34	-31.46			0.90	1.20	76.92	-33.91	0.00	0.00	Vehicle	Vehicle	326.97	------	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	2.37	3.96	------	------
		U$_{13}$ - L$_{14}$	-24.41	47.91	-50.52			0.90	1.20	51.65	-54.47	0.00	0.00	Vehicle	Vehicle	80.18	-149.75	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	5.25	8.75	3.35	5.58
		U$_{15}$ - L$_{15}$	48.53	73.91	-33.07			0.90	1.20	79.69	-35.66	0.00	0.00	Vehicle	Vehicle	235.75	-14.16	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	2.85	4.76	6.28	10.46
		U$_{15}$ - L$_{16}$	146.59	102.63	-9.80			0.90	1.20	110.65	-10.57	0.00	0.00	Vehicle	Vehicle	430.31	------	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	------	------	5.37	------	------	------	------	------	2.05	3.42	------	------
		U$_{17}$ - L$_{17}$	182.46	111.22	-15.09			0.90	1.20	119.92	-16.27	0.00	0.00	Vehicle	Vehicle	497.01	------	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.34	3.90	------	------
		U$_{19}$ - L$_{18}$	223.82	119.81	-12.65			0.90	1.20	129.18	-13.64	0.00	0.00	Vehicle	Vehicle	570.87	------	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	------	------	6.59	------	------	------	------	------	2.26	3.77	------	------
		U$_{20}$ - L$_{19}$	232.72	113.26	-10.58			0.90	1.20	122.11	-11.41	0.00	0.00	Vehicle	Vehicle	567.11	------	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	------	------	6.59	------	------	------	------	------	2.35	3.91	------	------
	Structure 2	U$_1$ - L$_1$	213.54	104.44	-13.81			0.90	1.18	111.19	-14.71	0.00	0.00	Vehicle	Vehicle	518.52	------	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	------	------	6.06	------	------	------	------	------	3.04	5.07	------	------
		U$_1$ - L$_2$	200.48	113.54	-16.22			0.90	1.18	120.89	-17.27	0.00	0.00	Vehicle	Vehicle	522.56	------	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	------	------	6.06	------	------	------	------	------	2.86	4.77	------	------
		U$_3$ - L$_3$	172.81	105.61	-18.15			0.90	1.18	112.44	-19.32	0.00	0.00	Vehicle	Vehicle	468.28	------	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.55	4.25	------	------
		U$_3$ - L$_4$	147.16	95.83	-21.35			0.90	1.18	102.03	-22.73	0.00	0.00	Vehicle	Vehicle	412.37	------	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	------	------	4.91	------	------	------	------	------	2.53	4.21	------	------
		U$_5$ - L$_5$	49.10	80.45	-28.09			0.90	1.18	85.66	-29.91	0.00	0.00	Vehicle	Vehicle	249.43	-0.96	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	67.91	28.23	-405.09	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	2.65	4.42	7.24	12.06
		U$_5$ - L$_6$	2.96	72.17	-42.12			0.90	1.18	76.84	-44.85	0.00	0.00	Vehicle	Vehicle	170.33	-93.31	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	3.32	5.53	4.40	7.33
		U$_7$ - L$_7$	-85.74	45.60	-69.53			0.90	1.18	48.55	-74.03	0.00	0.00	Vehicle	Vehicle	------	-271.86	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	2.22	3.69
		U$_7$ - L$_8$	140.30	86.12	-35.33			0.90	1.18	91.70	-37.61	0.00	0.00	Vehicle	Vehicle	381.06	------	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	------	------	15.75	------	------	42.00	------	------	8.89	------	------	------	------	------	3.03	5.05	------	------
		U$_9$ - L$_8$	204.22	108.02	-16.78			0.90	1.18	115.01	-17.86	0.00	0.00	Vehicle	Vehicle	514.68	------	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	------	------	6.59	------	------	------	------	------	2.64	4.40	------	------
		U$_9$ - L$_9$	234.87	116.77	-7.48			0.90	1.18	124.33	-7.97	0.00	0.00	Vehicle	Vehicle	574.70	------	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	------	------	6.06	------	------	------	------	------	2.62	4.36	------	------
		U$_{11}$ - L$_{10}$	263.10	127.66	1.94			0.90	1.18	135.92	2.06	0.00	0.00	Vehicle	Vehicle	636.52	------	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	------	------	5.62	------	------	------	------	------	2.57	4.28	------	------
		U$_{11}$ - L$_{11}$	274.02	127.54	0.09			0.90	1.18	135.80	0.09	0.00	0.00	Vehicle	Vehicle	650.45	------	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	------	------	5.62	------	------	------	------	------	2.52	4.20	------	------
		U$_{13}$ - L$_{12}$	254.94	124.95	-13.86			0.90	1.18	133.04	-14.75	0.00	0.00	Vehicle	Vehicle	619.67	------	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	------	------	6.06	------	------	------	------	------	2.36	3.93	------	------
		U$_{13}$ - L$_{13}$	217.71	110.42	-14.64			0.90	1.18	117.57	-15.59	0.00	0.00	Vehicle	Vehicle	537.74	------	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	------	------	6.06	------	------	------	------	------	2.86	4.76	------	------
		U$_{15}$ - L$_{15}$	110.05	89.89	-13.49			0.90	1.17	94.57	-14.20	0.00	0.00	Vehicle	Vehicle	347.96	------	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	3.43	5.72	------	------
		U$_{15}$ - L$_{16}$	132.30	99.90	-14.41			0.90	1.17	105.11	-15.16	0.00	0.00	Vehicle	Vehicle	399.71	------	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.96	4.93	------	------
		U$_{17}$ - L$_{17}$	172.89	116.12	-10.17			0.90	1.17	122.17	-10.70	0.00	0.00	Vehicle	Vehicle	489.46	------	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	------	------	6.59	------	------	------	------	------	2.64	4.40	------	------
		U$_{17}$ - L$_{18}$	160.19	108.28	-12.11			0.90	1.17	113.92	-12.75	0.00	0.00	Vehicle	Vehicle	455.07	------	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.58	4.31	------	------
		U$_{19}$ - L$_{19}$	152.35	101.03	-10.17			0.90	1.17	106.29	-10.70	0.00	0.00	Vehicle	Vehicle	428.34	------	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.81	4.69	------	------
		U$_{20}$ - L$_{20}$	120.69	98.87	-19.22			0.90	1.17	104.02	-20.22	0.00	0.00	Vehicle	Vehicle	382.26	------	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	------	------	15.75	------	------	42.00	------	------	8.89	------	------	------	------	------	2.78	4.64	------	------
		U$_{20}$ - L$_{21}$	76.08	86.29	-27.04			0.90	1.17	90.78	-28.45	0.00	0.00	Vehicle	Vehicle	295.60	------	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	2.32	3.87	------	------
		U$_{21}$ - L$_{22}$	31.46	67.29	-44.55			0.90	1.17	70.79	-46.88	0.00	0.00	Vehicle	Vehicle	194.28	-60.67	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	3.36	5.60	4.57	7.62
		U$_{23}$ - L$_{22}$	24.30	53.44	-52.35			0.90	1.17	56.22	-55.08	0.00	0.00	Vehicle	Vehicle	153.40	-87.75	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	4.31	7.18	3.78	6.31
		U$_{23}$ - L$_{23}$	72.26	79.50	-31.11			0.90	1.17	83.64	-32.73	0.00	0.00	Vehicle	Vehicle	275.16	------	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	2.55	4.25	------	------
		U$_{24}$ - L$_{24}$	112.13	100.62	-19.72			0.90	1.17	105.86	-20.75	0.00	0.00	Vehicle	Vehicle	375.13	------	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	------	------	15.75	------	------	42.00	------	------	8.89	------	------	------	------	------	2.78	4.64	------	------
		U$_{25}$ - L$_{25}$	112.13	100.62	-19.72			0.90	1.17	105.86	-20.75	0.00	0.00	Vehicle	Vehicle	375.13	------	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	------	------	15.75	------	------	42.00	------	------	8.89	------	------	------	------	------	2.78	4.64	------	------
		U$_{25}$ - L$_{26}$	127.84	109.15	-20.01			0.90	1.17	114.83	-21.05	0.00	0.00	Vehicle	Vehicle	415.00	------	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.73	4.55	------	------
		U$_{27}$ - L$_{26}$	132.67	115.22	-16.21			0.90	1.17	121.23	-17.05	0.00	0.00	Vehicle	Vehicle	435.12	------	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.56	4.27	------	------
		U$_{27}$ - L$_{27}$	137.94	118.46	-13.96			0.90	1.17	124.63	-14.69	0.00	0.00	Vehicle	Vehicle	449.36	------	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	------	------	6.59	------	------	------	------	------	2.75	4.59	------	------
		U$_{29}$ - L$_{28}$	122.80	113.69	-8.25			0.90	1.17	119.62	-8.68	0.00	0.00	Vehicle	Vehicle	418.80	------	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	2.65	4.41	------	------
		U$_{29}$ - L$_{29}$	102.75	103.14	-6.45			0.90	1.17	108.51	-6.79	0.00	0.00	Vehicle	Vehicle	368.68	------	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	------	------	7.23	------	------	------	------	------	3.03	5.05	------	------
		U$_{31}$ - L$_{31}$	140.07	96.06	-16.67			0.90	1.18	102.28	-17.75	0.00	0.00	Vehicle	Vehicle	403.69	------	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	------	------	6.06	------	------	------	------	------	3.74	6.23	------	------
		U$_{31}$ - L$_{32}$	167.39	109.37	-18.46			0.90	1.18	116.45	-19.66	0.00	0.00	Vehicle	Vehicle	469.91	------	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	------	------	6.06	------	------	------	------	------	3.14	5.24	------	------
		U$_{33}$ - L$_{32}$	202.10	116.69	-10.78			0.90	1.18	124.24	-11.47	0.00	0.00	Vehicle	Vehicle	531.93	------	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	------	------	5.62	------	------	------	------	------	3.10	5.17	------	------
		U$_{33}$ - L$_{34}$	201.91	112.65	-3.38			0.90	1.18	119.94	-3.60	0.00	0.00	Vehicle	Vehicle	522.36	------	0.00	33.27	33.2657	1

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.64	14.30	-102.00			0.75	1.24	13.27	-94.63	0.00	0.00	Vehicle	Vehicle	-----	-273.46	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.25	5.42
		U_1 - U_2	-61.57	36.10	-147.80			0.75	1.24	33.49	-137.12	0.00	0.00	Vehicle	Vehicle	-----	-377.14	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.20	3.67
		U_2 - U_3	-26.99	50.30	-145.90			0.75	1.24	46.67	-135.36	0.00	0.00	Vehicle	Vehicle	66.02	-328.36	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	8.98	14.96	2.39	3.98
		U_3 - U_4	32.92	65.00	-138.30			0.75	1.24	60.30	-128.31	0.00	0.00	Vehicle	Vehicle	173.46	-235.20	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.35	10.58	2.80	4.66
		U_4 - U_5	34.77	60.60	-84.80			0.75	1.24	56.22	-78.67	0.00	0.00	Vehicle	Vehicle	167.02	-125.25	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.79	11.32	4.58	7.63
		U_5 - U_6	124.13	-58.60	-44.30			0.75	1.24	-41.10	-54.37	0.00	0.00	Vehicle	Vehicle	72.32	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_6 - U_7	223.19	-11.40	-72.30			0.75	1.24	-10.58	-67.08	0.00	0.00	Vehicle	Vehicle	267.23	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_7 - U_8	331.76	-25.40	0.30			0.75	1.24	0.28	-23.56	0.00	0.00	Vehicle	Vehicle	431.89	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	1678.08	2796.79	-----	-----
		U_8 - U_9	267.61	48.40	-8.00			0.75	1.20	43.49	-7.19	0.00	0.00	Vehicle	Vehicle	442.12	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	9.26	15.43	-----	-----
		U_9 - U_{10}	89.12	65.70	-72.20			0.75	1.20	59.03	-64.87	0.00	0.00	Vehicle	Vehicle	243.75	-24.70	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.30	10.50	6.35	10.58
		U_{10} - U_{11}	-76.81	56.20	-119.80			0.75	1.20	50.50	-107.64	0.00	0.00	Vehicle	Vehicle	9.56	-333.07	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.34	15.57	2.90	4.84
		U_{11} - U_{12}	-230.69	46.40	-164.90			0.75	1.20	41.69	-148.16	0.00	0.00	Vehicle	Vehicle	-----	-620.91	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	44.59	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.36	3.93
		U_{12} - U_{13}	-341.88	41.20	-196.10			0.75	1.20	37.02	-176.20	0.00	0.00	Vehicle	Vehicle	-----	-826.20	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.71	4.52
		U_{13} - U_{14}	-421.62	-77.40	-217.80			0.75	1.20	-69.54	-195.69	0.00	0.00	Vehicle	Vehicle	-----	-972.11	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.78	4.63
		U_{14} - U_{15}	-422.51	39.30	-218.00			0.75	1.20	35.31	-195.87	0.00	0.00	Vehicle	Vehicle	-----	-973.65	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.77	4.62
		U_{15} - U_{16}	-439.94	-146.90	-224.80			0.75	1.20	-131.99	-201.98	0.00	0.00	Vehicle	Vehicle	-----	-1009.56	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.74	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.64	4.39
		U_{16} - U_{17}	-422.43	-98.20	-138.30			0.75	1.20	-88.23	-124.26	0.00	0.00	Vehicle	Vehicle	-----	-818.39	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.37	7.28
		U_{17} - U_{18}	-340.94	-137.90	-68.30			0.75	1.20	-61.37	-123.90	0.00	0.00	Vehicle	Vehicle	-----	-711.67	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	3.05	5.08
		U_{18} - U_{19}	-247.15	-8.10	-101.50			0.75	1.20	-7.28	-91.20	0.00	0.00	Vehicle	Vehicle	-----	-518.89	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	44.54	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	2.83	4.72
		U_{19} - U_{20}	-131.71	-35.90	-7.20			0.75	1.20	-6.47	-32.26	0.00	0.00	Vehicle	Vehicle	-----	-241.11	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	10.15	16.92
		U_0 - U_1	-131.51	10.30	-65.70			0.75	1.18	9.14	-58.29	0.00	0.00	Vehicle	Vehicle	-----	-297.26	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.31	8.85
		U_1 - U_2	-247.03	22.00	-131.40			0.75	1.18	19.52	-116.58	0.00	0.00	Vehicle	Vehicle	-----	-573.73	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.80	4.67
		U_2 - U_3	-347.15	34.90	-173.50			0.75	1.18	30.97	-153.94	0.00	0.00	Vehicle	Vehicle	-----	-784.83	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.85	4.74
		U_3 - U_4	-437.07	-155.30	-208.80			0.75	1.18	-137.79	-185.26	0.00	0.00	Vehicle	Vehicle	-----	-969.58	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.93	4.88
		U_4 - U_5	-468.70	59.50	-231.00			0.75	1.18	52.79	-204.95	0.00	0.00	Vehicle	Vehicle	-----	-1053.38	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.98	4.97
		U_5 - U_6	-471.03	70.40	-226.80			0.75	1.18	62.46	-201.23	0.00	0.00	Vehicle	Vehicle	-----	-1048.33	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.03	5.05
		U_6 - U_7	-414.41	78.80	-222.90			0.75	1.18	69.92	-197.77	0.00	0.00	Vehicle	Vehicle	-----	-967.23	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.81	4.69
		U_7 - U_8	-413.45	78.90	-213.90			0.75	1.18	70.00	-189.78	0.00	0.00	Vehicle	Vehicle	-----	-948.68	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.93	4.89
		U_8 - U_9	-321.98	81.40	-139.70			0.75	1.18	72.22	-123.95	0.00	0.00	Vehicle	Vehicle	-----	-687.13	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.89	6.49
		U_9 - U_{10}	-182.11	89.10	-160.60			0.75	1.18	79.05	-142.49	0.00	0.00	Vehicle	Vehicle	-----	-545.47	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.96	4.94
		U_{10} - U_{11}	-32.58	96.00	-125.80			0.75	1.18	85.18	-111.62	0.00	0.00	Vehicle	Vehicle	142.20	-284.18	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	6.64	11.07	3.96	6.60
		U_{11} - U_{12}	133.59	-34.40	-49.30			0.75	1.18	-30.52	-43.74	0.00	0.00	Vehicle	Vehicle	107.54	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{12} - U_{13}	289.99	34.60	-48.40			0.75	1.18	30.70	-42.94	0.00	0.00	Vehicle	Vehicle	443.50	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	16.60	27.66	-----	-----
		U_{13} - U_{14}	434.76	-13.80	-25.50			0.75	1.18	-12.24	-22.62	0.00	0.00	Vehicle	Vehicle	538.66	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{14} - U_{15}	474.45	55.70	-6.10			0.75	1.17	48.83	-5.35	0.00	0.00	Vehicle	Vehicle	722.59	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	13.39	22.32	-----	-----
		U_{15} - U_{16}	383.28	67.00	-28.70			0.75	1.17	58.74	-25.16	0.00	0.00	Vehicle	Vehicle	625.53	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	9.08	15.14	-----	-----
		U_{16} - U_{17}	279.57	72.20	-67.50			0.75	1.17	63.30	-59.18	0.00	0.00	Vehicle	Vehicle	500.60	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	7.11	-----	-----	7.25	12.08	-----	-----
		U_{17} - U_{18}	172.63	69.80	-93.30			0.75	1.17	61.20	-81.80	0.00	0.00	Vehicle	Vehicle	357.01	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	5.82	9.70	-----	-----
		U_{18} - U_{19}	74.36	60.90	-134.90			0.75	1.17	53.39	-118.27	0.00	0.00	Vehicle	Vehicle	212.36	-159.59	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	7.78	12.96	3.66	6.10
		U_{19} - U_{20}	-10.01	54.00	-152.60			0.75	1.17	47.34	-133.79	0.00	0.00	Vehicle	Vehicle	89.56	-302.90	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	10.52	17.54	3.06	5.10
	Structure 2	U_{20} - U_{21}	-62.06	31.10	-166.70			0.75	1.17	27.27	-146.15	0.00	0.00	Vehicle	Vehicle	-----	-397.34	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.18	5.30
		U_{21} - U_{22}	-88.74	42.50	-175.20			0.75	1.17	37.26	-153.61	0.00	0.00	Vehicle	Vehicle	-----	-448.17	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.92	4.87
		U_{22} - U_{23}	-88.92	42.20	-171.40			0.75	1.17	37.00	-150.27	0.00	0.00	Vehicle	Vehicle	-----	-441.19	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.99	4.98
		U_{23} - U_{24}	-76.67	52.30	-125.80			0.75	1.17	45.85	-110.30	0.00	0.00	Vehicle	Vehicle	-----	-338.64	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.13	6.89
		U_{24} - U_{25}	-37.64	61.00	-155.10			0.75	1.17	53.48	-135.98	0.00	0.00	Vehicle	Vehicle	66.94	-343.57	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.62	16.04	2.89	4.82
		U_{25} - U_{26}	37.23	-89.30	-83.10			0.75	1.17	-72.86	-78.29	0.00	0.00	Vehicle	Vehicle	-----	-121.24	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.25	8.74
		U_{26} - U_{27}	128.02	-49.80	-69.70			0.75	1.17	-43.66	-61.11	0.00	0.00	Vehicle	Vehicle	71.82	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	233.68	-27.90	-31.90			0.75	1.17	-24.46	-27.97	0.00	0.00	Vehicle	Vehicle	250.78	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{28} - U_{29}	337.65	48.80	-42.40			0.75	1.17	42.79	-37.17	0.00	0.00	Vehicle	Vehicle	531.65	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.11	21.85	-----	-----
		U_{29} - U_{30}	437.10	-6.60	-20.60			0.75	1.17	-5.79	-18.06	0.00	0.00	Vehicle	Vehicle	555.69	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{30} - U_{31}	420.53	63.70	-6.10			0.75	1.18	56.52	-5.41	0.00	0.00	Vehicle	Vehicle	669.14	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	12.14	20.24	-----	-----
		U_{31} - U_{32}	300.69	85.40	-47.10			0.75	1.18	75.77	-41.79	0.00	0.00	Vehicle	Vehicle	555.07	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.49	-3.70	-3.40			0.75	1.24	-3.15	-3.43	0.00	0.00	Vehicle	Vehicle	4.20	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	50.81	-20.90	92.90			0.75	1.24	86.19	-19.39	0.00	0.00	Vehicle	Vehicle	252.80	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	3.15	5.24	-----	-----
		L$_2$ - L$_3$	61.22	-35.60	133.70			0.75	1.24	124.04	-33.03	0.00	0.00	Vehicle	Vehicle	348.34	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	2.94	4.90	-----	-----
		L$_3$ - L$_4$	25.70	-49.50	84.20			0.75	1.24	78.12	-45.92	0.00	0.00	Vehicle	Vehicle	202.66	-66.09	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	4.94	8.23	7.69	12.82
		L$_4$ - L$_5$	-118.45	55.30	102.90			0.75	1.24	95.47	51.30	0.00	0.00	Vehicle	Vehicle	52.85	-42.83	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	4.48	7.46	-----	-----
		L$_5$ - L$_6$	-217.80	-87.50	52.30			0.75	1.24	48.52	-81.18	0.00	0.00	Vehicle	Vehicle	-----	-459.03	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	3.26	5.44
		L$_6$ - L$_7$	-320.36	-17.70	12.80			0.75	1.24	11.88	-16.42	0.00	0.00	Vehicle	Vehicle	-----	-452.04	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	22.82	38.03
		L$_7$ - L$_8$	-417.18	-67.80	0.00			0.75	1.24	0.00	-62.90	0.00	0.00	Vehicle	Vehicle	-----	-678.63	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	7.46	12.44
		L$_8$ - L$_9$	-410.79	-49.50	-45.80			0.75	1.20	-41.15	-44.48	0.00	0.00	Vehicle	Vehicle	-----	-630.39	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	10.64	17.73
		L$_9$ - L$_{10}$	-247.75	-65.80	10.70			0.75	1.20	9.61	-59.12	0.00	0.00	Vehicle	Vehicle	-----	-450.17	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	7.08	11.80
		L$_{10}$ - L$_{11}$	-65.21	-65.40	59.90			0.75	1.20	53.82	-58.76	0.00	0.00	Vehicle	Vehicle	31.83	-212.09	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	7.35	12.25	4.44	7.41
		L$_{11}$ - L$_{12}$	101.88	-59.10	109.70			0.75	1.20	98.57	-53.10	0.00	0.00	Vehicle	Vehicle	346.00	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	3.00	4.99	-----	-----
		L$_{12}$ - L$_{13}$	264.09	-48.90	146.20			0.75	1.20	131.36	-43.94	0.00	0.00	Vehicle	Vehicle	627.93	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	3.25	5.41	-----	-----
		L$_{13}$ - L$_{14}$	373.73	-44.70	187.70			0.75	1.20	168.65	-40.16	0.00	0.00	Vehicle	Vehicle	851.26	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	3.32	5.54	-----	-----
		L$_{14}$ - L$_{15}$	476.34	94.10	184.60			0.75	1.20	165.86	84.55	0.00	0.00	Vehicle	Vehicle	978.61	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	3.97	6.62	-----	-----
		L$_{15}$ - L$_{16}$	459.97	57.80	175.90			0.75	1.20	158.05	51.93	0.00	0.00	Vehicle	Vehicle	940.39	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	4.23	7.05	-----	-----
		L$_{16}$ - L$_{17}$	381.37	126.40	138.60			0.75	1.20	124.53	113.57	0.00	0.00	Vehicle	Vehicle	765.60	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	4.02	6.71	-----	-----
		L$_{17}$ - L$_{18}$	288.98	53.10	68.90			0.75	1.20	61.91	47.71	0.00	0.00	Vehicle	Vehicle	509.80	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	5.76	9.60	-----	-----
		L$_{18}$ - L$_{19}$	176.20	32.30	28.70			0.75	1.20	29.02	25.79	0.00	0.00	Vehicle	Vehicle	291.94	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	6.75	11.25	-----	-----
		L$_{19}$ - L$_{20}$	69.74	-13.40	16.30			0.75	1.20	14.65	-12.04	0.00	0.00	Vehicle	Vehicle	122.40	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	17.73	29.56	-----	-----
		L$_0$ - L$_1$	24.59	-1.50	-7.60			0.75	1.18	-1.33	-6.74	0.00	0.00	Vehicle	Vehicle	29.08	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	138.59	-11.10	71.00			0.75	1.18	62.99	-9.85	0.00	0.00	Vehicle	Vehicle	316.65	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	4.71	7.85	-----	-----
		L$_2$ - L$_3$	252.83	-24.00	118.90			0.75	1.18	105.49	-21.29	0.00	0.00	Vehicle	Vehicle	557.25	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	4.11	6.86	-----	-----
		L$_3$ - L$_4$	352.30	-36.90	163.20			0.75	1.18	144.80	-32.74	0.00	0.00	Vehicle	Vehicle	771.73	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	3.97	6.61	-----	-----
		L$_4$ - L$_5$	447.17	-49.80	189.80			0.75	1.18	168.40	-44.19	0.00	0.00	Vehicle	Vehicle	946.18	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	4.29	7.14	-----	-----
		L$_5$ - L$_6$	477.93	-62.00	215.60			0.75	1.18	191.29	-55.01	0.00	0.00	Vehicle	Vehicle	1035.78	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	4.12	6.87	-----	-----
		L$_6$ - L$_7$	482.68	-72.90	217.50			0.75	1.18	192.98	-64.68	0.00	0.00	Vehicle	Vehicle	1045.60	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	4.15	6.92	-----	-----
		L$_7$ - L$_8$	336.61	-87.50	170.80			0.75	1.18	151.54	-77.63	0.00	0.00	Vehicle	Vehicle	765.94	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	3.98	6.63	-----	-----
		L$_8$ - L$_9$	196.05	70.30	146.60			0.75	1.18	130.07	62.37	0.00	0.00	Vehicle	Vehicle	536.68	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	4.17	6.95	-----	-----
		L$_9$ - L$_{10}$	45.60	-94.90	100.70			0.75	1.18	89.35	-84.20	0.00	0.00	Vehicle	Vehicle	252.86	-123.16	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	5.48	9.14	5.51	9.18
		L$_{10}$ - L$_{11}$	-126.26	13.70	73.00			0.75	1.18	64.77	12.16	0.00	0.00	Vehicle	Vehicle	-----	-137.80	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L$_{11}$ - L$_{12}$	-284.87	-34.10	42.50			0.75	1.18	37.71	-30.26	0.00	0.00	Vehicle	Vehicle	-----	-435.88	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.81	21.35
		L$_{12}$ - L$_{13}$	-433.79	-39.90	-1.40			0.75	1.18	-1.24	-35.40	0.00	0.00	Vehicle	Vehicle	-----	-640.63	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	14.26	23.77
		L$_{13}$ - L$_{14}$	-552.65	-48.60	27.10			0.75	1.18	24.04	-43.12	0.00	0.00	Vehicle	Vehicle	-----	-811.87	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	13.39	22.32
		L$_{14}$ - L$_{15}$	-573.48	-63.80	-34.70			0.75	1.17	-30.42	-55.94	0.00	0.00	Vehicle	Vehicle	-----	-866.71	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.10	16.84
		L$_{15}$ - L$_{16}$	-492.94	-62.90	-2.20			0.75	1.17	-1.93	-55.15	0.00	0.00	Vehicle	Vehicle	-----	-760.31	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	8.51	14.19
		L$_{16}$ - L$_{17}$	-395.30	-72.70	23.40			0.75	1.17	20.52	-63.74	0.00	0.00	Vehicle	Vehicle	-----	-651.99	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	6.14	10.23
		L$_{17}$ - L$_{18}$	-288.04	-76.60	55.20			0.75	1.17	48.40	-67.16	0.00	0.00	Vehicle	Vehicle	-----	-519.97	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	3.93	6.54
		L$_{18}$ - L$_{19}$	-175.85	-73.50	84.20			0.75	1.17	73.82	-64.44	0.00	0.00	Vehicle	Vehicle	-----	-368.22	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	3.70	6.17
		L$_{19}$ - L$_{20}$	-78.08	-66.10	114.40			0.75	1.17	100.30	-57.95	0.00	0.00	Vehicle	Vehicle	115.82	-227.06	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.53	7.55	5.13	8.55
	Structure 2	L$_{20}$ - L$_{21}$	7.55	-59.60	144.80			0.75	1.17	126.95	-52.25	0.00	0.00	Vehicle	Vehicle	284.89	-103.40	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.52	7.54	9.44	15.73
		L$_{21}$ - L$_{22}$	59.07	-32.50	162.00			0.75	1.17	142.03	-28.49	0.00	0.00	Vehicle	Vehicle	384.52	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	3.83	6.38	-----	-----
		L$_{22}$ - L$_{23}$	71.98	-52.10	158.20			0.75	1.17	138.70	-45.68	0.00	0.00	Vehicle	Vehicle	394.10	-5.39	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	3.86	6.44	11.64	19.40
		L$_{23}$ - L$_{24}$	33.55	-60.80	141.70			0.75	1.17	124.24	-53.31	0.00	0.00	Vehicle	Vehicle	312.79	-71.89	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.50	7.49	9.54	15.90
		L$_{24}$ - L$_{25}$	-45.09	47.40	104.50			0.75	1.17	91.62	41.56	0.00	0.00	Vehicle	Vehicle	139.90	-----	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	-----	-----	6.40	-----	-----	6.40	-----	-----	4.74	7.90	-----	-----
		L$_{25}$ - L$_{26}$	-134.94	15.30	83.20			0.75	1.17	72.95	13.41	0.00	0.00	Vehicle	Vehicle	-----	-146.36	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{26}$ - L$_{27}$	-245.90	-21.50	58.00			0.75	1.17	50.85	-18.85	0.00	0.00	Vehicle	Vehicle	-----	-360.51	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	15.33	25.55
		L$_{27}$ - L$_{28}$	-351.78	-52.80	25.70			0.75	1.17	22.53	-46.29	0.00	0.00	Vehicle	Vehicle	-----	-557.61	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	9.02	15.03
		L$_{28}$ - L$_{29}$	-458.29	-39.70	0.60			0.75	1.17	0.53	-34.81	0.00	0.00	Vehicle	Vehicle	-----	-671.20	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	14.09	23.48
		L$_{29}$ - L$_{30}$	-542.18	-66.00	22.90			0.75	1.17	20.08	-57.87	0.00	0.00	Vehicle	Vehicle	-----	-830.21	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.09	16.82
		L$_{30}$ - L$_{31}$	-514.03	-62.30	-36.10			0.75	1.18	-32.03	-55.28	0.00	0.00	Vehicle	Vehicle	-----	-788.00	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.86	18.10
		L$_{31}$ - L$_{32}$	-411.21	-85.20	-7.10			0.75	1.18	-6.30	-75.59	0.00	0.00	Vehicle	Vehicle	-----	-698.36	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	P

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U$_0$ - L$_0$	-67.60	-151.15	14.43			0.75	1.24	13.39	-140.23	0.00	0.00	Vehicle	Vehicle	-----	-391.71	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	38.00	Fail	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.18	1.97
		U$_1$ - L$_1$	-24.06	-86.23	13.97			0.75	1.24	12.96	-80.00	0.00	0.00	Vehicle	Vehicle	-----	-204.62	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.46	4.10
		U$_2$ - L$_2$	12.88	-38.59	8.64			0.75	1.24	8.01	-35.80	0.00	0.00	Vehicle	Vehicle	34.09	-60.83	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	31.07	51.78	6.12	10.19
		U$_3$ - L$_3$	37.35	-33.16	26.20			0.75	1.24	24.30	-30.76	0.00	0.00	Vehicle	Vehicle	101.21	-18.10	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.64	16.06	7.58	12.63
		U$_4$ - L$_4$	-15.53	3.77	-2.46			0.75	1.24	3.50	-2.28	0.00	0.00	Vehicle	Vehicle	-----	-25.13	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	88.00	146.66
		U$_5$ - L$_5$	-92.52	17.20	-72.68			0.75	1.24	15.96	-67.43	0.00	0.00	Vehicle	Vehicle	-----	-266.37	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.96	4.93
		U$_6$ - L$_6$	-117.01	0.91	-91.53			0.75	1.24	0.84	-84.92	0.00	0.00	Vehicle	Vehicle	-----	-336.10	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.76	4.60
		U$_7$ - L$_7$	-127.49	0.26	-126.61			0.75	1.24	0.24	-117.47	0.00	0.00	Vehicle	Vehicle	-----	-420.24	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	42.27	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	1.70	2.83
		U$_8$ - L$_8$	-368.60	-136.00	-144.04			0.75	1.24	-126.17	-133.63	0.00	0.00	Vehicle	Vehicle	-----	-768.71	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.13	5.21
		U$_9$ - L$_9$	-214.45	-135.71	6.39			0.75	1.20	5.74	-121.94	0.00	0.00	Vehicle	Vehicle	-----	-542.99	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.46	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.12	3.53
		U$_{10}$ - L$_{10}$	-198.57	-122.82	-4.98			0.75	1.20	-4.47	-110.35	0.00	0.00	Vehicle	Vehicle	-----	-497.24	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.96	4.93
		U$_{11}$ - L$_{11}$	-171.30	-103.05	5.90			0.75	1.20	5.30	-92.59	0.00	0.00	Vehicle	Vehicle	-----	-423.30	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.05	5.08
		U$_{12}$ - L$_{12}$	-128.27	-79.50	13.22			0.75	1.20	11.88	-71.43	0.00	0.00	Vehicle	Vehicle	-----	-321.52	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.40	5.66
		U$_{13}$ - L$_{13}$	-96.55	-69.12	24.37			0.75	1.20	21.89	-62.10	0.00	0.00	Vehicle	Vehicle	-----	-260.08	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.74	4.57
		U$_{14}$ - L$_{14}$	-11.04	8.76	-3.39			0.75	1.20	7.87	-3.04	0.00	0.00	Vehicle	Vehicle	2.69	-20.95	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	33.45	55.75	65.83	109.72
		U$_{15}$ - L$_{15}$	-2.54	43.32	-53.13			0.75	1.20	38.92	-47.73	0.00	0.00	Vehicle	Vehicle	81.02	-106.73	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.63	11.05	4.28	7.14
		U$_{16}$ - L$_{16}$	-31.31	31.93	-64.30			0.75	1.20	28.69	-57.77	0.00	0.00	Vehicle	Vehicle	21.46	-165.88	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.60	16.00	3.22	5.37
		U$_{17}$ - L$_{17}$	-105.02	13.61	-85.78			0.75	1.20	12.22	-77.07	0.00	0.00	Vehicle	Vehicle	-----	-303.51	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.38	3.97
		U$_{18}$ - L$_{18}$	-126.66	6.61	-94.30			0.75	1.20	5.94	-84.73	0.00	0.00	Vehicle	Vehicle	-----	-348.24	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.82	4.71
		U$_{19}$ - L$_{19}$	-166.54	6.19	-103.20			0.75	1.20	5.56	-92.73	0.00	0.00	Vehicle	Vehicle	-----	-417.41	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.91	4.85
		U$_{20}$ - L$_{20}$	-184.30	5.75	-118.45			0.75	1.20	5.16	-106.42	0.00	0.00	Vehicle	Vehicle	-----	-470.18	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.24	3.74
		U$_0$ - L$_0$	-203.39	-118.91	15.74			0.75	1.18	13.96	-105.50	0.00	0.00	Vehicle	Vehicle	-----	-492.99	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.50	4.16
		U$_1$ - L$_1$	-176.11	-105.50	17.01			0.75	1.18	15.09	-93.61	0.00	0.00	Vehicle	Vehicle	-----	-431.76	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.18	5.30
		U$_2$ - L$_2$	-137.45	-90.78	16.10			0.75	1.18	14.28	-80.54	0.00	0.00	Vehicle	Vehicle	-----	-353.19	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.25	5.42
		U$_3$ - L$_3$	-117.61	-81.05	16.73			0.75	1.18	14.84	-71.91	0.00	0.00	Vehicle	Vehicle	-----	-308.70	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.79	4.65
		U$_4$ - L$_4$	-50.97	-69.22	18.03			0.75	1.18	15.99	-61.41	0.00	0.00	Vehicle	Vehicle	-----	-199.31	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.82	4.69
		U$_5$ - L$_5$	-13.79	-59.71	33.89			0.75	1.18	30.07	-52.98	0.00	0.00	Vehicle	Vehicle	47.23	-132.71	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.81	14.68	3.70	6.17
		U$_6$ - L$_6$	45.46	-41.56	45.94			0.75	1.18	40.76	-36.88	0.00	0.00	Vehicle	Vehicle	147.41	-20.80	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.63	9.38	6.30	10.50
		U$_7$ - L$_7$	-22.33	3.73	-9.58			0.75	1.18	3.31	-8.50	0.00	0.00	Vehicle	Vehicle	-----	-47.45	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	22.46	37.44
		U$_8$ - L$_8$	-120.06	30.25	-76.22			0.75	1.18	26.84	-67.62	0.00	0.00	Vehicle	Vehicle	-----	-302.59	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.64	6.07
		U$_9$ - L$_9$	-177.00	25.84	-89.15			0.75	1.18	22.93	-79.10	0.00	0.00	Vehicle	Vehicle	-----	-401.49	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.90	6.50
		U$_{10}$ - L$_{10}$	-205.85	19.27	-97.33			0.75	1.18	17.10	-86.35	0.00	0.00	Vehicle	Vehicle	-----	-454.71	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.98	6.63
		U$_{11}$ - L$_{11}$	-239.21	12.40	-106.20			0.75	1.18	11.00	-94.22	0.00	0.00	Vehicle	Vehicle	-----	-515.13	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.35	5.58
		U$_{12}$ - L$_{12}$	-257.92	2.85	-114.42			0.75	1.18	2.53	-101.52	0.00	0.00	Vehicle	Vehicle	-----	-555.26	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.21	5.36
		U$_{13}$ - L$_{13}$	-243.80	7.98	-120.35			0.75	1.18	7.08	-106.78	0.00	0.00	Vehicle	Vehicle	-----	-548.30	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.51	4.18
		U$_{14}$ - L$_{14}$	-420.84	-120.50	-134.43			0.75	1.18	-106.91	-119.27	0.00	0.00	Vehicle	Vehicle	-----	-805.52	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.17	5.29
		U$_{15}$ - L$_{15}$	-158.85	-123.98	13.13			0.75	1.17	11.51	-108.70	0.00	0.00	Vehicle	Vehicle	-----	-442.02	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.93	4.89
		U$_{16}$ - L$_{16}$	-174.03	-126.71	4.14			0.75	1.17	3.63	-111.09	0.00	0.00	Vehicle	Vehicle	-----	-466.93	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.66	4.43
		U$_{17}$ - L$_{17}$	-156.46	-105.58	11.91			0.75	1.17	10.44	-92.57	0.00	0.00	Vehicle	Vehicle	-----	-403.97	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.03	5.04
		U$_{18}$ - L$_{18}$	-142.20	-85.76	12.60			0.75	1.17	11.05	-75.19	0.00	0.00	Vehicle	Vehicle	-----	-347.78	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.47	5.79
		U$_{19}$ - L$_{19}$	-113.66	-84.03	19.87			0.75	1.17	17.42	-73.68	0.00	0.00	Vehicle	Vehicle	-----	-307.39	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.24	5.40
	Structure 2	U$_{20}$ - L$_{20}$	-76.52	-71.55	24.73			0.75	1.17	21.68	-62.73	0.00	0.00	Vehicle	Vehicle	-----	-235.38	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	2.86	4.76
		U$_{21}$ - L$_{21}$	-45.78	-55.97	31.33			0.75	1.17	27.47	-49.08	0.00	0.00	Vehicle	Vehicle	0.00	-165.84	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.34	17.24	3.60	6.01
		U$_{22}$ - L$_{22}$	-17.71	7.49	-9.26			0.75	1.17	6.56	-8.12	0.00	0.00	Vehicle	Vehicle	-----	-40.61	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	23.96	39.93
		U$_{23}$ - L$_{23}$	-30.66	36.94	-59.29			0.75	1.17	32.38	-51.98	0.00	0.00	Vehicle	Vehicle	30.30	-152.49	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.49	14.15	3.58	5.96
		U$_{24}$ - L$_{24}$	-62.03	35.84	-70.04			0.75	1.17	31.42	-61.41	0.00	0.00	Vehicle	Vehicle	-----	-213.68	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.06	5.10
		U$_{25}$ - L$_{25}$	-103.10	25.70	-84.21			0.75	1.17	22.54	-73.83	0.00	0.00	Vehicle	Vehicle	-----	-294.00	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.32	5.53
		U$_{26}$ - L$_{26}$	-134.31	17.17	-92.83			0.75	1.17	15.06	-81.39	0.00	0.00	Vehicle	Vehicle	-----	-350.94	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.27	5.44
		U$_{27}$ - L$_{27}$	-155.93	10.36	-102.64			0.75	1.17	9.09	-89.99	0.00	0.00	Vehicle	Vehicle	-----	-397.68	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.12	5.19
		U$_{28}$ - L$_{28}$	-179.28	2.63	-110.44			0.75	1.17	2.30	-96.83	0.00	0.00	Vehicle	Vehicle	-----	-442.86	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.02	5.03
		U$_{29}$ - L$_{29}$	-171.45	6.17	-115.33			0.75	1.17	5.41	-101.11	0.00	0.00	Vehicle	Vehicle	-----	-441.95	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.08	5.13
		U$_{30}$ - L$_{30}$	-392.76	-120.23	-131.94			0.75	1.18	-106.68	-117.07	0.00	0.00	Vehicle	Vehicle	-----	-764.23	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.38	5.63
		U$_{31}$ - L$_{31}$	-203.21	-134.77	13.45			0.75	1.18	11.94	-119.57

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.25	26.86	-21.76			0.75	1.24	24.92	-20.19	0.00	0.00	Vehicle	Vehicle	123.22	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**12.84**	**21.39**	-----	-----
		U_1 - L_2	10.78	59.39	7.59			0.75	1.24	55.10	7.04	0.00	0.00	Vehicle	Vehicle	133.39	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.54**	**7.57**	-----	-----
		U_2 - L_3	-44.02	55.52	-32.73			0.75	1.24	51.51	-30.36	0.00	0.00	Vehicle	Vehicle	54.37	-123.01	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**5.49**	**9.16**	**5.73**	**9.56**
		U_3 - L_4	-76.72	11.91	-69.65			0.75	1.24	11.05	-64.61	0.00	0.00	Vehicle	Vehicle	-----	-239.73	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**2.41**	**4.02**
		U_4 - L_4	118.39	83.62	20.43			0.75	1.24	77.58	18.96	0.00	0.00	Vehicle	Vehicle	321.99	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.14**	**5.24**	-----	-----
		U_5 - L_5	137.53	98.52	1.75			0.75	1.24	91.40	1.63	0.00	0.00	Vehicle	Vehicle	376.82	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.37**	**5.61**	-----	-----
		U_6 - L_6	157.34	111.96	-0.06			0.75	1.24	103.87	-0.06	0.00	0.00	Vehicle	Vehicle	429.59	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.85**	**4.75**	-----	-----
		U_7 - L_7	149.30	137.83	-0.25			0.75	1.24	127.88	-0.23	0.00	0.00	Vehicle	Vehicle	471.15	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.35**	**3.92**	-----	-----
		U_8 - L_8	249.09	147.77	-5.98			0.75	1.20	132.77	-5.38	0.00	0.00	Vehicle	Vehicle	611.49	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.22**	**5.37**	-----	-----
		U_9 - L_{10}	260.26	111.42	0.00			0.75	1.20	100.11	0.00	0.00	0.00	Vehicle	Vehicle	555.23	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.21**	**7.01**	-----	-----
		U_{10} - L_{11}	236.30	108.09	-7.67			0.75	1.20	97.12	-6.89	0.00	0.00	Vehicle	Vehicle	517.62	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**4.17**	**6.94**	-----	-----
		U_{11} - L_{12}	211.92	103.72	-18.10			0.75	1.20	93.20	-16.26	0.00	0.00	Vehicle	Vehicle	477.42	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.64**	**6.07**	-----	-----
		U_{12} - L_{13}	151.66	98.13	-30.35			0.75	1.20	88.17	-27.27	0.00	0.00	Vehicle	Vehicle	388.18	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_{13} - L_{14}	108.60	76.40	-47.01			0.75	1.20	68.65	-42.24	0.00	0.00	Vehicle	Vehicle	289.92	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.79**	**4.65**	-----	-----
		U_{14} - L_{15}	-24.45	62.39	-65.08			0.75	1.20	56.05	-58.47	0.00	0.00	Vehicle	Vehicle	89.67	-158.48	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.84**	**8.07**	**3.12**	**5.20**
		U_{15} - L_{15}	23.99	75.26	-43.98			0.75	1.20	67.62	-39.52	0.00	0.00	Vehicle	Vehicle	177.71	-54.43	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.58**	**5.97**	**5.29**	**8.82**
		U_{17} - L_{16}	120.03	92.18	-24.26			0.75	1.20	82.83	-21.80	0.00	0.00	Vehicle	Vehicle	335.50	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.93**	**4.88**	-----	-----
		U_{18} - L_{17}	144.79	102.89	-6.19			0.75	1.20	92.45	-5.56	0.00	0.00	Vehicle	Vehicle	388.53	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.28**	**5.47**	-----	-----
		U_{19} - L_{18}	193.05	109.39	1.85			0.75	1.20	98.28	1.66	0.00	0.00	Vehicle	Vehicle	463.92	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.16**	**5.26**	-----	-----
		U_{20} - L_{19}	193.51	95.04	-6.53			0.75	1.20	85.39	-5.87	0.00	0.00	Vehicle	Vehicle	436.58	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.63**	**6.05**	-----	-----
		U_0 - L_1	202.41	87.35	-17.73			0.75	1.18	77.50	-15.73	0.00	0.00	Vehicle	Vehicle	431.05	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.45**	**7.42**	-----	-----
		U_1 - L_2	190.86	121.60	-19.85			0.75	1.18	107.89	-17.62	0.00	0.00	Vehicle	Vehicle	481.87	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_2 - L_3	155.85	112.70	-19.30			0.75	1.18	99.99	-17.13	0.00	0.00	Vehicle	Vehicle	419.25	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.97**	**4.95**	-----	-----
		U_3 - L_4	134.05	94.22	-21.03			0.75	1.18	83.59	-18.66	0.00	0.00	Vehicle	Vehicle	355.39	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**3.18**	**5.30**	-----	-----
		U_4 - L_5	46.02	77.93	-39.56			0.75	1.18	69.14	-35.10	0.00	0.00	Vehicle	Vehicle	209.63	-16.23	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.31**	**5.52**	**6.11**	**10.19**
		U_5 - L_6	3.45	71.01	-59.46			0.75	1.18	63.00	-52.75	0.00	0.00	Vehicle	Vehicle	140.99	-109.82	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.04**	**6.73**	**3.74**	**6.24**
		U_6 - L_7	-84.29	52.86	-75.30			0.75	1.18	46.90	-66.81	0.00	0.00	Vehicle	Vehicle	-----	-254.32	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.47**	**4.12**
		U_7 - L_7	137.30	88.90	-44.51			0.75	1.18	78.88	-39.49	0.00	0.00	Vehicle	Vehicle	349.39	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.54**	**5.91**	-----	-----
		U_8 - L_8	210.89	102.37	-36.04			0.75	1.18	90.83	-31.98	0.00	0.00	Vehicle	Vehicle	470.95	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.30**	**5.50**	-----	-----
		U_{10} - L_9	236.36	109.14	-22.31			0.75	1.18	96.83	-19.80	0.00	0.00	Vehicle	Vehicle	517.07	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.35**	**5.59**	-----	-----
		U_{11} - L_{10}	274.62	112.77	-12.99			0.75	1.18	100.06	-11.52	0.00	0.00	Vehicle	Vehicle	573.79	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.42**	**5.70**	-----	-----
		U_{12} - L_{11}	281.06	116.66	-4.54			0.75	1.18	103.51	-4.02	0.00	0.00	Vehicle	Vehicle	589.65	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.27**	**5.44**	-----	-----
		U_{13} - L_{12}	278.12	118.00	1.27			0.75	1.18	104.70	1.12	0.00	0.00	Vehicle	Vehicle	588.39	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
		U_{14} - L_{13}	235.45	117.33	-8.09			0.75	1.18	104.10	-7.18	0.00	0.00	Vehicle	Vehicle	531.64	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{15} - L_{15}	143.03	112.25	-13.06			0.75	1.17	98.41	-11.45	0.00	0.00	Vehicle	Vehicle	399.16	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.09**	**5.16**	-----	-----
		U_{16} - L_{16}	171.91	120.76	-8.86			0.75	1.17	105.88	-7.77	0.00	0.00	Vehicle	Vehicle	452.89	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U_{17} - L_{17}	181.04	123.54	-12.61			0.75	1.17	108.31	-11.05	0.00	0.00	Vehicle	Vehicle	470.02	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.93**	**4.89**	-----	-----
		U_{18} - L_{18}	171.16	111.46	-12.82			0.75	1.17	97.72	-11.24	0.00	0.00	Vehicle	Vehicle	434.23	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.94**	**4.91**	-----	-----
		U_{19} - L_{19}	150.64	119.58	-20.19			0.75	1.17	104.84	-17.70	0.00	0.00	Vehicle	Vehicle	422.99	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
	Structure 2	U_0 - L_{20}	125.86	89.74	-33.87			0.75	1.17	78.68	-29.70	0.00	0.00	Vehicle	Vehicle	334.09	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.64**	**6.07**	-----	-----
		U_{20} - L_{21}	76.05	85.73	-39.42			0.75	1.17	75.16	-34.56	0.00	0.00	Vehicle	Vehicle	261.72	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.81**	**4.68**	-----	-----
		U_{21} - L_{22}	38.34	69.41	-54.60			0.75	1.17	60.85	-47.87	0.00	0.00	Vehicle	Vehicle	181.69	-53.88	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.84**	**6.40**	**4.56**	**7.60**
		U_{23} - L_{22}	18.02	63.56	-59.21			0.75	1.17	55.72	-51.91	0.00	0.00	Vehicle	Vehicle	144.16	-89.05	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.41**	**7.35**	**3.94**	**6.57**
		U_{24} - L_{23}	58.54	81.30	-37.91			0.75	1.17	71.28	-33.24	0.00	0.00	Vehicle	Vehicle	230.54	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.11**	**5.18**	-----	-----
		U_{25} - L_{24}	114.92	91.56	-34.39			0.75	1.17	80.28	-30.15	0.00	0.00	Vehicle	Vehicle	323.33	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.65**	**6.08**	-----	-----
		U_{26} - L_{25}	142.93	103.47	-21.60			0.75	1.17	90.72	-18.94	0.00	0.00	Vehicle	Vehicle	382.37	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.36**	**5.60**	-----	-----
		U_{27} - L_{26}	173.71	103.55	-12.02			0.75	1.17	90.78	-10.54	0.00	0.00	Vehicle	Vehicle	422.52	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.15**	**5.25**	-----	-----
		U_{28} - L_{27}	186.49	112.88	-11.29			0.75	1.17	98.97	-9.90	0.00	0.00	Vehicle	Vehicle	456.86	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.18**	**5.29**	-----	-----
		U_{29} - L_{28}	190.57	118.00	-7.62			0.75	1.17	103.46	-6.68	0.00	0.00	Vehicle	Vehicle	471.90	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.67**	**4.45**	-----	-----
		U_{30} - L_{29}	161.74	116.01	-6.01			0.75	1.17	101.71	-5.27	0.00	0.00	Vehicle	Vehicle	430.63	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.88**	**4.81**	-----	-----
		U_{30} - L_{31}	191.49	122.40	-12.95			0.75	1.18	108.59	-11.49	0.00	0.00	Vehicle	Vehicle	484.22	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.24**	**5.40**	-----	-----
		U_{31} - L_{32}	226.17	124.20	-14.49			0.75	1.18	110.20	-12.86	0.00	0.00	Vehicle	Vehicle	532.78	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U_{32} - L_{33}	243.26	126.25	-1.67			0.75	1.18	112.02	-1.48	0.00	0.00	Vehicle	Vehicle	558.94	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.22**	**5.37**	-----	-----
		U_{33} - L_{34}	238.98	109.11	-11.86			0.75	1.18	96.81	-10.52	0.00	0.00	Vehicle	Vehicle	520.42	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.75**	**6.25**	-----	-----
		U_{34} - L_{35}	222.10	105.35	-20.77			0.75	1.18	93.47	-18.43	0.00	0.00	Vehicle	Vehicle	491.25	-----	0.00	30.63	30.6305

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.77	13.30	-55.78	2.20	-8.83	0.90	1.24	14.80	-62.10	2.20	-8.83	Vehicle	Vehicle	-----	-221.34	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.82	8.03
		U_1 - U_2	-86.66	31.71	-91.12	6.00	-16.34	0.90	1.24	35.31	-101.45	6.00	-16.34	Vehicle	Vehicle	-----	-332.45	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.83	4.72
		U_2 - U_3	-48.28	47.11	-94.37	9.44	-19.05	0.90	1.24	52.44	-105.06	9.44	-19.05	Vehicle	Vehicle	50.87	-290.38	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	8.23	13.72	2.95	4.92
		U_3 - U_4	36.43	60.73	-83.64	12.72	-17.47	0.90	1.24	67.61	-93.12	12.72	-17.47	Vehicle	Vehicle	193.86	-154.39	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.63	9.39	3.88	6.46
		U_4 - U_5	38.78	60.93	-76.41	12.78	-17.37	0.90	1.24	67.83	-85.06	12.78	-17.37	Vehicle	Vehicle	197.39	-133.88	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.59	9.32	4.26	7.10
		U_5 - U_6	154.43	67.87	-15.92	3.10	0.00	0.90	1.24	75.56	-17.72	3.10	0.00	Vehicle	Vehicle	364.47	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	4.10	6.84	-----	-----
		U_6 - U_7	288.19	74.15	-6.04	17.11	-4.31	0.90	1.24	82.56	-6.72	17.11	-4.31	Vehicle	Pedestrian	553.52	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.75	6.25	-----	-----
		U_7 - U_8	410.75	6.15	8.80	22.59	0.00	0.90	1.24	9.79	6.84	22.59	0.00	Pedestrian	Vehicle	586.59	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	17.28	21.60	-----	-----
		U_8 - U_9	311.35	54.06	-3.25	12.90	6.15	0.90	1.20	58.28	-3.50	12.90	6.15	Vehicle	Vehicle	531.03	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	6.46	10.77	-----	-----
		U_9 - U_{10}	78.25	57.60	-46.12	12.28	-6.83	0.90	1.20	62.10	-49.72	12.28	-6.83	Vehicle	Vehicle	236.28	-6.01	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.10	10.16	8.15	13.59
		U_{10} - U_{11}	-141.75	54.30	-87.72	11.11	-18.45	0.90	1.20	58.54	-94.58	11.11	-18.45	Vehicle	Vehicle	-----	-389.19	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.89	4.82
		U_{11} - U_{12}	-338.40	50.00	-130.82	9.77	-27.96	0.90	1.20	53.91	-141.05	9.77	-27.96	Vehicle	Vehicle	-----	-745.53	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	40.69	Pass	28.44	48.19	Pass	8.00	12.00	Pass	-----	-----	2.02	3.36
		U_{12} - U_{13}	-480.50	43.77	-153.77	8.23	-34.35	0.90	1.20	47.19	-165.79	8.23	-34.35	Vehicle	Vehicle	-----	-983.86	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	41.98	Pass	28.44	49.72	Pass	8.00	12.00	Pass	-----	-----	2.38	3.96
		U_{13} - U_{14}	-571.10	37.17	-167.86	6.68	-37.24	0.90	1.20	40.08	-180.98	6.68	-37.24	Vehicle	Vehicle	-----	-1134.56	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.20	Pass	25.60	49.97	Pass	6.40	12.00	Pass	-----	-----	2.51	4.18
		U_{14} - U_{15}	-571.52	36.99	-163.37	6.65	-37.25	0.90	1.20	39.88	-176.14	6.65	-37.25	Vehicle	Vehicle	-----	-1124.62	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.39	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.58	4.29
		U_{15} - U_{16}	-582.34	14.09	-128.13	0.00	-31.16	0.90	1.20	15.20	-138.15	0.00	-31.16	Vehicle	Vehicle	-----	-1056.37	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	43.73	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.24	5.39
		U_{16} - U_{17}	-539.92	12.64	-118.58	0.00	-28.35	0.90	1.20	13.63	-127.85	0.00	-28.35	Vehicle	Vehicle	-----	-978.90	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.70	6.16
		U_{17} - U_{18}	-422.72	-94.73	-33.02	-25.07	2.26	0.90	1.20	-35.60	-102.14	2.26	-25.07	Vehicle	Vehicle	-----	-770.83	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	43.82	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	3.22	5.37
		U_{18} - U_{19}	-286.53	-60.01	-16.97	-16.97	1.28	0.90	1.20	-18.30	-64.71	1.28	-16.97	Vehicle	Vehicle	-----	-512.69	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	44.81	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	3.63	6.04
		U_{19} - U_{20}	-140.97	-26.82	-5.12	-8.68	0.55	0.90	1.20	-5.52	-28.91	0.55	-8.68	Vehicle	Vehicle	-----	-245.90	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	11.13	18.56
	Structure 2	U_0 - U_1	-147.48	4.29	-42.90	0.36	-4.88	0.90	1.18	4.57	-45.68	0.36	-4.88	Vehicle	Vehicle	-----	-290.70	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.57	10.94
		U_1 - U_2	-319.09	14.40	-85.46	1.96	-13.36	0.90	1.18	15.33	-90.99	1.96	-13.36	Vehicle	Vehicle	-----	-611.96	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.28	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.11	5.19
		U_2 - U_3	-460.93	25.83	-114.71	3.77	-20.95	0.90	1.18	27.50	-122.13	3.77	-20.95	Vehicle	Vehicle	-----	-863.81	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	43.47	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.03	5.05
		U_3 - U_4	-580.02	39.31	-157.82	5.92	-27.68	0.90	1.18	41.85	-168.03	5.92	-27.68	Vehicle	Vehicle	-----	-1118.10	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	42.65	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.72	4.53
		U_4 - U_5	-616.47	51.02	-173.30	7.86	-31.35	0.90	1.18	54.32	-184.51	7.86	-31.35	Vehicle	Vehicle	-----	-1201.20	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.34	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.83	4.72
		U_5 - U_6	-604.69	62.82	-165.27	9.87	-32.88	0.90	1.18	66.89	-175.97	9.87	-32.88	Vehicle	Vehicle	-----	-1167.36	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.96	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.01	5.01
		U_6 - U_7	-514.75	71.78	-155.07	11.56	-31.23	0.90	1.18	76.42	-165.11	11.56	-31.23	Vehicle	Vehicle	-----	-1026.91	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.51	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.00	5.01
		U_7 - U_8	-512.80	71.84	-150.32	11.57	-31.18	0.90	1.18	76.49	-160.04	11.57	-31.18	Vehicle	Vehicle	-----	-1013.39	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.80	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.11	5.18
		U_8 - U_9	-373.48	79.88	-129.53	13.16	-27.41	0.90	1.18	85.05	-137.91	13.16	-27.41	Vehicle	Vehicle	-----	-784.33	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.27	5.46
		U_9 - U_{10}	-181.02	83.80	-72.89	14.25	-21.42	0.90	1.18	89.22	-77.60	14.25	-21.42	Vehicle	Vehicle	-----	-403.46	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.45	9.09
		U_{10} - U_{11}	26.21	86.83	-60.10	15.21	-14.40	0.90	1.18	92.45	-63.99	15.21	-14.40	Vehicle	Vehicle	234.38	-104.58	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	5.74	9.57	7.46	12.43
		U_{11} - U_{12}	237.41	-7.12	-32.58	10.86	0.00	0.90	1.18	-7.58	-34.68	10.86	0.00	Vehicle	Vehicle	292.21	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{12} - U_{13}	435.92	15.94	1.09	15.82	0.56	0.90	1.18	16.97	1.16	15.82	0.56	Pedestrian	Pedestrian	619.97	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	17.16	21.45	-----	-----
		U_{13} - U_{14}	595.85	6.71	8.96	24.32	0.00	0.90	1.18	9.54	7.15	24.32	0.00	Pedestrian	Vehicle	829.63	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	22.88	28.60	-----	-----
		U_{14} - U_{15}	615.52	70.51	6.01	13.42	8.77	0.90	1.17	74.18	6.33	13.42	8.77	Vehicle	Pedestrian	960.91	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	7.67	12.79	-----	-----
		U_{15} - U_{16}	486.12	74.73	-20.29	14.17	3.09	0.90	1.17	78.62	-21.35	14.17	3.09	Vehicle	Vehicle	802.31	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	6.00	10.00	-----	-----
		U_{16} - U_{17}	339.23	74.32	-37.20	14.66	-2.95	0.90	1.17	78.19	-39.13	14.66	-2.95	Vehicle	Vehicle	610.40	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	5.41	9.01	-----	-----
		U_{17} - U_{18}	192.06	72.68	-71.52	15.12	-9.49	0.90	1.17	76.47	-75.25	15.12	-9.49	Vehicle	Vehicle	415.35	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.51	7.51	-----	-----
		U_{18} - U_{19}	53.73	66.59	-99.82	15.12	-15.34	0.90	1.17	70.06	-105.02	15.12	-15.34	Vehicle	Vehicle	221.64	-157.70	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.10	10.17	4.01	6.68
		U_{19} - U_{20}	-59.08	59.06	-124.43	15.07	-19.84	0.90	1.17	62.13	-130.91	15.07	-19.84	Vehicle	Vehicle	57.82	-360.46	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.49	14.15	2.90	4.84
	Structure 3	U_0 - U_{21}	-125.50	30.25	-125.21	14.76	-22.39	0.90	1.17	31.83	-131.73	14.76	-22.39	Pedestrian	Vehicle	-----	-448.56	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.24	5.40
		U_{21} - U_{22}	-146.93	40.71	-131.81	14.37	-22.74	0.90	1.17	42.83	-138.68	14.37	-22.74	Pedestrian	Vehicle	-----	-491.48	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.98	4.97
		U_{22} - U_{23}	-146.70	38.00	-129.45	14.36	-22.72	0.90	1.17	39.98	-136.20	14.36	-22.72	Pedestrian	Vehicle	-----	-485.81	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.04	5.07
		U_{23} - U_{24}	-112.76	49.59	-84.29	13.87	-16.66	0.90	1.17	52.17	-88.68	13.87	-16.66	Vehicle	Vehicle	-----	-338.74	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.90	8.16
		U_{24} - U_{25}	-36.27	57.05	-81.18	13.40	-15.02	0.90	1.17	60.02	-85.41	13.40	-15.02	Vehicle	Vehicle	82.89	-232.20	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.56	14.27	4.61	7.69
		U_{25} - U_{26}	80.70	62.56	-63.02	0.37	0.00	0.90	1.17	65.82	-66.31	0.37	0.00	Vehicle	Vehicle	247.51	-38.76	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.25	10.42	6.59	10.98
		U_{26} - U_{27}	220.59	-12.22	-24.12	7.92	0.00	0.90	1.17	-12.85	-25.38	7.92	0.00	Vehicle	Vehicle	258.92	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	363.31	6.70	-15.29	14.90	0.00	0.90	1.17	7.04	-16.09	14.90	0.00	Pedestrian	Vehicle	507.95	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	24.82	31.02	-----	-----
		U_{28} - U_{29}	503.82	44.69	-11.10	21.74	3.11	0.90	1.17	47.02	-11.68	21.74	3.11	Pedestrian	Vehicle	766.69	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	8.94	11.18	-----	-----
		U_{29} - U_{30}	616.57	24.37	-4.08	27.08	0.00	0.90	1.17	25.63	-4.29	27.08	0.00	Pedestrian	Vehicle	887.19	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	14.38	17.98	-----	-----
		U_{30} - U_{31}	559.74	76.86	-3.40	15.74	6.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck

Condition: As-Built

Fy = 33.0 ksi

Fu = 60.0 ksi

E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17

Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension

(-) Negative Stresses / Forces Indicate Compression

& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009

Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel

** Area deducted for rivet holes (see separate calculation

*** K = 0.75 per MCEB 6.6.2.1

**** Per AASHTO Std. Specs. For Highway Bridges, Articl

(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-2.01	1.42	0.35	0.36	-2.06	0.90	1.24	1.58	0.39	0.36	-2.06	Vehicle	Pedestrian	0.82	-5.32	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	191.39	318.98	-----	-----
		L_1 - L_2	67.91	-17.48	57.45	-3.36	9.23	0.90	1.24	63.95	-19.46	9.23	-3.36	Vehicle	Vehicle	226.85	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	4.08	6.80	-----	-----
		L_2 - L_3	78.84	-37.79	97.30	-7.39	15.48	0.90	1.24	108.32	-42.07	15.48	-7.39	Vehicle	Vehicle	337.18	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	3.27	5.44	-----	-----
		L_3 - L_4	39.14	-53.05	84.29	-10.83	18.09	0.90	1.24	93.84	-59.06	18.09	-10.83	Vehicle	Vehicle	254.20	-77.08	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	4.02	6.71	6.12	10.19
		L_4 - L_5	-166.38	-76.13	39.11	-16.90	10.96	0.90	1.24	43.54	-84.75	10.96	-16.90	Vehicle	Vehicle	-----	-399.93	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	43.60	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	2.36	3.94
		L_5 - L_6	-301.23	-82.76	15.74	-15.70	0.00	0.90	1.24	17.53	-92.14	0.00	-15.70	Vehicle	Vehicle	-----	-591.22	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	41.21	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	2.33	3.89
		L_6 - L_7	-438.94	-18.10	-22.89	-4.99	-21.52	0.90	1.24	-20.15	-25.48	-4.99	-21.52	Vehicle	Pedestrian	-----	-646.99	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	8.61	10.77
		L_7 - L_8	-551.65	-74.67	2.73	-35.55	0.00	0.90	1.24	3.04	-83.13	0.00	-35.55	Vehicle	Pedestrian	-----	-909.99	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	44.83	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	4.37	5.46
		L_8 - L_9	-570.53	-41.98	-40.48	-11.71	-25.77	0.90	1.20	-43.65	-45.26	-11.71	-25.77	Vehicle	Pedestrian	-----	-857.12	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	7.08	8.85
		L_9 - L_{10}	-355.48	-46.80	-7.24	-11.67	-13.03	0.90	1.20	-7.80	-50.46	-11.67	-13.03	Pedestrian	Vehicle	-----	-571.46	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	7.01	11.69
		L_{10} - L_{11}	-118.48	-48.24	38.94	-10.69	-1.74	0.90	1.20	41.99	-52.01	-1.74	-10.69	Vehicle	Vehicle	-----	-266.72	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	4.41	7.34
		L_{11} - L_{12}	103.45	-44.79	58.18	-9.47	9.96	0.90	1.20	62.73	-48.29	9.96	-9.47	Vehicle	Vehicle	270.40	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	4.69	7.82	-----	-----
		L_{12} - L_{13}	300.60	-41.55	121.90	-8.14	17.83	0.90	1.20	131.44	-44.80	17.83	-8.14	Vehicle	Vehicle	675.56	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	3.08	5.13	-----	-----
		L_{13} - L_{14}	441.19	-35.38	142.18	-6.61	24.15	0.90	1.20	153.29	-38.15	24.15	-6.61	Vehicle	Vehicle	905.69	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	3.39	5.65	-----	-----
		L_{14} - L_{15}	547.00	-22.67	130.70	0.00	21.08	0.90	1.20	140.92	-24.44	21.08	0.00	Vehicle	Vehicle	1016.42	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	4.37	7.29	-----	-----
		L_{15} - L_{16}	506.09	-21.28	119.87	0.00	18.29	0.90	1.20	129.24	-22.94	18.29	0.00	Vehicle	Vehicle	937.93	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	4.96	8.27	-----	-----
		L_{16} - L_{17}	398.75	81.41	49.62	0.00	11.88	0.90	1.20	87.78	53.50	11.88	0.00	Vehicle	Vehicle	708.56	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	5.59	9.32	-----	-----
		L_{17} - L_{18}	263.81	52.14	24.44	4.66	0.15	0.90	1.20	56.22	26.36	4.66	0.15	Vehicle	Vehicle	464.76	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	6.61	11.02	-----	-----
		L_{18} - L_{19}	118.75	23.83	1.28	-3.38	0.71	0.90	1.20	25.69	1.38	0.71	-3.38	Vehicle	Pedestrian	210.05	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	8.96	14.94	-----	-----
		L_{19} - L_{20}	-23.36	-6.07	4.14	-12.08	1.28	0.90	1.20	4.46	-6.54	1.28	-12.08	Vehicle	Pedestrian	-----	-60.63	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	17.19	21.48
		L_0- L_1	-36.12	5.04	0.73	1.19	-5.14	0.90	1.18	5.37	0.77	1.19	-5.14	Vehicle	Pedestrian	-----	-54.05	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	132.64	-2.99	40.45	-0.06	2.93	0.90	1.18	43.07	-3.18	2.93	-0.06	Vehicle	Vehicle	265.75	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	6.98	11.63	-----	-----
		L_2 - L_3	303.94	-14.52	87.28	-1.79	10.52	0.90	1.18	92.92	-15.46	10.52	-1.79	Vehicle	Vehicle	596.45	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	4.34	7.23	-----	-----
		L_3 - L_4	445.73	-26.08	122.23	-3.63	18.15	0.90	1.18	130.14	-27.76	18.15	-3.63	Vehicle	Vehicle	861.41	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	3.98	6.64	-----	-----
		L_4 - L_5	567.64	-41.81	160.90	-6.10	24.81	0.90	1.18	171.31	-44.52	24.81	-6.10	Vehicle	Vehicle	1109.11	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	3.79	6.32	-----	-----
		L_5 - L_6	603.43	-53.59	171.86	-8.06	28.47	0.90	1.18	182.98	-57.06	28.47	-8.06	Vehicle	Vehicle	1180.91	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	3.90	6.50	-----	-----
		L_6 - L_7	599.28	-67.88	155.09	-10.41	30.25	0.90	1.18	165.13	-72.27	30.25	-10.41	Vehicle	Vehicle	1136.83	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	4.43	7.38	-----	-----
		L_7 - L_8	373.73	-84.65	132.21	-13.66	24.92	0.90	1.18	140.77	-90.13	24.92	-13.66	Vehicle	Vehicle	790.83	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	4.13	6.88	-----	-----
		L_8 - L_9	195.51	-91.14	90.32	-15.12	19.51	0.90	1.18	96.16	-97.04	19.51	-15.12	Vehicle	Vehicle	462.51	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	5.64	9.40	-----	-----
		L_9 - L_{10}	-13.41	-94.35	61.59	-7.61	12.45	0.90	1.18	65.58	-100.45	12.45	-7.61	Vehicle	Vehicle	124.65	-235.09	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	8.01	13.35	4.27	7.11
		L_{10} - L_{11}	-217.51	20.12	21.21	-15.65	0.00	0.90	1.18	22.58	21.42	0.00	-15.65	Vehicle	Vehicle	-----	-236.36	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L_{11} - L_{12}	-420.12	-92.61	5.03	-23.35	0.00	0.90	1.18	5.35	-98.60	0.00	-23.35	Vehicle	Vehicle	-----	-759.79	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	43.12	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	3.11	5.18
		L_{12} - L_{13}	-591.61	-37.48	-22.30	-7.10	-18.75	0.90	1.18	-23.75	-39.90	-7.10	-18.75	Vehicle	Pedestrian	-----	-864.40	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	9.33	11.66
		L_{13} - L_{14}	-724.42	-48.89	0.60	-35.12	0.00	0.90	1.18	0.64	-52.05	0.00	-35.12	Vehicle	Pedestrian	-----	-1083.39	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	7.26	9.07
		L_{14} - L_{15}	-747.19	16.70	-20.54	0.00	-36.29	0.90	1.17	17.57	-21.61	0.00	-36.29	Vehicle	Pedestrian	-----	-1065.44	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.61	13.26
		L_{15} - L_{16}	-632.29	-57.91	-17.05	-9.38	-12.11	0.90	1.17	-17.93	-60.93	-9.38	-12.11	Pedestrian	Vehicle	-----	-953.99	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	6.33	10.56
		L_{16} - L_{17}	-488.73	-62.65	12.57	-9.25	-11.44	0.90	1.17	13.23	-65.91	-9.25	-11.44	Vehicle	Vehicle	-----	-778.15	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	5.09	8.48
		L_{17} - L_{18}	-337.06	-62.12	34.36	-9.73	-4.53	0.90	1.17	36.15	-65.35	-4.53	-9.73	Vehicle	Vehicle	-----	-579.77	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.62	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	3.58	5.97
		L_{18} - L_{19}	-183.64	-61.15	59.52	-9.59	1.37	0.90	1.17	62.62	-64.33	1.37	-9.59	Vehicle	Vehicle	-----	-378.11	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	3.64	6.06
		L_{19} - L_{20}	-45.76	-55.00	84.61	-9.58	7.21	0.90	1.17	89.02	-57.86	7.21	-9.58	Vehicle	Vehicle	133.39	-184.85	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.89	8.14	5.47	9.12
	Structure 2	L_{20} - L_{21}	68.06	-48.87	112.79	-9.12	11.07	0.90	1.17	118.67	-51.42	11.07	-9.12	Vehicle	Vehicle	345.60	-22.92	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.53	7.56	10.30	17.16
		L_{21} - L_{22}	134.01	-20.94	113.21	-8.81	13.61	0.90	1.17	119.11	-22.03	13.61	-8.81	Vehicle	Pedestrian	432.28	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	4.18	6.97	-----	-----
		L_{22} - L_{23}	122.68	-40.66	111.09	-7.57	8.54	0.90	1.17	116.87	-42.77	8.54	-7.57	Vehicle	Vehicle	412.71	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	4.32	7.20	-----	-----
		L_{23} - L_{24}	46.89	-48.20	83.11	-7.09	6.92	0.90	1.17	87.44	-50.71	6.92	-7.09	Vehicle	Vehicle	250.41	-48.92	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	6.30	10.50	10.19	16.98
		L_{24} - L_{25}	-66.54	-52.52	65.12	-4.27	3.32	0.90	1.17	68.51	-55.26	3.32	-4.27	Vehicle	Vehicle	61.94	-206.22	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	6.53	10.88	5.51	9.18
		L_{25} - L_{26}	-205.63	-57.42	47.52	-11.77	0.00	0.90	1.17	49.99	-60.41	0.00	-11.77	Vehicle	Vehicle	-----	-398.21	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	3.65	6.09
		L_{26} - L_{27}	-350.43	-5.20	15.08	-18.87	0.00	0.90	1.17	15.87	-5.47	0.00	-18.87	Vehicle	Pedestrian	-----	-495.11	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	12.39	15.49
		L_{27} - L_{28}	-494.65	-33.33	0.65	-25.89	0.00	0.90	1.17	0.68	-35.07	0.00	-25.89	Vehicle	Pedestrian	-----	-742.09	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	7.26	9.07
		L_{28} - L_{29}	-620.83	-65.27	-17.91	-21.97	-5.03	0.90	1.17	-18.85	-68.67	-5.03	-21.97	Vehicle	Vehicle	-----	-955.87	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	5.72	9.53
		L_{29} - L_{30}	-716.91	-33.61	-22.73	-36.29	0.00	0.90	1.17	-23.91	-35.36	0.00	-36.29	Vehicle	Pedestrian	-----	-1048.41	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	8.91	11.14
		L_{30} - L_{31}	-850.71	39.48	-14.98	0.00	-35.97	0.90	1.18	42.03	-15.94	0.00	-35.97	Vehicle	Pedestrian	-----	-1190.28	11

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.72	-76.68	17.34	-12.32	3.44	0.90	1.24	19.30	-85.37	3.44	-12.32	Vehicle	Vehicle	-----	-306.81	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	42.24	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.76	2.94
		U_1 - L_1	-46.53	-49.91	14.94	-9.05	2.93	0.90	1.24	16.63	-55.56	2.93	-9.05	Vehicle	Vehicle	-----	-180.87	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.30	5.50
		U_2 - L_2	-0.10	-26.70	13.51	-5.68	2.84	0.90	1.24	15.04	-29.72	2.84	-5.68	Vehicle	Vehicle	32.45	-64.53	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	17.07	28.45	7.10	11.84
		U_3 - L_3	39.60	-16.29	11.89	-2.12	2.69	0.90	1.24	13.23	-18.13	2.69	-2.12	Vehicle	Vehicle	80.14	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	17.60	29.33	-----	-----
		U_4 - L_4	-30.20	0.24	-9.33	0.00	-3.46	0.90	1.24	0.27	-10.39	0.00	-3.46	Vehicle	Pedestrian	-----	-61.77	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	18.46	23.08
		U_5 - L_5	-130.49	2.82	-44.59	0.00	-10.23	0.90	1.24	3.14	-49.64	0.00	-10.23	Vehicle	Vehicle	-----	-277.19	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	3.56	5.94
		U_6 - L_6	-158.18	7.65	-45.80	0.00	-13.06	0.90	1.24	8.51	-50.99	0.00	-13.06	Vehicle	Vehicle	-----	-316.11	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	4.12	6.86
		U_7 - L_7	-152.32	14.52	-43.94	0.00	-13.24	0.90	1.24	16.16	-48.92	0.00	-13.24	Vehicle	Vehicle	-----	-304.01	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.78	6.29
		U_8 - L_8	-455.55	-75.13	-45.42	-18.97	-12.74	0.90	1.24	-50.56	-83.65	-12.74	-18.97	Vehicle	Vehicle	-----	-773.44	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	4.37	7.29
		U_9 - L_9	-287.55	-74.85	-0.47	-18.20	0.00	0.90	1.20	-0.51	-80.70	0.00	-18.20	Vehicle	Vehicle	-----	-548.67	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.23	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	2.66	4.43
		U_{10} - L_{10}	-276.32	-69.54	-2.78	-16.17	-1.37	0.90	1.20	-2.99	-74.98	-1.37	-16.17	Pedestrian	Vehicle	-----	-521.67	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	3.73	6.22
		U_{11} - L_{11}	-232.59	-62.80	1.96	-14.41	0.00	0.90	1.20	2.11	-67.71	0.00	-14.41	Vehicle	Vehicle	-----	-449.07	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.62	6.04
		U_{12} - L_{12}	-178.43	-52.28	0.40	-11.20	0.00	0.90	1.20	0.43	-56.37	0.00	-11.20	Vehicle	Vehicle	-----	-354.08	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	3.77	6.28
		U_{13} - L_{13}	-127.74	-37.12	3.94	-7.88	0.00	0.90	1.20	4.24	-40.02	0.00	-7.88	Vehicle	Vehicle	-----	-252.77	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	3.79	6.32
		U_{14} - L_{14}	-30.39	-4.65	-6.88	-3.03	0.00	0.90	1.20	-5.01	-7.42	0.00	-3.03	Vehicle	Pedestrian	-----	-56.49	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	24.06	30.08
		U_{15} - L_{15}	-28.94	11.84	-31.31	1.55	-4.54	0.90	1.20	12.77	-33.76	1.55	-4.54	Vehicle	Vehicle	-----	-110.76	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.59	9.31
		U_{16} - L_{16}	-76.03	7.45	-36.84	1.39	-7.08	0.90	1.20	8.04	-39.72	1.39	-7.08	Vehicle	Vehicle	-----	-184.90	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	4.01	6.68
		U_{17} - L_{17}	-161.89	8.01	-50.01	1.30	-10.66	0.90	1.20	8.63	-53.92	1.30	-10.66	Vehicle	Vehicle	-----	-327.28	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	2.78	4.63
		U_{18} - L_{18}	-190.28	6.87	-51.86	1.12	-12.71	0.90	1.20	7.40	-55.92	1.12	-12.71	Vehicle	Vehicle	-----	-368.53	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	3.59	5.99
		U_{19} - L_{19}	-228.17	5.88	-51.12	0.97	-14.98	0.90	1.20	6.34	-55.12	0.97	-14.98	Vehicle	Vehicle	-----	-416.04	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.23	7.04
		U_{20} - L_{20}	-242.83	5.33	-50.04	0.95	-15.63	0.90	1.20	5.75	-53.96	0.95	-15.63	Vehicle	Vehicle	-----	-432.58	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.77	6.29
	Structure 2	U_0 - L_0	-303.03	-81.02	13.31	-15.08	2.22	0.90	1.18	14.17	-86.26	2.22	-15.08	Vehicle	Vehicle	-----	-580.84	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	43.14	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	2.36	3.94
		U_1 - L_1	-268.78	-74.71	13.54	-13.67	2.12	0.90	1.18	14.41	-79.54	2.12	-13.67	Vehicle	Vehicle	-----	-521.76	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.04	5.07
		U_2 - L_2	-220.87	-65.20	14.58	-12.32	2.34	0.90	1.18	15.52	-69.42	2.34	-12.32	Vehicle	Vehicle	-----	-437.54	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.06	5.09
		U_3 - L_3	-175.23	-60.23	15.62	-10.35	2.49	0.90	1.18	16.63	-64.12	2.49	-10.35	Vehicle	Vehicle	-----	-366.73	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	44.88	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	2.59	4.31
		U_4 - L_4	-82.08	-44.23	13.52	-6.62	2.21	0.90	1.18	14.39	-47.09	2.21	-6.62	Vehicle	Vehicle	-----	-208.72	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.28	5.46
		U_5 - L_5	-19.89	-31.63	13.36	-4.16	2.23	0.90	1.18	14.22	-33.68	2.23	-4.16	Vehicle	Vehicle	4.96	-98.83	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	18.88	31.47	5.71	9.52
		U_6 - L_6	60.32	-17.99	24.65	-0.47	1.75	0.90	1.18	26.25	-19.15	1.75	-0.47	Vehicle	Vehicle	135.29	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	8.40	14.00	-----	-----
		U_7 - L_7	-41.77	-2.09	-8.21	0.00	-2.49	0.90	1.18	-2.22	-8.74	0.00	-2.49	Vehicle	Vehicle	-----	-73.24	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	20.51	34.19
		U_8 - L_8	-189.01	6.02	-46.73	0.00	-8.38	0.90	1.18	6.41	-49.76	0.00	-8.38	Vehicle	Vehicle	-----	-353.52	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	4.12	6.86
		U_9 - L_9	-253.99	2.03	-58.06	0.00	-10.55	0.90	1.18	2.16	-61.81	0.00	-10.55	Vehicle	Vehicle	-----	-464.12	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	4.24	7.07
		U_{10} - L_{10}	-290.02	4.61	-60.68	0.00	-12.18	0.90	1.18	4.91	-64.61	0.00	-12.18	Vehicle	Vehicle	-----	-517.01	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.54	7.56
		U_{11} - L_{11}	-312.18	9.99	-65.01	0.00	-12.59	0.90	1.18	10.64	-69.21	0.00	-12.59	Vehicle	Vehicle	-----	-555.79	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.92	6.54
		U_{12} - L_{12}	-327.28	14.45	-59.65	-0.93	-13.01	0.90	1.18	15.38	-63.51	-0.93	-13.01	Vehicle	Vehicle	-----	-563.06	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.48	7.47
		U_{13} - L_{13}	-277.21	19.24	-50.44	0.00	-11.39	0.90	1.18	20.48	-53.70	0.00	-11.39	Vehicle	Vehicle	-----	-476.73	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	4.61	7.69
		U_{14} - L_{14}	-505.44	-59.13	-37.23	-11.34	-9.95	0.90	1.18	-39.64	-62.95	-9.95	-11.34	Vehicle	Vehicle	-----	-793.47	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	5.21	8.68
		U_{15} - L_{15}	-232.94	-68.59	3.26	-11.17	0.00	0.90	1.17	3.42	-72.16	0.00	-11.17	Vehicle	Vehicle	-----	-459.18	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.80	6.34
		U_{16} - L_{16}	-260.12	-73.04	0.50	-12.63	0.83	0.90	1.17	0.53	-76.84	0.83	-12.63	Pedestrian	Vehicle	-----	-504.64	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.17	5.28
		U_{17} - L_{17}	-228.24	-66.25	8.99	-11.76	0.66	0.90	1.17	9.45	-69.70	0.66	-11.76	Vehicle	Vehicle	-----	-447.74	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.40	5.67
		U_{18} - L_{18}	-209.27	-61.59	10.80	-11.28	-0.03	0.90	1.17	11.37	-64.80	-0.03	-11.28	Vehicle	Vehicle	-----	-412.45	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.41	5.68
		U_{19} - L_{19}	-166.55	-56.49	11.57	-9.53	-0.07	0.90	1.17	12.17	-59.44	-0.07	-9.53	Vehicle	Vehicle	-----	-345.29	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.48	5.80
		U_{20} - L_{20}	-113.95	-41.16	11.56	-7.50	-0.43	0.90	1.17	12.16	-43.30	-0.43	-7.50	Vehicle	Vehicle	-----	-241.95	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	3.62	6.03
		U_{21} - L_{21}	-62.76	-33.13	15.02	-5.22	-0.44	0.90	1.17	15.80	-34.85	-0.44	-5.22	Vehicle	Vehicle	-----	-157.11	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	4.78	7.97
		U_{22} - L_{22}	-38.94	-3.12	-8.31	-2.15	-2.04	0.90	1.17	-3.29	-8.74	-2.04	-2.15	Pedestrian	Vehicle	-----	-69.56	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	20.79	34.64
		U_{23} - L_{23}	-74.43	12.27	-37.35	0.48	-6.10	0.90	1.17	12.91	-39.30	0.48	-6.10	Vehicle	Vehicle	-----	-181.91	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	4.06	6.77
		U_{24} - L_{24}	-121.36	12.03	-44.13	0.37	-8.17	0.90	1.17	12.65	-46.43	0.37	-8.17	Vehicle	Vehicle	-----	-258.37	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	3.28	5.47
		U_{25} - L_{25}	-169.12	11.56	-53.19	0.43	-9.94	0.90	1.17	12.17	-55.96	0.43	-9.94	Vehicle	Vehicle	-----	-341.10	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.67	6.12
		U_{26} - L_{26}	-207.97	10.46	-56.32	0.14	-11.42	0.90	1.17	11.00	-59.26	0.14	-11.42	Vehicle	Vehicle	-----	-398.76	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.74	6.23
		U_{27} - L_{27}	-219.96	8.60	-58.27	0.16	-11.49	0.90	1.17	9.05	-61.31	0.16	-11.49	Vehicle	Vehicle	-----	-418.79	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.95	6.58
		U_{28} - L_{28}	-240.91	12.41	-55.03	-0.25	-11.17	0.90	1.17	13.06	-57.90	-0.25	-11.17	Vehicle	Vehicle	-----	-438.63	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	4.41	7.34
		U_{29} - L_{29}	-202.73	18.88	-47.35	0.00	-10.35	0.90	1.17	19.86	-49.81	0.00	-10.35	Vehicle	Vehicle	-----	-371.47	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	5.87	9.78
		U_{30} - L_{30}	-518.05	-63.66	-36.55	-13.79	-8.23	0.90	1.18	-38.91	-67.78	-8.23	-13.79	Vehicle	Vehicle	-----	-820.32	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	4.73	7.88
		U_{31} - L_{31}	-318.43	-71.16	8.72	-12.95	0.00	0.90	1.18	9.29	-75.76	0.00	-12.95	Vehicle	Vehicle	-----	-578.11	2.57	36.98	34.4077	1220.26	131.71	18.7969

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.66	58.89	-19.14	14.00	-4.60	0.90	1.24	65.56	-21.30	14.00	-4.60	Vehicle	Vehicle	256.01	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**4.56**	**7.61**	-----	-----
		U_1 - L_2	23.90	46.55	17.04	9.20	-4.71	0.90	1.24	51.82	18.97	9.20	-4.71	Vehicle	Vehicle	143.35	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.68**	**7.79**	-----	-----
		U_2 - L_3	-49.02	18.51	-18.22	0.00	-1.00	0.90	1.24	20.61	-20.28	0.00	-1.00	Vehicle	Vehicle	-----	-107.67	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.44**	**14.06**
		U_3 - L_4	-108.88	-5.18	-24.52	-4.20	-2.10	0.90	1.24	-5.77	-27.30	-2.10	-4.20	Pedestrian	Vehicle	-----	-200.68	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**5.00**	**8.34**
		U_4 - L_4	153.12	9.93	12.32	3.11	7.00	0.90	1.24	13.72	11.06	7.00	3.11	Pedestrian	Vehicle	232.72	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**14.34**	**17.93**	-----	-----
		U_5 - L_5	186.35	59.62	-3.58	13.44	0.00	0.90	1.24	66.37	-3.99	13.44	0.00	Vehicle	Vehicle	386.06	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.20**	**7.00**	-----	-----
		U_6 - L_6	177.52	55.30	-14.68	14.13	0.00	0.90	1.24	61.56	-16.34	14.13	0.00	Vehicle	Vehicle	364.17	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.61**	**7.69**	-----	-----
		U_7 - L_7	173.18	49.29	-16.12	13.87	0.00	0.90	1.24	54.88	-17.94	13.87	0.00	Vehicle	Vehicle	344.03	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.22**	**8.70**	-----	-----
		U_8 - L_8	328.11	82.43	-0.60	19.31	0.00	0.90	1.20	88.87	-0.64	19.31	0.00	Vehicle	Vehicle	619.10	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.28**	**7.14**	-----	-----
		U_9 - L_{10}	339.70	83.87	-3.06	19.74	0.00	0.90	1.20	90.43	-3.29	19.74	0.00	Vehicle	Vehicle	637.55	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.13**	**6.88**	-----	-----
		U_{10} - L_{11}	313.22	80.08	10.79	18.15	0.00	0.90	1.20	86.34	11.63	18.15	0.00	Vehicle	Vehicle	594.24	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**4.15**	**6.92**	-----	-----
		U_{11} - L_{12}	270.68	65.47	10.56	14.84	0.00	0.90	1.20	70.59	11.39	14.84	0.00	Vehicle	Vehicle	504.83	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.31**	**7.18**	-----	-----
		U_{12} - L_{13}	194.17	52.40	-5.65	10.79	0.00	0.90	1.20	56.50	-6.09	10.79	0.00	Vehicle	Vehicle	374.84	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**4.64**	**7.73**	-----	-----
		U_{13} - L_{14}	123.57	41.57	-14.04	2.11	3.86	0.90	1.20	44.82	-15.14	3.86	2.11	Vehicle	Vehicle	257.75	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.07**	**6.79**	-----	-----
		U_{14} - L_{15}	-16.32	32.86	-23.24	0.00	-0.87	0.90	1.20	35.43	-25.06	0.00	-0.87	Vehicle	Vehicle	55.54	-75.52	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.52**	**12.53**	**7.47**	**12.45**
		U_{15} - L_{15}	59.12	43.76	-11.37	6.08	-2.09	0.90	1.20	47.18	-12.25	6.08	-2.09	Vehicle	Vehicle	179.08	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.69**	**7.81**	-----	-----
		U_{17} - L_{16}	172.14	59.84	-11.17	9.93	-1.86	0.90	1.20	64.52	-12.04	9.93	-1.86	Vehicle	Vehicle	363.59	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.28**	**5.46**	-----	-----
		U_{18} - L_{17}	210.78	61.14	-9.46	12.51	-1.53	0.90	1.20	65.92	-10.20	12.51	-1.53	Vehicle	Vehicle	416.84	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.00**	**6.67**	-----	-----
		U_{19} - L_{18}	242.64	61.72	-7.56	13.73	-1.21	0.90	1.20	66.54	-8.15	13.73	-1.21	Vehicle	Vehicle	459.60	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.22**	**7.03**	-----	-----
		U_{20} - L_{19}	257.76	54.02	-6.21	15.70	-1.03	0.90	1.20	58.24	-6.69	15.70	-1.03	Vehicle	Vehicle	461.28	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.66**	**7.77**	-----	-----
		L_0 - L_1	298.99	57.42	-14.12	14.21	-2.21	0.90	1.18	61.14	-15.04	14.21	-2.21	Vehicle	Vehicle	521.15	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.70**	**7.83**	-----	-----
		U_1 - L_2	284.21	77.28	-16.81	14.05	-2.66	0.90	1.18	82.28	-17.90	14.05	-2.66	Vehicle	Vehicle	547.74	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.60**	**6.00**	-----	-----
		U_2 - L_3	221.42	69.97	-17.93	11.83	-2.85	0.90	1.18	74.49	-19.09	11.83	-2.85	Vehicle	Vehicle	449.25	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.46**	**5.76**	-----	-----
		U_3 - L_4	178.30	67.99	-20.24	10.08	-3.23	0.90	1.18	72.39	-21.55	10.08	-3.23	Vehicle	Vehicle	388.63	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**3.31**	**5.51**	-----	-----
		U_4 - L_5	53.50	42.15	-13.35	5.37	-2.87	0.90	1.18	44.87	-14.22	5.37	-2.87	Vehicle	Vehicle	166.77	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.00**	**8.34**	-----	-----
		U_5 - L_6	-16.51	35.09	-24.02	2.23	-1.22	0.90	1.18	37.36	-25.57	2.23	-1.22	Vehicle	Vehicle	59.48	-76.87	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.13**	**11.89**	**7.26**	**12.09**
		U_6 - L_7	-133.21	13.33	-45.32	0.00	-5.36	0.90	1.18	14.19	-48.25	0.00	-5.36	Vehicle	Vehicle	-----	-277.71	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.81**	**4.69**
		U_7 - L_7	208.77	53.30	-11.40	8.33	0.00	0.90	1.18	56.75	-12.13	8.33	0.00	Vehicle	Vehicle	394.35	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**4.17**	**6.95**	-----	-----
		U_8 - L_8	289.58	69.01	-2.54	10.70	0.00	0.90	1.18	73.47	-2.70	10.70	0.00	Vehicle	Vehicle	535.64	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.43**	**5.72**	-----	-----
		U_{10} - L_9	327.97	70.93	-2.73	12.66	0.00	0.90	1.18	75.51	-2.90	12.66	0.00	Vehicle	Vehicle	589.98	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.57**	**5.95**	-----	-----
		U_{11} - L_{10}	349.25	76.48	-4.07	12.70	0.00	0.90	1.18	81.43	-4.33	12.70	0.00	Vehicle	Vehicle	630.46	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.65**	**6.08**	-----	-----
		U_{12} - L_{11}	358.20	71.36	-11.06	13.52	0.00	0.90	1.18	75.97	-11.78	13.52	0.00	Vehicle	Vehicle	630.26	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.84**	**6.40**	-----	-----
		U_{13} - L_{12}	307.75	58.47	-21.34	12.26	-0.24	0.90	1.18	62.26	-22.72	12.26	-0.24	Vehicle	Vehicle	534.96	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.53**	**7.55**	-----	-----
		U_{14} - L_{13}	260.20	48.04	-18.21	9.65	0.00	0.90	1.18	51.15	-19.39	9.65	0.00	Vehicle	Vehicle	449.08	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.07**	**10.11**	-----	-----
		U_{15} - L_{14}	208.42	66.30	-8.78	11.04	-2.51	0.90	1.17	69.76	-9.23	11.04	-2.51	Vehicle	Vehicle	422.09	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.80**	**6.34**	-----	-----
		U_{16} - L_{15}	243.55	74.30	-5.76	11.54	-1.48	0.90	1.17	78.18	-6.06	11.54	-1.48	Vehicle	Vehicle	486.00	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{17} - L_{16}	255.86	75.20	-9.46	12.23	0.00	0.90	1.17	79.11	-9.96	12.23	0.00	Vehicle	Vehicle	504.04	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.45**	**5.74**	-----	-----
		U_{18} - L_{17}	235.29	72.22	-11.09	11.35	0.00	0.90	1.17	75.98	-11.66	11.35	0.00	Vehicle	Vehicle	470.52	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.28**	**5.47**	-----	-----
		U_{19} - L_{18}	212.11	66.88	-13.54	11.09	0.00	0.90	1.17	70.37	-14.24	11.09	0.00	Vehicle	Vehicle	428.20	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.74**	**6.23**	-----	-----
		U_{20} - L_{19}	168.24	57.50	-5.89	9.14	0.00	0.90	1.17	60.50	-6.20	9.14	0.00	Vehicle	Vehicle	349.79	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**4.31**	**7.19**	-----	-----
	Structure 2	U_{26} - L_{21}	97.26	44.23	-18.41	6.66	0.00	0.90	1.17	46.53	-19.37	6.66	0.00	Vehicle	Vehicle	227.26	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.26**	**7.10**	-----	-----
		U_{21} - L_{22}	30.60	15.98	-25.63	0.58	-2.18	0.90	1.17	16.82	-26.97	0.58	-2.18	Vehicle	Vehicle	76.22	-18.64	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**14.17**	**23.61**	**7.93**	**13.21**
		U_{23} - L_{22}	49.78	40.43	-20.58	5.11	-0.95	0.90	1.17	42.54	-21.65	5.11	-0.95	Vehicle	Vehicle	156.88	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.33**	**8.88**	-----	-----
		U_{24} - L_{23}	115.07	50.67	-13.47	8.00	-0.72	0.90	1.17	53.31	-14.17	8.00	-0.72	Vehicle	Vehicle	265.09	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.52**	**5.86**	-----	-----
		U_{25} - L_{24}	179.22	62.01	-15.86	10.10	0.00	0.90	1.17	65.24	-16.68	10.10	0.00	Vehicle	Vehicle	374.33	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.90**	**6.50**	-----	-----
		U_{26} - L_{25}	220.97	65.81	-13.91	11.89	0.00	0.90	1.17	69.23	-14.63	11.89	0.00	Vehicle	Vehicle	437.27	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.72**	**6.21**	-----	-----
		U_{27} - L_{26}	234.87	67.17	-11.06	11.45	0.00	0.90	1.17	70.67	-11.63	11.45	0.00	Vehicle	Vehicle	458.44	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.53**	**5.88**	-----	-----
		U_{28} - L_{27}	253.15	64.45	-9.97	12.25	0.00	0.90	1.17	67.81	-10.48	12.25	0.00	Vehicle	Vehicle	476.01	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.04**	**6.74**	-----	-----
		U_{29} - L_{28}	215.91	52.72	-21.25	10.20	0.61	0.90	1.17	55.46	-22.36	10.20	0.61	Vehicle	Vehicle	400.85	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.70**	**7.84**	-----	-----
		U_{30} - L_{29}	180.73	44.87	-18.04	8.49	0.00	0.90	1.17	47.21	-18.98	8.49	0.00	Vehicle	Vehicle	337.23	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.97**	**9.95**	-----	-----
		U_{31} - L_{31}	294.99	65.98	-10.11	12.90	0.00	0.90	1.18	70.25	-10.76	12.90	0.00	Vehicle	Vehicle	535.70	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.12**	**6.87**	-----	-----
		U_{32} - L_{32}	342.70	77.02	-9.36	13.70	-0.55	0.90	1.18	82.01	-9.96	13.70	-0.55	Vehicle	Vehicle	623.20	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.18**	**5.30**	-----	-----
		U_{33} - L_{33}	363.39	77.43	-4.78	14.16	0.00	0.90	1.18	82.44	-5.09	14.16	0.00	Vehicle	Vehicle	651.02	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.50**	**5.84**	-----	-----
		$U

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Segment
Condition: HS20 Truck
Analysis: As-Built

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 2.17
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Gusset Plate Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Pos. Mom. Start k-in | Max. Pos. Mom. End k-in | S_{bb} (in^3) | S_{tb} (in^3) | Z_z (in^3) | I (in^4) | I_{xx} (in^4) | Shape Factor | M_p (k-in) | Formula I.8 Term F: F_y/S_{bb} | M_u (k-in) | Equivalent Mom. Factor: a | $C_{m(x)}$ | $C_{m(y)}$ | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start k-in | Max. Neg. Mom. End k-in | S_{bb} (in^3) | S_{tb} (in^3) | Z_z (in^3) | I_{zz} (in^4) | Shape Factor | M_p (k-in) | F_{crit} (ksi) | Formula I.8 Term F: F_y/S_{bb} | M_u (k-in) | Equivalent Mom. Factor: a | $C_{m(x)}$ | $C_{m(y)}$ | Yield: Axial Axial/Bending | Yield: Moment Bending | Yield: Total | Yield: Pass | Tension: Axial Axial/Bending | Tension: Moment Bending | Tension: Total | Tension: Pass | Fracture: Axial Axial/Bending | Fracture: Moment Bending | Fracture: Total | Fracture: Pass | Buckle: Axial Axial/Bending | Buckle: Moment Bending | Buckle: Total | Buckle: Pass | Compression: Axial Axial/Bending | Compression: Moment Bending | Compression: Total | Compression: Pass |
|---|---|---

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **HS20 Truck**
Condition: **As-Built**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Per Figure 6.6.3.1.2-1 for Guide Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information — **M_1 Information**

ZZ Axis Moments from STAAD — YY Axis Moments from STAAD — Max. Prov. Moments — Max. Neg. Moments — Tension — Compression

Location	Member	Dead Load Start-In	Dead Load End-In	Live Load (Max) Start-In	Live Load (Max) End-In	Pedestrian Load (Max) Start-In	Pedestrian Load (Min) End-In	Lane Reduction & Impact Live Load Start-In	Lane Reduction & Impact Live Load End-In	Impact Pedestrian Load Max Start-In	Impact Pedestrian Load Max End-In	Start-In	End-In	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{top}	M_2 (k-in)	Equivalent Mom. Factor a	C_{mx}	C_{bsh}	Dead Load Start-In	Dead Load End-In	Live Load (Max) Start-In	Live Load (Max) End-In	Pedestrian Load (Max) Start-In	Pedestrian Load (Min) End-In	Lane Reduction & Impact Live Load Start-In	Lane Reduction & Impact Live Load End-In	Impact Pedestrian Load Max Start-In	Impact Pedestrian Load Max End-In	Start-In	End-In	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	P_{crit} (kip)	Formula 1.8 Term * F'c/S_{top}	M_1 (k-in)	Equivalent Mom. Factor a	C_{mx}	C_{bsh}	Axial Stress	Moment Stress	Total	Pass	Axial Stress	Moment Stress	Total	Pass	Axial Stress	Moment Stress	Total	Pass
Structure 1	L_0-L_1	-44.17	-99.07	0.97	1.00	4.81	-7.40					0.00	0.00	-85.36	-99.73	84.55	343.05	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.246	0.50	0.50	-2.16	-7.52	-0.08	-0.28	0.43	1.69					-1.00	-3.70	5.76	21.23	0.00	0.00	0.00	0.00	121.63	141.18	626.8	1.10	4609		0.99805042	4225.3	0.271	0.71	0.71	0.000	0.111	0.12	Yes	0.000	0.068	0.07	Yes	0.008	0.068	0.08	Yes	0.008	0.103	0.12	Yes
	L_1-L_2	-131.02	-112.64	-0.42	2.45	-2.26	-13.38					0.00	0.00	-158.05	-75.49	235.68	-333.76	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.442	0.42	0.42	-33.01	-1.65	0.32	-0.67	-2.97	-3.40					4.28	-8.92	-39.73	1.23	0.00	0.00	0.00	0.00	128.29	115.05	541.18	1.10	4609		0.99805042	4225.3	0.779	0.91	0.91	0.278	0.126	0.41	Yes	0.037	0.085	0.12	Yes	0.037	0.085	0.12	Yes	0.037	0.085	0.12	Yes
	L_2-L_3	-73.50	-79.96	-2.26	-2.65	-12.69	-14.21					0.00	0.00	-16.78	-38.10	-169.47	-789.79	83.6	83.58	70.97	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.080	0.50	0.50	-38.62	-28.87	-442.98	-514.69	99.5	99.50	91.00	329.43	0.00	0.00	0.00	0.00	-3.50	-11.68	-39.68	-17.14	0.00	0.00	0.00	0.00	141.26	188.27	749.5	1.10	6220		0.99781161	5651.9	0.361	0.74	0.74	0.425	0.131	0.56	Yes	0.252	0.084	0.34	Yes	0.083	0.101	0.19	Yes	0.082	0.109	0.20	Yes
	L_3-L_4	-68.34	-112.23	-16.94	-6.05	-0.01	-7.78					0.00	0.00	-20.32	-120.30	-102.96	0.00	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-68.64	-3.04	-25.80	-4.39	0.21	-7.35					-128.56	-9.28	-135.3	-151.71	-141.99	-172.01	694.3	1.10	0		0.00000000	0.0	0.000	0.00	0.00	0.000	0.174	0.17	Yes	0.000	0.128	0.24	Yes												
	L_4-L_5	-8.36	-229.14	3.08	6.05	-6.64	-5.54					0.00	0.00	10.08	-472.38	-178.59	-337.53	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952345	3448.5	0.212	0.68	0.68	28.81	91.29	0.78	2.20	1.78	-3.33					10.39	-2.70	23.78	2.05	0.00	0.00	0.00	0.00	59.98	124.52	88.98	22.40	205.5	1.10	7843		0.99778986	6800.4	0.482	0.79	0.79	0.637	0.105	0.75	Yes												
	L_5-L_6	-61.83	-111.52	-3.37	6.01	-0.07	-8.21					0.00	0.00	-24.47	-366.39	-223.05	-787.62	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952345	3448.5	0.222	0.68	0.68	-29.16	-59.23	-1.43	-3.63	0.32	8.17					32.51	-29.82	82.56	-159.37	288.5	288.45	1249.5	1.10	7843		0.99753206	6800.4	0.737	0.91	0.91	0.480	0.242	0.72	Yes	0.480	0.242	0.72	Yes				
	L_6-L_7	-1.61	-409.41	-1.85	15.85	0.09	-0.13					0.00	0.00	-24.65	-211.68	1.18	-1.79	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952345	3448.5	-0.049	0.58	0.58	-49.51	-37.09	0.75	-1.37	-0.93	-0.51					10.02	-18.24	-12.48	-8.87	0.00	0.00	0.00	0.00	-42.65	-114.12	-91.45	-89.49	305.4	305.44	352.52	403.40	1093.1	1.13	13312		0.99717297	11898.3	0.374	0.75	0.75					0.546	0.129	0.69	Yes				
	L_7-L_8	-439.88	-25.12	8.05	1.03	8.66	-5.80					0.00	0.00	104.21	13.33	112.03	-75.00	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-79.63	-3.78	814.59	-195.15	145.83	145.75	136.74	228.84	6350	2932.4	1.57	7552	0.99952161	4806.4	-0.240	0.50	0.50	-7.56	14.72	26.04	76.92	0.00	0.00	0.00	0.00	-138.55	-113.78	-65.74	-25.32	355.4	355.44	304.93	403.40	1093.1	1.13	13312		0.99718864	11898.5	0.821	0.93	0.93					0.544	0.099	0.65	Yes	0.537	0.108	0.65	Yes
	L_8-L_9	-168.12	-117.13	5.30	2.51	2.45	-7.87					0.00	0.00	68.61	32.48	31.66	-101.81	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-367.22	-81.90	287.15	-372.86	92.6	92.58	83.65	114.47	3295	1504.9	1.24	3777	0.99913812	3052.5	-0.779	0.25	0.29	86.11	-28.11	0.48	1.46	-1.78	-1.64					125.45	4.41	62.01	-82.38	158.2	158.16	551.51	173.24	694.3	1.10	5717		0.99758535	5208.8	0.035	0.61	0.61					0.521	0.051	0.38	Yes	0.516	0.059	0.62	Yes
	L_9-L_{10}	-23.72	-212.27	2.22	3.29	-1.47	-5.76					0.00	0.00	-41.65	-239.94	-174.07	-128.74	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952345	3448.5	-0.479	0.41	0.41	-19.46	-8.14	-25.33	-14.05	0.00	0.00	0.00	0.00	-66.08	-6.53	-14.05	-4.00	0.00	0.00	0.00	0.00	45.08	-12.04	61.23	-23.98	158.2	158.16	551.51	173.24	694.3	1.10	5717		0.99758535	5208.8	0.063	0.40	0.40	0.476	0.159	0.64	Yes	0.285	0.105	0.40	Yes	0.080	0.081	0.17	Yes
	L_{10}-L_{11}	-19.73	-128.50	3.29	1.61	-5.76	-11.22					0.00	0.00	42.69	-20.87	-74.51	-145.13	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	66.63	-121.84	-187.09	-481.50	130.1	130.08	121.10	170.72	3885	1793.2	1.31	3634	0.99950292	4288.6	0.389	0.76	0.76	70.65	67.31	-1.18	-0.47	0.36	0.43					-15.24	-0.68	48.33	101.88	157.66	233.3	233.26	201.34	929.4	1.10	8859		0.99716998	7679.8	0.646	0.86	0.86	0.548	0.248	0.80	Yes				
	L_{11}-L_{12}	-175.78	-425.21	2.54	2.22	-3.27	-21.92					0.00	0.00	32.68	28.70	-42.27	-283.64	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-299.75	-490.59	136.93	-1167.31	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99916106	5370.6	-0.117	0.55	0.55	11.87	17.23	-0.14	-0.49	4.67	-0.89					11.59	8.63	146.32	-2.61	321.7	321.70	275.89	363.71	1221.7	1.13	12002		0.99741173	10568.7	-0.018	0.59	0.59	0.567	0.173	0.74	Yes				
	L_{12}-L_{13}	-409.28	-20.79	7.75	0.98	8.33	0.76					0.00	0.00	-122.44	-22.48	-16.70	-61.82	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952345	3448.5	-0.005	0.58	0.58	-160.91	-40.42	-1.51	-0.83	-1.20	0.31					-19.58	-3.68	-21.54	-0.32	40.2	40.24	34.70	45.74	153.7	1.10	1509		0.99941270	1329.6	0.521	0.68	0.68	0.248	0.030	0.28	Yes	0.248	0.030	0.28	Yes				
	L_{13}-L_{14}	-209.39	-318.68	0.87	0.78	-7.72	-17.91					0.00	0.00	11.23	10.12	-89.91	-231.69	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-247.87	-392.36	-488.68	-916.27	179.7	179.69	170.68	251.43	7453	3700.7	1.40	8297	0.99912252	5524.6	0.533	0.81	0.81	-84.13	-64.40	-22.43	-0.59	0.79	-1.77					-116.15	-71.69	-126.02	-246.08	535.3	375.47	322.87	431.42	1347.7	1.15	14237		0.99727272	12356.7	0.512	0.80	0.80	0.491	0.128	0.62	Yes	0.315	0.075	0.40	Yes
	L_{14}-L_{15}	-374.46	-83.94	-0.87	3.70	-11.40	-8.16					0.00	0.00	-75.96	-47.87	-147.45	-150.62	179.7	179.69	170.68	251.43	7453	3700.7	1.40	8297	0.99912252	5524.6	-0.533	0.81	0.81	-651.90	-212.84	-808.16	-1172.72	153.9	153.89	145.15	215.37	6384	2239.34	1.29	7108	0.99912252	5524.6	0.533	0.81	0.81	-67.79	-21.88	-4.00	0.51	-3.70	5.52					-83.66	-23.88	-132.83	302.9	300.95	256.42	342.42	1154.2	1.12	11294		0.99742447	9968.6	0.070	0.83	0.83	0.340	0.083	0.40	Yes	0.340	0.083	0.40	Yes
	L_{15}-L_{16}	-171.07	-198.86	-4.31	4.30	-3.57	-3.74					0.00	0.00	-55.80	-55.67	-46.20	-48.43	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-343.30	-166.44	-322.50	-79.12	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904448	3891.8	-0.427	0.43	0.43	-57.14	-10.20	-1.20	-1.46	-0.78	-4.53					-15.84	-18.90	-10.14	-58.59	0.00	0.00	0.00	0.00	-107.95	-54.21	-96.26	-140.19	213.3	213.34	184.04	236.66	808.1	1.11	7813		0.99737381	7024.3	0.687	0.87	0.87	0.395	0.084	0.48	Yes	0.253	0.051	0.31	Yes
	L_{16}-L_{17}	-208.33	-253.78	-7.55	5.70	-3.81	-2.03					0.00	0.00	-97.67	-71.14	-54.62	-26.26	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-482.43	-489.91	-377.52	-72.24	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.597	0.50	0.50	-50.61	-27.61	-4.89	-0.03	-2.74	5.89					-63.27	-5.32	-36.45	76.26	0.00	0.00	0.00	0.00	-202.87	-140.13	-126.02	-246.08	535.3	375.47	322.87	431.42	1347.7	1.15	14237		0.99727272	12356.7	0.512	0.80	0.80	0.491	0.128	0.62	Yes	0.315	0.075	0.40	Yes
	L_{17}-L_{18}	-84.78	1.02	9.75	5.27	0.46	-0.49					0.00	0.00	-396.54	-149.08	-110.29	-12.44	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.376	0.45	0.45	-26.32	-5.87	3.02	0.72	0.11	0.02					41.71	9.35	3.41	0.31	0.00	0.00	0.00	0.00	56.16	12.64	-31.16	-9.16	133.1	133.11	119.24	146.13	626.8	1.10	4602		0.99805099	4383.9	0.225	0.69	0.69	0.036	0.131	0.17	Yes	0.022	0.088	0.12	Yes	0.206	0.074	0.29	Yes
	L_{18}-L_{19}	10.35	-213.29	-0.92	1.11	4.04	-10.53					0.00	0.00	-0.47	-246.53	125.32	-568.96	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.220	0.51	0.51	-0.41	-1.38	-0.06	-0.27	1.11	-3.85					-1.00	-3.45	-14.16	-49.19	0.00	0.00	0.00	0.00	-2.69	9.26	-31.20	-108.37	167.9	167.91	150.45	184.50	1098.1	1.10	6089		0.99834634	5531.9	0.298	0.72	0.72	0.026	0.134	0.16	Yes	0.015	0.086	0.11	Yes
	L_{19}-L_{20}	34.16	-247.73	1.37	0.95	12.26	-12.26					0.00	0.00	-7.30	-15.59	-27.64	-153.94	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-198.11	-289.74	-318.16	-1.35	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.346	0.50	0.50	-2.73	-5.42	-0.35	-0.05	-0.77	-3.12					-4.10	-5.39	-29.77	54.76	0.00	0.00	0.00	0.00	-39.23	-54.56	-49.25	-0.26	133.1	133.11	107.40	146.13	626.8	1.10	4602		0.99805099	4383.9	0.225	0.69	0.69	0.036	0.131	0.17	Yes	0.022	0.088	0.12	Yes
	L_{20}-L_{21}	-0.36	-194.33	-0.64	1.20	-2.70	-12.93					0.00	0.00	-8.19	-15.37	-34.48	-165.16	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-18.21	-219.33	75.18	-610.48	162.5	162.51	151.98	209.67	6949	2152.2	1.29	6919	0.99904248	5357.7	0.123	0.65	0.65	60.81	64.32	-0.01	0.29	-0.26	2.42					3.99	0.98	115.01	8.62	0.00	0.00	0.00	0.00	173.73	108.45	89.66	19.52	167.9	167.91	134.98	184.50	1098.1	1.10	6089		0.99795552	8626.6	0.576	0.83	0.83	0.471	0.101	0.58	Yes	0.309	0.061	0.37	Yes
	L_{21}-L_{22}	-287.80	-299.08	-0.23	2.06	-13.69	-20.84					0.00	0.00	-3.25	-26.37	-174.92	-266.26	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-381.17	-331.66	-753.13	-865.69	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99902244	6746.8	0.780	0.91	0.91	71.73	108.91	0.01	0.91	-2.24	0.03					91.61	166.67	31.16	142.44	385.1	385.05	321.50	445.45	1668.6	1.16	14832		0.99755552	12807.3	0.562	0.82	0.82	0.498	0.102	0.61	Yes	0.330	0.061	0.40	Yes
	L_{22}-L_{23}	-467.54	-273.29	2.97	0.49	-25.39	-28.67					0.00	0.00	-17.41	-44.69	-408.19	-1167.11	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-458.19	-453.54	-1167.11	-1.35	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.580	0.50	0.50	-5.64	-7.84	-0.35	-0.05	-1.11	-3.12					-9.34	-8.38	-29.77	54.76	0.00	0.00	0.00	0.00	-53.13	-54.56	-49.25	-0.26	133.1	133.11	107.40	146.13	626.8	1.10	4602		0.99805099	4383.9	0.225	0.69	0.69	0.036	0.131	0.17	Yes	0.022	0.088	0.12	Yes
	L_{23}-L_{24}	-310.55	-49.89	3.66	6.74	-13.43	-20.98					0.00	0.00	46.76	86.15	-171.57	-268.05	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-302.39	127.01	-775.45	-640.42	255.7	255.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.826	0.93	0.93	-554.37	-3.37	0.09	0.24	1.37	-3.98					1.15	3.05	17.47	-50.79	0.00	0.00	0.00	0.00	-132.44	2.23	-88.09	-114.42	330.3	330.27	276.06	369.76	1851.4	1.12	12202		0.99739952	10877.1	-0.017	0.59	0.59	0.513	0.097	0.61	Yes	0.337	0.057	0.40	Yes
	L_{24}-L_{25}	-272.22	-203.36	-1.77	4.29	-11.77	-16.82					0.00	0.00	-261.51	-139.34	-231.26	-272.72	411.9	411.89	392.09	521.47	18512	8272.7	1.41	23392	0.99981427	17437.6	0.429	0.93	0.93	-28.61	10.39	-22.31	19.56	293.3	292.93	259.31	329.53	2492.49	2492.49	2492.49	2492.49	2492.49	2492.49	2492.49	2492.49	-106.68	29.24	-106.68	29.24	1061.7	1061.70	1061.70	1061.70	1061.70	1061.70	1061.70	1061.70	-106.68	29.24	-106.68	29.24	1061.7	1061.70	1061.70	1061.70	1061.70	1061.70	1061.70	1061.70	-106.68	29.24	-106.68	29.24	1061.7	1061.70	1061.70	1061.70	1061.70	1061.70	1061.70	1061.70
	L_{25}-L_{26}	-261.91	-188.33	3.24	6.65	-5.76	-9.53					0.00	0.00	-261.91	-128.97	-249.85	-193.07	411.9	411.89	392.09	521.47	18512	8272.7	1.41	23392	0.99981427	17437.6	0.429	0.93	0.93	-250.71	-128.97	-249.85	-193.07	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99895457	6781.3	0.826	0.93	0.93	-43.15	3.78	1.00	1.21	-0.68	-2.47					12.80	15.41	-0.98	54.59	0.00	0.00	0.00	0.00	79.60	29.24	-53.36	-33.96	113.2	113.25	91.95	134.01	626.8	1.10	4602		0.99827238	7563.1	0.476	0.79	0.79	0.266	0.094	0.36	Yes	0.212	0.080	0.30	Yes
	L_{26}-L_{27}	-131.48	-389.15	-8.12	7.01	-6.47	-6.81					0.00	0.00	-103.76	-89.59	-82.65	-86.98	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-395.73	-792.01	-350.00	-317.44	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916215	5468.6	-0.565	0.33	0.37	41.71	155.65	-0.35	0.19	0.08	-4.27					-58.01	-81.66	-13.94	-43.81	0.00	0.00	0.00	0.00	-99.74	-89.59	-100.39	7.40	303.9	303.91	247.50	337.00	1439.2	1.14	11452		0.99803122	8222.2	-0.498	0.40	0.40	-284.46	-193.98	1.60	-0.85	3.31	5.47					-326.03	-275.43	-279.39	-102.44	444.9	444.92	369.61	507.36	2244.6	1.14	16743		0.99771127	14648.8	0.845	0.94	0.94					0.465	0.110	0.58	Yes	0.461	0.156	0.62	Yes
	L_{27}-L_{28}	-184.13	-4.56	7.11	1.17	-4.23	-11.44					0.00	0.00	-71.93	-103.89	-169.64	-0.00	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-537.71	-0.00	-1.00	-0.00	0.00	0.00					-198.20	-29.27	-0.00	-0.00	0.00	0.00	0.00	0.00	23.99	61.81	-39.07	-0.00	233.3	233.34	194.43	259.53	1439.2	1.14	11452		0.99803122	8222.2	-0.498	0.40	0.40	-284.46	-193.98	1.60	-0.85	3.31	5.47					14743		0.99771127	14648.8	0.845	0.94	0.94					0.465	0.110	0.58	Yes	0.461	0.156	0.62	Yes
	L_{28}-L_{29}	-515.59	-35.24	7.13	2.21	0.27	-11.69					0.00	0.00	90.03	27.90	3.43	-147.64	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-855.33	14.64	677.70	-365.70	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8157	0.99901945	6543.8	0.017	0.61	0.61	101.84	-39.62	3.59	3.21	-3.32	0.71					45.27	40.46	-29.32	8.90	0.00	0.00	0.00	0.00	230.48	35.17	68.87	-32.22	327.4	327.44	272.63	362.39	1622.3	1.11	11959		0.99805165	10784.1	0.153	0.66	0.66					0.542	0.104	0.65	Yes	0.526	0.066	0.75	Yes
	L_{29}-L_{30}	-252.02	-25.09	6.27	2.73	-3.79	-12.41					0.00	0.00	79.10	34.47	-47.80	-166.70	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-499.00	42.06	224.06	-372.14	127.4	127.41	116.52	157.02	3868	1501.0	1.23	5182	0.99898888	4200.3	0.084	0.63	0.63	70.19	39.60	-1.76	-0.33	1.58	3.68					43.13	42.40	134.52	-152.10	180.6	180.57	174.56	198.17	1146.7	1.10	6540		0.99836065	5949.0	0.894	0.95	0.95	0.582	0.096	0.68	Yes				
	L_{30}-L_{31}	-230.55	-46.37	3.68	4.17	-3.46	-16.51					0.00	0.00	46.49	52.68	-43.65	-208.48	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-400.43	-53.87	255.15	-191.54	127.4	127.41	116.52	157.02	3868	1501.0	1.23	5182	0.99898891	4200.3	-0.401	0.44	0.44	29.71	2.44	0.09	-0.68	3.62	-10.40					1.12	-8.56	-45.04	-17.69	0.00	0.00	0.00	0.00	-11.96	-41.60	-45.04	-28.62	180.6	180.57	156.03	198.17	1146.7	1.10	6540		0.99836065	5949.0	-0.234	0.51	0.51	0.182	0.121	0.31	Yes	0.182	0.121	0.31	Yes
	L_{31}-L_{32}	-41.53	-186.96	-0.09	3.20	-11.82	-30.40					0.00	0.00	-1.12	-40.35	-149.26	-383.74	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00	-51.55	-155.62	-269.40	-1074.69	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.251	0.75	0.75	-40.46	5.36	0.27	0.60	4.86	-0.50					-45.10	23.38	80.43	-6.79	256.0	256.03	211.86	281.97	1450.4	1.10	9292		0

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.00	DL Factor:	1.00
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0~L_1	-56.29	86.22	4.58	5.48	0.70	-0.93	0.00	0.00	0.00	0.00
	L_1~L_2	-14.44	23.27	-4.31	4.20	0.92	-0.92	0.00	0.00	0.00	0.00
	L_2~L_3	-0.68	5.55	-3.20	1.50	-1.20	-4.27	0.00	0.00	0.00	0.00
	L_3~L_4	36.84	-39.22	-2.72	2.97	1.73	-1.61	0.00	0.00	0.00	0.00
	L_4~U_4	47.71	-49.19	-2.94	3.01	1.77	-39.60	-28.81	0.00	0.00	0.00
	U_0~U_1	57.71	-69.80	-0.20	0.04	3.84	-4.21	-2.69	0.48	57.21	-11.98
	U_1~U_2	63.32	-67.29	-0.24	0.51	-5.37	-58.34	-54.34	0.00	-0.52	2.57
	U_2~U_3	106.28	-118.16	-0.16	0.15	8.85	-8.05	-2.15	1.94	73.13	-80.87
	U_3~U_4	-10.96	6.72	4.91	7.33	-8.73	-7.72	-65.65	78.92	97.87	-116.67
	U_4~L_5	-144.91	167.70	-4.74	5.29	0.39	-0.38	-267.25	366.38	-177.36	207.27
	L_5~L_6	-102.02	95.66	-4.09	4.41	-0.12	-0.41	-52.03	57.10	-1.57	-5.24
	L_6~L_7	-51.13	58.05	-3.89	4.41	0.47	-0.50	-52.15	56.96	-2.30	0.00
	L_7~L_8	-96.42	93.90	-4.42	4.61	0.54	-0.46	-57.23	57.07	6.93	-6.00
	L_8~U_8	-90.91	75.94	-3.98	4.23	0.79	-0.80	-51.52	54.78	10.26	-10.00
	U_4~U_5	-33.93	39.66	-3.93	3.93	0.05	-0.13	-37.75	43.43	5.91	-6.00
	U_5~U_6	8.32	-15.87	-2.03	-1.99	3.58	-3.80	-26.20	25.75	46.29	-48.14
	U_6~U_7	47.73	-50.39	-0.79	0.79	3.97	-4.10	39.82	-43.93	173.91	-180.39
	U_7~U_8	61.55	-72.81	-0.60	0.60	4.32	-4.41	-7.70	7.75	55.95	-57.01
	U_8~L_9	133.11	-138.25	-0.83	0.83	3.97	-7.03	-10.70	14.80	60.89	-63.00
	L_9~L_{10}	157.87	-153.86	-0.85	0.76	7.86	-7.72	-10.96	9.82	101.79	-99.82
	L_{10}~L_{11}	131.38	-213.66	-0.37	0.62	5.50	-7.61	-4.74	7.96	71.85	-98.50
	L_{11}~L_{12}	147.13	191.00	-3.88	3.72	0.25	-0.43	-263.99	449.22	1,003.76	-1,010.87
	L_{12}~L_{13}	-122.87	130.77	-6.42	6.35	0.80	-0.82	-82.06	81.14	10.16	-10.41
	L_{13}~L_{14}	-61.79	58.78	-6.42	6.39	0.98	-0.92	-81.66	81.66	12.67	-12.61
	L_{14}~U_{14}	-62.46	69.03	-3.32	3.52	0.63	-0.64	-42.43	45.01	8.06	-8.00
	U_8~U_9	37.86	-43.29	-3.87	3.87	0.00	-0.01	-49.14	49.14	0.00	0.00
	U_9~L_{10}	-9.11	15.69	3.43	3.68	1.52	-1.38	-43.85	46.93	19.39	-17.64
	L_{10}~U_{10}	14.84	-14.93	-2.73	2.88	2.15	-2.12	-34.92	34.80	27.52	-27.06
	U_{10}~U_{11}	39.69	-45.43	-1.38	-1.74	19.20	-19.64	-29.04	-33.07	0.00	0.00
	U_{11}~L_{12}	88.81	-97.92	-1.01	0.91	-4.52	-5.09	-12.52	11.68	62.86	-64.90
	L_{12}~U_{12}	133.08	-133.02	-1.01	0.91	-4.52	-5.09	173.30	-180.20	130.95	-133.91
	U_{12}~U_{13}	140.09	-147.00	-0.01	0.11	6.21	-6.44	-0.08	1.43	79.28	-82.29
	U_{13}~L_{14}	148.96	-153.44	-0.15	0.26	6.11	-6.31	-1.67	3.35	78.09	-80.73
	L_{14}~U_{14}	149.87	-139.96	-0.32	0.56	5.42	-6.30	-3.47	6.26	69.20	-84.36
	U_{14}~L_{15}	185.41	-182.32	-2.71	0.70	7.28	-6.31	-9.02	8.96	92.95	-89.22
	L_{15}~U_{15}	72.60	7.70	-3.71	0.72	7.28	-6.31	-42.29	39.74	92.89	-89.22
	U_{15}~L_{16}	-128.28	-129.98	-6.20	5.88	0.72	-0.64	-78.21	74.21	9.14	-8.11
	L_{16}~U_{16}	-69.77	-66.23	-6.20	5.88	0.72	-0.64	-78.21	74.21	9.14	-8.11
	U_{16}~L_{17}	-125.94	122.64	-6.87	6.89	0.73	-0.69	-86.76	86.94	9.27	-8.71
	L_{17}~U_{17}	-109.69	106.91	-6.37	6.92	0.97	-0.90	-80.41	87.30	12.35	-11.96
	U_{17}~L_{18}	-53.24	53.24	-4.75	4.75	0.65	-0.65	-59.25	59.25	8.25	-8.25
	L_{18}~U_{18}	-43.25	43.74	-3.77	3.90	0.81	-0.81	-47.56	49.18	10.28	-10.23
	U_{18}~L_{19}	29.76	34.99	-2.83	2.83	0.00	0.00	-44.64	44.64	0.00	0.00
	L_{19}~U_{19}	-1.28	1.60	-2.38	2.53	1.95	-2.07	-30.01	31.94	24.63	-26.16
	U_{19}~L_{20}	46.57	-51.58	-1.14	0.99	4.64	-4.16	-14.39	12.49	51.96	-52.47
	L_{20}~U_{20}	62.68	-61.36	-0.97	0.94	5.06	-4.95	-12.26	11.84	63.93	-62.91
	U_{20}~L_{21}	106.60	-105.79	-1.04	1.00	8.32	-8.39	-13.08	12.68	105.05	-105.87
	L_{21}~U_{21}	50.25	-54.50	-0.71	0.71	5.79	-5.79	-8.71	8.71	70.49	-70.49
	U_{21}~L_{22}	-114.56	114.55	-5.50	5.42	0.62	-7.61	-6.36	5.29	101.29	-96.07
	L_{22}~U_{22}	-13.70	5.19	-5.61	5.46	0.62	-7.61	-70.76	68.32	9.98	-9.01
	U_{22}~L_{23}	-121.12	118.67	-6.54	5.35	0.78	-0.73	-70.76	68.32	9.98	-9.01
	L_{23}~U_{23}	-92.37	86.40	-5.20	5.17	0.62	-0.86	-66.37	66.07	7.93	-10.97
	U_{23}~L_{24}	-43.45	43.45	-3.93	3.93	0.00	0.00	-54.86	54.86	0.00	0.00
	L_{24}~U_{24}	-96.77	103.11	-5.60	5.92	0.08	-0.30	-75.39	73.57	10.90	-10.90
	U_{24}~L_{25}	-91.56	91.56	-6.39	6.39	0.81	-0.81	-87.66	87.66	11.69	-11.69
	L_{25}~U_{25}	-43.45	70.99	-4.53	4.82	0.57	-0.51	-67.86	61.61	7.26	-6.55
	U_{25}~L_{26}	-32.66	38.67	-2.87	3.21	0.94	-1.00	-36.63	41.01	11.98	-12.73
	L_{26}~U_{26}	-92.05	88.07	-4.23	4.23	0.00	0.00	-49.60	49.60	0.00	0.00
	U_{26}~L_{27}	4.46	-6.40	-2.11	1.98	3.32	-3.55	-26.97	25.35	42.38	-45.31
	L_{27}~U_{27}	47.22	-50.55	-0.76	0.77	4.02	-4.18	-9.76	8.95	51.45	-52.00
	U_{27}~L_{28}	92.05	-98.07	-0.73	0.73	4.02	-4.18	-13.99	13.16	102.03	-99.44
	L_{28}~U_{28}	104.86	-112.00	-1.10	1.03	7.99	-7.78	-13.99	13.16	102.03	-99.44
	U_{28}~L_{29}	108.12	-132.78	-0.55	0.90	5.31	-7.73	-7.04	11.52	67.89	-99.04
	L_{29}~U_{29}	124.18	-165.51	-0.71	1.13	2.36	-4.66	-109.22	166.95	-0.97	6.02
	U_{29}~L_{30}	-109.22	116.95	-0.97	6.02	0.56	-0.53	-109.22	116.95	-0.97	6.02
	L_{30}~U_{30}	-61.41	61.55	-3.96	4.13	1.17	-1.24	-61.41	61.55	-3.96	4.13
	U_{30}~L_{31}	-48.65	58.79	-3.53	3.65	0.46	-0.47	-45.72	47.23	5.99	-6.13
	L_{31}~U_{31}	27.86	-30.67	-2.00	2.16	2.42	-2.51	-25.88	27.91	31.34	-32.50
	U_{31}~L_{32}	54.15	-62.89	-2.30	2.30	0.00	0.00	-54.44	54.44	0.00	0.00
	L_{32}~U_{32}	-57.24	53.42	15.11	16.03	0.00	0.00	-57.24	53.42	15.11	16.03
	U_{32}~L_{33}	-36.85	40.05	-2.92	3.65	0.05	-0.13	-38.96	48.72	0.60	-1.75
	L_{33}~U_{33}	-39.84	39.91	-2.84	2.86	0.84	-0.65	-37.89	38.25	11.28	-8.64
	U_{33}~L_{34}	-38.87	40.30	-2.69	2.77	2.21	-2.48	-35.88	37.08	29.51	-33.11
	L_{34}~U_{34}	-13.42	14.14	-1.32	1.50	3.71	-4.34	-17.67	20.00	49.82	-58.02
	U_{34}~L_{35}	5.87	-8.62	-1.39	1.23	5.52	-4.99	-15.04	18.47	73.74	-66.61
	U_{35}~L_{36}	20.19	-40.81	-0.29	0.95	3.19	-5.35	-3.85	12.62	42.63	-72.01

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0~L_1	0.00	0.00	0.00	0.00	0.00	0.00	-240.43	-77.11	-13.24	-4.89
	L_1~L_2	0.00	0.00	0.00	0.00	0.00	0.00	-6.25	5.25	6.20	-1.59
	L_2~L_3	0.00	0.00	0.00	0.00	0.00	0.00	11.33	12.66	26.80	7.49
	L_3~L_4	0.00	0.00	0.00	0.00	0.00	0.00	-32.17	-5.33	18.32	16.13
	L_4~U_4	0.00	0.00	0.00	0.00	0.00	0.00	-67.41	-13.11	-3.07	-0.15
	U_0~U_1	0.00	0.00	0.00	0.00	0.00	0.00	25.17	23.61	-26.80	-36.58
	U_1~U_2	0.00	0.00	0.00	0.00	0.00	0.00	-40.54	-7.66	51.62	133.51
	U_2~U_3	0.00	0.00	0.00	0.00	0.00	0.00	-40.96	-1.96	130.48	8.50
	U_3~U_4	0.00	0.00	0.00	0.00	0.00	0.00	-3.34	-2.15	202.61	-26.50
	U_4~L_5	0.00	0.00	0.00	0.00	0.00	0.00	52.59	-12.58	-20.02	0.72
	L_5~L_6	0.00	0.00	0.00	0.00	0.00	0.00	-120.38	-84.13	37.68	30.08
	L_6~L_7	0.00	0.00	0.00	0.00	0.00	0.00	-30.45	-6.58	-64.74	-36.73
	L_7~L_8	0.00	0.00	0.00	0.00	0.00	0.00	-61.44	-39.27	-68.82	-25.27
	L_8~U_8	0.00	0.00	0.00	0.00	0.00	0.00	1.15	-12.95	-43.05	-5.10
	U_4~U_5	0.00	0.00	0.00	0.00	0.00	0.00	5.82	-5.82	-10.23	0.00
	U_5~U_6	0.00	0.00	0.00	0.00	0.00	0.00	22.20	36.46	36.10	-7.80
	U_6~U_7	0.00	0.00	0.00	0.00	0.00	0.00	-3.89	6.11	85.85	-8.32
	U_7~U_8	0.00	0.00	0.00	0.00	0.00	0.00	-5.30	5.99	62.73	-18.39
	U_8~L_9	0.00	0.00	0.00	0.00	0.00	0.00	-5.30	-7.54	61.35	-26.46
	L_9~L_{10}	0.00	0.00	0.00	0.00	0.00	0.00	-91.73	-109.05	-0.41	0.98
	L_{10}~L_{11}	0.00	0.00	0.00	0.00	0.00	0.00	-84.36	-88.34	-0.16	0.44
	L_{11}~L_{12}	0.00	0.00	0.00	0.00	0.00	0.00	-91.27	-87.79	-0.19	0.46
	L_{12}~L_{13}	0.00	0.00	0.00	0.00	0.00	0.00	-18.97	6.31	-1.58	-2.20
	L_{13}~L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	-87.52	-28.58	-0.54	-0.54
	L_{14}~U_{14}	0.00	0.00	0.00	0.00	0.00	0.00	-42.43	-45.01	-8.06	-8.00
	U_8~U_9	0.00	0.00	0.00	0.00	0.00	0.00	-13.04	2.21	15.36	1.48
	U_9~L_{10}	0.00	0.00	0.00	0.00	0.00	0.00	-86.21	-24.94	32.72	-7.17
	L_{10}~U_{10}	0.00	0.00	0.00	0.00	0.00	0.00	-32.17	-32.39	-9.37	-2.75
	U_{10}~U_{11}	0.00	0.00	0.00	0.00	0.00	0.00	-29.91	-20.99	-2.63	-1.64
	U_{11}~L_{12}	0.00	0.00	0.00	0.00	0.00	0.00	-14.69	-20.49	-20.72	-32.62
	L_{12}~U_{12}	0.00	0.00	0.00	0.00	0.00	0.00	15.15	12.30	42.89	-8.19
	U_{12}~U_{13}	0.00	0.00	0.00	0.00	0.00	0.00	15.17	15.20	42.91	-8.20
	U_{13}~L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	-27.27	-88.67	-0.88	0.36
	L_{14}~U_{14}	0.00	0.00	0.00	0.00	0.00	0.00	-91.47	-60.31	-1.33	0.74
	U_{14}~L_{15}	0.00	0.00	0.00	0.00	0.00	0.00	-84.37	-47.04	-1.50	0.96
	L_{15}~U_{15}	0.00	0.00	0.00	0.00	0.00	0.00	-31.58	-2.39	90.89	3.16
	U_{15}~L_{16}	0.00	0.00	0.00	0.00	0.00	0.00	-37.73	17.37	77.16	-32.11
	L_{16}~U_{16}	0.00	0.00	0.00	0.00	0.00	0.00	-183.07	-12.01	0.67	-1.33
	U_{16}~L_{17}	0.00	0.00	0.00	0.00	0.00	0.00	-180.84	-14.19	0.67	-1.33
	L_{17}~U_{17}	0.00	0.00	0.00	0.00	0.00	0.00	-207.40	-155.03	-4.82	-4.11
	U_{17}~L_{18}	0.00	0.00	0.00	0.00	0.00	0.00	-61.18	-108.34	0.48	-2.82
	L_{18}~U_{18}	0.00	0.00	0.00	0.00	0.00	0.00	-48.66	-85.61	0.38	-2.22
	U_{18}~L_{19}	0.00	0.00	0.00	0.00	0.00	0.00	-9.56	-18.66	-1.22	2.90
	L_{19}~U_{19}	0.00	0.00	0.00	0.00	0.00	0.00	-50.94	-61.77	-0.39	0.13
	U_{19}~L_{20}	0.00	0.00	0.00	0.00	0.00	0.00	-47.31	-21.98	-0.70	0.26
	L_{20}~U_{20}	0.00	0.00	0.00	0.00	0.00	0.00	-23.21	21.96	35.96	13.08
	U_{20}~L_{21}	0.00	0.00	0.00	0.00	0.00	0.00	28.51	28.51	0.00	0.00
	L_{21}~U_{21}	0.00	0.00	0.00	0.00	0.00	0.00	-29.35	-39.48	171.16	-180.22
	U_{21}~L_{22}	0.00	0.00	0.00	0.00	0.00	0.00	54.92	-54.10	220.00	-215.20
	L_{22}~U_{22}	0.00	0.00	0.00	0.00	0.00	0.00	-13.08	12.68	155.05	-155.87
	U_{22}~L_{23}	0.00	0.00	0.00	0.00	0.00	0.00	-70.76	68.32	9.98	-9.01
	L_{23}~U_{23}	0.00	0.00	0.00	0.00	0.00	0.00	-66.37	66.07	7.93	-10.97
	U_{23}~L_{24}	0.00	0.00	0.00	0.00	0.00	0.00	-54.86	54.86	0.00	0.00
	L_{24}~U_{24}	0.00	0.00	0.00	0.00	0.00	0.00	-75.39	73.57	10.90	-10.90
	U_{24}~L_{25}	0.00	0.00	0.00	0.00	0.00	0.00	-87.66	87.66	11.69	-11.69
	L_{25}~U_{25}	0.00	0.00	0.00	0.00	0.00	0.00	-67.86	61.61	7.26	-6.55
	U_{25}~L_{26}	0.00	0.00	0.00	0.00	0.00	0.00	-36.63	41.01	11.98	-12.73
	L_{26}~U_{26}	0.00	0.00	0.00	0.00	0.00	0.00	-49.60	-49.60	0.00	0.00
	U_{26}~L_{27}	0.00	0.00	0.00	0.00	0.00	0.00	-26.97	25.35	42.38	-45.31
	L_{27}~U_{27}	0.00	0.00	0.00	0.00	0.00	0.00	-9.76	8.95	51.45	-52.00
	U_{27}~L_{28}	0.00	0.00	0.00	0.00	0.00	0.00	-13.99	13.16	102.03	-99.44
	L_{28}~U_{28}	0.00	0.00	0.00	0.00	0.00	0.00	-7.04	11.52	67.89	-99.04
	L_{29}~U_{29}	0.00	0.00	0.00	0.00	0.00	0.00	-109.22	116.95	-0.97	6.02
	U_{29}~L_{30}	0.00	0.00	0.00	0.00	0.00	0.00	-61.41	61.55	-3.96	4.13
	L_{30}~U_{30}	0.00	0.00	0.00	0.00	0.00	0.00	-45.72	47.23	5.99	-6.13
	U_{30}~L_{31}	0.00	0.00	0.00	0.00	0.00	0.00	-25.88	27.91	31.34	-32.50
	L_{31}~U_{31}	0.00	0.00	0.00	0.00	0.00	0.00	-54.44	54.44	0.00	0.00
	U_{31}~L_{32}	0.00	0.00	0.00	0.00	0.00	0.00	-57.24	53.42	15.11	16.03
	L_{32}~U_{32}	0.00	0.00	0.00	0.00	0.00	0.00	-38.96	48.72	0.60	-1.75
	U_{32}~L_{33}	0.00	0.00	0.00	0.00	0.00	0.00	-37.89	38.25	11.28	-8.64
	L_{33}~U_{33}	0.00	0.00	0.00	0.00	0.00	0.00	-35.88	37.08	29.51	-33.11
	U_{33}~L_{34}	0.00	0.00	0.00	0.00	0.00	0.00	-17.67	20.00	49.82	-58.02
	U_{34}~L_{35}	0.00	0.00	0.00	0.00	0.00	0.00	-15.04	18.47	73.74	-66.61
	U_{35}~L_{36}	0.00	0.00	0.00	0.00	0.00	0.00	-3.85	12.62	42.63	-72.01

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 2	U_0~L_1	99.11	-131.92	0.05	0.03	5.20	-6.39	0.61	0.43	67.33	-82.72
	L_1~L_2	95.00	-87.91	0.13	0.32	4.90	-5.00	1.67	4.11	64.03	-71.21
	L_2~L_3	135.46	-154.19	-0.22	0.20	6.30	-6.80	-2.81	2.54	81.52	-87.94
	L_3~L_4	52.77	-74.32	-0.86	6.65	5.91	-7.04	-76.29	88.80	73.58	-94.05
	L_4~L_5	-62.87	69.54	-4.48	4.63	0.56	-0.34	-59.78	61.88	4.66	-4.48
	L_5~L_6	-41.65	35.38	-3.93	4.10	0.20	-0.35	-52.52	54.71	2.61	-4.73
	L_6~L_7	-36.80	40.05	-2.92	3.65	0.05	-0.13	-38.96	48.72	0.60	-1.75
	L_7~L_8	-39.84	39.91	-2.84	2.86	0.84	-0.65	-37.89	38.25	11.28	-8.64
	L_8~L_9	-38.87	40.30	-2.69	2.77	2.21	-2.48	-35.88	37.08	29.51	-33.11
	L_9~L_{10}	-13.42	14.14	-1.32	1.50	3.71	-4.34	-17.67	20.00	49.82	-58.02
	L_{10}~L_{11}	5.87	-8.62	-1.39	1.23	5.52	-4.99	-15.04	18.47	73.74	-66.61
	L_{11}~L_{12}	20.19	-40.81	-0.29	0.95	3.19	-5.35	-3.85	12.62	42.63	-72.01

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 2	U_0~L_1	0.00	0.00	0.00	0.00	0.00	0.00	-18.54	-4.39	36.55	-19.28
	L_1~L_2	0.00	0.00	0.00	0.00	0.00	0.00	19.46	20.96	65.48	3.21
	L_2~L_3	0.00	0.00	0.00	0.00	0.00	0.00	-39.31	-9.03	155.53	18.50
	L_3~L_4	0.00	0.00	0.00	0.00	0.00	0.00	80.17	20.68	176.52	34.45
	L_4~L_5	0.00	0.00	0.00	0.00	0.00	0.00	41.27	9.74	66.85	25.81
	L_5~L_6	0.00	0.00	0.00	0.00	0.00	0.00	-4.84	17.73	29.64	24.49
	L_6~L_7	0.00	0.00	0.00	0.00	0.00	0.00	-6.28	10.45	23.50	15.08
	L_7~L_8	0.00	0.00	0.00	0.00	0.00	0.00	-1.56	11.74	38.77	6.23
	L_8~L_9	0.00	0.00	0.00	0.00	0.00	0.00	-15.66	6.04	330.72	105.89
	L_9~L_{10}	0.00	0.00	0.00	0.00	0.00	0.00	-18.64	-4.39	36.55	-19.28
	L_{10}~L_{11}	0.00	0.00	0.00	0.00	0.00	0.00	19.46	20.96	65.48	3.21
	L_{11}~L_{12}	0.00	0.00	0.00	0.00	0.00	0.00	-39.31	-9.03	155.53	18.50
	L_{12}~L_{13}	0.00	0.00	0.00	0.00	0.00	0.00	80.17	20.68	176.52	34.45
	L_{13}~L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	41.27	9.74	66.85	25.81
	L_{14}~L_{15}	0.00	0.00	0.00	0.00	0.00	0.00	-4.84	17.73	29.64	24.49
	L_{15}~L_{16}	0.00	0.00	0.00	0.00	0.00	0.00	-6.28	10.45	23.50	15.08
	L_{16}~L_{17}	0.00	0.00	0.00	0.00	0.00	0.00	-1.56	11.74	38.77	6.23
	L_{17}~L_{18}	0.00	0.00	0.00	0.00	0.00	0.00	-15.66	6.04	330.72	105.89

M_y Information

ZZ Axis Moment Properties

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula f_b Tens / F_y Sbu	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(x)}$	$C_{b(min)}$
Structure 1	U_0~L_1	0.00	0.00	205.88	270.68	82.97	85.14	15.4

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-23.44	-7.53	-2.03	1.16	0.27	-0.22				
	U_1-L_2	-3.41	-8.42	-1.05	0.51	-0.20	-2.28				
	U_2-L_3	-17.96	-39.67	-2.37	-4.56	-0.60	-0.73				
	U_3-L_4	-7.93	-13.37	0.42	0.11	-0.96	-1.24				
	U_4-L_5	-14.61	-18.52	0.18	0.59	-21.16	-9.89				
	U_5-L_6	-37.44	-76.90	-2.80	-2.76	-0.72	-0.19				
	U_6-L_7	-21.19	-42.64	-0.37	-0.37	-0.11	-0.11				
	L_1-L_2	-8.75	-101.99	-2.15	4.26	0.05	-0.04				
	L_2-L_3	-5.11	-118.70	1.39	3.07	0.33	-0.24				
	L_3-L_4	-77.69	-73.54	-3.39	2.47	-0.38	-0.15				
	L_4-L_5	-43.88	-73.22	-1.98	1.72	-1.08	-0.28				
	L_5-L_6	-72.22	-72.22	-2.54	2.54	-0.77	-0.77				
	L_6-L_7	-65.20	-48.77	-2.38	2.18	0.14	-0.67				
	L_7-U_7	-24.90	-8.63	-1.07	0.78	0.18	-0.80				
	U_7-L_8	-0.81	-22.83	0.04	1.28	-0.42	-1.26				
	L_8-U_8	-25.30	-9.99	-1.72	1.67	0.46	-0.86				
	U_8-L_9	-37.01	-20.01	-2.44	1.95	-0.48	-0.14				
	L_9-U_9	-101.94	-74.52	-4.28	3.98	0.54	-0.54				
	U_9-L_{10}	-115.87	-80.00	-5.24	3.90	0.40	-0.40				
	L_{10}-U_{10}	-75.88	-78.94	-3.85	3.79	0.11	-0.22				
	U_{10}-L_{11}	-109.41	-98.91	-4.51	4.25	0.51	-0.53				
	L_{11}-U_{11}	-89.79	-88.79	-4.05	4.05	0.57	-0.57				
	U_{11}-L_{12}	-90.87	-71.82	-4.37	3.61	0.74	-0.64				
	L_{12}-U_{12}	-47.34	-28.52	-2.11	1.52	0.47	-0.47				
	U_{12}-L_{13}	-20.35	-3.86	-1.96	1.68	0.43	-0.70				
	L_{13}-U_{13}	-1.38	-11.20	-1.14	0.97	-10.57	-10.98				
	U_{13}-L_{14}	6.85	-23.87	-0.96	0.55	1.02	-1.37				
	L_{14}-U_{14}	-44.41	-35.31	-2.14	1.64	0.39	-1.18				
	U_{14}-L_{15}	-96.57	-69.69	-4.16	3.29	0.20	-0.20				
	L_{15}-U_{15}	-85.40	-67.30	-3.83	2.84	-0.09	-0.64				
	U_{15}-L_{16}	-42.73	-133.41	-2.99	4.16	0.39	-0.40				
	L_{16}-U_{16}	-105.84	-116.34	-4.75	4.22	-0.09	-0.06				
	U_{16}-L_{17}	-141.98	-130.62	-5.89	5.18	0.63	-0.41				
	L_{17}-U_{17}	-82.19	-133.41	-2.99	4.16	0.39	-0.40				
	U_{17}-L_{18}	-11.96	-79.20	-3.17	3.90	0.63	-0.51				
	L_{18}-U_{18}	-77.27	-77.27	-4.26	4.26	0.57	-0.57				
	U_{18}-L_{19}	-66.19	-89.97	-4.79	4.31	0.34	-0.42				
	L_{19}-U_{19}	-47.09	-67.30	-3.83	2.84	-0.09	-0.64				
	U_{19}-L_{20}	-58.07	-72.69	-3.48	3.30	0.68	-0.64				
	L_{20}-U_{20}	-31.84	-37.99	-2.75	2.41	0.17	-0.71				
	U_{20}-L_{21}	-29.17	-24.56	-2.53	2.16	0.38	-0.66				
	L_{21}-U_{21}	-10.03	-3.77	-1.24	0.89	0.59	-1.21				
	U_{21}-L_{22}	-15.71	-11.17	-1.50	1.13	0.34	-0.24				
	L_{22}-U_{22}	-19.43	-19.57	-1.95	1.66	0.57	-0.88				
	U_{22}-L_{23}	-42.73	-133.41	-2.99	4.16	0.39	-0.40				
	L_{23}-U_{23}	-46.51	-58.29	-3.91	3.50	0.64	-0.71				
	U_{23}-L_{24}	-54.32	-68.37	-4.38	3.95	0.52	-0.65				
	L_{24}-U_{24}	-50.07	-50.07	-4.38	4.38	0.60	-0.60				
	U_{24}-L_{25}	-69.49	-72.12	-5.70	5.05	0.35	-0.43				
	L_{25}-U_{25}	-17.09	-73.63	-3.26	3.42	0.45	-0.45				
	U_{25}-L_{26}	-35.84	-53.55	-3.28	4.25	0.84	-0.68				
	L_{26}-U_{26}	-26.26	-39.09	-4.00	3.68	0.66	-0.27				
	U_{26}-L_{27}	-78.38	-71.14	-3.01	3.27	-0.11	-0.26				
	L_{27}-U_{27}	-76.98	-76.98	-3.72	3.72	-0.63	-0.63				
	U_{27}-L_{28}	-76.64	-55.13	-4.17	3.25	-0.27	-0.75				
	L_{28}-U_{28}	-70.25	-39.90	-3.90	2.29	-0.27	-0.27				
	U_{28}-L_{29}	-9.26	-17.63	-0.71	0.39	1.21	-1.70				
	L_{29}-U_{29}	-1.03	-9.85	-1.51	1.00	0.95	-1.40				
	U_{29}-L_{30}	-13.28	-8.61	-1.70	1.39	0.30	-0.30				
	L_{30}-U_{30}	-33.71	-19.61	-2.52	2.09	0.55	-0.49				
	U_{30}-L_{31}	-42.82	-42.82	-3.63	3.63	0.63	-0.63				
	L_{31}-U_{31}	-78.83	-60.14	-5.63	4.49	0.74	-0.67				
	U_{31}-L_{32}	-70.25	-39.90	-3.90	2.29	-0.27	-0.27				
	L_{32}-U_{32}	-18.61	-63.30	-2.61	3.16	0.48	-0.26				
	U_{32}-L_{33}	-79.70	-55.34	-3.86	3.73	0.08	-0.19				
	L_{33}-U_{33}	-56.36	-42.32	-4.64	4.26	0.36	-0.33				
	U_{33}-L_{34}	-48.06	-63.72	-3.64	3.64	0.63	-0.63				
	L_{34}-U_{34}	-30.19	-23.79	-2.61	2.01	-0.30	-0.64				
	U_{34}-L_{35}	-76.18	-76.18	-3.77	3.77	-0.67	-0.67				
	L_{35}-U_{35}	-11.74	-7.65	-1.37	0.97	0.29	-0.15				
	U_{35}-L_{36}	-33.53	-18.27	-2.33	1.84	0.05	-0.41				
	L_{36}-U_{36}	-1.49	-18.99	-0.91	0.69	0.25	-1.16				
	U_{36}-L_{37}	-13.28	-8.61	-1.70	1.39	0.30	-0.30				
	L_{37}-U_{37}	-53.89	-37.99	-2.43	2.03	0.22	-0.81				
	U_{37}-L_{38}	-61.82	-22.38	-2.91	1.45	-1.45	-3.97				
	L_{38}-U_{38}	-73.70	-52.24	-3.90	3.90	0.63	-0.63				
	U_{38}-L_{39}	-5.27	-64.91	-2.00	3.49	0.31	-0.20				
	L_{39}-U_{39}	-38.99	-50.41	-2.46	3.40	-0.16	-0.50				
	U_{39}-L_{40}	-7.78	-19.68	-0.21	0.73	-0.89	-0.55				
	L_{40}-U_{40}	-2.61	-8.77	-0.94	0.29	-0.87	-0.87				
	U_{40}-L_{41}	-5.74	-5.74	-0.67	0.73	1.12	-0.15				

YY Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{req} (in^3)	S_x (in^3)	S_{act} (in^3)	Z_f (in^3)	I_{act} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_n (k-in)	Equivalent Mom. Factor a	C_{mx}	C_{mx}/a
Structure 1	U_0-L_1	-144.20	-22.03	5.25	11.06	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	U_1-L_2	-20.15	-23.77	119.09	37.74	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.172	0.56	0.56
	U_2-L_3	-17.52	-16.78	3.55	8.74	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.227	0.55	0.55
	U_3-L_4	-33.39	-37.29	1.49	1.59	0.32	-2.47										
	U_4-L_5	-17.51	-16.57	-113.86	-77.99	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	U_5-L_6	-28.31	-28.84	1.32	1.28	0.32	-5.84										
	U_6-L_7	-24.42	-25.04	4.59	-26.40	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_1-L_2	-53.08	-179.96	-278.63	-96.03	148.0	147.96	147.96	167.25	201.8	1.13	5519	262	5958.852	0.984	0.85	0.86
	L_2-L_3	-138.20	-141.14	144.40	-69.80	148.0	147.96	147.96	167.25	201.8	1.13	5519	262	5958.852	0.984	0.85	0.86
	L_3-L_4	-134.05	-86.57	-132.86	212.63	113.4	113.37	113.37	130.15	82.6	1.15	4264	134	4607.520	0.978	0.84	0.86
	L_4-L_5	-109.07	-71.03	18.72	4.45	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_5-L_6	-47.86	61.19	46.38	6.29	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_6-L_7	25.41	42.02	8.50	11.65	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_7-U_7	14.65	36.37	94.09	15.89	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_8-U_8	1.84	16.92	27.65	13.46	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_9-U_9	10.25	22.73	13.00	19.50	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_{10}-U_{10}	0.67	26.00	0.79	1.76	-1.01	-1.01										
	L_{11}-U_{11}	-0.60	20.40	-66.36	0.68	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_{12}-U_{12}	-20.86	8.38	-2.19	-16.62	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_{13}-U_{13}	-51.02	-38.61	-54.61	-5.19	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_{14}-U_{14}	-102.08	-63.99	-98.51	-19.60	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_{15}-U_{15}	-118.88	-89.09	-22.82	17.30	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_{16}-U_{16}	-257.56	-213.44	-136.76	19.32	38.4	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{17}-U_{17}	-49.86	-49.00	1.46	-3.61	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_{18}-U_{18}	-266.68	-208.79	-56.45	95.03	38.8	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{19}-U_{19}	-266.97	-246.25	-128.26	113.93	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{20}-U_{20}	-259.28	-237.99	-117.48	91.25	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{21}-U_{21}	-239.14	-193.41	-87.62	75.68	35.1	35.09	35.09	53.51	4	1.53	1183.7	1.53	1766	-0.270	0.28	0.28
	L_{22}-U_{22}	-176.34	-164.75	-90.28	91.36	40.7	40.70	40.70	40.44	67.92	25	1661.0	1.67	2241	-0.322	0.23	0.23
	L_{23}-U_{23}	-138.64	-143.40	-113.18	87.44	39.8	39.77	39.77	39.56	65.61	21	1616.3	1.65	2165	-0.322	0.23	0.23
	L_{24}-U_{24}	-162.65	-86.44	-125.51	77.17	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{25}-U_{25}	-151.54	-124.43	-80.78	44.56	20.8	20.80	20.67	34.66	1070.0	1.67	1144	1.53	1029.6	-0.621	0.27	0.27
	L_{26}-U_{26}	-62.31	-53.11	-27.24	-12.67	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{27}-U_{27}	-25.80	-19.57	-22.84	-16.56	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{28}-U_{28}	-22.25	19.56	50.90	11.14	0.00	0.00	0.00	0.00	0.00	1.00	857	1.5	773.7	-0.486	0.41	0.41
	L_{29}-U_{29}	-11.11	54.28	-211.31	-11.15	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.699	0.33	0.33
	L_{30}-U_{30}	-116.58	80.78	-183.56	14.91	19.4	19.37	19.37	29.87	14	1.54	986	1.5	958.8	-0.689	0.32	0.32
	L_{31}-U_{31}	-252.41	208.24	-117.27	81.53	35.1	35.09	35.09	53.51	4	1.53	1183.7	1.53	1766	-0.525	0.27	0.27
	L_{32}-U_{32}	-257.56	213.44	-136.76	19.32	38.4	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{33}-U_{33}	-206.68	208.79	-95.45	95.03	38.8	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{34}-U_{34}	-266.97	246.25	-128.26	113.93	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{35}-U_{35}	-259.28	237.99	-117.48	91.25	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{36}-U_{36}	-239.14	193.41	-87.62	75.68	35.1	35.09	35.09	53.51	4	1.53	1183.7	1.53	1766	-0.270	0.28	0.28
	L_{37}-U_{37}	-176.34	164.75	-90.28	91.36	40.7	40.70	40.70	40.44	67.92	25	1661.0	1.67	2241	-0.322	0.23	0.23
	L_{38}-U_{38}	-138.64	143.40	-113.18	87.44	39.8	39.77	39.77	39.56	65.61	21	1616.3	1.65	2165	-0.322	0.23	0.23
	L_{39}-U_{39}	-162.65	86.44	-125.51	77.17	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{40}-U_{40}	-151.54	124.43	-80.78	44.56	20.8	20.80	20.67	34.66	1070.0	1.67	1144	1.53	1029.6	-0.621	0.27	0.27
	L_{41}-U_{41}	-62.31	53.11	-27.24	-12.67	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{42}-U_{42}	-25.80	19.57	-22.84	-16.56	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{43}-U_{43}	-0.11	54.61	-211.15	11.15	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.699	0.33	0.33
	L_{44}-U_{44}	-116.58	80.78	-183.56	14.91	19.4	19.37	19.37	29.87	14	1.54	986	1.5	958.8	-0.689	0.32	0.32
	L_{45}-U_{45}	-252.41	208.24	-117.27	81.53	35.1	35.09	35.09	53.51	4	1.53	1183.7	1.53	1766	-0.270	0.28	0.28
	L_{46}-U_{46}	-257.56	213.44	-136.76	19.32	38.4	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{47}-U_{47}	-206.68	208.79	-95.45	95.03	38.8	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{48}-U_{48}	-266.97	246.25	-128.26	113.93	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{49}-U_{49}	-259.28	237.99	-117.48	91.25	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{50}-U_{50}	-239.14	193.41	-87.62	75.68	35.1	35.09	35.09	53.51	4	1.53	1183.7	1.53	1766	-0.270	0.28	0.28
	L_{51}-U_{51}	-176.34	164.75	-90.28	91.36	40.7	40.70	40.70	40.44	67.92	25	1661.0	1.67	2241	-0.322	0.23	0.23
	L_{52}-U_{52}	-138.64	143.40	-113.18	87.44	39.8	39.77	39.77	39.56	65.61	21	1616.3	1.65	2165	-0.322	0.23	0.23
	L_{53}-U_{53}	-162.65	86.44	-125.51	77.17	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{54}-U_{54}	-151.54	124.43	-80.78	44.56	20.8	20.80	20.67	34.66	1070.0	1.67	1144	1.53	1029.6	-0.621	0.27	0.27
	L_{55}-U_{55}	-62.31	53.11	-27.24	-12.67	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{56}-U_{56}	-25.80	19.57	-22.84	-16.56	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{57}-U_{57}	-0.11	54.61	-211.15	11.15	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.699	0.33	0.33
	L_{58}-U_{58}	-116.58	80.78	-183.56	14.91	19.4	19.37	19.37	29.87	14	1.54	986	1.5	958.8	-0.689	0.32	0.32
	L_{59}-U_{59}	-252.41	208.24	-117.27	81.53	35.1	35.09	35.09	53.51	4	1.53	1183.7	1.53	1766	-0.270	0.28	0.28
	L_{60}-U_{60}	-257.56	213.44	-136.76	19.32	38.4	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{61}-U_{61}	-206.68	208.79	-95.45	95.03	38.8	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{62}-U_{62}	-266.97	246.25	-128.26	113.93	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{63}-U_{63}	-259.28	237.99	-117.48	91.25	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{64}-U_{64}	-239.14	193.41	-87.62	75.68	35.1	35.09	35.09	53.51	4	1.53	1183.7	1.53	1766	-0.270	0.28	0.28
	L_{65}-U_{65}	-176.34	164.75	-90.28	91.36	40.7	40.70	40.70	40.44	67.92	25	1661.0	1.67	2241	-0.322	0.23	0.23
	L_{66}-U_{66}	-138.64	143.40	-113.18	87.44	39.8	39.77	39.77	39.56	65.61	21	1616.3	1.65	2165	-0.322	0.23	0.23
	L_{67}-U_{67}	-162.65	86.44	-125.51	77.17	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{68}-U_{68}	-151.54	124.43	-80.78	44.56	20.8	20.80	20.67	34.66	1070.0	1.67	1144	1.53	1029.6	-0.621	0.27	0.27
	L_{69}-U_{69}	-62.31	53.11	-27.24	-12.67	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{70}-U_{70}	-25.80	19.57	-22.84	-16.56	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{71}-U_{71}	-0.11	54.61	-211.15	11.15	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.699	0.33	0.33
	L_{72}-U_{72}	-116.58	80.78	-183.56	14.91	19.4	19.37	19.37	29.87	14	1.54	986	1.5	958.8	-0.689	0.32	0.32
	L_{73}-U_{73}	-252.41	208.24	-117.27	81.53	35.1	35.09	35.09	53.51	4	1.53	1183.7	1.53	1766	-0.270	0.28	0.28
	L_{74}-U_{74}	-257.56	213.44	-136.76	19.32	38.4	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{75}-U_{75}	-206.68	208.79	-95.45	95.03	38.8	38.83	38.83	50.23	39.4	1.29	1264	0.0	1633.1	-0.313	0.31	0.31
	L_{76}-U_{76}	-266.97	246.25	-128.26	113.93	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{77}-U_{77}	-259.28	237.99	-117.48	91.25	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{78}-U_{78}	-239.14	193.41	-87.62	75.68	35.1	35.09	35.09	53.51	4	1.53	1183.7	1.53	1766	-0.270	0.28	0.28
	L_{79}-U_{79}	-176.34	164.75	-90.28	91.36	40.7	40.70	40.70	40.44	67.92	25	1661.0	1.67	2241	-0.322	0.23	0.23
	L_{80}-U_{80}	-138.64	143.40	-113.18	87.44	39.8	39.77	39.77	39.56	65.61	21	1616.3	1.65	2165	-0.322	0.23	0.23
	L_{81}-U_{81}	-162.65	86.44	-125.51	77.17	42.7	42.74	42.74	65.30	8	1.53	1395	0.0	2155.1	-0.322	0.23	0.23
	L_{82}-U_{82}	-151.54	124.43	-80.78	44.56	20.8	20.80	20.67	34.66	1070.0	1.67	1144	1.53	1029.6	-0.621	0.27	0.27
	L_{83}-U_{83}	-62.31	53.11	-27.24	-12.67	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{84}-U_{84}	-25.80	19.57	-22.84	-16.56	15.4	15.42	15.42	23.71	7	1.54	782	1.5	763.3	-0.531	0.39	0.39
	L_{85}-U_{85}	-0.11	54.61	-211.15

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Condition: **HS20 Truck**
Inventory: **As-Built**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-75.12	-0.70	-1.10	1.90	6.40	-18.70	-12.25	18.70	-11.25	-308.19
	U_1 - U_2	45.81	-20.16	0.30	3.30	-2.60	-19.30	-3.30	32.20	-27.63	-214.87
	U_2 - L_1	-112.19	86.51	1.40	3.60	-2.20	-17.70	15.59	40.08	-2.23	-197.05
	L_1 - U_3	-15.88	66.14	2.30	3.40	-2.50	-17.90	25.81	33.70	-27.83	-200.39
	U_3 - L_2	-9.16	61.58	2.30	3.50	-2.90	-10.50	20.04	38.97	-10.02	-116.90
	L_2 - U_4	42.76	120.09	6.20	5.10	-0.10	-5.10	-69.02	56.78	-1.11	-56.78
	U_4 - L_3	93.72	43.54	2.50	2.50	-0.70	-10.20	-40.08	27.83	-81.27	-114.67
	L_3 - U_5	-47.40	525.96	24.30	25.00	0.00	0.00	270.53	278.33	0.00	0.00
	U_5 - L_4	474.61	-124.27	1.60	1.70	-25.40	-178.90	17.25	20.49	178.98	-190.84
	L_4 - U_6	46.76	20.63	1.90	2.90	1.60	-12.50	20.49	31.27	17.25	-134.78
	U_6 - L_5	-136.80	470.88	-19.10	16.80	0.00	0.00	30.19	23.88	199.93	-230.17
	L_5 - U_7	27.83	-140.42	2.90	1.70	-6.70	-17.70	31.27	18.33	-67.93	-190.84
	U_7 - L_6	-106.18	-154.99	2.50	0.90	-7.60	-21.30	26.96	9.70	-81.94	-229.06
	L_6 - U_8	-137.97	-202.66	2.30	1.80	-6.70	-29.70	23.88	0.00	-303.84	-383.97
	U_8 - L_7	-245.66	-182.98	1.70	1.30	-18.80	-22.10	18.33	14.02	-202.70	-238.28
	L_7 - U_9	-123.52	-326.70	-10.20	1.80	-13.40	-21.60	-109.08	-141.44	-143.69	-229.80
	U_9 - L_8	-269.82	-144.58	-0.90	1.30	-3.50	-15.80	-9.70	14.02	-37.74	-170.36
	L_8 - U_{10}	-164.10	-67.23	1.40	1.50	0.00	-7.90	-79.79	7.14	-150.41	-171.27
	U_{10} - L_9	-170.36	-20.48	1.30	3.20	-10.20	-6.00	-14.02	34.50	-109.98	-64.69
	L_9 - U_{11}	-186.12	24.46	-7.80	10.80	2.60	-18.00	-84.10	116.45	28.03	-164.08
	U_{11} - L_{10}	-70.88	119.47	-23.70	23.10	0.00	-19.90	-4.26	141.79	39.15	-210.91
	L_{10} - U_{12}	-70.88	-181.00	-0.30	2.10	-6.10	-19.90	-3.19	22.36	1.06	-211.88
	U_{12} - L_{11}	-53.93	-252.21	-0.40	1.50	-5.30	-19.90	-1.06	0.00	-15.97	-211.88
	L_{11} - U_{13}	-327.18	-325.33	1.30	3.60	-20.80	-34.90	13.84	38.33	-221.46	-371.58
	U_{13} - L_{12}	-338.53	-244.71	1.70	3.50	-18.70	-36.10	18.09	38.33	-206.56	-404.06
	L_{12} - U_{14}	-396.09	-197.74	2.80	5.60	-9.30	-24.50	29.81	59.62	-69.02	-268.65
	U_{14} - L_{13}	-344.15	-179.39	4.30	3.80	-17.40	-41.30	45.78	40.46	-185.26	-439.72
	L_{13} - U_{15}	-224.10	-291.71	3.20	4.30	-6.30	-20.20	45.78	61.35	-221.54	-272.07
	U_{15} - L_{14}	-350.17	-90.75	2.80	4.90	-2.20	-17.50	29.81	52.17	-23.42	-186.32
	L_{14} - U_{16}	-227.12	-139.21	4.60	3.30	-17.30	-41.30	52.17	29.81	-222.02	-272.07
	U_{16} - L_{15}	-167.07	-39.82	4.70	4.70	-13.80	-11.30	50.64	50.04	-146.93	-120.31
	L_{15} - U_{17}	-109.47	116.42	-23.40	24.40	-3.40	-6.50	-106.47	56.43	-24.49	-69.21
	U_{17} - L_{16}	-261.00	1265.93	31.70	34.40	-0.70	-1.50	-337.51	366.28	-7.45	-15.87
	L_{16} - U_{18}	-1192.75	0.00	0.00	0.00	0.00	0.00	-6.31	381.90	-1.06	-204.06
	U_{18} - L_{17}	-25.30	71.62	2.50	4.50	0.90	-20.50	26.20	47.34	9.47	-215.68
	L_{17} - U_{19}	-25.30	71.62	2.50	4.50	0.90	-20.50	26.20	47.34	9.47	-215.68
	U_{19} - L_{18}	-150.58	33.05	3.30	3.60	2.70	-18.70	34.72	37.88	28.41	-196.74
	L_{18} - U_{20}	-147.30	4.36	4.20	2.90	-6.20	-21.70	44.19	30.51	-65.23	-228.31
	U_{20} - L_{19}	-147.30	4.36	4.20	2.90	-6.20	-21.70	44.19	30.51	-65.23	-228.31
	L_{19} - U_{21}	-31.67	-34.01	0.10	3.30	0.80	-23.10	1.05	34.72	8.42	-243.04
	U_{21} - L_{20}	-86.74	-71.52	2.10	3.20	-0.10	-23.10	22.09	32.78	-1.05	-243.04
	L_{20} - U_{22}	-60.95	-86.97	1.40	1.90	-17.20	-21.70	14.73	19.99	-180.96	-228.31
	U_{22} - L_{21}	-32.99	-18.50	2.60	1.40	-18.10	-17.20	32.62	14.73	-169.39	-180.96
	L_{21} - U_{23}	-32.99	28.66	3.10	4.00	-16.10	-17.00	32.62	42.08	-169.39	-178.86
	U_{23} - L_{22}	-15.12	113.76	-9.70	5.70	-0.90	-11.90	-102.05	59.97	-9.47	-125.20
	L_{22} - U_{24}	-15.12	113.76	-9.70	5.70	-0.90	-11.90	-102.05	59.97	-9.47	-125.20
	U_{24} - L_{23}	-2.69	209.81	-10.30	8.30	1.40	-9.10	-108.37	87.32	14.73	-95.74
	L_{23} - U_{25}	-122.28	1156.58	-22.30	37.50	0.10	-1.90	-338.78	394.54	1.05	-19.99
	U_{25} - L_{24}	-1153.78	-196.80	-0.70	3.90	34.00	-29.50	-7.45	41.52	362.00	-314.09
	L_{24} - U_{26}	-67.81	62.60	-3.20	4.00	0.00	-26.80	53.24	43.85	0.00	-285.34
	U_{26} - L_{25}	178.87	-59.61	3.60	4.40	3.00	-20.60	38.33	46.85	31.94	-219.33
	L_{25} - U_{27}	-68.77	-178.57	5.00	4.10	0.00	-26.80	53.24	43.85	0.00	-285.34
	U_{27} - L_{26}	-67.81	62.60	-3.20	4.00	0.00	-26.80	53.24	43.85	0.00	-285.34
	L_{26} - U_{28}	-236.40	-153.09	3.80	3.40	-13.70	-44.10	40.46	36.20	-145.86	-409.53
	U_{28} - L_{27}	-98.63	-313.14	3.70	3.80	-26.10	-29.50	39.39	40.46	-277.89	-282.15
	L_{27} - U_{29}	-78.24	-392.96	4.30	3.70	-32.20	-29.50	39.39	40.46	-277.89	-282.15
	U_{29} - L_{28}	-350.27	-386.72	-9.20	2.10	-29.50	-29.40	-55.36	22.36	-314.09	-313.02
	L_{28} - U_{30}	-278.82	-117.63	-7.50	5.70	-6.00	-13.70	-84.11	60.69	-63.88	-146.86
	U_{30} - L_{29}	-278.82	-117.63	-7.50	5.70	-6.00	-13.70	-84.11	60.69	-63.88	-146.86
	L_{29} - U_{31}	-186.12	-74.10	-8.80	11.10	2.20	-15.60	-87.31	118.10	23.42	-166.09
	U_{31} - L_{30}	-139.59	-187.78	0.00	0.90	4.90	-16.30	0.00	9.70	52.83	-175.75
	L_{30} - U_{32}	-47.42	-118.54	-0.20	1.10	11.90	-28.00	-2.16	12.94	61.46	-216.64
	U_{32} - L_{31}	-52.50	-128.95	-0.20	1.20	5.70	-20.00	-2.16	12.94	61.46	-216.64
	L_{31} - U_{33}	-277.57	-111.60	0.90	2.30	0.70	-24.80	9.70	24.80	7.55	-267.39
	U_{33} - L_{32}	-166.87	-240.33	1.50	2.10	-3.40	-29.00	16.17	22.64	-36.66	-312.68
	L_{32} - U_{34}	-287.50	-127.71	1.80	1.80	-5.70	-16.00	16.17	22.64	-18.33	-172.31
	U_{34} - L_{33}	-141.30	-113.93	-7.60	4.20	0.50	-13.90	-81.94	45.28	5.39	-149.87
	L_{33} - U_{35}	-140.41	-22.73	1.60	3.60	-0.40	-10.50	17.25	38.82	-4.31	-113.21
	U_{35} - L_{34}	-141.54	56.98	-8.90	4.00	-3.20	-4.50	-95.96	34.13	-34.50	-48.52
	L_{34} - U_{36}	3.07	40.55	-3.10	3.20	1.70	-5.70	-33.42	34.50	18.33	-61.46
	U_{36} - L_{35}	-136.80	470.88	-19.10	16.80	0.00	0.00	-205.94	181.14	0.00	0.00
	L_{35} - U_{37}	497.19	-34.44	2.50	2.00	22.00	-19.90	27.83	22.27	244.93	-221.55
	U_{37} - L_{36}	41.01	105.92	2.20	2.90	1.80	-13.00	24.49	32.29	20.04	-144.73
	L_{36} - U_{38}	113.01	44.44	3.60	2.80	4.80	-15.60	45.08	27.83	53.44	-173.67
	U_{38} - L_{37}	59.30	15.07	3.50	2.20	-8.60	-15.20	38.97	24.49	-97.97	-169.22
	L_{37} - U_{39}	80.84	-19.79	3.50	1.90	-7.80	-14.50	38.97	21.10	-88.84	-161.43
	U_{39} - L_{38}	80.24	-119.59	0.10	1.20	2.50	-14.40	1.11	13.36	27.83	-160.32
	L_{38} - U_{40}	24.67	-27.08	-0.50	1.40	-16.90	-9.50	-5.57	15.55	-188.15	-105.76
	U_{40} - L_{39}	29.36	-160.66	-7.90	9.60	-12.20	-10.80	-87.95	106.89	-113.56	-120.24

ZZ Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	S_{lb} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F/S_{bb}	M_n k/in-in	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{b1}	Equivalent Mom. Factor C_{b2n}
Structure 1	U_0 - U_1	-117.69	30.28	63.22	451.98	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	-0.140	0.54
	U_1 - U_2	-53.61	63.74	-123.26	181.75	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.208	0.79
	U_2 - L_1	-112.07	199.30	-150.67	-314.49	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.479	0.75
	L_1 - U_3	35.70	161.76	-93.50	-248.20	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.222	0.89
	U_3 - L_2	31.51	164.48	-32.62	-173.22	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.194	0.68
	L_2 - U_4	-93.96	279.14	53.18	33.10	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	-0.337	0.47
	U_4 - L_3	34.22	116.51	-85.33	-153.71	78.18	142.56	2586	1649.1	1.47	4704	0.99901736	3201.5	0.512	0.80
	L_3 - U_5	-647.77	1286.79	61.61	683.75	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6999	0.99894545	4564.8	-0.503	0.40
	U_5 - L_4	854.63	-117.17	1005.04	-570.04	130.3	130.26	105.11	180.77	2960	1799.3	1.39	5965	0.99892639	4250.8	-0.572	0.37
	L_4 - U_6	-505.17	94.56	98.16	-265.20	96.6	96.61	79.12	135.29	2174	1387.9	1.40	4465	0.99873184	3184.1	-0.370	0.45
	U_6 - L_5	30.19	143.27	-128.89	139.93	-230.17	83.55	135.29	2174	1387.9	1.40	4465	0.99873184	3184.1	-0.370	0.45
	L_5 - U_7	33.93	-142.83	-112.99	-596.03	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99875895	4241.5	0.919	0.57
	U_7 - L_6	-106.18	-154.99	2.50	0.90	-7.60	-21.30	26.96	9.70	-81.94	-229.06	0.00	0.00	0.00	0.00	0.00	0.00
	L_6 - U_8	-137.97	-202.66	2.30	1.80	-6.70	-29.70	-303.84	-383.97	-23.88	-303.84	-383.97	-23.42	-340.61	9.0064	0.998994	0.74
	U_8 - L_7	-245.66	-182.98	1.70	1.30	-18.80	-22.10	18.33	14.02	-202.70	-238.28	0.00	0.00	0.00	0.00	0.00	0.00
	L_7 - U_9	-123.52	-326.70	-10.20	1.80	-13.40	-21.60	-109.08	-141.44	-143.69	-229.80	-286.85	-302.66	-373.51	9.0064	0.998994	0.74
	U_9 - L_8	-269.82	-144.58	-0.90	1.30	-3.50	-15.80	-9.70	14.02	-37.74	-170.36	-373.51	-158.10	-432.27	-557.57	188.53	188.53
	L_8 - U_{10}	-164.10	-67.23	1.40	1.50	0.00	-7.90	-79.79	7.14	-150.41	-171.27	-373.28	36.38	-350.41	-311.98	127.31	127.31
	U_{10} - L_9	-170.36	-20.48	-1.30	3.20	-10.20	-6.00	-14.02	34.50	-109.98	-64.69	0.00	0.00	0.00	0.00	0.00	0.00
	L_9 - U_{11}	-186.12	24.46	-7.80	10.80	2.60	-18.00	-84.10	116.45	28.03	-164.08	-201.83	28.41	-183.61	23.72	0.00	0.00
	U_{11} - L_{10}	-70.88	119.47	-23.70	23.10	0.00	-19.90	-4.26	141.79	39.15	-210.91	-424.16	284.10	-181.22	359.73	1554.3	1.44
	L_{10} - U_{12}	-70.88	-181.00	-0.30	2.10	-6.10	-19.90	-3.19	22.36	1.06	-211.88	-424.16	284.10	-181.22	359.73	1554.3	1.44
	U_{12} - L_{11}	-53.93	-252.21	-0.40	1.50	-5.30	-19.90	-1.06	0.00	-15.97	-211.88	-424.16	284.10	-181.22	359.73	1554.3	1.44
	L_{11} - U_{13}	-327.18	-325.33	1.30	3.60	-20.80	-34.90	13.84	38.33	-221.46	-371.58	-695.34	-339.88	-665.19	-1228.02	232.7	232.70
	U_{13} - L_{12}	-338.53	-244.71	1.70	3.50	-18.70	-36.10	18.09	38.33	-206.56	-404.06	-695.34	-266.70	-613.61	-1228.02	232.7	232.70
	L_{12} - U_{14}	-396.09	-197.74	2.80	5.60	-9.30	-24.50	29.81	59.62	-69.02	-268.65	-450.33	-127.88	-729.46	-822.24	251.2	251.73
	U_{14} - L_{13}	-344.15	-179.39	4.30	3.80	-17.40	-41.30	45.78	40.46	-185.26	-439.72	0.00	0.00	0.00	0.00	0.00	0.00
	L_{13} - U_{15}	-224.10	-291.71	3.20	4.30	-6.30	-20.20	45.78	61.35	-221.54	-272.07	-348.20	-145.55	-848.79	-1189.94	232.7	232.70
	U_{15} - L_{14}	-350.17	-90.75	2.80	4.90	-2.20	-17.50	29.81	52.17	-23.42	-186.32	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14} - U_{16}	-227.12	-139.21	4.60	3.30	-17.30	-41.30	52.17	29.81	-222.02	-272.07	-350.63	-4.94	-505.97	-521.68	198.9	198.88
	U_{16} - L_{15}	-167.07	-39.82	4.70	4.70	-13.80	-11.30	50.64	50.04	-146.93	-120.31	-109.77	160.19	-530.53	-208.91	156.8	156.80
	L_{15} - U_{17}	-109.47	116.42	-23.40	24.40	-3.40	-6.50	-106.47	56.43	-24.49	-69.21	-370.38	264.00	-185.86	-89.83	484.37	138.2
	U_{17} - L_{16}	-261.00	1265.93	31.70	34.40	-0.70	-1.50	-337.51	366.28	-7.45	-15.87	-1010.57	2439.26	-355.44	1611.10	221.8	221.77
	L_{16} - U_{18}	-1192.75	0.00	0.00	0.00	0.00	0.00	-6.31	381.90	-1.06	-204.06	-1536.90	-381.90	-233.56	-1611.10	221.8	221.77
	U_{18} - L_{17}	-25.30	71.62	2.50	4.50	0.90	-20.50	26.20	47.34	9.47	-215.68	-409.00	24.09	195.68	-12.38	-374.20	185.0
	L_{17} - U_{19}	-25.30	71.62	2.50	4.50	0.90	-20.50	26.20	47.34	9.47	-215.68	-409.00	24.09	195.68	-12.38	-374.20	185.0
	U_{19} - L_{18}	-150.58	33.05	3.30	3.60	2.70	-18.70	34.72	37.88	28.41	-196.74	-409.00	-270.98	-125.03	257.30	-383.31	127.9
	L_{18} - U_{20}	-147.30	4.36	4.20	2.90	-6.20	-21.70	44.19	30.51	-65.23	-228.31	-287.23	31.77	50.16	-489.00	127.8	127.83
	U_{20} - L_{19}	-147.30	4.36	4.20	2.90	-6.20	-21.70	44.19	30.51	-65.23	-228.31	-287.23	31.77	50.16	-489.00	127.8	127.83
	L_{19} - U_{21}	-31.67	-34.01	0.10	3.30	0.80	-23.10	1.05	34.72	8.42	-243.04	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21} - L_{20}	-86.74	-71.52	2.10	3.20	-0.10	-23.10	22.09	32.78	-1.05	-243.04	-38.89	31.02	-22.94	-572.78	144.8	144.84
	L_{20} - U_{22}	-60.95	-86.97	1.40	1.90	-17.20	-21.70	14.73	19.99	-180.96	-228.31	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22} - L_{21}	-32.99	-18.50	2.60	1.40	-18.10	-17.20	32.62	14.73	-169.39	-180.96	-47.32	-49.73	-411.31	-607.22	144.8	144.84
	L_{21} - U_{23}	-32.99	28.66	3.10	4.00	-16.10	-17.00	32.62	42.08	-169.39	-178.86	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23} - L_{22}	-15.12	113.76	-9.70	5.70	-0.90	-11.90	-102.05	59.97	-9.47	-125.20	-240.78	277.81	-80.18	123.39	127.8	127.83
	L_{22} - U_{24}	-15.12	113.76	-9.70	5.70	-0.90	-11.90	-102.05	59.97	-9.47	-125.20	-240.78	277.81	-80.18	123.39	127.8	127.83
	U_{24} - L_{23}	-2.69	209.81	-10.30	8.30	1.40	-9.10	-108.37	87.32	14.73	-95.74	-238.28	461.96	28.42	65.32	173.0	173.03
	L_{23} - U_{25}	-122.28	1156.58	-22.30	37.50	0.10	-1.90	-338.78	394.54	1.05	-19.99	-892.56	2308.28	-166.68	-1460.14	232.7	232.70
	U_{25} - L_{24}	-1153.78	-196.80	-0.70	3.90	34.00	-29.50	-7.45	41.52	362.00	-314.09	-1463.77	-165.97	2264.25	-936.36	221.8	221.77
	L_{24} - U_{26}	-67.81	62.60	-3.20	4.00	0.00	-26.80	53.24	43.85	0.00	-285.34	-270.98	125.03	257.30	-383.31	127.9	127.83
	U_{26} - L_{25}	178.87	-59.61	3.60	4.40	3.00	-20.60	38.33	46.85	31.94	-219.33	0.00	0.00	0.00	0.00	0.00	0.00
	L_{25} - U_{27}	-68.77	-178.57	5.00	4.10	0.00	-26.80	53.24	43.85	0.00	-285.34	-270.98	125.03	257.30	-383.31	127.9	127.83
	U_{27} - L_{26}	-67.81	62.60	-3.20	4.00	0.00	-26.80	53.24	43.85	0.00	-285.34	-270.98	125.03	257.30	-383.31	127.9	127.83
	L_{26} - U_{28}	-236.40	-153.09	3.80	3.40	-13.70	-44.10	40.46	36.20	-145.86	-409.53	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28} - L_{27}	-98.63	-313.14	3.70	3.80	-26.10	-29.50	39.39	40.46	-277.89	-282.15	-42.87	-319.42	-730.31	-1010.40	232.7	232.70
	L_{27} - U_{29}	-78.24	-392.96	4.30	3.70	-32.20	-29.50	39.39	40.46	-277.89	-282.15	-84.28	-457.80	-730.33	-1010.40	232.7	232.70
	U_{29} - L_{28}	-350.27	-386.72	-9.20	2.10	-29.50	-29.40	-55.36	22.36	-314.09	-313.02	0.00	0.00	0.00	0.00	0.00	0.00
	L_{28} - U_{30}	-278.82	-117.63	-7.50	5.70	-6.00	-13.70	-84.11	60.69	-63.88	-146.86	-675.31	-454.29	-1133.87	-1180.95	251.7	251.73
	U_{30} - L_{29}	-278.82	-117.63	-7.50	5.70	-6.00	-13.70	-84.11	60.69	-63.88	-146.86	-675.31	-454.29	-1133.87	-1180.95	251.7	251.73
	L_{29} - U_{31}	-186.12	-74.10	-8.80	11.10	2.20	-15.60	-87.31	118.10	23.42	-166.09	-431.20	189.72	-191.28	-606.20	127.8	127.83
	U_{31} - L_{30}	-139.59	-187.78	0.00	0.90	4.90	-16.30	0.00	9.70	52.83	-175.75	0.00	0.00	0.00	0.00	0.00	0.00
	L_{30} - U_{32}	-47.42	-118.54	-0.20	1.10	11.90	-28.00	-2.16	12.94	61.46	-216.64	-191.65	-129.71	-61.46	-216.64	127.8	127.83
	U_{32} - L_{31}	-52.50	-128.95	-0.20	1.20	5.70	-20.00	-2.16	12.94	61.46	-216.64	-191.65	-129.71	-61.46	-216.64	127.8	127.83
	L_{31} - U_{33}	-277.57	-111.60	0.90	2.30	0.70	-24.80	9.70	24.80	7.55	-267.39	-339.91	-91.34	-344.49	-724.43	188.5	188.53
	U_{33} - L_{32}	-166.87	-240.33	1.50	2.10	-3.40	-29.00	16.17	22.64	-36.66	-312.68	0.00	0.00	0.00	0.00	0.00	0.00
	L_{32} - U_{34}	-287.50	-127.71	1.80	1.80	-5.70	-16.00	16.17	22.64	-18.33	-172.31	-339.91	-91.34	-344.49	-724.43	188.5	188.53
	U_{34} - L_{33}	-141.30	-113.93	-7.60	4.20	0.50	-13.90	-81.94	45.28	5.39	-149.87	0.00	0.00	0.00	0.00	0.00	0.00
	L_{33} - U_{35}	-140.41	-22.73	1.60	3.60	-0.40	-10.50	17.25	38.82	-4.31	-113.21	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35} - L_{34}	-141.54	56.98	-8.90	4.00	-3.20	-4.50	-95.96	34.13	-34.50	-48.52	0.00	0.00	0.00	0.00	0.00	0.00
	L_{34} - U_{36}	3.07	40.55	-3.10	3.20	1.70	-5.70	-33.42	34.50	18.33	-61.46	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36} - L_{35}	-136.80	470.88	-19.10	16.80	0.00	0.00	-205.94	181.14	0.00	0.00	-634.04	1004.61	-177.85	612.15	130.3	130.26
	L_{35} - U_{37}	497.19	-34.44	2.50	2.00	22.00	-19.90	27.83	22.27	244.93	-221.55	0.00	0.00	0.00	0.00	0.00	0.00
	U_{37} - L_{36}	41.01	105.92	2.20	2.90	1.80	-13.00	24.49	32.29	20.04	-144.73	0.00	0.00	0.00	0.00	0.00	0.00
	L_{36} - U_{38}	113.01	44.44	3.60	2.80	4.80	-15.60	45.08	27.83	53.44	-173.67	0.00	0.00	0.00	0.00	0.00	0.00
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Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Guide Specification for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-In (k-ft)	Dead Load End-In (k-ft)	Live Load (Max) Start-In (k-ft)	Live Load (Max) End-In (k-ft)	Pedestrian Load (Max) Start-In (k-ft)	Pedestrian Load (Min) End-In (k-ft)	Lane Reduction & Impact Live Load Max Start-In (k-ft)	Lane Reduction & Impact Live Load Max End-In (k-ft)	Impact Pedestrian Load Max Start-In (k-ft)	Impact Pedestrian Load Max End-In (k-ft)
Structure 1	L_0-L_1	-15.54	-73.33	-1.00	5.00	4.40	-10.60	-11.13	11.13	48.99	-118.01
	L_1-L_2	39.76	-87.96	-0.10	2.30	-3.90	-13.00	-1.11	25.91	-43.42	-144.73
	L_2-L_3	39.76	-87.96	-0.10	2.30	-3.90	-13.00	-1.11	25.91	-43.42	-144.73
	L_3-L_4	-11.34	11.55	1.20	4.00	1.40	-16.20	13.36	44.53	15.59	-180.35
	L_4-L_5	-49.11	208.03	-16.10	3.60	-19.70	-58.80	-179.24	64.57	-120.41	-121.35
	L_5-L_6	-0.46	181.07	2.20	5.40	-3.40	-6.80	24.49	60.12	-37.85	-73.70
	L_6-L_7	41.44	78.72	-11.00	4.90	-15.40	-15.40	-122.46	54.05	-213.98	-131.27
	L_7-L_8	-25.11	448.74	-8.20	17.00	0.10	-0.10	-91.29	189.26	1.11	-1.11
	L_8-L_9	425.89	-36.02	1.80	1.30	12.20	-8.50	19.41	14.02	131.54	-91.65
	L_9-L_{10}	150.02	-126.53	1.30	3.20	-0.70	-10.90	3.23	32.35	7.15	-117.02
	L_{10}-L_{11}	120.44	-115.99	3.60	1.80	-2.60	-9.00	38.82	19.41	-28.03	-97.04
	L_{11}-L_{12}	120.44	-115.99	3.60	1.80	-2.60	-9.00	38.82	19.41	-28.03	-97.04
	L_{12}-L_{13}	-45.24	-121.26	2.20	1.30	-5.10	-13.40	23.72	11.86	-64.94	-144.48
	L_{13}-L_{14}	96.32	-264.98	1.90	1.40	-5.90	-21.70	20.49	15.09	-43.61	-233.97
	L_{14}-L_{15}	96.32	-264.98	1.90	1.40	-5.90	-21.70	20.49	15.09	-43.61	-233.97
	L_{15}-L_{16}	-191.89	-319.35	-1.70	1.40	-8.10	-19.50	-18.33	15.09	-87.33	-210.25
	L_{16}-L_{17}	38.44	-64.09	-1.00	4.60	-5.60	-11.50	-150.95	38.62	-162.44	-493.75
	L_{17}-L_{18}	-154.50	-31.26	-3.70	4.20	-4.40	-5.20	-39.89	45.28	-47.44	-56.07
	L_{18}-L_{19}	-215.80	145.76	-10.70	2.30	-13.00	-2.80	-115.37	58.47	-130.52	-30.19
	L_{19}-L_{20}	-136.32	49.67	-10.10	5.60	-5.40	-0.30	-108.90	60.38	-31.31	-3.23
	L_0-L_1	-2.68	-185.02	-0.70	1.40	4.30	-12.40	-7.45	14.91	45.78	-132.02
	L_1-L_2	75.78	-243.21	-1.50	1.40	7.40	-15.40	-7.45	18.76	71.45	-150.45
	L_2-L_3	-4.23	-180.72	-0.20	1.30	-3.20	-15.50	-2.13	15.97	-34.27	-165.03
	L_3-L_4	-11.34	-180.72	-0.20	1.30	-3.20	-15.50	-3.19	15.97	-34.27	-165.03
	L_4-L_5	-252.89	-295.03	1.40	2.40	-11.60	-24.40	14.91	25.55	-123.51	-269.79
	L_5-L_6	-252.89	-295.03	1.40	2.40	-11.60	-24.40	14.91	25.55	-123.51	-269.79
	L_6-L_7	-475.08	-292.18	3.80	1.80	-21.40	-30.40	-40.46	20.46	-201.62	-264.53
	L_7-L_8	-280.47	-64.51	3.00	5.40	-10.40	-20.00	31.94	57.49	-110.73	-212.94
	L_8-L_9	-292.36	219.74	-4.40	3.00	-19.70	-39.60	-45.26	47.91	-125.41	-364.93
	L_9-L_{10}	-225.83	141.30	-2.40	5.60	-4.50	-11.60	25.55	59.62	-52.17	-117.12
	L_{10}-L_{11}	-201.53	-255.61	-7.30	2.30	-20.60	-6.30	-420.35	353.51	-431.54	-88.37
	L_{11}-L_{12}	-160.03	387.16	-6.10	7.90	-6.10	-8.40	-84.95	79.85	-64.95	-89.43
	L_{12}-L_{13}	-202.71	-204.45	-1.90	3.70	-8.60	-23.40	20.23	39.39	-91.56	-249.14
	L_{13}-L_{14}	-202.71	-204.45	-1.90	3.70	-8.60	-23.40	20.23	39.39	-91.56	-249.14
	L_{14}-L_{15}	1072.48	-412.35	1.20	1.60	27.10	-23.10	12.63	16.83	289.12	-243.04
	L_{15}-L_{16}	539.46	-410.17	1.20	1.60	27.10	-23.10	3.16	16.83	138.39	-194.12
	L_{16}-L_{17}	475.57	-49.03	4.60	2.30	0.70	-14.80	48.40	24.20	7.36	-155.71
	L_{17}-L_{18}	475.57	-49.03	4.60	2.30	0.70	-14.80	48.40	24.20	7.36	-155.71
	L_{18}-L_{19}	-226.51	-41.81	5.10	2.20	-3.60	-13.90	53.66	23.15	-37.88	-146.24
	L_{19}-L_{20}	-214.45	-56.43	2.90	3.10	-4.00	-17.00	30.51	32.62	-42.08	-176.86
	L_0-L_1	-201.50	-255.61	-7.30	2.30	-20.60	-6.30	-420.35	353.51	-431.54	-88.37
	L_1-L_2	49.27	-202.49	0.50	3.10	-12.30	-29.20	9.28	32.62	-129.41	-307.21
	L_2-L_3	-197.10	-24.39	1.90	3.70	-8.60	-23.40	20.23	39.39	-91.56	-249.14
	L_3-L_4	-111.92	0.86	1.90	4.30	-10.70	-18.60	3.16	39.13	-389.40	-422.88
	L_4-L_5	-111.92	0.86	1.90	4.30	-10.70	-18.60	3.16	39.13	-389.40	-422.88
	L_5-L_6	-60.78	179.81	-6.70	6.00	-5.40	-11.80	-70.49	63.13	-56.81	-123.14
	L_6-L_7	-81.80	265.56	-6.40	7.10	-7.40	-10.10	-67.33	74.70	-77.86	-108.26
	L_7-L_8	-99.81	-279.28	2.30	3.60	-9.10	-24.40	24.25	37.88	-95.74	-256.71
	L_8-L_9	-99.81	-279.28	2.30	3.60	-9.10	-24.40	24.25	37.88	-95.74	-256.71
	L_9-L_{10}	1026.29	362.30	1.80	2.00	27.70	-24.10	-19.16	21.29	294.92	-256.59
	L_{10}-L_{11}	-226.76	-125.36	1.50	5.10	-10.50	-16.10	10.65	54.30	-111.78	-171.42
	L_{11}-L_{12}	-278.05	-132.91	2.30	4.50	-9.60	-14.50	24.49	47.91	-9.39	-154.38
	L_{12}-L_{13}	-278.05	-132.91	2.30	4.50	-9.60	-14.50	24.49	47.91	-9.39	-154.38
	L_{13}-L_{14}	-222.98	-243.21	3.00	3.50	-4.90	-15.90	31.94	37.26	-52.17	-169.29
	L_{14}-L_{15}	-222.98	-243.21	3.00	3.50	-4.90	-15.90	31.94	37.26	-52.17	-169.29
	L_{15}-L_{16}	-167.58	-470.72	3.50	2.80	-6.30	-31.60	37.26	29.81	-67.08	-336.45
	L_{16}-L_{17}	-445.06	-93.48	2.80	5.80	-16.60	-28.90	34.07	8.52	-176.74	-307.70
	L_{17}-L_{18}	-392.27	38.30	-4.80	3.30	-13.50	-15.50	-51.11	35.14	-143.73	-165.53
	L_{18}-L_{19}	-392.27	38.30	-4.80	3.30	-13.50	-15.50	-58.66	35.14	-143.73	-165.53
	L_{19}-L_{20}	-297.04	199.10	-12.30	4.10	-4.10	-5.30	-130.96	43.85	-43.65	-56.43
	L_0-L_1	-297.04	199.10	-12.30	4.10	-4.10	-5.30	-130.96	43.85	-43.65	-56.43
	L_1-L_2	24.53	-109.42	-0.40	0.70	4.80	-10.80	-4.31	7.55	51.75	-109.98
	L_2-L_3	-139.90	-177.77	-0.40	0.90	2.10	-10.70	-4.31	9.70	22.64	-115.37
	L_3-L_4	-139.90	-177.77	-0.40	0.90	2.10	-10.70	-4.31	9.70	22.64	-115.37
	L_4-L_5	47.96	-293.64	-0.20	1.30	-3.70	-16.90	-1.08	14.67	-113.13	-189.62
	L_5-L_6	47.96	-293.64	-0.20	1.30	-3.70	-16.90	57.68	31.36	-24.68	-176.53
	L_6-L_7	-47.68	-343.07	0.40	2.30	-15.40	-25.10	4.31	24.80	-152.13	-270.63
	L_7-L_8	-341.10	86.20	-21.30	6.10	-8.70	-16.10	-229.66	65.17	-93.80	-173.59
	L_8-L_9	-341.10	86.20	-21.30	6.10	-8.70	-16.10	-229.66	65.17	-93.80	-173.59
	L_9-L_{10}	-201.09	-192.50	-5.60	4.30	-3.50	-9.50	-60.38	46.36	-37.74	-91.65
	L_{10}-L_{11}	-201.09	-192.50	-5.60	4.30	-3.50	-9.50	-60.38	46.36	-37.74	-91.65
	L_{11}-L_{12}	-148.24	148.96	-4.40	5.30	-4.40	-9.70	-47.44	57.14	-47.44	-104.59
	L_{12}-L_{13}	-148.24	148.96	-4.40	5.30	-4.40	-9.70	-47.44	57.14	-47.44	-104.59
	L_{13}-L_{14}	-428.31	-26.46	-2.00	1.20	13.90	-8.80	32.29	13.36	-134.75	-87.97
	L_{14}-L_{15}	-428.31	-26.46	-2.00	1.20	13.90	-8.80	32.29	13.36	-134.75	-87.97
	L_{15}-L_{16}	-70.66	27.55	0.30	3.30	-1.80	-12.30	3.34	36.14	-20.04	-136.94
	L_{16}-L_{17}	-70.66	27.55	0.30	3.30	-1.80	-12.30	3.34	36.14	-20.04	-136.94
	L_{17}-L_{18}	-194.48	-25.11	3.50	2.90	-2.00	-16.00	38.97	32.29	-22.27	-178.13
	L_{18}-L_{19}	-194.48	-25.11	3.50	2.90	-2.00	-16.00	38.97	32.29	-22.27	-178.13
	L_{19}-L_{20}	-45.48	-80.88	0.60	1.90	-4.90	-15.60	-6.68	21.14	-34.65	-173.67
	L_0-L_1	-45.48	-80.88	0.60	1.90	-4.90	-15.60	-6.68	21.14	-34.65	-173.67
	L_1-L_2	-74.44	-5.53	-9.80	6.00	0.70	-0.70	-109.19	66.80	-77.99	-77.99

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start-In (k-in)	Max. Pos. Mom. End-In (k-in)	Max. Neg. Mom. Start-In (k-in)	Max. Neg. Mom. End-In (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_{zz} (in^4)	$I_{t/n}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{top}$	M_z (k-in)	Equivalent Mem. Factors a	Equivalent Mem. Factors C$_{bend}$	Equivalent Mem. Factors C$_{axial}$
Structure 1	L_0-L_1	44.32	71.21	85.93	351.02	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.245	0.50	0.50
	L_1-L_2	49.28	68.87	-42.38	-427.93	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	0.099	0.64	0.64
	L_2-L_3	49.28	68.87	-42.38	-427.93	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	0.099	0.64	0.64
	L_3-L_4	68.78	13.77	-341.35	-427.93	99.10	91.00	125.40	3409	1372.0	1.26	4141	0.99991186	3294.8	-0.027	0.58	0.58	0.58
	L_4-L_5	14.21	111.51	19.03	-375.75	99.9	99.93	84.14	129.49	3409	1372.0	1.26	4141	0.99991186	3294.8	-0.0001	0.58	0.58	0.58
	L_5-L_6	452.25	32.07	52.08	-76.68	74.7	74.62	92.58	76.68	114.47	1186	1.23	2752	0.99952691	3052.4	-0.272	0.47	0.47	0.47
	L_6-L_7	5.57	365.05	-62.61	71.37	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952948	3448.5	0.144	0.66	0.66	0.66
	L_7-L_8	219.21	232.53	-122.48	54.56	104.6	104.58	141.52	129.09	152.94	3200	1.37	6264	0.99951428	4776.0	-0.691	0.52	0.52	0.52
	L_8-L_9	19.41	14.02	131.54	-91.65	74.65	74.62	145.75	130.44	228.84	6500	2.92	7552	0.99952691	4806.3	-0.232	0.51	0.51	0.51
	L_9-L_{10}	3.23	32.35	7.15	-117.02	74.65	74.62	145.75	130.44	228.84	6500	2.92	7552	0.99952691	4806.4	-0.293	0.48	0.48	0.48
	L_{10}-L_{11}	38.82	19.41	-28.03	-97.04	93.6	92.6	92.58	65.83	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.265	0.49	0.49
	L_{11}-L_{12}	26.96	13.17	-35.71	-106.13	93.6	92.58	92.58	65.83	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.265	0.49	0.49
	L_{12}-L_{13}	-7.42	-131.95	-177.96	-470.68	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99995022	4288.6	0.378	0.75	0.75	0.75
	L_{13}-L_{14}	169.60	-428.76	-12.61	-868.40	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99995106	5370.6	0.013	0.61	0.61	0.61
	L_{14}-L_{15}	169.60	-428.76	-12.61	-868.40	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99995106	5370.6	0.013	0.61	0.61	0.61
	L_{15}-L_{16}	-289.16	-381.15	-438.67	-869.39	179.7	179.69	170.68	251.43	6763	3050.7	1.40	8297	0.99912252	5924.6	0.505	0.80	0.80	0.80
	L_{16}-L_{17}	768.93	142.44	-493.75	-213.31	153.9	153.89	138.16	206.43	5957	2460.7	1.34	6912	0.99991414	5273.9	-0.181	0.52	0.53	0.53
	L_{17}-L_{18}	-287.29	57.48	-333.64	-162.12	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904448	3891.8	0.534	0.81	0.81	0.81
	L_{18}-L_{19}	-530.50	310.97	-350.62	-124.08	83.6	83.58	74.62	100.97	2740	1090.2	1.21	3332	0.99950547	2755.5	-0.593	0.37	0.37	0.37
	L_{19}-L_{20}	-108.90	60.38	-31.31	-3.23	83.6	83.58	67.49	100.97	2740	1090.2	1.21	3332	0.99950547	2755.5	-0.473	0.41	0.41	0.41
	L_0-L_1	-7.45	14.91	45.78	-132.02	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.182	0.53	0.53	0.53
	L_1-L_2	-7.45	18.76	71.45	-150.45	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.232	0.51	0.51	0.51
	L_2-L_3	-2.13	15.97	-34.27	-165.03	0.00	0.00	82.92	162.51	151.98	2089.67	4946	2152.2	1.29	7619	0.99904436	5267.7	0.134	0.65	0.65	0.65
	L_3-L_4	-3.19	15.97	-34.27	-165.03	0.00	0.00	82.92	162.51	151.98	2089.67	4946	2152.2	1.29	7619	0.99904436	5267.7	0.134	0.65	0.65	0.65
	L_4-L_5	14.91	25.55	-123.51	-269.79	0.00	0.00	296.41	-328.17	-696.30	-846.41	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.630	0.85	0.85	0.85
	L_5-L_6	14.91	25.55	-123.51	-269.79	0.00	0.00	296.41	-328.17	-696.30	-846.41	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.630	0.85	0.85	0.85
	L_6-L_7	12.78	20.46	-201.62	-259.79	0.00	0.00	296.41	-329.59	-696.30	-846.41	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.630	0.85	0.85	0.85
	L_7-L_8	31.94	57.49	-110.73	-212.94	0.00	0.00	296.41	40.71	-654.53	-545.23	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.902	0.96	0.96	0.96
	L_8-L_9	-45.26	47.91	-125.41	-364.93	0.00	0.00	296.41	-481.57	-696.30	-846.41	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.630	0.85	0.85	0.85
	L_9-L_{10}	25.55	59.62	-52.17	-117.12	0.00	0.00	238.22	312.87	-606.62	-70.07	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99952948	4912.7	0.172	0.62	0.67	0.67
	L_{10}-L_{11}	-420.35	353.51	-431.54	-88.37	0.00	0.00	238.22	312.87	-606.62	-70.07	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99952948	4912.7	0.172	0.62	0.67	0.67
	L_{11}-L_{12}	-348.76	676.32	-348.76	309.83	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916421	5468.6	-0.516	0.39	0.39	0.39
	L_{12}-L_{13}	-219.69	-180.43	-461.91	805.59	226.0	225.96	325.96	213.39	364.84	7490	3164.4	1.39	11452	0.99900039	8222.0	-0.528	0.39	0.39
	L_{13}-L_{14}	-529.09	-212.24	-249.40	-1111.27	-1029.08	216.3	216.33	205.74	7625	3425.8	1.39	11719	0.99911494	7132.6	0.926	0.91	0.97	0.97
	L_{14}-L_{15}	1421.55	-499.59	2511.95	-1062.64	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900039	8222.0	-0.528	0.39	0.39	0.39
	L_{15}-L_{16}	1421.55	-499.59	2511.95	-1062.64	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900039	8222.0	-0.528	0.39	0.39	0.39
	L_{16}-L_{17}	1116.60	-11.31	627.70	-401.11	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8197	0.99915124	5943.6	-0.016	0.55	0.59	0.59
	L_{17}-L_{18}	-204.26	-36.59	-165.48	-145.21	93.6	92.58	92.58	65.83	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.265	0.49	0.49
	L_{18}-L_{19}	53.66	23.15	-37.88	-146.24	0.00	0.00	410.72	-4.21	212.40	-371.22	127.4	127.41	116.92	157.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.019	0.60	0.60	0.60
	L_{19}-L_{20}	30.51	32.62	-42.08	-176.86	0.00	0.00	344.89	-3.29	187.60	-463.48	127.4	127.41	108.77	157.02	3868	1501.0	1.23	5182	0.99898891	4200.3	-0.405	0.44	0.44	0.44
	L_0-L_1	-420.35	353.51	-431.54	-88.37	0.00	0.00	238.22	312.87	-606.62	-70.07	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99952948	4912.7	0.172	0.62	0.67	0.67
	L_1-L_2	9.28	32.62	-129.41	-307.21	0.00	0.00	75.45	-192.57	-216.33	-628.86	161.2	161.18	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.223	0.65	0.69	0.69
	L_2-L_3	-197.10	-24.39	1.90	3.70	-8.60	-23.40	20.23	39.39	-91.56	-249.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_3-L_4	-111.92	0.86	1.90	4.30	-10.70	-18.60	3.16	39.13	-389.40	-422.88	161.2	161.18	150.63	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.521	0.97	0.97	0.97
	L_4-L_5	-111.92	0.86	1.90	4.30	-10.70	-18.60	3.16	39.13	-389.40	-422.88	161.2	161.18	150.63	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.521	0.97	0.97	0.97
	L_5-L_6	-70.49	63.13	-56.81	-123.14	0.00	0.00	231.74	370.52	-252.10	-35.24	127.4	127.41	116.92	157.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.625	0.35	0.35	0.35
	L_6-L_7	-87.33	74.70	-77.86	-108.26	0.00	0.00	252.23	507.08	-275.02	114.99	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99952948	4912.7	-0.497	0.40	0.40	0.40
	L_7-L_8	-99.81	-279.28	2.30	3.60	-9.10	-24.40	24.25	37.88	-95.74	-256.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_8-L_9	-99.81	-279.28	2.30	3.60	-9.10	-24.40	24.25	37.88	-95.74	-256.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_9-L_{10}	-19.16	21.29	294.92	-256.59	0.00	0.00	1292.65	424.89	1973.17	-1026.94	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900039	8221.8	0.520	0.39	0.39	0.39
	L_{10}-L_{11}	10.65	54.30	-111.78	-171.42	0.00	0.00	271.72	-45.34	-537.60	-534.39	226.0	225.96	214.97	304.84	7460	3191.4	1.35	10060	0.99896082	7448.9	0.995	1.00	1.00	1.00
	L_{11}-L_{12}	24.49	47.91	-9.39	-154.38	0.00	0.00	414.52	-48.97	347.62	-507.27	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5716	0.99901436	4598.4	-0.685	0.33	0.33	0.33
	L_{12}-L_{13}	53.24	37.91	-39.29	-178.89	0.00	0.00	414.52	-48.97	347.62	-507.27	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5716	0.99901436	4598.4	-0.685	0.33	0.33	0.33
	L_{13}-L_{14}	359.08	-235.43	176.84	-682.96	168.0	168.04	149.99	224.57	5911	2429.7	1.33	7411	0.99914827	5557.1	-0.259	0.50	0.50	0.50
	L_{14}-L_{15}	359.08	-235.43	176.84	-682.96	168.0	168.04	149.99	224.57	5911	2429.7	1.33	7411	0.99914827	5557.1	-0.259	0.50	0.50	0.50
	L_{15}-L_{16}	-509.14	-313.85	-1032.33	-179.7	179.69	165.14	251.43	6763	3050.7	1.40	8297	0.99912252	5924.6	0.288	0.72	0.72	0.72
	L_{16}-L_{17}	-1032.33	-179.7	-1037.64	-647.30	153.9	153.89	138.16	206.43	5957	2460.7	1.34	6912	0.99991414	5273.9	0.211	0.71	0.71	0.71
	L_{17}-L_{18}	-647.30	-363.71	-1040.99	-218.3	216.3	205.74	344.78	7625	3425.8	1.39	11719	0.99911494	7132.6	0.271	0.71	0.71	0.71
	L_{18}-L_{19}	-218.87	-185.98	-1040.99	-218.3	216.3	205.74	344.78	7625	3425.8	1.39	11719	0.99911494	7132.6	0.271	0.71	0.71	0.71
	L_0-L_1	-604.76	-103.07	-861.52	-789.21	197.7	197.72	179.89	341.80	7583	3368.5	1.73	11279	0.99917736	6519.3	0.820	0.93	0.93	0.93
	L_1-L_2	-509.14	-313.85	-1032.33	-179.7	179.69	165.14	251.43	6763	3050.7	1.40	8297	0.99912252	5924.6	0.288	0.72	0.72	0.72
	L_2-L_3	-620.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Member
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1~L_1	-29.84	49.00	-4.94	8.00	0.85	-0.93				
	U_1~L_2	-9.06	15.16	-3.83	4.11	0.72	-0.78				
	U_1~U_2	10.00	9.71	-3.92	3.97	1.27	-1.13				
	U_2~L_2	33.43	-34.38	-3.35	3.54	2.44	-2.39				
	U_2~L_3	41.60	-42.42	-1.73	1.93	2.96	-2.96				
	U_2~U_3	45.52	-51.05	-0.76	0.61	3.86	-4.08				
	U_3~L_3	57.57	-55.93	-0.30	0.53	3.99	-4.44				
	U_3~L_4	91.21	-101.85	-0.02	0.02	6.69	-6.18				
	U_3~U_4	-20.53	21.18	-5.79	6.96	7.99	-9.48				
	U_4~L_4	-135.19	155.81	-5.70	6.66	0.28	-0.37				
	U_4~L_5	-88.41	88.14	-3.44	4.56	0.00	-0.27				
	U_4~U_5	-91.02	123.86	-2.88	5.06	0.00	-0.25				
	U_5~L_5	-79.50	78.32	-4.63	4.03	1.20	-0.92				
	U_5~L_6	-49.20	60.09	-4.28	4.44	1.61	-1.48				
	U_5~U_6	-29.73	34.60	-2.76	2.92	2.39	-2.35				
	U_6~L_6	-1.46	-2.70	-2.88	2.86	3.65	-3.81				
	U_6~L_7	34.16	-36.57	-1.86	1.60	4.28	-4.56				
	U_6~U_7	46.21	-55.82	-0.65	0.41	4.11	-4.12				
	U_7~L_7	110.34	-114.53	-0.48	0.48	7.54	-6.57				
	U_7~L_8	121.24	-131.09	-0.42	0.43	7.32	-7.19				
	U_7~U_8	-134.20	-173.18	-0.26	0.36	6.22	-7.92				
	U_8~L_8	-114.26	168.30	-1.94	2.94	0.16	-0.16				
	U_8~L_9	-124.38	133.15	-6.92	6.77	0.95	-1.02				
	U_8~U_9	-113.37	113.65	-5.42	5.08	1.15	-1.11				
	U_9~L_9	-56.00	62.15	-3.66	3.60	0.64	-0.67				
	U_9~L_{10}	-34.84	39.78	-3.52	3.33	0.47	-0.49				
	U_9~U_{10}	-7.05	12.30	-3.55	3.70	2.38	-2.12				
	U_{10}~L_{10}	15.85	-15.58	-3.23	3.28	2.77	-2.79				
	U_{10}~L_{11}	38.85	-44.93	-1.72	1.75	3.56	-3.49				
	U_{10}~U_{11}	86.89	-96.05	-1.92	1.75	5.56	-5.49				
	U_{11}~L_{11}	155.09	-164.41	-1.24	1.48	7.80	-7.80				
	U_{11}~L_{12}	141.21	-149.39	-1.19	0.77	5.86	-5.94				
	U_{11}~U_{12}	192.53	-192.81	-0.67	0.42	5.90	-5.91				
	U_{12}~L_{12}	147.39	-146.79	-0.37	0.49	6.06	-6.06				
	U_{12}~L_{13}	203.50	-203.15	-0.52	0.55	7.02	-6.91				
	U_{12}~U_{13}	6.02	-9.48	-0.12	0.12	0.78	-0.77				
	U_{13}~L_{13}	-159.87	162.82	-7.61	7.38	0.84	-0.89				
	U_{13}~L_{14}	-113.88	113.84	-5.76	5.73	0.61	-0.63				
	U_{13}~U_{14}	-130.37	-127.18	-6.84	6.98	0.81	-0.79				
	U_{14}~L_{14}	-113.07	114.60	-6.87	6.89	0.91	-0.93				
	U_{14}~L_{15}	-44.77	47.64	-3.46	3.48	0.80	-0.80				
	U_{14}~U_{15}	-44.77	66.58	-3.85	3.87	1.53	-1.24				
	U_{15}~L_{15}	-30.30	34.99	-2.87	2.91	1.37	-1.26				
	U_{15}~L_{16}	-3.70	4.34	-2.67	2.81	2.28	-2.38				
	U_{15}~U_{16}	28.64	25.72	-2.39	2.52	1.89	-1.89				
	U_{16}~L_{16}	19.32	-17.75	-2.30	2.42	4.05	-4.05				
	U_{16}~L_{17}	88.55	-87.48	-1.41	1.13	4.58	-4.43				
	U_{16}~U_{17}	138.75	-139.77	-1.21	1.27	4.58	-4.76				
	U_{17}~L_{17}	138.22	-138.56	-0.76	0.75	7.53	-7.53				
	U_{17}~L_{18}	124.45	-124.54	-0.74	0.74	7.42	-7.42				
	U_{17}~U_{18}	173.92	-176.10	-0.42	0.47	8.24	-7.91				
	U_{18}~L_{18}	121.38	-121.57	-0.58	0.58	7.46	-7.46				
	U_{18}~L_{19}	167.09	167.27	-0.81	0.72	7.77	-7.85				
	U_{18}~U_{19}	-116.04	-109.89	-5.52	5.65	0.38	-0.68				
	U_{19}~L_{19}	-119.38	-119.83	-5.38	5.80	0.56	-0.48				
	U_{19}~L_{20}	-79.51	-79.51	-4.95	5.22	1.22	-1.56				
	U_{19}~U_{20}	-43.96	51.93	-2.87	3.18	1.42	-1.56				
	U_{20}~L_{20}	-30.55	33.89	-2.87	3.18	1.42	-1.56				
	U_{20}~L_{21}	-5.57	1.81	-2.78	2.66	3.59	-3.75				
	U_{20}~U_{21}	16.43	16.43	-2.78	2.66	3.59	-3.75				
	U_{21}~L_{21}	55.25	-51.09	-0.62	0.63	3.95	-3.95				
	U_{21}~L_{22}	116.85	-122.73	-0.57	0.57	7.19	-7.19				
	U_{21}~U_{22}	137.13	-150.74	-0.81	0.83	7.06	-6.99				
	U_{22}~L_{22}	165.72	-206.83	-0.60	0.80	5.99	-8.11				
	U_{22}~L_{23}	-72.72	142.90	-0.74	1.56	0.00	-0.00				
	U_{22}~U_{23}	-109.81	-112.89	-0.74	0.96	0.00	-0.00				
	U_{23}~L_{23}	-38.40	-68.11	-0.59	0.61	0.00	-0.00				
	U_{23}~L_{24}	-37.87	34.14	-3.99	3.92	0.47	-0.61				
	U_{23}~U_{24}	-2.78	8.39	-3.82	3.92	2.02	-2.02				
	U_{24}~L_{24}	25.87	-28.68	-2.47	2.60	3.20	-3.32				
	U_{24}~L_{25}	76.96	-76.96	-1.61	1.49	4.36	-4.44				
	U_{24}~U_{25}	76.96	-77.23	-1.61	1.49	4.36	-4.44				
	U_{25}~L_{25}	82.21	-85.87	-0.29	0.44	4.76	-5.10				
	U_{25}~L_{26}	142.63	-166.12	-0.09	0.12	5.82	-6.94				
	U_{25}~U_{26}	-115.91	-115.91	-5.42	5.42	0.00	-0.00				
	U_{26}~L_{26}	-81.19	-89.90	-5.28	5.57	0.00	-0.00				
	U_{26}~L_{27}	-38.98	-42.96	-3.05	3.72	0.23	-0.20				
	U_{26}~U_{27}	-38.98	-40.31	-3.45	3.34	1.40	-1.20				
	U_{27}~L_{27}	-37.48	-38.73	-3.13	3.25	2.89	-3.17				
	U_{27}~L_{28}	-10.29	11.13	-1.40	1.44	4.04	-4.48				
	U_{27}~U_{28}	3.53	-11.97	-0.76	0.73	4.90	-4.54				
	U_{28}~L_{28}	44.79	-53.89	-0.53	0.71	5.03	-6.45				

ZZ Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{top}$	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	$C_{m(y)}$
Structure 1	U_1~L_1	-157.84	208.52	-18.27	41.36	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_1~L_2	-104.17	118.82	5.68	8.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_1~U_2	-74.14	83.12	-43.89	-41.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_2~L_2	-37.43	40.77	102.26	-102.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_2~L_3	-12.40	-18.19	43.91	-139.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_2~U_3	40.76	-51.60	152.18	-164.71	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_3~L_3	63.68	-64.33	168.24	-172.38	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_3~L_4	91.21	-101.85	-0.02	0.02	6.69	-6.18							
	U_3~U_4	-0.22	0.24	63.29	-68.85	0.00	0.00	0.00	0.00	0.00	118.10	-131.87	258.71	-281.57
	U_4~L_4	-64.44	77.47	88.99	-105.55	0.00	0.00	0.00	0.00	0.00	-166.30	-166.39	168.12	-201.17
	U_4~L_5	-47.00	71.34	3.03	-3.99	0.00	0.00	0.00	0.00	0.00	-309.00	357.13	-169.18	193.91
	U_4~U_5	-37.24	-49.21	0.02	-2.95	0.00	0.00	0.00	0.00	0.00	-195.18	221.21	-114.89	108.18
	U_5~L_5	-47.96	57.62	0.05	-2.68	0.00	0.00	0.00	0.00	0.00	-209.26	286.48	96.57	192.36
	U_5~L_6	-49.89	48.86	1.27	-0.96	0.00	0.00	0.00	0.00	0.00	-211.45	207.68	-75.25	80.23
	U_5~U_6	-46.16	47.83	17.46	-15.91	0.00	0.00	0.00	0.00	0.00	-163.97	191.75	-26.26	43.64
	U_6~L_6	-1.46	-2.70	-2.88	2.86	3.65	-3.81							
	U_6~L_7	-31.08	30.79	39.33	-41.09	0.00	0.00	0.00	0.00	0.00	-114.76	-20.80	153.79	-25.36
	U_6~U_7	-26.02	27.21	46.10	-45.96	0.00	0.00	0.00	0.00	0.00	-89.25	53.19	83.32	-92.53
	U_7~L_7	-7.00	4.45	44.36	-44.43	0.00	0.00	0.00	0.00	0.00	44.92	-62.92	156.18	-168.84
	U_7~L_8	-6.10	3.19	10.49	-10.86	0.00	0.00	0.00	0.00	0.00	-132.27	-137.56	266.17	-352.42
	U_7~U_8	-4.55	4.58	78.97	-77.50	0.00	0.00	0.00	0.00	0.00	147.76	-160.49	328.71	-338.33
	U_8~L_8	-2.81	3.87	67.01	-65.22	0.00	0.00	0.00	0.00	0.00	168.36	-216.74	319.65	-409.77
	U_8~L_9	-301.72	301.72	497.01	-329.65	0.00	0.00	0.00	0.00	0.00	-301.72	497.01	-329.65	329.65
	U_8~U_9	-321.41	329.23	-139.73	149.66	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	U_9~L_9	-157.26	163.73	-58.56	65.25	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
	U_9~L_{10}	-147.57	152.16	-53.92	60.14	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_9~U_{10}	-90.94	101.89	83.28	-83.28	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{10}~L_{10}	-53.91	55.34	84.43	-84.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{10}~L_{11}	-10.85	-23.43	107.73	-122.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{10}~U_{11}	-29.25	63.19	83.32	-92.53	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{11}~L_{11}	-60.68	64.61	241.20	-251.53	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5
	U_{11}~L_{12}	-56.08	72.78	107.24	-110.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{11}~U_{12}	-156.56	176.30	318.77	-331.24	43.2	43.24	43.16	70.66	10	1479.6	1.60	2266	1.5
	U_{12}~L_{12}	-160.19	166.32	331.98	-332.34	43.3	43.24	43.16	70.66	10	1479.6	1.60	2266	1.5
	U_{12}~L_{13}	-252.65	251.41	426.44	-423.99	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{13}~L_{13}	-122.71	122.71	112.72	-112.60	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{13}~L_{14}	-381.33	379.96	-188.61	191.47	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{13}~U_{14}	-275.08	324.24	-151.06	147.25	42.7	42.74	42.74	65.30	9	1711.0	1.53	2357	1.5
	U_{14}~L_{14}	-326.49	324.49	-151.06	147.25	42.7	42.74	42.74	65.30	9	1711.0	1.53	2357	1.5
	U_{14}~L_{15}	-303.69	306.06	-126.36	127.82	38.9	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5
	U_{14}~U_{15}	-161.86	166.62	-83.03	83.03	18.1	18.61	18.61	31.48	8	970.0	1.68	1339	1.5
	U_{15}~L_{15}	-140.90	148.82	-23.42	32.29	17.2	17.24	17.24	28.54	8	824.7	1.54	876	1.5
	U_{15}~L_{16}	-125.92	129.81	-19.26	19.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{15}~U_{16}	-65.76	69.78	46.78	-46.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{16}~L_{16}	-28.13	29.61	23.81	-24.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}~L_{17}	-28.94	28.72	-2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}~U_{17}	-19.32	17.75	42.30	-42.65	0.00	0.00	0.00	0.00	0.00	9.94	16.30	143.45	-147.17
	U_{17}~L_{17}	-14.80	11.91	48.17	-46.92	0.00	0.00	0.00	0.00	0.00	54.45	41.92	150.88	-158.69
	U_{17}~L_{18}	-13.75	13.75	31.53	-31.53	0.00	0.00	0.00	0.00	0.00	41.92	41.92	158.69	-158.69
	U_{17}~U_{18}	-7.34	7.84	83.41	-83.38	0.00	0.00	0.00	0.00	0.00	162.47	-163.67	360.41	-361.31
	U_{18}~L_{18}	-7.42	7.42	83.38	-83.38	0.00	0.00	0.00	0.00	0.00	162.47	-163.67	360.41	-361.31
	U_{18}~L_{19}	-4.44	3.92	86.67	-83.24	0.00	0.00	0.00	0.00	0.00	166.91	-167.59	413.73	-409.25
	U_{19}~L_{19}	-2.78	4.07	83.24	-86.42	0.00	0.00	0.00	0.00	0.00	166.91	-167.59	413.73	-409.25
	U_{19}~L_{20}	-61.78	61.80	5.98	-5.07	0.00	0.00	0.00	0.00	0.00	-289.65	295.39	-142.62	150.72
	U_{20}~L_{20}	-30.55	33.89	15.10	-16.59	0.00	0.00	0.00	0.00	0.00	-176.25	180.80	-26.30	31.97
	U_{20}~L_{21}	-79.51	88.86	5.01	4.95	1.22	-1.56							
	U_{20}~U_{21}	-53.30	52.69	75.31	-87.91	0.00	0.00	0.00	0.00	0.00	218.94	229.68	-75.31	87.91
	U_{21}~L_{21}	-30.55	33.89	15.10	-16.59	0.00	0.00	0.00	0.00	0.00	-123.20	140.94	-24.30	31.97
	U_{21}~L_{22}	-5.57	1.81	-2.78	2.66	3.59	-3.75							
	U_{21}~U_{22}	-29.59	29.27	38.20	-39.96	0.00	0.00	0.00	0.00	0.00	-71.35	53.99	71.52	-84.23
	U_{22}~L_{22}	-4.89	4.89	38.43	-38.43	0.00	0.00	0.00	0.00	0.00	57.64	-64.53	162.90	-170.42
	U_{22}~L_{23}	-6.55	6.69	42.03	-42.00	0.00	0.00	0.00	0.00	0.00	57.64	-64.53	162.90	-170.42
	U_{23}~L_{23}	-8.66	8.78	75.15	-74.45	0.00	0.00	0.00	0.00	0.00	159.91	-176.83	341.08	-357.27
	U_{23}~L_{24}	-6.36	8.50	63.74	-65.35	0.00	0.00	0.00	0.00	0.00	159.91	-176.83	341.08	-357.27
	U_{24}~L_{24}	-72.72	142.90	-0.74	1.56	0.00	-0.00							
	U_{24}~L_{25}	-72.79	69.82	5.67	-6.15	0.00	0.00	0.00	0.00	0.00	-299.27	298.05	-129.27	133.65
	U_{24}~U_{25}	-67.03	67.03	5.67	-6.51	0.00	0.00	0.00	0.00	0.00	-299.27	298.05	-129.27	133.65
	U_{25}~L_{25}	-38.72	38.90	5.45	-4.44	0.00	0.00	0.00	0.00	0.00	-133.91	146.83	-40.93	52.92
	U_{25}~L_{26}	-38.72	38.90	5.45	-4.44	0.00	0.00	0.00	0.00	0.00	-133.91	146.83	-40.93	52.92
	U_{26}~L_{26}	-115.91	-115.91	-5.42	5.42	0.00	-0.00							
	U_{26}~L_{27}	-82.87	82.87	-5.28	5.57	0.00	-0.00							
	U_{26}~U_{27}	-124.34	145.66	-45.25	51.12	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_{27}~L_{27}	-124.34	145.66	-45.25	51.12	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_{27}~L_{28}	-135.01	132.95	-18.22	23.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{28}~L_{28}	-135.01	132.95	-18.22	23.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{28}~L_{29}	-124.16	128.67	20.99	-26.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{29}~L_{29}	-45.57	52.83	179.44	-223.86	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1~L_1	-243.96	-78.24	24.16	7.75	0.00	0.00	0.00	0.00	0.00	0.00
	U_1~L_2	-91.78	-20.04	15.82	15.54	7.80	0.00	0.00	0.00	-215.02	-54.34
	U_1~U_2	-19.25	13.75	-14.38	-4.22	-2.29	-0.38	0.00	0.00	19.06	38.88
	U_2~L_2	-84.37	-2.08	1.81	2.44	-3.63	-1.91	0.00	0.00	-65.95	56.03
	U_2~L_3	-20.28	19.34	-2.11	-6.01	0.00	0.00	0.00	0.00	-216.55	-52.89
	U_2~U_3	-7.05	7.77	16.56	-9.91	0.00	0.00	0.00	0.00	-135.07	-44.60
	U_3~L_3	-5.81	3.12	20.73	3.41	0.00	0.00	0.00	0.00	-116.20	6.88
	U_3~L_4	-100.29	33.53	0.04	0.00	0.00	0.00	0.00	0.00	-129.53	46.18
	U_3~U_4	-1.35	1.86	13.27	3.81	0.00	0.00	0.00	0.00	-216.61	-64.21
	U_4~L_4	-1.29	-3.75	6.60	4.13	0.00	0.00	0.00	0.00	-247.63	-183.62
	U_4~L_5	-12.03	-6.85	-10.63	-13.94	0.00	0.00	0.00	0.00	-229.07	-161.21
	U_4~U_5	0.30	10.18	2.97	8.77	0.00	0.00	0.00	0.00	-128.70	-83.56
	U_5~L_5	14.20	20.41	6.67	10.59	0.00	0.00	0.00	0.00	-94.28	-69.44
	U_5~L_6	24.09	24.42	9.76	10.10	0.00	0.00	0.00	0.00	-54.29	-57.96
	U_5~U_6	11.69	10.18	4.61	3.92	0.00	0.00	0.00	0.00	-126.41	-83.28
	U_6~L_6	8.81	-2.88	21.12	-8.37	0.00	0.00	0.00	0.00	-147.21	-123.15
	U_6~L_7	23.56	11.46	9.10	4.54	0.00	0.00	0.00	0.00	-131.12	-121.25
	U_6~U_7	13.39	16.35	27.27	2.57	0.00	0.00	0.00	0.00	-128.97	-77.80
	U_7~L_7	4.39	-1.02	36.56	-0.92	0.00	0.00	0.00	0.00	-137.44	-44.31
	U_7~L_8	-2.31	-5.15	23.84	-13.85	0.00	0.00	0.00	0.00	-60.89	21.45
	U_7~U_8	-10.97	-1.43	48.84	6.16	0.00	0.00	0.00	0.00	38.24	5.01
	U_8~L_8	-329.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-999.97	-169.87
	U_8~L_9	-22.94	-43.87	-2.55	-73.63	0.00	0.00	0.00	0.00	-22.94	-43.87
	U_8~U_9	6.19	12.62	18.11	0.62	0.00	0.00	0.00	0.00	-22.94	-43.87
	U_9~L_9	0.78	7.10	7.78	6.45	0.00	0.00	0.00	0.00	-14.30	-14.96
	U_9~L_{10}	2.20	1.21	3.01	1.68	0.00	0.00	0.00	0.00	-53.23	-56.42
	U_9~U_{10}	-6.82	6.09	0.70	1.57	0.00	0.00	0.00	0.00	-70.65	89.46
	U_{10}~L_{10}	2.52	12.62	3.10	7.70	0.00	0.00	0.00	0.00	-100.10	62.66
	U_{10}~L_{11}	2.61	5.01	1.54	2.96	0.00	0.00	0.00	0.00	-88.32	-20.95
	U_{10}~U_{11}	-12.85	86.70	1.33	0.12	-0.75	-0.16	0.00	0.00	-135.56	-109.84
	U_{11}~L_{11}	14.14	1.32	-8.02	-15.50	0.00	0.00	0.00	0.00	-185.72	-113.19
	U_{11}~L_{12}	7.13	2.17	-2.35	-4.50	0.00	0.00	0.00	0.00	-123.04	-45.50
	U_{11}~U_{12}	18.08	14.34	-17.98	-0.14	0.00	0.00	0.00	0.00	-61.54	-63.74
	U_{12}~L_{12}	14.14	-23.44	2.80	-4.63	0.00	0.00	0.00	0.00	-91.54	-63.74
	U_{12}~L_{13}	-7.93	-3.80	32.85	7.54	0.00	0.00	0.00	0.00	-31.90	69.36
	U_{13}~L_{13}	-17.63	3.58	-0.97	-0.92	0.00	0.00	0.00	0.00	-22.94	-43.87
	U_{13}~L_{14}	-6.34	-3.79	8.45	6.62	0.00	0.00	0.00	0.00	-34.79	-84.94

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information | **M_1 Information**

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-ft) | ZZ Axis Moments from STAAD: Dead Load End (k-ft) | ZZ Axis Moments from STAAD: Live Load (Max) Start (k-ft) | ZZ Axis Moments from STAAD: Live Load (Max) End (k-ft) | ZZ Axis Moments from STAAD: Pedestrian Load (Max) Start (k-ft) | ZZ Axis Moments from STAAD: Pedestrian Load (Max) End (k-ft) | Lane Reduction & Impact Live Load Start (k-ft) | Lane Reduction & Impact Live Load End (k-ft) | Impact Pedestrian Load Max Start (k-ft) | Impact Pedestrian Load Max End (k-ft) | Max. Pos. Mom. Start k-in | Max. Pos. Mom. End k-in | Max. Neg. Mom. Start k-in | Max. Neg. Mom. End k-in | S_{ss} (in^3) | S_b (in^3) | Z_z (in^3) | I (in^4) | I_{xx} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_{ss} | M_1 (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor $C_{mx/b}$ | YY Axis Moments from STAAD: Dead Load Start (k-ft) | YY Axis Moments from STAAD: Dead Load End (k-ft) | YY Axis Moments from STAAD: Live Load (Max) Start (k-ft) | YY Axis Moments from STAAD: Live Load (Max) End (k-ft) | YY Axis Moments from STAAD: Pedestrian Load (Max) Start (k-ft) | YY Axis Moments from STAAD: Pedestrian Load (Max) End (k-ft) | Lane Reduction & Impact Live Load Start (k-ft) | Lane Reduction & Impact Live Load End (k-ft) | Impact Pedestrian Load Max Start (k-ft) | Impact Pedestrian Load Max End (k-ft) | Max. Pos. Mom. Start k-in | Max. Pos. Mom. End k-in | Max. Neg. Mom. Start k-in | Max. Neg. Mom. End k-in | S_{ss} (in^3) | S_b (in^3) | Z_z (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{allow} (kip) | Formula 1.8 Term * F_y/S_{ss} | M_{ss} (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor $C_{mx/b}$ | Axial w/ Moment Pos. | Moment Pos. | Total | Pass | Axial w/ Moment Neg. | Moment Neg. | Total | Pass | Axial w/ Moment Pos. | Moment Pos. | Total | Pass | Axial w/ Moment Neg. | Moment Neg. | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Segment
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 2.17
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

| Location | Member | ZZ Axis Moments from STAAD | | |

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_f Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load (Max) Start (k-in)	Lane Reduction & Impact Live Load (Max) End (k-in)	Impact Pedestrian Load (Max) Start (k-in)	Impact Pedestrian Load (Max) End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	YY Axis Moments from STAAD: Start (k-in)	End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Term "F" F/S_{bot}	M_f (k-in)	Equivalent Mom. Factor a	C_m	C_{mod}	C_{calc}	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor	M_p (k-in)	P_{crit} (kip)	Formula I.8 Term "F" F/S_{bot}	M_n (k-in)	Equivalent Mom. Factor a	C_m	C_{mod}	C_{calc}	Pass	Axial Moment	Total	Pass	Axial Moment	Total	Pass
Structure 1	L_0-L_1	-19.48	-91.71	0.70	0.73	3.77	-4.95	-0.11	0.13	0.30	-0.64	-9.31	9.77	50.42	-66.06	-1.37	1.50	3.54	-7.68	-45.49	-98.06	62.36	-145.15	83.6	83.68	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.430	0.43	0.43	36.69	129.06	0.09	0.39	-4.60	-18.91	-0.03	-0.11	0.46	1.68	1.26	-4.61	-81.45	-225.90	-0.46	-1.68	6.78	24.94	48.34	177.77	-43.22	-380.94	128.3	128.29	121.83	141.18	626.8	1.10	4659	----	0.99806542	4225.3	0.154	0.66	0.68	0.68	0.001	0.104	0.11	Yes	0.001	0.062	0.07	Yes	0.010	0.047	0.06	Yes
	L_1-L_2	30.33	-116.64	0.64	2.33	-1.47	-9.16	-0.15	-0.92	-0.07	-1.33	-8.59	31.09	-19.60	-122.39	-1.85	5.12	-2.82	-15.98	20.82	-84.27	-23.91	-132.02	83.6	83.68	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	0.007	0.60	0.60	169.01	-70.76	1.91	-19.95	-19.97	8.75	0.15	-0.12	1.96	-2.87	25.50	-12.66	-268.79	90.11	2.29	-1.71	29.02	-12.93	274.97	-119.43	-358.34	103.25	128.3	128.29	115.05	141.18	626.8	1.10	4659	----	0.99806542	4225.3	0.154	0.66	0.68	0.68	0.347	0.202	0.55	Yes	0.212	0.132	0.35	Yes
	L_2-L_3	31.08	-78.07	-1.38	2.52	-7.53	-7.61	0.23	0.30	-1.04	-1.27	-18.67	33.60	-100.60	-107.71	2.57	5.48	-12.47	-15.23	82.70	-28.69	-303.01	-321.56	99.5	99.53	91.00	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	0.030	0.46	0.46	141.61	-59.81	8.16	-84.37	-85.37	34.98	0.64	-0.50	8.16	-12.26	109.04	-54.08	-1148.07	385.02	9.79	-7.31	124.05	-55.25	1174.94	514.98	20.11	-169.41	-1531.76	441.26	128.3	128.29	98.87	149.3	626.8	1.10	4659	----	0.99789161	5651.9	-0.926	0.23	0.23	0.292	0.088	0.39	Yes	0.104	0.052	0.16	Yes
	L_3-L_4	-60.77	-234.10	3.31	0.50	-15.60	-1.48	0.69	-0.16	-33.82	-9.75	-42.07	-7.76	8.68	-21.47	-53.92	52.99	-76.68	74.47	-109.7	-213.7	52.6	-323.09	83.6	83.68	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	0.043	0.45	0.45	66.28	-170.56	0.35	-4.30	-4.30	1.94	4.62	-7.12	7.40	-130.42	2.82	-5.34	-19.19	-84.33	-225.45	0.45	-1.64	6.63	24.39	48.34	177.77	-43.22	-380.94	128.3	128.29	105.31	141.99	572.01	1.10	4643	----	0.99797789	5114.9	-0.809	0.23	0.23	0.104	0.072	0.18	Yes
	L_4-L_5	-2.22	-269.06	2.47	0.65	-1.46	-2.21	-0.31	1.16	0.00	0.00	32.97	62.11	-12.53	-29.58	-3.72	13.93	0.00	0.00	68.56	48.26	-45.20	285.69	104.6	104.58	95.61	136.97	4040	1678.1	1.31	4520	0.99952345	3948.5	0.142	0.66	0.66	0.00	-5.26	-10.78	-27.69	24.18	14.34	-18.47	0.00	0.00	171.88	-218.10	122.84	-142.35	206.15	176.18	126.5	176.4	784.3	1.10	7464	----	0.99778986	6800.4	-0.788	0.28	0.28	----	0.522	0.382	0.90	Yes	0.682	0.107	0.79	Yes
	L_5-L_6	-2.28	-53.33	-1.76	3.13	-0.27	-4.34	-0.90	1.35	-0.57	-1.57	-37.97	-12.79	-4.14	7.36	-5.60	-53.79	52.41	-1.26	10.75	-6.64	-9.66	-129.09	104.6	104.58	95.61	136.97	4040	1678.1	1.31	4520	0.99952345	4776.0	-0.231	0.47	0.47	0.00	-1.05	1.51	30.14	-38.16	-17.66	38.54	-288.39	284.5	-280.46	-164.52	-288.39	285.6	126.5	176.4	784.3	1.10	7464	----	0.99753246	6796.7	-0.787	0.28	0.28	----	0.527	0.382	0.90	Yes	0.521	0.026	0.55	Yes
	L_6-L_7	-38.40	-570.96	0.54	6.76	0.62	-2.09	-0.35	3.65	0.00	0.00	0.00	-7.24	90.26	8.34	37.23	-4.16	43.81	0.00	0.00	-65.61	937.87	-36.38	-94.34	146.8	145.75	130.44	228.84	6550	2932.4	1.57	7552	0.99952915	4806.3	-0.070	0.57	0.57	217.29	246.29	154.07	0.97	4.82	3.12	-0.12	0.77	-0.09	0.00	0.00	12.91	64.39	41.67	-1.59	11.40	-1.34	0.00	0.00	310.18	353.58	349.93	279.63	355.4	355.44	352.52	403.40	1093.1	1.13	13312	----	0.99711701	11898.3	0.877	0.96	0.96	----	0.394	0.145	0.73	Yes	0.726	0.124	0.71	Yes
	L_7-L_8	555.48	-39.57	2.85	0.93	6.10	2.80	1.31	0.05	2.09	-0.32	36.86	12.05	78.89	36.25	15.71	0.55	25.12	-3.78	89.14	31.03	657.07	145.5	145.75	136.74	228.84	6550	2932.4	1.57	7552	0.99952915	4806.3	0.737	0.85	0.85	167.32	215.72	-0.04	0.77	-2.30	-10.71	-0.62	-0.18	0.82	1.30	-0.53	5.90	-25.84	-138.52	8.87	-2.54	11.80	19.36	216.63	302.08	188.04	324.35	355.4	355.44	304.93	403.40	1093.1	1.13	13312	----	0.99710884	11898.5	0.717	0.96	0.96	----	0.550	0.194	0.75	Yes	0.543	0.118	0.67	Yes
	L_8-L_9	185.35	-153.68	-0.33	2.44	1.89	6.13	-0.36	0.40	0.76	-0.39	-79.35	-4.36	53.57	8.39	-11.44	228.34	-139.52	272.75	-371.72	144.9	144.85	129.09	152.84	5210	2379.8	1.33	6364	0.99949164	4776.1	-0.734	0.31	0.31	189.43	-92.23	-9.55	1.64	34.47	19.64	-189.99	-122.25	0.89	-2.36	20.24	-8.64	269.93	143.99	169.23	29.69	288.5	288.45	246.71	321.99	1086.4	1.12	10626	----	0.99754491	9459.8	0.556	0.38	0.38	0.405	0.455	0.31	Yes	0.460	0.058	0.52	Yes
	L_9-L_{10}	164.35	-164.49	2.94	1.65	-1.23	-5.53	0.70	0.32	0.30	-1.05	38.00	21.37	-15.90	-71.56	8.40	3.86	3.59	-12.82	299.99	-167.52	179.20	-368.88	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.486	0.41	0.41	135.95	67.91	-1.09	-0.45	1.86	-11.36	-0.03	-0.13	-0.77	1.20	-14.15	-5.82	-24.08	-148.20	-0.40	-1.91	-11.07	17.18	-297.40	75.15	-124.56	-229.01	158.2	158.16	151.51	173.24	694.3	1.10	5717	----	0.99738763	5208.8	0.324	0.42	0.42	0.350	0.169	0.52	Yes	0.270	0.110	0.33	Yes
	L_{10}-L_{11}	179.34	-221.21	-1.26	3.25	0.42	0.26	0.16	-0.16	-2.49	1.83	28.00	63.98	-3.56	3.13	1.35	-15.12	287.34	-285.88	294.90	-330.33	52.6	-529.56	83.6	83.68	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	0.160	0.38	0.38	74.10	-12.73	0.74	-0.74	-0.74	0.37	-0.05	-0.04	0.31	-0.74	2.19	-0.57	-8.91	34.77	-0.73	-0.92	-22.07	-11.47	111.83	-52.76	-182.79	233.2	319.34	144.53	172.24	694.3	1.10	5717	----	0.99738526	5208.8	-0.324	0.47	0.47	0.350	0.189	0.52	Yes	0.270	0.110	0.33	Yes
	L_{11}-L_{12}	-57.28	-170.48	2.14	1.07	-4.97	-6.49	0.43	0.20	-0.57	-0.97	-27.69	13.83	-84.23	-64.24	-83.94	5.15	2.41	-6.79	-11.64	-147.1	-191.57	213.65	-603.50	130.1	-130.08	-121.10	-170.72	388.5	1793.2	1.31	3434	0.99952915	5318.6	0.529	0.81	0.81	96.77	102.89	-0.54	-0.24	-0.60	-12.93	0.00	-0.04	-1.11	1.63	-3.04	-7.78	-167.31	-0.04	-0.59	-15.89	14.84	141.00	128.47	-142.65	227.47	426.3	1086.4	1.12	8305	----	0.99789969	7679.8	-0.802	0.28	0.28	0.333	0.088	0.64	Yes	0.333	0.088	0.64	Yes
	L_{12}-L_{13}	70.09	-469.84	1.65	1.47	-1.85	-14.81	0.35	0.23	-2.28	21.25	19.06	-23.87	-191.55	4.18	2.75	-5.44	-27.35	-137.37	-569.49	39.40	-1025.62	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99901006	5318.6	-0.038	0.58	0.58	106.42	42.42	0.14	-0.54	-16.90	0.33	0.05	-0.06	1.76	-1.93	1.76	-1.01	-218.71	-5.44	-0.68	1.19	25.56	-15.04	142.16	37.35	-335.53	53.50	321.7	321.70	279.89	363.71	1221.7	1.13	12002	----	0.99741170	10568.7	-0.159	0.54	0.54	0.533	0.169	0.77	Yes	0.345	0.104	0.45	Yes
	L_{13}-L_{14}	-488.80	-137.87	0.58	0.19	-4.18	-1.67	-0.78	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	-272.90	-364.23	6.56	1.00	-6.39	-9.44	0.00	0.00	1.30	-1.07	7.27	12.93	-92.65	-122.15	0.00	0.00	15.56	-12.86	-339.42	-432.49	-533.85	-725.16	179.7	179.69	162.41	219.93	6087	2613.8	1.35	7258	0.99901006	5524.6	-0.156	0.52	0.52	0.00	1.36	-1.07	17.92	-13.73	0.00	0.00	0.00	0.00	0.00	-15.05	21.69	18.50	302.49	-29.42	342.42	1154.2	1.12	11729	----	0.99747442	9968.6	0.911	0.99	0.99	0.488	0.114	0.57	Yes	0.293	0.077	0.37	Yes
	L_{15}-L_{16}	-389.86	-47.21	-0.22	1.87	-13.56	-0.51	-2.21	0.10	-57.69	-24.16	-51.51	-45.44	0.00	0.00	0.00	0.00	-14.54	-2.27	-653.26	113.71	-516.42	-37.08	103.9	103.89	138.16	258.43	7900	3393.7	1.57	9802	0.99952915	6241.1	-0.334	0.50	0.50	113.05	71.50	5.32	3.15	-2.03	-10.38	0.00	-0.05	2.19	-15.05	21.69	18.50	302.49	-29.42	342.42	1154.2	1.12	11729	----	0.99747442	9968.6	0.911	0.99	0.99	0.488	0.114	0.57	Yes	0.293	0.077	0.37	Yes
	L_{16}-L_{17}	-202.42	-20.75	-0.77	1.48	-2.16	-1.76	-0.96	0.27	0.06	-0.07	-35.81	19.12	-27.97	-22.71	-11.52	3.29	0.66	-0.88	-340.74	68.41	-323.75	-22.23	121.1	121.08	112.11	157.22	3591	1640.0	1.30	4668	0.99904048	3891.8	-0.201	0.52	0.52	0.00	0.88	-1.31	-21.30	-24.65	13.00	-11.19	-0.22	0.03	90.40	-141.43	-83.33	-192.01	213.3	213.34	184.04	236.66	908.1	1.11	7813	----	0.99737381	7024.3	0.434	0.77	0.77	0.405	0.090	0.50	Yes	0.259	0.055	0.32	Yes
	L_{17}-L_{18}	-240.36	-179.75	-0.20	-0.41	-1.50	-0.57	0.06	-0.06	-9.27	-1.11	-2.68	-6.35	-1.13	6.85	0.73	-0.71	-0.27	-468.89	302.52	-314.41	-324.62	83.6	83.68	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34	0.00	-128.40	-114.23	3.92	-0.68	-0.37	-3.97	-1.25	0.08	-0.81	-17.08	-14.23	0.39	0.28	0.46	-0.37	12.13	-1.03	107.48	-140.13	626.8	1.10	4822	----	0.99810102	4383.9	0.244	0.89	0.89	0.489	0.109	0.59	Yes
	L_{18}-L_{19}	-190.79	100.10	-3.71	2.50	0.37	-0.28	-1.21	0.90	0.06	-0.06	-48.05	32.33	-4.72	-3.67	-14.53	10.82	0.74	-0.71	-370.17	250.01	-239.15	-255.15	83.6	83.68	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.569	0.37	0.37	0.00	-352.15	208.27	0.17	-0.37	-0.20	-2.30	-0.52	-0.78	-0.17	13.14	2.95	0.46	0.10	147.36	33.00	141.84	142.25	133.1	133.11	119.24	146.13	626.8	1.10	4822	----	0.99800998	4383.9	0.224	0.89	0.89	0.489	0.109	0.59	Yes
	L_{19}-L_{20}	26.57	-260.07	-0.42	0.90	2.76	-7.73	-0.06	0.13	-0.35	-1.08	-5.33	-11.43	35.25	-98.81	-9.70	1.56	4.19	-12.92	23.00	-313.31	98.63	-147.03	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.073	0.57	0.57	22.46	78.18	0.03	0.12	-3.59	-12.47	0.00	0.01	0.23	0.80	0.43	1.48	-45.85	-159.26	0.04	0.17	3.28	11.39	30.14	104.66	-39.98	-211.09	167.9	167.91	155.45	184.50	1098.1	1.10	6089	----	0.99834345	5531.9	0.189	0.68	0.68	----	0.329	0.185	0.51	Yes	0.192	0.118	0.31	Yes
	L_{20}-L_{21}	201.83	-347.02	1.71	0.17	-0.45	-2.27	-0.49	0.17	-0.45	-0.27	-40.46	0.00	-14.36	0.00	-5.36	-15.25	261.81	-83.38	59.34	-15.25	261.81	-83.38	83.6	83.68	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.430	0.43	0.43	69.18	-52.82	-0.21	2.45	1.06	-4.87	-0.01	0.03	-0.11	0.44	-0.32	1.47	-6.44	-44.64	0.11	-0.46	1.86	7.66	48.34	177.77	-43.22	-380.94	128.3	128.29	121.83	141.18	626.8	1.10	4659	----	0.99806542	4225.3	0.154	0.66	0.68	0.68	0.001	0.104	0.11	Yes	0.001	0.062	0.07	Yes
	L_{21}-L_{22}	7.20	-277.30	-0.69	-1.13	-2.09	-8.29	-0.13	0.17	-0.18	-8.82	-14.41	-26.68	-105.93	-1.60	2.04	2.78	-14.13	-9.74	-329.26	-48.44	-590.00	162.5	162.51	151.98	209.67	4946	2152.2	1.29	6919	0.99952915	5318.6	-0.062	0.82	0.82	0.00	-55.27	-127.02	-0.03	-0.13	2.70	-10.40	-0.05	-0.47	0.98	-2.41	-1.64	-38.47	-126.50	-0.37	-0.57	13.97	-72.73	161.58	2.84	-108.96	258.9	258.92	218.75	284.83	1462.6	1.10	9399	----	0.99819159	8626.6	-0.450	0.32	0.32	0.408	0.308	0.361	0.37	Yes	0.308	0.361	0.37	Yes
	L_{22}-L_{23}	36.00	-479.17	1.63	0.26	-3.21	-12.22	-0.22	0.24	-0.31	-1.52	-24.84	-39.31	-182.34	-2.76	3.51	4.79	-24.32	-16.77	-567.01	83.74	-1016.04	279.8	279.84	261.84	361.13	8519	3707.1	1.57	11452	0.99900394	8222.2	0.724	0.89	0.89	119.37	-95.79	176.70	1.26	-4.45	-3.44	4.76	0.04	-0.71	1.51	-3.72	-2.53	-59.47	-195.50	-0.57	-0.88	21.58	-112.34	249.67	3.99	-168.31	399.8	399.85	337.36	439.63	1844.2	1.09	14743	----	0.99771127	14648.8	0.374	0.99	0.99	----	0.541	0.257	0.8	Yes	0.536	0.185	0.73	Yes
	L_{23}-L_{24}	306.67	-83.83	2.14	0.13	-7.85	0.00	-0.55	0.06	-1.29	0.00	-61.67	-21.96	-224.39	0.00	-14.96	0.00	-0.68	0.00	-1016.03	0.00	-1016.03	0.00	279.8	279.84	261.84	361.13	8519	3707.1	1.57	11452	0.99900394	8222.2	0.724	0.89	0.89	119.01	-129.39	0.00	-0.68	0.00	-1.29

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spreadsheet
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.00	DL Factor:	1.00
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

(Case I considered in Max. Tension/Compression Load)

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Min) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{comb}
Structure 1	U_0–L_1	-15.70	54.51	3.43	3.68	0.51	-0.74	-0.04	0.43	0.03	-0.13	-45.77	49.15	4.09	-0.86	-0.48	5.10	0.34	-1.55	-119.58	177.36	-11.55	49.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.674	0.33	0.33
	U_1–L_1	-27.61	29.28	-7.74	2.72	0.98	-0.90	-0.57	0.52	0.20	-0.18	-36.54	36.36	13.13	-12.05	-6.82	6.19	2.40	-2.14	-115.06	116.86	-10.94	37.41	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.985	0.21	0.21
	U_1–L_2	-5.35	5.24	1.83	2.18	0.91	-1.06	-0.26	0.35	0.22	-0.25	-24.07	21.55	12.74	-14.17	-3.51	4.29	2.38	-2.75	-41.83	58.38	37.01	-37.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.742	0.32	0.32
	U_2–L_2	40.61	-41.50	-0.96	1.16	1.28	-1.21	-0.06	0.10	0.17	-0.21	-12.76	15.50	17.10	-16.15	-0.70	1.25	1.99	-2.46	25.15	-20.37	89.85	-88.94	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.990	0.20	0.20
	U_2–L_3	56.81	-57.80	-3.90	3.33	1.60	-1.82	-0.13	0.30	0.31	-0.44	-22.08	21.76	0.00	0.00	0.00	0.00	62.50	-62.50	-62.50	62.50	-42.93	42.93	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.20	0.20
	U_3–L_3	64.44	-72.22	-0.11	0.18	1.82	-2.11	0.00	0.00	0.42	-0.47	-1.50	2.40	24.34	-28.15	0.00	0.00	0.02	-0.65	-80.53	-68.65	136.51	-154.88	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.881	0.25	0.25
	U_3–L_4	60.40	-64.15	-0.42	0.42	1.71	-2.01	0.00	0.00	0.48	-0.50	-4.22	4.76	18.52	-20.96	0.00	0.00	0.06	-0.74	-64.89	-47.53	114.85	-129.74	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.983	0.21	0.21
	U_4–L_4	109.00	-121.35	-0.79	0.85	2.39	-2.43	0.00	0.00	0.90	-0.96	-10.68	11.32	31.88	-32.40	0.00	0.00	0.00	0.90	-0.79	-0.76	118.78	-133.24	210.77	-227.95	18.5	18.45	18.36	30.78	4	1020.9	1.67	1016	1.5	913.3	-0.925	0.23	0.23
	U_4–L_5	-42.62	47.12	-3.58	4.30	2.67	-3.43	-0.77	0.93	0.77	-0.93	-47.81	54.80	38.28	-45.88	-9.29	11.14	9.24	-11.11	-159.00	185.75	-27.53	58.15	107.1	107.13	107.11	162.71	26	5302.9	1.52	5369	1.5	5302.9	-0.982	0.26	0.26
	U_5–L_5	-181.51	205.10	-3.67	3.98	0.08	-0.21	-0.94	1.08	0.00	0.00	-27.48	51.47	0.89	-2.67	-11.24	12.70	0.00	0.00	-338.85	378.14	-233.61	385.16	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.896	0.24	0.24
	U_5–L_6	-123.92	126.16	-2.87	3.19	-0.06	-0.29	-0.61	0.71	-0.04	-0.05	-37.12	41.21	-0.82	-3.71	-7.30	8.52	-0.44	-0.58	-233.27	244.81	-162.86	155.96	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.953	0.22	0.22
	U_6–L_6	-127.70	170.40	-2.07	3.64	-0.02	-0.07	-0.68	0.85	0.00	0.00	-39.73	51.67	-0.29	-1.71	-0.84	-0.18	0.00	0.00	-252.10	329.30	-166.46	219.78	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.799	0.29	0.29
	U_6–L_7	-106.29	107.56	-2.30	2.50	0.12	-0.16	-0.50	0.55	0.00	0.00	-29.77	32.38	1.51	-0.65	-6.18	6.60	0.00	0.00	-202.68	209.99	-134.90	138.42	21.1	21.09	21.09	35.46	3	1137.6	1.68	1170	1.5	1044.0	-0.965	0.21	0.21
	U_7–L_7	-66.48	79.89	-2.12	2.27	0.33	-0.28	-0.35	0.40	0.00	0.00	-27.44	29.42	4.20	-3.58	-4.24	4.82	0.00	0.00	-140.88	167.60	-77.31	96.09	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.870	0.25	0.25
	U_8–L_8	-31.84	38.75	-1.76	1.93	0.15	0.00	-0.17	0.19	0.00	0.00	-13.27	14.24	0.00	0.00	0.00	0.00	0.00	0.00	-67.94	81.11	-37.37	46.58	17.2	17.24	17.24	26.54	2	751.9	1.54	782	1.5	763.3	-0.877	0.25	0.25
	U_8–L_9	17.16	-23.69	-0.74	0.74	2.19	-2.31	0.00	0.00	-0.21	0.27	-0.30	-9.51	9.63	28.32	-29.84	-1.20	-1.31	3.18	-3.58	11.75	-9.93	83.68	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.977	0.21	0.21
	U_9–L_9	60.40	-64.15	-0.42	0.42	1.71	-2.01	0.00	0.00	0.48	-0.50	-4.22	4.76	18.52	-20.96	0.00	0.00	0.06	-0.74	-64.89	-47.53	114.85	-129.74	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.983	0.21	0.21
	U_9–L_{10}	74.44	-85.11	-0.36	0.37	2.17	-2.25	-0.06	0.06	0.49	-0.46	-4.71	4.80	28.09	-29.09	-0.72	0.73	5.15	-5.53	86.57	-100.24	157.63	-173.66	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.908	0.24	0.24
	U_{10}–L_{10}	-167.77	162.63	-3.40	3.60	-0.08	0.08	0.83	-0.87	0.00	0.00	-45.28	46.94	-0.07	1.00	9.50	-10.42	0.00	0.00	-297.54	302.21	-312.28	313.77	35.5	35.52	35.09	55.09	15	1157.1	1.65	1766	1.5	1737.0	-0.970	0.21	0.21
	U_{10}–L_{11}	164.37	-173.76	0.43	0.41	3.42	-3.48	-0.07	0.07	0.91	-0.96	-5.55	5.33	44.21	-44.96	-0.85	0.83	10.97	-11.39	200.66	-214.34	309.48	-323.31	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.997	0.22	0.22
	U_{11}–L_{11}	-194.92	-235.55	-0.29	0.37	2.79	-3.30	-0.06	0.07	1.06	-1.17	-3.69	4.80	36.15	-43.51	-0.77	0.88	12.73	-14.04	245.41	-295.82	331.73	-400.49	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.828	0.27	0.27
	U_{11}–L_{12}	113.48	204.38	-4.53	5.05	0.38	-0.52	-0.04	0.11	-0.29	0.72	-0.94	1.24	-3.00	8.63	0.46	-1.25	-298.82	431.43	102.97	75.41	46.72	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.859	0.23	0.23
	U_{12}–L_{12}	-201.32	204.79	-4.49	4.99	0.92	-0.87	0.91	0.88	0.15	-0.14	-37.38	58.59	11.69	-11.54	-10.88	10.50	1.81	-1.68	-385.98	392.18	-298.36	242.09	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-1.000	0.21	0.21
	U_{13}–L_{13}	-159.92	159.92	-4.41	4.43	0.87	-0.87	0.88	0.88	0.14	-0.14	-32.38	32.38	-12.38	12.38	-3.71	3.71	-1.68	1.68	-318.32	318.32	-238.32	238.32	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-1.000	0.21	0.21
	U_{14}–L_{14}	-79.54	88.71	-2.41	2.52	0.61	-0.64	-0.37	0.41	0.10	-0.10	-30.73	32.13	7.84	-8.11	-4.46	4.87	1.18	-1.21	-169.98	184.34	-86.41	97.74	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.919	0.23	0.23
	U_{15}–L_{15}	-47.01	54.58	-2.05	2.09	0.11	-0.11	-0.11	0.11	0.00	0.00	-16.67	16.67	-8.86	-8.83	-2.61	2.61	-1.36	-1.36	-101.58	101.58	-51.14	51.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{15}–L_{16}	-4.04	12.50	-1.82	1.96	0.75	-0.79	-0.17	0.21	0.13	-0.13	-23.19	25.04	9.62	10.64	-2.05	2.50	1.51	-1.60	-66.15	70.51	14.94	-5.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.796	0.28	0.28
	U_{16}–L_{16}	27.52	-27.99	-1.27	1.36	1.32	-1.34	-0.04	0.05	0.10	-0.12	-16.21	17.34	16.81	-17.16	-0.43	0.60	1.22	-1.39	0.65	1.18	72.21	-73.56	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.982	0.21	0.21
	U_{17}–L_{17}	59.94	-69.39	-0.40	0.40	1.50	-1.76	-0.02	0.02	0.45	-0.48	-19.37	20.07	34.66	-37.77	-0.26	0.26	2.77	-3.03	85.30	85.30	-19.39	19.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.977	0.21	0.21
	U_{17}–L_{18}	130.31	141.80	-0.36	0.24	2.85	-3.02	0.00	0.00	0.47	-0.50	-4.57	3.10	36.45	-38.03	0.00	0.00	5.58	-5.94	159.50	-177.61	248.39	-267.83	20.8	20.87	20.87	34.64	1	1037.5	1.67	1143	1.5	1029.6	-0.927	0.23	0.23
	U_{18}–L_{18}	216.58	-221.43	0.00	0.00	4.29	-4.56	0.00	0.00	0.71	-0.75	-2.31	0.00	52.31	-55.66	0.00	0.00	8.41	-8.96	246.30	-283.83	344.16	-373.57	20.8	20.87	20.87	34.64	1	1037.5	1.67	1143	1.5	1029.6	-0.997	0.23	0.23
	U_{19}–L_{19}	193.18	-200.19	-0.25	0.37	3.54	-3.72	0.00	0.00	0.67	-0.68	-3.18	4.68	45.25	-47.52	0.00	0.00	8.02	-8.10	244.23	-250.09	349.18	-363.20	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.961	0.22	0.22
	U_{20}–L_{20}	194.78	-194.55	-0.45	0.55	3.39	-3.46	0.00	0.00	0.65	-0.65	-5.79	7.05	43.36	-44.23	0.00	0.00	7.81	-7.82	240.67	-237.63	347.16	-348.75	43.0	43.01	43.24	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.999	0.20	0.20
	U_{21}–L_{21}	177.53	-177.02	-0.75	0.79	3.09	-3.17	0.00	0.00	0.59	-0.59	-8.46	9.24	39.57	-40.53	0.00	0.00	7.16	-7.16	209.57	-209.57	302.53	-302.53	43.0	43.01	43.24	68.66	14	1479.6	1.60	2366	1.5	2129.0	-1.000	0.20	0.20
	U_{22}–L_{22}	231.65	-230.62	-1.25	1.26	3.12	-2.95	0.00	0.00	0.77	-0.77	-16.00	15.10	39.85	-37.64	0.00	0.00	9.20	-8.19	266.49	-264.93	387.49	-381.36	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.984	0.21	0.21
	U_{23}–L_{23}	29.62	-29.62	-0.96	0.96	1.23	-1.23	0.00	0.00	0.35	-0.35	-43.99	43.99	-41.79	41.79	-10.46	10.46	-1.02	1.02	-116.12	116.12	-72.58	72.58	39.2	39.17	39.11	112.72	14	1392.6	1.62	2090	1.5	1938.9	-0.960	0.22	0.22
	U_{24}–L_{24}	-220.23	219.22	-4.74	4.43	0.37	-0.46	-0.83	0.81	0.00	0.00	-59.88	55.98	4.63	-0.76	-9.52	9.76	0.00	0.00	-416.04	406.28	276.26	272.52	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.937	0.21	0.21
	U_{25}–L_{25}	309.23	-309.23	-4.52	4.52	0.60	-0.60	-0.77	0.77	0.00	0.00	-60.58	60.58	-6.97	6.97	-8.29	8.29	0.00	0.00	-409.60	409.60	-274.61	274.61	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.997	0.21	0.21
	U_{26}–L_{26}	-182.78	181.59	-4.77	4.80	0.67	-0.64	-0.77	0.78	0.07	0.07	-0.08	-60.18	60.62	8.48	-8.11	-8.29	9.34	0.80	-0.98	-367.99	367.42	-219.21	218.80	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.999	0.20	0.20
	U_{27}–L_{27}	-159.39	160.90	-4.39	4.72	0.81	-0.81	-0.74	0.76	0.07	0.07	-0.09	-55.48	59.63	10.24	-10.26	-8.64	9.07	0.58	-1.10	-327.35	342.26	-184.97	190.82	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.969	0.21	0.21
	U_{28}–L_{28}	-89.51	63.36	-2.12	2.20	0.62	-0.62	-0.34	0.35	0.00	0.00	-26.77	27.81	7.76	-7.83	-4.02	4.24	0.02	-0.12	-135.36	142.63	-60.54	65.41	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.949	0.22	0.22
	U_{29}–L_{29}	37.62	-37.62	-0.74	0.74	1.23	-1.23	0.00	0.00	0.35	-0.35	-13.97	13.97	-7.83	7.83	-2.61	2.61	-1.02	1.02	-93.77	93.77	-51.14	51.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{30}–L_{30}	4.56	-5.01	-0.99	1.09	1.24	-1.34	-0.07	0.09	0.13	-0.14	-12.47	13.72	15.71	-16.93	-0.89	1.06	1.52	-1.73	-15.78	17.91	39.96	-43.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.977	0.21	0.21
	U_{31}–L_{31}	28.39	-55.09	-0.74	0.63	2.67	-2.87	-0.06	0.06	0.42	-0.45	-29.25	31.11	2.47	-3.91	-10.73	11.91	0.00	0.00	-43.87	-91.71	73.03	-153.36	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.942	0.23	0.23
	U_{32}–L_{32}	70.77	-74.69	-0.70	0.70	2.34	-2.40	-0.05	0.05	0.40	-0.41	-8.84	8.80	23.82	-24.31	-0.68	0.68	4.75	-4.93	72.85	-77.24	155.96	-161.81	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.963	0.21	0.21
	U_{33}–L_{33}	104.65	-105.00	-0.66	0.63	2.93	-2.87	-0.06	0.06	0.52	-0.51	-8.32	8.00	36.97	-36.23	-0.85	0.76	6.19	-6.12	-118.02	-119.16	216.14	-215.01	18.7	18.71	18.61	31.48	8	970.0	1.68	1539	1.5	926.1	-0.995	0.20	0.20
	U_{34}–L_{34}	139.53	-139.53	-0.79	0.79	2.99	-2.99	-0.07	0.07	0.66	-0.66	-10.72	10.72	46.91	-46.91	-1.08	1.08	7.85	-7.85	158.72	-158.72	275.28	-275.28	18.7	18.71	18.61	31.48	8	970.0	1.68	1539	1.5	926.1	-1.000	0.20	0.20
	U_{35}–L_{35}	189.58	-191.05	-0.66	0.64	4.33	-4.36	-0.06	0.06	0.80	-0.81	-8.28	8.04	54.67	-55.01	-0.72	0.65	9.58	-9.77	228.51	-230.94	364.90	-367.55	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.993	0.20	0.20
	U_{36}–L_{36}	153.03	-157.73	-0.77	0.77	3.89	-3.89	-0.07	0.07	0.77	-0.77	-9.74	9.74	49.72	-49.72	-0.98	0.98	8.56	-8.56	168.45	-173.69	294.61	-294.61	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.989	0.20	0.20
	U_{37}–L_{37}	207.01	-210.59	-1.32	1.33	3.43	-3.20	0.00	0.00	0.81	-0.81	-16.72	16.82	43.33	-40.38	0.00	0.00	9.72	-8.71	232.89	-237.33	362.99	-361.24	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.995	0.20	0.20
	U_{38}–L_{38}	44.02	-58.92	-1.63	1.63	1.63	-1.63	-0.03	0.03	0.43	-0.43	-38.98	38.98	-3.84	3.84	-3.84	3.84	-1.68	1.68	-112.74	112.74	-112.60	112.60	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.946	0.22	0.22
	U_{39}–L_{39}	-251.15	245.11	-4.08	3.87	0.42	-0.42	-0.82	0.81	0.00	0.00	-52.13	49.50	6.40	-6.37	-9.83	9.68	0.00	0.00	-439.44	425.88	-314.78	307.01	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.969	0.21	0.21
	U_{40}–L_{40}	-185.39	178.08	-3.72	3.75	0.36	-0.65	-0.66	0.69	0.00	0.00	-47.49	47.95	4.65	-8.30	-7.94	8.27	0.56	-1.25	-343.90	335.40	-230.93	213.51	43.2	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5	2140.4	-0.975	0.21	0.21
	U_{41}–L_{41}	-44.02	58.92	-1.63	1.63	1.63	-1.63	-0.03	0.03	0.43	-0.43	-38.98	38.98	-3.84	3.84	-3.84	3.84	-1.68	1.68	-112.74	112.74	-112.60	112.60	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.946	0.22	0.22
	U_{42}–L_{42}	-251.15	245.11	-4.08	3.87	0.42	-0.42	-0.82	0.81	0.00	0.00	-52.13	49.50	6.40	-6.37	-9.83	9.68	0.00	0.00	-439.44	425.88	-314.78	307.01	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.969	0.21	0.21
	U_{43}–L_{43}	-185.39	178.08	-3.72	3.75	0.36	-0.65	-0.66	0.69	0.00	0.00	-47.49	47.95	4.65	-8.30	-7.94	8.27	0.56	-1.25	-343.90	335.40	-230.93	213.51	43.2	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5	2140.4	-0.975	0.21	0.21
	U_{44}–L_{44}	-185.34	192.19	-3.49	3.78	-0.03	-0.13	-0.64	0.64	0.00	0.00	-44.63	48.27	-0.43	-1.65	-7.63	7.72	0.00	0.00	-337.63	354.43	-241.88	246.28	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.953	0.22	0.22
	U_{45}–L_{45}	-185.39	178.08	-3.72	3.75	0.36	-0.65	-0.66	0.69	0.00	0.00	-47.49	47.95	4.65	-8.30	-7.94	8.27	0.56	-1.25	-343.90	335.40	-230.93	213.51	43.2	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5	2140.4	-0.975	0.21	0.21
	U_{46}–L_{46}	-116.39	129.36	-2.79	2.90	0.26	-0.18	-0.42	0.45	0.00	0.00	-35.11	37.06	3.37	-2.31	-8.99	9.40	0.00	0.00	-227.39	248.47	-144.00	158.62	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.929	0.23	0.23
	U_{47}–L_{47}	-52.79	62.48	-1.97	1.97	0.53	-0.56	-0.16	0.22	0.00	0.00	-17.48	20.03	6.73	-7.45	-2.16	2.58	0.00	0.00	-106.50	124.63	-57.69	69.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.895	0.26	0.26
	U_{48}–L_{48}	-19.17	20.05	-1.34	1.34	0.22	-0.22	-0.25	0.25	0.00	0.00	-9.97	10.31	20.48	-21.72	-1.67	1.73	2.66	-3.02	2.89	10.68	79.68	-91.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.866	0.25	0.25
	U_{49}–L_{49}	18.83	-25.93	-0.78	0.81	1.99	-2.12	-0.14	0.14	0.22	-0.25	-28.47	30.27	12.98	-14.27	-3.82	4.29	1.98	-2.33	-28.47	58.61	38.12	-38.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.977	0.21	0.21
	U_{50}–L_{50}	95.02	-96.90	-0.59	0.60	2.29	-2.35	-0.10	0.10	0.37	-0.40	-7.54	7.63	29.25	-30.05	-1.16	1.16	4.48	-4.75	100.70	-109.45	180.39	-191.98	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.944	0.22	0.22
	U_{51}–L_{51}	177.21	-183.34	-0.91	0.91	2.74	-2.74	-0.08	0.08	0.61	-0.61	-9.79	9.79	45.39	-45.39	-1.25	1.25	7.19	-7.19	202.02	-202.02	349.72	-349.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.977	0.21	0.21
	U_{52}–L_{52}	189.59	-202.30	-0.72	0.70	3.51	-3.56	-0.12	0.11	0.78	-0.81	-9.24	8.97	44.88	-45.29	-1.43	1.34	9.40	-9.72	-226.45	-243.55	343.72	-361.12	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.952	0.22	0.22
	U_{53}–L_{53}	214.89	-210.10	-0.44	0.64	2.89	-3.54	-0.06	0.06	0.92	-0.93	-5.56	5.20	36.69	-45.28	-0.67	1.15	8.59	-11.12	-267.32	-333.35	359.28	-449.23	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.800	0.28	0.28
	U_{54}–L_{54}	109.52	109.52	-3.45	3.45	0

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	3.65	-1.42	-1.72	0.87	0.06	-0.13	0.15	0.01	0.03	-0.02
	U_1-L_1	-11.48	-3.33	-8.81	0.32	-0.41	-0.24	0.25	0.07	0.08	-0.04
	U_1-L_2	-0.03	-11.78	-3.38	-8.50	-0.46	0.00	-0.04	-0.26	-0.15	0.06
	U_2-L_2	9.81	-15.01	0.13	0.11	-0.29	-0.74	0.08	0.01	-0.08	-0.12
	U_2-L_3	-16.21	25.06	0.19	0.19	-0.27	0.03	0.12	-0.17	-0.01	2.49
	U_3-L_3	-34.06	79.68	1.64	1.38	-0.30	-0.09	-0.28	0.44	0.00	-0.01
	U_3-L_4	-71.10	82.69	-2.05	1.57	0.01	-0.27	-0.39	0.14	0.01	-0.45
	U_4-L_4	-1.39	103.42	-0.89	1.74	0.33	-0.58	-0.09	0.65	0.00	0.00
	U_4-L_5	-12.27	139.07	-0.94	2.38	-0.13	-0.11	0.01	0.71	0.00	-0.01
	U_5-L_5	-100.92	90.29	-1.68	1.55	0.11	-0.02	-0.50	0.51	0.00	-0.03
	U_5-L_6	-73.43	69.78	-1.72	1.18	-0.67	-0.05	-0.31	0.35	0.00	0.00
	U_6-L_6	-82.32	52.89	-1.70	0.82	-0.39	-0.23	0.00	0.23	0.00	0.00
	U_6-L_7	-69.90	47.85	-1.39	1.16	-0.25	-0.30	-0.31	0.21	0.00	0.00
	U_7-L_7	-27.40	6.37	-0.67	0.35	0.04	-0.51	-0.03	0.05	-0.12	-0.02
	U_7-L_8	-0.38	-32.72	-0.01	-0.65	0.05	0.12	-0.02	-0.60	-0.49	0.04
	U_8-L_8	-31.05	12.71	-1.13	0.88	0.21	-0.33	0.19	0.11	0.05	-0.04
	U_8-L_9	-46.66	27.26	-1.30	0.53	0.13	-0.19	0.20	0.03	0.05	-0.07
	U_9-L_9	-118.88	85.32	-2.68	2.08	0.35	-0.33	-0.55	0.42	0.06	-0.05
	U_9-L_{10}	-118.21	87.78	-2.48	1.91	0.34	-0.34	-0.54	0.44	0.06	-0.05
	U_{10}-L_{10}	-146.00	120.15	-2.29	2.05	0.19	-0.29	-0.77	0.62	0.04	-0.04
	U_{10}-L_{11}	-86.84	116.71	-3.66	2.98	0.22	-0.43	-0.13	0.38	0.01	-0.06
	U_{11}-L_{11}	-134.13	114.46	-3.22	2.92	0.22	-0.69	-0.33	0.12	0.00	-0.05
	U_{11}-L_{12}	-118.22	92.25	-2.96	2.56	0.73	-0.65	-0.52	0.43	0.11	-0.25
	U_{12}-L_{12}	-84.32	88.89	-2.28	2.42	0.73	-0.47	-0.37	0.43	0.11	-0.25
	U_{12}-L_{13}	-84.32	8.60	-1.13	0.51	0.07	-0.38	-0.18	0.11	0.07	-0.06
	U_{13}-L_{13}	-1.48	-18.42	-0.80	0.05	0.01	-0.06	-0.04	-0.04	-0.11	0.01
	U_{13}-L_{14}	-13.33	-37.03	-0.36	0.18	0.47	-1.00	0.00	0.00	0.04	-0.13
	U_{14}-L_{14}	-66.01	54.01	-1.39	1.12	0.10	-0.46	-0.23	0.17	0.00	0.00
	U_{14}-L_{15}	-133.76	94.01	-3.01	2.19	0.19	-0.42	-0.42	0.33	0.00	-0.06
	U_{15}-L_{15}	-116.16	105.67	-2.30	1.71	0.03	-0.19	-0.36	0.36	0.00	-0.06
	U_{15}-L_{16}	-139.86	104.35	-2.57	2.04	0.13	-0.45	-0.45	0.36	0.00	-0.06
	U_{16}-L_{16}	-131.93	101.03	-2.50	2.35	0.63	-0.39	-0.42	0.51	0.00	-0.01
	U_{16}-L_{17}	-175.29	162.92	-2.67	2.48	1.03	-0.74	-0.56	0.56	0.04	0.02
	U_{17}-L_{17}	-139.38	139.38	-2.37	2.37	0.74	-0.74	-0.45	0.45	0.00	0.00
	U_{17}-L_{18}	-45.28	135.72	-2.32	2.84	0.62	-0.21	-0.36	0.49	0.18	-0.02
	U_{18}-L_{18}	-143.91	76.14	-2.74	1.45	0.29	-0.29	-0.49	0.27	0.00	-0.01
	U_{18}-L_{19}	-112.48	136.84	-3.24	3.01	0.33	-0.40	-0.48	0.55	0.00	-0.01
	U_{19}-L_{19}	-83.68	84.68	-2.63	2.06	0.44	-0.45	-0.37	0.40	0.00	0.00
	U_{19}-L_{20}	-51.76	54.22	-1.63	1.34	-0.09	-0.43	-0.27	0.25	0.00	0.00
	U_{20}-L_{20}	-14.05	25.25	-1.15	0.64	-0.09	-0.29	-0.11	0.11	0.00	0.00
	U_{20}-L_{21}	-14.01	1.02	-0.24	0.42	0.20	-0.79	0.00	0.04	-0.01	-0.02
	U_{21}-L_{21}	18.16	2.24	-0.04	0.04	0.00	-0.06	0.00	0.00	0.00	-0.01
	U_{21}-L_{22}	-32.82	30.90	-1.22	1.05	0.15	-0.39	-0.20	0.17	0.03	-0.03
	U_{22}-L_{22}	-83.93	119.62	-1.71	2.29	0.29	-0.63	-0.10	0.26	0.03	-0.06
	U_{22}-L_{23}	-83.93	100.93	-2.49	2.11	0.44	-0.48	-0.39	0.44	0.03	-0.06
	U_{23}-L_{23}	-98.58	117.15	-2.49	2.31	0.37	-0.45	-0.42	0.49	0.00	-0.06
	U_{23}-L_{24}	-126.11	124.51	-2.52	2.41	0.51	-0.43	-0.43	0.49	0.00	-0.06
	U_{24}-L_{24}	-126.17	124.51	-2.52	2.41	0.02	-0.79	-0.52	0.49	-0.01	-0.01
	U_{24}-L_{25}	-29.24	122.38	-2.30	2.83	0.49	-0.21	-0.36	0.49	0.18	-0.02
	U_{25}-L_{25}	-82.40	185.99	-2.36	3.03	0.64	-0.34	-0.40	0.60	0.00	-0.06
	U_{25}-L_{26}	-118.42	160.32	-2.75	2.56	0.35	-0.37	-0.45	0.52	0.00	-0.06
	U_{26}-L_{26}	-128.98	123.04	-2.65	2.00	-0.12	-0.11	-0.40	0.44	0.00	-0.06
	U_{26}-L_{27}	-128.98	123.04	-2.65	2.00	-0.12	-0.11	-0.40	0.44	0.00	-0.06
	U_{27}-L_{27}	-128.43	95.01	-2.04	1.86	-0.27	-0.44	-0.41	0.35	0.00	0.00
	U_{27}-L_{28}	-63.23	63.23	-1.46	1.46	-0.27	-0.27	-0.27	0.27	0.00	0.00
	U_{28}-L_{28}	8.89	-32.25	-0.54	0.21	0.57	-0.84	0.00	0.00	0.03	-0.12
	U_{28}-L_{29}	-4.65	-13.30	-0.96	0.64	0.47	-0.66	-0.11	0.03	0.07	-0.06
	U_{29}-L_{29}	-43.22	40.48	-1.58	1.26	0.44	-0.38	-0.27	0.19	0.07	-0.07
	U_{29}-L_{30}	-43.22	40.48	-1.58	1.26	0.44	-0.38	-0.27	0.19	0.07	-0.07
	U_{30}-L_{30}	-135.94	107.53	-2.69	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08
	U_{30}-L_{31}	-135.94	107.53	-2.69	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08
	U_{31}-L_{31}	-65.25	88.28	-2.98	3.88	0.13	-0.23	-0.47	0.37	0.00	-0.06
	U_{31}-L_{32}	-138.22	96.74	-3.12	2.35	0.43	-0.36	-0.75	0.56	0.00	-0.05
	U_{32}-L_{32}	-113.16	77.27	-2.64	1.66	0.38	-0.31	-0.66	0.48	0.00	-0.05
	U_{32}-L_{33}	-43.91	24.73	-1.40	1.10	0.30	-0.25	-0.30	0.20	0.00	-0.05
	U_{33}-L_{33}	-2.65	-25.30	-0.51	0.23	0.29	-0.83	0.00	0.00	-0.05	-0.09
	U_{33}-L_{34}	-37.40	53.68	-1.50	1.24	-0.07	-0.29	-0.32	0.23	0.00	-0.05
	U_{34}-L_{34}	-81.44	41.31	-1.88	0.90	-0.82	-0.34	-0.36	0.26	0.00	0.00
	U_{34}-L_{35}	-76.63	76.63	-1.76	1.76	-0.82	-0.82	-0.36	0.36	0.00	0.00
	U_{35}-L_{35}	-84.52	94.91	-1.37	1.49	0.61	-0.24	-0.45	0.52	0.00	-0.05
	U_{35}-L_{36}	-89.38	90.85	-2.14	2.07	0.06	-0.50	-0.57	0.50	-0.42	0.00
	U_{36}-L_{36}	-18.98	22.49	0.15	0.49	-0.62	-0.46	0.04	0.11	-0.18	-0.01
	U_{36}-L_{37}	-4.48	-12.52	-0.70	0.17	0.30	0.00	0.00	0.00	-0.62	-0.91
	U_{37}-L_{37}	-34.24	14.49	-0.67	0.55	0.10	-0.20	0.13	0.07	-0.05	-0.98

YY Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	$I_{t/n}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(pos)}$	Equivalent Mom. Factor $C_{m(neg)}$
Structure 1	U_0-L_1	-45.16	23.20	8.48	-5.57	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7
	U_1-L_1	-42.28	-24.56	13.23	-8.68	24.2	34.64	14.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1-L_2	-42.28	-24.56	13.23	-8.68	24.2	34.64	14.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2-L_2	9.07	9.07	5.04	-5.04	9.3	19.37	19.37	29.87	4	1174.0	1.82	1174	1.5	763.3
	U_2-L_3	-154.31	8.15	0.85	-1.00	1.5	1.53	1.53	2.20	1	1174.0	1.82	1174	1.5	763.3
	U_3-L_3	-192.51	23.27	-0.31	2.83	1.4	1.53	1.53	2.20	1	1174.0	1.82	1174	1.5	763.3
	U_3-L_4	-153.23	-33.31	0.92	1.40	-3.82	-1.85	-1.81	-0.87	0	1174.0	1.82	1174	1.5	763.3
	U_4-L_4	12.34	10.34	-51.05	-24.70	26.84	-12.19	0.00	0.00	0	1174.0	1.82	1174	1.5	763.3
	U_4-L_5	-62.13	-62.13	37.43	5.01	28.12	9.62	0.00	0.00	0	1174.0	1.82	1174	1.5	763.3
	U_5-L_5	-51.86	33.46	37.24	10.72	0.00	0.00	0.00	0.00	0	1174.0	1.82	1174	1.5	763.3
	U_5-L_6	-106.86	-88.50	-212.91	-78.63	22.67	4.36	0.00	0.00	0	1174.0	1.82	1174	1.5	763.3
	U_6-L_6	-102.73	-61.93	-360.14	-110.83	32.04	9.52	0.00	0.00	0	1174.0	1.82	1174	1.5	763.3
	U_6-L_7	-73.17	-49.75	-347.72	-46.36	27.90	9.52	0.00	0.00	0	1174.0	1.82	1174	1.5	763.3
	U_7-L_7	-29.75	-19.65	-3.29	-1.95	-11.50	-3.07	-0.09	-0.07	2.45	0.86	42.61	-25.37	-148.84	-39.76
	U_7-L_8	-20.28	-163.04	0.91	-0.56	10.89	-2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_8-L_8	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_8-L_9	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9-L_9	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9-L_{10}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}-L_{10}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}-L_{11}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}-L_{11}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}-L_{12}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}-L_{12}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}-L_{13}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}-L_{13}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}-L_{14}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}-L_{14}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}-L_{15}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}-L_{15}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}-L_{16}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}-L_{16}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}-L_{17}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}-L_{17}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}-L_{18}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}-L_{18}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}-L_{19}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}-L_{19}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}-L_{20}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}-L_{20}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}-L_{21}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21}-L_{21}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21}-L_{22}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22}-L_{22}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22}-L_{23}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23}-L_{23}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23}-L_{24}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24}-L_{24}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24}-L_{25}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25}-L_{25}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25}-L_{26}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26}-L_{26}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26}-L_{27}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27}-L_{27}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27}-L_{28}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28}-L_{28}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28}-L_{29}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29}-L_{29}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29}-L_{30}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{30}-L_{30}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{30}-L_{31}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{31}-L_{31}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{31}-L_{32}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32}-L_{32}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32}-L_{33}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33}-L_{33}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33}-L_{34}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34}-L_{34}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34}-L_{35}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35}-L_{35}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35}-L_{36}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36}-L_{36}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36}-L_{37}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{37}-L_{37}	-28.91	-28.91	15.41	7.15	-23.31	-4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

M_y Information

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_{yy} (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(pos)}$	Equivalent Mom. Factor $C_{m(neg)}$
Structure 1	U_0-L_1	-171.35	-84.95	23.11	23.66	-16.17	-8.33	8.12	7.42	4.81	69	-220.50	40.32	14.83	100.5
	U_1-L_1	-461.26	-225.00	94.0	93.99	93.99	93.99	93.99	93.99	1.13	3454	166	0.94257797	3126.1	0.458
	U_1-L_2	-461.26	-225.00	94.0	93.99	93.99	93.99	93.99	93.99	1.13	3454	166	0.94257797	2947.3	0.414
	U_2-L_2	-206.49	-91.61	3.49	2.35	-15.89	-6.26	0.12	0.19	2.20	58	46.63	31.34	-225.12	-63.62
	U_2-L_3	-154.31	8.15	0.85	-1.00	1.53	1.53	1.53	2.20	1	1174	1.82	1174	1.5	763.3
	U_3-L_3	-192.51	23.27	-0.31	2.83	1.4	1.53	1.53	2.20	1	1174	1.82	1174	1.5	763.3
	U_3-L_4	-153.23	-33.31	0.92	1.40	-3.82	-1.85	-1.81	-0.87	0	1174	1.82	1174	1.5	763.3
	U_4-L_4	-172.46	-79.38	-309.80	-174.82	148.0	147.96	147.96	147.96	1.13	5519	255	0.99994741	4689.9	0.564
	U_4-L_5	-172.46	-79.38	-309.80	-174.82	148.0	147.96	147.96	147.96	1.13	5519	262	0.99948852	4728.8	0.433
	U_5-L_5	-172.46	-79.38	-309.80	-174.82	148.0	147.96	147.96	147.96	1.13	5519	262	0.99948852	4728.8	0.433
	U_5-L_6	-172.46	-79.38	-309.80	-174.82	148.0	147.96	147.96	147.96	1.13	5519	262	0.99948852	4728.8	0.433
	U_6-L_6	-172.46	-79.38	-309.80	-174.82	148.0	147.96	147.96	147.96	1.13	5519	262	0.99948852	4728.8	0.433
	U_6-L_7	-172.46	-79.38	-309.80	-174.82	148.0	147.96	147.96	147.96	1.13	5519

Moment (End) AB Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

			Inventory Loads - HS20 Truck																																	
			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression															
	Vehicle	Pedestrian			Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating				
DL Factor:	1.300	1.300	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass								
LL Factor:	2.167	1.625	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																								
North Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-547.89	-183	69	-87	-864	9	-9	-25	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.247	1.00	Yes	0.739	0.205	0.95	Yes	1.00	**1.93**						
		$U_1 - U_2$	-----	-584.21	-62	38	-163	-736	-7	-34	-45	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1.00	Yes	0.788	0.175	0.97	Yes	1.00	**1.19**						
		$U_2 - U_3$	108.92	-597.26	-131	231	-316	-516	7	26	52	132	0.125	0.145	0.27	Yes	0.084	0.094	0.18	Yes	0.813	0.181	1.00	Yes	0.805	0.123	0.93	Yes	1.00	**1.34**						
		$U_3 - U_4$	304.51	-572.60	58	282	-265	-708	11	35	155	25	0.349	0.195	0.55	Yes	0.240	0.134	0.38	Yes	0.779	0.214	1.00	Yes	0.772	0.168	0.95	Yes	1.00	**1.58**						
		$U_4 - U_5$	430.08	-585.92	164	341	-395	-530	9	-35	34	-186	0.493	0.157	0.66	Yes	0.338	0.108	0.45	Yes	0.797	0.197	1.00	Yes	0.790	0.126	0.92	Yes	1.00	**2.23**						
		$U_5 - U_6$	735.86	-145.62	286	506	-123	-72	-162	-65	157	-214	0.843	0.157	1.00	Yes	0.569	0.102	0.68	Yes	0.198	0.144	0.35	Yes	0.196	0.120	0.32	Yes	1.00	**2.70**						
		$U_6 - U_7$	886.50	-69.43	390	241	-438	-433	-305	-110	398	-291	0.848	0.148	1.00	Yes	0.592	0.102	0.70	Yes	0.079	0.136	0.22	Yes	0.078	0.093	0.18	Yes	1.00	**2.38**						
		$U_7 - U_8$	544.23	-----	-2608	3637	-49	765	672	-429	-435	-300	0.377	0.619	1.00	Yes	0.263	0.422	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**						
		$U_8 - U_9$	494.06	-----	680	16	2766	-2196	-1041	-145	-504	300	0.405	0.592	1.00	Yes	0.277	0.403	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**						
		$U_9 - U_{10}$	706.57	-188.00	246	296	214	-625	-161	14	79	545	0.766	0.228	1.00	Yes	0.519	0.153	0.68	Yes	0.242	0.132	0.38	Yes	0.240	0.140	0.38	Yes	1.00	**2.35**						
		$U_{10} - U_{11}$	267.70	-606.15	320	-77	216	-996	26	94	283	175	0.290	0.269	0.56	Yes	0.193	0.172	0.37	Yes	0.780	0.204	0.99	Yes	0.773	0.223	1.00	Yes	1.00	**1.77**						
		$U_{11} - U_{12}$	-----	-877.88	228	-105	123	-771	102	408	217	588	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.162	1.00	Yes	0.824	0.128	0.96	Yes	1.00	**1.41**						
		$U_{12} - U_{13}$	-----	-1208.42	4	-237	-73	-949	346	208	565	384	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.174	1.00	Yes	0.807	0.131	0.94	Yes	1.00	**1.36**						
		$U_{13} - U_{14}$	-----	-1355.36	-147	-382	-391	-1433	222	177	390	517	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.210	1.00	Yes	0.777	0.158	0.94	Yes	1.00	**1.25**						
		$U_{14} - U_{15}$	-----	-1341.16	-272	-250	-1281	-876	213	31	580	150	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.220	1.00	Yes	0.769	0.141	0.92	Yes	1.00	**1.22**						
		$U_{15} - U_{16}$	-----	-1405.13	-178	-404	-179	-1404	63	51	352	89	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.181	1.00	Yes	0.806	0.155	0.97	Yes	1.00	**1.80**						
		$U_{16} - U_{17}$	-----	-1401.19	-605	-159	-897	-970	382	-67	547	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1.00	Yes	0.803	0.107	0.92	Yes	1.00	**2.15**						
		$U_{17} - U_{18}$	-----	-1122.70	-600	200	-312	-274	437	-2	210	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.103	1.00	Yes	0.878	0.098	0.98	Yes	1.00	**1.74**						
		$U_{18} - U_{19}$	-----	-721.04	-682	52	-695	-297	382	-180	382	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1.00	Yes	0.811	0.140	0.96	Yes	1.00	**1.60**						
		$U_{19} - U_{20}$	-----	-532.48	-1500	1952	-301	-362	262	-817	74	-579	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.236	0.85	Yes	0.599	0.393	1.00	Yes	1.00	**3.66**						
	Structure 2	$U_0 - U_1$	-----	-609.71	-92	-90	466	-1606	3	-71	-85	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.242	0.97	Yes	0.720	0.273	1.00	Yes	1.00	**3.38**						
		$U_1 - U_2$	-----	-827.19	-46	-191	23	-1189	-69	-218	-43	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.187	1.00	Yes	0.798	0.180	0.98	Yes	1.00	**1.75**						
		$U_2 - U_3$	-----	-1174.34	-98	-274	-63	-1469	-27	368	-22	386	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.157	1.00	Yes	0.833	0.150	0.99	Yes	1.00	**1.71**						
		$U_3 - U_4$	-----	-1315.00	-413	-407	-1255	-1597	341	514	393	618	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.239	1.00	Yes	0.749	0.142	0.90	Yes	1.00	**1.45**						
		$U_4 - U_5$	-----	-1479.25	-462	-375	-610	-2042	773	307	356	267	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.229	1.00	Yes	0.759	0.169	0.93	Yes	1.00	**1.46**						
		$U_5 - U_6$	-----	-1566.61	-422	6	-1101	-1256	186	-216	328	453	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.185	1.00	Yes	0.804	0.104	0.91	Yes	1.00	**1.52**						
		$U_6 - U_7$	-----	-1356.61	-287	-106	-1333	-1499	-134	-184	300	157	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.213	1.00	Yes	0.772	0.134	0.91	Yes	1.00	**1.33**						
		$U_7 - U_8$	-----	-1424.83	-141	-104	-717	-1504	-128	-208	186	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.179	1.00	Yes	0.811	0.134	0.95	Yes	1.00	**1.93**						
		$U_8 - U_9$	3.55	-1229.10	-229	191	-914	-927	-122	-214	289	-182	0.002	0.122	0.13	Yes	0.001	0.080	0.09	Yes	0.840	0.154	1.00	Yes	0.834	0.099	0.94	Yes	1.00	**1.91**						
		$U_9 - U_{10}$	145.10	-951.50	-79	341	-1294	-476	-139	-152	253	-70	0.106	0.185	0.30	Yes	0.072	0.125	0.20	Yes	0.826	0.170	1.00	Yes	0.821	0.158	0.98	Yes	1.00	**1.63**						
		$U_{10} - U_{11}$	910.07	-811.89	446	610	-588	-898	-288	-195	269	-357	0.769	0.170	0.94	Yes	0.523	0.111	0.64	Yes	0.812	0.180	1.00	Yes	0.807	0.127	0.94	Yes	1.00	**3.70**						
		$U_{11} - U_{12}$	-----	-729.46	-1909	1162	-1035	-701	810	-130	679	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.163	0.90	Yes	0.725	0.269	1.00	Yes	1.00	**6.86**						
		$U_{12} - U_{13}$	1160.87	-3.28	488	176	-1116	-1250	-434	-373	547	-309	0.784	0.210	1.00	Yes	0.559	0.143	0.71	Yes	0.003	0.255	0.26	Yes	0.003	0.158	0.17	Yes	1.00	**3.25**						
		$U_{13} - U_{14}$	783.05	-----	-2340	5551	-352	1375	-46	-1356	-411	-500	0.385	0.607	1.00	Yes	0.273	0.398	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**						
		$U_{14} - U_{15}$	777.07	-----	1424	280	5651	-3448	-1273	-938	-1051	-42	0.382	0.610	1.00	Yes	0.271	0.400	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**						
		$U_{15} - U_{16}$	1328.09	-----	129	503	145	-1157	-659	-438	-202	689	0.803	0.190	1.00	Yes	0.571	0.129	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**						
		$U_{16} - U_{17}$	1020.25	-32.32	646	308	884	-1524	-208	-26	480	354	0.752	0.242	1.00	Yes	0.500	0.159	0.66	Yes	0.028	0.112	0.15	Yes	0.028	0.192	0.22	Yes	1.00	**2.88**						
		$U_{17} - U_{18}$	718.00	-287.79	454	325	282	-972	2	252	205	749	0.721	0.275	1.00	Yes	0.480	0.181	0.67	Yes	0.342	0.174	0.52	Yes	0.340	0.165	0.51	Yes	1.00	**2.27**						
		$U_{18} - U_{19}$	564.54	-644.20	530	238	-211	-1118	100	117	411	468	0.567	0.258	0.83	Yes	0.372	0.165	0.54	Yes	0.765	0.233	1.00	Yes	0.761	0.190	0.96	Yes	1.00	**2.33**						
		$U_{19} - U_{20}$	315.83	-722.87	316	218	17	-1011	20	13	219	481	0.296	0.227	0.53	Yes	0.196	0.149	0.35	Yes	0.803	0.194	1.00	Yes	0.798	0.162	0.96	Yes	1.00	**1.82**						
		$U_{20} - U_{21}$	72.88	-890.56	-66	110	-160	-992	75	-10	298	269	0.057	0.176	0.24	Yes	0.040	0.114	0.16	Yes	0.819	0.176	1.00	Yes	0.813	0.144	0.96	Yes	1.00	**1.80**						
		$U_{21} - U_{22}$	63.06	-807.53	-44	22	-807	-1132	43	61	152	392	0.049	0.207	0.26	Yes	0.035	0.139	0.18	Yes	0.742	0.254	1.00	Yes	0.737	0.164	0.91	Yes	1.00	**1.46**						
		$U_{22} - U_{23}$	73.90	-822.73	69	-38	-933	-904	58	-2	430	59	0.057	0.182	0.24	Yes	0.041	0.123	0.17	Yes	0.756	0.234	1.00	Yes	0.751	0.135	0.89	Yes	1.00	**1.51**						
		$U_{23} - U_{24}$	233.47	-881.36	-54	203	-278	-1038	-37	-64	256	50	0.181	0.178	0.36	Yes	0.127	0.115	0.25	Yes	0.810	0.182	1.00	Yes	0.804	0.150	0.96	Yes	1.00	**2.15**						
		$U_{24} - U_{25}$	270.73	-715.53	176	269	-966	-542	-57	-86	393	-126	0.254	0.208	0.47	Yes	0.168	0.136	0.31	Yes	0.794	0.204	1.00	Yes	0.789	0.155	0.95	Yes	1.00	**1.66**						
		$U_{25} - U_{26}$	-----	-719.90	-716	692	-238	-841	268	-231	213	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.098	0.96	Yes	0.850	0.143	1.00	Yes	1.00	**3.34**						
		$U_{26} - U_{27}$	-----	-708.87	-818	927	-608	-830	366	-372	398	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.141	0.99	Yes	0.837	0.157	1.00	Yes	1.00	**4.71**						
		$U_{27} - U_{28}$	8.00	-781.42	-1395	1610	-2519	-771	531	-313	972	-9	0.006	0.419	0.43	Yes	0.004	0.276	0.28	Yes	0.682	0.302	0.99	Yes	0.677	0.316	1.00	Yes	1.00	**6.11**						
		$U_{28} - U_{29}$	1122.58	-----	-54	578	337	-2263	116	-671	44	-546	0.679	0.314	1.00	Yes	0.483	0.211	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**						
		$U_{29} - U_{30}$	446.60	-----	-5134	7742	-82	542	664	-874	-240	107	0.220	0.777	1.00	Yes	0.155	0.508	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.49**						
		$U_{30} - U_{31}$	780.72	-----	1094	382	5767	-3689	-1127	-605	-1049	97	0.384	0.611	1.00	Yes	0.272	0.401	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**						
		$U_{31} - U_{32}$	1143.32	-----	40	436	-52	-1159	-401	-206	65	809	0.772	0.223	1.00	Yes	0.550	0.153	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**						
		$U_{32} - U_{33}$	879.83	-257.72	468	268	394	-1299	-84	7	542	479	0.743	0.249	1.00	Yes	0.499	0.166	0.67	Yes	0.258	0.173	0.44	Yes	0.256	0.183	0.44	Yes	1.00	**2.67**						
		$U_{33} - U_{34}$	785.55	-727.24	425	311	72	-1405	-4	240	528	999	0.664	0.320	0.99	Yes	0.452	0.210	0.67	Yes	0.727	0.272	1.00	Yes	0.723	0.198	0.93	Yes	1.00	**3.01**						
		$U_{34} - U_{35}$	345.64	-885.92	345	64	88	-1560	200	164	646	534	0.254	0.260	0.52	Yes	0.172	0.176	0.35	Yes	0.769	0.226	1.00	Yes	0.765	0.190	0.96	Yes	1.00	**1.98**						
		$U_{35} - U_{36}$	132.18	-1181.03	162	-138	-206	-1285	108	92	404	564	0.076	0.183	0.26	Yes	0.053	0.121	0.18	Yes	0.807	0.187	1.00	Yes	0.801	0.137	0.94	Yes	1.00	**1.84**						
		$U_{36} - U_{37}$	-----	-1326.24	-67	29	-1068	-1755	87	-1	382	343	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1.00	Yes	0.755	0.156	0.92	Yes	1.00	**1.70**						
		$U_{37} - U_{38}$	-----	-1356.23	119	-151	-1284	-1589	45	19	363	279	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.216	1.00	Yes	0.772	0.142	0.92	Yes	1.00	**1.74**						
		$U_{38} - U_{39}$	-----	-1534.29	168	-272	-466	-2029	129	-30	543	149	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.203	1.00	Yes	0.788	0.168	0.96	Yes	1.00	**2.14**						
		$U_{39} - U_{40}$	-----	-1438.74	-251	-310	-1895	-1662	51	-9	481	192	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.248	1.00	Yes	0.739	0.157	0.90	Yes	1.00	**1.69**						
		$U_{40} - U_{41}$	-----	-1335.82	-250	-318	-1607	-1423	47	-95	575	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.230	1.00	Yes	0.761	0.143	0.91	Yes	1.00	**1.72**						
		$U_{41} - U_{42}$	-----	-1240.38	-1098	219	-841	-772	392	-24	309	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.107	1.00	Yes	0.880	0.112	1.00	Yes	1.00	**2.45**						
		$U_{42} - U_{43}$	-----	-785.95	-281	82	-1238	-578	-65	-114	387	-270	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.230	1.00	Yes	0.759	0.188	0.95	Yes	1.00	**2.31**						
		$U_{43} - U_{44}$	-----	-589.45	-1705	1769	8	-989	166	-646	29	-843	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.213	0.92	Yes	0.696	0.300	1.00	Yes	1.00	**3.64**						
	Structure 3	$U_0 - U_1$	-----	-639.48	-8	-158	382	-1366	-2	-51	171	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.210	0.94	Yes	0.719	0.275	1.00	Yes	1.00	**3.66**						
		$U_1 - U_2$	-----	-727.32	-33	-140	121	-769	-63	-233	-67	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.166	1.00	Yes	0.818	0.155	0.98	Yes	1.00	**1.59**						
		$U_2 - U_3$	-----	-1049.74	-72	-165	132	-976	-51	334	6	389	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.161	1.00	Yes	0.821	0.159	0.99	Yes	1.00	**1.49**						
		$U_3 - U_4$	-----	-1394.60	-167	-294	-384	-1190	365	573	357	469	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1.00	Yes	0.799	0.131	0.94	Yes	1.00	**1.63**						
		$U_4 - U_5$	-----	-1401.60	-401	-52	-452	-1002	699	234	382	235	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1.00	Yes	0.804	0.110	0.92	Yes	1.00	**1.52**						
		$U_5 - U_6$	-----	-1344.90	-182	-273	-467	-1549	139	-150	315	321	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.213	1.00	Yes	0.771	0.171	0.95	Yes	1.00	**1.36**						
		$U_6 - U_7$	-----	-1440.78	-361	-69	-916	-916	-114	-203	402	29	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.159	1.00	Yes	0.826	0.101	0.93	Yes	1.00	**1.86**						
		$U_7 - U_8$	-----	-1221.94	-135	90	-343	-887	-86	-212	232	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.169	1.00	Yes	0.816	0.122	0.94	Yes	1.00	**2.27**						
		$U_8 - U_9$	63.68	-908.52	-31	292	-420	-533	-80	-174	277	-362	0.051	0.132	0.19	Yes	0.034	0.088	0.13	Yes	0.860	0.136	1.00	Yes	0.852	0.088	0.95	Yes	1.00	**2.15**						
		$U_9 - U_{10}$	440.13	-663.96	45	375	-612	-197	-155	-127	282	-218	0.477	0.183	0.66	Yes	0.318	0.118	0.44	Yes	0.855	0.143	1.00	Yes	0.847	0.137	0.99	Yes	1.00	**2.84**						
		$U_{10} - U_{11}$	-----	-578.53	-455	425	-939	-357	284	-399	676	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.248	1.00	Yes	0.738	0.210	0.95	Yes	1.00	**3.96**						
		$U_{11} - U_{12}$	510.05	-----	-1657	2700	-149	550	198	-999	-392	-385	0.418	0.576	1.00	Yes	0.286	0.392	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**						
		$U_{12} - U_{13}$	957.45	-----	1033	127	1803	-1043	-536	-494	-409	-16	0.663	0.328	1.00	Yes	0.463	0.224	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**						
		$U_{13} - U_{14}$	875.16	-----	232	440	176	-457	-342	-223	-41	414	0.837	0.154	1.00	Yes	0.585	0.106	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**						
		$U_{14} - U_{15}$	648.02	-347.67	426	297	392	-844	-129	-40	292	103	0.743	0.250	1.00	Yes	0.501	0.163	0.67	Yes	0.473	0.126	0.60	Yes	0.469	0.201	0.67	Yes	1.00	**2.09**						
		$U_{15} - U_{16}$	433.10	-577.31	338	236	-99	-696	-69	131	111	452	0.496	0.242	0.74	Yes	0.341	0.165	0.51	Yes	0.786	0.208	1.00	Yes	0.778	0.166	0.95	Yes	1.00	**1.85**						
		$U_{16} - U_{17}$	411.57	-551.55	394	128	-361	-717	76	74	402	149	0.472	0.238	0.72	Yes	0.324	0.163	0.49	Yes	0.750	0.243	1.00	Yes	0.744	0.170	0.92	Yes	1.00	**1.76**						
		$U_{17} - U_{18}$	347.36	-543.72	454	-31	119	-1102	-106	71	267	52	0.398	0.307	0.71	Yes	0.269	0.200	0.47	Yes	0.740	0.238	0.98	Yes	0.733	0.262	1.00	Yes	1.00	**2.47**						
		$U_{18} - U_{19}$	94.87	-515.70	169	-37	-815	-490	-39	31	468	-21	0.109	0.273	0.39	Yes	0.075	0.187	0.27	Yes	0.702	0.296	1.00	Yes	0.695	0.194	0.89	Yes	1.00	**1.53**						
		$U_{19} - U_{20}$	-----	-555.82	-916	1046	-145	-606	337	-482	391	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.114	0.88	Yes	0.750	0.249	1.00	Yes	1.00	**2.69**						

Moment (End) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.218	0.566	0.79	Yes	0.217	0.782	1.00	Yes	1.00	**11.56**
North Truss - Lower Chord	Structure 1	L_0 - L_1			-----	-120.26	-380	207	1584	-2605	-28	-103	141	521	-----	-----	-----	-----	-----	-----	-----	-----	0.218	0.566	0.79	Yes	0.217	0.782	1.00	Yes	1.00	**11.56**
		L_1 - L_2			457.11	-0.57	148	-19	288	-842	-26	-37	-197	-179	0.700	0.295	1.00	Yes	0.427	0.198	0.63	Yes	0.001	0.172	0.18	Yes	0.001	0.253	0.26	Yes	1.00	**1.80**
		L_2 - L_3			693.42	-27.90	-20	22	-633	-728	-33	23	-152	41	0.798	0.200	1.00	Yes	0.462	0.120	0.59	Yes	0.038	0.223	0.27	Yes	0.038	0.176	0.22	Yes	1.00	**1.52**
		L_3 - L_4			639.67	-202.45	102	313	-32	-900	79	72	-262	-156	0.736	0.260	1.00	Yes	0.437	0.167	0.61	Yes	0.277	0.202	0.48	Yes	0.274	0.217	0.50	Yes	1.00	**1.96**
		L_4 - L_5			463.62	-----	-1164	699	-661	-91	-322	50	-276	500	0.600	0.397	1.00	Yes	0.360	0.258	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		L_5 - L_6			-----	-732.89	167	603	-320	18	77	129	127	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.140	1.00	Yes	0.846	0.134	0.98	Yes	1.00	**1.74**
		L_6 - L_7			-----	-1027.94	-766	962	-695	-800	-102	124	111	928	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.156	1.00	Yes	0.827	0.151	0.98	Yes	1.00	**4.25**
		L_7 - L_8			-----	-1191.11	-131	1736	8	588	-10	-173	-131	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.229	1.00	Yes	0.754	0.230	0.99	Yes	1.00	**2.48**
		L_8 - L_9			-----	-1291.43	1238	53	1288	-512	-170	-52	44	359	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1.00	Yes	0.818	0.171	0.99	Yes	1.00	**2.95**
		L_9 - L_{10}			-----	-1069.85	145	138	254	-861	37	139	251	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.070	0.95	Yes	0.861	0.135	1.00	Yes	1.00	**2.95**
		L_{10} - L_{11}			-----	-550.58	522	-8	359	-603	140	47	10	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.076	0.93	Yes	0.839	0.160	1.00	Yes	1.00	**2.04**
		L_{11} - L_{12}			589.20	-216.14	480	-170	234	-818	87	-27	112	-51	0.763	0.236	1.00	Yes	0.458	0.156	0.62	Yes	0.332	0.121	0.46	Yes	0.329	0.217	0.55	Yes	1.00	**1.92**
		L_{12} - L_{13}			1042.64	-----	160	-76	-350	-799	26	35	112	255	0.823	0.171	1.00	Yes	0.526	0.103	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.01**
		L_{13} - L_{14}			1274.78	-----	351	-446	72	-1606	9	-1	240	-20	0.750	0.241	1.00	Yes	0.486	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.71**
		L_{14} - L_{15}			1644.47	-----	-1086	3	-1474	-895	-220	-108	-210	211	0.803	0.193	1.00	Yes	0.522	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		L_{15} - L_{16}			1567.86	-----	-213	-361	-797	-1631	-126	-55	-150	-477	0.766	0.230	1.00	Yes	0.492	0.135	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**
		L_{16} - L_{17}			1213.10	-----	-910	376	-1309	-479	-416	6	-394	367	0.767	0.229	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
		L_{17} - L_{18}			896.59	-----	-755	557	-663	-436	-223	-194	-171	-572	0.781	0.219	1.00	Yes	0.500	0.133	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		L_{18} - L_{19}			361.49	-16.88	-1068	931	-672	115	-582	-31	-355	594	0.553	0.444	1.00	Yes	0.374	0.281	0.66	Yes	0.031	0.169	0.20	Yes	0.030	0.320	0.36	Yes	1.00	**3.76**
		L_{19} - L_{20}			134.96	-365.30	-1121	541	-76	-49	296	66	-23	-5	0.207	0.398	0.61	Yes	0.126	0.267	0.40	Yes	0.664	0.235	0.90	Yes	0.658	0.336	1.00	Yes	1.00	**3.65**
	Structure 2	L_0 - L_1			33.89	-187.08	-143	69	1273	-3561	-25	-86	-346	-1202	0.041	0.922	0.97	Yes	0.024	0.588	0.62	Yes	0.269	0.613	0.89	Yes	0.267	0.725	1.00	Yes	1.00	**11.26**
		L_1 - L_2			544.06	-----	160	-210	710	-1462	-39	33	-245	-232	0.661	0.338	1.00	Yes	0.393	0.217	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		L_2 - L_3			1012.66	-----	-47	-165	-197	-1193	79	79	60	233	0.798	0.197	1.00	Yes	0.523	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		L_3 - L_4			1317.23	-----	41	-427	-243	-1730	31	56	200	68	0.774	0.218	1.00	Yes	0.521	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		L_4 - L_5			1746.83	-----	-391	-250	-1294	-1790	94	202	-58	144	0.814	0.183	1.00	Yes	0.539	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		L_5 - L_6			1828.64	-----	-145	-382	-1217	-2295	114	-16	148	-68	0.785	0.213	1.00	Yes	0.527	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		L_6 - L_7			1829.43	-----	-433	-90	-2105	-2046	-166	45	-49	508	0.774	0.216	1.00	Yes	0.515	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		L_7 - L_8			1441.76	-49.80	-183	346	-1212	-1323	-131	10	-54	-244	0.827	0.166	1.00	Yes	0.543	0.098	0.65	Yes	0.034	0.195	0.23	Yes	0.034	0.146	0.18	Yes	1.00	**2.17**
		L_8 - L_9			1125.77	-----	-866	574	-1145	-386	-193	55	-171	537	0.787	0.205	1.00	Yes	0.530	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		L_9 - L_{10}			875.00	-799.32	-40	862	-875	-640	37	117	-49	-392	0.781	0.187	0.97	Yes	0.455	0.115	0.57	Yes	0.845	0.154	1.00	Yes	0.839	0.140	0.98	Yes	1.00	**3.35**
		L_{10} - L_{11}			617.14	-42.50	-1514	1179	-1198	-420	-642	113	-322	825	0.616	0.376	1.00	Yes	0.361	0.233	0.60	Yes	0.050	0.125	0.18	Yes	0.050	0.265	0.32	Yes	1.00	**4.73**
		L_{11} - L_{12}			153.14	-927.40	-1556	1702	-1274	-655	-6	235	240	-649	0.107	0.293	0.40	Yes	0.071	0.177	0.25	Yes	0.767	0.167	0.94	Yes	0.760	0.232	1.00	Yes	1.00	**6.16**
		L_{12} - L_{13}			-----	-1320.38	-593	12	-769	-1682	82	-80	55	269	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1.00	Yes	0.790	0.167	0.96	Yes	1.00	**3.28**
		L_{13} - L_{14}			-----	-1381.41	-1004	3436	-348	1191	-194	-384	-182	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.230	0.94	Yes	0.695	0.300	1.00	Yes	1.00	**3.00**
		L_{14} - L_{15}			-----	-1424.35	1419	-263	3200	-1979	-224	-330	-68	248	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.182	0.91	Yes	0.717	0.279	1.00	Yes	1.00	**3.34**
		L_{15} - L_{16}			-----	-1434.77	-867	339	-1085	-1104	-16	371	26	6	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.131	1.00	Yes	0.858	0.110	0.97	Yes	1.00	**3.15**
		L_{16} - L_{17}			-----	-1153.95	1205	120	691	-922	401	189	-42	1	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.152	1.00	Yes	0.840	0.149	0.99	Yes	1.00	**2.74**
		L_{17} - L_{18}			-----	-823.39	472	231	357	-798	102	-56	50	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.048	0.92	Yes	0.865	0.128	1.00	Yes	1.00	**1.99**
		L_{18} - L_{19}			114.11	-635.28	661	113	126	-694	-2	34	176	248	0.129	0.172	0.31	Yes	0.075	0.102	0.18	Yes	0.852	0.147	1.00	Yes	0.847	0.134	0.99	Yes	1.00	**1.95**
		L_{19} - L_{20}			548.35	-572.30	551	225	64	-1187	58	-43	297	-92	0.621	0.275	0.90	Yes	0.367	0.174	0.55	Yes	0.767	0.152	0.92	Yes	0.763	0.229	1.00	Yes	1.00	**2.50**
		L_{20} - L_{21}			925.76	-467.20	562	52	-660	-1466	-95	-104	114	357	0.738	0.252	1.00	Yes	0.484	0.151	0.64	Yes	0.441	0.226	0.67	Yes	0.438	0.214	0.66	Yes	1.00	**2.93**
		L_{21} - L_{22}			854.36	-----	49	-58	-631	-2004	-37	42	229	-22	0.681	0.317	1.00	Yes	0.456	0.198	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		L_{22} - L_{23}			924.04	-130.75	-140	227	-1069	-1434	-18	3	-89	428	0.737	0.255	1.00	Yes	0.493	0.161	0.66	Yes	0.124	0.289	0.42	Yes	0.123	0.209	0.34	Yes	1.00	**2.48**
		L_{23} - L_{24}			937.04	-322.02	15	400	-1077	-1471	12	82	76	-309	0.747	0.248	1.00	Yes	0.490	0.148	0.64	Yes	0.304	0.287	0.60	Yes	0.302	0.215	0.52	Yes	1.00	**2.99**
		L_{24} - L_{25}			662.07	-----	-565	483	-887	-801	-192	223	-273	496	0.750	0.247	1.00	Yes	0.444	0.155	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		L_{25} - L_{26}			608.17	-490.08	-828	1059	-902	-1218	-65	-171	134	-470	0.689	0.307	1.00	Yes	0.397	0.182	0.58	Yes	0.657	0.145	0.81	Yes	0.653	0.235	0.89	Yes	1.00	**4.79**
		L_{26} - L_{27}			34.61	-802.17	-791	984	-877	-415	-367	16	-229	481	0.031	0.215	0.25	Yes	0.018	0.132	0.16	Yes	0.848	0.105	0.96	Yes	0.842	0.157	1.00	Yes	1.00	**3.48**
		L_{27} - L_{28}			-----	-1139.91	-551	1363	-445	-31	-78	-62	34	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.130	0.97	Yes	0.830	0.168	1.00	Yes	1.00	**3.08**
		L_{28} - L_{29}			-----	-1377.93	-2	-47	-554	-1453	-41	4	87	290	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.169	1.00	Yes	0.824	0.144	0.97	Yes	1.00	**2.37**
		L_{29} - L_{30}			-----	-1392.99	-1110	3398	-379	762	81	147	-57	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.204	0.92	Yes	0.701	0.297	1.00	Yes	1.00	**3.28**
		L_{30} - L_{31}			-----	-1375.25	1554	-283	3459	-2460	-461	-372	179	601	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.204	0.91	Yes	0.692	0.302	1.00	Yes	1.00	**4.46**
		L_{31} - L_{32}			-----	-1109.46	-480	536	-1574	-2267	-533	33	373	187	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.325	1.00	Yes	0.664	0.225	0.89	Yes	1.00	**6.40**
		L_{32} - L_{33}			-----	-1009.71	988	143	373	-1254	-135	-68	330	289	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.154	0.99	Yes	0.828	0.171	1.00	Yes	1.00	**3.71**
		L_{33} - L_{34}			235.18	-665.67	393	171	229	-1218	7	-89	237	-31	0.235	0.245	0.48	Yes	0.138	0.154	0.30	Yes	0.787	0.143	0.94	Yes	0.782	0.213	1.00	Yes	1.00	**2.86**
		L_{34} - L_{35}			608.15	-701.10	704	75	653	-1617	-42	60	179	303	0.543	0.295	0.84	Yes	0.316	0.183	0.50	Yes	0.741	0.179	0.93	Yes	0.736	0.259	1.00	Yes	1.00	**3.80**
		L_{35} - L_{36}			1085.63	-263.55	385	-9	-67	-1356	101	-48	560	32	0.759	0.236	1.00	Yes	0.511	0.148	0.66	Yes	0.219	0.177	0.40	Yes	0.217	0.183	0.40	Yes	1.00	**2.60**
		L_{36} - L_{37}			1325.39	-37.82	243	1	-637	-1864	-103	12	-18	397	0.760	0.238	1.00	Yes	0.499	0.141	0.64	Yes	0.026	0.223	0.25	Yes	0.026	0.206	0.24	Yes	1.00	**2.22**
		L_{37} - L_{38}			1777.43	-----	-39	-350	-662	-2680	-42	-8	83	-166	0.752	0.246	1.00	Yes	0.500	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		L_{38} - L_{39}			1874.33	-----	-233	-155	-1923	-1952	-55	4	-106	346	0.804	0.195	1.00	Yes	0.540	0.119	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
		L_{39} - L_{40}			1633.36	-----	-189	-298	-1008	-2114	-52	-32	-172	-545	0.761	0.236	1.00	Yes	0.504	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.73**
		L_{40} - L_{41}			1331.60	-----	-1098	210	-1515	-1001	-405	38	-288	501	0.782	0.217	1.00	Yes	0.527	0.136	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.84**
		L_{41} - L_{42}			1032.21	-----	-889	385	-970	-794	-99	13	-12	-415	0.813	0.184	1.00	Yes	0.533	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		L_{42} - L_{43}			469.53	-----	-1517	721	-834	-454	-446	153	-312	712	0.570	0.426	1.00	Yes	0.339	0.270	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_{43} - L_{44}			259.89	-338.11	-2448	942	-30	-34	1109	324	-185	-54	0.316	0.680	1.00	Yes	0.188	0.432	0.62	Yes	0.486	0.425	0.92	Yes	0.483	0.498	0.99	Yes	1.00	**7.67**
	Structure 3	L_0 - L_1			185.03	-265.87	-18	-75	987	-1729	-9	-41	-140	-633	0.283	0.650	0.94	Yes	0.173	0.434	0.61	Yes	0.483	0.354	0.84	Yes	0.479	0.519	1.00	Yes	1.00	**6.13**
		L_1 - L_2			397.61	-----	151	-186	473	-1061	-50	21	-328	-1	0.609	0.387	1.00	Yes	0.412	0.243	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		L_2 - L_3			910.73	-----	-35	-161	20	-929	36	23	182	103	0.793	0.202	1.00	Yes	0.508	0.121	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.01**
		L_3 - L_4			1212.20	-----	62	-365	-119	-1368	44	53	295	127	0.766	0.227	1.00	Yes	0.497	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		L_4 - L_5			1645.92	-----	-378	-179	-1220	-1413	115	222	81	281	0.804	0.190	1.00	Yes	0.516	0.111	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		L_5 - L_6			1547.98	-----	-83	-349	-608	-1875	141	78	166	75	0.756	0.238	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		L_6 - L_7			1354.84	-----	-1078	357	-1190	-581	-199	20	-152	407	0.797	0.198	1.00	Yes	0.516	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.94**
		L_7 - L_8			1079.97	-----	-65	156	-525	-688	-26	40	-35	-204	0.852	0.146	1.00	Yes	0.545	0.087	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		L_8 - L_9			569.23	-----	-643	402	-520	-143	-167	150	-158	498	0.737	0.257	1.00	Yes	0.442	0.165	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.76**
		L_9 - L_{10}			283.84	-559.16	14	515	-529	-196	74	138	154	-51	0.368	0.167	0.54	Yes	0.214	0.101	0.32	Yes	0.860	0.126	0.99	Yes	0.852	0.140	1.00	Yes	1.00	**2.64**
		L_{10} - L_{11}			-----	-1040.40	-1017	1028	-577	-645	-384	-103	76	866	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.129	0.98	Yes	0.837	0.161	1.00	Yes	1.00	**4.77**
		L_{11} - L_{12}			-----	-1230.72	-193	1386	-34	468	-278	-482	-213	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.203	1.00	Yes	0.779	0.184	0.97	Yes	1.00	**2.47**
		L_{12} - L_{13}			-----	-1226.44	1180	95	1645	-670	-144	-299	-36	359	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1.00	Yes	0.777	0.218	1.00	Yes	1.00	**3.96**
		L_{13} - L_{14}			-----	-1112.58	-13	288	70	-651	-250	127	66	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.906	0.083	0.99	Yes	0.896	0.102	1.00	Yes	1.00	**2.32**
		L_{14} - L_{15}			-----	-741.46	566	165	157	-371	148	-7	11	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.129	1.00	Yes	0.855	0.125	0.99	Yes	1.00	**1.63**
		L_{15} - L_{16}			206.79	-541.67	423	194	162	-632	16	-58	44	-50	0.268	0.178	0.45	Yes	0.161	0.117	0.28	Yes	0.833	0.098	0.94	Yes	0.825	0.167	1.00	Yes	1.00	**1.47**
		L_{16} - L_{17}			635.88	-294.42	384	47	-40	-889	96	-49	67	290	0.732	0.261	1.00	Yes	0.435	0.168	0.61	Yes	0.402	0.203	0.61	Yes	0.398	0.215	0.62	Yes	1.00	**1.89**
		L_{17} - L_{18}			645.12	-161.24	125	10	-398	-956	1	12	58	-166	0.742	0.258	1.00	Yes	0.429	0.155	0.59	Yes	0.220	0.239	0.46	Yes	0.218	0.231	0.45	Yes	1.00	**1.94**
		L_{18} - L_{19}			425.83	-----	-633	262	-573	-561	-109	133	-201	730	0.652	0.346	1.00	Yes	0.398	0.225	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		L_{19} - L_{20}			2.22	-178.92	-1962	1161	-805	-252	1867	508	-970	-264	0.003	0.990	1.00	Yes	0.002	0.595	0.60	Yes	0.325	0.649	0.98	Yes	0.322	0.589	0.92	Yes	1.00	**8.57**

Moment (End) AB Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 2.167

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-318.38	-191	253	-55	88	-468	-150	-34	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.247	0.96	Yes	0.674	0.323	1.00	Yes	1.00	**0.89**
		$U_1 - L_1$			20.93	-328.03	-233	239	27	-15	-46	24	0	-2	0.038	0.319	0.36	Yes	0.021	0.175	0.20	Yes	0.717	0.083	0.80	Yes	0.694	0.305	1.00	Yes	1.00	**1.72**
		$U_2 - L_2$			103.12	-305.82	-224	275	88	-98	-15	59	69	31	0.185	0.371	0.56	Yes	0.102	0.204	0.31	Yes	0.668	0.121	0.79	Yes	0.647	0.351	1.00	Yes	1.00	**2.51**
		$U_3 - L_3$			218.57	-263.75	-308	342	274	-257	-333	-56	162	154	0.393	0.534	0.93	Yes	0.216	0.294	0.51	Yes	0.578	0.188	0.77	Yes	0.558	0.438	1.00	Yes	1.00	**4.52**
		$U_4 - L_4$			-----	-203.88	-54	38	440	-432	-5	140	-514	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.265	0.72	Yes	0.431	0.563	1.00	Yes	1.00	**4.37**
		$U_5 - L_5$			-----	-420.47	67	-89	237	-268	20	20	-144	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.132	0.90	Yes	0.725	0.272	1.00	Yes	1.00	**1.46**
		$U_6 - L_6$			-----	-520.83	87	-80	270	-287	-228	-57	79	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.118	0.91	Yes	0.747	0.251	1.00	Yes	1.00	**1.43**
		$U_7 - L_7$			-----	-438.85	134	-150	303	-324	-161	13	201	35	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.144	0.88	Yes	0.677	0.319	1.00	Yes	1.00	**0.97**
		$U_8 - L_8$			-----	-1206.67	-349	411	484	-585	-118	-7	918	291	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.125	1.00	Yes	0.837	0.109	0.95	Yes	1.00	**2.35**
		$U_9 - L_9$			-----	-665.21	-389	442	-172	202	-162	-212	-399	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.147	0.95	Yes	0.751	0.246	1.00	Yes	1.00	**1.51**
		$U_{10} - L_{10}$			-----	-731.42	-357	367	-139	102	-996	-669	-325	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.238	1.00	Yes	0.722	0.190	0.92	Yes	1.00	**1.96**
		$U_{11} - L_{11}$			-----	-665.04	-355	479	-144	195	-452	-423	-569	-386	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.175	0.98	Yes	0.774	0.222	1.00	Yes	1.00	**1.83**
		$U_{12} - L_{12}$			-----	-512.92	-340	336	-99	100	-347	-259	-337	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.161	0.91	Yes	0.704	0.290	1.00	Yes	1.00	**1.73**
		$U_{13} - L_{13}$			-----	-365.01	-232	262	-49	68	-41	-34	-172	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.128	0.87	Yes	0.699	0.299	1.00	Yes	1.00	**1.37**
		$U_{14} - L_{14}$			-----	-158.06	-472	516	255	-256	38	198	-36	117	-----	-----	-----	-----	-----	-----	-----	-----	0.353	0.213	0.57	Yes	0.334	0.659	1.00	Yes	1.00	**5.81**
		$U_{15} - L_{15}$			167.45	-305.30	-124	112	249	-274	59	111	130	-117	0.301	0.388	0.69	Yes	0.166	0.213	0.38	Yes	0.684	0.131	0.82	Yes	0.646	0.350	1.00	Yes	1.00	**2.38**
		$U_{16} - L_{16}$			-----	-321.98	27	-30	240	-249	-73	-100	238	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.107	0.84	Yes	0.681	0.318	1.00	Yes	1.00	**1.60**
		$U_{17} - L_{17}$			-----	-430.83	60	-74	228	-245	-120	-112	60	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.111	0.92	Yes	0.743	0.249	1.00	Yes	1.00	**1.22**
		$U_{18} - L_{18}$			-----	-533.33	142	-148	431	-444	-135	-120	123	-219	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.089	0.88	Yes	0.742	0.251	1.00	Yes	1.00	**1.34**
		$U_{19} - L_{19}$			-----	-639.41	170	-168	534	-522	-116	-45	185	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.099	0.90	Yes	0.744	0.248	1.00	Yes	1.00	**1.49**
		$U_{20} - L_{20}$			-----	-604.80	159	-257	356	-531	30	4	399	52	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.200	1.00	Yes	0.704	0.247	0.96	Yes	1.00	**1.19**
	Structure 2	$U_0 - L_0$			-----	-678.46	-449	567	-162	211	-541	-92	-42	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.184	1.00	Yes	0.727	0.241	0.97	Yes	1.00	**1.59**
		$U_1 - L_1$			-----	-715.57	-530	536	-114	123	-185	32	-106	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.080	0.90	Yes	0.767	0.227	1.00	Yes	1.00	**2.08**
		$U_2 - L_2$			-----	-587.73	-470	479	-105	115	-153	-33	-107	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.086	0.88	Yes	0.749	0.245	1.00	Yes	1.00	**1.79**
		$U_3 - L_3$			-----	-498.37	-221	238	-55	63	72	-44	78	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.076	0.93	Yes	0.782	0.217	1.00	Yes	1.00	**1.52**
		$U_4 - L_4$			-----	-335.30	-223	222	-13	21	-179	-38	249	76	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.149	0.91	Yes	0.709	0.285	1.00	Yes	1.00	**1.62**
		$U_5 - L_5$			76.16	-326.66	-212	235	77	-60	13	-31	-2	97	0.137	0.329	0.47	Yes	0.075	0.181	0.26	Yes	0.738	0.130	0.87	Yes	0.691	0.301	1.00	Yes	1.00	**2.11**
		$U_6 - L_6$			345.57	-239.29	-232	245	217	-214	-62	-25	120	203	0.622	0.372	1.00	Yes	0.342	0.205	0.55	Yes	0.539	0.147	0.69	Yes	0.506	0.313	0.82	Yes	1.00	**3.32**
		$U_7 - L_7$			-----	-212.09	-146	156	384	-430	-128	236	281	65	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.229	0.71	Yes	0.449	0.550	1.00	Yes	1.00	**5.18**
		$U_8 - L_8$			-----	-464.49	67	-83	354	-373	-5	-66	100	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.100	0.78	Yes	0.669	0.326	1.00	Yes	1.00	**1.75**
		$U_9 - L_9$			-----	-686.72	158	-172	599	-605	-37	-194	120	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.086	0.86	Yes	0.736	0.257	1.00	Yes	1.00	**2.09**
		$U_{10} - L_{10}$			-----	-787.86	182	-184	553	-576	-147	-94	225	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.090	0.87	Yes	0.737	0.254	1.00	Yes	1.00	**2.16**
		$U_{11} - L_{11}$			-----	-809.67	186	-186	516	-533	-189	-69	149	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.100	0.92	Yes	0.757	0.235	1.00	Yes	1.00	**1.91**
		$U_{12} - L_{12}$			-----	-881.12	156	-133	535	-541	-145	10	173	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.098	0.95	Yes	0.764	0.232	1.00	Yes	1.00	**1.97**
		$U_{13} - L_{13}$			-----	-745.54	208	-204	582	-561	-170	20	279	40	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1.00	Yes	0.719	0.278	1.00	Yes	1.00	**1.69**
		$U_{14} - L_{14}$			-----	-1158.62	-452	420	678	-646	260	266	747	305	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.152	1.00	Yes	0.768	0.120	0.89	Yes	1.00	**2.75**
		$U_{15} - L_{15}$			-----	-730.32	-604	584	-116	124	-191	-110	-307	9	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.160	0.98	Yes	0.704	0.289	1.00	Yes	1.00	**2.58**
		$U_{16} - L_{16}$			-----	-655.93	-517	486	-89	63	-1166	-470	-808	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.238	1.00	Yes	0.703	0.219	0.93	Yes	1.00	**2.11**
		$U_{17} - L_{17}$			-----	-636.71	-538	534	-124	122	-532	-425	-275	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.168	0.96	Yes	0.741	0.250	1.00	Yes	1.00	**1.99**
		$U_{18} - L_{18}$			-----	-584.64	-458	484	-95	95	-82	-280	-114	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.111	0.90	Yes	0.745	0.248	1.00	Yes	1.00	**1.81**
		$U_{19} - L_{19}$			-----	-468.76	-306	300	-54	58	-234	-175	-66	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.124	0.83	Yes	0.700	0.295	1.00	Yes	1.00	**1.67**
		$U_{20} - L_{20}$			-----	-381.08	-226	233	-19	20	-29	-87	-68	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.094	0.88	Yes	0.730	0.266	1.00	Yes	1.00	**1.65**
	Structure 3	$U_{21} - L_{21}$			31.79	-329.24	-213	234	19	-13	156	-16	-20	47	0.057	0.344	0.41	Yes	0.031	0.189	0.23	Yes	0.744	0.123	0.87	Yes	0.697	0.299	1.00	Yes	1.00	**1.80**
		$U_{22} - L_{22}$			-----	-215.60	-395	420	321	-340	-12	265	417	149	-----	-----	-----	-----	-----	-----	-----	-----	0.485	0.200	0.69	Yes	0.456	0.537	1.00	Yes	1.00	**6.04**
		$U_{23} - L_{23}$			83.53	-314.57	-49	45	244	-260	79	68	149	-57	0.150	0.376	0.53	Yes	0.083	0.207	0.29	Yes	0.711	0.108	0.82	Yes	0.666	0.332	1.00	Yes	1.00	**1.99**
		$U_{24} - L_{24}$			-----	-370.07	10	-22	241	-252	76	27	197	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.109	0.87	Yes	0.709	0.288	1.00	Yes	1.00	**1.63**
		$U_{25} - L_{25}$			-----	-468.26	38	-38	308	-301	-88	-29	240	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.097	0.81	Yes	0.699	0.296	1.00	Yes	1.00	**1.63**
		$U_{26} - L_{26}$			-----	-566.58	67	-70	509	-536	-123	-22	327	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.105	0.87	Yes	0.722	0.274	1.00	Yes	1.00	**1.80**
		$U_{27} - L_{27}$			-----	-627.04	85	-85	570	-572	-136	3	265	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.100	0.88	Yes	0.730	0.266	1.00	Yes	1.00	**1.89**
		$U_{28} - L_{28}$			-----	-711.00	74	-71	560	-552	-156	17	360	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.105	0.93	Yes	0.762	0.237	1.00	Yes	1.00	**2.05**
		$U_{29} - L_{29}$			-----	-710.86	118	-123	639	-613	-118	28	417	42	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.196	0.99	Yes	0.685	0.306	1.00	Yes	1.00	**2.23**
		$U_{30} - L_{30}$			-----	-1165.03	-629	567	748	-733	-72	298	833	49	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.142	1.00	Yes	0.773	0.132	0.91	Yes	1.00	**3.24**
		$U_{31} - L_{31}$			-----	-753.41	-506	491	-108	108	93	-90	-307	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.153	1.00	Yes	0.726	0.242	0.97	Yes	1.00	**2.28**
		$U_{32} - L_{32}$			-----	-812.59	-459	450	-80	56	-843	-430	-672	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.217	1.00	Yes	0.704	0.197	0.91	Yes	1.00	**2.36**
		$U_{33} - L_{33}$			-----	-837.00	-463	477	-117	106	-251	-434	-456	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.153	1.00	Yes	0.783	0.210	1.00	Yes	1.00	**2.34**
		$U_{34} - L_{34}$			-----	-800.85	-547	556	-120	113	-440	-395	-316	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.147	0.94	Yes	0.749	0.245	1.00	Yes	1.00	**2.58**
		$U_{35} - L_{35}$			-----	-707.94	-551	564	-110	125	-49	-140	-157	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.067	0.86	Yes	0.759	0.239	1.00	Yes	1.00	**2.30**
		$U_{36} - L_{36}$			-----	-488.35	-306	330	-54	66	258	38	-46	62	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.120	0.83	Yes	0.703	0.289	1.00	Yes	1.00	**1.78**
		$U_{37} - L_{37}$			-----	-184.95	-416	469	80	-80	-163	192	82	101	-----	-----	-----	-----	-----	-----	-----	-----	0.418	0.230	0.65	Yes	0.391	0.599	1.00	Yes	1.00	**4.71**
		$U_{38} - L_{38}$			338.41	-176.94	-241	248	168	-173	236	115	178	-73	0.609	0.385	1.00	Yes	0.335	0.212	0.55	Yes	0.398	0.133	0.54	Yes	0.374	0.317	0.70	Yes	1.00	**2.79**
		$U_{39} - L_{39}$			153.89	-323.21	-134	120	225	-245	50	72	161	-102	0.277	0.360	0.64	Yes	0.152	0.198	0.36	Yes	0.730	0.110	0.85	Yes	0.684	0.314	1.00	Yes	1.00	**2.39**
		$U_{40} - L_{40}$			4.93	-340.57	-10	4	217	-217	15	-34	166	-123	0.009	0.326	0.34	Yes	0.005	0.179	0.19	Yes	0.772	0.087	0.86	Yes	0.721	0.278	1.00	Yes	1.00	**1.75**
		$U_{41} - L_{41}$			-----	-484.28	27	-31	244	-256	7	-31	142	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.083	0.91	Yes	0.759	0.233	1.00	Yes	1.00	**1.64**
		$U_{42} - L_{42}$			-----	-583.90	60	-69	494	-500	11	-35	165	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.076	0.86	Yes	0.744	0.256	1.00	Yes	1.00	**1.77**
		$U_{43} - L_{43}$			-----	-707.90	77	-90	568	-566	-50	-51	261	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.086	0.90	Yes	0.759	0.241	1.00	Yes	1.00	**1.95**
		$U_{44} - L_{44}$			-----	-670.57	115	-130	390	-537	-142	-24	627	106	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.197	1.00	Yes	0.719	0.228	0.95	Yes	1.00	**1.70**
	Structure 4	$U_0 - L_0$			-----	-579.91	-410	469	-145	194	-827	-108	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.232	1.00	Yes	0.675	0.218	0.90	Yes	1.00	**1.24**
		$U_1 - L_1$			-----	-663.90	-466	479	-112	123	-574	24	-122	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.139	0.97	Yes	0.773	0.222	1.00	Yes	1.00	**1.94**
		$U_2 - L_2$			-----	-533.20	-438	442	-108	114	-303	-26	-147	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.111	0.90	Yes	0.742	0.250	1.00	Yes	1.00	**1.69**
		$U_3 - L_3$			-----	-445.52	-203	221	-45	58	-38	-63	45	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.080	0.92	Yes	0.769	0.224	1.00	Yes	1.00	**1.42**
		$U_4 - L_4$			-----	-321.60	-244	248	-16	22	-209	-25	232	48	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.146	0.88	Yes	0.680	0.317	1.00	Yes	1.00	**1.81**
		$U_5 - L_5$			99.52	-305.87	-256	275	66	-63	-157	-30	-89	82	0.179	0.397	0.58	Yes	0.098	0.218	0.32	Yes	0.686	0.149	0.84	Yes	0.647	0.351	1.00	Yes	1.00	**2.25**
		$U_6 - L_6$			-----	-201.36	-288	310	429	-447	253	106	-160	51	-----	-----	-----	-----	-----	-----	-----	-----	0.449	0.216	0.67	Yes	0.426	0.571	1.00	Yes	1.00	**5.78**
		$U_7 - L_7$			-----	-360.92	12	-25	244	-267	-11	-22	-2	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.120	0.86	Yes	0.691	0.304	1.00	Yes	1.00	**1.57**
		$U_8 - L_8$			-----	-511.98	64	-70	337	-339	-15	-85	89	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.101	0.85	Yes	0.702	0.289	1.00	Yes	1.00	**1.85**
		$U_9 - L_9$			-----	-653.55	131	-169	408	-514	-187	-140	42	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.103	0.89	Yes	0.761	0.239	1.00	Yes	1.00	**1.92**
		$U_{10} - L_{10}$			-----	-776.65	131	-109	404	-439	-3	24	199	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.077	0.89	Yes	0.766	0.227	1.00	Yes	1.00	**2.02**
		$U_{11} - L_{11}$			-----	-645.46	167	-192	428	-472	-154	-28	294	57	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.124	0.90	Yes	0.729	0.263	1.00	Yes	1.00	**1.43**
		$U_{12} - L_{12}$			-----	-1177.63	-379	412	490	-635	458	182	980	375	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.143	1.00	Yes	0.816	0.118	0.94	Yes	1.00	**2.64**
		$U_{13} - L_{13}$			-----	-459.43	-273	289	-67	76	-215	-117	-297	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.154	0.93	Yes	0.709	0.284	1.00	Yes	1.00	**1.48**
		$U_{14} - L_{14}$			-----	-472.34	-253	254	-44	28	-1007	-534	-659	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.283	1.00	Yes	0.677	0.222	0.90	Yes	1.00	**1.75**
		$U_{15} - L_{15}$			-----	-444.52	-171	207	-46	47	-66	-209	-443	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1.00	Yes	0.767	0.209	0.98	Yes	1.00	**1.46**
		$U_{16} - L_{16}$			-----	-260.75	-344	347	35	-15	204	-21	-629	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.290	0.87	Yes	0.552	0.443	1.00	Yes	1.00	**3.56**
		$U_{17} - L_{17}$			283.84	-184.00	-302	312	156	-180	-121	100	-295	-196	0.511	0.484	1.00	Yes	0.281	0.266	0.55	Yes	0.403	0.175	0.58	Yes	0.389	0.399	0.79	Yes	1.00	**3.23**
		$U_{18} - L_{18}$			122.27	-291.69	-114	127	253	-298	-111	18	51	-121	0.220	0.416	0.64	Yes	0.121	0.229	0.35	Yes	0.637	0.141	0.78	Yes	0.617	0.380	1.00	Yes	1.00	**2.51**
		$U_{19} - L_{19}$			48.47	-310.26	-57	45	264	-244	-84	-3	57	-65	0.087	0.362	0.45	Yes	0.048	0.199	0.25	Yes	0.678	0.106	0.79	Yes	0.657	0.338	1.00	Yes	1.00	**1.61**
		$U_{20} - L_{20}$			-----	-316.06	19	-28	110	-194	-46	-15	630	202	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.289	1.00	Yes	0.669	0.248	0.92	Yes	1.00	**0.90**

Moment (End) AB Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

				Inventory Loads - HS20 Truck																													
				Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression												
		Vehicle	Pedestrian	Max. Tension	Max. Comp.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:		1.300	1.300			Start	End	Start	End	Start	End	Start	End																			
LL Factor:		2.167	1.625	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
North Truss - Diagonals	Structure 1	$U_0 - L_1$		518.44	-----	-139	72	-16	-2	-613	-128	-12	4	0.680	0.317	1.00	Yes	0.411	0.174	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_1 - L_2$		413.28	-----	-76	24	-18	-30	-160	-174	548	139	0.743	0.255	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_2 - L_3$		437.92	-161.49	-115	35	-86	-99	-223	-175	-36	-104	0.788	0.211	1.00	Yes	0.433	0.116	0.55	Yes	0.372	0.221	0.60	Yes	0.342	0.147	0.49	Yes	1.00	**4.07**
		$U_3 - L_4$		-----	-318.59	53	-7	-89	-146	111	116	-10	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.267	1.00	Yes	0.674	0.186	0.87	Yes	1.00	**3.58**
		$U_4 - L_4$		463.32	-----	-5	79	-146	-35	67	21	-719	-544	0.679	0.315	1.00	Yes	0.374	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.76**
		$U_4 - L_5$		655.26	-----	-182	231	-83	91	-272	-273	-478	-137	0.775	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.64**
		$U_5 - L_6$		660.01	-----	-296	248	-93	100	-255	-217	141	51	0.780	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.40**
		$U_6 - L_7$		655.53	-----	-102	312	-9	130	-174	-126	229	112	0.775	0.219	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.46**
		$U_5 - L_8$		990.27	-----	-98	356	15	138	330	377	322	98	0.792	0.207	1.00	Yes	0.490	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		$U_9 - L_{10}$		1027.21	-----	-293	272	-74	85	185	359	93	118	0.821	0.177	1.00	Yes	0.509	0.099	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{10} - L_{11}$		977.60	-----	-217	212	-156	76	110	337	526	230	0.826	0.170	1.00	Yes	0.511	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{11} - L_{12}$		862.04	-----	-246	143	-166	-8	51	183	219	153	0.853	0.147	1.00	Yes	0.469	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
		$U_{12} - L_{13}$		650.98	-----	-202	171	-78	30	27	53	-62	-108	0.794	0.198	1.00	Yes	0.499	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.76**
		$U_{13} - L_{14}$		463.38	-----	-87	51	-23	-32	-30	-79	-74	-179	0.833	0.163	1.00	Yes	0.458	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{15} - L_{14}$		252.29	-331.24	-64	5	59	-121	-244	-265	-278	-124	0.454	0.235	0.69	Yes	0.250	0.129	0.38	Yes	0.776	0.216	1.00	Yes	0.701	0.154	0.86	Yes	1.00	**2.54**
		$U_{16} - L_{15}$		400.05	-87.68	-127	94	-8	-34	-369	-289	-384	-147	0.720	0.273	1.00	Yes	0.396	0.150	0.55	Yes	0.208	0.176	0.39	Yes	0.186	0.162	0.35	Yes	1.00	**1.95**
		$U_{17} - L_{16}$		510.04	-----	-139	99	-51	11	-464	-355	-454	-227	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.33**
		$U_{18} - L_{17}$		613.75	-----	-306	258	-110	75	-552	-449	-108	-115	0.726	0.274	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.45**
		$U_{19} - L_{18}$		672.15	-----	-351	253	-132	87	-536	-465	-65	-105	0.728	0.268	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.36**
		$U_{20} - L_{19}$		698.25	-----	-260	261	-94	91	-651	-426	-100	-37	0.756	0.241	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.50**
	Structure 2	$U_0 - L_1$		759.06	-----	-392	364	-114	99	-420	-60	-61	-51	0.751	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		$U_1 - L_2$		780.77	-----	-387	311	-94	71	-183	-262	-100	-29	0.772	0.219	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.99**
		$U_2 - L_3$		657.82	-----	-333	271	-82	62	-164	39	-22	91	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$U_3 - L_4$		598.95	-----	-178	145	-35	13	-143	-93	110	63	0.798	0.192	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_4 - L_5$		433.30	-65.16	-135	105	-3	-26	-163	-8	-83	-151	0.779	0.219	1.00	Yes	0.429	0.121	0.55	Yes	0.161	0.102	0.27	Yes	0.138	0.172	0.31	Yes	1.00	**1.99**
		$U_5 - L_6$		437.58	-249.29	-128	72	58	-105	-161	20	-170	-163	0.787	0.212	1.00	Yes	0.433	0.117	0.55	Yes	0.589	0.161	0.76	Yes	0.527	0.163	0.70	Yes	1.00	**2.61**
		$U_6 - L_7$		66.08	-382.18	-36	-5	57	-104	-119	-145	-96	-296	0.108	0.196	0.31	Yes	0.059	0.108	0.17	Yes	0.818	0.173	1.00	Yes	0.732	0.119	0.86	Yes	1.00	**1.69**
		$U_8 - L_7$		589.63	-----	-179	139	-36	-21	-250	-427	-361	-195	0.752	0.247	1.00	Yes	0.473	0.140	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.05**
		$U_8 - L_8$		685.75	-----	-321	239	-141	42	-457	-372	-521	-242	0.743	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.69**
		$U_{10} - L_9$		792.44	-----	-303	230	-115	56	-472	-441	-282	-202	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_{11} - L_{10}$		870.71	-----	-334	286	-147	107	-444	-463	-365	-214	0.793	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		$U_{12} - L_{11}$		864.75	-----	-365	353	-142	148	-405	-358	14	-47	0.788	0.210	1.00	Yes	0.433	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.73**
		$U_{13} - L_{12}$		751.86	-----	-422	379	-151	153	-191	-158	343	132	0.744	0.247	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.46**
		$U_{14} - L_{13}$		745.61	-----	-270	424	-33	147	-259	-131	384	189	0.738	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{14} - L_{15}$		634.99	-----	-224	359	26	70	236	163	218	-37	0.751	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		$U_{15} - L_{16}$		636.91	-----	-371	344	-62	68	-163	202	-10	21	0.753	0.247	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{16} - L_{17}$		711.67	-----	-327	334	-69	96	-296	315	-149	63	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_{17} - L_{18}$		656.55	-----	-289	284	-66	79	-43	292	-27	101	0.776	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{18} - L_{19}$		679.85	-----	-272	283	-69	58	159	188	61	12	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		$U_{19} - L_{20}$		617.78	-----	-195	184	-32	9	84	148	-16	-44	0.788	0.205	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.05**
		$U_{20} - L_{21}$		448.54	-10.68	-126	113	-12	-9	19	90	-5	-71	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	0.025	0.063	0.09	Yes	0.023	0.161	0.19	Yes	1.00	**1.78**
		$U_{21} - L_{22}$		448.25	-228.84	-103	69	30	-83	8	4	-37	-194	0.806	0.188	1.00	Yes	0.443	0.104	0.55	Yes	0.541	0.127	0.67	Yes	0.484	0.132	0.62	Yes	1.00	**2.66**
		$U_{23} - L_{22}$		405.47	-334.70	-101	65	50	-105	-262	-276	-340	-16	0.729	0.232	0.97	Yes	0.401	0.128	0.53	Yes	0.797	0.200	1.00	Yes	0.708	0.134	0.85	Yes	1.00	**3.07**
		$U_{24} - L_{23}$		416.02	-32.11	-120	106	2	-17	-317	-217	-154	-59	0.748	0.245	1.00	Yes	0.412	0.135	0.55	Yes	0.077	0.139	0.22	Yes	0.068	0.154	0.23	Yes	1.00	**1.78**
		$U_{25} - L_{24}$		581.89	-----	-189	182	-20	8	-405	-316	-194	-111	0.742	0.252	1.00	Yes	0.408	0.143	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_{26} - L_{25}$		656.17	-----	-271	264	-26	38	-361	-353	120	47	0.776	0.219	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_{27} - L_{26}$		650.22	-----	-289	285	-45	57	-331	-274	179	70	0.769	0.223	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{28} - L_{27}$		708.27	-----	-332	360	-47	66	-273	-248	204	113	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
		$U_{29} - L_{28}$		628.57	-----	-373	343	-73	72	-227	-170	211	102	0.743	0.252	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_{30} - L_{29}$		635.23	-----	-222	358	-14	77	-210	-119	191	107	0.751	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		$U_{30} - L_{31}$		762.44	-----	-292	430	14	72	153	188	283	0	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		$U_{31} - L_{32}$		760.14	-----	-438	380	-73	76	-190	252	15	48	0.752	0.241	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{32} - L_{33}$		886.57	-----	-356	347	-57	93	-282	280	-147	142	0.808	0.189	1.00	Yes	0.444	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		$U_{33} - L_{34}$		898.81	-----	-340	314	-110	75	3	245	55	142	0.819	0.178	1.00	Yes	0.450	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		$U_{34} - L_{35}$		838.05	-----	-305	252	-93	45	114	193	89	-29	0.829	0.171	1.00	Yes	0.456	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**
		$U_{35} - L_{36}$		750.02	-----	-337	258	-115	29	15	86	5	-87	0.812	0.187	1.00	Yes	0.447	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**
		$U_{36} - L_{37}$		617.75	-----	-176	169	-33	-15	-62	5	-69	-225	0.788	0.203	1.00	Yes	0.496	0.114	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		$U_{38} - L_{37}$		14.38	-387.84	-22	-6	60	-96	-187	-198	-249	-69	0.023	0.175	0.20	Yes	0.013	0.096	0.11	Yes	0.838	0.153	1.00	Yes	0.743	0.110	0.86	Yes	1.00	**1.56**
		$U_{39} - L_{38}$		322.75	-310.86	-99	54	64	-109	-364	-250	-462	-93	0.580	0.273	0.86	Yes	0.319	0.150	0.47	Yes	0.741	0.251	1.00	Yes	0.658	0.139	0.80	Yes	1.00	**2.39**
		$U_{40} - L_{39}$		403.30	-113.16	-130	100	18	-43	-358	-283	-240	-132	0.725	0.270	1.00	Yes	0.399	0.148	0.55	Yes	0.271	0.188	0.46	Yes	0.239	0.166	0.41	Yes	1.00	**2.12**
		$U_{41} - L_{40}$		564.05	-----	-170	130	-16	1	-408	-362	-91	-76	0.752	0.241	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_{42} - L_{41}$		611.72	-----	-317	263	-48	31	-490	-407	-66	-63	0.723	0.268	1.00	Yes	0.398	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.75**
		$U_{43} - L_{42}$		749.84	-----	-381	313	-64	43	-484	-433	-3	-45	0.742	0.249	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{44} - L_{43}$		748.27	-----	-286	322	-93	79	-695	-407	58	-21	0.740	0.253	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.93**
	Structure 3	$U_0 - L_1$		570.24	-----	-424	314	-113	94	-988	63	-61	-53	0.618	0.379	1.00	Yes	0.340	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.72**
		$U_1 - L_2$		716.90	-----	-343	253	-99	67	-280	-52	-125	-44	0.776	0.221	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_2 - L_3$		643.08	-----	-330	241	-97	64	-252	126	-48	78	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.62**
		$U_3 - L_4$		553.12	-----	-150	108	-41	5	-139	-18	35	-6	0.811	0.185	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.63**
		$U_4 - L_5$		431.85	-97.53	-132	109	-4	-36	-147	-61	-126	-176	0.777	0.219	1.00	Yes	0.427	0.121	0.55	Yes	0.231	0.106	0.34	Yes	0.206	0.168	0.38	Yes	1.00	**2.18**
		$U_5 - L_6$		331.58	-326.37	-76	23	19	-119	-128	-157	-124	-308	0.596	0.241	0.84	Yes	0.328	0.132	0.47	Yes	0.765	0.226	1.00	Yes	0.691	0.152	0.85	Yes	1.00	**2.90**
		$U_7 - L_6$		428.47	-63.54	-82	38	-15	-41	-211	-298	-429	-184	0.771	0.229	1.00	Yes	0.424	0.126	0.55	Yes	0.148	0.180	0.33	Yes	0.134	0.105	0.24	Yes	1.00	**1.90**
		$U_8 - L_7$		604.80	-----	-195	154	-59	8	-435	-386	-349	-224	0.737	0.256	1.00	Yes	0.464	0.145	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_8 - L_8$		751.08	-----	-229	103	-154	-21	-509	-517	-952	-467	0.743	0.249	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{10} - L_9$		914.22	-----	-240	172	-148	51	-594	-576	-845	-419	0.772	0.222	1.00	Yes	0.478	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{11} - L_{10}$		997.15	-----	-302	259	-95	85	-502	-425	52	-21	0.797	0.198	1.00	Yes	0.494	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		$U_{12} - L_{11}$		984.21	-----	-105	364	-10	129	-394	-291	248	121	0.787	0.212	1.00	Yes	0.487	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		$U_{12} - L_{13}$		658.37	-----	-113	294	25	73	274	182	173	-14	0.778	0.217	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		$U_{13} - L_{14}$		666.98	-----	-285	240	-28	56	-81	228	-50	26	0.789	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		$U_{14} - L_{15}$		700.15	-----	-181	229	-52	58	-86	218	100	88	0.828	0.170	1.00	Yes	0.455	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		$U_{15} - L_{16}$		447.71	-----	36	188	-208	-97	476	473	549	141	0.657	0.339	1.00	Yes	0.361	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		$U_{17} - L_{16}$		-----	-358.47	23	-4	-8	-72	223	142	-264	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.172	1.00	Yes	0.758	0.092	0.86	Yes	1.00	**1.84**
		$U_{18} - L_{17}$		355.94	-118.08	-91	18	-84	-99	-301	-262	-800	-263	0.640	0.359	1.00	Yes	0.352	0.197	0.55	Yes	0.272	0.330	0.61	Yes	0.250	0.127	0.38	Yes	1.00	**3.49**
		$U_{19} - L_{18}$		414.45	-139.81	-96	34	28	-20	-441	-336	173	135	0.745	0.251	1.00	Yes	0.410	0.138	0.55	Yes	0.321	0.219	0.54	Yes	0.296	0.123	0.42	Yes	1.00	**1.95**
		$U_{20} - L_{19}$		592.44	-----	-44	40	54	-8	-635	-376	475	-1	0.777	0.222	1.00	Yes	0.469	0.122	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.88**

Moment (End) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression													
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	U_0 - U_1	1.300	1.625	-----	-547.40	-153	84	269	-1055	15	-11	-41	-434	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.248	1	Yes	0.738	0.251	0.99	Yes	1.00	**2.34**
		U_1 - U_2			42.81	-582.99	-49	92	-163	-814	-6	47	-43	72	0.049	0.206	0.26	Yes	0.034	0.141	0.18	Yes	0.793	0.205	1	Yes	0.786	0.194	0.98	Yes	1.00	**1.69**
		U_2 - U_3			155.05	-586.58	-82	276	-155	-690	-3	-90	256	-190	0.178	0.207	0.39	Yes	0.120	0.135	0.26	Yes	0.798	0.202	1	Yes	0.791	0.164	0.96	Yes	1.00	**1.88**
		U_3 - U_4			326.17	-560.13	100	264	-151	-856	-91	-81	-8	-259	0.374	0.247	0.63	Yes	0.257	0.169	0.43	Yes	0.762	0.236	1	Yes	0.755	0.203	0.96	Yes	1.00	**2.17**
		U_4 - U_5			465.90	-543.49	138	372	-87	-795	-105	66	-288	-342	0.534	0.247	0.79	Yes	0.366	0.169	0.54	Yes	0.740	0.251	1	Yes	0.733	0.189	0.93	Yes	1.00	**3.45**
		U_5 - U_6			-----	-560.11	-860	910	41	-597	172	-494	-345	-509	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.235	1	Yes	0.755	0.216	0.98	Yes	1.00	**6.13**
		U_6 - U_7			159.35	-539.38	-375	401	-884	-1362	-623	-355	-581	-396	0.152	0.375	0.53	Yes	0.106	0.257	0.37	Yes	0.613	0.381	1	Yes	0.607	0.289	0.90	Yes	1.00	**5.71**
		U_7 - U_8			434.94	-----	-3604	4328	-62	684	-417	115	-242	173	0.301	0.698	1.00	Yes	0.210	0.475	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.04**
		U_8 - U_9			722.90	-----	766	15	2161	-1807	-145	36	69	352	0.592	0.405	1.00	Yes	0.405	0.276	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		U_9 - U_{10}			615.40	-433.12	234	291	207	-1114	75	311	230	484	0.668	0.327	1.00	Yes	0.452	0.220	0.68	Yes	0.558	0.234	0.8	Yes	0.553	0.249	0.81	Yes	1.00	**3.91**
		U_{10} - U_{11}			133.36	-596.97	223	-71	203	-1062	208	55	343	115	0.145	0.293	0.44	Yes	0.096	0.188	0.29	Yes	0.769	0.220	0.99	Yes	0.762	0.238	1.00	Yes	1.00	**2.13**
		U_{11} - U_{12}			-----	-862.59	155	-113	-222	-907	152	56	271	134	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.178	1	Yes	0.809	0.151	0.96	Yes	1.00	**1.75**
		U_{12} - U_{13}			-----	-1169.09	-27	-162	-475	-1146	172	-72	292	35	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.202	1	Yes	0.781	0.158	0.94	Yes	1.00	**1.90**
		U_{13} - U_{14}			-----	-1350.42	-409	-336	-259	-1706	293	23	85	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1	Yes	0.774	0.188	0.97	Yes	1.00	**1.89**
		U_{14} - U_{15}			-----	-1358.11	-244	-180	-1156	-1222	185	-48	185	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1	Yes	0.779	0.135	0.92	Yes	1.00	**1.91**
		U_{15} - U_{16}			-----	-1378.44	-600	-347	-737	-1355	268	-77	57	-335	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.195	1	Yes	0.790	0.149	0.94	Yes	1.00	**1.84**
		U_{16} - U_{17}			-----	-1339.70	-412	-99	-591	-1272	240	-312	-343	-449	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.218	1	Yes	0.768	0.140	0.91	Yes	1.00	**2.94**
		U_{17} - U_{18}			-----	-1105.67	-627	218	-200	-543	-91	-400	-201	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.122	1	Yes	0.865	0.102	0.97	Yes	1.00	**2.47**
		U_{18} - U_{19}			-----	-708.50	-281	120	-688	-301	-244	-222	-1	-309	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.195	1	Yes	0.797	0.138	0.94	Yes	1.00	**1.96**
		U_{19} - U_{20}			-----	-517.20	-1144	1281	59	-2050	-338	-171	-72	-922	-----	-----	-----	-----	-----	-----	-----	-----	0.587	0.307	0.9	Yes	0.582	0.412	1.00	Yes	1.00	**4.95**
	Structure 2	U_0 - U_1			-----	-588.38	181	-142	874	-1782	96	195	-10	-286	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.210	0.91	Yes	0.695	0.302	1.00	Yes	1.00	**3.30**
		U_1 - U_2			-----	-784.99	-105	-146	-88	-1078	344	660	208	283	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1	Yes	0.758	0.164	0.93	Yes	1.00	**1.84**
		U_2 - U_3			-----	-1139.33	-81	-212	42	-1650	608	4	579	51	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.185	1	Yes	0.809	0.168	0.98	Yes	1.00	**2.06**
		U_3 - U_4			-----	-1312.24	-370	-269	-1315	-1915	204	-392	263	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.240	1	Yes	0.747	0.171	0.92	Yes	1.00	**1.85**
		U_4 - U_5			-----	-1480.20	-361	-319	-587	-2310	-68	-359	68	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.226	1	Yes	0.760	0.191	0.96	Yes	1.00	**1.96**
		U_5 - U_6			-----	-1540.14	-377	18	-971	-1460	-118	-302	-118	-464	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.194	1	Yes	0.791	0.121	0.92	Yes	1.00	**2.13**
		U_6 - U_7			-----	-1315.24	-268	-74	-1175	-1960	-88	-265	-17	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.749	0.175	0.93	Yes	1.00	**1.81**
		U_7 - U_8			-----	-1339.00	-150	-191	-1652	-1293	-188	-223	-206	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.230	1	Yes	0.762	0.147	0.91	Yes	1.00	**1.95**
		U_8 - U_9			-----	-1135.83	-283	184	-591	-1196	-147	-85	-252	-479	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.221	1	Yes	0.770	0.127	0.90	Yes	1.00	**2.67**
		U_9 - U_{10}			151.65	-936.79	-86	325	-1305	-600	-166	-40	-161	-186	0.111	0.179	0.30	Yes	0.075	0.121	0.20	Yes	0.813	0.181	1	Yes	0.808	0.159	0.97	Yes	1.00	**2.27**
		U_{10} - U_{11}			525.34	-786.26	116	385	-1196	-750	-146	-58	-217	-264	0.444	0.201	0.65	Yes	0.302	0.130	0.44	Yes	0.786	0.211	1	Yes	0.781	0.169	0.96	Yes	1.00	**3.08**
		U_{11} - U_{12}			-----	-685.36	-2234	1330	-624	-1137	-230	-805	-585	-930	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.231	0.92	Yes	0.681	0.315	1.00	Yes	1.00	**9.06**
		U_{12} - U_{13}			797.48	-211.23	164	232	-1411	-2772	-852	-1146	-896	-490	0.539	0.458	1.00	Yes	0.384	0.312	0.70	Yes	0.169	0.491	0.67	Yes	0.168	0.349	0.52	Yes	1.00	**6.32**
		U_{13} - U_{14}			344.45	-----	-6424	8249	-474	1358	-956	-198	-630	-332	0.169	0.829	1.00	Yes	0.120	0.543	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.32**
		U_{14} - U_{15}			1047.27	-----	1495	213	4741	-2801	-556	-186	-120	640	0.515	0.483	1.00	Yes	0.365	0.316	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		U_{15} - U_{16}			1110.54	-----	241	587	66	-2155	-149	237	498	928	0.671	0.323	1.00	Yes	0.478	0.218	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		U_{16} - U_{17}			922.43	-159.15	653	313	867	-2037	182	62	572	211	0.680	0.316	1.00	Yes	0.452	0.208	0.67	Yes	0.139	0.132	0.28	Yes	0.138	0.256	0.40	Yes	1.00	**4.08**
		U_{17} - U_{18}			711.10	-426.12	472	344	422	-1522	-39	-5	162	29	0.714	0.282	1.00	Yes	0.475	0.187	0.67	Yes	0.506	0.142	0.65	Yes	0.503	0.258	0.77	Yes	1.00	**3.67**
		U_{18} - U_{19}			427.46	-636.06	465	195	-213	-1409	-64	-52	177	-19	0.429	0.265	0.70	Yes	0.282	0.168	0.45	Yes	0.756	0.205	0.97	Yes	0.751	0.239	1.00	Yes	1.00	**2.86**
		U_{19} - U_{20}			227.64	-693.09	283	153	-562	-1195	-36	75	103	70	0.213	0.205	0.42	Yes	0.142	0.135	0.28	Yes	0.770	0.221	1	Yes	0.765	0.191	0.96	Yes	1.00	**2.35**
		U_{20} - U_{21}			67.74	-876.21	-35	145	5	-1367	58	-92	103	-201	0.053	0.220	0.28	Yes	0.037	0.141	0.18	Yes	0.806	0.187	1	Yes	0.800	0.198	1.00	Yes	1.00	**2.51**
		U_{21} - U_{22}			51.74	-804.18	-13	15	-824	-1405	-16	-51	59	-37	0.040	0.210	0.26	Yes	0.028	0.139	0.17	Yes	0.739	0.258	1	Yes	0.734	0.203	0.94	Yes	1.00	**2.07**
		U_{22} - U_{23}			57.41	-818.23	-10	-20	-925	-1181	-73	-103	-38	-167	0.045	0.189	0.24	Yes	0.032	0.126	0.16	Yes	0.752	0.243	1	Yes	0.747	0.171	0.92	Yes	1.00	**2.16**
		U_{23} - U_{24}			204.45	-831.16	35	160	-48	-1376	-250	-113	-229	-427	0.159	0.246	0.41	Yes	0.111	0.159	0.28	Yes	0.764	0.232	1	Yes	0.759	0.199	0.96	Yes	1.00	**3.06**
		U_{24} - U_{25}			209.02	-704.83	114	240	-860	-825	-235	-35	-134	-152	0.196	0.169	0.37	Yes	0.130	0.111	0.25	Yes	0.783	0.213	1	Yes	0.778	0.138	0.92	Yes	1.00	**2.23**
		U_{25} - U_{26}			-----	-693.11	-986	716	-109	-1038	-90	-49	-249	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.116	0.94	Yes	0.819	0.176	1.00	Yes	1.00	**4.37**
		U_{26} - U_{27}			-----	-641.67	-1165	892	-178	-1389	-166	-127	-402	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.169	0.94	Yes	0.758	0.236	1.00	Yes	1.00	**6.10**
		U_{27} - U_{28}			-----	-626.40	-3608	3177	486	-2911	-488	-1001	-943	-1246	-----	-----	-----	-----	-----	-----	-----	-----	0.546	0.384	0.94	Yes	0.543	0.453	1.00	Yes	1.00	**15.35**
		U_{28} - U_{29}			998.17	-46.93	-98	365	-1679	-2798	-789	-509	-926	-468	0.603	0.396	1.00	Yes	0.429	0.267	0.70	Yes	0.034	0.439	0.48	Yes	0.033	0.318	0.36	Yes	1.00	**6.03**
		U_{29} - U_{30}			476.56	-----	-5525	7753	-142	1187	-672	103	-56	420	0.234	0.764	1.00	Yes	0.166	0.500	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.31**
		U_{30} - U_{31}			1047.04	-----	1434	112	4705	-3036	-448	-213	212	616	0.515	0.478	1.00	Yes	0.365	0.313	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		U_{31} - U_{32}			1064.06	-----	139	498	-324	-1564	-53	216	590	831	0.719	0.276	1.00	Yes	0.512	0.189	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		U_{32} - U_{33}			790.83	-368.59	530	287	481	-1782	185	46	624	162	0.668	0.328	1.00	Yes	0.449	0.219	0.67	Yes	0.369	0.196	0.57	Yes	0.366	0.251	0.62	Yes	1.00	**3.59**
		U_{33} - U_{34}			560.45	-773.84	404	264	74	-1627	59	35	232	11	0.473	0.258	0.74	Yes	0.322	0.166	0.49	Yes	0.774	0.199	0.98	Yes	0.769	0.230	1.00	Yes	1.00	**3.40**
		U_{34} - U_{35}			227.38	-912.77	357	-12	89	-1669	115	-5	174	-139	0.167	0.222	0.39	Yes	0.113	0.151	0.27	Yes	0.792	0.165	0.96	Yes	0.788	0.203	1.00	Yes	1.00	**2.32**
		U_{35} - U_{36}			-----	-1197.95	172	-205	-144	-1534	73	32	234	199	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.173	1	Yes	0.813	0.163	0.98	Yes	1.00	**2.49**
		U_{36} - U_{37}			-----	-1302.20	-135	-45	-927	-2194	166	-47	261	25	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.246	1	Yes	0.741	0.196	0.94	Yes	1.00	**1.96**
		U_{37} - U_{38}			-----	-1367.35	55	-219	-1422	-1720	11	1	115	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.206	1	Yes	0.779	0.153	0.94	Yes	1.00	**2.15**
		U_{38} - U_{39}			-----	-1490.99	30	-399	-1423	-2070	79	-106	161	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.223	1	Yes	0.766	0.172	0.94	Yes	1.00	**2.10**
		U_{39} - U_{40}			-----	-1448.38	-695	-406	-1815	-1857	58	-177	-131	-301	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.243	1	Yes	0.744	0.154	0.90	Yes	1.00	**2.00**
		U_{40} - U_{41}			-----	-1324.37	-495	-421	-1535	-1635	25	-261	-246	-332	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.238	1	Yes	0.754	0.146	0.90	Yes	1.00	**1.93**
		U_{41} - U_{42}			-----	-1241.27	-856	203	-737	-1009	-102	-203	-165	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.108	1	Yes	0.881	0.103	0.99	Yes	1.00	**2.71**
		U_{42} - U_{43}			-----	-821.19	-415	120	-1109	-544	4	-156	208	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.199	1	Yes	0.793	0.168	0.97	Yes	1.00	**2.53**
		U_{43} - U_{44}			-----	-479.19	-1131	1107	-4	-1787	-368	-170	-54	-766	-----	-----	-----	-----	-----	-----	-----	-----	0.569	0.421	1	Yes	0.566	0.303	0.87	Yes	1.00	**4.70**
	Structure 3	U_0 - U_1			-----	-612.20	181	-173	568	-1529	62	144	-48	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.208	0.91	Yes	0.689	0.308	1.00	Yes	1.00	**3.37**
		U_1 - U_2			-----	-691.90	-69	-113	38	-778	259	534	198	288	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.212	1	Yes	0.778	0.157	0.94	Yes	1.00	**1.65**
		U_2 - U_3			-----	-1019.92	-77	-115	184	-1051	517	7	615	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1	Yes	0.798	0.171	0.97	Yes	1.00	**1.89**
		U_3 - U_4			-----	-1372.90	-137	-193	-324	-1508	131	-257	324	283	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.196	1	Yes	0.787	0.166	0.96	Yes	1.00	**2.29**
		U_4 - U_5			-----	-1375.28	-317	-34	-327	-1340	-19	-315	38	-512	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.200	1	Yes	0.788	0.148	0.94	Yes	1.00	**2.06**
		U_5 - U_6			-----	-1329.87	-144	-214	-382	-1727	-61	-218	-114	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.227	1	Yes	0.762	0.191	0.96	Yes	1.00	**2.08**
		U_6 - U_7			-----	-1354.21	-274	-46	-487	-1230	-136	-257	-156	-489	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.776	0.136	0.92	Yes	1.00	**2.85**
		U_7 - U_8			-----	-1190.09	-644	106	-153	-990	98	-187	-260	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1	Yes	0.795	0.137	0.94	Yes	1.00	**2.59**
		U_8 - U_9			43.32	-817.80	-73	291	-218	-733	-108	-74	-253	-401	0.035	0.170	0.21	Yes	0.023	0.114	0.14	Yes	0.774	0.219	1	Yes	0.767	0.122	0.89	Yes	1.00	**3.11**
		U_9 - U_{10}			-----	-604.53	-982	433	-471	-330	-160	-342	-232	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.201	0.98	Yes	0.771	0.220	1.00	Yes	1.00	**3.84**
		U_{10} - U_{11}			-----	-302.96	-1493	1598	825	-2699	-1240	-886	-950	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.390	0.520	0.91	Yes	0.387	0.605	1.00	Yes	1.00	**20.67**
		U_{11} - U_{12}			320.23	-----	-3931	3913	-178	612	-610	-11	-295	9	0.262	0.734	1.00	Yes	0.179	0.500	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.41**
		U_{12} - U_{13}			854.11	-----	843	113	2381	-1614	-447	-87	-124	386	0.592	0.406	1.00	Yes	0.413	0.277	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		U_{13} - U_{14}			778.90	-109.78	221	359	191	-855	-160	277	161	499	0.745	0.250	1.00	Yes	0.521	0.172	0.70	Yes	0.125	0.268	0.4	Yes	0.124	0.182	0.31	Yes	1.00	**3.17**
		U_{14} - U_{15}			599.17	-429.67	399	233	483	-1036	48	152	343	5	0.687	0.304	1.00	Yes	0.463	0.199	0.67	Yes	0.585	0.140	0.73	Yes	0.579	0.246	0.83	Yes	1.00	**2.91**
		U_{15} - U_{16}			307.62	-565.19	257	133	-375	-761	-7	142	142	167	0.353	0.209	0.57	Yes	0.242	0.143	0.39	Yes	0.769	0.229	1	Yes	0.762	0.181	0.95	Yes	1.00	**2.13**
		U_{16} - U_{17}			318.79	-576.07	302	77	-312	-813	39	65	153	-22	0.365	0.219	0.59	Yes	0.251	0.150	0.41	Yes	0.784	0.209	1	Yes	0.777	0.193	0.98	Yes	1.00	**2.25**
		U_{17} - U_{18}			-----	-514.47	112	-63	297	-1265	-44	-129	-113	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.221	0.93	Yes	0.694	0.301	1.00	Yes	1.00	**3.19**
		U_{18} - U_{19}			-----	-548.65	-55	28	-795	-464	-15	124	134	29	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.246	1	Yes	0.740	0.189	0.93	Yes	1.00	**1.87**
		U_{19} - U_{20}			-----	-497.60	-567	525	-742	-1034	45	-85	343	-429	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.318	1	Yes	0.671	0.246	0.92	Yes	1.00	**3.17**

Moment (End) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-70.24	-284	168	1140	-2890	48	165	-163	-625	-----	-----	-----	-----	-----	-----	-----	-----	0.128	0.634	0.77	Yes	0.126	0.867	1.00	Yes	1.00	**10.93**
		L_1 - L_2	432.51	-16.39	47	-5	-133	-730	25	17	-515	169	0.662	0.330	1.00	Yes	0.404	0.217	0.63	Yes	0.030	0.224	0.26	Yes	0.030	0.219	0.25	Yes	1.00	**1.96**
		L_2 - L_3	672.79	-78.36	-28	73	-630	-880	12	-6	-84	-22	0.774	0.226	1.00	Yes	0.448	0.136	0.59	Yes	0.107	0.257	0.37	Yes	0.106	0.213	0.32	Yes	1.00	**2.21**
		L_3 - L_4	576.45	-285.83	78	325	94	-1239	-12	19	-198	3	0.663	0.331	1.00	Yes	0.394	0.214	0.61	Yes	0.391	0.235	0.63	Yes	0.387	0.299	0.69	Yes	1.00	**3.21**
		L_4 - L_5	472.74	-----	-1241	702	-488	-526	-128	55	-288	48	0.612	0.380	1.00	Yes	0.367	0.249	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		L_5 - L_6	-----	-749.24	140	581	-218	-199	11	74	-85	16	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.122	1	Yes	0.864	0.128	1.00	Yes	1.00	**2.65**
		L_6 - L_7	-----	-745.91	-2511	1197	-1528	-2533	95	-131	-17	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.182	0.79	Yes	0.600	0.398	1.00	Yes	1.00	**9.26**
		L_7 - L_8	-----	-1096.82	-837	2252	-23	574	110	91	31	72	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.255	0.96	Yes	0.695	0.298	1.00	Yes	1.00	**4.07**
		L_8 - L_9	-----	-1100.65	801	132	2229	-1214	-4	-28	-31	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.234	0.95	Yes	0.697	0.295	1.00	Yes	1.00	**5.88**
		L_9 - L_{10}	-----	-956.59	230	183	114	-1426	36	55	186	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.143	0.93	Yes	0.770	0.224	1.00	Yes	1.00	**4.95**
		L_{10} - L_{11}	300.40	-505.32	434	-12	-44	-845	91	18	-56	-28	0.389	0.240	0.63	Yes	0.227	0.145	0.38	Yes	0.777	0.153	0.94	Yes	0.770	0.224	1.00	Yes	1.00	**3.30**
		L_{11} - L_{12}	591.71	-114.98	332	-182	131	-800	-28	20	-84	100	0.766	0.229	1.00	Yes	0.460	0.151	0.62	Yes	0.177	0.129	0.31	Yes	0.175	0.212	0.39	Yes	1.00	**2.15**
		L_{12} - L_{13}	1042.48	-----	67	-95	-351	-927	-21	-38	-107	65	0.823	0.177	1.00	Yes	0.526	0.105	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.46**
		L_{13} - L_{14}	1289.41	-----	223	-390	-178	-1576	-105	65	-223	132	0.758	0.236	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		L_{14} - L_{15}	1636.51	-----	-1159	49	-848	-1386	7	161	-337	-130	0.800	0.191	1.00	Yes	0.520	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
		L_{15} - L_{16}	1576.25	-----	-363	-320	-790	-1715	47	168	-260	-186	0.770	0.225	1.00	Yes	0.494	0.131	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		L_{16} - L_{17}	1240.06	-----	-1344	290	-1137	-683	-120	21	-165	66	0.784	0.212	1.00	Yes	0.509	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.76**
		L_{17} - L_{18}	927.48	-----	-556	363	-624	-540	-37	38	-306	-548	0.808	0.190	1.00	Yes	0.517	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		L_{18} - L_{19}	403.04	-----	-972	526	-474	9	-127	0	-160	401	0.617	0.375	1.00	Yes	0.417	0.236	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.77**
		L_{19} - L_{20}	258.29	-47.13	-1424	756	-227	28	822	184	-4	-1	0.395	0.598	1.00	Yes	0.241	0.396	0.64	Yes	0.086	0.343	0.43	Yes	0.085	0.427	0.52	Yes	1.00	**5.28**
	Structure 2	L_0 - L_1	-----	-150.73	-205	163	1237	-3817	24	69	-582	-2066	-----	-----	-----	-----	-----	-----	-----	-----	0.217	0.771	0.99	Yes	0.215	0.777	1.00	Yes	1.00	**12.50**
		L_1 - L_2	548.74	-----	156	-207	243	-1228	85	108	-506	289	0.666	0.333	1.00	Yes	0.396	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.70**
		L_2 - L_3	1005.01	-----	-19	-133	-224	-1293	129	175	26	18	0.792	0.206	1.00	Yes	0.519	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		L_3 - L_4	1303.43	-----	55	-312	-281	-1816	46	122	-60	221	0.766	0.230	1.00	Yes	0.516	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.69**
		L_4 - L_5	1690.30	-----	-231	-215	-1142	-2094	16	-14	-26	112	0.788	0.205	1.00	Yes	0.522	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		L_5 - L_6	1791.84	-----	-28	-336	-1389	-2408	-95	59	-245	66	0.769	0.229	1.00	Yes	0.516	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		L_6 - L_7	1840.22	-----	-363	-74	-2049	-2362	53	-14	-27	113	0.779	0.215	1.00	Yes	0.518	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		L_7 - L_8	1411.54	-61.35	-159	286	-1076	-1452	-66	78	-326	-162	0.809	0.187	1.00	Yes	0.532	0.111	0.65	Yes	0.042	0.225	0.27	Yes	0.041	0.160	0.21	Yes	1.00	**2.97**
		L_8 - L_9	1181.07	-----	-714	627	-1131	-761	83	84	-189	114	0.826	0.170	1.00	Yes	0.556	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
		L_9 - L_{10}	916.29	-748.38	-48	756	-794	-940	36	136	-219	-180	0.818	0.177	1.00	Yes	0.476	0.110	0.59	Yes	0.791	0.148	0.94	Yes	0.786	0.150	0.94	Yes	1.00	**4.43**
		L_{10} - L_{11}	726.04	-----	-1330	1204	-1213	-830	50	14	-272	-147	0.725	0.269	1.00	Yes	0.425	0.169	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		L_{11} - L_{12}	292.00	-901.75	-1349	1906	-1349	-1068	98	196	-89	-366	0.204	0.294	0.50	Yes	0.135	0.175	0.32	Yes	0.745	0.164	0.91	Yes	0.739	0.260	1.00	Yes	1.00	**8.11**
		L_{12} - L_{13}	-----	-981.81	-25	199	-1344	-3207	-590	-538	-49	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.592	0.399	1	Yes	0.587	0.319	0.91	Yes	1.00	**5.45**
		L_{13} - L_{14}	-----	-1169.16	-2614	4706	-477	1289	-11	12	-223	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.594	0.266	0.86	Yes	0.588	0.411	1.00	Yes	1.00	**4.82**
		L_{14} - L_{15}	-----	-1275.01	1514	-377	4093	-2837	251	210	-197	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.214	0.87	Yes	0.642	0.357	1.00	Yes	1.00	**4.37**
		L_{15} - L_{16}	-----	-1234.42	-397	490	-1812	-2036	-43	145	-32	112	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.247	1	Yes	0.738	0.202	0.95	Yes	1.00	**4.97**
		L_{16} - L_{17}	-----	-1108.51	1063	162	680	-1516	198	55	-27	124	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.168	0.99	Yes	0.807	0.187	1.00	Yes	1.00	**4.31**
		L_{17} - L_{18}	-----	-789.42	484	213	250	-1067	17	-43	-55	106	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.071	0.91	Yes	0.829	0.171	1.00	Yes	1.00	**2.85**
		L_{18} - L_{19}	210.47	-611.88	614	83	69	-924	-41	-72	21	9	0.238	0.189	0.43	Yes	0.138	0.113	0.26	Yes	0.821	0.141	0.97	Yes	0.815	0.178	1.00	Yes	1.00	**2.75**
		L_{19} - L_{20}	632.36	-525.52	502	163	-29	-1385	-80	-38	-65	85	0.716	0.280	1.00	Yes	0.424	0.180	0.61	Yes	0.705	0.155	0.86	Yes	0.700	0.267	0.97	Yes	1.00	**3.38**
		L_{20} - L_{21}	943.20	-374.36	384	14	-699	-1641	1	-36	-76	-13	0.752	0.248	1.00	Yes	0.493	0.146	0.64	Yes	0.354	0.226	0.58	Yes	0.351	0.240	0.60	Yes	1.00	**3.39**
		L_{21} - L_{22}	867.09	-81.77	93	-82	-656	-1973	-50	58	-149	158	0.691	0.305	1.00	Yes	0.462	0.190	0.66	Yes	0.077	0.262	0.34	Yes	0.077	0.288	0.37	Yes	1.00	**2.57**
		L_{22} - L_{23}	926.36	-180.68	-136	196	-818	-1560	24	-37	-241	-81	0.739	0.254	1.00	Yes	0.494	0.159	0.66	Yes	0.171	0.300	0.48	Yes	0.170	0.228	0.40	Yes	1.00	**2.77**
		L_{23} - L_{24}	964.96	-351.72	3	337	-980	-1450	-6	73	-146	-122	0.770	0.227	1.00	Yes	0.505	0.135	0.64	Yes	0.332	0.277	0.61	Yes	0.330	0.212	0.55	Yes	1.00	**3.42**
		L_{24} - L_{25}	702.14	-----	-431	522	-754	-885	146	96	-178	-70	0.795	0.198	1.00	Yes	0.471	0.126	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		L_{25} - L_{26}	651.08	-23.43	-878	949	-723	-1173	118	218	-109	-223	0.738	0.260	1.00	Yes	0.426	0.155	0.59	Yes	0.031	0.122	0.16	Yes	0.031	0.226	0.26	Yes	1.00	**5.23**
		L_{26} - L_{27}	641.96	-676.14	-1380	1758	-1579	-1664	241	149	-276	129	0.573	0.314	0.89	Yes	0.334	0.196	0.53	Yes	0.715	0.167	0.89	Yes	0.710	0.281	1.00	Yes	1.00	**8.73**
		L_{27} - L_{28}	-----	-1037.20	-929	1958	-797	-480	188	333	-195	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.185	0.95	Yes	0.755	0.242	1.00	Yes	1.00	**5.78**
		L_{28} - L_{29}	-----	-1027.42	170	107	-1317	-3547	-140	-271	-49	42	-----	-----	-----	-----	-----	-----	-----	-----	0.620	0.378	1	Yes	0.615	0.353	0.97	Yes	1.00	**5.72**
		L_{29} - L_{30}	-----	-1231.01	-2473	4252	-503	1162	78	147	107	147	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.226	0.86	Yes	0.619	0.371	1.00	Yes	1.00	**4.20**
		L_{30} - L_{31}	-----	-1225.95	1141	-256	4310	-3060	-371	-265	-70	15	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.234	0.86	Yes	0.617	0.376	1.00	Yes	1.00	**4.66**
		L_{31} - L_{32}	-----	-1236.04	-196	341	-1332	-1754	-172	-44	124	193	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.254	1	Yes	0.739	0.174	0.92	Yes	1.00	**4.28**
		L_{32} - L_{33}	-----	-1008.26	920	93	429	-1271	29	-40	120	85	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.142	0.98	Yes	0.827	0.173	1.00	Yes	1.00	**3.60**
		L_{33} - L_{34}	154.86	-682.23	508	114	323	-1097	-20	12	5	191	0.155	0.218	0.38	Yes	0.091	0.137	0.23	Yes	0.807	0.098	0.91	Yes	0.801	0.192	1.00	Yes	1.00	**2.76**
		L_{34} - L_{35}	810.58	-686.79	695	1	-64	-1582	-6	-70	-15	179	0.724	0.275	1.00	Yes	0.421	0.171	0.60	Yes	0.726	0.179	0.91	Yes	0.721	0.253	0.98	Yes	1.00	**4.01**
		L_{35} - L_{36}	1112.50	-319.48	506	-64	-64	-1463	-83	14	-213	137	0.778	0.217	1.00	Yes	0.524	0.135	0.66	Yes	0.265	0.139	0.41	Yes	0.263	0.197	0.47	Yes	1.00	**3.13**
		L_{36} - L_{37}	1303.10	-21.05	309	-69	-432	-2122	15	-3	27	161	0.747	0.247	1.00	Yes	0.491	0.144	0.64	Yes	0.014	0.220	0.24	Yes	0.014	0.234	0.25	Yes	1.00	**2.63**
		L_{37} - L_{38}	1761.88	-----	10	-429	-629	-2673	-66	55	-314	-36	0.746	0.254	1.00	Yes	0.496	0.149	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
		L_{38} - L_{39}	1853.32	-----	-351	-65	-1761	-2180	1	-58	-149	77	0.795	0.203	1.00	Yes	0.534	0.123	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		L_{39} - L_{40}	1640.76	-----	-957	-90	-1075	-2266	115	217	-233	-198	0.765	0.230	1.00	Yes	0.506	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.21**
		L_{40} - L_{41}	1360.80	-----	-865	294	-1510	-1098	13	20	-194	-24	0.800	0.192	1.00	Yes	0.538	0.119	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.21**
		L_{41} - L_{42}	1040.71	-----	-716	372	-926	-834	33	135	-151	-392	0.820	0.176	1.00	Yes	0.538	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		L_{42} - L_{43}	523.64	-----	-1303	512	-692	-188	-10	157	-114	597	0.636	0.363	1.00	Yes	0.378	0.231	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		L_{43} - L_{44}	40.47	-74.86	-3204	1122	-15	-89	1816	523	-87	-21	0.049	0.950	1.00	Yes	0.029	0.601	0.64	Yes	0.108	0.637	0.75	Yes	0.107	0.652	0.76	Yes	1.00	**10.71**
	Structure 3	L_0 - L_1	33.54	-176.70	-52	4	1033	-2269	-8	4	-238	-1122	0.051	0.914	0.97	Yes	0.031	0.607	0.64	Yes	0.321	0.551	0.88	Yes	0.318	0.681	1.00	Yes	1.00	**8.92**
		L_1 - L_2	455.24	-----	157	-187	280	-760	37	63	-343	270	0.697	0.299	1.00	Yes	0.471	0.189	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		L_2 - L_3	920.49	-----	-22	-138	-58	-918	87	132	23	18	0.802	0.194	1.00	Yes	0.513	0.116	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		L_3 - L_4	1211.41	-----	50	-302	-163	-1413	34	120	-52	218	0.766	0.227	1.00	Yes	0.497	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		L_4 - L_5	1650.82	-----	-271	-129	-1244	-1503	24	14	67	100	0.807	0.188	1.00	Yes	0.518	0.109	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		L_5 - L_6	1528.05	-----	-31	-312	-662	-1913	-62	132	-68	272	0.747	0.250	1.00	Yes	0.485	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		L_6 - L_7	1286.14	-----	-1638	454	-931	-791	-13	147	-198	91	0.756	0.242	1.00	Yes	0.490	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		L_7 - L_8	1046.40	-----	-278	127	-515	-775	77	249	-140	-14	0.826	0.166	1.00	Yes	0.528	0.100	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**
		L_8 - L_9	634.01	-----	-585	447	-464	-293	69	-22	-99	65	0.821	0.172	1.00	Yes	0.493	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
		L_9 - L_{10}	382.46	-564.82	-23	513	-518	-336	-19	17	14	25	0.495	0.142	0.64	Yes	0.288	0.086	0.38	Yes	0.868	0.107	0.98	Yes	0.861	0.137	1.00	Yes	1.00	**3.53**
		L_{10} - L_{11}	-----	-976.78	-881	1022	-881	-1323	277	-222	58	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.075	0.87	Yes	0.786	0.208	1.00	Yes	1.00	**6.69**
		L_{11} - L_{12}	-----	-1144.29	-821	2022	-55	534	56	-22	-84	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.225	0.96	Yes	0.725	0.268	1.00	Yes	1.00	**4.61**
		L_{12} - L_{13}	-----	-1145.17	864	93	2030	-967	-331	-265	-161	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.243	0.98	Yes	0.725	0.269	1.00	Yes	1.00	**4.39**
		L_{13} - L_{14}	-----	-1021.06	118	256	-67	-1123	-114	-66	-61	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.144	0.98	Yes	0.822	0.176	1.00	Yes	1.00	**3.66**
		L_{14} - L_{15}	17.40	-728.24	555	153	81	-678	54	-45	-63	86	0.017	0.161	0.18	Yes	0.011	0.098	0.11	Yes	0.849	0.139	0.99	Yes	0.840	0.150	1.00	Yes	1.00	**2.85**
		L_{15} - L_{16}	295.19	-492.70	448	129	141	-925	6	-71	-106	208	0.382	0.282	0.67	Yes	0.229	0.185	0.42	Yes	0.757	0.142	0.9	Yes	0.751	0.245	1.00	Yes	1.00	**2.31**
		L_{16} - L_{17}	609.23	-----	-366	44	57	-1096	60	-12	-165	-66	0.701	0.291	1.00	Yes	0.416	0.189	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		L_{17} - L_{18}	608.55	-----	-26	1	-332	-975	173	370	-72	-59	0.700	0.295	1.00	Yes	0.405	0.176	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		L_{18} - L_{19}	433.77	-----	-895	187	-416	-641	44	37	-46	279	0.664	0.329	1.00	Yes	0.405	0.220	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		L_{19} - L_{20}	20.67	-3.74	-2489	1457	74	-178	989	276	-134	-41	0.032	0.959	1.00	Yes	0.019	0.583	0.61	Yes	0.007	0.559	0.57	Yes	0.007	0.747	0.76	Yes	1.00	**10.12**

Moment (End) AB Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-336.60	-136	182	-22	45	-569	-183	-94	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.246	1	Yes	0.712	0.233	0.95	Yes	1.00	**0.82**
		$U_1 - L_1$	20.29	-349.54	-181	202	20	-15	-381	-91	46	20	0.036	0.368	0.41	Yes	0.020	0.203	0.23	Yes	0.764	0.170	0.94	Yes	0.740	0.258	1.00	Yes	1.00	**1.84**
		$U_2 - L_2$	80.22	-266.96	-306	338	125	-118	112	118	-131	-24	0.144	0.469	0.62	Yes	0.079	0.258	0.34	Yes	0.583	0.144	0.73	Yes	0.565	0.431	1.00	Yes	1.00	**3.66**
		$U_3 - L_3$	262.70	-222.51	-285	303	283	-279	68	236	-466	-190	0.472	0.522	1.00	Yes	0.260	0.287	0.55	Yes	0.488	0.200	0.69	Yes	0.471	0.387	0.86	Yes	1.00	**4.07**
		$U_4 - L_4$	35.58	-56.56	-253	217	677	-650	163	234	-159	-170	0.064	0.933	1.00	Yes	0.035	0.513	0.55	Yes	0.124	0.252	0.38	Yes	0.120	0.865	0.99	Yes	1.00	**7.36**
		$U_5 - L_5$	-----	-420.65	21	-36	250	-269	-119	-43	-75	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.102	0.87	Yes	0.726	0.272	1.00	Yes	1.00	**2.06**
		$U_6 - L_6$	-----	-518.48	55	-57	263	-286	-97	13	-46	15	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.090	0.88	Yes	0.744	0.250	1.00	Yes	1.00	**1.99**
		$U_7 - L_7$	-----	-452.35	118	-132	273	-300	-129	46	29	75	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.118	0.88	Yes	0.698	0.296	1.00	Yes	1.00	**1.13**
		$U_8 - L_8$	-----	-1275.56	-411	489	504	-602	-211	-57	-140	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.921	0.056	0.98	Yes	0.884	0.112	1.00	Yes	1.00	**2.75**
		$U_9 - L_9$	-----	-671.12	-374	432	-166	190	-249	-190	-224	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.128	0.93	Yes	0.758	0.240	1.00	Yes	1.00	**1.49**
		$U_{10} - L_{10}$	-----	-821.22	-304	366	-115	100	-264	-181	-257	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.113	0.97	Yes	0.810	0.190	1.00	Yes	1.00	**2.36**
		$U_{11} - L_{11}$	-----	-679.73	-325	447	-69	148	-114	19	-126	12	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.087	0.91	Yes	0.791	0.207	1.00	Yes	1.00	**2.28**
		$U_{12} - L_{12}$	-----	-513.43	-345	339	-40	53	-56	104	-93	57	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.093	0.84	Yes	0.704	0.295	1.00	Yes	1.00	**2.24**
		$U_{13} - L_{13}$	-----	-362.34	-240	261	2	17	-15	138	-85	84	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.104	0.84	Yes	0.694	0.297	1.00	Yes	1.00	**1.76**
		$U_{14} - L_{14}$	105.51	-60.69	-573	613	342	-341	19	54	59	78	0.190	0.807	1.00	Yes	0.104	0.444	0.55	Yes	0.135	0.213	0.35	Yes	0.128	0.784	0.92	Yes	1.00	**7.03**
		$U_{15} - L_{15}$	245.09	-307.95	-200	193	249	-266	-110	-135	-31	-177	0.441	0.391	0.84	Yes	0.242	0.215	0.46	Yes	0.690	0.162	0.86	Yes	0.652	0.340	1.00	Yes	1.00	**2.95**
		$U_{16} - L_{16}$	93.54	-311.00	-49	33	260	-263	-58	-78	-128	-192	0.168	0.391	0.56	Yes	0.093	0.215	0.31	Yes	0.701	0.160	0.87	Yes	0.658	0.336	1.00	Yes	1.00	**2.16**
		$U_{17} - L_{17}$	-----	-433.27	33	-55	231	-244	-89	-50	-76	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.108	0.92	Yes	0.747	0.247	1.00	Yes	1.00	**1.78**
		$U_{18} - L_{18}$	-----	-530.26	121	-126	448	-455	-160	-62	72	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.093	0.87	Yes	0.738	0.257	1.00	Yes	1.00	**1.99**
		$U_{19} - L_{19}$	-----	-643.11	137	-149	521	-527	-67	9	54	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.073	0.88	Yes	0.749	0.245	1.00	Yes	1.00	**2.12**
		$U_{20} - L_{20}$	-----	-634.27	164	-211	423	-541	21	3	236	31	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1	Yes	0.738	0.251	0.99	Yes	1.00	**1.71**
	Structure 2	$U_0 - L_0$	-----	-601.34	-419	496	-115	180	-1335	-226	-261	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.276	1	Yes	0.644	0.210	0.86	Yes	1.00	**1.47**
		$U_1 - L_1$	-----	-713.71	-543	546	-109	117	-5	6	43	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.069	0.89	Yes	0.765	0.232	1.00	Yes	1.00	**2.39**
		$U_2 - L_2$	-----	-581.21	-491	489	-79	88	1	84	99	44	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.080	0.86	Yes	0.741	0.251	1.00	Yes	1.00	**2.31**
		$U_3 - L_3$	-----	-486.71	-254	258	-41	47	-12	133	20	130	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.094	0.93	Yes	0.763	0.235	1.00	Yes	1.00	**2.14**
		$U_4 - L_4$	3.79	-335.24	-227	224	15	8	-60	126	-56	100	0.007	0.327	0.34	Yes	0.004	0.180	0.19	Yes	0.760	0.094	0.86	Yes	0.709	0.290	1.00	Yes	1.00	**2.02**
		$U_5 - L_5$	155.66	-323.76	-227	244	137	-114	-44	150	-128	78	0.280	0.355	0.64	Yes	0.154	0.195	0.35	Yes	0.731	0.115	0.85	Yes	0.685	0.311	1.00	Yes	1.00	**2.66**
		$U_6 - L_6$	362.60	-215.49	-235	240	240	-241	-87	129	-129	93	0.652	0.346	1.00	Yes	0.359	0.190	0.55	Yes	0.485	0.091	0.58	Yes	0.456	0.308	0.77	Yes	1.00	**3.44**
		$U_7 - L_7$	21.38	-158.68	-229	244	453	-513	-88	104	-165	-100	0.038	0.704	0.75	Yes	0.021	0.387	0.41	Yes	0.358	0.228	0.59	Yes	0.336	0.656	1.00	Yes	1.00	**7.04**
		$U_8 - L_8$	-----	-458.15	22	-42	377	-386	-103	-107	-202	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.664	0.128	0.8	Yes	0.660	0.338	1.00	Yes	1.00	**2.06**
		$U_9 - L_9$	-----	-687.70	80	-115	611	-613	-129	-106	-101	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.082	0.85	Yes	0.737	0.260	1.00	Yes	1.00	**2.67**
		$U_{10} - L_{10}$	-----	-791.88	107	-144	562	-578	-53	10	-53	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.083	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**2.80**
		$U_{11} - L_{11}$	-----	-810.56	158	-172	529	-530	-47	-137	-118	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.083	0.9	Yes	0.758	0.234	1.00	Yes	1.00	**2.45**
		$U_{12} - L_{12}$	-----	-881.07	159	-152	547	-548	-2	54	83	101	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.087	0.94	Yes	0.764	0.235	1.00	Yes	1.00	**2.48**
		$U_{13} - L_{13}$	-----	-752.17	242	-240	569	-564	-87	42	79	88	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.116	0.96	Yes	0.725	0.272	1.00	Yes	1.00	**1.88**
		$U_{14} - L_{14}$	-----	-1296.05	-504	468	634	-605	-41	147	-93	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.948	0.047	1	Yes	0.859	0.112	0.98	Yes	1.00	**2.90**
		$U_{15} - L_{15}$	-----	-735.64	-598	590	-165	166	-152	-95	-80	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.139	0.96	Yes	0.709	0.286	1.00	Yes	1.00	**2.25**
		$U_{16} - L_{16}$	-----	-739.60	-477	483	-128	102	-284	-142	-166	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.103	0.96	Yes	0.793	0.205	1.00	Yes	1.00	**2.13**
		$U_{17} - L_{17}$	-----	-646.71	-514	517	-129	126	-137	-42	-99	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.082	0.88	Yes	0.753	0.240	1.00	Yes	1.00	**2.21**
		$U_{18} - L_{18}$	-----	-572.47	-520	523	-98	99	-99	4	-82	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.078	0.85	Yes	0.729	0.267	1.00	Yes	1.00	**2.38**
		$U_{19} - L_{19}$	-----	-473.63	-300	290	-44	49	-116	33	-155	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.096	0.81	Yes	0.707	0.289	1.00	Yes	1.00	**2.04**
		$U_{20} - L_{20}$	-----	-376.52	-237	240	13	3	-71	67	-171	5	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.112	0.89	Yes	0.721	0.275	1.00	Yes	1.00	**2.04**
	Structure 3	$U_{21} - L_{21}$	83.23	-314.54	-246	257	51	-50	-103	68	-158	26	0.150	0.374	0.53	Yes	0.082	0.206	0.29	Yes	0.711	0.126	0.84	Yes	0.666	0.328	1.00	Yes	1.00	**2.40**
		$U_{22} - L_{22}$	89.17	-161.79	-486	512	402	-422	17	150	20	25	0.160	0.698	0.86	Yes	0.088	0.384	0.48	Yes	0.364	0.200	0.57	Yes	0.342	0.654	1.00	Yes	1.00	**7.89**
		$U_{23} - L_{23}$	129.38	-311.54	-102	93	254	-264	-65	-45	-125	-119	0.233	0.373	0.61	Yes	0.128	0.205	0.34	Yes	0.704	0.135	0.84	Yes	0.659	0.337	1.00	Yes	1.00	**2.41**
		$U_{24} - L_{24}$	67.23	-369.59	-39	29	251	-255	-72	-62	-55	-71	0.109	0.310	0.42	Yes	0.060	0.171	0.24	Yes	0.758	0.099	0.86	Yes	0.708	0.292	1.00	Yes	1.00	**2.17**
		$U_{25} - L_{25}$	-----	-468.25	20	-34	305	-299	-79	2	-44	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.082	0.79	Yes	0.699	0.293	1.00	Yes	1.00	**2.09**
		$U_{26} - L_{26}$	-----	-563.68	88	-109	533	-550	-86	-4	-140	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.092	0.85	Yes	0.718	0.282	1.00	Yes	1.00	**2.21**
		$U_{27} - L_{27}$	-----	-627.12	142	-144	573	-574	-150	0	-47	29	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.084	0.86	Yes	0.730	0.266	1.00	Yes	1.00	**2.18**
		$U_{28} - L_{28}$	-----	-705.41	132	-129	565	-556	-32	-24	55	91	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.075	0.89	Yes	0.756	0.240	1.00	Yes	1.00	**2.25**
		$U_{29} - L_{29}$	-----	-710.70	205	-210	644	-631	-115	25	24	69	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.124	0.92	Yes	0.685	0.308	1.00	Yes	1.00	**2.23**
		$U_{30} - L_{30}$	-----	-1293.46	-613	548	665	-657	-162	68	-22	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.946	0.052	1	Yes	0.858	0.118	0.98	Yes	1.00	**3.09**
		$U_{31} - L_{31}$	-----	-768.81	-523	519	-183	179	-174	-90	-119	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.134	1	Yes	0.741	0.250	1.00	Yes	1.00	**1.95**
		$U_{32} - L_{32}$	-----	-904.62	-494	494	-127	101	-268	-122	-185	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.120	0.99	Yes	0.784	0.212	1.00	Yes	1.00	**2.70**
		$U_{33} - L_{33}$	-----	-840.80	-449	467	-162	144	-125	0	-136	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.080	0.93	Yes	0.786	0.206	1.00	Yes	1.00	**2.46**
		$U_{34} - L_{34}$	-----	-799.28	-549	555	-118	129	-92	79	-162	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.083	0.88	Yes	0.747	0.245	1.00	Yes	1.00	**2.94**
		$U_{35} - L_{35}$	-----	-701.87	-576	580	-108	125	10	170	-182	37	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.074	0.86	Yes	0.752	0.246	1.00	Yes	1.00	**2.80**
		$U_{36} - L_{36}$	-----	-467.68	-360	369	-41	54	-50	126	-156	66	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.096	0.78	Yes	0.674	0.323	1.00	Yes	1.00	**2.22**
		$U_{37} - L_{37}$	2.47	-141.81	-483	540	154	-164	-51	158	-184	-33	0.004	0.744	0.75	Yes	0.002	0.409	0.42	Yes	0.320	0.234	0.56	Yes	0.300	0.691	1.00	Yes	1.00	**6.44**
		$U_{38} - L_{38}$	350.99	-139.14	-240	247	165	-164	-71	-104	-139	-169	0.631	0.364	1.00	Yes	0.347	0.200	0.55	Yes	0.313	0.134	0.45	Yes	0.294	0.316	0.61	Yes	1.00	**2.57**
		$U_{39} - L_{39}$	254.06	-315.86	-196	183	237	-253	-110	-107	-29	-141	0.457	0.364	0.83	Yes	0.251	0.200	0.46	Yes	0.714	0.146	0.86	Yes	0.668	0.324	1.00	Yes	1.00	**2.95**
		$U_{40} - L_{40}$	99.56	-331.83	-53	31	229	-227	-83	-39	-60	-108	0.179	0.324	0.51	Yes	0.098	0.178	0.28	Yes	0.753	0.115	0.87	Yes	0.702	0.292	1.00	Yes	1.00	**2.22**
		$U_{41} - L_{41}$	-----	-478.44	43	-50	258	-265	-104	-43	-110	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.103	0.92	Yes	0.750	0.242	1.00	Yes	1.00	**2.04**
		$U_{42} - L_{42}$	-----	-572.38	102	-112	518	-516	-84	-49	97	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.081	0.85	Yes	0.729	0.265	1.00	Yes	1.00	**2.16**
		$U_{43} - L_{43}$	-----	-706.79	136	-153	549	-563	-40	-19	250	17	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.098	0.91	Yes	0.757	0.239	1.00	Yes	1.00	**2.28**
		$U_{44} - L_{44}$	-----	-691.83	191	-237	457	-596	-36	-6	232	39	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.144	0.98	Yes	0.741	0.253	1.00	Yes	1.00	**1.75**
	Structure 4	$U_0 - L_0$	-----	-574.09	-357	452	-103	167	-823	-108	-245	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1	Yes	0.668	0.210	0.88	Yes	1.00	**1.50**
		$U_1 - L_1$	-----	-652.59	-517	511	-108	115	55	19	6	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.074	0.89	Yes	0.760	0.240	1.00	Yes	1.00	**2.41**
		$U_2 - L_2$	-----	-537.48	-426	433	-90	95	-84	59	85	32	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.077	0.87	Yes	0.748	0.245	1.00	Yes	1.00	**2.12**
		$U_3 - L_3$	-----	-441.63	-213	226	-32	44	37	183	0	120	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.115	0.95	Yes	0.762	0.229	1.00	Yes	1.00	**1.94**
		$U_4 - L_4$	57.89	-315.31	-259	259	36	-16	-103	173	-128	126	0.104	0.381	0.49	Yes	0.057	0.210	0.27	Yes	0.711	0.105	0.82	Yes	0.667	0.331	1.00	Yes	1.00	**2.34**
		$U_5 - L_5$	166.76	-300.23	-266	281	135	-128	-88	165	-168	71	0.300	0.407	0.71	Yes	0.165	0.224	0.39	Yes	0.673	0.129	0.81	Yes	0.635	0.359	1.00	Yes	1.00	**2.94**
		$U_6 - L_6$	-----	-73.25	-429	450	634	-661	56	121	-301	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.163	0.275	0.44	Yes	0.155	0.845	1.00	Yes	1.00	**8.04**
		$U_7 - L_7$	24.87	-356.89	-31	19	250	-269	-175	-141	-154	-167	0.040	0.352	0.40	Yes	0.022	0.194	0.22	Yes	0.722	0.142	0.87	Yes	0.684	0.307	1.00	Yes	1.00	**1.90**
		$U_8 - L_8$	-----	-511.97	16	-20	339	-340	-136	-103	-238	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.133	0.88	Yes	0.702	0.291	1.00	Yes	1.00	**2.32**
		$U_9 - L_9$	-----	-650.14	68	-117	415	-506	-93	-143	-197	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.106	0.89	Yes	0.757	0.235	1.00	Yes	1.00	**2.48**
		$U_{10} - L_{10}$	-----	-778.82	102	-98	412	-437	-13	86	27	96	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.071	0.88	Yes	0.768	0.227	1.00	Yes	1.00	**2.62**
		$U_{11} - L_{11}$	-----	-652.60	182	-212	396	-467	-51	62	146	141	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.116	0.9	Yes	0.737	0.260	1.00	Yes	1.00	**1.55**
		$U_{12} - L_{12}$	-----	-1276.63	-404	434	433	-567	52	75	-127	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.922	0.048	0.97	Yes	0.885	0.106	1.00	Yes	1.00	**2.69**
		$U_{13} - L_{13}$	-----	-460.96	-269	289	-105	115	-160	-107	-113	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.138	0.91	Yes	0.711	0.285	1.00	Yes	1.00	**1.28**
		$U_{14} - L_{14}$	-----	-544.63	-216	245	-62	54	-269	-155	-191	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.132	0.96	Yes	0.781	0.214	1.00	Yes	1.00	**1.76**
		$U_{15} - L_{15}$	-----	-449.85	-182	216	-41	47	-173	-18	-164	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.107	0.93	Yes	0.776	0.219	1.00	Yes	1.00	**1.78**
		$U_{16} - L_{16}$	94.26	-135.66	-558	542	153	-123	-110	46	-344	-207	0.170	0.812	0.99	Yes	0.093	0.447	0.54	Yes	0.298	0.255	0.56	Yes	0.287	0.713	1.00	Yes	1.00	**6.08**
		$U_{17} - L_{17}$	289.37	-175.91	-289	300	174	-194	-112	-24	-310	-252	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.385	0.180	0.57	Yes	0.372	0.384	0.76	Yes	1.00	**3.19**
		$U_{18} - L_{18}$	80.25	-271.67	-120	124	294	-327	112	10	-212	-162	0.144	0.479	0.63	Yes	0.079	0.264	0.35	Yes	0.594	0.174	0.77	Yes	0.575	0.418	1.00	Yes	1.00	**3.16**
		$U_{19} - L_{19}$	21.70	-315.65	-35	23	259	-252	-169	-90	-140	-113	0.039	0.380	0.42	Yes	0.021	0.209	0.24	Yes	0.690	0.125	0.82	Yes	0.668	0.332	1.00	Yes	1.00	**2.16**
		$U_{20} - L_{20}$	-----	-352.09	48	-56	155	-194	-170	-54	359	115	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.189	0.98	Yes	0.745	0.248	1.00	Yes	1.00	**0.80**

Moment (End) AB Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Inventory Loads - HS20 Truck																																	
					Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression															
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating									
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass										
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																									
Center Truss - Diagonals	Structure 1	$U_0 - L_1$			294.88	-113.56	-237	140	25	-20	-1311	-81	-26	-14	0.387	0.607	1.00	Yes	0.234	0.334	0.57	Yes	0.194	0.416	0.61	Yes	0.175	0.277	0.46	Yes	1.00	**4.18**							
		$U_1 - L_2$			358.00	-----	-70	44	-40	-43	14	-105	-914	-432	0.644	0.355	1.00	Yes	0.354	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**							
		$U_2 - L_3$			384.20	-317.43	-70	45	-43	-96	-151	-393	-415	-243	0.691	0.243	0.94	Yes	0.380	0.133	0.52	Yes	0.731	0.263	1	Yes	0.672	0.122	0.80	Yes	1.00	**3.96**							
		$U_3 - L_4$			-----	-376.98	8	-10	1	-68	-119	-55	-150	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.133	1	Yes	0.798	0.087	0.89	Yes	1.00	**1.98**							
		$U_4 - L_4$			580.24	-----	-74	71	-97	-27	-65	-197	-177	-200	0.851	0.145	1.00	Yes	0.468	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**							
		$U_4 - L_5$			708.00	-----	-182	249	-93	40	56	-98	-36	-9	0.837	0.160	1.00	Yes	0.460	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.67**							
		$U_5 - L_6$			646.92	-----	-299	244	-78	85	325	147	295	170	0.765	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**							
		$U_6 - L_7$			657.66	-----	-111	292	-8	115	303	154	241	173	0.778	0.221	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**							
		$U_8 - L_9$			1005.57	-----	-108	356	-2	136	257	211	96	111	0.804	0.192	1.00	Yes	0.498	0.107	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**							
		$U_9 - L_{10}$			1046.06	-----	-297	285	-97	85	174	129	89	104	0.836	0.155	1.00	Yes	0.518	0.086	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**							
		$U_{10} - L_{11}$			1032.16	-----	-225	220	-169	37	-99	-163	101	-82	0.872	0.126	1.00	Yes	0.540	0.070	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**							
		$U_{11} - L_{12}$			842.46	-----	-236	157	-140	-35	-324	-344	-301	-243	0.833	0.161	1.00	Yes	0.458	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**							
		$U_{12} - L_{13}$			619.32	-----	-185	170	-64	1	-387	-353	-349	-279	0.755	0.237	1.00	Yes	0.475	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**							
		$U_{13} - L_{14}$			444.25	-45.29	-77	58	1	-39	-284	-337	-294	-320	0.799	0.196	1.00	Yes	0.439	0.108	0.55	Yes	0.105	0.151	0.26	Yes	0.096	0.098	0.20	Yes	1.00	**2.04**							
		$U_{15} - L_{14}$			259.67	-335.83	-58	11	66	-105	-222	-342	-197	-301	0.467	0.234	0.71	Yes	0.257	0.128	0.39	Yes	0.787	0.211	1	Yes	0.711	0.135	0.85	Yes	1.00	**2.40**							
		$U_{16} - L_{15}$			414.81	-192.98	-133	96	30	-67	-249	-279	-199	-182	0.746	0.251	1.00	Yes	0.410	0.138	0.55	Yes	0.457	0.183	0.65	Yes	0.408	0.170	0.58	Yes	1.00	**2.62**							
		$U_{17} - L_{16}$			542.26	-----	-145	116	-25	-16	-149	-246	-183	-132	0.795	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**							
		$U_{18} - L_{17}$			657.60	-----	-328	274	-104	55	-154	-155	-135	-69	0.777	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**							
		$U_{19} - L_{18}$			718.41	-----	-369	262	-89	64	-173	-170	-151	-19	0.778	0.217	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**							
		$U_{20} - L_{19}$			617.97	-----	-408	312	-127	106	-716	-113	1	34	0.669	0.327	1.00	Yes	0.368	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.98**							
	Structure 2	$U_0 - L_1$			640.12	-----	-447	367	-66	75	-1004	-166	-121	50	0.633	0.358	1.00	Yes	0.348	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**							
		$U_1 - L_2$			787.97	-----	-412	306	-86	58	-112	-166	43	11	0.780	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**							
		$U_2 - L_3$			653.56	-----	-323	259	-65	49	-202	-233	-76	-178	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**							
		$U_3 - L_4$			577.93	-----	-170	143	-38	-1	-321	-303	-268	-207	0.770	0.223	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**							
		$U_4 - L_5$			413.00	-119.46	-120	98	11	-46	-354	-296	-287	-213	0.743	0.255	1.00	Yes	0.409	0.140	0.55	Yes	0.295	0.190	0.49	Yes	0.253	0.153	0.41	Yes	1.00	**2.36**							
		$U_5 - L_6$			384.21	-313.48	-109	71	86	-117	-431	-302	-365	-246	0.691	0.274	0.97	Yes	0.380	0.151	0.54	Yes	0.740	0.256	1	Yes	0.663	0.150	0.82	Yes	1.00	**2.78**							
		$U_6 - L_7$			75.23	-372.83	-27	-1	67	-102	-323	-277	-273	-258	0.123	0.201	0.33	Yes	0.067	0.111	0.18	Yes	0.798	0.199	1	Yes	0.714	0.117	0.84	Yes	1.00	**1.82**							
		$U_8 - L_7$			618.07	-41.59	-174	153	-5	-35	-138	-271	-185	-246	0.788	0.211	1.00	Yes	0.496	0.119	0.62	Yes	0.069	0.098	0.17	Yes	0.062	0.156	0.22	Yes	1.00	**2.57**							
		$U_9 - L_8$			733.83	-----	-327	276	-104	11	-128	-206	-187	-160	0.795	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**							
		$U_{10} - L_9$			841.25	-----	-312	254	-87	38	-53	-150	-20	-61	0.832	0.167	1.00	Yes	0.458	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**							
		$U_{11} - L_{10}$			910.21	-----	-363	310	-119	87	56	-63	62	32	0.829	0.163	1.00	Yes	0.456	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**							
		$U_{12} - L_{11}$			890.76	-----	-361	357	-107	135	165	68	246	159	0.811	0.187	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**							
		$U_{13} - L_{12}$			738.06	-----	-436	370	-199	170	266	124	411	247	0.730	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.66**							
		$U_{14} - L_{13}$			765.35	-----	-282	434	-65	176	273	156	232	137	0.757	0.242	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**							
		$U_{14} - L_{15}$			639.85	-----	-217	365	-1	102	161	93	49	36	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**							
		$U_{15} - L_{16}$			641.00	-----	-373	334	-111	104	121	89	62	69	0.758	0.233	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**							
		$U_{16} - L_{17}$			747.82	-----	-358	353	-73	98	9	-7	9	5	0.810	0.185	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**							
		$U_{17} - L_{18}$			682.95	-----	-298	289	-73	75	-77	-73	-76	-20	0.807	0.183	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**							
		$U_{18} - L_{19}$			682.12	-----	-282	248	-43	38	-150	-148	-109	-98	0.806	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**							
		$U_{19} - L_{20}$			603.03	-2.24	-188	195	-12	-7	-266	-232	-175	-140	0.769	0.229	1.00	Yes	0.423	0.129	0.56	Yes	0.004	0.104	0.11	Yes	0.003	0.174	0.18	Yes	1.00	**2.58**							
		$U_{20} - L_{21}$			433.51	-55.02	-116	108	9	-24	-227	-172	-215	-152	0.780	0.214	1.00	Yes	0.429	0.118	0.55	Yes	0.131	0.110	0.25	Yes	0.116	0.148	0.27	Yes	1.00	**2.05**							
		$U_{21} - L_{22}$			442.33	-258.92	-95	76	45	-81	-259	-275	-232	-238	0.796	0.201	1.00	Yes	0.438	0.111	0.55	Yes	0.612	0.167	0.78	Yes	0.548	0.121	0.67	Yes	1.00	**2.98**							
		$U_{23} - L_{22}$			429.58	-354.96	-100	69	70	-100	-95	-246	-169	-241	0.773	0.199	0.98	Yes	0.425	0.109	0.54	Yes	0.845	0.153	1	Yes	0.751	0.128	0.88	Yes	1.00	**3.36**							
		$U_{24} - L_{23}$			446.55	-96.63	-120	114	27	-39	-59	-127	-56	-83	0.803	0.190	1.00	Yes	0.442	0.104	0.55	Yes	0.231	0.067	0.3	Yes	0.204	0.153	0.36	Yes	1.00	**2.40**							
		$U_{25} - L_{24}$			623.41	-28.62	-200	195	7	-26	21	-92	-13	-56	0.795	0.198	1.00	Yes	0.437	0.110	0.55	Yes	0.048	0.053	0.11	Yes	0.043	0.179	0.23	Yes	1.00	**2.73**							
		$U_{26} - L_{25}$			689.48	-----	-296	272	-34	21	60	-27	25	16	0.815	0.179	1.00	Yes	0.448	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**							
		$U_{27} - L_{26}$			673.58	-----	-293	299	-57	69	151	33	157	82	0.796	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**							
		$U_{28} - L_{27}$			719.17	-----	-334	361	-83	104	212	111	185	109	0.779	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**							
		$U_{29} - L_{28}$			625.51	-----	-372	327	-125	119	251	118	217	110	0.740	0.256	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.69**							
		$U_{30} - L_{29}$			638.54	-----	-220	357	-38	127	216	75	177	102	0.755	0.241	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.94**							
		$U_{30} - L_{31}$			775.38	-----	-285	445	-26	133	122	68	62	38	0.767	0.225	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**							
		$U_{31} - L_{32}$			778.73	-----	-458	386	-129	130	56	39	36	47	0.770	0.221	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**							
		$U_{32} - L_{33}$			907.77	-----	-365	344	-100	119	-118	-98	-60	-22	0.827	0.171	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**							
		$U_{33} - L_{34}$			902.40	-----	-335	312	-104	72	-250	-231	-173	-131	0.822	0.177	1.00	Yes	0.452	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**							
		$U_{34} - L_{35}$			816.44	-----	-281	245	-86	43	-355	-334	-223	-223	0.808	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**							
		$U_{35} - L_{36}$			713.94	-----	-305	277	-84	7	-382	-325	-402	-285	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**							
		$U_{36} - L_{37}$			607.86	-----	-160	167	-18	-21	-354	-365	-294	-320	0.775	0.224	1.00	Yes	0.488	0.127	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**							
		$U_{38} - L_{37}$			31.14	-390.61	-22	-10	75	-101	-131	-227	-157	-229	0.051	0.175	0.23	Yes	0.028	0.096	0.13	Yes	0.844	0.150	1	Yes	0.748	0.115	0.87	Yes	1.00	**1.68**							
		$U_{39} - L_{38}$			291.89	-343.32	-84	55	77	-112	-174	-234	-205	-183	0.525	0.211	0.74	Yes	0.289	0.116	0.41	Yes	0.818	0.175	1	Yes	0.726	0.143	0.87	Yes	1.00	**2.47**							
		$U_{40} - L_{39}$			429.33	-188.24	-129	101	43	-69	-131	-204	-88	-112	0.772	0.224	1.00	Yes	0.425	0.123	0.55	Yes	0.451	0.139	0.59	Yes	0.398	0.165	0.57	Yes	1.00	**2.70**							
		$U_{41} - L_{40}$			596.71	-----	-187	142	-25	-15	-100	-163	-103	-59	0.795	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**							
		$U_{42} - L_{41}$			667.30	-----	-333	283	-70	47	-75	-94	-3	-3	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.39**							
		$U_{43} - L_{42}$			800.40	-----	-390	328	-91	61	-65	-119	-8	-32	0.792	0.199	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**							
		$U_{44} - L_{43}$			733.65	-----	-406	367	-138	121	-523	-197	34	5	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**							
	Structure 3	$U_0 - L_1$			590.66	-----	-432	318	-68	71	-837	-201	-131	45	0.640	0.359	1.00	Yes	0.352	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**							
		$U_1 - L_2$			721.05	-----	-363	253	-91	57	-61	-149	37	13	0.781	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**							
		$U_2 - L_3$			639.82	-----	-333	242	-78	48	-256	-267	-74	-167	0.756	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**							
		$U_3 - L_4$			528.83	-----	-142	99	-19	-13	-324	-315	-302	-219	0.775	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**							
		$U_4 - L_5$			404.66	-159.29	-117	99	19	-54	-396	-331	-309	-239	0.728	0.265	1.00	Yes	0.400	0.146	0.55	Yes	0.378	0.203	0.59	Yes	0.337	0.150	0.49	Yes	1.00	**2.51**							
		$U_5 - L_6$			273.59	-313.01	-56	18	43	-101	-408	-378	-385	-336	0.492	0.247	0.74	Yes	0.271	0.136	0.41	Yes	0.733	0.264	1	Yes	0.662	0.129	0.80	Yes	1.00	**2.34**							
		$U_7 - L_6$			450.57	-53.46	-80	47	11	-36	-107	-279	-98	-241	0.810	0.183	1.00	Yes	0.446	0.101	0.55	Yes	0.124	0.115	0.24	Yes	0.113	0.103	0.22	Yes	1.00	**2.02**							
		$U_8 - L_7$			637.90	-62.29	-193	168	-67	-17	-154	-239	-172	-181	0.778	0.215	1.00	Yes	0.489	0.121	0.62	Yes	0.098	0.101	0.2	Yes	0.089	0.169	0.26	Yes	1.00	**2.40**							
		$U_8 - L_9$			850.52	-----	-269	142	-153	-48	-71	-219	-72	-134	0.841	0.158	1.00	Yes	0.463	0.087	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**							
		$U_{10} - L_9$			1028.17	-----	-246	203	-149	29	95	-35	-97	-7	0.868	0.126	1.00	Yes	0.538	0.070	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**							
		$U_{11} - L_{10}$			1002.49	-----	-306	270	-101	87	451	291	307	198	0.801	0.194	1.00	Yes	0.496	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.70**							
		$U_{12} - L_{11}$			979.44	-----	-107	367	-13	141	396	274	279	210	0.783	0.214	1.00	Yes	0.485	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.46**							
		$U_{12} - L_{13}$			660.15	-----	-118	310	-3	106	187	124	114	93	0.780	0.211	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**							
		$U_{13} - L_{14}$			677.76	-----	-291	231	-71	76	146	98	93	118	0.801	0.192	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**							
		$U_{14} - L_{15}$			700.42	-----	-167	238	-36	39	-148	-190	-9	-13	0.828	0.170	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**							
		$U_{15} - L_{16}$			572.82	-----	-62	95	-84	-30	-236	-261	-273	-230	0.840	0.160	1.00	Yes	0.462	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**							
		$U_{17} - L_{16}$			-----	-383.45	5	-9	3	-66	16	-74	-155	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.120	1	Yes	0.811	0.084	0.90	Yes	1.00	**1.95**							
		$U_{18} - L_{17}$			387.03	-202.50	-79	35	-73	-114	-27	-518	-513	-233	0.696	0.295	1.00	Yes	0.383	0.162	0.55	Yes	0.466	0.250	0.72	Yes	0.428	0.145	0.58	Yes	1.00	**4.37**							
		$U_{19} - L_{18}$			424.17	-----	-84	41	-78	-46	51	-125	-438	-258	0.763	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**							
		$U_{20} - L_{19}$			474.98	-24.11	-177	90	-20	1	-674	-138	33	-3	0.623	0.376	1.00	Yes	0.376	0.207	0.59	Yes	0.041	0.243	0.29	Yes	0.037	0.206	0.25	Yes	1.00	**2.48**							

Moment (End) AB Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$	25.67	-558.66	-140	91	611	-1013	-73	128	138	-779	0.029	0.372	0.41	Yes	0.020	0.255	0.28	Yes	0.760	0.178	0.94	Yes	0.753	0.241	1.00	Yes	1.00	**3.51**
		$U_1 - U_2$	34.28	-534.83	-101	102	-378	-723	-160	131	116	-494	0.039	0.255	0.30	Yes	0.027	0.175	0.21	Yes	0.728	0.272	1	Yes	0.721	0.172	0.90	Yes	1.00	**1.92**
		$U_2 - U_3$	182.04	-553.17	-90	309	-390	-479	-117	124	-315	-514	0.209	0.201	0.41	Yes	0.141	0.133	0.28	Yes	0.753	0.238	1	Yes	0.746	0.114	0.86	Yes	1.00	**2.15**
		$U_3 - U_4$	516.06	-598.12	159	429	-502	-567	-224	-4	5	-414	0.592	0.205	0.80	Yes	0.406	0.140	0.55	Yes	0.814	0.180	1	Yes	0.807	0.135	0.95	Yes	1.00	**3.20**
		$U_4 - U_5$	548.28	-573.89	226	436	-726	-364	-86	-4	-472	374	0.628	0.252	0.89	Yes	0.431	0.173	0.61	Yes	0.781	0.218	1	Yes	0.774	0.173	0.95	Yes	1.00	**3.39**
		$U_5 - U_6$	717.28	-----	292	513	-18	88	100	148	-75	292	0.822	0.171	1.00	Yes	0.555	0.112	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_6 - U_7$	895.60	-----	414	228	72	-96	333	285	-210	291	0.856	0.134	1.00	Yes	0.599	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		$U_7 - U_8$	793.89	-----	-892	2170	220	469	261	635	1162	934	0.550	0.447	1.00	Yes	0.384	0.306	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_8 - U_9$	802.01	-----	1041	-130	1608	-1047	246	479	193	-566	0.657	0.339	1.00	Yes	0.450	0.231	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_9 - U_{10}$	670.00	-353.24	253	274	85	-757	-9	318	518	-632	0.727	0.271	1.00	Yes	0.492	0.182	0.68	Yes	0.455	0.182	0.64	Yes	0.451	0.170	0.63	Yes	1.00	**4.22**
		$U_{10} - U_{11}$	85.05	-619.39	258	-166	193	-898	46	111	-86	-474	0.092	0.277	0.37	Yes	0.061	0.179	0.25	Yes	0.798	0.196	1	Yes	0.790	0.201	1.00	Yes	1.00	**2.12**
		$U_{11} - U_{12}$	-----	-912.36	157	-206	27	-802	12	104	-6	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.129	1	Yes	0.856	0.133	0.99	Yes	1.00	**1.55**
		$U_{12} - U_{13}$	-----	-1275.51	-44	-266	-337	-743	81	9	266	-476	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.137	1	Yes	0.852	0.102	0.96	Yes	1.00	**1.81**
		$U_{13} - U_{14}$	-----	-1385.97	-195	-504	-595	-1397	-43	-8	49	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.189	1	Yes	0.795	0.154	0.95	Yes	1.00	**1.64**
		$U_{14} - U_{15}$	-----	-1403.68	-400	-288	-1177	-791	42	-276	-230	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1	Yes	0.805	0.130	0.94	Yes	1.00	**1.73**
		$U_{15} - U_{16}$	-----	-1422.12	-251	-423	-597	-1052	-25	-229	-424	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.171	1	Yes	0.815	0.116	0.94	Yes	1.00	**2.22**
		$U_{16} - U_{17}$	-----	-1406.55	-373	-190	-1179	-745	1	-222	-294	260	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1	Yes	0.806	0.130	0.94	Yes	1.00	**2.54**
		$U_{17} - U_{18}$	-----	-1105.96	-662	109	-345	-257	-20	-203	-316	662	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.119	1	Yes	0.865	0.108	0.98	Yes	1.00	**2.51**
		$U_{18} - U_{19}$	-----	-719.26	-759	110	-405	-57	162	-180	640	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.177	1	Yes	0.809	0.153	0.97	Yes	1.00	**2.47**
		$U_{19} - U_{20}$	-----	-655.81	-1274	633	-359	-209	-332	-117	104	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.241	0.99	Yes	0.738	0.256	1.00	Yes	1.00	**7.54**
	Structure 2	$U_0 - U_1$	-----	-590.95	263	-303	1011	-1744	70	47	307	-725	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.160	0.87	Yes	0.698	0.296	1.00	Yes	1.00	**4.03**
		$U_1 - U_2$	-----	-834.34	-150	-315	-167	-1029	-22	25	-15	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.187	1	Yes	0.805	0.156	0.97	Yes	1.00	**2.13**
		$U_2 - U_3$	-----	-1146.49	-136	-419	-389	-1411	-35	-55	207	-678	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.180	1	Yes	0.814	0.144	0.96	Yes	1.00	**2.07**
		$U_3 - U_4$	-----	-1371.71	-531	-540	-905	-1557	-116	-38	-110	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.204	1	Yes	0.781	0.139	0.92	Yes	1.00	**1.70**
		$U_4 - U_5$	-----	-1508.35	-582	-553	-1427	-1612	-123	-86	70	-674	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.774	0.134	0.91	Yes	1.00	**1.77**
		$U_5 - U_6$	-----	-1548.85	-566	9	-1140	-1247	-197	-46	-564	-641	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.189	1	Yes	0.795	0.103	0.90	Yes	1.00	**2.00**
		$U_6 - U_7$	-----	-1377.65	-310	-201	-1089	-1362	-172	-92	-209	-399	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.204	1	Yes	0.784	0.121	0.91	Yes	1.00	**1.98**
		$U_7 - U_8$	-----	-1367.95	-337	-189	-1502	-1053	-80	-179	-374	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.207	1	Yes	0.779	0.134	0.92	Yes	1.00	**2.02**
		$U_8 - U_9$	-----	-1172.11	-346	228	-1325	-578	-11	-186	-569	22	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1	Yes	0.795	0.141	0.94	Yes	1.00	**2.30**
		$U_9 - U_{10}$	547.25	-915.99	69	716	-1029	-496	-94	-166	-844	-28	0.401	0.217	0.62	Yes	0.272	0.146	0.42	Yes	0.795	0.204	1	Yes	0.790	0.125	0.92	Yes	1.00	**4.05**
		$U_{10} - U_{11}$	820.15	-510.03	329	607	-1173	-331	-172	-94	-1111	25	0.693	0.301	1.00	Yes	0.471	0.199	0.68	Yes	0.510	0.253	0.77	Yes	0.507	0.166	0.68	Yes	1.00	**3.92**
		$U_{11} - U_{12}$	94.91	-669.23	-2120	1526	-2364	-400	-705	-1098	-1665	479	0.080	0.536	0.62	Yes	0.054	0.358	0.42	Yes	0.669	0.326	1	Yes	0.665	0.334	1.00	Yes	1.00	**13.01**
		$U_{12} - U_{13}$	1073.76	-----	758	319	2	-1259	354	909	-863	1166	0.725	0.270	1.00	Yes	0.517	0.186	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.52**
		$U_{13} - U_{14}$	1088.86	-----	-1646	4154	95	1176	280	949	798	1106	0.535	0.460	1.00	Yes	0.379	0.302	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{14} - U_{15}$	1297.27	-----	2399	-44	3400	-1176	528	665	610	9	0.638	0.360	1.00	Yes	0.452	0.236	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		$U_{15} - U_{16}$	1337.62	-----	145	414	-178	-1291	177	423	-37	-472	0.809	0.187	1.00	Yes	0.575	0.126	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{16} - U_{17}$	1073.78	-----	676	223	723	-1037	-32	324	-180	-694	0.791	0.203	1.00	Yes	0.526	0.134	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{17} - U_{18}$	751.70	-244.33	488	259	393	-1078	-59	287	-222	-395	0.755	0.241	1.00	Yes	0.502	0.159	0.67	Yes	0.290	0.108	0.4	Yes	0.289	0.183	0.48	Yes	1.00	**3.03**
		$U_{18} - U_{19}$	571.57	-682.23	586	159	129	-1127	4	158	134	-732	0.574	0.299	0.88	Yes	0.376	0.191	0.57	Yes	0.811	0.171	0.99	Yes	0.806	0.191	1.00	Yes	1.00	**3.31**
		$U_{19} - U_{20}$	236.34	-736.61	269	104	-467	-932	-55	132	330	-385	0.222	0.201	0.43	Yes	0.147	0.132	0.28	Yes	0.818	0.179	1	Yes	0.813	0.149	0.97	Yes	1.00	**2.33**
		$U_{20} - U_{21}$	19.42	-851.39	-77	10	-254	-943	-74	-16	-243	-642	0.015	0.207	0.23	Yes	0.011	0.136	0.15	Yes	0.783	0.211	1	Yes	0.777	0.137	0.92	Yes	1.00	**2.41**
		$U_{21} - U_{22}$	7.69	-833.31	-108	-75	-581	-1136	-183	-102	-167	-230	0.006	0.190	0.20	Yes	0.004	0.127	0.14	Yes	0.766	0.228	1	Yes	0.761	0.165	0.93	Yes	1.00	**2.14**
		$U_{22} - U_{23}$	0.30	-829.03	-74	-121	-1119	-787	-54	-166	-202	-6	0.000	0.184	0.19	Yes	0.000	0.123	0.13	Yes	0.762	0.236	1	Yes	0.757	0.162	0.92	Yes	1.00	**2.16**
		$U_{23} - U_{24}$	259.15	-836.33	-114	275	-278	-985	6	-69	-497	167	0.201	0.197	0.40	Yes	0.141	0.129	0.27	Yes	0.769	0.226	1	Yes	0.763	0.143	0.91	Yes	1.00	**3.59**
		$U_{24} - U_{25}$	429.94	-726.02	268	413	-708	-684	-13	-57	-503	258	0.403	0.181	0.59	Yes	0.267	0.119	0.39	Yes	0.806	0.190	1	Yes	0.801	0.113	0.92	Yes	1.00	**3.67**
		$U_{25} - U_{26}$	735.45	-530.32	239	689	-804	-204	25	-25	-826	-56	0.738	0.257	1.00	Yes	0.484	0.166	0.65	Yes	0.630	0.233	0.87	Yes	0.626	0.136	0.77	Yes	1.00	**4.42**
		$U_{26} - U_{27}$	-----	-529.14	-1627	1496	-136	-1289	-1006	-469	-1548	1923	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.368	1	Yes	0.625	0.276	0.91	Yes	1.00	**14.84**
		$U_{27} - U_{28}$	875.40	-----	-1169	1886	-590	-354	-230	-553	-1046	559	0.645	0.347	1.00	Yes	0.429	0.228	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.31**
		$U_{28} - U_{29}$	1329.51	-----	71	275	-779	-973	-62	280	-966	773	0.804	0.192	1.00	Yes	0.572	0.132	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.04**
		$U_{29} - U_{30}$	1164.08	-----	-699	3631	164	1399	615	1094	1007	1327	0.572	0.427	1.00	Yes	0.405	0.281	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{30} - U_{31}$	1264.55	-----	2359	-215	3509	-1550	587	611	687	-278	0.622	0.372	1.00	Yes	0.440	0.244	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_{31} - U_{32}$	1236.79	-----	96	375	-161	-907	203	397	-4	-450	0.835	0.157	1.00	Yes	0.595	0.107	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{32} - U_{33}$	856.10	-202.52	595	149	492	-1182	8	226	-166	-856	0.723	0.271	1.00	Yes	0.486	0.181	0.67	Yes	0.202	0.143	0.35	Yes	0.201	0.167	0.37	Yes	1.00	**3.21**
		$U_{33} - U_{34}$	613.46	-805.54	478	161	12	-1384	-26	216	-93	-544	0.518	0.262	0.78	Yes	0.353	0.170	0.53	Yes	0.805	0.194	1	Yes	0.801	0.195	1.00	Yes	1.00	**3.39**
		$U_{34} - U_{35}$	112.62	-965.26	399	-182	70	-1268	43	46	-45	-510	0.083	0.210	0.30	Yes	0.056	0.142	0.20	Yes	0.838	0.158	1	Yes	0.833	0.154	0.99	Yes	1.00	**2.34**
		$U_{35} - U_{36}$	-----	-1207.54	96	-465	-191	-1383	-18	88	-180	-320	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.169	1	Yes	0.819	0.147	0.97	Yes	1.00	**1.84**
		$U_{36} - U_{37}$	-----	-1434.89	-288	-311	-847	-1352	-22	-120	53	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.175	1	Yes	0.817	0.120	0.94	Yes	1.00	**1.80**
		$U_{37} - U_{38}$	-----	-1416.27	-199	-423	-1198	-1310	-94	-198	-272	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.182	1	Yes	0.806	0.117	0.93	Yes	1.00	**1.78**
		$U_{38} - U_{39}$	-----	-1550.81	-165	-633	-1036	-1621	8	-211	-458	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.197	1	Yes	0.796	0.134	0.94	Yes	1.00	**1.82**
		$U_{39} - U_{40}$	-----	-1526.20	-610	-505	-1265	-1544	30	-101	-360	242	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.784	0.128	0.92	Yes	1.00	**2.45**
		$U_{40} - U_{41}$	-----	-1376.24	-502	-484	-1629	-1214	89	-156	-82	117	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.784	0.145	0.93	Yes	1.00	**2.30**
		$U_{41} - U_{42}$	-----	-1194.26	-1048	82	-1246	-449	54	-233	-273	394	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.140	1	Yes	0.848	0.127	0.98	Yes	1.00	**2.70**
		$U_{42} - U_{43}$	-----	-873.92	-862	45	-416	-160	-90	-419	-81	552	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.147	1	Yes	0.843	0.131	0.98	Yes	1.00	**3.04**
		$U_{43} - U_{44}$	-----	-604.05	-1335	680	-1009	-249	-390	-178	656	13	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.276	1	Yes	0.713	0.227	0.95	Yes	1.00	**6.22**
	Structure 3	$U_0 - U_1$	-----	-589.98	371	-304	1278	-1645	95	70	199	-999	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.154	0.83	Yes	0.664	0.331	1.00	Yes	1.00	**4.52**
		$U_1 - U_2$	-----	-718.06	-83	-225	-72	-764	-22	9	125	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.176	1	Yes	0.808	0.154	0.97	Yes	1.00	**1.91**
		$U_2 - U_3$	-----	-1048.13	-57	-236	-138	-769	-34	-54	328	-677	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.160	1	Yes	0.820	0.125	0.95	Yes	1.00	**1.94**
		$U_3 - U_4$	-----	-1378.59	-219	-365	-613	-1296	-109	-33	48	-521	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1	Yes	0.790	0.143	0.94	Yes	1.00	**2.04**
		$U_4 - U_5$	-----	-1431.87	-440	-126	-790	-804	-93	-52	-46	-703	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.164	1	Yes	0.821	0.089	0.91	Yes	1.00	**1.92**
		$U_5 - U_6$	-----	-1367.20	-254	-374	-805	-1293	-186	-149	31	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.784	0.143	0.93	Yes	1.00	**1.81**
		$U_6 - U_7$	-----	-1382.80	-490	-144	-1328	-691	-117	-295	-347	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.198	1	Yes	0.793	0.146	0.94	Yes	1.00	**1.98**
		$U_7 - U_8$	-----	-1213.09	-204	98	-609	-607	-88	-304	-716	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.173	1	Yes	0.810	0.084	0.90	Yes	1.00	**2.94**
		$U_8 - U_9$	-----	-829.96	-85	313	-663	-105	-217	-172	-514	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.207	1	Yes	0.779	0.110	0.89	Yes	1.00	**2.75**
		$U_9 - U_{10}$	694.39	-336.79	134	586	-258	-86	33	136	-304	669	0.753	0.239	1.00	Yes	0.502	0.155	0.66	Yes	0.434	0.162	0.6	Yes	0.430	0.131	0.57	Yes	1.00	**6.34**
		$U_{10} - U_{11}$	355.58	-0.31	-558	821	12	-601	-526	-468	-1968	2628	0.386	0.607	1.00	Yes	0.261	0.406	0.67	Yes	0.000	0.294	0.3	Yes	0.000	0.184	0.19	Yes	1.00	**13.92**
		$U_{11} - U_{12}$	703.53	-----	-812	1786	30	566	179	459	968	887	0.576	0.418	1.00	Yes	0.394	0.284	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		$U_{12} - U_{13}$	938.08	-----	1126	-5	1890	-941	78	470	49	-575	0.650	0.345	1.00	Yes	0.453	0.235	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		$U_{13} - U_{14}$	847.64	-25.08	224	364	-4	-567	-102	381	166	-466	0.811	0.184	1.00	Yes	0.567	0.127	0.70	Yes	0.029	0.187	0.22	Yes	0.028	0.120	0.15	Yes	1.00	**3.15**
		$U_{14} - U_{15}$	603.68	-436.69	439	211	38	-684	-58	250	451	-830	0.692	0.303	1.00	Yes	0.467	0.200	0.67	Yes	0.594	0.216	0.81	Yes	0.589	0.163	0.76	Yes	1.00	**3.05**
		$U_{15} - U_{16}$	296.42	-582.93	265	117	-259	-749	-75	198	302	138	0.340	0.229	0.57	Yes	0.233	0.157	0.40	Yes	0.793	0.199	1	Yes	0.786	0.178	0.97	Yes	1.00	**2.38**
		$U_{16} - U_{17}$	444.56	-594.99	433	98	-142	-813	224	-36	107	427	0.510	0.265	0.78	Yes	0.350	0.182	0.54	Yes	0.810	0.182	1	Yes	0.802	0.193	1.00	Yes	1.00	**3.54**
		$U_{17} - U_{18}$	113.34	-585.45	247	-165	-451	-665	70	36	-235	-2	0.130	0.198	0.33	Yes	0.088	0.129	0.22	Yes	0.797	0.200	1	Yes	0.789	0.158	0.95	Yes	1.00	**2.43**
		$U_{18} - U_{19}$	-----	-574.39	6	-68	-719	-258	214	-194	-305	382	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.775	0.171	0.95	Yes	1.00	**2.72**
		$U_{19} - U_{20}$	-----	-491.86	-499	-17	-257	-585	-183	-85	1006	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.322	1	Yes	0.663	0.139	0.81	Yes	1.00	**4.15**

Moment (End) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
South Truss - Lower Chord	Structure 1	L_0 - L_1	28.21	-26.96	-207	71	763	-1197	70	258	-753	-2768	0.043	0.953	1.00	Yes	0.025	0.565	0.60	Yes	0.049	0.620	0.67	Yes	0.049	0.359	0.41	Yes	1.00	**8.99**
		L_1 - L_2	377.07	-----	1	-11	-49	-704	335	-149	-985	315	0.577	0.423	1.00	Yes	0.352	0.274	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		L_2 - L_3	656.74	-112.80	-38	70	-648	-622	-181	123	276	-524	0.756	0.241	1.00	Yes	0.437	0.143	0.58	Yes	0.154	0.225	0.38	Yes	0.153	0.156	0.31	Yes	1.00	**2.36**
		L_3 - L_4	622.58	-308.94	21	363	-402	-646	305	-238	-769	89	0.716	0.279	1.00	Yes	0.425	0.175	0.61	Yes	0.422	0.224	0.65	Yes	0.418	0.156	0.58	Yes	1.00	**2.81**
		L_4 - L_5	-----	-566.55	104	472	-219	130	-67	192	-56	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.128	1	Yes	0.863	0.125	0.99	Yes	1.00	**1.91**
		L_5 - L_6	-----	-746.96	124	589	-78	236	163	-236	76	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.127	1	Yes	0.862	0.130	1.00	Yes	1.00	**1.78**
		L_6 - L_7	-----	-1063.01	-331	655	37	-596	334	803	-556	-950	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.126	1	Yes	0.856	0.103	0.96	Yes	1.00	**6.45**
		L_7 - L_8	-----	-1232.27	-92	1265	-14	624	357	587	463	207	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.206	1	Yes	0.780	0.167	0.95	Yes	1.00	**2.67**
		L_8 - L_9	-----	-1122.73	986	35	1280	-266	214	352	121	-359	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.275	1	Yes	0.711	0.169	0.89	Yes	1.00	**3.30**
		L_9 - L_{10}	-----	-1021.12	171	108	398	-1079	389	-274	-1857	341	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.148	0.98	Yes	0.822	0.170	1.00	Yes	1.00	**5.11**
		L_{10} - L_{11}	121.27	-495.05	463	-74	109	-683	-270	50	-19	-871	0.157	0.333	0.50	Yes	0.091	0.198	0.29	Yes	0.761	0.234	1	Yes	0.754	0.181	0.94	Yes	1.00	**3.03**
		L_{11} - L_{12}	514.07	-157.72	384	-213	406	-895	140	-100	-320	531	0.666	0.330	1.00	Yes	0.399	0.213	0.62	Yes	0.242	0.160	0.41	Yes	0.240	0.237	0.48	Yes	1.00	**2.79**
		L_{12} - L_{13}	1018.90	-----	58	-155	-381	-623	-159	121	-163	-664	0.804	0.188	1.00	Yes	0.514	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		L_{13} - L_{14}	1239.98	-----	184	-528	-13	-1444	146	22	-812	54	0.729	0.267	1.00	Yes	0.472	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.01**
		L_{14} - L_{15}	1570.69	-----	-555	-149	-1281	-864	-152	173	-327	-1066	0.767	0.229	1.00	Yes	0.499	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		L_{15} - L_{16}	1621.59	-----	-301	-364	-971	-1371	115	-136	-589	196	0.792	0.207	1.00	Yes	0.509	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.44**
		L_{16} - L_{17}	1197.95	-----	-1030	248	-906	-290	446	409	-350	-947	0.757	0.235	1.00	Yes	0.491	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		L_{17} - L_{18}	908.10	-----	-623	219	-544	-201	160	-152	-646	-386	0.791	0.203	1.00	Yes	0.506	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_{18} - L_{19}	410.02	-----	-983	550	-328	180	336	232	-120	-229	0.628	0.365	1.00	Yes	0.424	0.229	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		L_{19} - L_{20}	67.50	-336.77	-1302	840	-158	58	193	43	137	31	0.103	0.431	0.54	Yes	0.063	0.291	0.36	Yes	0.612	0.211	0.83	Yes	0.606	0.391	1.00	Yes	1.00	**10.12**
	Structure 2	L_0 - L_1	81.17	-125.19	-93	-65	741	-2339	40	137	-733	-2547	0.099	0.894	1.00	Yes	0.059	0.558	0.62	Yes	0.180	0.646	0.83	Yes	0.179	0.476	0.66	Yes	1.00	**11.02**
		L_1 - L_2	465.76	-----	198	-350	331	-1243	152	-57	-1072	546	0.566	0.429	1.00	Yes	0.336	0.269	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		L_2 - L_3	982.85	-----	-46	-269	-159	-1030	-74	155	146	-635	0.775	0.216	1.00	Yes	0.508	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**
		L_3 - L_4	1279.88	-----	-12	-506	-134	-1526	181	-4	-824	389	0.752	0.244	1.00	Yes	0.506	0.154	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		L_4 - L_5	1728.92	-----	-437	-396	-1290	-1512	-81	163	266	-646	0.806	0.186	1.00	Yes	0.534	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.67**
		L_5 - L_6	1785.98	-----	-220	-494	-939	-2044	190	-91	-735	176	0.766	0.227	1.00	Yes	0.514	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		L_6 - L_7	1873.78	-----	-517	-152	-1770	-1702	-164	220	166	-752	0.793	0.202	1.00	Yes	0.527	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		L_7 - L_8	1405.25	-102.84	-263	454	-1329	-842	234	-141	-459	420	0.806	0.184	1.00	Yes	0.529	0.110	0.64	Yes	0.070	0.156	0.23	Yes	0.069	0.147	0.22	Yes	1.00	**3.01**
		L_8 - L_9	1018.40	-517.08	-30	650	-1023	-160	-75	188	-314	-1589	0.712	0.288	1.00	Yes	0.480	0.186	0.67	Yes	0.429	0.221	0.65	Yes	0.425	0.138	0.57	Yes	1.00	**3.67**
		L_9 - L_{10}	504.54	-816.99	-111	873	-780	-158	149	-128	-554	-102	0.450	0.206	0.66	Yes	0.262	0.126	0.39	Yes	0.864	0.110	0.98	Yes	0.858	0.140	1.00	Yes	1.00	**3.67**
		L_{10} - L_{11}	331.99	-----	-2155	1695	-904	-231	893	651	-449	-2162	0.331	0.668	1.00	Yes	0.194	0.410	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.57**
		L_{11} - L_{12}	-----	-1031.46	-73	1106	-329	626	62	-368	-34	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.127	0.98	Yes	0.846	0.151	1.00	Yes	1.00	**2.27**
		L_{12} - L_{13}	-----	-1293.57	-369	46	-159	-1569	-78	405	-388	-621	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.211	1	Yes	0.774	0.156	0.93	Yes	1.00	**5.50**
		L_{13} - L_{14}	-----	-1457.76	-1275	2980	-444	1355	98	329	714	610	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.215	0.96	Yes	0.734	0.260	1.00	Yes	1.00	**3.64**
		L_{14} - L_{15}	-----	-1261.12	1390	-374	2873	-1330	551	559	-99	-399	-----	-----	-----	-----	-----	-----	-----	-----	0.640	0.357	1	Yes	0.635	0.251	0.89	Yes	1.00	**3.08**
		L_{15} - L_{16}	-----	-1407.13	-770	261	-844	-1161	196	-302	-684	176	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.150	1	Yes	0.842	0.115	0.96	Yes	1.00	**4.43**
		L_{16} - L_{17}	-----	-1126.19	1166	51	739	-885	-404	-5	-109	-1027	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.168	1	Yes	0.820	0.144	0.97	Yes	1.00	**3.44**
		L_{17} - L_{18}	-----	-803.86	515	167	467	-828	126	-192	-667	370	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.143	1	Yes	0.844	0.133	0.98	Yes	1.00	**2.58**
		L_{18} - L_{19}	127.31	-614.77	695	24	139	-702	-206	63	21	-603	0.144	0.228	0.38	Yes	0.083	0.134	0.22	Yes	0.824	0.173	1	Yes	0.819	0.135	0.96	Yes	1.00	**2.70**
		L_{19} - L_{20}	534.26	-445.41	496	112	96	-1118	149	-171	-1128	433	0.605	0.388	1.00	Yes	0.358	0.241	0.60	Yes	0.597	0.208	0.81	Yes	0.594	0.216	0.81	Yes	1.00	**3.08**
		L_{20} - L_{21}	924.05	-273.54	391	-84	-688	-1217	-183	70	188	-791	0.737	0.263	1.00	Yes	0.483	0.160	0.65	Yes	0.258	0.237	0.5	Yes	0.257	0.178	0.44	Yes	1.00	**3.25**
		L_{21} - L_{22}	893.78	-----	-25	-192	-496	-1518	137	-154	-594	63	0.713	0.286	1.00	Yes	0.477	0.180	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_{22} - L_{23}	885.95	-106.39	-278	142	-1327	-783	-49	213	-146	-862	0.706	0.286	1.00	Yes	0.473	0.182	0.66	Yes	0.101	0.236	0.34	Yes	0.100	0.194	0.30	Yes	1.00	**2.87**
		L_{23} - L_{24}	963.58	-462.56	0	586	-960	-1174	179	-145	-483	275	0.768	0.223	1.00	Yes	0.504	0.135	0.64	Yes	0.437	0.190	0.63	Yes	0.434	0.171	0.61	Yes	1.00	**4.76**
		L_{24} - L_{25}	480.46	-543.78	196	529	-776	-192	-100	145	38	-1277	0.544	0.345	0.89	Yes	0.322	0.212	0.54	Yes	0.729	0.262	1	Yes	0.725	0.150	0.88	Yes	1.00	**3.82**
		L_{25} - L_{26}	40.78	-639.64	28	726	-515	70	101	-167	-416	67	0.046	0.204	0.25	Yes	0.027	0.120	0.15	Yes	0.858	0.125	0.99	Yes	0.852	0.140	1.00	Yes	1.00	**2.84**
		L_{26} - L_{27}	-----	-722.35	-1164	1294	-444	-10	781	589	-334	-1169	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.759	0.207	0.97	Yes	1.00	**6.74**
		L_{27} - L_{28}	-----	-1095.46	-521	1607	-339	633	458	-146	-117	45	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.158	0.97	Yes	0.798	0.198	1.00	Yes	1.00	**4.57**
		L_{28} - L_{29}	-----	-1379.95	79	-218	-166	-1575	-49	354	-346	-667	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.164	1	Yes	0.825	0.157	0.99	Yes	1.00	**3.85**
		L_{29} - L_{30}	-----	-1444.90	-1515	3116	-530	1302	-11	216	837	906	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.229	0.97	Yes	0.727	0.272	1.00	Yes	1.00	**4.41**
		L_{30} - L_{31}	-----	-1293.64	1614	-444	2643	-1055	668	579	48	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.340	1	Yes	0.651	0.231	0.89	Yes	1.00	**2.23**
		L_{31} - L_{32}	-----	-1402.89	-460	74	-601	-1091	239	-247	-519	264	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.153	1	Yes	0.839	0.108	0.95	Yes	1.00	**3.42**
		L_{32} - L_{33}	-----	-1040.77	1008	-73	658	-762	-328	28	193	-579	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.126	0.99	Yes	0.853	0.137	1.00	Yes	1.00	**2.55**
		L_{33} - L_{34}	-----	-720.05	578	-18	527	-826	100	-130	-627	434	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.067	0.92	Yes	0.846	0.144	1.00	Yes	1.00	**2.26**
		L_{34} - L_{35}	604.27	-708.33	804	-118	39	-1356	-209	100	176	-1363	0.539	0.381	0.93	Yes	0.314	0.231	0.55	Yes	0.749	0.244	1	Yes	0.744	0.217	0.97	Yes	1.00	**3.95**
		L_{35} - L_{36}	962.37	-277.09	569	-167	193	-1402	165	-122	-1380	439	0.673	0.319	1.00	Yes	0.453	0.204	0.66	Yes	0.230	0.183	0.42	Yes	0.228	0.189	0.42	Yes	1.00	**3.20**
		L_{36} - L_{37}	1308.63	-----	294	-264	-569	-1567	-203	153	51	-829	0.750	0.241	1.00	Yes	0.493	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**
		L_{37} - L_{38}	1741.92	-----	-330	-651	-1220	-2291	107	-173	-942	300	0.737	0.259	1.00	Yes	0.490	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_{38} - L_{39}	1788.42	-----	-568	-211	-1824	-1422	-105	173	-276	-1068	0.767	0.228	1.00	Yes	0.515	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		L_{39} - L_{40}	1715.49	-----	-429	-312	-1388	-1757	129	-120	-451	404	0.800	0.196	1.00	Yes	0.529	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		L_{40} - L_{41}	1289.20	-----	-1227	212	-1439	-464	373	394	-46	-892	0.757	0.240	1.00	Yes	0.510	0.151	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		L_{41} - L_{42}	1029.07	-----	-953	321	-683	-335	313	-5	-441	-139	0.811	0.185	1.00	Yes	0.532	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_{42} - L_{43}	526.01	-----	-1191	605	-632	80	217	374	-33	-715	0.639	0.360	1.00	Yes	0.380	0.227	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_{43} - L_{44}	126.80	-264.62	-3036	1301	32	-117	1229	358	-103	-30	0.154	0.820	0.98	Yes	0.092	0.521	0.62	Yes	0.380	0.534	0.92	Yes	0.378	0.618	1.00	Yes	1.00	**22.54**
	Structure 3	L_0 - L_1	20.38	-339.83	22	-133	694	-1249	25	116	-253	-1147	0.031	0.613	0.65	Yes	0.019	0.401	0.43	Yes	0.617	0.377	1	Yes	0.612	0.375	0.99	Yes	1.00	**7.18**
		L_1 - L_2	355.83	-----	213	-241	473	-996	153	-33	-730	593	0.545	0.450	1.00	Yes	0.368	0.287	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		L_2 - L_3	846.28	-----	-11	-216	-31	-801	-60	166	13	-795	0.737	0.256	1.00	Yes	0.472	0.157	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		L_3 - L_4	1144.14	-----	30	-409	-41	-1330	190	7	-820	541	0.723	0.268	1.00	Yes	0.469	0.166	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		L_4 - L_5	1605.12	-----	-389	-236	-1206	-1102	-46	213	1	-899	0.784	0.209	1.00	Yes	0.503	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		L_5 - L_6	1481.07	-----	-143	-456	-555	-1724	243	-37	-895	158	0.724	0.271	1.00	Yes	0.470	0.166	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		L_6 - L_7	1209.22	-----	-1370	365	-1113	-377	571	318	-236	-1103	0.711	0.281	1.00	Yes	0.461	0.174	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		L_7 - L_8	1033.91	-80.98	-85	195	-599	-497	151	-168	-591	15	0.816	0.175	1.00	Yes	0.522	0.107	0.63	Yes	0.076	0.143	0.22	Yes	0.075	0.106	0.19	Yes	1.00	**3.40**
		L_8 - L_9	480.98	-----	-873	563	-478	-26	249	248	-126	-793	0.623	0.370	1.00	Yes	0.374	0.237	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		L_9 - L_{10}	-----	-562.45	-65	518	-272	135	145	-153	28	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.081	0.95	Yes	0.857	0.137	1.00	Yes	1.00	**2.74**
		L_{10} - L_{11}	-----	-1012.43	-666	889	-45	-475	436	932	-583	-1289	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.173	1	Yes	0.815	0.140	0.96	Yes	1.00	**7.80**
		L_{11} - L_{12}	-----	-1217.69	-94	1353	-10	611	293	613	529	149	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1	Yes	0.771	0.179	0.96	Yes	1.00	**3.42**
		L_{12} - L_{13}	-----	-1130.91	1018	5	1309	-238	-151	68	-61	-378	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.273	1	Yes	0.716	0.173	0.89	Yes	1.00	**2.40**
		L_{13} - L_{14}	-----	-1039.07	64	175	182	-675	220	-248	-1171	57	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.149	1	Yes	0.836	0.106	0.95	Yes	1.00	**3.08**
		L_{14} - L_{15}	-----	-690.31	546	95	171	-397	-254	86	-103	-740	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1	Yes	0.796	0.121	0.92	Yes	1.00	**2.13**
		L_{15} - L_{16}	269.28	-512.25	460	111	225	-808	256	-208	-1017	322	0.349	0.395	0.75	Yes	0.209	0.251	0.47	Yes	0.788	0.200	0.99	Yes	0.780	0.214	1.00	Yes	1.00	**2.40**
		L_{16} - L_{17}	656.30	-----	-19	-54	-313	-670	-80	477	-133	-340	0.755	0.239	1.00	Yes	0.448	0.151	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		L_{17} - L_{18}	647.70	-49.48	24	-104	-717	-665	111	-112	-497	258	0.745	0.253	1.00	Yes	0.431	0.150	0.59	Yes	0.068	0.238	0.31	Yes	0.067	0.173	0.25	Yes	1.00	**2.85**
		L_{18} - L_{19}	424.81	-----	-656	120	-258	-187	207	441	30	-691	0.650	0.345	1.00	Yes	0.397	0.225	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		L_{19} - L_{20}	62.07	-60.08	-1606	1221	150	-259	-1949	-530	226	62	0.095	0.900	1.00	Yes	0.056	0.539	0.60	Yes	0.109	0.698	0.81	Yes	0.108	0.482	0.60	Yes	1.00	**16.25**

Moment (End) AB Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 2.167

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression													
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-283.08	-107	164	-13	52	-998	-320	202	65	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.359	1	Yes	0.599	0.209	0.81	Yes	1.00	**0.87**
		$U_1 - L_1$			10.80	-298.69	-193	194	20	-14	-1060	-357	566	211	0.019	0.555	0.58	Yes	0.011	0.305	0.32	Yes	0.653	0.347	1	Yes	0.632	0.248	0.88	Yes	1.00	**1.98**
		$U_2 - L_2$			142.74	-282.56	-221	270	127	-141	-971	-306	852	228	0.257	0.627	0.89	Yes	0.141	0.345	0.49	Yes	0.617	0.374	1	Yes	0.598	0.346	0.95	Yes	1.00	**4.39**
		$U_3 - L_3$			185.27	-131.86	-76	103	226	-217	-1280	-284	-1184	-740	0.333	0.659	1.00	Yes	0.183	0.363	0.55	Yes	0.289	0.330	0.62	Yes	0.279	0.289	0.57	Yes	1.00	**4.67**
		$U_4 - L_4$			-----	-178.27	4	-16	332	-331	1032	187	-492	-307	-----	-----	-----	-----	-----	-----	-----	-----	0.392	0.606	1	Yes	0.377	0.424	0.81	Yes	1.00	**6.18**
		$U_5 - L_5$			-----	-366.31	78	-84	180	-205	1044	590	125	229	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.328	1	Yes	0.632	0.208	0.85	Yes	1.00	**1.83**
		$U_6 - L_6$			-----	-415.67	77	-65	210	-218	1495	745	821	436	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.368	1	Yes	0.596	0.190	0.79	Yes	1.00	**1.90**
		$U_7 - L_7$			-----	-383.35	102	-115	262	-280	1232	307	621	195	-----	-----	-----	-----	-----	-----	-----	-----	0.641	0.353	1	Yes	0.591	0.276	0.87	Yes	1.00	**1.75**
		$U_8 - L_8$			-----	-1194.27	-400	475	220	-269	-1275	-582	-46	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.128	1	Yes	0.828	0.088	0.92	Yes	1.00	**3.32**
		$U_9 - L_9$			-----	-660.38	-405	449	-232	257	-614	-129	728	353	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.202	0.99	Yes	0.746	0.250	1.00	Yes	1.00	**1.64**
		$U_{10} - L_{10}$			-----	-784.64	-350	376	-166	143	291	217	712	313	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.181	1	Yes	0.774	0.195	0.97	Yes	1.00	**2.62**
		$U_{11} - L_{11}$			-----	-664.65	-379	488	-167	217	-303	126	632	360	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.179	0.98	Yes	0.774	0.226	1.00	Yes	1.00	**2.47**
		$U_{12} - L_{12}$			-----	-508.56	-284	299	-131	137	-848	-138	409	296	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.260	1	Yes	0.698	0.255	0.96	Yes	1.00	**2.26**
		$U_{13} - L_{13}$			-----	-367.60	-225	252	-65	86	47	187	70	98	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.144	0.89	Yes	0.704	0.288	1.00	Yes	1.00	**2.32**
		$U_{14} - L_{14}$			-----	-188.24	-375	405	129	-134	-1304	-993	-1353	-534	-----	-----	-----	-----	-----	-----	-----	-----	0.420	0.573	1	Yes	0.398	0.517	0.92	Yes	1.00	**8.76**
		$U_{15} - L_{15}$			64.76	-308.32	-54	46	249	-270	395	-187	-766	-181	0.116	0.567	0.69	Yes	0.064	0.312	0.38	Yes	0.691	0.284	0.98	Yes	0.652	0.345	1.00	Yes	1.00	**3.70**
		$U_{16} - L_{16}$			-----	-318.14	44	-49	245	-252	474	106	-34	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.218	0.94	Yes	0.673	0.323	1.00	Yes	1.00	**2.55**
		$U_{17} - L_{17}$			-----	-419.00	79	-92	205	-223	504	199	198	109	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.210	1	Yes	0.723	0.226	0.95	Yes	1.00	**1.79**
		$U_{18} - L_{18}$			-----	-533.22	172	-179	437	-449	678	172	104	14	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.183	0.97	Yes	0.742	0.254	1.00	Yes	1.00	**2.36**
		$U_{19} - L_{19}$			-----	-649.44	178	-192	497	-514	584	112	205	39	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.157	0.97	Yes	0.756	0.238	1.00	Yes	1.00	**2.95**
		$U_{20} - L_{20}$			-----	-610.60	233	-280	451	-544	452	59	283	37	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.711	0.252	0.97	Yes	1.00	**2.52**
	Structure 2	$U_0 - L_0$			-----	-608.60	-317	452	-161	269	-1216	-206	36	6	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.266	1	Yes	0.652	0.192	0.85	Yes	1.00	**1.15**
		$U_1 - L_1$			-----	-718.98	-528	538	-207	214	-837	-71	629	161	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.175	1	Yes	0.771	0.228	1.00	Yes	1.00	**2.14**
		$U_2 - L_2$			-----	-593.37	-455	472	-152	167	41	239	624	284	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.176	0.98	Yes	0.756	0.241	1.00	Yes	1.00	**2.04**
		$U_3 - L_3$			-----	-459.97	-215	232	-75	86	-44	213	546	265	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.721	0.211	0.94	Yes	1.00	**1.67**
		$U_4 - L_4$			-----	-320.35	-181	192	-20	31	-616	48	561	236	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1	Yes	0.678	0.246	0.93	Yes	1.00	**2.09**
		$U_5 - L_5$			98.11	-319.38	-208	235	78	-72	-456	65	565	173	0.176	0.463	0.64	Yes	0.097	0.255	0.36	Yes	0.721	0.277	1	Yes	0.676	0.300	0.98	Yes	1.00	**4.02**
		$U_6 - L_6$			307.68	-88.87	-106	115	183	-186	-694	-63	-501	-231	0.553	0.439	1.00	Yes	0.304	0.241	0.55	Yes	0.200	0.235	0.44	Yes	0.188	0.238	0.43	Yes	1.00	**4.03**
		$U_7 - L_7$			-----	-195.71	-16	15	391	-443	-332	-505	-1641	-733	-----	-----	-----	-----	-----	-----	-----	-----	0.442	0.555	1	Yes	0.414	0.566	0.98	Yes	1.00	**7.47**
		$U_8 - L_8$			-----	-470.54	149	-170	334	-358	418	-29	-7	0	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.149	0.84	Yes	0.678	0.314	1.00	Yes	1.00	**2.09**
		$U_9 - L_9$			-----	-694.05	277	-277	586	-596	1159	618	-63	113	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.221	1	Yes	0.744	0.253	1.00	Yes	1.00	**2.72**
		$U_{10} - L_{10}$			-----	-744.63	233	-234	509	-531	1178	693	-7	216	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.696	0.234	0.94	Yes	1.00	**2.63**
		$U_{11} - L_{11}$			-----	-732.71	226	-220	458	-462	1185	667	526	492	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.259	1	Yes	0.685	0.204	0.89	Yes	1.00	**2.18**
		$U_{12} - L_{12}$			-----	-720.67	186	-168	417	-410	1490	652	1012	506	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.305	1	Yes	0.625	0.179	0.81	Yes	1.00	**2.15**
		$U_{13} - L_{13}$			-----	-623.52	223	-221	496	-484	1158	317	516	178	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.300	1	Yes	0.601	0.238	0.84	Yes	1.00	**2.26**
		$U_{14} - L_{14}$			-----	-1225.11	-593	550	431	-415	-735	-382	723	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.097	1	Yes	0.812	0.105	0.92	Yes	1.00	**4.16**
		$U_{15} - L_{15}$			-----	-662.81	-585	564	-263	256	-334	-9	858	83	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1	Yes	0.639	0.280	0.92	Yes	1.00	**2.30**
		$U_{16} - L_{16}$			-----	-715.60	-463	454	-202	170	-259	93	820	178	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.171	1	Yes	0.767	0.196	0.97	Yes	1.00	**2.27**
		$U_{17} - L_{17}$			-----	-643.22	-537	537	-195	196	-53	144	594	193	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.156	0.96	Yes	0.749	0.249	1.00	Yes	1.00	**2.29**
		$U_{18} - L_{18}$			-----	-579.00	-470	496	-159	164	-302	60	622	214	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.94	Yes	0.738	0.253	1.00	Yes	1.00	**2.19**
		$U_{19} - L_{19}$			-----	-487.78	-277	281	-87	89	-742	31	520	195	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.211	0.95	Yes	0.728	0.270	1.00	Yes	1.00	**2.11**
		$U_{20} - L_{20}$			-----	-376.21	-218	229	-36	41	-88	67	517	179	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.220	1	Yes	0.721	0.261	0.99	Yes	1.00	**2.43**
		$U_{21} - L_{21}$			28.29	-323.94	-226	245	21	-14	-473	43	85	3	0.051	0.451	0.51	Yes	0.028	0.248	0.28	Yes	0.732	0.235	0.97	Yes	0.685	0.314	1.00	Yes	1.00	**3.21**
		$U_{22} - L_{22}$			-----	-196.32	-161	178	268	-289	422	-200	-1755	-896	-----	-----	-----	-----	-----	-----	-----	-----	0.442	0.552	1	Yes	0.415	0.369	0.79	Yes	1.00	**7.69**
		$U_{23} - L_{23}$			-----	-320.57	11	-14	230	-249	524	165	-99	33	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.247	0.98	Yes	0.678	0.318	1.00	Yes	1.00	**2.63**
		$U_{24} - L_{24}$			-----	-371.05	51	-56	228	-235	583	204	132	108	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1	Yes	0.711	0.269	0.98	Yes	1.00	**2.12**
		$U_{25} - L_{25}$			-----	-471.19	99	-101	302	-299	588	223	-33	118	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.184	0.9	Yes	0.704	0.291	1.00	Yes	1.00	**2.07**
		$U_{26} - L_{26}$			-----	-571.89	168	-175	499	-523	707	301	226	273	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.190	0.96	Yes	0.729	0.267	1.00	Yes	1.00	**2.35**
		$U_{27} - L_{27}$			-----	-632.91	200	-203	556	-560	769	313	504	436	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.193	0.98	Yes	0.737	0.260	1.00	Yes	1.00	**2.61**
		$U_{28} - L_{28}$			-----	-614.28	156	-129	467	-451	1651	558	899	389	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.290	1	Yes	0.658	0.198	0.86	Yes	1.00	**2.40**
		$U_{29} - L_{29}$			-----	-619.40	150	-154	579	-562	1189	197	460	135	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.304	1	Yes	0.597	0.277	0.88	Yes	1.00	**3.30**
		$U_{30} - L_{30}$			-----	-1200.89	-564	500	270	-285	-959	-314	425	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.116	1	Yes	0.796	0.100	0.90	Yes	1.00	**3.59**
		$U_{31} - L_{31}$			-----	-710.73	-531	513	-305	298	-564	13	508	95	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.205	1	Yes	0.685	0.254	0.94	Yes	1.00	**1.81**
		$U_{32} - L_{32}$			-----	-853.63	-475	468	-218	191	-131	59	616	188	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.172	1	Yes	0.740	0.204	0.95	Yes	1.00	**2.27**
		$U_{33} - L_{33}$			-----	-828.75	-501	501	-248	231	-473	101	548	237	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.156	0.99	Yes	0.775	0.221	1.00	Yes	1.00	**2.42**
		$U_{34} - L_{34}$			-----	-758.83	-471	499	-243	241	-1144	-125	498	233	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.245	1	Yes	0.709	0.220	0.93	Yes	1.00	**2.38**
		$U_{35} - L_{35}$			-----	-694.53	-570	587	-254	269	-312	109	630	377	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.152	0.93	Yes	0.744	0.249	1.00	Yes	1.00	**2.73**
		$U_{36} - L_{36}$			-----	-480.39	-323	350	-135	157	-330	64	222	173	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.147	0.85	Yes	0.692	0.306	1.00	Yes	1.00	**2.26**
		$U_{37} - L_{37}$			-----	-173.26	-425	490	34	-33	-1226	-724	-1080	-370	-----	-----	-----	-----	-----	-----	-----	-----	0.391	0.588	0.98	Yes	0.367	0.626	1.00	Yes	1.00	**9.42**
		$U_{38} - L_{38}$			289.06	-146.47	-180	184	153	-164	-174	-499	-821	-258	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.330	0.219	0.55	Yes	0.310	0.236	0.55	Yes	1.00	**4.28**
		$U_{39} - L_{39}$			56.64	-322.62	-53	47	222	-243	530	156	-400	-38	0.102	0.465	0.57	Yes	0.056	0.255	0.32	Yes	0.729	0.251	0.98	Yes	0.683	0.311	1.00	Yes	1.00	**3.58**
		$U_{40} - L_{40}$			-----	-326.75	34	-42	221	-224	598	172	-59	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.256	1	Yes	0.691	0.287	0.98	Yes	1.00	**2.26**
		$U_{41} - L_{41}$			-----	-462.19	86	-95	236	-249	579	192	216	112	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1	Yes	0.725	0.226	0.96	Yes	1.00	**1.88**
		$U_{42} - L_{42}$			-----	-577.53	169	-178	496	-502	668	171	323	135	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.172	0.95	Yes	0.736	0.257	1.00	Yes	1.00	**2.47**
		$U_{43} - L_{43}$			-----	-705.38	187	-205	536	-555	620	185	483	224	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.152	0.96	Yes	0.756	0.235	1.00	Yes	1.00	**2.97**
		$U_{44} - L_{44}$			-----	-672.49	248	-305	488	-607	536	91	228	39	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1	Yes	0.721	0.258	0.98	Yes	1.00	**2.61**
	Structure 3	$U_0 - L_0$			-----	-566.19	-298	417	-134	236	-879	-115	110	14	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.248	1	Yes	0.659	0.194	0.86	Yes	1.00	**1.22**
		$U_1 - L_1$			-----	-652.42	-507	501	-206	205	-364	71	620	142	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.161	0.98	Yes	0.759	0.235	1.00	Yes	1.00	**2.09**
		$U_2 - L_2$			-----	-544.58	-379	403	-158	169	-671	111	660	306	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.195	1	Yes	0.757	0.228	0.99	Yes	1.00	**1.82**
		$U_3 - L_3$			-----	-408.30	-191	209	-68	83	47	230	566	270	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.229	1	Yes	0.704	0.212	0.92	Yes	1.00	**1.56**
		$U_4 - L_4$			-----	-323.18	-217	229	-30	36	-569	89	613	223	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.270	1	Yes	0.684	0.293	0.98	Yes	1.00	**2.48**
		$U_5 - L_5$			52.07	-247.84	-162	186	48	-37	-1248	-47	-146	-58	0.094	0.599	0.70	Yes	0.052	0.330	0.39	Yes	0.556	0.438	1	Yes	0.524	0.238	0.77	Yes	1.00	**2.99**
		$U_6 - L_6$			-----	-166.71	-150	156	328	-354	-684	-825	-182	-274	-----	-----	-----	-----	-----	-----	-----	-----	0.372	0.620	1	Yes	0.353	0.453	0.81	Yes	1.00	**7.94**
		$U_7 - L_7$			-----	-365.36	80	-96	232	-257	496	81	-377	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.210	0.95	Yes	0.700	0.293	1.00	Yes	1.00	**2.01**
		$U_8 - L_8$			-----	-509.77	133	-134	334	-335	898	373	-58	44	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.259	1	Yes	0.699	0.286	0.99	Yes	1.00	**2.43**
		$U_9 - L_9$			-----	-622.84	160	-220	380	-477	1159	420	450	423	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.725	0.221	0.95	Yes	1.00	**2.52**
		$U_{10} - L_{10}$			-----	-625.87	152	-140	317	-330	1707	942	1087	678	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.345	1	Yes	0.618	0.171	0.79	Yes	1.00	**2.24**
		$U_{11} - L_{11}$			-----	-566.91	189	-219	376	-423	1506	674	744	423	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.322	1	Yes	0.640	0.235	0.88	Yes	1.00	**1.87**
		$U_{12} - L_{12}$			-----	-1177.40	-409	437	276	-375	-1266	-529	716	211	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.149	1	Yes	0.816	0.081	0.90	Yes	1.00	**3.49**
		$U_{13} - L_{13}$			-----	-435.95	-263	283	-156	168	-874	-66	639	177	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.264	1	Yes	0.673	0.278	0.96	Yes	1.00	**1.14**
		$U_{14} - L_{14}$			-----	-502.68	-197	218	-100	89	-842	-235	775	277	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.232	1	Yes	0.721	0.191	0.92	Yes	1.00	**1.77**
		$U_{15} - L_{15}$			-----	-393.74	-171	201	-80	87	-926	-209	682	254	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.285	1	Yes	0.679	0.203	0.89	Yes	1.00	**1.83**
		$U_{16} - L_{16}$			-----	-166.71	-278	278	-19	32	-2016	-941	-1007	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.367	0.624	1	Yes	0.353	0.356	0.71	Yes	1.00	**5.02**
		$U_{17} - L_{17}$			188.55	-214.95	-186	209	194	-219	440	159	-1299	-558	0.339	0.656	1.00	Yes	0.187	0.361	0.55	Yes	0.471	0.410	0.89	Yes	0.455	0.280	0.74	Yes	1.00	**5.73**
		$U_{18} - L_{18}$			108.27	-291.94	-114	123	258	-299	460	146	-191	-187	0.195	0.515	0.71	Yes	0.107	0.283	0.40	Yes	0.638	0.233	0.88	Yes	0.618	0.382	1.00	Yes	1.00	**4.51**
		$U_{19} - L_{19}$			-----	-328.29	-30	14	232	-238	424	219	223	125	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.204	0.93	Yes	0.695	0.304	1.00	Yes	1.00	**3.05**
		$U_{20} - L_{20}$			-----	-319.50	78	-90	199	-248	604	194	275	88	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.276	0.99	Yes	0.676	0.317	1.00	Yes	1.00	**1.72**

Moment (End) AB Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$	460.01	-----	-117	59	9	-11	-1015	-485	12	88	0.603	0.392	1.00	Yes	0.364	0.216	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		$U_1 - L_2$	295.06	-----	-70	18	-43	-21	-315	-161	-1299	-523	0.531	0.465	1.00	Yes	0.292	0.256	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		$U_2 - L_3$	75.75	-201.01	-35	-3	-45	-57	-76	-94	-1825	-277	0.136	0.601	0.74	Yes	0.075	0.331	0.41	Yes	0.463	0.534	1	Yes	0.425	0.073	0.50	Yes	1.00	**3.12**
		$U_3 - L_4$	-----	-280.12	23	-13	-7	-70	452	249	-875	-305	-----	-----	-----	-----	-----	-----	-----	-----	0.641	0.350	1	Yes	0.593	0.089	0.69	Yes	1.00	**2.34**
		$U_4 - L_4$	392.30	-----	5	110	-119	-13	-48	199	1303	850	0.575	0.424	1.00	Yes	0.316	0.233	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$U_4 - L_5$	617.45	-----	-168	207	-67	96	-273	244	822	79	0.730	0.267	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		$U_5 - L_6$	592.07	-----	-253	244	-37	84	-360	30	-818	-113	0.700	0.293	1.00	Yes	0.385	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_6 - L_7$	609.61	-----	-85	297	29	81	-113	14	-557	-294	0.721	0.270	1.00	Yes	0.396	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		$U_8 - L_9$	953.46	-----	-88	364	-26	173	-219	-361	549	156	0.762	0.232	1.00	Yes	0.472	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**
		$U_9 - L_{10}$	1010.54	-----	-300	266	-122	116	-395	-256	370	154	0.808	0.184	1.00	Yes	0.500	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		$U_{10} - L_{11}$	887.82	-----	-219	175	-144	87	-514	-595	-1104	-540	0.750	0.247	1.00	Yes	0.464	0.141	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
		$U_{11} - L_{12}$	723.53	-----	-222	97	-167	14	-477	-438	-1200	-697	0.716	0.283	1.00	Yes	0.394	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{12} - L_{13}$	556.31	-----	-187	143	-108	42	-387	-380	-788	-361	0.678	0.317	1.00	Yes	0.427	0.182	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		$U_{13} - L_{14}$	389.26	-----	-80	31	-33	-25	-140	-233	-682	-306	0.700	0.299	1.00	Yes	0.385	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		$U_{15} - L_{14}$	283.18	-236.54	-79	-3	9	-99	-309	-314	868	-253	0.509	0.378	0.89	Yes	0.280	0.208	0.49	Yes	0.554	0.439	1	Yes	0.501	0.127	0.63	Yes	1.00	**3.97**
		$U_{16} - L_{15}$	410.45	-9.78	-143	97	-21	-14	-206	-13	-259	-129	0.738	0.258	1.00	Yes	0.406	0.142	0.55	Yes	0.023	0.142	0.17	Yes	0.021	0.183	0.21	Yes	1.00	**3.26**
		$U_{17} - L_{16}$	523.75	-----	-143	100	-46	22	-332	-129	-305	-105	0.768	0.222	1.00	Yes	0.422	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{18} - L_{17}$	620.39	-----	-330	252	-130	89	-379	-7	-400	-112	0.733	0.259	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{19} - L_{18}$	692.06	-----	-335	254	-132	95	-373	-131	-455	-203	0.750	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		$U_{20} - L_{19}$	700.34	-----	-376	323	-174	140	-148	-66	-259	-140	0.759	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.89**
	Structure 2	$U_0 - L_1$	651.52	-----	-314	315	-101	128	-1377	-425	-158	5	0.645	0.352	1.00	Yes	0.355	0.194	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.98**
		$U_1 - L_2$	754.74	-----	-394	312	-158	112	-430	-396	156	-20	0.747	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_2 - L_3$	615.76	-----	-320	264	-112	83	-402	-458	138	-17	0.728	0.264	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		$U_3 - L_4$	555.44	-----	-175	120	-50	23	-357	-443	178	16	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**
		$U_4 - L_5$	351.55	-19.80	-122	85	-26	-19	-363	-307	-711	-232	0.632	0.362	1.00	Yes	0.348	0.199	0.55	Yes	0.049	0.280	0.33	Yes	0.042	0.156	0.20	Yes	1.00	**2.90**
		$U_5 - L_6$	289.38	-234.24	-89	34	52	-108	-397	-270	-1062	-190	0.520	0.446	0.97	Yes	0.286	0.245	0.54	Yes	0.553	0.444	1	Yes	0.496	0.138	0.64	Yes	1.00	**3.84**
		$U_6 - L_7$	-----	-362.12	-1	-39	41	-98	45	-72	-475	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.216	1	Yes	0.694	0.112	0.81	Yes	1.00	**1.81**
		$U_8 - L_7$	610.75	-----	-192	155	-79	35	-243	-6	-51	-142	0.779	0.221	1.00	Yes	0.490	0.124	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.76**
		$U_8 - L_9$	734.89	-----	-339	258	-183	111	-182	-63	35	-44	0.796	0.203	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_{10} - L_9$	838.23	-----	-311	257	-149	124	-117	131	-116	12	0.829	0.164	1.00	Yes	0.456	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		$U_{11} - L_{10}$	889.26	-----	-343	308	-156	158	-220	179	-284	81	0.810	0.185	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
		$U_{12} - L_{11}$	843.39	-----	-331	345	-132	174	-507	177	-566	62	0.768	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**
		$U_{13} - L_{12}$	730.51	-----	-409	380	-158	162	-485	52	-540	-1	0.723	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		$U_{14} - L_{13}$	731.08	-----	-249	426	-17	126	-24	52	-490	-255	0.723	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{14} - L_{15}$	596.30	-----	-195	344	-22	164	154	-390	528	241	0.705	0.290	1.00	Yes	0.388	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{15} - L_{16}$	604.39	-----	-360	326	-175	163	53	-288	429	104	0.715	0.282	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.70**
		$U_{16} - L_{17}$	691.36	-----	-332	349	-127	154	42	-415	373	110	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		$U_{17} - L_{18}$	652.56	-----	-286	288	-109	125	-77	-193	360	90	0.771	0.228	1.00	Yes	0.424	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_{18} - L_{19}$	635.28	-----	-278	256	-80	94	-183	-462	293	80	0.751	0.241	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		$U_{19} - L_{20}$	564.00	-----	-185	167	-74	38	-282	-215	-527	-183	0.719	0.273	1.00	Yes	0.396	0.156	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		$U_{20} - L_{21}$	402.24	-----	-122	105	-24	-3	-188	-271	-399	-91	0.723	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**
		$U_{21} - L_{22}$	202.22	-220.69	-48	52	6	-95	290	67	-1387	-275	0.364	0.522	0.89	Yes	0.200	0.287	0.49	Yes	0.521	0.473	1	Yes	0.467	0.121	0.59	Yes	1.00	**4.46**
		$U_{23} - L_{22}$	432.90	-122.68	-116	63	10	-59	-239	-82	84	-136	0.779	0.217	1.00	Yes	0.428	0.119	0.55	Yes	0.292	0.140	0.44	Yes	0.260	0.148	0.41	Yes	1.00	**3.99**
		$U_{24} - L_{23}$	439.09	-----	-127	112	-32	14	-148	44	86	-58	0.790	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		$U_{25} - L_{24}$	596.73	-----	-189	179	-40	48	-180	48	-301	-82	0.761	0.231	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
		$U_{26} - L_{25}$	669.45	-----	-283	277	-79	96	-49	179	-254	-57	0.791	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{27} - L_{26}$	649.73	-----	-282	295	-105	125	-266	161	-341	-8	0.768	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_{28} - L_{27}$	676.09	-----	-307	343	-94	148	-417	232	-543	41	0.732	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		$U_{29} - L_{28}$	593.50	-----	-343	333	-92	105	-359	43	-549	-41	0.702	0.294	1.00	Yes	0.386	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		$U_{30} - L_{29}$	629.37	-----	-193	363	34	68	-88	5	-230	-196	0.744	0.247	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		$U_{30} - L_{31}$	735.33	-----	-258	435	-66	220	-40	-278	422	186	0.727	0.265	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_{31} - L_{32}$	734.40	-----	-422	372	-233	217	13	-298	453	119	0.727	0.264	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.63**
		$U_{32} - L_{33}$	865.57	-----	-348	351	-159	191	-307	-414	285	61	0.788	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		$U_{33} - L_{34}$	859.39	-----	-327	281	-175	153	-430	-523	96	-92	0.783	0.210	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		$U_{34} - L_{35}$	775.88	-----	-288	238	-181	120	-477	-451	-640	-338	0.768	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**
		$U_{35} - L_{36}$	685.86	-----	-312	234	-183	97	-377	-335	-577	-300	0.743	0.255	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{36} - L_{37}$	556.08	-----	-175	146	-79	20	-210	-445	-641	-264	0.709	0.288	1.00	Yes	0.446	0.165	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		$U_{38} - L_{37}$	-----	-368.71	-26	-28	51	-100	-309	-176	-51	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.194	1	Yes	0.706	0.114	0.83	Yes	1.00	**2.48**
		$U_{39} - L_{38}$	428.14	-229.19	-132	67	55	-105	-136	-113	189	-94	0.770	0.223	1.00	Yes	0.424	0.123	0.55	Yes	0.546	0.179	0.73	Yes	0.485	0.169	0.66	Yes	1.00	**4.76**
		$U_{40} - L_{39}$	396.36	-10.57	-135	91	-6	-9	-214	91	-379	-103	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	0.025	0.159	0.19	Yes	0.022	0.172	0.20	Yes	1.00	**2.84**
		$U_{41} - L_{40}$	559.78	-----	-175	127	-56	30	-321	-98	-413	-179	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$U_{42} - L_{41}$	624.72	-----	-322	264	-120	90	-385	-73	-403	-171	0.739	0.255	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$U_{43} - L_{42}$	771.54	-----	-378	310	-134	101	-362	-79	-376	-195	0.763	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		$U_{44} - L_{43}$	799.57	-----	-382	378	-159	152	-80	66	-171	11	0.791	0.203	1.00	Yes	0.435	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
	Structure 3	$U_0 - L_1$	605.32	-----	-293	266	-78	102	-1140	-435	-150	4	0.656	0.338	1.00	Yes	0.361	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.87**
		$U_1 - L_2$	674.42	-----	-349	253	-157	106	-391	-518	169	-36	0.730	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.94**
		$U_2 - L_3$	588.11	-----	-311	240	-123	84	-388	-690	134	-26	0.695	0.301	1.00	Yes	0.382	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_3 - L_4$	512.66	-----	-141	98	-39	17	-417	-362	170	-14	0.752	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_4 - L_5$	321.98	-23.79	-117	75	-38	-14	-311	-460	-904	-264	0.579	0.411	1.00	Yes	0.319	0.226	0.55	Yes	0.056	0.312	0.37	Yes	0.050	0.149	0.20	Yes	1.00	**2.66**
		$U_5 - L_6$	170.74	-243.16	-49	-12	23	-107	-197	-126	-911	-290	0.307	0.400	0.71	Yes	0.169	0.220	0.39	Yes	0.570	0.424	1	Yes	0.515	0.137	0.66	Yes	1.00	**3.20**
		$U_7 - L_6$	443.87	-----	-91	39	-36	-14	-210	-183	292	-126	0.798	0.201	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.38**
		$U_8 - L_7$	618.54	-----	-200	159	-98	49	-163	0	319	-85	0.754	0.237	1.00	Yes	0.474	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		$U_8 - L_9$	793.06	-----	-244	120	-166	29	-156	46	648	371	0.785	0.210	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		$U_{10} - L_9$	888.41	-----	-209	184	-107	89	-220	248	1106	225	0.750	0.242	1.00	Yes	0.465	0.139	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		$U_{11} - L_{10}$	945.62	-----	-275	268	-65	101	-285	153	-939	-233	0.756	0.242	1.00	Yes	0.468	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		$U_{12} - L_{11}$	917.57	-----	-78	354	26	113	58	239	-808	-282	0.734	0.260	1.00	Yes	0.454	0.147	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		$U_{13} - L_{13}$	613.85	-----	-90	287	-19	144	101	-398	570	166	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{13} - L_{14}$	633.21	-----	-292	234	-113	115	-327	-320	443	156	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.93**
		$U_{14} - L_{15}$	607.83	-----	-166	211	-87	96	-190	-255	-874	-384	0.719	0.279	1.00	Yes	0.395	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		$U_{15} - L_{16}$	319.13	-----	-10	75	-89	-18	448	225	-1880	-978	0.468	0.528	1.00	Yes	0.257	0.290	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{17} - L_{16}$	-----	-299.89	46	-11	-48	-95	-246	-19	671	31	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.305	1	Yes	0.635	0.121	0.76	Yes	1.00	**4.05**
		$U_{18} - L_{17}$	392.00	-106.03	-126	13	-65	-64	-435	-243	379	-31	0.705	0.287	1.00	Yes	0.388	0.158	0.55	Yes	0.244	0.257	0.51	Yes	0.224	0.161	0.39	Yes	1.00	**5.95**
		$U_{19} - L_{18}$	365.52	-----	-72	14	-29	-21	-278	-251	857	380	0.657	0.341	1.00	Yes	0.362	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{20} - L_{19}$	624.95	-11.31	-119	80	-27	2	-147	-31	-54	22	0.820	0.176	1.00	Yes	0.495	0.097	0.60	Yes	0.019	0.091	0.12	Yes	0.017	0.139	0.16	Yes	1.00	**3.84**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-548.45	-183	69	-87	-865	9	-9	-25	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.248	1.00	Yes	0.740	0.206	0.95	Yes	1.00	**3.23**
		U_1 - U_2	-----	-581.19	-62	38	-162	-732	-7	-34	-45	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.200	1.00	Yes	0.784	0.174	0.96	Yes	1.00	**1.97**
		U_2 - U_3	110.03	-600.29	-131	232	-316	-519	7	26	53	132	0.126	0.146	0.28	Yes	0.085	0.095	0.19	Yes	0.817	0.182	1.00	Yes	0.809	0.123	0.94	Yes	1.00	**2.25**
		U_3 - U_4	304.09	-571.74	58	282	-265	-707	11	35	155	25	0.349	0.194	0.55	Yes	0.239	0.133	0.38	Yes	0.778	0.213	1.00	Yes	0.771	0.168	0.94	Yes	1.00	**2.62**
		U_4 - U_5	429.86	-585.59	164	341	-395	-529	9	-35	34	-185	0.493	0.157	0.65	Yes	0.338	0.108	0.45	Yes	0.797	0.196	1.00	Yes	0.790	0.126	0.92	Yes	1.00	**3.72**
		U_5 - U_6	728.78	-141.90	282	502	-122	-69	-160	-65	155	-212	0.835	0.155	1.00	Yes	0.563	0.102	0.67	Yes	0.193	0.143	0.34	Yes	0.191	0.119	0.32	Yes	1.00	**4.45**
		U_6 - U_7	883.34	-67.22	388	240	-435	-430	-304	-110	395	-290	0.845	0.147	1.00	Yes	0.590	0.101	0.70	Yes	0.076	0.135	0.22	Yes	0.076	0.092	0.17	Yes	1.00	**3.94**
		U_7 - U_8	544.26	-----	-2610	3639	-49	765	672	-429	-435	-300	0.377	0.620	1.00	Yes	0.263	0.422	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.36**
		U_8 - U_9	493.56	-----	680	14	2753	-2183	-1036	-145	-503	297	0.404	0.589	1.00	Yes	0.277	0.401	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.61**
		U_9 - U_{10}	708.73	-189.42	246	297	214	-628	-162	14	80	546	0.769	0.228	1.00	Yes	0.521	0.153	0.68	Yes	0.244	0.132	0.38	Yes	0.242	0.141	0.39	Yes	1.00	**3.94**
		U_{10} - U_{11}	267.86	-606.39	320	-76	216	-996	25	94	283	175	0.291	0.269	0.56	Yes	0.194	0.172	0.37	Yes	0.781	0.204	0.99	Yes	0.774	0.223	1.00	Yes	1.00	**2.95**
		U_{11} - U_{12}	-----	-875.03	227	-106	123	-768	102	408	217	587	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.162	1.00	Yes	0.821	0.127	0.95	Yes	1.00	**2.33**
		U_{12} - U_{13}	-----	-1210.79	4	-237	-73	-951	346	208	566	385	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1.00	Yes	0.809	0.131	0.94	Yes	1.00	**2.28**
		U_{13} - U_{14}	-----	-1355.33	-147	-382	-391	-1433	222	177	390	517	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.210	1.00	Yes	0.777	0.158	0.94	Yes	1.00	**2.09**
		U_{14} - U_{15}	-----	-1340.77	-272	-250	-1280	-876	213	31	580	150	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.220	1.00	Yes	0.769	0.141	0.91	Yes	1.00	**2.04**
		U_{15} - U_{16}	-----	-1404.21	-178	-404	-179	-1403	63	51	352	89	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.181	1.00	Yes	0.805	0.155	0.96	Yes	1.00	**2.99**
		U_{16} - U_{17}	-----	-1408.20	-607	-158	-901	-977	384	-67	551	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.180	1.00	Yes	0.807	0.108	0.92	Yes	1.00	**3.62**
		U_{17} - U_{18}	-----	-1121.99	-600	200	-312	-274	437	-2	209	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.103	1.00	Yes	0.878	0.098	0.98	Yes	1.00	**2.89**
		U_{18} - U_{19}	-----	-722.60	-684	52	-697	-298	383	-180	383	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.175	1.00	Yes	0.813	0.140	0.96	Yes	1.00	**2.68**
		U_{19} - U_{20}	-----	-532.40	-1500	1951	-301	-362	262	-817	74	-579	-----	-----	-----	-----	-----	-----	-----	-----	0.604	0.236	0.85	Yes	0.599	0.393	1.00	Yes	1.00	**6.10**
	Structure 2	U_0 - U_1	-----	-609.71	-92	-90	466	-1606	3	-71	-85	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.242	0.97	Yes	0.720	0.273	1.00	Yes	1.00	**5.63**
		U_1 - U_2	-----	-832.79	-47	-190	24	-1199	-69	-218	-43	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.804	0.182	0.99	Yes	1.00	**2.94**
		U_2 - U_3	-----	-1173.49	-98	-275	-63	-1467	-27	368	-22	386	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.157	1.00	Yes	0.833	0.149	0.99	Yes	1.00	**2.85**
		U_3 - U_4	-----	-1315.15	-413	-407	-1255	-1597	341	514	392	618	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.239	1.00	Yes	0.749	0.142	0.90	Yes	1.00	**2.42**
		U_4 - U_5	-----	-1481.01	-462	-375	-610	-2045	773	307	355	267	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.230	1.00	Yes	0.760	0.170	0.93	Yes	1.00	**2.43**
		U_5 - U_6	-----	-1568.54	-422	6	-1102	-1258	186	-216	329	454	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.186	1.00	Yes	0.805	0.104	0.91	Yes	1.00	**2.53**
		U_6 - U_7	-----	-1364.82	-285	-104	-1342	-1511	-135	-185	303	160	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.215	1.00	Yes	0.777	0.135	0.92	Yes	1.00	**2.24**
		U_7 - U_8	-----	-1420.39	-142	-105	-715	-1498	-128	-207	185	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.178	1.00	Yes	0.809	0.133	0.95	Yes	1.00	**3.21**
		U_8 - U_9	5.81	-1233.18	-228	192	-916	-931	-123	-214	290	-182	0.003	0.123	0.13	Yes	0.002	0.081	0.09	Yes	0.842	0.155	1.00	Yes	0.836	0.099	0.94	Yes	1.00	**3.20**
		U_9 - U_{10}	144.46	-950.41	-79	341	-1293	-475	-138	-152	252	-70	0.106	0.185	0.30	Yes	0.072	0.125	0.20	Yes	0.825	0.170	1.00	Yes	0.820	0.157	0.98	Yes	1.00	**2.71**
		U_{10} - U_{11}	917.91	-817.86	451	614	-591	-905	-290	-196	271	-359	0.775	0.171	0.95	Yes	0.528	0.112	0.64	Yes	0.818	0.181	1.00	Yes	0.813	0.128	0.95	Yes	1.00	**6.22**
		U_{11} - U_{12}	-----	-730.27	-1911	1162	-1036	-702	811	-130	679	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.163	0.90	Yes	0.726	0.270	1.00	Yes	1.00	**11.45**
		U_{12} - U_{13}	1162.47	-3.95	489	176	-1118	-1253	-435	-374	548	-309	0.785	0.210	1.00	Yes	0.560	0.143	0.71	Yes	0.003	0.255	0.26	Yes	0.003	0.158	0.17	Yes	1.00	**5.42**
		U_{13} - U_{14}	786.15	-----	-2364	5597	-353	1374	-42	-1367	-411	-500	0.387	0.612	1.00	Yes	0.274	0.402	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.98**
		U_{14} - U_{15}	778.72	-----	1425	282	5685	-3476	-1279	-942	-1055	-39	0.383	0.614	1.00	Yes	0.271	0.403	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.99**
		U_{15} - U_{16}	1327.36	-----	129	502	145	-1156	-659	-437	-202	688	0.802	0.190	1.00	Yes	0.571	0.129	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		U_{16} - U_{17}	1024.18	-34.59	648	310	887	-1534	-210	-27	482	355	0.755	0.243	1.00	Yes	0.502	0.160	0.67	Yes	0.030	0.113	0.15	Yes	0.030	0.193	0.23	Yes	1.00	**4.82**
		U_{17} - U_{18}	718.23	-288.03	454	325	282	-973	2	252	205	749	0.721	0.275	1.00	Yes	0.480	0.182	0.67	Yes	0.342	0.174	0.52	Yes	0.340	0.165	0.51	Yes	1.00	**3.78**
		U_{18} - U_{19}	564.39	-643.97	530	238	-211	-1117	100	117	411	467	0.567	0.258	0.83	Yes	0.372	0.165	0.54	Yes	0.765	0.233	1.00	Yes	0.761	0.190	0.96	Yes	1.00	**3.89**
		U_{19} - U_{20}	314.23	-719.38	315	217	18	-1006	21	13	219	479	0.295	0.226	0.53	Yes	0.195	0.148	0.35	Yes	0.799	0.193	1.00	Yes	0.794	0.161	0.96	Yes	1.00	**3.02**
		U_{20} - U_{21}	73.62	-894.55	-67	111	-160	-996	75	-10	299	270	0.057	0.177	0.24	Yes	0.040	0.115	0.16	Yes	0.822	0.177	1.00	Yes	0.816	0.144	0.97	Yes	1.00	**3.02**
		U_{21} - U_{22}	63.44	-809.12	-43	22	-809	-1134	43	61	152	393	0.049	0.207	0.26	Yes	0.035	0.139	0.18	Yes	0.744	0.255	1.00	Yes	0.738	0.164	0.91	Yes	1.00	**2.44**
		U_{22} - U_{23}	74.00	-823.11	69	-38	-934	-904	58	-2	431	59	0.057	0.182	0.24	Yes	0.041	0.123	0.17	Yes	0.757	0.234	1.00	Yes	0.751	0.135	0.89	Yes	1.00	**2.51**
		U_{23} - U_{24}	234.04	-882.76	-54	203	-278	-1040	-37	-64	256	50	0.182	0.179	0.37	Yes	0.127	0.115	0.25	Yes	0.812	0.183	1.00	Yes	0.806	0.151	0.96	Yes	1.00	**3.58**
		U_{24} - U_{25}	268.28	-709.75	174	268	-958	-537	-57	-86	390	-126	0.252	0.206	0.46	Yes	0.167	0.135	0.31	Yes	0.788	0.202	1.00	Yes	0.783	0.153	0.94	Yes	1.00	**2.74**
		U_{25} - U_{26}	-----	-719.16	-715	692	-237	-840	268	-231	212	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.098	0.96	Yes	0.849	0.143	1.00	Yes	1.00	**5.57**
		U_{26} - U_{27}	-----	-705.80	-815	924	-605	-827	365	-371	396	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.140	0.98	Yes	0.834	0.157	1.00	Yes	1.00	**7.82**
		U_{27} - U_{28}	8.24	-780.50	-1393	1609	-2517	-770	530	-312	971	-9	0.006	0.418	0.43	Yes	0.004	0.275	0.28	Yes	0.681	0.302	0.99	Yes	0.677	0.316	1.00	Yes	1.00	**10.18**
		U_{28} - U_{29}	1125.73	-----	-54	580	338	-2272	117	-673	45	-548	0.681	0.315	1.00	Yes	0.484	0.212	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.11**
		U_{29} - U_{30}	446.57	-----	-5139	7750	-82	541	665	-875	-240	108	0.220	0.777	1.00	Yes	0.155	0.509	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.50**
		U_{30} - U_{31}	780.96	-----	1094	382	5770	-3692	-1127	-606	-1049	97	0.384	0.611	1.00	Yes	0.272	0.401	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.83**
		U_{31} - U_{32}	1143.85	-----	40	437	-52	-1160	-401	-206	66	810	0.772	0.223	1.00	Yes	0.551	0.153	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		U_{32} - U_{33}	880.89	-258.37	469	268	394	-1301	-85	7	542	480	0.744	0.250	1.00	Yes	0.500	0.167	0.67	Yes	0.258	0.173	0.44	Yes	0.257	0.184	0.45	Yes	1.00	**4.46**
		U_{33} - U_{34}	782.50	-724.31	423	309	71	-1400	-3	241	526	997	0.661	0.319	0.99	Yes	0.450	0.210	0.66	Yes	0.724	0.271	1.00	Yes	0.720	0.197	0.92	Yes	1.00	**5.00**
		U_{34} - U_{35}	344.21	-883.70	344	63	88	-1556	201	164	645	533	0.252	0.259	0.52	Yes	0.171	0.175	0.35	Yes	0.767	0.225	1.00	Yes	0.763	0.189	0.96	Yes	1.00	**3.30**
		U_{35} - U_{36}	132.36	-1181.42	162	-137	-206	-1286	108	92	404	564	0.076	0.183	0.26	Yes	0.054	0.121	0.18	Yes	0.807	0.187	1.00	Yes	0.801	0.137	0.94	Yes	1.00	**3.07**
		U_{36} - U_{37}	-----	-1330.54	-66	30	-1072	-1762	87	-1	383	344	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.232	1.00	Yes	0.758	0.157	0.92	Yes	1.00	**2.85**
		U_{37} - U_{38}	-----	-1353.92	118	-152	-1281	-1586	45	19	363	279	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.216	1.00	Yes	0.771	0.141	0.92	Yes	1.00	**2.89**
		U_{38} - U_{39}	-----	-1527.50	165	-272	-465	-2019	129	-30	541	148	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.202	1.00	Yes	0.784	0.167	0.96	Yes	1.00	**3.55**
		U_{39} - U_{40}	-----	-1445.38	-250	-310	-1905	-1671	51	-8	484	194	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1.00	Yes	0.742	0.158	0.90	Yes	1.00	**2.83**
		U_{40} - U_{41}	-----	-1339.20	-249	-318	-1612	-1427	47	-95	577	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.231	1.00	Yes	0.763	0.144	0.91	Yes	1.00	**2.88**
		U_{41} - U_{42}	-----	-1244.58	-1102	220	-844	-776	394	-24	311	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.107	1.00	Yes	0.883	0.112	1.00	Yes	1.00	**4.11**
		U_{42} - U_{43}	-----	-785.94	-281	82	-1238	-578	-65	-114	387	-270	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.230	1.00	Yes	0.759	0.188	0.95	Yes	1.00	**3.85**
		U_{43} - U_{44}	-----	-588.19	-1700	1765	8	-986	165	-644	29	-841	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.212	0.92	Yes	0.695	0.300	1.00	Yes	1.00	**6.05**
	Structure 3	U_0 - U_1	-----	-639.78	-8	-158	382	-1367	-2	-51	171	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.210	0.94	Yes	0.720	0.275	1.00	Yes	1.00	**6.11**
		U_1 - U_2	-----	-727.82	-33	-140	122	-770	-63	-233	-67	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.166	1.00	Yes	0.819	0.155	0.98	Yes	1.00	**2.66**
		U_2 - U_3	-----	-1053.38	-73	-165	133	-981	-51	334	7	389	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.162	1.00	Yes	0.824	0.160	0.99	Yes	1.00	**2.50**
		U_3 - U_4	-----	-1394.52	-167	-294	-384	-1190	365	573	357	469	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1.00	Yes	0.799	0.131	0.94	Yes	1.00	**2.72**
		U_4 - U_5	-----	-1405.11	-401	-52	-452	-1005	699	234	380	235	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.183	1.00	Yes	0.806	0.111	0.92	Yes	1.00	**2.55**
		U_5 - U_6	-----	-1348.21	-182	-273	-468	-1554	139	-150	316	323	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.213	1.00	Yes	0.773	0.171	0.95	Yes	1.00	**2.27**
		U_6 - U_7	-----	-1442.46	-361	-69	-917	-918	-114	-203	403	30	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.160	1.00	Yes	0.827	0.101	0.93	Yes	1.00	**3.11**
		U_7 - U_8	-----	-1226.62	-135	92	-344	-891	-86	-212	233	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.170	1.00	Yes	0.819	0.123	0.95	Yes	1.00	**3.80**
		U_8 - U_9	62.65	-906.99	-31	291	-420	-531	-80	-174	276	-361	0.050	0.131	0.19	Yes	0.034	0.088	0.13	Yes	0.859	0.136	1.00	Yes	0.851	0.088	0.94	Yes	1.00	**3.58**
		U_9 - U_{10}	440.17	-664.00	45	375	-613	-197	-155	-127	282	-218	0.477	0.183	0.66	Yes	0.318	0.118	0.44	Yes	0.855	0.143	1.00	Yes	0.847	0.137	0.99	Yes	1.00	**4.74**
		U_{10} - U_{11}	-----	-581.62	-457	427	-944	-359	285	-400	680	-456	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.249	1.00	Yes	0.742	0.211	0.96	Yes	1.00	**6.63**
		U_{11} - U_{12}	510.00	-----	-1657	2700	-149	550	198	-999	-392	-385	0.418	0.575	1.00	Yes	0.286	0.391	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.05**
		U_{12} - U_{13}	963.78	-----	1039	128	1817	-1055	-539	-497	-410	-13	0.668	0.330	1.00	Yes	0.466	0.225	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		U_{13} - U_{14}	878.31	-----	233	441	177	-460	-343	-224	-40	417	0.840	0.155	1.00	Yes	0.587	0.107	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		U_{14} - U_{15}	646.70	-346.18	425	296	391	-842	-128	-40	291	102	0.741	0.249	1.00	Yes	0.500	0.163	0.67	Yes	0.471	0.125	0.60	Yes	0.467	0.200	0.67	Yes	1.00	**3.47**
		U_{15} - U_{16}	433.16	-577.42	338	236	-99	-696	-69	131	111	452	0.496	0.242	0.74	Yes	0.341	0.166	0.51	Yes	0.786	0.208	1.00	Yes	0.779	0.166	0.95	Yes	1.00	**3.09**
		U_{16} - U_{17}	411.96	-552.30	395	128	-362	-718	76	74	402	149	0.472	0.239	0.72	Yes	0.324	0.163	0.49	Yes	0.752	0.243	1.00	Yes	0.745	0.171	0.92	Yes	1.00	**2.93**
		U_{17} - U_{18}	346.43	-542.27	453	-31	119	-1099	-106	71	267	52	0.397	0.306	0.71	Yes	0.268	0.200	0.47	Yes	0.738	0.237	0.98	Yes	0.731	0.261	1.00	Yes	1.00	**4.10**
		U_{18} - U_{19}	95.09	-516.43	169	-37	-817	-491	-39	32	468	-21	0.109	0.273	0.39	Yes	0.075	0.187	0.27	Yes	0.703	0.296	1.00	Yes	0.696	0.194	0.90	Yes	1.00	**2.55**
		U_{19} - U_{20}	-----	-553.24	-912	1040	-144	-603	335	-480	389	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.113	0.87	Yes	0.746	0.247	1.00	Yes	1.00	**4.46**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-119.81	-379	206	1578	-2596	-28	-103	141	519	-----	-----	-----	-----	-----	-----	-----	-----	0.218	0.564	0.79	Yes	0.216	0.779	1.00	Yes	1.00	**19.19**
		L_1 - L_2	457.54	-0.68	148	-19	288	-843	-26	-37	-198	-179	0.700	0.295	1.00	Yes	0.427	0.198	0.63	Yes	0.001	0.172	0.18	Yes	0.001	0.253	0.26	Yes	1.00	**3.00**
		L_2 - L_3	692.83	-27.74	-20	22	-632	-727	-33	23	-151	41	0.797	0.200	1.00	Yes	0.461	0.120	0.59	Yes	0.038	0.222	0.27	Yes	0.038	0.176	0.22	Yes	1.00	**2.53**
		L_3 - L_4	638.95	-202.07	102	313	-32	-899	79	72	-262	-155	0.735	0.259	1.00	Yes	0.437	0.167	0.61	Yes	0.276	0.202	0.48	Yes	0.274	0.217	0.50	Yes	1.00	**3.26**
		L_4 - L_5	463.38	-----	-1164	699	-660	-91	-322	50	-276	500	0.600	0.397	1.00	Yes	0.360	0.258	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		L_5 - L_6	-----	-731.83	166	603	-319	19	77	129	127	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.140	1.00	Yes	0.844	0.133	0.98	Yes	1.00	**2.90**
		L_6 - L_7	-----	-1032.06	-771	968	-700	-807	-103	125	111	935	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.158	1.00	Yes	0.831	0.152	0.99	Yes	1.00	**7.14**
		L_7 - L_8	-----	-1189.26	-130	1732	8	588	-11	-172	-131	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.229	1.00	Yes	0.753	0.229	0.99	Yes	1.00	**4.12**
		L_8 - L_9	-----	-1285.40	1232	52	1281	-508	-170	-52	43	354	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.169	1.00	Yes	0.814	0.170	0.99	Yes	1.00	**4.87**
		L_9 - L_{10}	-----	-1064.61	146	135	254	-856	36	138	248	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.070	0.94	Yes	0.857	0.135	1.00	Yes	1.00	**4.88**
		L_{10} - L_{11}	-----	-548.13	521	-9	358	-600	139	47	11	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.076	0.92	Yes	0.835	0.159	1.00	Yes	1.00	**3.39**
		L_{11} - L_{12}	585.46	-213.38	478	-171	234	-814	86	-26	111	-51	0.758	0.235	1.00	Yes	0.455	0.155	0.61	Yes	0.328	0.120	0.45	Yes	0.325	0.215	0.55	Yes	1.00	**3.17**
		L_{12} - L_{13}	1043.13	-----	160	-76	-350	-799	25	35	112	255	0.823	0.172	1.00	Yes	0.527	0.103	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		L_{13} - L_{14}	1282.27	-----	352	-445	70	-1616	9	-1	242	-21	0.754	0.243	1.00	Yes	0.489	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
		L_{14} - L_{15}	1642.28	-----	-1084	3	-1472	-893	-220	-108	-210	210	0.802	0.193	1.00	Yes	0.521	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		L_{15} - L_{16}	1572.55	-----	-213	-361	-799	-1637	-126	-54	-150	-479	0.768	0.231	1.00	Yes	0.493	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		L_{16} - L_{17}	1210.79	-----	-909	375	-1306	-477	-415	6	-393	366	0.766	0.229	1.00	Yes	0.497	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		L_{17} - L_{18}	891.21	-----	-750	552	-659	-432	-221	-192	-170	-567	0.776	0.217	1.00	Yes	0.497	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.27**
		L_{18} - L_{19}	360.06	-15.79	-1062	927	-670	116	-578	-31	-353	590	0.551	0.441	1.00	Yes	0.373	0.280	0.66	Yes	0.029	0.168	0.20	Yes	0.028	0.319	0.35	Yes	1.00	**6.23**
		L_{19} - L_{20}	135.55	-366.63	-1125	543	-76	-49	297	67	-23	-5	0.207	0.399	0.61	Yes	0.127	0.268	0.40	Yes	0.666	0.236	0.91	Yes	0.660	0.338	1.00	Yes	1.00	**6.11**
	Structure 2	L_0 - L_1	33.96	-188.16	-144	71	1280	-3578	-25	-86	-348	-1208	0.041	0.927	0.97	Yes	0.025	0.591	0.62	Yes	0.271	0.616	0.89	Yes	0.269	0.728	1.00	Yes	1.00	**18.87**
		L_1 - L_2	543.03	-----	160	-210	709	-1459	-39	33	-244	-231	0.660	0.337	1.00	Yes	0.392	0.217	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_2 - L_3	1010.35	-----	-47	-165	-196	-1190	79	78	60	233	0.796	0.197	1.00	Yes	0.522	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		L_3 - L_4	1316.44	-----	41	-428	-243	-1729	31	56	200	68	0.773	0.218	1.00	Yes	0.521	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_4 - L_5	1743.40	-----	-391	-250	-1292	-1785	94	202	-57	144	0.813	0.182	1.00	Yes	0.538	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		L_5 - L_6	1824.58	-----	-146	-383	-1213	-2289	113	-16	147	-68	0.783	0.212	1.00	Yes	0.525	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		L_6 - L_7	1839.12	-----	-431	-88	-2117	-2059	-166	45	-48	511	0.778	0.218	1.00	Yes	0.517	0.129	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		L_7 - L_8	1450.58	-53.98	-181	350	-1219	-1334	-130	10	-53	-246	0.832	0.167	1.00	Yes	0.546	0.099	0.65	Yes	0.037	0.197	0.24	Yes	0.036	0.147	0.19	Yes	1.00	**3.66**
		L_8 - L_9	1131.99	-----	-869	576	-1150	-391	-194	56	-172	541	0.792	0.206	1.00	Yes	0.533	0.130	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_9 - L_{10}	873.70	-797.98	-40	861	-874	-638	37	117	-49	-391	0.780	0.187	0.97	Yes	0.454	0.115	0.57	Yes	0.844	0.154	1.00	Yes	0.838	0.140	0.98	Yes	1.00	**5.58**
		L_{10} - L_{11}	620.34	-42.00	-1520	1182	-1202	-423	-644	113	-323	828	0.619	0.377	1.00	Yes	0.363	0.234	0.60	Yes	0.050	0.126	0.18	Yes	0.049	0.266	0.32	Yes	1.00	**7.91**
		L_{11} - L_{12}	153.37	-927.65	-1557	1702	-1275	-656	-6	235	240	-650	0.107	0.293	0.40	Yes	0.071	0.177	0.25	Yes	0.767	0.167	0.94	Yes	0.761	0.232	1.00	Yes	1.00	**10.27**
		L_{12} - L_{13}	-----	-1321.60	-593	12	-770	-1684	82	-80	55	269	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.200	1.00	Yes	0.791	0.167	0.96	Yes	1.00	**5.47**
		L_{13} - L_{14}	-----	-1381.89	-1005	3438	-348	1191	-194	-384	-182	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.230	0.94	Yes	0.695	0.300	1.00	Yes	1.00	**5.00**
		L_{14} - L_{15}	-----	-1426.54	1419	-263	3206	-1984	-223	-330	-67	249	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.182	0.91	Yes	0.718	0.280	1.00	Yes	1.00	**5.58**
		L_{15} - L_{16}	-----	-1437.16	-868	340	-1087	-1107	-15	372	26	6	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.131	1.00	Yes	0.860	0.110	0.97	Yes	1.00	**5.27**
		L_{16} - L_{17}	-----	-1151.77	1203	119	691	-919	400	188	-41	1	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.152	1.00	Yes	0.839	0.148	0.99	Yes	1.00	**4.55**
		L_{17} - L_{18}	-----	-823.58	472	231	357	-798	102	-56	50	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.048	0.92	Yes	0.865	0.128	1.00	Yes	1.00	**3.32**
		L_{18} - L_{19}	111.56	-632.24	659	112	127	-689	-2	34	175	246	0.126	0.171	0.30	Yes	0.073	0.101	0.18	Yes	0.848	0.146	1.00	Yes	0.843	0.133	0.98	Yes	1.00	**3.22**
		L_{19} - L_{20}	553.48	-576.05	553	227	62	-1196	58	-43	299	-93	0.627	0.277	0.91	Yes	0.371	0.176	0.55	Yes	0.772	0.154	0.93	Yes	0.768	0.231	1.00	Yes	1.00	**4.19**
		L_{20} - L_{21}	931.37	-470.08	565	53	-664	-1474	-96	-104	115	360	0.743	0.254	1.00	Yes	0.487	0.152	0.64	Yes	0.444	0.227	0.68	Yes	0.441	0.215	0.66	Yes	1.00	**4.92**
		L_{21} - L_{22}	850.56	-----	49	-59	-628	-1996	-37	42	228	-22	0.678	0.316	1.00	Yes	0.454	0.198	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		L_{22} - L_{23}	923.77	-130.69	-140	227	-1069	-1433	-18	3	-89	428	0.737	0.255	1.00	Yes	0.493	0.161	0.66	Yes	0.123	0.288	0.42	Yes	0.123	0.209	0.34	Yes	1.00	**4.13**
		L_{23} - L_{24}	934.82	-321.19	14	399	-1075	-1467	12	81	76	-308	0.745	0.247	1.00	Yes	0.489	0.148	0.64	Yes	0.303	0.286	0.59	Yes	0.301	0.214	0.52	Yes	1.00	**4.98**
		L_{24} - L_{25}	659.87	-----	-564	481	-885	-798	-191	222	-272	495	0.748	0.246	1.00	Yes	0.442	0.155	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		L_{25} - L_{26}	608.43	-490.18	-828	1059	-902	-1218	-65	-171	134	-470	0.689	0.307	1.00	Yes	0.398	0.182	0.58	Yes	0.657	0.145	0.81	Yes	0.653	0.235	0.89	Yes	1.00	**7.99**
		L_{26} - L_{27}	34.18	-801.47	-790	983	-876	-414	-367	16	-228	481	0.031	0.215	0.25	Yes	0.018	0.132	0.15	Yes	0.847	0.105	0.96	Yes	0.842	0.157	1.00	Yes	1.00	**5.79**
		L_{27} - L_{28}	-----	-1139.29	-551	1362	-445	-31	-77	-62	34	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.130	0.97	Yes	0.830	0.168	1.00	Yes	1.00	**5.14**
		L_{28} - L_{29}	-----	-1372.68	-3	-48	-551	-1446	-40	4	87	288	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.168	1.00	Yes	0.821	0.144	0.97	Yes	1.00	**3.93**
		L_{29} - L_{30}	-----	-1394.94	-1112	3404	-379	761	81	148	-57	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.204	0.92	Yes	0.702	0.297	1.00	Yes	1.00	**5.49**
		L_{30} - L_{31}	-----	-1373.65	1553	-283	3454	-2457	-460	-371	179	599	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.203	0.91	Yes	0.691	0.302	1.00	Yes	1.00	**7.43**
		L_{31} - L_{32}	-----	-1114.09	-482	540	-1582	-2281	-535	33	376	188	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.327	1.00	Yes	0.666	0.227	0.90	Yes	1.00	**10.73**
		L_{32} - L_{33}	-----	-1003.47	983	140	373	-1245	-133	-68	328	286	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.153	0.99	Yes	0.823	0.170	1.00	Yes	1.00	**6.13**
		L_{33} - L_{34}	234.52	-664.44	392	170	229	-1216	7	-88	237	-31	0.234	0.245	0.48	Yes	0.137	0.154	0.30	Yes	0.786	0.143	0.93	Yes	0.780	0.213	1.00	Yes	1.00	**4.76**
		L_{34} - L_{35}	608.09	-701.02	704	75	653	-1617	-42	60	179	303	0.543	0.295	0.84	Yes	0.316	0.183	0.50	Yes	0.741	0.179	0.93	Yes	0.736	0.259	1.00	Yes	1.00	**6.33**
		L_{35} - L_{36}	1085.00	-263.19	384	-9	-67	-1355	101	-48	560	32	0.759	0.235	1.00	Yes	0.511	0.148	0.66	Yes	0.218	0.177	0.40	Yes	0.217	0.183	0.40	Yes	1.00	**4.32**
		L_{36} - L_{37}	1319.53	-35.43	240	0	-634	-1854	-103	13	-18	395	0.757	0.237	1.00	Yes	0.497	0.140	0.64	Yes	0.024	0.222	0.25	Yes	0.024	0.205	0.23	Yes	1.00	**3.68**
		L_{37} - L_{38}	1777.43	-----	-39	-350	-662	-2680	-42	-8	83	-166	0.752	0.246	1.00	Yes	0.500	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		L_{38} - L_{39}	1868.55	-----	-235	-155	-1917	-1944	-55	4	-106	345	0.802	0.194	1.00	Yes	0.538	0.119	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		L_{39} - L_{40}	1633.21	-----	-189	-298	-1008	-2114	-52	-32	-172	-545	0.761	0.236	1.00	Yes	0.504	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		L_{40} - L_{41}	1324.69	-----	-1093	209	-1507	-993	-403	37	-286	498	0.778	0.216	1.00	Yes	0.524	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		L_{41} - L_{42}	1034.34	-----	-891	386	-972	-796	-99	13	-12	-416	0.815	0.185	1.00	Yes	0.535	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_{42} - L_{43}	469.86	-----	-1519	721	-835	-455	-446	153	-312	713	0.571	0.426	1.00	Yes	0.339	0.270	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.60**
		L_{43} - L_{44}	259.54	-337.51	-2445	941	-31	-34	1108	324	-185	-54	0.315	0.679	1.00	Yes	0.188	0.431	0.62	Yes	0.485	0.424	0.91	Yes	0.482	0.497	0.98	Yes	1.00	**12.76**
	Structure 3	L_0 - L_1	185.26	-266.36	-18	-75	989	-1732	-9	-41	-140	-634	0.284	0.651	0.94	Yes	0.173	0.435	0.61	Yes	0.484	0.355	0.84	Yes	0.480	0.520	1.00	Yes	1.00	**10.23**
		L_1 - L_2	396.72	-----	151	-186	472	-1058	-50	21	-327	-1	0.607	0.385	1.00	Yes	0.411	0.242	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		L_2 - L_3	913.89	-----	-36	-161	20	-933	36	23	183	104	0.796	0.203	1.00	Yes	0.509	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_3 - L_4	1211.18	-----	62	-365	-119	-1367	44	53	294	127	0.766	0.227	1.00	Yes	0.497	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		L_4 - L_5	1648.54	-----	-378	-179	-1222	-1416	115	222	81	282	0.805	0.190	1.00	Yes	0.517	0.111	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		L_5 - L_6	1547.26	-----	-83	-349	-608	-1874	141	78	166	75	0.756	0.238	1.00	Yes	0.491	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		L_6 - L_7	1359.53	-----	-1081	358	-1194	-585	-199	20	-152	409	0.800	0.199	1.00	Yes	0.518	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		L_7 - L_8	1076.35	-----	-66	155	-523	-685	-26	40	-35	-203	0.849	0.145	1.00	Yes	0.543	0.087	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		L_8 - L_9	571.31	-----	-644	403	-521	-145	-167	151	-159	500	0.740	0.258	1.00	Yes	0.444	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		L_9 - L_{10}	283.69	-558.96	14	515	-529	-196	74	138	154	-51	0.367	0.167	0.54	Yes	0.214	0.101	0.32	Yes	0.859	0.126	0.99	Yes	0.852	0.140	1.00	Yes	1.00	**4.40**
		L_{10} - L_{11}	-----	-1038.16	-1014	1025	-576	-642	-383	-103	76	863	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.128	0.98	Yes	0.836	0.161	1.00	Yes	1.00	**7.93**
		L_{11} - L_{12}	-----	-1232.73	-193	1389	-34	468	-278	-483	-213	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.203	1.00	Yes	0.781	0.184	0.97	Yes	1.00	**4.13**
		L_{12} - L_{13}	-----	-1229.03	1183	95	1649	-672	-144	-300	-35	361	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.211	1.00	Yes	0.778	0.218	1.00	Yes	1.00	**6.63**
		L_{13} - L_{14}	-----	-1107.43	-12	286	70	-646	-250	126	64	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.082	0.99	Yes	0.891	0.101	1.00	Yes	1.00	**3.85**
		L_{14} - L_{15}	-----	-742.97	567	165	156	-372	148	-7	11	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.130	1.00	Yes	0.857	0.125	0.99	Yes	1.00	**2.72**
		L_{15} - L_{16}	207.15	-542.00	423	194	162	-633	16	-58	44	-50	0.268	0.178	0.45	Yes	0.161	0.117	0.28	Yes	0.833	0.098	0.94	Yes	0.826	0.167	1.00	Yes	1.00	**2.46**
		L_{16} - L_{17}	636.38	-294.66	384	47	-40	-889	96	-49	67	290	0.732	0.261	1.00	Yes	0.435	0.168	0.61	Yes	0.403	0.203	0.61	Yes	0.399	0.215	0.62	Yes	1.00	**3.15**
		L_{17} - L_{18}	641.48	-159.91	124	9	-396	-951	1	12	58	-165	0.738	0.256	1.00	Yes	0.427	0.154	0.59	Yes	0.218	0.238	0.46	Yes	0.216	0.230	0.45	Yes	1.00	**3.21**
		L_{18} - L_{19}	423.77	-----	-630	260	-570	-558	-109	132	-200	725	0.649	0.345	1.00	Yes	0.396	0.224	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		L_{19} - L_{20}	2.18	-179.64	-1969	1165	-808	-252	1874	510	-973	-265	0.003	0.993	1.00	Yes	0.002	0.597	0.60	Yes	0.326	0.651	0.98	Yes	0.323	0.591	0.92	Yes	1.00	**14.34**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	U_0 - L_0			-----	-316.36	-190	252	-55	88	-463	-149	-34	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.245	0.96	Yes	0.669	0.322	1.00	Yes	1.00	**1.47**
		U_1 - L_1			20.71	-327.09	-232	238	27	-15	-46	23	0	-2	0.037	0.318	0.36	Yes	0.020	0.175	0.20	Yes	0.715	0.083	0.80	Yes	0.692	0.304	1.00	Yes	1.00	**2.85**
		U_2 - L_2			103.00	-305.40	-224	274	88	-98	-15	59	69	31	0.185	0.371	0.56	Yes	0.102	0.204	0.31	Yes	0.667	0.121	0.79	Yes	0.646	0.351	1.00	Yes	1.00	**4.18**
		U_3 - L_3			218.64	-263.89	-308	343	274	-257	-333	-56	162	154	0.393	0.534	0.93	Yes	0.216	0.294	0.52	Yes	0.578	0.188	0.77	Yes	0.558	0.438	1.00	Yes	1.00	**7.54**
		U_4 - L_4			-----	-203.50	-54	38	439	-431	-5	140	-513	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.447	0.265	0.72	Yes	0.431	0.562	1.00	Yes	1.00	**7.27**
		U_5 - L_5			-----	-420.96	67	-89	237	-269	20	21	-144	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.132	0.90	Yes	0.726	0.273	1.00	Yes	1.00	**2.43**
		U_6 - L_6			-----	-517.95	87	-80	268	-286	-227	-57	78	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.117	0.91	Yes	0.743	0.250	1.00	Yes	1.00	**2.37**
		U_7 - L_7			-----	-438.48	134	-150	303	-324	-161	13	200	35	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.144	0.88	Yes	0.676	0.319	1.00	Yes	1.00	**1.62**
		U_8 - L_8			-----	-1207.87	-349	411	485	-586	-118	-7	919	292	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.125	1.00	Yes	0.837	0.109	0.95	Yes	1.00	**3.92**
		U_9 - L_9			-----	-665.78	-389	442	-172	202	-162	-212	-399	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.147	0.95	Yes	0.752	0.246	1.00	Yes	1.00	**2.52**
		U_{10} - L_{10}			-----	-731.85	-358	367	-139	102	-996	-669	-324	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.238	1.00	Yes	0.722	0.190	0.92	Yes	1.00	**3.27**
		U_{11} - L_{11}			-----	-665.13	-355	479	-144	195	-452	-423	-569	-386	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.175	0.98	Yes	0.774	0.223	1.00	Yes	1.00	**3.05**
		U_{12} - L_{12}			-----	-514.54	-341	337	-99	99	-349	-259	-339	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.162	0.91	Yes	0.706	0.291	1.00	Yes	1.00	**2.90**
		U_{13} - L_{13}			-----	-364.67	-232	261	-49	68	-41	-34	-172	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.127	0.87	Yes	0.699	0.298	1.00	Yes	1.00	**2.28**
		U_{14} - L_{14}			-----	-158.35	-473	517	256	-257	38	199	-36	118	-----	-----	-----	-----	-----	-----	-----	-----	0.353	0.213	0.57	Yes	0.335	0.660	1.00	Yes	1.00	**9.71**
		U_{15} - L_{15}			166.41	-303.53	-123	111	248	-272	58	110	129	-117	0.299	0.385	0.69	Yes	0.165	0.212	0.38	Yes	0.680	0.130	0.81	Yes	0.642	0.348	1.00	Yes	1.00	**3.94**
		U_{16} - L_{16}			-----	-320.93	27	-30	239	-248	-73	-101	236	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.107	0.83	Yes	0.679	0.317	1.00	Yes	1.00	**2.65**
		U_{17} - L_{17}			-----	-431.40	60	-74	228	-246	-120	-112	60	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.111	0.92	Yes	0.744	0.249	1.00	Yes	1.00	**2.04**
		U_{18} - L_{18}			-----	-533.97	142	-148	432	-444	-135	-120	123	-219	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.090	0.88	Yes	0.743	0.252	1.00	Yes	1.00	**2.24**
		U_{19} - L_{19}			-----	-641.66	170	-168	536	-524	-116	-45	187	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.099	0.91	Yes	0.747	0.249	1.00	Yes	1.00	**2.50**
		U_{20} - L_{20}			-----	-605.21	159	-257	356	-532	30	4	400	52	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.200	1.00	Yes	0.704	0.247	0.96	Yes	1.00	**1.98**
	Structure 2	U_0 - L_0			-----	-677.38	-449	566	-162	211	-539	-91	-42	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.183	1.00	Yes	0.726	0.240	0.97	Yes	1.00	**2.64**
		U_1 - L_1			-----	-713.90	-529	535	-114	123	-185	32	-106	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.080	0.90	Yes	0.765	0.227	1.00	Yes	1.00	**3.46**
		U_2 - L_2			-----	-590.04	-472	481	-104	115	-154	-33	-107	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.086	0.88	Yes	0.752	0.246	1.00	Yes	1.00	**2.99**
		U_3 - L_3			-----	-497.20	-221	238	-55	63	72	-44	78	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.076	0.93	Yes	0.780	0.217	1.00	Yes	1.00	**2.53**
		U_4 - L_4			-----	-336.24	-224	222	-12	21	-180	-38	249	76	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.149	0.92	Yes	0.711	0.286	1.00	Yes	1.00	**2.72**
		U_5 - L_5			76.00	-326.20	-212	235	77	-60	13	-30	-2	97	0.137	0.329	0.47	Yes	0.075	0.181	0.26	Yes	0.737	0.129	0.87	Yes	0.690	0.300	1.00	Yes	1.00	**3.51**
		U_6 - L_6			346.90	-240.61	-233	246	218	-215	-63	-26	120	203	0.624	0.374	1.00	Yes	0.343	0.206	0.55	Yes	0.541	0.147	0.69	Yes	0.509	0.315	0.83	Yes	1.00	**5.56**
		U_7 - L_7			-----	-212.13	-146	156	384	-430	-128	236	281	65	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.229	0.71	Yes	0.449	0.550	1.00	Yes	1.00	**8.63**
		U_8 - L_8			-----	-462.04	67	-83	352	-371	-5	-66	99	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.100	0.77	Yes	0.666	0.325	1.00	Yes	1.00	**2.89**
		U_9 - L_9			-----	-688.85	158	-172	601	-607	-36	-195	121	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.086	0.86	Yes	0.738	0.257	1.00	Yes	1.00	**3.50**
		U_{10} - L_{10}			-----	-792.82	182	-184	557	-580	-147	-94	228	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.091	0.88	Yes	0.741	0.256	1.00	Yes	1.00	**3.63**
		U_{11} - L_{11}			-----	-813.46	186	-186	519	-535	-190	-69	151	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.100	0.92	Yes	0.761	0.236	1.00	Yes	1.00	**3.20**
		U_{12} - L_{12}			-----	-877.64	156	-134	533	-539	-145	10	171	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.097	0.94	Yes	0.761	0.231	1.00	Yes	1.00	**3.26**
		U_{13} - L_{13}			-----	-745.88	208	-204	582	-561	-170	20	280	40	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1.00	Yes	0.719	0.279	1.00	Yes	1.00	**2.82**
		U_{14} - L_{14}			-----	-1158.27	-452	420	678	-646	259	266	747	305	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.152	1.00	Yes	0.768	0.120	0.89	Yes	1.00	**4.59**
		U_{15} - L_{15}			-----	-730.54	-604	584	-116	124	-191	-110	-307	9	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.160	0.98	Yes	0.704	0.289	1.00	Yes	1.00	**4.30**
		U_{16} - L_{16}			-----	-656.52	-517	487	-89	63	-1167	-471	-808	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1.00	Yes	0.704	0.219	0.93	Yes	1.00	**3.53**
		U_{17} - L_{17}			-----	-639.45	-540	536	-124	122	-534	-427	-275	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.169	0.96	Yes	0.744	0.251	1.00	Yes	1.00	**3.34**
		U_{18} - L_{18}			-----	-584.50	-458	484	-95	95	-82	-280	-114	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.111	0.89	Yes	0.745	0.248	1.00	Yes	1.00	**3.02**
		U_{19} - L_{19}			-----	-469.19	-307	300	-54	58	-234	-175	-66	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.125	0.84	Yes	0.701	0.295	1.00	Yes	1.00	**2.79**
		U_{20} - L_{20}			-----	-381.21	-226	233	-19	20	-29	-87	-68	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.094	0.88	Yes	0.730	0.266	1.00	Yes	1.00	**2.75**
		U_{21} - L_{21}			31.75	-329.12	-213	234	19	-13	156	-16	-20	47	0.057	0.344	0.41	Yes	0.031	0.189	0.23	Yes	0.744	0.123	0.87	Yes	0.696	0.299	1.00	Yes	1.00	**2.99**
		U_{22} - L_{22}			-----	-215.76	-395	421	321	-341	-12	266	417	149	-----	-----	-----	-----	-----	-----	-----	-----	0.486	0.200	0.69	Yes	0.457	0.538	1.00	Yes	1.00	**10.08**
		U_{23} - L_{23}			82.61	-312.77	-48	44	242	-259	78	67	148	-57	0.149	0.373	0.53	Yes	0.082	0.205	0.29	Yes	0.707	0.107	0.82	Yes	0.662	0.331	1.00	Yes	1.00	**3.29**
		U_{24} - L_{24}			-----	-370.51	10	-22	241	-252	76	27	197	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.109	0.87	Yes	0.710	0.288	1.00	Yes	1.00	**2.72**
		U_{25} - L_{25}			-----	-467.71	38	-38	307	-300	-88	-29	239	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.096	0.81	Yes	0.698	0.296	1.00	Yes	1.00	**2.72**
		U_{26} - L_{26}			-----	-565.65	67	-70	508	-535	-122	-22	326	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.105	0.86	Yes	0.721	0.274	1.00	Yes	1.00	**3.00**
		U_{27} - L_{27}			-----	-627.48	85	-85	570	-573	-136	3	265	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.100	0.88	Yes	0.730	0.266	1.00	Yes	1.00	**3.16**
		U_{28} - L_{28}			-----	-710.30	74	-71	559	-552	-156	17	359	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.105	0.93	Yes	0.761	0.237	1.00	Yes	1.00	**3.41**
		U_{29} - L_{29}			-----	-710.33	118	-123	638	-613	-118	28	417	42	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.196	0.99	Yes	0.685	0.305	1.00	Yes	1.00	**3.71**
		U_{30} - L_{30}			-----	-1165.23	-629	567	748	-733	-72	298	833	49	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.142	1.00	Yes	0.773	0.132	0.91	Yes	1.00	**5.41**
		U_{31} - L_{31}			-----	-753.38	-506	491	-108	108	93	-90	-307	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.153	1.00	Yes	0.726	0.242	0.97	Yes	1.00	**3.79**
		U_{32} - L_{32}			-----	-814.66	-461	451	-79	56	-844	-431	-673	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.218	1.00	Yes	0.706	0.198	0.91	Yes	1.00	**3.95**
		U_{33} - L_{33}			-----	-836.15	-463	476	-117	106	-251	-434	-456	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.153	1.00	Yes	0.782	0.210	1.00	Yes	1.00	**3.90**
		U_{34} - L_{34}			-----	-802.86	-548	557	-120	113	-442	-396	-317	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.147	0.95	Yes	0.751	0.246	1.00	Yes	1.00	**4.31**
		U_{35} - L_{35}			-----	-705.62	-549	562	-110	125	-48	-140	-156	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.067	0.86	Yes	0.756	0.238	1.00	Yes	1.00	**3.82**
		U_{36} - L_{36}			-----	-488.11	-306	330	-54	66	258	38	-46	62	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.120	0.83	Yes	0.703	0.288	1.00	Yes	1.00	**2.97**
		U_{37} - L_{37}			-----	-186.58	-420	473	81	-81	-166	194	82	102	-----	-----	-----	-----	-----	-----	-----	-----	0.421	0.233	0.66	Yes	0.395	0.605	1.00	Yes	1.00	**7.93**
		U_{38} - L_{38}			338.91	-177.31	-241	248	168	-174	236	116	178	-73	0.610	0.386	1.00	Yes	0.335	0.212	0.55	Yes	0.399	0.134	0.54	Yes	0.375	0.317	0.70	Yes	1.00	**4.66**
		U_{39} - L_{39}			153.50	-322.53	-133	120	225	-245	50	72	161	-102	0.276	0.360	0.64	Yes	0.152	0.198	0.35	Yes	0.729	0.110	0.84	Yes	0.682	0.313	1.00	Yes	1.00	**3.97**
		U_{40} - L_{40}			4.96	-340.70	-10	4	218	-217	15	-34	166	-123	0.009	0.326	0.34	Yes	0.005	0.179	0.19	Yes	0.773	0.087	0.86	Yes	0.721	0.278	1.00	Yes	1.00	**2.92**
		U_{41} - L_{41}			-----	-487.70	26	-30	246	-257	8	-30	143	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.084	0.92	Yes	0.765	0.234	1.00	Yes	1.00	**2.76**
		U_{42} - L_{42}			-----	-584.02	60	-69	494	-500	11	-35	165	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.076	0.86	Yes	0.744	0.256	1.00	Yes	1.00	**2.96**
		U_{43} - L_{43}			-----	-703.00	78	-91	564	-562	-50	-51	258	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.085	0.89	Yes	0.753	0.239	1.00	Yes	1.00	**3.22**
		U_{44} - L_{44}			-----	-666.18	115	-131	388	-533	-141	-24	621	105	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.195	1.00	Yes	0.714	0.226	0.95	Yes	1.00	**2.80**
	Structure 3	U_0 - L_0			-----	-576.51	-408	467	-145	194	-819	-107	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.229	1.00	Yes	0.671	0.217	0.89	Yes	1.00	**2.05**
		U_1 - L_1			-----	-663.83	-466	479	-112	123	-574	24	-122	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.139	0.97	Yes	0.773	0.222	1.00	Yes	1.00	**3.23**
		U_2 - L_2			-----	-535.55	-440	444	-108	114	-304	-26	-147	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.112	0.90	Yes	0.745	0.251	1.00	Yes	1.00	**2.84**
		U_3 - L_3			-----	-445.19	-203	221	-45	58	-37	-63	45	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.080	0.92	Yes	0.768	0.224	1.00	Yes	1.00	**2.36**
		U_4 - L_4			-----	-320.88	-243	248	-17	22	-207	-25	231	48	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.146	0.87	Yes	0.679	0.316	1.00	Yes	1.00	**3.00**
		U_5 - L_5			99.60	-306.06	-256	275	67	-63	-158	-30	-89	82	0.179	0.397	0.58	Yes	0.099	0.219	0.32	Yes	0.686	0.149	0.84	Yes	0.648	0.352	1.00	Yes	1.00	**3.75**
		U_6 - L_6			-----	-201.70	-288	310	429	-448	254	107	-161	51	-----	-----	-----	-----	-----	-----	-----	-----	0.450	0.217	0.67	Yes	0.427	0.572	1.00	Yes	1.00	**9.65**
		U_7 - L_7			-----	-360.29	12	-26	244	-266	-11	-22	-2	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.120	0.85	Yes	0.690	0.304	1.00	Yes	1.00	**2.61**
		U_8 - L_8			-----	-513.84	63	-69	338	-340	-15	-84	90	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.102	0.85	Yes	0.705	0.291	1.00	Yes	1.00	**3.10**
		U_9 - L_9			-----	-653.13	131	-169	408	-514	-187	-140	41	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.103	0.89	Yes	0.760	0.239	1.00	Yes	1.00	**3.19**
		U_{10} - L_{10}			-----	-780.46	131	-109	406	-441	-2	25	201	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.078	0.89	Yes	0.770	0.229	1.00	Yes	1.00	**3.39**
		U_{11} - L_{11}			-----	-648.36	167	-192	430	-474	-155	-29	297	57	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.125	0.90	Yes	0.732	0.264	1.00	Yes	1.00	**2.40**
		U_{12} - L_{12}			-----	-1180.14	-381	413	491	-637	459	182	984	376	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.144	1.00	Yes	0.818	0.119	0.94	Yes	1.00	**4.42**
		U_{13} - L_{13}			-----	-461.30	-274	290	-67	76	-215	-118	-298	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.155	0.93	Yes	0.712	0.285	1.00	Yes	1.00	**2.48**
		U_{14} - L_{14}			-----	-469.23	-252	252	-44	28	-1002	-531	-657	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.281	1.00	Yes	0.673	0.220	0.90	Yes	1.00	**2.89**
		U_{15} - L_{15}			-----	-444.82	-171	207	-46	47	-66	-209	-443	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.189	1.00	Yes	0.767	0.210	0.98	Yes	1.00	**2.44**
		U_{16} - L_{16}			-----	-261.89	-345	348	36	-15	206	-21	-632	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.576	0.291	0.87	Yes	0.554	0.445	1.00	Yes	1.00	**5.96**
		U_{17} - L_{17}			283.41	-183.58	-301	311	156	-179	-121	100	-294	-196	0.510	0.483	1.00	Yes	0.280	0.266	0.55	Yes	0.402	0.174	0.58	Yes	0.388	0.398	0.79	Yes	1.00	**5.38**
		U_{18} - L_{18}			121.74	-290.11	-113	127	251	-296	-111	18	50	-121	0.219	0.413	0.64	Yes	0.120	0.227	0.35	Yes	0.634	0.140	0.78	Yes	0.614	0.378	1.00	Yes	1.00	**4.17**
		U_{19} - L_{19}			48.80	-311.58	-57	45	266	-246	-84	-2	57	-65	0.088	0.364	0.46	Yes	0.048	0.200	0.25	Yes	0.681	0.106	0.79	Yes	0.659	0.340	1.00	Yes	1.00	**2.69**
		U_{20} - L_{20}			-----	-316.13	19	-28	110	-194	-46	-15	630	202	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.289	1.00	Yes	0.669	0.248	0.92	Yes	1.00	**1.50**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

					Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression										
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:		Vehicle 1.300	Pedestrian 1.300	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
LL Factor:		1.300	1.300	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$		517.64	-----	-139	72	-16	-2	-611	-128	-12	4	0.679	0.316	1.00	Yes	0.410	0.174	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_1 - L_2$		410.69	-----	-75	24	-18	-30	-159	-173	543	137	0.739	0.253	1.00	Yes	0.406	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_2 - L_3$		436.50	-161.17	-115	35	-86	-99	-222	-175	-37	-104	0.785	0.211	1.00	Yes	0.432	0.116	0.55	Yes	0.371	0.220	0.60	Yes	0.341	0.146	0.49	Yes	1.00	**6.77**
		$U_3 - L_4$		-----	-318.65	53	-7	-89	-146	111	116	-10	-304	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		$U_4 - L_5$		462.21	-----	-5	79	-145	-35	67	21	-716	-543	0.678	0.314	1.00	Yes	0.373	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		$U_5 - L_6$		658.40	-----	-183	232	-83	91	-274	-275	-482	-138	0.778	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.76**
		$U_6 - L_7$		659.73	-----	-296	248	-93	100	-255	-217	141	51	0.780	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_7 - L_8$		655.43	-----	-102	312	-9	130	-174	-126	229	112	0.775	0.219	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_8 - L_9$		989.59	-----	-98	356	15	138	329	377	322	98	0.791	0.207	1.00	Yes	0.490	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_9 - L_{10}$		1026.96	-----	-293	272	-74	85	185	359	93	118	0.821	0.177	1.00	Yes	0.509	0.099	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{10} - L_{11}$		972.96	-----	-216	211	-155	77	110	335	522	229	0.822	0.169	1.00	Yes	0.509	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_{11} - L_{12}$		856.75	-----	-245	142	-165	-8	51	183	218	153	0.848	0.146	1.00	Yes	0.466	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_{12} - L_{13}$		651.78	-----	-203	171	-78	30	27	53	-62	-108	0.795	0.198	1.00	Yes	0.500	0.111	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		$U_{13} - L_{14}$		461.46	-----	-86	51	-23	-32	-30	-79	-74	-178	0.830	0.162	1.00	Yes	0.456	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.01**
		$U_{15} - L_{14}$		252.35	-331.30	-64	5	59	-121	-244	-265	-278	-124	0.454	0.235	0.69	Yes	0.250	0.129	0.38	Yes	0.776	0.216	1.00	Yes	0.701	0.154	0.86	Yes	1.00	**4.23**
		$U_{16} - L_{15}$		402.78	-88.90	-128	94	-8	-35	-370	-290	-386	-147	0.724	0.275	1.00	Yes	0.398	0.151	0.55	Yes	0.211	0.177	0.39	Yes	0.188	0.163	0.36	Yes	1.00	**3.28**
		$U_{17} - L_{16}$		509.92	-----	-139	99	-51	11	-464	-355	-454	-227	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$U_{18} - L_{17}$		612.31	-----	-306	258	-110	75	-551	-448	-108	-115	0.724	0.273	1.00	Yes	0.398	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{19} - L_{18}$		670.12	-----	-350	252	-132	87	-533	-463	-65	-106	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.26**
		$U_{20} - L_{19}$		693.97	-----	-258	260	-94	91	-646	-422	-101	-38	0.752	0.239	1.00	Yes	0.413	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
	Structure 2	$U_0 - L_1$		757.71	-----	-391	363	-114	99	-419	-60	-61	-51	0.750	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_1 - L_2$		785.37	-----	-389	312	-94	70	-184	-264	-100	-28	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_2 - L_3$		657.43	-----	-333	271	-82	62	-164	39	-22	91	0.777	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		$U_3 - L_4$		602.58	-----	-179	146	-35	13	-145	-94	110	64	0.803	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		$U_4 - L_5$		430.17	-64.06	-134	105	-3	-26	-162	-9	-82	-151	0.774	0.218	1.00	Yes	0.426	0.120	0.55	Yes	0.158	0.101	0.26	Yes	0.136	0.171	0.31	Yes	1.00	**3.29**
		$U_5 - L_6$		435.54	-248.10	-127	72	58	-104	-161	19	-169	-163	0.783	0.211	1.00	Yes	0.431	0.116	0.55	Yes	0.586	0.161	0.75	Yes	0.525	0.162	0.69	Yes	1.00	**4.32**
		$U_6 - L_7$		67.82	-384.84	-36	-5	57	-105	-119	-145	-96	-297	0.110	0.197	0.31	Yes	0.061	0.108	0.17	Yes	0.824	0.174	1.00	Yes	0.737	0.120	0.86	Yes	1.00	**2.84**
		$U_8 - L_7$		587.69	-----	-178	138	-37	-21	-250	-426	-360	-196	0.749	0.246	1.00	Yes	0.472	0.140	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_8 - L_9$		685.17	-----	-320	239	-141	42	-456	-372	-521	-242	0.742	0.250	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		$U_{10} - L_9$		792.79	-----	-303	230	-115	56	-473	-441	-282	-202	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{11} - L_{10}$		871.45	-----	-334	287	-147	107	-445	-464	-365	-214	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{12} - L_{11}$		858.46	-----	-362	351	-142	148	-399	-354	14	-46	0.782	0.208	1.00	Yes	0.430	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.84**
		$U_{13} - L_{12}$		756.29	-----	-425	381	-151	153	-194	-160	345	133	0.748	0.249	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.46**
		$U_{14} - L_{13}$		746.22	-----	-271	424	-33	147	-260	-131	384	189	0.738	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_{14} - L_{15}$		634.70	-----	-223	359	26	70	236	163	218	-37	0.750	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{15} - L_{16}$		634.93	-----	-370	343	-62	68	-163	201	-10	21	0.751	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_{16} - L_{17}$		709.86	-----	-326	333	-69	96	-295	314	-149	63	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_{17} - L_{18}$		656.40	-----	-289	284	-66	79	-43	292	-27	101	0.776	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_{18} - L_{19}$		678.11	-----	-271	282	-69	58	159	188	61	12	0.802	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{19} - L_{20}$		618.81	-----	-196	184	-32	9	85	149	-16	-44	0.789	0.205	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		$U_{20} - L_{21}$		449.91	-11.10	-127	113	-12	-9	19	90	-5	-72	0.809	0.188	1.00	Yes	0.445	0.103	0.55	Yes	0.026	0.063	0.09	Yes	0.023	0.162	0.19	Yes	1.00	**2.97**
		$U_{21} - L_{22}$		448.41	-228.95	-103	69	30	-83	8	4	-37	-194	0.806	0.188	1.00	Yes	0.444	0.104	0.55	Yes	0.541	0.128	0.67	Yes	0.484	0.132	0.62	Yes	1.00	**4.43**
		$U_{23} - L_{22}$		404.19	-333.44	-101	65	50	-104	-262	-275	-339	-16	0.727	0.231	0.96	Yes	0.400	0.127	0.53	Yes	0.794	0.199	1.00	Yes	0.706	0.133	0.84	Yes	1.00	**5.10**
		$U_{24} - L_{23}$		416.01	-32.10	-120	106	2	-17	-317	-217	-154	-59	0.748	0.245	1.00	Yes	0.412	0.135	0.55	Yes	0.077	0.139	0.22	Yes	0.068	0.154	0.23	Yes	1.00	**2.96**
		$U_{25} - L_{24}$		581.66	-----	-189	182	-20	8	-405	-316	-194	-111	0.742	0.252	1.00	Yes	0.408	0.143	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		$U_{26} - L_{25}$		656.19	-----	-271	264	-26	38	-361	-353	120	47	0.776	0.219	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		$U_{27} - L_{26}$		651.45	-----	-289	286	-45	57	-332	-274	180	71	0.770	0.224	1.00	Yes	0.424	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{28} - L_{27}$		708.43	-----	-332	360	-47	66	-273	-248	204	113	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_{29} - L_{28}$		625.79	-----	-371	342	-73	72	-224	-169	211	102	0.740	0.251	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{30} - L_{29}$		640.18	-----	-224	361	-14	77	-213	-121	192	107	0.757	0.243	1.00	Yes	0.416	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_{30} - L_{31}$		762.87	-----	-292	430	14	72	153	188	283	0	0.755	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		$U_{31} - L_{32}$		759.93	-----	-438	380	-73	76	-190	252	15	48	0.752	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{32} - L_{33}$		885.29	-----	-355	346	-57	93	-281	280	-147	142	0.806	0.189	1.00	Yes	0.444	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{33} - L_{34}$		899.78	-----	-340	314	-110	75	3	245	55	142	0.820	0.178	1.00	Yes	0.451	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{34} - L_{35}$		837.64	-----	-305	252	-93	45	114	192	89	-29	0.829	0.170	1.00	Yes	0.456	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		$U_{35} - L_{36}$		750.53	-----	-337	258	-115	29	15	86	5	-87	0.813	0.187	1.00	Yes	0.447	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_{36} - L_{37}$		622.17	-----	-177	170	-32	-16	-62	6	-69	-226	0.793	0.204	1.00	Yes	0.499	0.115	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{38} - L_{37}$		14.75	-388.83	-22	-6	61	-96	-187	-198	-249	-69	0.024	0.175	0.20	Yes	0.013	0.096	0.11	Yes	0.840	0.153	1.00	Yes	0.745	0.110	0.86	Yes	1.00	**2.60**
		$U_{38} - L_{39}$		324.65	-312.62	-99	54	64	-110	-365	-250	-464	-93	0.584	0.275	0.86	Yes	0.321	0.151	0.48	Yes	0.745	0.252	1.00	Yes	0.661	0.140	0.81	Yes	1.00	**4.01**
		$U_{40} - L_{39}$		403.17	-113.11	-130	100	18	-43	-358	-283	-240	-132	0.725	0.270	1.00	Yes	0.399	0.148	0.55	Yes	0.271	0.188	0.46	Yes	0.239	0.166	0.41	Yes	1.00	**3.53**
		$U_{41} - L_{40}$		568.17	-----	-171	131	-16	1	-410	-364	-90	-76	0.757	0.242	1.00	Yes	0.417	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{42} - L_{41}$		612.27	-----	-317	264	-48	31	-490	-407	-66	-63	0.724	0.268	1.00	Yes	0.398	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		$U_{43} - L_{42}$		751.96	-----	-382	314	-63	43	-486	-434	-3	-45	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{44} - L_{43}$		752.24	-----	-287	323	-93	79	-701	-410	58	-21	0.744	0.255	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
	Structure 3	$U_0 - L_1$		570.80	-----	-424	314	-113	94	-989	64	-61	-53	0.618	0.380	1.00	Yes	0.340	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.87**
		$U_1 - L_2$		716.33	-----	-342	253	-99	67	-280	-52	-125	-44	0.776	0.221	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_2 - L_3$		644.15	-----	-330	242	-97	63	-253	126	-48	78	0.762	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_3 - L_4$		554.19	-----	-150	108	-41	5	-140	-18	35	-6	0.813	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		$U_4 - L_5$		432.09	-97.62	-132	109	-4	-36	-147	-61	-126	-177	0.777	0.219	1.00	Yes	0.427	0.121	0.55	Yes	0.231	0.106	0.34	Yes	0.207	0.168	0.38	Yes	1.00	**3.64**
		$U_5 - L_6$		333.44	-327.98	-76	24	19	-119	-128	-156	-124	-308	0.600	0.242	0.85	Yes	0.330	0.133	0.47	Yes	0.768	0.227	1.00	Yes	0.694	0.152	0.85	Yes	1.00	**4.85**
		$U_7 - L_6$		426.49	-62.27	-82	38	-15	-41	-211	-298	-427	-184	0.767	0.228	1.00	Yes	0.422	0.125	0.55	Yes	0.145	0.179	0.33	Yes	0.132	0.104	0.24	Yes	1.00	**3.15**
		$U_8 - L_7$		607.35	-----	-196	155	-59	7	-437	-387	-350	-224	0.740	0.257	1.00	Yes	0.466	0.146	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_9 - L_8$		757.19	-----	-231	104	-155	-21	-513	-521	-962	-470	0.749	0.251	1.00	Yes	0.412	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_{10} - L_9$		913.31	-----	-239	172	-148	51	-594	-575	-843	-418	0.771	0.222	1.00	Yes	0.478	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_{11} - L_{10}$		997.38	-----	-302	259	-95	85	-502	-426	52	-21	0.797	0.198	1.00	Yes	0.494	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_{12} - L_{11}$		978.03	-----	-104	361	-10	129	-389	-288	247	120	0.782	0.211	1.00	Yes	0.484	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{12} - L_{13}$		660.77	-----	-114	295	25	73	275	183	174	-14	0.781	0.218	1.00	Yes	0.430	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{13} - L_{14}$		667.16	-----	-285	240	-28	56	-81	228	-50	26	0.789	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		$U_{14} - L_{15}$		698.41	-----	-180	228	-52	58	-86	218	100	88	0.826	0.169	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_{15} - L_{16}$		447.96	-----	36	188	-209	-97	477	473	549	141	0.657	0.340	1.00	Yes	0.361	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.82**
		$U_{17} - L_{16}$		-----	-358.35	23	-4	-8	-72	223	142	-264	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.172	1.00	Yes	0.758	0.092	0.86	Yes	1.00	**3.06**
		$U_{18} - L_{17}$		354.52	-117.87	-91	18	-84	-99	-300	-261	-797	-262	0.638	0.357	1.00	Yes	0.351	0.197	0.55	Yes	0.271	0.329	0.60	Yes	0.249	0.127	0.38	Yes	1.00	**5.80**
		$U_{19} - L_{18}$		413.89	-139.62	-96	34	28	-20	-441	-335	173	134	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	0.320	0.218	0.54	Yes	0.295	0.123	0.42	Yes	1.00	**3.25**
		$U_{20} - L_{19}$		590.30	-----	-44	40	53	-8	-632	-375	473	-1	0.774	0.221	1.00	Yes	0.468	0.122	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-546.14	-153	83	269	-1052	15	-11	-41	-433	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.247	1	Yes	0.736	0.250	0.99	Yes	1.00	**3.88**
		$U_1 - U_2$	41.94	-579.46	-49	91	-162	-809	-5	47	-42	72	0.048	0.204	0.26	Yes	0.033	0.140	0.18	Yes	0.788	0.204	1	Yes	0.781	0.192	0.98	Yes	1.00	**2.80**
		$U_2 - U_3$	154.23	-584.21	-83	275	-155	-687	-2	-90	255	-190	0.177	0.206	0.39	Yes	0.119	0.135	0.26	Yes	0.795	0.201	1	Yes	0.788	0.163	0.96	Yes	1.00	**3.12**
		$U_3 - U_4$	325.97	-559.70	100	264	-151	-855	-91	-81	-8	-259	0.374	0.247	0.63	Yes	0.256	0.169	0.43	Yes	0.762	0.236	1	Yes	0.755	0.203	0.96	Yes	1.00	**3.61**
		$U_4 - U_5$	467.98	-546.40	139	373	-87	-799	-105	67	-290	-343	0.536	0.248	0.79	Yes	0.368	0.170	0.54	Yes	0.743	0.252	1	Yes	0.737	0.190	0.93	Yes	1.00	**5.78**
		$U_5 - U_6$	-----	-558.96	-859	908	41	-596	171	-494	-345	-508	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.235	1	Yes	0.754	0.216	0.97	Yes	1.00	**10.19**
		$U_6 - U_7$	158.80	-542.85	-377	402	-888	-1367	-624	-356	-583	-398	0.152	0.377	0.53	Yes	0.106	0.258	0.37	Yes	0.617	0.383	1	Yes	0.611	0.291	0.91	Yes	1.00	**9.55**
		$U_7 - U_8$	434.91	-----	-3581	4304	-62	684	-416	115	-242	173	0.301	0.695	1.00	Yes	0.210	0.473	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.01**
		$U_8 - U_9$	723.60	-----	766	15	2164	-1810	-145	35	69	352	0.593	0.406	1.00	Yes	0.406	0.276	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		$U_9 - U_{10}$	618.23	-436.23	235	293	208	-1120	75	311	231	485	0.671	0.329	1.00	Yes	0.454	0.221	0.68	Yes	0.562	0.235	0.8	Yes	0.557	0.251	0.81	Yes	1.00	**6.55**
		$U_{10} - U_{11}$	130.86	-591.64	222	-72	202	-1052	209	55	342	114	0.142	0.291	0.44	Yes	0.095	0.187	0.29	Yes	0.762	0.218	0.98	Yes	0.755	0.236	1.00	Yes	1.00	**3.51**
		$U_{11} - U_{12}$	-----	-864.75	155	-113	-223	-910	152	56	271	134	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.179	1	Yes	0.811	0.151	0.97	Yes	1.00	**2.93**
		$U_{12} - U_{13}$	-----	-1171.28	-27	-161	-476	-1149	172	-72	292	35	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.782	0.158	0.95	Yes	1.00	**3.17**
		$U_{13} - U_{14}$	-----	-1350.42	-409	-336	-259	-1706	293	23	85	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1	Yes	0.774	0.188	0.97	Yes	1.00	**3.15**
		$U_{14} - U_{15}$	-----	-1351.14	-244	-180	-1149	-1213	185	-49	185	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1	Yes	0.775	0.134	0.91	Yes	1.00	**3.15**
		$U_{15} - U_{16}$	-----	-1377.97	-599	-347	-737	-1354	268	-77	57	-335	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.195	1	Yes	0.790	0.149	0.94	Yes	1.00	**3.07**
		$U_{16} - U_{17}$	-----	-1337.40	-412	-100	-590	-1269	240	-312	-342	-448	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.218	1	Yes	0.767	0.140	0.91	Yes	1.00	**4.88**
		$U_{17} - U_{18}$	-----	-1105.78	-627	218	-200	-543	-91	-400	-201	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.122	1	Yes	0.865	0.102	0.97	Yes	1.00	**4.11**
		$U_{18} - U_{19}$	-----	-708.06	-281	120	-688	-301	-244	-222	-2	-309	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.195	1	Yes	0.797	0.138	0.94	Yes	1.00	**3.26**
		$U_{19} - U_{20}$	-----	-518.10	-1146	1284	60	-2055	-339	-171	-72	-925	-----	-----	-----	-----	-----	-----	-----	-----	0.588	0.308	0.9	Yes	0.583	0.413	1.00	Yes	1.00	**8.27**
	Structure 2	$U_0 - U_1$	-----	-587.52	181	-143	873	-1778	96	194	-10	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.210	0.91	Yes	0.694	0.302	1.00	Yes	1.00	**5.50**
		$U_1 - U_2$	-----	-783.84	-105	-147	-88	-1076	344	660	209	284	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.229	1	Yes	0.757	0.163	0.92	Yes	1.00	**3.05**
		$U_2 - U_3$	-----	-1137.56	-81	-213	42	-1646	607	4	579	51	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.185	1	Yes	0.807	0.168	0.98	Yes	1.00	**3.43**
		$U_3 - U_4$	-----	-1316.33	-369	-268	-1320	-1924	204	-393	264	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.241	1	Yes	0.750	0.171	0.93	Yes	1.00	**3.11**
		$U_4 - U_5$	-----	-1483.50	-360	-319	-587	-2317	-68	-359	68	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.227	1	Yes	0.762	0.192	0.96	Yes	1.00	**3.28**
		$U_5 - U_6$	-----	-1549.64	-376	21	-976	-1472	-119	-303	-119	-466	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1	Yes	0.796	0.122	0.92	Yes	1.00	**3.58**
		$U_6 - U_7$	-----	-1314.42	-268	-75	-1174	-1958	-88	-265	-17	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.748	0.174	0.93	Yes	1.00	**3.02**
		$U_7 - U_8$	-----	-1329.31	-152	-193	-1635	-1282	-187	-222	-205	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.228	1	Yes	0.757	0.146	0.91	Yes	1.00	**3.21**
		$U_8 - U_9$	-----	-1132.60	-283	183	-590	-1191	-147	-85	-251	-478	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.220	1	Yes	0.768	0.127	0.90	Yes	1.00	**4.43**
		$U_9 - U_{10}$	152.76	-938.80	-86	326	-1308	-602	-166	-40	-161	-186	0.112	0.179	0.30	Yes	0.076	0.122	0.20	Yes	0.815	0.181	1	Yes	0.810	0.159	0.97	Yes	1.00	**3.79**
		$U_{10} - U_{11}$	526.48	-787.75	117	386	-1198	-752	-146	-58	-217	-264	0.445	0.201	0.65	Yes	0.303	0.130	0.44	Yes	0.788	0.212	1	Yes	0.783	0.169	0.96	Yes	1.00	**5.14**
		$U_{11} - U_{12}$	-----	-681.85	-2225	1326	-622	-1132	-230	-803	-584	-928	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.230	0.92	Yes	0.678	0.314	1.00	Yes	1.00	**15.05**
		$U_{12} - U_{13}$	795.62	-208.62	163	231	-1405	-2760	-850	-1142	-894	-489	0.537	0.456	1.00	Yes	0.383	0.311	0.70	Yes	0.167	0.489	0.66	Yes	0.166	0.348	0.52	Yes	1.00	**10.49**
		$U_{13} - U_{14}$	344.97	-----	-6410	8233	-473	1358	-955	-197	-630	-331	0.170	0.828	1.00	Yes	0.120	0.542	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.84**
		$U_{14} - U_{15}$	1043.91	-----	1495	211	4716	-2780	-553	-182	-120	637	0.513	0.480	1.00	Yes	0.363	0.314	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		$U_{15} - U_{16}$	1108.41	-----	240	585	65	-2147	-148	238	497	926	0.670	0.322	1.00	Yes	0.477	0.218	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.99**
		$U_{16} - U_{17}$	922.38	-159.10	653	313	867	-2037	182	62	572	211	0.680	0.316	1.00	Yes	0.452	0.208	0.67	Yes	0.139	0.132	0.28	Yes	0.138	0.256	0.40	Yes	1.00	**6.79**
		$U_{17} - U_{18}$	708.06	-422.05	470	342	420	-1512	-38	-4	162	29	0.711	0.280	1.00	Yes	0.473	0.186	0.66	Yes	0.501	0.142	0.65	Yes	0.498	0.257	0.76	Yes	1.00	**6.08**
		$U_{18} - U_{19}$	427.79	-636.79	466	195	-213	-1410	-65	-52	177	-19	0.429	0.265	0.70	Yes	0.282	0.168	0.46	Yes	0.757	0.205	0.97	Yes	0.752	0.239	1.00	Yes	1.00	**4.77**
		$U_{19} - U_{20}$	228.46	-695.42	283	154	-564	-1199	-36	75	103	70	0.214	0.206	0.43	Yes	0.142	0.135	0.28	Yes	0.772	0.222	1	Yes	0.767	0.192	0.96	Yes	1.00	**3.92**
		$U_{20} - U_{21}$	67.46	-874.68	-35	144	5	-1365	58	-92	103	-201	0.052	0.220	0.28	Yes	0.037	0.141	0.18	Yes	0.804	0.187	1	Yes	0.798	0.198	1.00	Yes	1.00	**4.18**
		$U_{21} - U_{22}$	50.97	-801.02	-13	15	-821	-1399	-16	-51	59	-37	0.040	0.209	0.25	Yes	0.028	0.139	0.17	Yes	0.736	0.257	1	Yes	0.731	0.203	0.94	Yes	1.00	**3.43**
		$U_{22} - U_{23}$	57.90	-820.23	-10	-19	-928	-1184	-73	-103	-39	-167	0.045	0.190	0.24	Yes	0.032	0.126	0.16	Yes	0.754	0.243	1	Yes	0.749	0.171	0.93	Yes	1.00	**3.61**
		$U_{23} - U_{24}$	205.28	-833.17	36	160	-48	-1379	-250	-113	-229	-428	0.159	0.247	0.41	Yes	0.111	0.160	0.28	Yes	0.766	0.233	1	Yes	0.760	0.200	0.97	Yes	1.00	**5.12**
		$U_{24} - U_{25}$	208.87	-704.43	114	240	-859	-825	-235	-35	-134	-152	0.196	0.169	0.37	Yes	0.130	0.111	0.25	Yes	0.782	0.213	1	Yes	0.777	0.138	0.92	Yes	1.00	**3.71**
		$U_{25} - U_{26}$	-----	-693.08	-986	716	-109	-1038	-90	-49	-249	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.116	0.94	Yes	0.819	0.176	1.00	Yes	1.00	**7.28**
		$U_{26} - U_{27}$	-----	-643.08	-1167	894	-178	-1392	-166	-127	-403	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.169	0.94	Yes	0.759	0.236	1.00	Yes	1.00	**10.19**
		$U_{27} - U_{28}$	-----	-623.37	-3596	3168	485	-2901	-488	-998	-941	-1242	-----	-----	-----	-----	-----	-----	-----	-----	0.544	0.383	0.93	Yes	0.540	0.452	1.00	Yes	1.00	**25.50**
		$U_{28} - U_{29}$	992.99	-42.43	-96	361	-1663	-2772	-784	-505	-921	-465	0.600	0.393	1.00	Yes	0.427	0.264	0.70	Yes	0.030	0.435	0.47	Yes	0.030	0.315	0.35	Yes	1.00	**9.96**
		$U_{29} - U_{30}$	477.58	-----	-5466	7684	-142	1190	-668	104	-58	417	0.235	0.757	1.00	Yes	0.166	0.495	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.05**
		$U_{30} - U_{31}$	1047.30	-----	1434	112	4706	-3038	-448	-214	212	616	0.515	0.478	1.00	Yes	0.365	0.313	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.81**
		$U_{31} - U_{32}$	1065.07	-----	139	498	-325	-1567	-54	216	590	832	0.719	0.277	1.00	Yes	0.513	0.189	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		$U_{32} - U_{33}$	792.19	-369.95	531	288	481	-1786	185	46	624	162	0.669	0.328	1.00	Yes	0.449	0.219	0.67	Yes	0.370	0.197	0.57	Yes	0.368	0.252	0.62	Yes	1.00	**5.99**
		$U_{33} - U_{34}$	559.89	-773.03	404	264	74	-1626	59	35	232	11	0.473	0.258	0.74	Yes	0.322	0.166	0.49	Yes	0.773	0.198	0.98	Yes	0.768	0.229	1.00	Yes	1.00	**5.66**
		$U_{34} - U_{35}$	227.69	-913.34	358	-12	89	-1670	115	-5	174	-139	0.167	0.222	0.39	Yes	0.113	0.151	0.27	Yes	0.793	0.165	0.96	Yes	0.788	0.203	1.00	Yes	1.00	**3.88**
		$U_{35} - U_{36}$	-----	-1203.21	174	-204	-144	-1541	73	32	235	200	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.174	1	Yes	0.816	0.164	0.98	Yes	1.00	**4.18**
		$U_{36} - U_{37}$	-----	-1307.74	-134	-44	-931	-2208	166	-47	261	26	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.248	1	Yes	0.745	0.197	0.95	Yes	1.00	**3.29**
		$U_{37} - U_{38}$	-----	-1371.34	56	-218	-1427	-1726	11	1	115	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.207	1	Yes	0.781	0.154	0.94	Yes	1.00	**3.60**
		$U_{38} - U_{39}$	-----	-1492.46	30	-399	-1425	-2073	79	-106	161	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.223	1	Yes	0.766	0.172	0.94	Yes	1.00	**3.50**
		$U_{39} - U_{40}$	-----	-1455.28	-697	-405	-1825	-1868	59	-177	-131	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.244	1	Yes	0.747	0.155	0.91	Yes	1.00	**3.36**
		$U_{40} - U_{41}$	-----	-1322.34	-495	-421	-1532	-1632	25	-260	-246	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.753	0.145	0.90	Yes	1.00	**3.20**
		$U_{41} - U_{42}$	-----	-1244.46	-858	205	-739	-1012	-102	-203	-165	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.108	1	Yes	0.883	0.103	0.99	Yes	1.00	**4.53**
		$U_{42} - U_{43}$	-----	-820.50	-415	120	-1108	-543	4	-156	207	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.199	1	Yes	0.792	0.168	0.96	Yes	1.00	**4.20**
		$U_{43} - U_{44}$	-----	-479.19	-1131	1107	-4	-1787	-368	-170	-54	-766	-----	-----	-----	-----	-----	-----	-----	-----	0.569	0.421	1	Yes	0.566	0.303	0.87	Yes	1.00	**7.83**
	Structure 3	$U_0 - U_1$	-----	-610.88	181	-173	567	-1525	62	144	-48	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.208	0.91	Yes	0.687	0.307	1.00	Yes	1.00	**5.61**
		$U_1 - U_2$	-----	-691.62	-69	-113	38	-778	259	534	198	288	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.778	0.156	0.94	Yes	1.00	**2.74**
		$U_2 - U_3$	-----	-1020.55	-77	-115	184	-1052	517	7	615	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.187	1	Yes	0.799	0.171	0.97	Yes	1.00	**3.16**
		$U_3 - U_4$	-----	-1375.52	-137	-193	-325	-1512	131	-257	324	284	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.197	1	Yes	0.789	0.167	0.96	Yes	1.00	**3.82**
		$U_4 - U_5$	-----	-1367.31	-318	-35	-327	-1328	-19	-314	38	-510	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.198	1	Yes	0.784	0.147	0.94	Yes	1.00	**3.40**
		$U_5 - U_6$	-----	-1330.47	-144	-214	-382	-1728	-61	-218	-114	-365	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.227	1	Yes	0.763	0.191	0.96	Yes	1.00	**3.47**
		$U_6 - U_7$	-----	-1348.23	-275	-47	-486	-1222	-135	-256	-155	-487	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.211	1	Yes	0.773	0.135	0.91	Yes	1.00	**4.71**
		$U_7 - U_8$	-----	-1192.13	-645	107	-153	-993	98	-188	-260	-455	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.190	1	Yes	0.796	0.137	0.94	Yes	1.00	**4.33**
		$U_8 - U_9$	42.44	-816.47	-73	290	-218	-732	-107	-75	-252	-401	0.034	0.169	0.21	Yes	0.023	0.114	0.14	Yes	0.773	0.218	1	Yes	0.766	0.121	0.89	Yes	1.00	**5.17**
		$U_9 - U_{10}$	-----	-607.61	-987	435	-473	-332	-160	-343	-233	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.202	0.99	Yes	0.775	0.221	1.00	Yes	1.00	**6.44**
		$U_{10} - U_{11}$	-----	-303.48	-1495	1600	826	-2703	-1241	-887	-951	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.391	0.520	0.92	Yes	0.387	0.605	1.00	Yes	1.00	**34.49**
		$U_{11} - U_{12}$	320.23	-----	-3934	3916	-178	612	-610	-11	-295	9	0.262	0.734	1.00	Yes	0.179	0.500	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.03**
		$U_{12} - U_{13}$	853.90	-----	843	113	2380	-1613	-447	-87	-124	386	0.592	0.406	1.00	Yes	0.413	0.277	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{13} - U_{14}$	779.37	-110.15	222	359	191	-856	-160	277	161	499	0.745	0.251	1.00	Yes	0.521	0.172	0.70	Yes	0.125	0.268	0.4	Yes	0.124	0.182	0.31	Yes	1.00	**5.28**
		$U_{14} - U_{15}$	601.48	-432.73	401	234	485	-1042	48	153	344	5	0.689	0.306	1.00	Yes	0.465	0.200	0.67	Yes	0.589	0.141	0.73	Yes	0.584	0.248	0.84	Yes	1.00	**4.87**
		$U_{15} - U_{16}$	306.83	-563.35	256	132	-374	-759	-7	141	142	167	0.352	0.209	0.57	Yes	0.241	0.143	0.39	Yes	0.767	0.228	1	Yes	0.760	0.180	0.95	Yes	1.00	**3.54**
		$U_{16} - U_{17}$	319.86	-578.47	303	78	-313	-816	39	65	154	-22	0.367	0.220	0.59	Yes	0.252	0.151	0.41	Yes	0.787	0.209	1	Yes	0.780	0.194	0.98	Yes	1.00	**3.77**
		$U_{17} - U_{18}$	-----	-515.75	112	-63	297	-1268	-44	-130	-113	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.222	0.93	Yes	0.695	0.301	1.00	Yes	1.00	**5.34**
		$U_{18} - U_{19}$	-----	-548.72	-55	28	-795	-464	-15	124	134	29	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.246	1	Yes	0.740	0.189	0.93	Yes	1.00	**3.12**
		$U_{19} - U_{20}$	-----	-496.06	-564	522	-740	-1031	45	-85	342	-427	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.317	1	Yes	0.669	0.245	0.92	Yes	1.00	**5.26**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-70.62	-285	170	1145	-2903	48	166	-164	-628	-----	-----	-----	-----	-----	-----	-----	-----	0.128	0.637	0.77	Yes	0.127	0.871	1.00	Yes	1.00	**18.30**
		L_1 - L_2	434.43	-16.82	47	-5	-134	-733	25	17	-518	170	0.665	0.331	1.00	Yes	0.406	0.218	0.63	Yes	0.031	0.225	0.26	Yes	0.030	0.220	0.26	Yes	1.00	**3.29**
		L_2 - L_3	668.83	-77.31	-29	72	-626	-875	12	-6	-83	-21	0.769	0.225	1.00	Yes	0.445	0.135	0.59	Yes	0.106	0.255	0.37	Yes	0.105	0.211	0.32	Yes	1.00	**3.65**
		L_3 - L_4	574.33	-284.59	78	323	93	-1234	-12	19	-197	3	0.661	0.330	1.00	Yes	0.392	0.213	0.61	Yes	0.389	0.234	0.63	Yes	0.385	0.298	0.69	Yes	1.00	**5.33**
		L_4 - L_5	475.24	-----	-1245	703	-489	-529	-128	55	-290	48	0.615	0.381	1.00	Yes	0.369	0.250	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		L_5 - L_6	-----	-750.57	140	582	-219	-201	11	74	-85	16	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.122	1	Yes	0.866	0.129	1.00	Yes	1.00	**4.43**
		L_6 - L_7	-----	-743.92	-2496	1190	-1519	-2517	95	-131	-16	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.181	0.79	Yes	0.599	0.396	1.00	Yes	1.00	**15.34**
		L_7 - L_8	-----	-1096.25	-837	2250	-23	574	110	91	31	72	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.255	0.96	Yes	0.694	0.298	1.00	Yes	1.00	**6.77**
		L_8 - L_9	-----	-1102.60	802	132	2235	-1218	-4	-28	-32	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.235	0.95	Yes	0.698	0.296	1.00	Yes	1.00	**9.83**
		L_9 - L_{10}	-----	-956.31	230	183	114	-1425	36	55	186	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.143	0.93	Yes	0.770	0.224	1.00	Yes	1.00	**8.25**
		L_{10} - L_{11}	302.88	-508.02	436	-11	-45	-850	91	18	-57	-28	0.392	0.241	0.64	Yes	0.228	0.146	0.38	Yes	0.781	0.154	0.94	Yes	0.774	0.225	1.00	Yes	1.00	**5.54**
		L_{11} - L_{12}	590.98	-114.59	332	-182	132	-799	-28	20	-84	100	0.765	0.229	1.00	Yes	0.459	0.151	0.62	Yes	0.176	0.128	0.31	Yes	0.175	0.212	0.39	Yes	1.00	**3.58**
		L_{12} - L_{13}	1041.22	-----	67	-95	-351	-925	-21	-38	-107	65	0.822	0.177	1.00	Yes	0.526	0.105	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		L_{13} - L_{14}	1290.12	-----	223	-389	-178	-1577	-105	65	-223	132	0.759	0.236	1.00	Yes	0.492	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_{14} - L_{15}	1647.04	-----	-1166	50	-852	-1400	8	163	-340	-131	0.805	0.193	1.00	Yes	0.523	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		L_{15} - L_{16}	1579.18	-----	-363	-320	-792	-1719	47	168	-261	-187	0.772	0.226	1.00	Yes	0.495	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_{16} - L_{17}	1233.34	-----	-1335	288	-1131	-676	-120	20	-164	64	0.780	0.211	1.00	Yes	0.506	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_{17} - L_{18}	924.89	-----	-555	361	-622	-538	-37	38	-305	-546	0.805	0.190	1.00	Yes	0.516	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		L_{18} - L_{19}	403.00	-----	-972	526	-474	9	-127	0	-160	401	0.617	0.375	1.00	Yes	0.417	0.236	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		L_{19} - L_{20}	258.76	-47.52	-1427	758	-227	27	825	185	-4	-1	0.396	0.599	1.00	Yes	0.242	0.397	0.64	Yes	0.086	0.344	0.43	Yes	0.086	0.428	0.52	Yes	1.00	**8.83**
	Structure 2	L_0 - L_1	-----	-152.00	-207	166	1246	-3842	24	69	-586	-2080	-----	-----	-----	-----	-----	-----	-----	-----	0.219	0.776	1	Yes	0.217	0.782	1.00	Yes	1.00	**20.99**
		L_1 - L_2	548.52	-----	156	-207	243	-1228	85	108	-506	288	0.666	0.333	1.00	Yes	0.396	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		L_2 - L_3	1005.62	-----	-19	-132	-224	-1294	129	175	26	18	0.793	0.206	1.00	Yes	0.520	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		L_3 - L_4	1304.39	-----	55	-311	-281	-1817	46	122	-60	221	0.766	0.230	1.00	Yes	0.516	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		L_4 - L_5	1686.59	-----	-231	-216	-1139	-2089	16	-14	-26	112	0.786	0.205	1.00	Yes	0.521	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		L_5 - L_6	1793.50	-----	-27	-336	-1391	-2411	-95	59	-245	66	0.770	0.229	1.00	Yes	0.516	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		L_6 - L_7	1845.88	-----	-362	-72	-2056	-2371	53	-15	-27	113	0.781	0.215	1.00	Yes	0.519	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		L_7 - L_8	1408.94	-60.01	-160	285	-1074	-1449	-66	78	-326	-161	0.808	0.187	1.00	Yes	0.531	0.110	0.65	Yes	0.041	0.224	0.27	Yes	0.040	0.160	0.21	Yes	1.00	**4.93**
		L_8 - L_9	1174.92	-----	-711	625	-1126	-754	83	83	-188	113	0.822	0.170	1.00	Yes	0.554	0.106	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_9 - L_{10}	915.50	-747.64	-49	755	-794	-939	36	136	-219	-180	0.817	0.177	1.00	Yes	0.476	0.110	0.59	Yes	0.790	0.148	0.94	Yes	0.785	0.150	0.94	Yes	1.00	**7.37**
		L_{10} - L_{11}	727.38	-----	-1332	1205	-1215	-832	50	14	-272	-147	0.726	0.270	1.00	Yes	0.426	0.169	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.59**
		L_{11} - L_{12}	284.42	-895.66	-1336	1890	-1336	-1050	97	194	-88	-361	0.198	0.291	0.49	Yes	0.132	0.174	0.31	Yes	0.740	0.162	0.91	Yes	0.734	0.257	1.00	Yes	1.00	**13.36**
		L_{12} - L_{13}	-----	-985.80	-22	204	-1355	-3235	-596	-543	-50	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.595	0.403	1	Yes	0.590	0.322	0.92	Yes	1.00	**9.17**
		L_{13} - L_{14}	-----	-1166.72	-2603	4688	-477	1290	-12	11	-222	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.592	0.265	0.86	Yes	0.587	0.409	1.00	Yes	1.00	**8.00**
		L_{14} - L_{15}	-----	-1273.58	1513	-377	4086	-2830	250	209	-197	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.214	0.87	Yes	0.641	0.357	1.00	Yes	1.00	**7.26**
		L_{15} - L_{16}	-----	-1233.70	-397	489	-1811	-2033	-43	145	-32	111	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.246	1	Yes	0.738	0.202	0.95	Yes	1.00	**8.27**
		L_{16} - L_{17}	-----	-1112.15	1066	163	681	-1525	200	55	-28	125	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.169	0.99	Yes	0.810	0.188	1.00	Yes	1.00	**7.22**
		L_{17} - L_{18}	-----	-788.65	484	213	250	-1065	17	-43	-55	106	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.070	0.91	Yes	0.828	0.170	1.00	Yes	1.00	**4.74**
		L_{18} - L_{19}	210.59	-611.98	614	83	69	-924	-41	-72	21	9	0.239	0.189	0.43	Yes	0.138	0.113	0.26	Yes	0.821	0.141	0.97	Yes	0.816	0.178	1.00	Yes	1.00	**4.58**
		L_{19} - L_{20}	633.26	-526.04	502	163	-30	-1386	-80	-38	-65	85	0.717	0.281	1.00	Yes	0.424	0.180	0.61	Yes	0.705	0.155	0.87	Yes	0.701	0.268	0.97	Yes	1.00	**5.64**
		L_{20} - L_{21}	936.96	-371.79	382	13	-693	-1631	1	-36	-75	-13	0.747	0.246	1.00	Yes	0.490	0.145	0.64	Yes	0.351	0.225	0.58	Yes	0.349	0.238	0.59	Yes	1.00	**5.62**
		L_{21} - L_{22}	868.14	-81.97	93	-82	-657	-1975	-50	58	-149	158	0.692	0.305	1.00	Yes	0.463	0.191	0.66	Yes	0.077	0.262	0.34	Yes	0.077	0.288	0.37	Yes	1.00	**4.29**
		L_{22} - L_{23}	927.67	-181.11	-136	196	-819	-1563	25	-37	-241	-81	0.740	0.254	1.00	Yes	0.495	0.159	0.66	Yes	0.171	0.301	0.48	Yes	0.170	0.228	0.40	Yes	1.00	**4.63**
		L_{23} - L_{24}	960.29	-349.71	2	335	-976	-1443	-6	73	-146	-121	0.766	0.226	1.00	Yes	0.502	0.134	0.64	Yes	0.330	0.276	0.61	Yes	0.328	0.211	0.54	Yes	1.00	**5.68**
		L_{24} - L_{25}	702.90	-----	-432	522	-755	-886	146	96	-178	-70	0.796	0.198	1.00	Yes	0.471	0.126	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.39**
		L_{25} - L_{26}	647.80	-24.03	-875	946	-720	-1167	117	218	-109	-222	0.734	0.259	1.00	Yes	0.423	0.154	0.58	Yes	0.032	0.122	0.16	Yes	0.032	0.225	0.26	Yes	1.00	**8.68**
		L_{26} - L_{27}	641.69	-676.03	-1379	1757	-1578	-1664	241	149	-276	129	0.573	0.314	0.89	Yes	0.333	0.196	0.53	Yes	0.715	0.167	0.89	Yes	0.710	0.281	1.00	Yes	1.00	**14.54**
		L_{27} - L_{28}	-----	-1036.41	-928	1956	-796	-479	187	333	-194	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.184	0.95	Yes	0.755	0.241	1.00	Yes	1.00	**9.62**
		L_{28} - L_{29}	-----	-1027.28	170	106	-1317	-3546	-140	-271	-49	42	-----	-----	-----	-----	-----	-----	-----	-----	0.620	0.378	1	Yes	0.614	0.352	0.97	Yes	1.00	**9.54**
		L_{29} - L_{30}	-----	-1239.74	-2506	4301	-503	1160	79	149	108	149	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.228	0.86	Yes	0.624	0.376	1.00	Yes	1.00	**7.11**
		L_{30} - L_{31}	-----	-1222.69	1142	-257	4292	-3045	-369	-263	-70	14	-----	-----	-----	-----	-----	-----	-----	-----	0.621	0.233	0.86	Yes	0.615	0.375	1.00	Yes	1.00	**7.72**
		L_{31} - L_{32}	-----	-1231.43	-197	338	-1325	-1743	-171	-44	123	192	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.253	1	Yes	0.737	0.173	0.91	Yes	1.00	**7.09**
		L_{32} - L_{33}	-----	-1008.32	920	93	429	-1271	29	-40	120	85	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.142	0.98	Yes	0.827	0.173	1.00	Yes	1.00	**6.01**
		L_{33} - L_{34}	157.48	-686.01	509	116	323	-1104	-20	12	5	191	0.157	0.219	0.38	Yes	0.092	0.138	0.23	Yes	0.811	0.099	0.92	Yes	0.806	0.193	1.00	Yes	1.00	**4.64**
		L_{34} - L_{35}	803.97	-681.02	692	-1	-61	-1571	-5	-70	-15	178	0.718	0.273	1.00	Yes	0.418	0.170	0.59	Yes	0.720	0.178	0.9	Yes	0.715	0.251	0.97	Yes	1.00	**6.63**
		L_{35} - L_{36}	1111.68	-319.01	506	-64	-63	-1462	-83	14	-213	137	0.778	0.217	1.00	Yes	0.524	0.135	0.66	Yes	0.265	0.139	0.41	Yes	0.263	0.197	0.46	Yes	1.00	**5.21**
		L_{36} - L_{37}	1304.59	-21.70	310	-69	-433	-2125	15	-3	27	161	0.748	0.248	1.00	Yes	0.491	0.145	0.64	Yes	0.015	0.221	0.24	Yes	0.015	0.235	0.25	Yes	1.00	**4.40**
		L_{37} - L_{38}	1756.59	-----	9	-430	-627	-2663	-67	55	-313	-36	0.743	0.253	1.00	Yes	0.494	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		L_{38} - L_{39}	1853.54	-----	-351	-65	-1761	-2180	1	-58	-149	77	0.795	0.203	1.00	Yes	0.534	0.123	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_{39} - L_{40}	1640.14	-----	-956	-90	-1075	-2265	115	217	-233	-198	0.765	0.230	1.00	Yes	0.506	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		L_{40} - L_{41}	1364.56	-----	-867	295	-1514	-1103	14	21	-195	-24	0.802	0.193	1.00	Yes	0.540	0.119	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_{41} - L_{42}	1041.08	-----	-717	372	-926	-834	33	135	-151	-392	0.820	0.176	1.00	Yes	0.538	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		L_{42} - L_{43}	519.80	-----	-1292	509	-688	-183	-9	156	-112	590	0.631	0.360	1.00	Yes	0.376	0.228	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**
		L_{43} - L_{44}	40.50	-73.96	-3181	1114	-18	-88	1803	519	-86	-21	0.049	0.943	1.00	Yes	0.029	0.597	0.63	Yes	0.106	0.632	0.74	Yes	0.106	0.647	0.76	Yes	1.00	**17.72**
	Structure 3	L_0 - L_1	33.53	-176.71	-52	4	1033	-2269	-8	4	-238	-1122	0.051	0.914	0.97	Yes	0.031	0.607	0.64	Yes	0.321	0.551	0.88	Yes	0.318	0.681	1.00	Yes	1.00	**14.88**
		L_1 - L_2	455.70	-----	157	-187	281	-761	37	63	-344	271	0.697	0.300	1.00	Yes	0.472	0.189	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		L_2 - L_3	924.25	-----	-22	-138	-58	-923	87	132	22	18	0.805	0.195	1.00	Yes	0.515	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_3 - L_4	1214.62	-----	50	-302	-164	-1417	34	120	-52	218	0.768	0.227	1.00	Yes	0.498	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		L_4 - L_5	1647.86	-----	-271	-129	-1241	-1500	24	14	67	100	0.805	0.188	1.00	Yes	0.517	0.109	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_5 - L_6	1530.45	-----	-31	-311	-663	-1916	-62	132	-68	272	0.748	0.250	1.00	Yes	0.486	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		L_6 - L_7	1287.09	-----	-1639	455	-932	-792	-13	147	-198	91	0.757	0.242	1.00	Yes	0.490	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_7 - L_8	1045.28	-----	-278	127	-514	-774	77	248	-140	-13	0.825	0.166	1.00	Yes	0.528	0.100	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		L_8 - L_9	636.81	-----	-587	448	-465	-296	69	-21	-99	66	0.825	0.173	1.00	Yes	0.495	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		L_9 - L_{10}	378.59	-560.45	-25	510	-515	-332	-19	17	14	25	0.490	0.141	0.64	Yes	0.286	0.086	0.38	Yes	0.862	0.107	0.97	Yes	0.854	0.136	1.00	Yes	1.00	**5.83**
		L_{10} - L_{11}	-----	-978.64	-883	1025	-883	-1327	277	-222	58	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.075	0.88	Yes	0.788	0.209	1.00	Yes	1.00	**11.18**
		L_{11} - L_{12}	-----	-1149.62	-827	2034	-55	534	57	-22	-84	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.226	0.97	Yes	0.728	0.269	1.00	Yes	1.00	**7.75**
		L_{12} - L_{13}	-----	-1147.49	865	93	2035	-970	-331	-265	-161	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.244	0.98	Yes	0.727	0.269	1.00	Yes	1.00	**7.35**
		L_{13} - L_{14}	-----	-1021.46	118	256	-67	-1124	-114	-66	-61	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.144	0.98	Yes	0.822	0.177	1.00	Yes	1.00	**6.11**
		L_{14} - L_{15}	18.33	-729.67	556	154	80	-680	54	-45	-63	86	0.018	0.162	0.18	Yes	0.012	0.098	0.11	Yes	0.851	0.140	1	Yes	0.842	0.150	1.00	Yes	1.00	**4.76**
		L_{15} - L_{16}	296.02	-493.32	448	129	141	-927	6	-71	-106	208	0.383	0.282	0.67	Yes	0.230	0.185	0.42	Yes	0.758	0.142	0.91	Yes	0.752	0.245	1.00	Yes	1.00	**3.86**
		L_{16} - L_{17}	613.30	-----	-369	44	57	-1104	61	-12	-166	-66	0.706	0.293	1.00	Yes	0.419	0.190	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		L_{17} - L_{18}	608.47	-----	-26	1	-332	-975	173	370	-72	-59	0.700	0.295	1.00	Yes	0.405	0.176	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		L_{18} - L_{19}	434.55	-----	-897	188	-417	-642	44	37	-46	280	0.665	0.329	1.00	Yes	0.406	0.220	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		L_{19} - L_{20}	20.65	-3.91	-2504	1466	75	-179	995	278	-135	-41	0.032	0.965	1.00	Yes	0.019	0.586	0.61	Yes	0.007	0.563	0.57	Yes	0.007	0.751	0.76	Yes	1.00	**16.97**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-336.19	-136	182	-22	45	-569	-182	-94	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.246	1	Yes	0.711	0.233	0.95	Yes	1.00	**1.36**
		$U_1 - L_1$			20.12	-348.49	-181	201	20	-15	-380	-90	45	20	0.036	0.367	0.41	Yes	0.020	0.202	0.23	Yes	0.761	0.169	0.94	Yes	0.737	0.257	1.00	Yes	1.00	**3.05**
		$U_2 - L_2$			80.14	-266.61	-306	337	125	-117	111	118	-131	-24	0.144	0.469	0.62	Yes	0.079	0.258	0.34	Yes	0.583	0.144	0.73	Yes	0.564	0.431	1.00	Yes	1.00	**6.09**
		$U_3 - L_3$			262.51	-222.28	-285	303	282	-279	68	236	-466	-190	0.472	0.522	1.00	Yes	0.260	0.287	0.55	Yes	0.487	0.200	0.69	Yes	0.470	0.387	0.86	Yes	1.00	**6.77**
		$U_4 - L_4$			35.35	-56.41	-252	216	674	-648	162	233	-159	-170	0.064	0.929	1.00	Yes	0.035	0.511	0.55	Yes	0.124	0.251	0.38	Yes	0.119	0.862	0.99	Yes	1.00	**12.22**
		$U_5 - L_5$			-----	-421.34	21	-36	251	-269	-119	-43	-75	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.102	0.87	Yes	0.727	0.273	1.00	Yes	1.00	**3.43**
		$U_6 - L_6$			-----	-520.39	55	-56	264	-287	-97	13	-45	15	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.090	0.88	Yes	0.746	0.251	1.00	Yes	1.00	**3.34**
		$U_7 - L_7$			-----	-450.84	118	-132	272	-300	-129	46	29	75	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.118	0.88	Yes	0.696	0.295	1.00	Yes	1.00	**1.87**
		$U_8 - L_8$			-----	-1269.95	-408	486	500	-597	-212	-57	-141	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.917	0.055	0.98	Yes	0.880	0.111	1.00	Yes	1.00	**4.55**
		$U_9 - L_9$			-----	-671.42	-374	432	-166	190	-249	-190	-224	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.128	0.93	Yes	0.758	0.240	1.00	Yes	1.00	**2.48**
		$U_{10} - L_{10}$			-----	-817.23	-303	364	-115	100	-264	-181	-257	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.112	0.96	Yes	0.806	0.189	1.00	Yes	1.00	**3.90**
		$U_{11} - L_{11}$			-----	-678.59	-325	446	-69	148	-114	19	-126	12	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.087	0.91	Yes	0.790	0.207	1.00	Yes	1.00	**3.79**
		$U_{12} - L_{12}$			-----	-508.78	-342	336	-41	54	-57	103	-93	56	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.092	0.83	Yes	0.698	0.292	1.00	Yes	1.00	**3.68**
		$U_{13} - L_{13}$			-----	-363.77	-241	262	3	17	-14	139	-84	84	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.105	0.85	Yes	0.697	0.299	1.00	Yes	1.00	**2.95**
		$U_{14} - L_{14}$			104.81	-60.41	-570	610	339	-339	18	53	57	78	0.188	0.802	1.00	Yes	0.104	0.441	0.55	Yes	0.135	0.212	0.35	Yes	0.128	0.780	0.91	Yes	1.00	**11.65**
		$U_{15} - L_{15}$			246.64	-309.86	-202	194	251	-267	-110	-135	-31	-177	0.444	0.393	0.84	Yes	0.244	0.216	0.47	Yes	0.695	0.163	0.86	Yes	0.656	0.342	1.00	Yes	1.00	**4.94**
		$U_{16} - L_{16}$			93.75	-311.44	-49	33	260	-263	-58	-78	-128	-192	0.169	0.392	0.57	Yes	0.093	0.215	0.31	Yes	0.702	0.160	0.87	Yes	0.659	0.336	1.00	Yes	1.00	**3.60**
		$U_{17} - L_{17}$			-----	-434.41	33	-55	232	-244	-88	-50	-76	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.108	0.93	Yes	0.749	0.248	1.00	Yes	1.00	**2.97**
		$U_{18} - L_{18}$			-----	-530.64	121	-126	448	-455	-160	-62	72	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.093	0.88	Yes	0.738	0.258	1.00	Yes	1.00	**3.32**
		$U_{19} - L_{19}$			-----	-641.31	137	-149	519	-525	-66	9	53	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.073	0.88	Yes	0.746	0.244	1.00	Yes	1.00	**3.52**
		$U_{20} - L_{20}$			-----	-634.40	164	-211	423	-541	21	3	236	31	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1	Yes	0.738	0.251	0.99	Yes	1.00	**2.85**
	Structure 2	$U_0 - L_0$			-----	-602.02	-419	497	-115	180	-1337	-227	-261	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.277	1	Yes	0.645	0.211	0.86	Yes	1.00	**2.46**
		$U_1 - L_1$			-----	-712.42	-542	545	-109	117	-6	6	43	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.069	0.89	Yes	0.763	0.231	1.00	Yes	1.00	**3.97**
		$U_2 - L_2$			-----	-583.49	-493	491	-79	88	1	85	99	44	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.080	0.87	Yes	0.744	0.252	1.00	Yes	1.00	**3.87**
		$U_3 - L_3$			-----	-487.24	-254	259	-41	47	-12	133	20	130	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.094	0.93	Yes	0.764	0.236	1.00	Yes	1.00	**3.58**
		$U_4 - L_4$			3.25	-333.15	-226	223	14	8	-60	125	-56	100	0.006	0.325	0.34	Yes	0.003	0.179	0.19	Yes	0.756	0.093	0.85	Yes	0.705	0.289	1.00	Yes	1.00	**3.34**
		$U_5 - L_5$			154.72	-322.11	-226	242	137	-113	-44	149	-127	78	0.278	0.353	0.64	Yes	0.153	0.194	0.35	Yes	0.728	0.114	0.85	Yes	0.682	0.310	1.00	Yes	1.00	**4.42**
		$U_6 - L_6$			362.00	-214.95	-235	239	240	-241	-87	129	-129	93	0.651	0.345	1.00	Yes	0.358	0.190	0.55	Yes	0.484	0.091	0.58	Yes	0.455	0.308	0.77	Yes	1.00	**5.72**
		$U_7 - L_7$			21.62	-159.29	-230	246	455	-515	-88	104	-165	-101	0.039	0.706	0.75	Yes	0.021	0.389	0.41	Yes	0.360	0.229	0.59	Yes	0.337	0.658	1.00	Yes	1.00	**11.79**
		$U_8 - L_8$			-----	-458.69	21	-42	378	-386	-103	-107	-202	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.128	0.8	Yes	0.661	0.338	1.00	Yes	1.00	**3.44**
		$U_9 - L_9$			-----	-687.01	80	-115	610	-613	-129	-106	-101	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.082	0.85	Yes	0.736	0.260	1.00	Yes	1.00	**4.44**
		$U_{10} - L_{10}$			-----	-789.03	107	-144	560	-576	-53	10	-54	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.082	0.87	Yes	0.738	0.254	1.00	Yes	1.00	**4.64**
		$U_{11} - L_{11}$			-----	-816.69	157	-172	533	-534	-46	-139	-118	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.084	0.91	Yes	0.764	0.236	1.00	Yes	1.00	**4.13**
		$U_{12} - L_{12}$			-----	-882.03	159	-152	547	-549	-2	54	83	102	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.087	0.94	Yes	0.765	0.235	1.00	Yes	1.00	**4.14**
		$U_{13} - L_{13}$			-----	-751.89	242	-240	569	-564	-87	42	79	88	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.116	0.96	Yes	0.725	0.272	1.00	Yes	1.00	**3.13**
		$U_{14} - L_{14}$			-----	-1300.79	-508	471	638	-609	-40	147	-93	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.951	0.047	1	Yes	0.863	0.113	0.98	Yes	1.00	**4.86**
		$U_{15} - L_{15}$			-----	-736.71	-598	591	-165	166	-152	-95	-80	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.140	0.97	Yes	0.710	0.286	1.00	Yes	1.00	**3.75**
		$U_{16} - L_{16}$			-----	-738.50	-476	483	-128	102	-284	-142	-166	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.103	0.96	Yes	0.791	0.205	1.00	Yes	1.00	**3.55**
		$U_{17} - L_{17}$			-----	-646.51	-514	517	-129	126	-137	-42	-99	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.082	0.88	Yes	0.752	0.240	1.00	Yes	1.00	**3.68**
		$U_{18} - L_{18}$			-----	-571.81	-519	522	-98	99	-99	3	-82	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.078	0.84	Yes	0.729	0.267	1.00	Yes	1.00	**3.96**
		$U_{19} - L_{19}$			-----	-473.19	-300	289	-44	49	-116	33	-155	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.096	0.81	Yes	0.707	0.289	1.00	Yes	1.00	**3.40**
		$U_{20} - L_{20}$			-----	-376.51	-237	240	13	3	-71	67	-171	5	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.112	0.89	Yes	0.721	0.275	1.00	Yes	1.00	**3.40**
		$U_{21} - L_{21}$			82.92	-313.98	-246	256	51	-50	-103	68	-158	26	0.149	0.373	0.53	Yes	0.082	0.205	0.29	Yes	0.709	0.126	0.84	Yes	0.664	0.328	1.00	Yes	1.00	**3.99**
		$U_{22} - L_{22}$			88.45	-160.91	-483	509	400	-419	16	148	19	24	0.159	0.693	0.86	Yes	0.087	0.381	0.47	Yes	0.362	0.198	0.57	Yes	0.340	0.650	1.00	Yes	1.00	**13.07**
		$U_{23} - L_{23}$			129.99	-312.51	-102	93	255	-265	-65	-45	-125	-119	0.234	0.374	0.61	Yes	0.129	0.206	0.34	Yes	0.706	0.135	0.85	Yes	0.661	0.338	1.00	Yes	1.00	**4.03**
		$U_{24} - L_{24}$			66.54	-368.26	-39	28	250	-255	-72	-62	-55	-71	0.108	0.309	0.42	Yes	0.060	0.170	0.23	Yes	0.755	0.099	0.86	Yes	0.705	0.291	1.00	Yes	1.00	**3.60**
		$U_{25} - L_{25}$			-----	-469.67	19	-34	305	-300	-79	2	-43	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.082	0.79	Yes	0.701	0.294	1.00	Yes	1.00	**3.50**
		$U_{26} - L_{26}$			-----	-560.41	88	-109	529	-547	-87	-5	-140	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.092	0.84	Yes	0.714	0.280	1.00	Yes	1.00	**3.65**
		$U_{27} - L_{27}$			-----	-625.31	142	-144	571	-572	-150	0	-48	29	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.084	0.86	Yes	0.728	0.266	1.00	Yes	1.00	**3.61**
		$U_{28} - L_{28}$			-----	-704.95	132	-129	564	-556	-32	-24	55	91	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.075	0.89	Yes	0.755	0.239	1.00	Yes	1.00	**3.75**
		$U_{29} - L_{29}$			-----	-709.16	205	-210	643	-629	-115	25	24	69	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.123	0.92	Yes	0.684	0.308	1.00	Yes	1.00	**3.70**
		$U_{30} - L_{30}$			-----	-1292.14	-612	547	664	-656	-162	68	-22	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.945	0.052	1	Yes	0.857	0.118	0.98	Yes	1.00	**5.14**
		$U_{31} - L_{31}$			-----	-768.41	-523	519	-183	179	-174	-90	-120	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.134	1	Yes	0.741	0.250	1.00	Yes	1.00	**3.24**
		$U_{32} - L_{32}$			-----	-904.77	-494	494	-127	101	-268	-122	-185	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.120	0.99	Yes	0.784	0.212	1.00	Yes	1.00	**4.49**
		$U_{33} - L_{33}$			-----	-845.41	-451	470	-162	144	-125	0	-136	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.080	0.94	Yes	0.790	0.207	1.00	Yes	1.00	**4.13**
		$U_{34} - L_{34}$			-----	-799.38	-549	555	-118	129	-92	79	-162	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.083	0.88	Yes	0.747	0.245	1.00	Yes	1.00	**4.90**
		$U_{35} - L_{35}$			-----	-702.10	-576	580	-108	125	10	170	-182	37	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.074	0.86	Yes	0.752	0.246	1.00	Yes	1.00	**4.67**
		$U_{36} - L_{36}$			-----	-468.62	-360	370	-41	54	-50	127	-156	66	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.096	0.78	Yes	0.675	0.323	1.00	Yes	1.00	**3.71**
		$U_{37} - L_{37}$			2.69	-142.62	-486	544	155	-166	-51	159	-184	-33	0.005	0.748	0.76	Yes	0.003	0.412	0.42	Yes	0.322	0.236	0.56	Yes	0.302	0.695	1.00	Yes	1.00	**10.81**
		$U_{38} - L_{38}$			350.48	-138.73	-239	246	165	-164	-71	-104	-139	-169	0.630	0.364	1.00	Yes	0.347	0.200	0.55	Yes	0.312	0.134	0.45	Yes	0.294	0.315	0.61	Yes	1.00	**4.28**
		$U_{39} - L_{39}$			254.93	-316.99	-197	184	238	-254	-110	-107	-29	-141	0.458	0.365	0.83	Yes	0.252	0.201	0.46	Yes	0.716	0.146	0.87	Yes	0.671	0.325	1.00	Yes	1.00	**4.94**
		$U_{40} - L_{40}$			100.28	-333.27	-54	32	230	-228	-82	-39	-60	-108	0.180	0.325	0.51	Yes	0.099	0.179	0.28	Yes	0.756	0.115	0.88	Yes	0.705	0.294	1.00	Yes	1.00	**3.71**
		$U_{41} - L_{41}$			-----	-479.94	43	-50	259	-266	-104	-43	-110	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.103	0.93	Yes	0.753	0.243	1.00	Yes	1.00	**3.42**
		$U_{42} - L_{42}$			-----	-571.07	102	-112	517	-514	-84	-49	96	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.081	0.85	Yes	0.728	0.264	1.00	Yes	1.00	**3.60**
		$U_{43} - L_{43}$			-----	-707.12	136	-153	549	-563	-40	-19	250	17	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.098	0.91	Yes	0.758	0.239	1.00	Yes	1.00	**3.80**
		$U_{44} - L_{44}$			-----	-692.94	191	-237	457	-596	-36	-6	233	39	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.145	0.98	Yes	0.743	0.253	1.00	Yes	1.00	**2.92**
	Structure 3	$U_0 - L_0$			-----	-574.37	-357	452	-103	167	-823	-108	-245	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1	Yes	0.669	0.210	0.88	Yes	1.00	**2.50**
		$U_1 - L_1$			-----	-650.14	-515	509	-108	115	54	19	6	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.074	0.89	Yes	0.757	0.239	1.00	Yes	1.00	**3.99**
		$U_2 - L_2$			-----	-540.79	-429	436	-90	95	-85	59	85	32	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.078	0.87	Yes	0.752	0.247	1.00	Yes	1.00	**3.57**
		$U_3 - L_3$			-----	-442.55	-213	226	-32	44	37	183	0	120	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.115	0.95	Yes	0.763	0.230	1.00	Yes	1.00	**3.24**
		$U_4 - L_4$			57.53	-314.34	-258	258	36	-16	-103	173	-128	126	0.103	0.380	0.49	Yes	0.057	0.209	0.27	Yes	0.708	0.104	0.82	Yes	0.665	0.330	1.00	Yes	1.00	**3.89**
		$U_5 - L_5$			167.32	-301.14	-267	281	136	-128	-88	165	-169	71	0.301	0.409	0.71	Yes	0.166	0.225	0.40	Yes	0.675	0.129	0.81	Yes	0.637	0.360	1.00	Yes	1.00	**4.92**
		$U_6 - L_6$			-----	-72.78	-426	446	629	-656	55	120	-300	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.162	0.273	0.44	Yes	0.154	0.839	1.00	Yes	1.00	**13.29**
		$U_7 - L_7$			25.68	-358.41	-32	19	251	-270	-175	-141	-154	-167	0.042	0.354	0.40	Yes	0.023	0.194	0.22	Yes	0.725	0.143	0.87	Yes	0.687	0.308	1.00	Yes	1.00	**3.18**
		$U_8 - L_8$			-----	-514.65	15	-19	341	-342	-136	-103	-238	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.134	0.88	Yes	0.706	0.292	1.00	Yes	1.00	**3.90**
		$U_9 - L_9$			-----	-652.05	68	-117	416	-508	-93	-143	-197	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.106	0.89	Yes	0.759	0.236	1.00	Yes	1.00	**4.15**
		$U_{10} - L_{10}$			-----	-779.60	102	-98	412	-438	-13	87	28	96	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.071	0.88	Yes	0.769	0.227	1.00	Yes	1.00	**4.38**
		$U_{11} - L_{11}$			-----	-653.98	182	-212	397	-468	-51	62	147	141	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.116	0.9	Yes	0.739	0.260	1.00	Yes	1.00	**2.59**
		$U_{12} - L_{12}$			-----	-1279.82	-406	436	435	-569	53	75	-127	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.048	0.98	Yes	0.887	0.106	1.00	Yes	1.00	**4.50**
		$U_{13} - L_{13}$			-----	-458.22	-267	288	-105	115	-159	-107	-113	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.137	0.91	Yes	0.707	0.283	1.00	Yes	1.00	**2.12**
		$U_{14} - L_{14}$			-----	-546.75	-217	246	-62	54	-270	-155	-191	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.132	0.97	Yes	0.784	0.215	1.00	Yes	1.00	**2.95**
		$U_{15} - L_{15}$			-----	-452.02	-183	217	-41	47	-173	-17	-164	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.107	0.93	Yes	0.780	0.220	1.00	Yes	1.00	**2.99**
		$U_{16} - L_{16}$			93.60	-134.98	-555	539	152	-122	-111	45	-342	-206	0.168	0.808	0.98	Yes	0.093	0.444	0.54	Yes	0.297	0.253	0.56	Yes	0.286	0.709	1.00	Yes	1.00	**10.08**
		$U_{17} - L_{17}$			291.21	-177.60	-291	302	175	-195	-111	-23	-311	-254	0.524	0.476	1.00	Yes	0.288	0.262	0.55	Yes	0.389	0.180	0.57	Yes	0.376	0.386	0.77	Yes	1.00	**5.35**
		$U_{18} - L_{18}$			80.48	-272.76	-121	124	295	-328	113	10	-212	-163	0.145	0.481	0.63	Yes	0.080	0.264	0.35	Yes	0.596	0.174	0.78	Yes	0.577	0.419	1.00	Yes	1.00	**5.28**
		$U_{19} - L_{19}$			21.41	-313.90	-34	22	258	-250	-168	-90	-140	-113	0.039	0.378	0.42	Yes	0.021	0.208	0.23	Yes	0.686	0.125	0.82	Yes	0.664	0.330	1.00	Yes	1.00	**3.57**
		$U_{20} - L_{20}$			-----	-352.53	48	-56	155	-194	-170	-54	360	115	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.189	0.98	Yes	0.746	0.248	1.00	Yes	1.00	**1.33**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$			295.99	-114.46	-238	141	26	-20	-1317	-81	-26	-14	0.388	0.610	1.00	Yes	0.234	0.336	0.58	Yes	0.195	0.418	0.62	Yes	0.177	0.278	0.46	Yes	1.00	**7.00**
		$U_1 - L_2$			357.10	-----	-70	44	-40	-42	14	-105	-912	-431	0.642	0.354	1.00	Yes	0.353	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		$U_2 - L_3$			385.96	-318.47	-70	45	-43	-96	-152	-394	-416	-243	0.694	0.243	0.94	Yes	0.382	0.134	0.52	Yes	0.733	0.264	1	Yes	0.674	0.123	0.80	Yes	1.00	**6.62**
		$U_3 - L_4$			-----	-377.23	8	-10	1	-68	-119	-55	-150	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.133	1	Yes	0.798	0.087	0.89	Yes	1.00	**3.30**
		$U_4 - L_4$			578.83	-----	-74	71	-97	-27	-64	-197	-176	-199	0.849	0.145	1.00	Yes	0.467	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_5 - L_5$			710.00	-----	-182	250	-93	40	55	-98	-37	-10	0.839	0.160	1.00	Yes	0.462	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_1 - L_6$			646.41	-----	-298	244	-78	85	325	147	295	170	0.764	0.229	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_6 - L_7$			652.08	-----	-110	290	-8	115	302	155	241	173	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.76**
		$U_8 - L_9$			1006.05	-----	-109	357	-2	136	257	211	96	111	0.804	0.192	1.00	Yes	0.498	0.107	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_9 - L_{10}$			1049.16	-----	-298	286	-97	85	174	129	89	104	0.839	0.155	1.00	Yes	0.520	0.087	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		$U_{10} - L_{11}$			1034.00	-----	-226	221	-169	37	-99	-164	101	-82	0.873	0.126	1.00	Yes	0.541	0.070	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{11} - L_{12}$			846.61	-----	-237	158	-141	-35	-325	-346	-302	-243	0.838	0.161	1.00	Yes	0.461	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_{12} - L_{13}$			624.18	-----	-186	171	-64	0	-388	-355	-350	-280	0.761	0.238	1.00	Yes	0.479	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{13} - L_{14}$			444.37	-45.36	-77	58	1	-39	-284	-337	-294	-320	0.799	0.196	1.00	Yes	0.440	0.108	0.55	Yes	0.105	0.151	0.26	Yes	0.096	0.098	0.20	Yes	1.00	**3.40**
		$U_{15} - L_{14}$			258.88	-335.00	-58	11	66	-105	-222	-341	-197	-300	0.466	0.233	0.70	Yes	0.256	0.128	0.39	Yes	0.785	0.210	1	Yes	0.709	0.134	0.85	Yes	1.00	**3.99**
		$U_{16} - L_{15}$			412.88	-191.85	-132	95	30	-67	-248	-278	-198	-182	0.743	0.250	1.00	Yes	0.408	0.137	0.55	Yes	0.455	0.182	0.64	Yes	0.406	0.169	0.58	Yes	1.00	**4.34**
		$U_{17} - L_{16}$			539.33	-----	-144	115	-25	-16	-149	-245	-182	-132	0.791	0.203	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{18} - L_{17}$			659.51	-----	-329	275	-104	55	-154	-155	-135	-69	0.780	0.214	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_{19} - L_{18}$			718.88	-----	-369	262	-89	64	-173	-171	-152	-19	0.779	0.217	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_{20} - L_{19}$			616.78	-----	-407	311	-127	106	-714	-113	1	34	0.668	0.326	1.00	Yes	0.367	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
	Structure 2	$U_0 - L_1$			639.59	-----	-447	367	-66	75	-1003	-166	-121	50	0.633	0.357	1.00	Yes	0.348	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_1 - L_2$			787.66	-----	-412	306	-86	58	-112	-166	43	11	0.779	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_2 - L_3$			654.01	-----	-323	259	-65	49	-202	-233	-76	-178	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_3 - L_4$			577.16	-----	-170	143	-38	-1	-321	-303	-268	-207	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_4 - L_5$			410.44	-118.16	-119	98	11	-46	-353	-295	-286	-212	0.738	0.254	1.00	Yes	0.406	0.140	0.55	Yes	0.292	0.189	0.49	Yes	0.250	0.152	0.41	Yes	1.00	**3.90**
		$U_5 - L_6$			383.95	-313.26	-109	71	86	-117	-431	-302	-365	-246	0.691	0.274	0.97	Yes	0.380	0.151	0.54	Yes	0.740	0.256	1	Yes	0.663	0.149	0.82	Yes	1.00	**4.63**
		$U_6 - L_7$			74.18	-371.33	-27	-2	66	-102	-322	-276	-273	-257	0.121	0.200	0.33	Yes	0.066	0.110	0.18	Yes	0.795	0.198	1	Yes	0.711	0.117	0.83	Yes	1.00	**3.01**
		$U_8 - L_7$			614.78	-39.95	-173	153	-6	-35	-137	-270	-183	-245	0.784	0.210	1.00	Yes	0.493	0.119	0.62	Yes	0.066	0.097	0.17	Yes	0.060	0.155	0.22	Yes	1.00	**4.25**
		$U_8 - L_8$			734.28	-----	-327	277	-104	11	-128	-206	-187	-160	0.795	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_{10} - L_9$			837.59	-----	-310	253	-87	38	-52	-149	-19	-61	0.829	0.166	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_{11} - L_{10}$			912.54	-----	-364	311	-119	87	55	-63	62	32	0.831	0.163	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{12} - L_{11}$			891.06	-----	-361	358	-107	135	165	68	246	159	0.812	0.187	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_{13} - L_{12}$			738.31	-----	-436	371	-199	170	266	124	411	247	0.730	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.77**
		$U_{14} - L_{13}$			758.59	-----	-279	431	-65	176	272	156	232	137	0.750	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_{14} - L_{15}$			641.79	-----	-217	366	0	102	162	93	49	35	0.759	0.237	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{15} - L_{16}$			641.92	-----	-374	335	-111	104	121	89	62	69	0.759	0.234	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{16} - L_{17}$			745.41	-----	-357	352	-73	98	9	-7	9	5	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_{17} - L_{18}$			686.08	-----	-300	290	-73	75	-78	-73	-77	-20	0.811	0.184	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		$U_{18} - L_{19}$			683.14	-----	-282	248	-43	38	-150	-148	-109	-98	0.808	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{19} - L_{20}$			602.15	-1.91	-187	195	-12	-6	-266	-232	-175	-140	0.768	0.228	1.00	Yes	0.422	0.129	0.56	Yes	0.003	0.104	0.11	Yes	0.003	0.174	0.18	Yes	1.00	**4.29**
		$U_{20} - L_{21}$			435.16	-55.78	-117	108	9	-24	-228	-172	-215	-153	0.783	0.215	1.00	Yes	0.430	0.118	0.55	Yes	0.132	0.110	0.25	Yes	0.118	0.149	0.27	Yes	1.00	**3.44**
		$U_{21} - L_{22}$			441.05	-257.91	-95	76	45	-80	-259	-275	-232	-237	0.793	0.201	1.00	Yes	0.436	0.110	0.55	Yes	0.609	0.167	0.78	Yes	0.546	0.121	0.67	Yes	1.00	**4.95**
		$U_{23} - L_{22}$			427.12	-352.67	-99	69	70	-99	-94	-245	-168	-240	0.768	0.198	0.97	Yes	0.423	0.109	0.54	Yes	0.840	0.152	1	Yes	0.746	0.127	0.88	Yes	1.00	**5.57**
		$U_{24} - L_{23}$			449.33	-97.92	-121	115	28	-39	-60	-128	-57	-84	0.808	0.191	1.00	Yes	0.444	0.105	0.55	Yes	0.234	0.067	0.31	Yes	0.207	0.154	0.37	Yes	1.00	**4.03**
		$U_{25} - L_{24}$			623.09	-28.50	-200	195	7	-26	21	-91	-13	-56	0.794	0.198	1.00	Yes	0.437	0.110	0.55	Yes	0.048	0.053	0.11	Yes	0.043	0.179	0.23	Yes	1.00	**4.54**
		$U_{26} - L_{25}$			686.91	-----	-295	271	-34	21	61	-27	25	17	0.812	0.178	1.00	Yes	0.447	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{27} - L_{26}$			675.96	-----	-294	300	-56	69	151	33	157	82	0.799	0.198	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{28} - L_{27}$			719.52	-----	-335	362	-82	104	212	111	185	109	0.779	0.220	1.00	Yes	0.429	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{29} - L_{28}$			625.60	-----	-372	327	-125	119	251	118	217	110	0.740	0.256	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		$U_{30} - L_{29}$			639.57	-----	-220	358	-38	127	216	75	177	102	0.756	0.242	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_{30} - L_{31}$			775.01	-----	-285	444	-26	133	122	68	62	38	0.767	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{31} - L_{32}$			780.59	-----	-459	387	-129	130	56	39	36	47	0.772	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{32} - L_{33}$			907.72	-----	-365	344	-100	119	-118	-98	-60	-22	0.827	0.171	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{33} - L_{34}$			898.18	-----	-334	311	-104	72	-250	-230	-173	-131	0.818	0.176	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{34} - L_{35}$			818.74	-----	-282	246	-86	42	-356	-335	-223	-223	0.810	0.184	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_{35} - L_{36}$			713.47	-----	-304	277	-84	7	-382	-325	-402	-285	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_{36} - L_{37}$			604.58	-----	-159	166	-19	-21	-353	-363	-293	-319	0.771	0.223	1.00	Yes	0.485	0.126	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{38} - L_{37}$			31.84	-391.69	-22	-10	75	-101	-131	-228	-157	-229	0.052	0.175	0.23	Yes	0.029	0.096	0.13	Yes	0.846	0.150	1	Yes	0.750	0.116	0.87	Yes	1.00	**2.81**
		$U_{39} - L_{38}$			293.95	-345.35	-85	55	78	-112	-175	-235	-206	-183	0.529	0.212	0.75	Yes	0.291	0.116	0.41	Yes	0.823	0.176	1	Yes	0.731	0.144	0.88	Yes	1.00	**4.15**
		$U_{40} - L_{38}$			427.11	-187.03	-128	100	43	-69	-131	-203	-87	-112	0.768	0.223	1.00	Yes	0.422	0.123	0.55	Yes	0.448	0.138	0.59	Yes	0.396	0.164	0.56	Yes	1.00	**4.48**
		$U_{41} - L_{40}$			596.71	-----	-187	142	-25	-15	-100	-163	-103	-59	0.795	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{42} - L_{41}$			670.46	-----	-334	285	-70	46	-76	-95	-3	-3	0.793	0.206	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{43} - L_{42}$			802.00	-----	-391	329	-91	61	-65	-120	-8	-33	0.793	0.199	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{44} - L_{43}$			734.09	-----	-406	368	-138	121	-524	-197	34	5	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
	Structure 3	$U_0 - L_1$			590.82	-----	-433	318	-68	71	-837	-201	-131	45	0.640	0.359	1.00	Yes	0.352	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$U_1 - L_2$			722.23	-----	-364	253	-91	57	-61	-149	37	13	0.782	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$U_2 - L_3$			640.24	-----	-333	242	-78	48	-256	-267	-74	-167	0.757	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_3 - L_4$			526.48	-----	-141	99	-19	-13	-324	-314	-301	-219	0.772	0.219	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_4 - L_5$			405.24	-159.60	-118	99	19	-54	-396	-331	-309	-239	0.729	0.265	1.00	Yes	0.401	0.146	0.55	Yes	0.378	0.203	0.59	Yes	0.338	0.150	0.49	Yes	1.00	**4.19**
		$U_5 - L_6$			272.88	-312.29	-56	18	42	-101	-407	-378	-385	-335	0.491	0.247	0.74	Yes	0.270	0.136	0.41	Yes	0.732	0.263	1	Yes	0.661	0.129	0.79	Yes	1.00	**3.88**
		$U_7 - L_6$			452.78	-54.63	-81	48	12	-37	-107	-280	-98	-242	0.814	0.184	1.00	Yes	0.448	0.101	0.55	Yes	0.127	0.116	0.25	Yes	0.116	0.103	0.22	Yes	1.00	**3.39**
		$U_8 - L_7$			641.16	-64.00	-194	169	-67	-17	-155	-240	-173	-181	0.782	0.216	1.00	Yes	0.492	0.122	0.62	Yes	0.101	0.102	0.21	Yes	0.092	0.170	0.27	Yes	1.00	**4.03**
		$U_8 - L_9$			848.43	-----	-268	142	-152	-48	-70	-219	-71	-133	0.839	0.157	1.00	Yes	0.462	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		$U_{10} - L_9$			1027.96	-----	-246	202	-149	29	95	-35	-97	-7	0.868	0.126	1.00	Yes	0.537	0.070	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{11} - L_{10}$			999.38	-----	-305	269	-101	87	450	291	307	198	0.799	0.193	1.00	Yes	0.495	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{12} - L_{11}$			979.61	-----	-107	367	-13	141	396	274	279	210	0.783	0.214	1.00	Yes	0.485	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_{13} - L_{13}$			659.77	-----	-118	310	-3	106	187	124	114	93	0.780	0.211	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_{13} - L_{14}$			675.70	-----	-290	230	-71	76	145	98	93	118	0.799	0.192	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_{14} - L_{15}$			697.79	-----	-166	238	-35	39	-147	-189	-9	-13	0.825	0.170	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_{15} - L_{16}$			571.09	-----	-62	94	-84	-29	-236	-260	-273	-230	0.837	0.159	1.00	Yes	0.461	0.087	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
		$U_{17} - L_{16}$			-----	-382.93	5	-9	3	-65	16	-74	-154	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.119	1	Yes	0.810	0.084	0.90	Yes	1.00	**3.25**
		$U_{18} - L_{17}$			389.97	-203.46	-79	35	-73	-114	-28	-522	-517	-234	0.701	0.297	1.00	Yes	0.386	0.163	0.55	Yes	0.468	0.251	0.72	Yes	0.430	0.146	0.58	Yes	1.00	**7.33**
		$U_{19} - L_{18}$			422.41	-----	-84	41	-78	-46	51	-125	-436	-257	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_{20} - L_{19}$			474.50	-24.01	-177	90	-20	1	-673	-138	33	-3	0.622	0.376	1.00	Yes	0.376	0.207	0.59	Yes	0.041	0.243	0.29	Yes	0.037	0.206	0.25	Yes	1.00	**4.12**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

				Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
								Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
						Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
						(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$				26.45	-561.90	-142	92	615	-1019	-75	129	138	-785	0.030	0.375	0.41	Yes	0.021	0.256	0.28	Yes	0.765	0.179	0.95	Yes	0.758	0.242	1.00	Yes	1.00	**5.89**
		$U_1 - U_2$				32.92	-530.93	-101	100	-376	-717	-160	130	114	-489	0.038	0.253	0.30	Yes	0.026	0.173	0.20	Yes	0.722	0.269	1	Yes	0.716	0.170	0.89	Yes	1.00	**3.17**
		$U_2 - U_3$				182.87	-554.83	-90	310	-390	-481	-117	125	-315	-516	0.210	0.202	0.42	Yes	0.141	0.133	0.28	Yes	0.755	0.239	1	Yes	0.748	0.114	0.87	Yes	1.00	**3.60**
		$U_3 - U_4$				516.38	-598.56	159	429	-502	-567	-224	-4	5	-414	0.592	0.205	0.80	Yes	0.406	0.140	0.55	Yes	0.814	0.180	1	Yes	0.807	0.135	0.95	Yes	1.00	**5.34**
		$U_4 - U_5$				547.10	-572.41	226	435	-724	-363	-86	-4	-471	373	0.627	0.252	0.88	Yes	0.430	0.172	0.61	Yes	0.779	0.217	1	Yes	0.772	0.172	0.95	Yes	1.00	**5.63**
		$U_5 - U_6$				716.77	-----	291	513	-18	88	100	147	-75	292	0.822	0.171	1.00	Yes	0.554	0.112	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		$U_6 - U_7$				894.09	-----	413	228	39	-155	332	285	-317	368	0.855	0.138	1.00	Yes	0.598	0.095	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_7 - U_8$				804.87	-----	-925	2225	152	553	258	643	979	823	0.558	0.437	1.00	Yes	0.389	0.298	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		$U_8 - U_9$				802.77	-----	1042	-130	1609	-1048	246	480	192	-567	0.658	0.340	1.00	Yes	0.450	0.231	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		$U_9 - U_{10}$				669.81	-353.09	253	274	85	-757	-9	318	518	-632	0.727	0.271	1.00	Yes	0.492	0.182	0.68	Yes	0.455	0.182	0.64	Yes	0.451	0.170	0.63	Yes	1.00	**7.04**
		$U_{10} - U_{11}$				84.51	-618.51	257	-166	193	-897	46	111	-85	-473	0.092	0.277	0.37	Yes	0.061	0.179	0.24	Yes	0.796	0.196	1	Yes	0.789	0.201	1.00	Yes	1.00	**3.53**
		$U_{11} - U_{12}$				-----	-913.16	158	-205	27	-803	12	104	-6	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.130	1	Yes	0.857	0.133	0.99	Yes	1.00	**2.58**
		$U_{12} - U_{13}$				-----	-1273.77	-44	-267	-337	-741	81	8	265	-475	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.137	1	Yes	0.851	0.102	0.96	Yes	1.00	**3.01**
		$U_{13} - U_{14}$				-----	-1384.73	-195	-504	-595	-1395	-43	-8	49	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.188	1	Yes	0.794	0.154	0.95	Yes	1.00	**2.73**
		$U_{14} - U_{15}$				-----	-1404.76	-400	-288	-1179	-791	42	-275	-231	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.183	1	Yes	0.805	0.130	0.94	Yes	1.00	**2.89**
		$U_{15} - U_{16}$				-----	-1416.80	-251	-423	-595	-1047	-26	-231	-422	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.170	1	Yes	0.812	0.116	0.93	Yes	1.00	**3.67**
		$U_{16} - U_{17}$				-----	-1405.83	-373	-191	-1178	-745	1	-222	-294	260	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1	Yes	0.806	0.130	0.94	Yes	1.00	**4.24**
		$U_{17} - U_{18}$				-----	-1105.70	-661	109	-345	-257	-20	-203	-315	662	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.119	1	Yes	0.865	0.108	0.98	Yes	1.00	**4.19**
		$U_{18} - U_{19}$				-----	-720.16	-760	111	-405	-57	161	-180	641	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.178	1	Yes	0.810	0.153	0.97	Yes	1.00	**4.13**
		$U_{19} - U_{20}$				-----	-654.61	-1271	631	-359	-209	-331	-117	103	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.241	0.99	Yes	0.736	0.256	1.00	Yes	1.00	**12.54**
	Structure 2	$U_0 - U_1$				-----	-589.96	263	-303	1010	-1741	70	47	307	-724	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.159	0.87	Yes	0.697	0.296	1.00	Yes	1.00	**6.71**
		$U_1 - U_2$				-----	-832.98	-150	-315	-167	-1027	-22	25	-15	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.186	1	Yes	0.804	0.156	0.96	Yes	1.00	**3.54**
		$U_2 - U_3$				-----	-1142.26	-136	-420	-387	-1404	-35	-56	205	-673	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.179	1	Yes	0.811	0.143	0.96	Yes	1.00	**3.42**
		$U_3 - U_4$				-----	-1371.36	-531	-540	-905	-1556	-116	-38	-110	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.204	1	Yes	0.781	0.139	0.92	Yes	1.00	**2.83**
		$U_4 - U_5$				-----	-1500.31	-583	-555	-1418	-1602	-122	-86	68	-668	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.217	1	Yes	0.770	0.133	0.91	Yes	1.00	**2.91**
		$U_5 - U_6$				-----	-1549.81	-566	9	-1141	-1248	-197	-46	-565	-642	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.190	1	Yes	0.796	0.103	0.90	Yes	1.00	**3.34**
		$U_6 - U_7$				-----	-1383.31	-308	-199	-1093	-1369	-172	-92	-209	-401	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.206	1	Yes	0.788	0.122	0.91	Yes	1.00	**3.33**
		$U_7 - U_8$				-----	-1370.17	-336	-188	-1505	-1055	-80	-178	-375	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.207	1	Yes	0.780	0.134	0.92	Yes	1.00	**3.38**
		$U_8 - U_9$				-----	-1166.44	-348	226	-1318	-574	-11	-187	-565	20	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.194	1	Yes	0.791	0.140	0.94	Yes	1.00	**3.80**
		$U_9 - U_{10}$				544.20	-913.34	67	714	-1027	-493	-94	-166	-841	-29	0.399	0.216	0.62	Yes	0.270	0.146	0.42	Yes	0.793	0.204	1	Yes	0.788	0.125	0.92	Yes	1.00	**6.72**
		$U_{10} - U_{11}$				821.04	-510.64	330	608	-1174	-331	-172	-94	-1112	25	0.694	0.301	1.00	Yes	0.472	0.199	0.68	Yes	0.511	0.254	0.77	Yes	0.507	0.166	0.68	Yes	1.00	**6.55**
		$U_{11} - U_{12}$				94.89	-669.34	-2120	1526	-2364	-400	-705	-1098	-1665	479	0.080	0.537	0.62	Yes	0.054	0.358	0.42	Yes	0.669	0.326	1	Yes	0.665	0.334	1.00	Yes	1.00	**21.69**
		$U_{12} - U_{13}$				1077.14	-----	763	321	2	-1267	357	914	-869	1173	0.727	0.271	1.00	Yes	0.518	0.187	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.98**
		$U_{13} - U_{14}$				1095.91	-----	-1675	4202	-16	1376	279	957	690	987	0.539	0.456	1.00	Yes	0.382	0.300	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.30**
		$U_{14} - U_{15}$				1243.56	-----	2355	-65	3665	-1353	525	640	630	-71	0.611	0.383	1.00	Yes	0.433	0.251	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{15} - U_{16}$				1336.59	-----	145	413	-178	-1289	177	423	-37	-471	0.808	0.186	1.00	Yes	0.575	0.125	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		$U_{16} - U_{17}$				1073.24	-----	676	223	723	-1036	-32	324	-179	-693	0.791	0.203	1.00	Yes	0.526	0.134	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		$U_{17} - U_{18}$				753.37	-245.97	488	260	394	-1081	-59	287	-223	-397	0.756	0.242	1.00	Yes	0.504	0.160	0.67	Yes	0.292	0.108	0.41	Yes	0.290	0.184	0.48	Yes	1.00	**5.07**
		$U_{18} - U_{19}$				569.11	-678.53	584	157	129	-1122	4	157	133	-729	0.571	0.297	0.87	Yes	0.375	0.190	0.57	Yes	0.806	0.170	0.98	Yes	0.801	0.190	1.00	Yes	1.00	**5.48**
		$U_{19} - U_{20}$				234.11	-731.91	268	102	-463	-926	-55	132	327	-382	0.220	0.200	0.42	Yes	0.146	0.131	0.28	Yes	0.813	0.178	1	Yes	0.808	0.148	0.96	Yes	1.00	**3.85**
		$U_{20} - U_{21}$				80.43	-851.82	-70	62	-254	-944	-86	-10	-243	-643	0.062	0.207	0.27	Yes	0.044	0.136	0.18	Yes	0.783	0.211	1	Yes	0.777	0.137	0.92	Yes	1.00	**4.02**
		$U_{21} - U_{22}$				75.49	-837.11	-75	-29	-583	-1142	-189	-102	-167	-230	0.059	0.191	0.25	Yes	0.042	0.127	0.17	Yes	0.770	0.229	1	Yes	0.764	0.165	0.93	Yes	1.00	**3.58**
		$U_{22} - U_{23}$				64.61	-830.61	-28	-90	-1122	-789	-42	-158	-203	-6	0.050	0.185	0.24	Yes	0.036	0.123	0.16	Yes	0.764	0.236	1	Yes	0.758	0.162	0.93	Yes	1.00	**3.61**
		$U_{23} - U_{24}$				260.08	-837.92	-114	276	-278	-987	6	-69	-498	168	0.202	0.197	0.40	Yes	0.141	0.129	0.28	Yes	0.770	0.227	1	Yes	0.765	0.143	0.91	Yes	1.00	**6.00**
		$U_{24} - U_{25}$				428.80	-724.40	267	412	-707	-682	-13	-58	-502	257	0.402	0.181	0.59	Yes	0.267	0.119	0.39	Yes	0.804	0.189	1	Yes	0.799	0.113	0.92	Yes	1.00	**6.10**
		$U_{25} - U_{26}$				736.45	-531.33	240	690	-805	-205	25	-24	-827	-56	0.739	0.258	1.00	Yes	0.485	0.166	0.66	Yes	0.631	0.233	0.87	Yes	0.627	0.137	0.77	Yes	1.00	**7.38**
		$U_{26} - U_{27}$				-----	-527.95	-1625	1494	-136	-1287	-1005	-469	-1546	1920	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.368	1	Yes	0.623	0.276	0.90	Yes	1.00	**24.70**
		$U_{27} - U_{28}$				896.29	-----	-1227	1960	-477	-184	-243	-580	-817	430	0.660	0.332	1.00	Yes	0.439	0.219	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.86**
		$U_{28} - U_{29}$				1385.05	-----	67	300	-610	-796	-77	285	-761	670	0.837	0.155	1.00	Yes	0.596	0.106	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.17**
		$U_{29} - U_{30}$				1172.70	-----	-711	3669	81	1537	618	1104	881	1180	0.577	0.420	1.00	Yes	0.408	0.276	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		$U_{30} - U_{31}$				1264.23	-----	2359	-215	3508	-1549	587	610	687	-277	0.622	0.372	1.00	Yes	0.440	0.244	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_{31} - U_{32}$				1239.34	-----	97	377	-161	-910	203	397	-5	-452	0.837	0.158	1.00	Yes	0.597	0.108	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		$U_{32} - U_{33}$				855.13	-201.88	595	149	491	-1181	8	226	-165	-854	0.722	0.271	1.00	Yes	0.485	0.180	0.67	Yes	0.202	0.142	0.35	Yes	0.201	0.167	0.37	Yes	1.00	**5.33**
		$U_{33} - U_{34}$				612.06	-803.99	477	160	12	-1382	-26	216	-93	-543	0.517	0.261	0.78	Yes	0.352	0.170	0.53	Yes	0.804	0.193	1	Yes	0.799	0.195	1.00	Yes	1.00	**5.64**
		$U_{34} - U_{35}$				110.11	-961.64	397	-184	70	-1264	43	46	-45	-508	0.081	0.209	0.29	Yes	0.055	0.141	0.20	Yes	0.835	0.157	1	Yes	0.830	0.154	0.99	Yes	1.00	**3.88**
		$U_{35} - U_{36}$				-----	-1214.09	98	-464	-192	-1391	-18	89	-181	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.170	1	Yes	0.823	0.148	0.98	Yes	1.00	**3.09**
		$U_{36} - U_{37}$				-----	-1429.09	-289	-312	-843	-1344	-22	-120	52	-323	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1	Yes	0.814	0.120	0.94	Yes	1.00	**2.98**
		$U_{37} - U_{38}$				-----	-1413.72	-199	-424	-1195	-1308	-94	-198	-272	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.182	1	Yes	0.805	0.117	0.93	Yes	1.00	**2.95**
		$U_{38} - U_{39}$				-----	-1550.36	-165	-633	-1036	-1620	8	-211	-458	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.197	1	Yes	0.796	0.134	0.94	Yes	1.00	**3.03**
		$U_{39} - U_{40}$				-----	-1525.42	-610	-505	-1264	-1543	30	-101	-360	241	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.783	0.128	0.92	Yes	1.00	**4.08**
		$U_{40} - U_{41}$				-----	-1378.04	-502	-484	-1632	-1216	89	-156	-82	118	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.206	1	Yes	0.785	0.145	0.94	Yes	1.00	**3.85**
		$U_{41} - U_{42}$				-----	-1194.61	-1049	82	-1246	-450	54	-233	-273	394	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.140	1	Yes	0.848	0.127	0.98	Yes	1.00	**4.50**
		$U_{42} - U_{43}$				-----	-873.84	-862	45	-416	-160	-90	-418	-81	552	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.147	1	Yes	0.843	0.131	0.98	Yes	1.00	**5.07**
		$U_{43} - U_{44}$				-----	-604.67	-1337	681	-1010	-249	-391	-178	657	13	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.277	1	Yes	0.714	0.227	0.95	Yes	1.00	**10.39**
	Structure 3	$U_0 - U_1$				-----	-590.96	371	-304	1280	-1647	95	70	199	-1002	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.154	0.83	Yes	0.665	0.331	1.00	Yes	1.00	**7.55**
		$U_1 - U_2$				-----	-723.19	-83	-224	-72	-772	-23	9	127	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.178	1	Yes	0.814	0.155	0.97	Yes	1.00	**3.24**
		$U_2 - U_3$				-----	-1057.32	-57	-235	-140	-777	-34	-53	334	-687	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.162	1	Yes	0.827	0.126	0.96	Yes	1.00	**3.29**
		$U_3 - U_4$				-----	-1379.14	-219	-365	-613	-1297	-109	-33	48	-522	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1	Yes	0.791	0.143	0.94	Yes	1.00	**3.41**
		$U_4 - U_5$				-----	-1433.68	-440	-126	-790	-806	-93	-52	-46	-705	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.164	1	Yes	0.822	0.089	0.92	Yes	1.00	**3.20**
		$U_5 - U_6$				-----	-1367.22	-254	-374	-805	-1293	-186	-149	31	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.784	0.143	0.93	Yes	1.00	**3.02**
		$U_6 - U_7$				-----	-1381.04	-490	-145	-1326	-689	-117	-295	-347	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.198	1	Yes	0.792	0.146	0.94	Yes	1.00	**3.28**
		$U_7 - U_8$				-----	-1219.78	-203	100	-612	-612	-87	-304	-722	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.174	1	Yes	0.815	0.084	0.90	Yes	1.00	**4.95**
		$U_8 - U_9$				-----	-834.15	-128	259	-666	-107	-215	-187	-517	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1	Yes	0.783	0.111	0.90	Yes	1.00	**3.47**
		$U_9 - U_{10}$				696.01	-337.24	135	587	-258	-87	33	137	-305	671	0.755	0.239	1.00	Yes	0.503	0.156	0.66	Yes	0.434	0.162	0.6	Yes	0.430	0.131	0.57	Yes	1.00	**10.59**
		$U_{10} - U_{11}$				385.54	-----	-653	937	14	-510	-607	-532	-1719	2281	0.418	0.577	1.00	Yes	0.283	0.386	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.22**
		$U_{11} - U_{12}$				718.60	-----	-847	1844	-26	620	183	471	794	760	0.589	0.407	1.00	Yes	0.403	0.277	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		$U_{12} - U_{13}$				941.91	-----	1128	-3	1899	-949	77	472	48	-583	0.653	0.347	1.00	Yes	0.455	0.237	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{13} - U_{14}$				847.66	-25.10	224	364	-4	-567	-102	381	166	-466	0.811	0.184	1.00	Yes	0.567	0.127	0.70	Yes	0.029	0.187	0.22	Yes	0.028	0.120	0.15	Yes	1.00	**5.25**
		$U_{14} - U_{15}$				602.91	-435.71	439	210	38	-683	-58	250	450	-829	0.691	0.302	1.00	Yes	0.466	0.200	0.67	Yes	0.593	0.215	0.81	Yes	0.588	0.162	0.76	Yes	1.00	**5.08**
		$U_{15} - U_{16}$				298.35	-586.42	267	118	-261	-753	-75	199	304	139	0.342	0.231	0.58	Yes	0.235	0.158	0.40	Yes	0.798	0.200	1	Yes	0.791	0.179	0.97	Yes	1.00	**3.98**
		$U_{16} - U_{17}$				446.32	-597.17	434	98	-143	-815	224	-35	107	429	0.512	0.266	0.78	Yes	0.351	0.182	0.54	Yes	0.813	0.183	1	Yes	0.805	0.194	1.00	Yes	1.00	**5.93**
		$U_{17} - U_{18}$				112.76	-584.33	246	-166	-450	-664	70	36	-234	-2	0.129	0.197	0.33	Yes	0.087	0.129	0.22	Yes	0.795	0.199	1	Yes	0.788	0.158	0.95	Yes	1.00	**4.04**
		$U_{18} - U_{19}$				-----	-577.18	7	-68	-723	-259	214	-194	-309	386	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.778	0.172	0.96	Yes	1.00	**4.57**
		$U_{19} - U_{20}$				-----	-494.80	-502	-15	-259	-588	-184	-84	1015	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.325	1	Yes	0.667	0.140	0.81	Yes	1.00	**6.97**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 Vehicle 1.300 Pedestrian
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0-L_1	20.78	-27.26	-163	25	773	-1210	64	236	-763	-2804	0.032	0.965	1.00	Yes	0.019	0.572	0.60	Yes	0.049	0.628	0.68	Yes	0.049	0.363	0.42	Yes	1.00	**11.37**
		L_1 - L_2	377.06	-----	1	-11	-49	-704	335	-149	-985	315	0.577	0.423	1.00	Yes	0.352	0.274	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		L_2 - L_3	653.92	-111.70	-39	70	-645	-619	-181	122	273	-521	0.752	0.240	1.00	Yes	0.435	0.142	0.58	Yes	0.153	0.224	0.38	Yes	0.151	0.156	0.31	Yes	1.00	**3.92**
		L_3 - L_4	619.47	-306.98	20	361	-400	-642	305	-238	-763	87	0.713	0.278	1.00	Yes	0.423	0.174	0.60	Yes	0.419	0.222	0.65	Yes	0.415	0.155	0.58	Yes	1.00	**4.66**
		L_4 - L_5	-----	-563.04	102	471	-218	132	-67	193	-56	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.127	1	Yes	0.858	0.125	0.99	Yes	1.00	**3.15**
		L_5 - L_6	-----	-747.62	125	590	-78	235	163	-236	75	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.127	1	Yes	0.863	0.130	1.00	Yes	1.00	**2.97**
		L_6 - L_7	-----	-1071.74	-253	517	38	-608	233	687	-564	-972	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.123	1	Yes	0.863	0.096	0.96	Yes	1.00	**8.20**
		L_7 - L_8	-----	-1262.13	-83	1157	-12	617	341	510	474	207	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.187	1	Yes	0.799	0.153	0.96	Yes	1.00	**3.53**
		L_8 - L_9	-----	-1122.73	920	13	1280	-266	215	334	121	-359	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.275	1	Yes	0.711	0.169	0.89	Yes	1.00	**4.13**
		L_9 - L_{10}	-----	-1025.04	147	214	399	-1085	439	-326	-1871	345	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.149	0.99	Yes	0.825	0.170	1.00	Yes	1.00	**8.58**
		L_{10} - L_{11}	121.12	-494.86	463	-74	109	-683	-269	50	-19	-870	0.157	0.333	0.49	Yes	0.091	0.197	0.29	Yes	0.761	0.234	1	Yes	0.754	0.181	0.94	Yes	1.00	**5.04**
		L_{11} - L_{12}	514.17	-157.79	384	-213	406	-896	140	-101	-320	531	0.666	0.330	1.00	Yes	0.400	0.213	0.62	Yes	0.243	0.160	0.41	Yes	0.240	0.237	0.48	Yes	1.00	**4.66**
		L_{12} - L_{13}	1017.74	-----	58	-155	-381	-622	-159	121	-163	-663	0.803	0.188	1.00	Yes	0.514	0.114	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_{13} - L_{14}	1242.97	-----	184	-528	-13	-1447	146	22	-817	54	0.731	0.267	1.00	Yes	0.474	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		L_{14} - L_{15}	1571.99	-----	-554	-149	-1282	-865	-152	173	-327	-1068	0.768	0.230	1.00	Yes	0.499	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		L_{15} - L_{16}	1620.47	-----	-301	-364	-970	-1370	115	-136	-589	195	0.792	0.207	1.00	Yes	0.508	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.73**
		L_{16} - L_{17}	1195.92	-----	-1029	248	-904	-289	444	408	-350	-944	0.756	0.235	1.00	Yes	0.491	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		L_{17} - L_{18}	906.83	-----	-622	219	-544	-201	160	-152	-644	-386	0.790	0.202	1.00	Yes	0.505	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.72**
		L_{18} - L_{19}	408.76	-----	-979	548	-333	163	334	232	-105	-354	0.626	0.367	1.00	Yes	0.423	0.231	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		L_{19} - L_{20}	50.09	-366.21	-1115	713	-149	51	184	41	137	31	0.077	0.373	0.45	Yes	0.047	0.251	0.30	Yes	0.665	0.184	0.85	Yes	0.659	0.335	1.00	Yes	1.00	**13.87**
	Structure 2	L_0-L_1	53.48	-128.73	-65	-124	773	-2430	37	129	-768	-2667	0.065	0.932	1.00	Yes	0.039	0.581	0.63	Yes	0.185	0.674	0.86	Yes	0.184	0.494	0.68	Yes	1.00	**14.40**
		L_1 - L_2	467.53	-----	197	-349	332	-1248	152	-57	-1079	549	0.568	0.431	1.00	Yes	0.338	0.270	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_2 - L_3	982.77	-----	-46	-269	-159	-1030	-74	155	146	-635	0.775	0.216	1.00	Yes	0.508	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		L_3 - L_4	1278.00	-----	-12	-506	-134	-1524	181	-4	-822	388	0.751	0.244	1.00	Yes	0.506	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		L_4 - L_5	1735.28	-----	-437	-395	-1296	-1519	-82	163	268	-651	0.809	0.187	1.00	Yes	0.536	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		L_5 - L_6	1782.93	-----	-220	-495	-937	-2040	190	-91	-732	175	0.765	0.227	1.00	Yes	0.513	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		L_6 - L_7	1877.66	-----	-516	-151	-1773	-1707	-164	220	167	-756	0.795	0.202	1.00	Yes	0.528	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		L_7 - L_8	1406.94	-103.92	-263	455	-1330	-844	234	-141	-460	421	0.807	0.185	1.00	Yes	0.530	0.110	0.64	Yes	0.071	0.156	0.23	Yes	0.070	0.147	0.22	Yes	1.00	**5.03**
		L_8 - L_9	1010.78	-509.38	-34	647	-1017	-155	-75	187	-312	-1572	0.707	0.285	1.00	Yes	0.476	0.184	0.67	Yes	0.422	0.219	0.65	Yes	0.419	0.137	0.56	Yes	1.00	**6.05**
		L_9 - L_{10}	503.58	-815.52	-112	872	-779	-157	149	-128	-552	-103	0.449	0.206	0.66	Yes	0.262	0.126	0.39	Yes	0.862	0.110	0.98	Yes	0.856	0.140	1.00	Yes	1.00	**6.11**
		L_{10} - L_{11}	331.81	-----	-2155	1694	-904	-231	893	651	-449	-2161	0.331	0.668	1.00	Yes	0.194	0.409	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.94**
		L_{11} - L_{12}	-----	-1025.76	-75	1102	-328	628	63	-367	-32	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.127	0.98	Yes	0.841	0.150	1.00	Yes	1.00	**3.74**
		L_{12} - L_{13}	-----	-1296.11	-320	-54	-159	-1575	-96	346	-389	-625	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.775	0.157	0.94	Yes	1.00	**6.91**
		L_{13} - L_{14}	-----	-1494.24	-1145	2739	-432	1327	125	311	748	637	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.204	0.97	Yes	0.752	0.239	1.00	Yes	1.00	**4.88**
		L_{14} - L_{15}	-----	-1265.34	1479	-436	2889	-1340	474	476	-104	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.353	1	Yes	0.637	0.252	0.89	Yes	1.00	**3.91**
		L_{15} - L_{16}	-----	-1404.86	-870	375	-842	-1156	211	-346	-681	175	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.149	1	Yes	0.840	0.115	0.96	Yes	1.00	**7.36**
		L_{16} - L_{17}	-----	-1131.27	1170	53	739	-892	-405	-6	-108	-1038	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.169	1	Yes	0.824	0.144	0.97	Yes	1.00	**5.79**
		L_{17} - L_{18}	-----	-806.82	516	169	467	-834	126	-192	-673	374	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.144	1	Yes	0.847	0.133	0.99	Yes	1.00	**4.34**
		L_{18} - L_{19}	126.92	-614.38	694	23	140	-701	-206	63	21	-602	0.144	0.227	0.38	Yes	0.083	0.133	0.22	Yes	0.824	0.172	1	Yes	0.819	0.135	0.96	Yes	1.00	**4.49**
		L_{19} - L_{20}	534.20	-445.38	496	112	96	-1118	149	-171	-1128	432	0.605	0.388	1.00	Yes	0.358	0.241	0.60	Yes	0.597	0.208	0.81	Yes	0.594	0.216	0.81	Yes	1.00	**5.13**
		L_{20} - L_{21}	924.13	-273.57	391	-84	-688	-1217	-183	70	188	-791	0.737	0.263	1.00	Yes	0.483	0.160	0.65	Yes	0.258	0.237	0.5	Yes	0.257	0.178	0.44	Yes	1.00	**5.42**
		L_{21} - L_{22}	826.44	-----	-27	-212	-590	-1749	137	-147	-745	94	0.659	0.335	1.00	Yes	0.441	0.212	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		L_{22} - L_{23}	891.32	-108.35	-277	144	-1333	-788	-49	213	-146	-870	0.711	0.288	1.00	Yes	0.475	0.183	0.66	Yes	0.102	0.237	0.34	Yes	0.102	0.195	0.30	Yes	1.00	**4.82**
		L_{23} - L_{24}	967.56	-464.87	1	589	-963	-1179	179	-145	-486	277	0.772	0.224	1.00	Yes	0.506	0.136	0.65	Yes	0.439	0.191	0.63	Yes	0.436	0.172	0.61	Yes	1.00	**7.98**
		L_{24} - L_{25}	480.09	-543.48	196	529	-775	-191	-100	145	38	-1277	0.544	0.345	0.89	Yes	0.322	0.212	0.54	Yes	0.729	0.262	1	Yes	0.724	0.150	0.88	Yes	1.00	**6.36**
		L_{25} - L_{26}	42.24	-641.40	29	728	-517	68	102	-166	-418	68	0.048	0.204	0.26	Yes	0.028	0.121	0.15	Yes	0.860	0.126	0.99	Yes	0.855	0.140	1.00	Yes	1.00	**4.76**
		L_{26} - L_{27}	-----	-732.73	-924	1097	-458	-26	591	499	-344	-1221	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.223	1	Yes	0.769	0.176	0.95	Yes	1.00	**8.76**
		L_{27} - L_{28}	-----	-1121.40	-440	1447	-351	622	401	-148	-134	56	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.142	0.97	Yes	0.817	0.178	1.00	Yes	1.00	**6.04**
		L_{28} - L_{29}	-----	-1372.85	78	-222	-164	-1562	-49	352	-343	-657	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.162	1	Yes	0.821	0.155	0.98	Yes	1.00	**6.34**
		L_{29} - L_{30}	-----	-1480.26	-1352	2842	-519	1272	40	222	878	951	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.218	0.97	Yes	0.745	0.248	1.00	Yes	1.00	**5.89**
		L_{30} - L_{31}	-----	-1300.66	1666	-476	2673	-1072	572	502	41	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.661	0.337	1	Yes	0.654	0.233	0.89	Yes	1.00	**2.89**
		L_{31} - L_{32}	-----	-1393.67	-507	169	-595	-1075	261	-297	-506	258	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.150	1	Yes	0.834	0.107	0.95	Yes	1.00	**5.60**
		L_{32} - L_{33}	-----	-1043.40	1010	-71	658	-765	-329	27	195	-583	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.127	0.99	Yes	0.856	0.138	1.00	Yes	1.00	**4.28**
		L_{33} - L_{34}	-----	-720.61	578	-17	527	-827	100	-130	-628	435	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.068	0.92	Yes	0.846	0.145	1.00	Yes	1.00	**3.77**
		L_{34} - L_{35}	606.35	-710.46	806	-117	38	-1360	-210	100	177	-1368	0.541	0.382	0.93	Yes	0.315	0.232	0.55	Yes	0.751	0.244	1	Yes	0.746	0.218	0.97	Yes	1.00	**6.61**
		L_{35} - L_{36}	961.80	-276.71	569	-168	193	-1402	165	-122	-1379	439	0.673	0.319	1.00	Yes	0.453	0.204	0.66	Yes	0.229	0.183	0.42	Yes	0.228	0.189	0.42	Yes	1.00	**5.33**
		L_{36} - L_{37}	1317.93	-----	298	-261	-575	-1579	-204	152	53	-841	0.756	0.243	1.00	Yes	0.496	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{37} - L_{38}	1739.12	-----	-331	-652	-1218	-2287	107	-173	-939	299	0.736	0.259	1.00	Yes	0.489	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{38} - L_{39}	1788.37	-----	-568	-211	-1824	-1422	-105	173	-276	-1068	0.767	0.228	1.00	Yes	0.515	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_{39} - L_{40}	1711.42	-----	-430	-312	-1384	-1752	129	-120	-449	402	0.798	0.196	1.00	Yes	0.528	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		L_{40} - L_{41}	1289.59	-----	-1227	212	-1440	-464	373	394	-46	-892	0.758	0.240	1.00	Yes	0.510	0.151	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		L_{41} - L_{42}	1025.28	-----	-949	320	-681	-333	312	-6	-438	-139	0.808	0.184	1.00	Yes	0.530	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.46**
		L_{42} - L_{43}	526.11	-----	-1191	605	-632	80	217	375	-33	-715	0.639	0.360	1.00	Yes	0.380	0.227	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.79**
		L_{43} - L_{44}	126.65	-264.39	-3034	1300	31	-117	1228	358	-103	-30	0.154	0.819	0.98	Yes	0.091	0.521	0.62	Yes	0.380	0.534	0.92	Yes	0.378	0.617	1.00	Yes	1.00	**28.15**
	Structure 3	L_0-L_1	21.03	-341.08	22	-132	697	-1254	25	115	-255	-1153	0.032	0.616	0.65	Yes	0.020	0.403	0.43	Yes	0.619	0.379	1	Yes	0.614	0.376	1.00	Yes	1.00	**9.02**
		L_1 - L_2	317.78	-----	219	-252	504	-1094	151	-27	-855	676	0.486	0.506	1.00	Yes	0.329	0.323	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_2 - L_3	850.69	-----	-11	-216	-32	-806	-60	166	13	-803	0.741	0.258	1.00	Yes	0.474	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		L_3 - L_4	1146.16	-----	30	-409	-41	-1332	190	7	-823	542	0.725	0.269	1.00	Yes	0.470	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		L_4 - L_5	1604.59	-----	-389	-236	-1206	-1102	-46	213	1	-899	0.784	0.208	1.00	Yes	0.503	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_5 - L_6	1478.99	-----	-143	-457	-554	-1721	243	-36	-893	158	0.723	0.270	1.00	Yes	0.470	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		L_6 - L_7	1210.59	-----	-1372	365	-1114	-378	573	318	-237	-1106	0.712	0.281	1.00	Yes	0.461	0.174	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		L_7 - L_8	1038.16	-83.60	-84	197	-602	-500	152	-168	-595	16	0.819	0.176	1.00	Yes	0.524	0.107	0.64	Yes	0.078	0.144	0.23	Yes	0.078	0.107	0.19	Yes	1.00	**5.70**
		L_8 - L_9	482.84	-----	-876	564	-478	-27	251	249	-127	-798	0.625	0.371	1.00	Yes	0.375	0.238	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		L_9 - L_{10}	-----	-562.63	-65	518	-272	135	145	-153	28	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.081	0.95	Yes	0.857	0.137	1.00	Yes	1.00	**4.57**
		L_{10} - L_{11}	-----	-1013.88	-668	890	-45	-477	437	934	-585	-1292	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.173	1	Yes	0.816	0.140	0.96	Yes	1.00	**9.78**
		L_{11} - L_{12}	-----	-1242.64	-87	1224	-8	604	267	484	547	156	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.195	1	Yes	0.787	0.162	0.95	Yes	1.00	**4.49**
		L_{12} - L_{13}	-----	-1128.95	960	-8	1306	-237	-130	70	-61	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.272	1	Yes	0.715	0.173	0.89	Yes	1.00	**2.98**
		L_{13} - L_{14}	-----	-1038.63	47	253	182	-674	240	-281	-1170	57	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.149	1	Yes	0.836	0.106	0.95	Yes	1.00	**5.13**
		L_{14} - L_{15}	-----	-688.78	544	95	171	-396	-253	86	-104	-736	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.191	1	Yes	0.795	0.120	0.92	Yes	1.00	**3.53**
		L_{15} - L_{16}	269.84	-512.73	460	112	225	-809	256	-208	-1019	323	0.349	0.395	0.75	Yes	0.210	0.251	0.47	Yes	0.788	0.200	0.99	Yes	0.781	0.214	1.00	Yes	1.00	**4.00**
		L_{16} - L_{17}	629.22	-----	-19	-58	-393	-815	-84	464	-129	-491	0.724	0.276	1.00	Yes	0.430	0.176	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		L_{17} - L_{18}	646.41	-48.95	23	-104	-716	-664	111	-112	-495	257	0.744	0.253	1.00	Yes	0.430	0.150	0.59	Yes	0.067	0.237	0.31	Yes	0.066	0.173	0.24	Yes	1.00	**4.74**
		L_{18} - L_{19}	423.32	-----	-654	119	-258	-186	206	440	29	-687	0.648	0.344	1.00	Yes	0.395	0.224	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		L_{19} - L_{20}	61.79	-78.41	-1600	1216	251	-360	-1940	-528	229	62	0.095	0.897	1.00	Yes	0.056	0.537	0.60	Yes	0.142	0.696	0.84	Yes	0.141	0.480	0.63	Yes	1.00	**26.96**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 Vehicle 1.300 Pedestrian
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-283.72	-107	164	-13	52	-1003	-322	202	65	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.361	1	Yes	0.600	0.210	0.82	Yes	1.00	**1.46**
		$U_1 - L_1$	10.60	-298.03	-192	194	20	-13	-1055	-356	566	211	0.019	0.553	0.58	Yes	0.010	0.304	0.32	Yes	0.651	0.345	1	Yes	0.631	0.247	0.88	Yes	1.00	**3.29**
		$U_2 - L_2$	142.71	-282.50	-221	270	127	-141	-970	-306	852	228	0.257	0.626	0.89	Yes	0.141	0.345	0.49	Yes	0.617	0.374	1	Yes	0.598	0.345	0.95	Yes	1.00	**7.31**
		$U_3 - L_3$	185.54	-132.23	-76	103	226	-218	-1284	-285	-1187	-741	0.334	0.661	1.00	Yes	0.184	0.363	0.55	Yes	0.290	0.331	0.63	Yes	0.280	0.289	0.57	Yes	1.00	**7.79**
		$U_4 - L_4$	-----	-182.58	20	-29	340	-339	954	220	-529	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.401	0.594	1	Yes	0.386	0.434	0.83	Yes	1.00	**7.96**
		$U_5 - L_5$	-----	-367.75	78	-84	181	-206	1046	592	121	228	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.329	1	Yes	0.634	0.209	0.85	Yes	1.00	**3.07**
		$U_6 - L_6$	-----	-414.26	77	-66	209	-217	1491	742	822	436	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.367	1	Yes	0.594	0.190	0.79	Yes	1.00	**3.15**
		$U_7 - L_7$	-----	-382.58	102	-115	262	-280	1230	307	621	195	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.353	1	Yes	0.590	0.276	0.87	Yes	1.00	**2.90**
		$U_8 - L_8$	-----	-1203.38	-405	481	224	-274	-1302	-592	-54	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.131	1	Yes	0.834	0.090	0.93	Yes	1.00	**5.62**
		$U_9 - L_9$	-----	-661.08	-405	450	-232	257	-617	-130	729	353	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.202	1	Yes	0.747	0.250	1.00	Yes	1.00	**2.74**
		$U_{10} - L_{10}$	-----	-776.15	-408	441	-166	143	195	186	709	313	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1	Yes	0.766	0.228	1.00	Yes	1.00	**4.28**
		$U_{11} - L_{11}$	-----	-662.98	-378	486	-167	217	-299	127	632	360	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.178	0.98	Yes	0.772	0.226	1.00	Yes	1.00	**4.10**
		$U_{12} - L_{12}$	-----	-507.32	-284	298	-131	137	-842	-136	410	297	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.258	1	Yes	0.696	0.255	0.96	Yes	1.00	**3.76**
		$U_{13} - L_{13}$	-----	-367.37	-224	252	-65	86	48	187	71	99	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.144	0.89	Yes	0.704	0.288	1.00	Yes	1.00	**3.87**
		$U_{14} - L_{14}$	-----	-192.71	-299	324	134	-140	-885	-731	-1410	-555	-----	-----	-----	-----	-----	-----	-----	-----	0.430	0.565	1	Yes	0.408	0.414	0.83	Yes	1.00	**11.28**
		$U_{15} - L_{15}$	63.94	-306.13	-53	46	248	-268	395	-185	-757	-179	0.115	0.562	0.68	Yes	0.063	0.309	0.38	Yes	0.686	0.281	0.97	Yes	0.648	0.343	1.00	Yes	1.00	**6.12**
		$U_{16} - L_{16}$	-----	-318.13	44	-49	245	-252	474	106	-34	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.218	0.94	Yes	0.673	0.323	1.00	Yes	1.00	**4.25**
		$U_{17} - L_{17}$	-----	-418.85	79	-92	205	-223	504	199	198	109	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.210	1	Yes	0.723	0.226	0.95	Yes	1.00	**2.97**
		$U_{18} - L_{18}$	-----	-534.60	172	-179	438	-450	678	172	101	13	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.183	0.97	Yes	0.744	0.255	1.00	Yes	1.00	**3.95**
		$U_{19} - L_{19}$	-----	-650.19	178	-192	497	-514	584	112	204	39	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.157	0.97	Yes	0.757	0.239	1.00	Yes	1.00	**4.93**
		$U_{20} - L_{20}$	-----	-609.89	233	-280	451	-543	452	59	284	37	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.188	1	Yes	0.710	0.252	0.97	Yes	1.00	**4.19**
	Structure 2	$U_0 - L_0$	-----	-608.41	-317	452	-161	269	-1215	-206	36	6	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.266	1	Yes	0.652	0.192	0.85	Yes	1.00	**1.91**
		$U_1 - L_1$	-----	-716.95	-527	537	-208	215	-829	-69	629	161	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1	Yes	0.768	0.228	1.00	Yes	1.00	**3.55**
		$U_2 - L_2$	-----	-593.05	-455	471	-152	168	41	239	624	284	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.176	0.98	Yes	0.756	0.241	1.00	Yes	1.00	**3.39**
		$U_3 - L_3$	-----	-458.40	-214	231	-75	86	-40	213	546	265	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.211	1	Yes	0.719	0.210	0.93	Yes	1.00	**2.77**
		$U_4 - L_4$	-----	-320.93	-181	193	-20	31	-619	48	561	236	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.272	1	Yes	0.679	0.246	0.93	Yes	1.00	**3.50**
		$U_5 - L_5$	98.14	-319.45	-208	235	78	-72	-456	65	565	173	0.177	0.463	0.64	Yes	0.097	0.255	0.36	Yes	0.722	0.277	1	Yes	0.676	0.300	0.98	Yes	1.00	**6.71**
		$U_6 - L_6$	308.28	-89.31	-106	115	183	-187	-697	-64	-504	-232	0.554	0.440	1.00	Yes	0.305	0.242	0.55	Yes	0.201	0.236	0.44	Yes	0.189	0.239	0.43	Yes	1.00	**6.74**
		$U_7 - L_7$	-----	-195.72	-16	15	391	-443	-332	-505	-1641	-733	-----	-----	-----	-----	-----	-----	-----	-----	0.442	0.555	1	Yes	0.414	0.566	0.98	Yes	1.00	**12.45**
		$U_8 - L_8$	-----	-470.85	149	-170	334	-359	418	-30	-8	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.149	0.84	Yes	0.678	0.314	1.00	Yes	1.00	**3.48**
		$U_9 - L_9$	-----	-690.61	277	-277	584	-593	1155	615	-56	115	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.220	0.99	Yes	0.740	0.252	1.00	Yes	1.00	**4.49**
		$U_{10} - L_{10}$	-----	-745.81	233	-233	509	-531	1179	694	-9	216	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.256	1	Yes	0.697	0.235	0.94	Yes	1.00	**4.39**
		$U_{11} - L_{11}$	-----	-733.67	226	-220	459	-462	1187	668	526	492	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.259	1	Yes	0.686	0.204	0.90	Yes	1.00	**3.64**
		$U_{12} - L_{12}$	-----	-720.98	186	-168	417	-410	1490	653	1012	506	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.306	1	Yes	0.625	0.179	0.81	Yes	1.00	**3.58**
		$U_{13} - L_{13}$	-----	-624.41	222	-221	497	-485	1160	318	515	178	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.301	1	Yes	0.602	0.238	0.84	Yes	1.00	**3.78**
		$U_{14} - L_{14}$	-----	-1229.94	-598	555	435	-418	-745	-385	725	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.098	1	Yes	0.816	0.106	0.93	Yes	1.00	**7.00**
		$U_{15} - L_{15}$	-----	-662.63	-585	564	-263	256	-334	-9	858	83	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1	Yes	0.639	0.280	0.92	Yes	1.00	**3.84**
		$U_{16} - L_{16}$	-----	-708.16	-537	531	-202	171	-547	63	817	178	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.179	1	Yes	0.759	0.228	0.99	Yes	1.00	**3.70**
		$U_{17} - L_{17}$	-----	-642.47	-536	537	-196	196	-51	144	594	193	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.156	0.95	Yes	0.748	0.249	1.00	Yes	1.00	**3.82**
		$U_{18} - L_{18}$	-----	-579.82	-471	496	-159	164	-305	60	622	214	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.168	0.95	Yes	0.739	0.254	1.00	Yes	1.00	**3.65**
		$U_{19} - L_{19}$	-----	-484.70	-276	279	-88	89	-728	33	520	195	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.208	0.94	Yes	0.724	0.269	1.00	Yes	1.00	**3.47**
		$U_{20} - L_{20}$	-----	-376.18	-218	229	-36	41	-88	68	517	179	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.220	1	Yes	0.721	0.261	0.99	Yes	1.00	**4.05**
		$U_{21} - L_{21}$	27.97	-323.24	-225	245	21	-14	-471	44	86	4	0.050	0.449	0.50	Yes	0.028	0.247	0.28	Yes	0.730	0.234	0.97	Yes	0.684	0.313	1.00	Yes	1.00	**5.33**
		$U_{22} - L_{22}$	-----	-196.70	-217	240	268	-289	358	-333	-1761	-899	-----	-----	-----	-----	-----	-----	-----	-----	0.443	0.554	1	Yes	0.416	0.370	0.79	Yes	1.00	**12.85**
		$U_{23} - L_{23}$	-----	-320.51	11	-14	230	-249	524	165	-99	33	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.247	0.98	Yes	0.678	0.318	1.00	Yes	1.00	**4.38**
		$U_{24} - L_{24}$	-----	-371.43	51	-56	228	-236	583	204	131	107	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.236	1	Yes	0.712	0.269	0.99	Yes	1.00	**3.54**
		$U_{25} - L_{25}$	-----	-471.85	99	-100	303	-300	588	223	-34	118	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.184	0.9	Yes	0.705	0.291	1.00	Yes	1.00	**3.46**
		$U_{26} - L_{26}$	-----	-570.04	168	-176	497	-521	707	301	229	273	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.189	0.95	Yes	0.726	0.267	1.00	Yes	1.00	**3.89**
		$U_{27} - L_{27}$	-----	-631.53	200	-203	555	-558	769	313	505	436	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.193	0.98	Yes	0.735	0.259	1.00	Yes	1.00	**4.34**
		$U_{28} - L_{28}$	-----	-611.77	156	-130	465	-449	1646	556	900	388	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.288	1	Yes	0.656	0.197	0.86	Yes	1.00	**3.97**
		$U_{29} - L_{29}$	-----	-618.02	150	-154	577	-561	1187	197	460	135	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.303	1	Yes	0.596	0.276	0.88	Yes	1.00	**5.47**
		$U_{30} - L_{30}$	-----	-1206.37	-569	505	274	-289	-973	-317	425	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.117	1	Yes	0.800	0.101	0.91	Yes	1.00	**6.05**
		$U_{31} - L_{31}$	-----	-708.08	-529	511	-306	298	-556	13	507	95	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.203	1	Yes	0.683	0.253	0.94	Yes	1.00	**2.99**
		$U_{32} - L_{32}$	-----	-857.50	-477	470	-218	190	-137	58	617	188	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1	Yes	0.743	0.205	0.95	Yes	1.00	**3.83**
		$U_{33} - L_{33}$	-----	-825.96	-499	499	-248	231	-466	102	548	237	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.155	0.99	Yes	0.772	0.220	1.00	Yes	1.00	**4.00**
		$U_{34} - L_{34}$	-----	-757.92	-471	498	-243	241	-1139	-124	499	233	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.244	1	Yes	0.709	0.220	0.93	Yes	1.00	**3.96**
		$U_{35} - L_{35}$	-----	-697.16	-572	589	-254	269	-319	107	630	378	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.152	0.93	Yes	0.747	0.250	1.00	Yes	1.00	**4.58**
		$U_{36} - L_{36}$	-----	-480.77	-323	350	-135	157	-332	64	221	173	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.147	0.85	Yes	0.693	0.306	1.00	Yes	1.00	**3.77**
		$U_{37} - L_{37}$	-----	-185.89	-365	421	46	-45	-943	-581	-1249	-425	-----	-----	-----	-----	-----	-----	-----	-----	0.420	0.575	1	Yes	0.393	0.539	0.94	Yes	1.00	**13.06**
		$U_{38} - L_{38}$	288.90	-146.33	-180	184	153	-164	-173	-499	-820	-258	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.329	0.219	0.55	Yes	0.310	0.235	0.55	Yes	1.00	**7.13**
		$U_{39} - L_{39}$	57.34	-324.54	-53	47	223	-245	530	156	-406	-39	0.103	0.466	0.57	Yes	0.057	0.257	0.32	Yes	0.733	0.252	0.99	Yes	0.687	0.313	1.00	Yes	1.00	**6.00**
		$U_{40} - L_{40}$	-----	-326.00	34	-42	220	-224	597	172	-57	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.255	1	Yes	0.690	0.286	0.98	Yes	1.00	**3.75**
		$U_{41} - L_{41}$	-----	-462.94	86	-95	237	-249	579	192	215	112	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.210	1	Yes	0.726	0.227	0.96	Yes	1.00	**3.15**
		$U_{42} - L_{42}$	-----	-576.65	169	-178	495	-502	668	171	325	136	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.171	0.95	Yes	0.735	0.257	1.00	Yes	1.00	**4.10**
		$U_{43} - L_{43}$	-----	-711.50	186	-204	540	-560	618	185	480	223	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.153	0.97	Yes	0.763	0.237	1.00	Yes	1.00	**5.04**
		$U_{44} - L_{44}$	-----	-671.39	248	-305	487	-606	536	91	229	39	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.187	1	Yes	0.720	0.257	0.98	Yes	1.00	**4.33**
	Structure 3	$U_0 - L_0$	-----	-564.94	-297	416	-134	236	-874	-115	110	14	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.247	1	Yes	0.658	0.193	0.86	Yes	1.00	**2.02**
		$U_1 - L_1$	-----	-652.75	-508	501	-206	205	-365	70	620	142	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.161	0.98	Yes	0.760	0.236	1.00	Yes	1.00	**3.48**
		$U_2 - L_2$	-----	-547.60	-381	405	-158	169	-685	108	660	306	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.198	1	Yes	0.762	0.229	1.00	Yes	1.00	**3.06**
		$U_3 - L_3$	-----	-409.06	-191	210	-68	83	45	229	566	269	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.706	0.213	0.92	Yes	1.00	**2.60**
		$U_4 - L_4$	-----	-321.21	-216	228	-31	37	-560	91	612	223	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.269	1	Yes	0.680	0.291	0.98	Yes	1.00	**4.09**
		$U_5 - L_5$	52.44	-248.84	-162	187	48	-38	-1256	-48	-149	-59	0.094	0.602	0.70	Yes	0.052	0.331	0.39	Yes	0.558	0.440	1	Yes	0.527	0.239	0.77	Yes	1.00	**5.01**
		$U_6 - L_6$	-----	-180.70	-116	120	358	-386	-465	-655	-269	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.403	0.595	1	Yes	0.382	0.494	0.88	Yes	1.00	**11.00**
		$U_7 - L_7$	-----	-365.55	80	-96	232	-257	496	81	-378	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.210	0.95	Yes	0.700	0.293	1.00	Yes	1.00	**3.35**
		$U_8 - L_8$	-----	-512.15	133	-134	336	-337	900	373	-65	41	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.260	1	Yes	0.703	0.288	1.00	Yes	1.00	**4.09**
		$U_9 - L_9$	-----	-621.04	161	-220	379	-475	1157	420	453	423	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.247	1	Yes	0.723	0.221	0.95	Yes	1.00	**4.17**
		$U_{10} - L_{10}$	-----	-623.93	152	-140	316	-329	1702	939	1087	677	-----	-----	-----	-----	-----	-----	-----	-----	0.646	0.344	1	Yes	0.616	0.171	0.79	Yes	1.00	**3.70**
		$U_{11} - L_{11}$	-----	-565.51	189	-220	375	-422	1502	672	744	423	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.321	1	Yes	0.639	0.234	0.88	Yes	1.00	**3.10**
		$U_{12} - L_{12}$	-----	-1172.65	-405	433	274	-373	-1250	-523	716	210	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.147	1	Yes	0.813	0.081	0.90	Yes	1.00	**5.77**
		$U_{13} - L_{13}$	-----	-437.65	-264	284	-156	168	-886	-68	640	177	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.267	1	Yes	0.675	0.279	0.96	Yes	1.00	**1.92**
		$U_{14} - L_{14}$	-----	-469.94	-213	238	-100	90	-1089	-317	755	274	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.285	1	Yes	0.674	0.208	0.89	Yes	1.00	**2.59**
		$U_{15} - L_{15}$	-----	-393.84	-171	201	-80	87	-927	-209	682	254	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.285	1	Yes	0.679	0.204	0.89	Yes	1.00	**3.05**
		$U_{16} - L_{16}$	-----	-167.26	-279	279	-19	31	-2028	-947	-1014	-457	-----	-----	-----	-----	-----	-----	-----	-----	0.368	0.628	1	Yes	0.354	0.357	0.72	Yes	1.00	**8.41**
		$U_{17} - L_{17}$	188.31	-214.52	-186	208	193	-219	440	159	-1296	-557	0.339	0.655	1.00	Yes	0.186	0.360	0.55	Yes	0.470	0.409	0.88	Yes	0.454	0.279	0.74	Yes	1.00	**9.54**
		$U_{18} - L_{18}$	107.69	-290.53	-113	123	256	-297	460	147	-187	-185	0.194	0.513	0.71	Yes	0.107	0.282	0.39	Yes	0.635	0.233	0.87	Yes	0.615	0.380	1.00	Yes	1.00	**7.48**
		$U_{19} - L_{19}$	-----	-325.60	-30	13	230	-236	425	219	226	126	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.204	0.92	Yes	0.689	0.302	1.00	Yes	1.00	**5.03**
		$U_{20} - L_{20}$	-----	-321.49	78	-90	200	-249	604	194	271	87	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.277	1	Yes	0.680	0.318	1.00	Yes	1.00	**2.90**

Moment (End) AB Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$			458.25	-----	-116	59	9	-11	-1010	-483	11	88	0.601	0.390	1.00	Yes	0.363	0.215	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_1 - L_2$			293.63	-----	-70	18	-43	-21	-313	-160	-1291	-520	0.528	0.463	1.00	Yes	0.290	0.255	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_2 - L_3$			75.12	-200.38	-35	-3	-45	-57	-75	-93	-1816	-276	0.135	0.598	0.74	Yes	0.074	0.329	0.41	Yes	0.461	0.531	1	Yes	0.424	0.073	0.50	Yes	1.00	**5.18**
		$U_3 - L_4$			-----	-280.68	26	-11	-7	-70	515	293	-879	-307	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.352	1	Yes	0.594	0.089	0.69	Yes	1.00	**3.92**
		$U_4 - L_4$			420.05	-----	9	121	-105	-6	-26	226	1089	730	0.616	0.376	1.00	Yes	0.339	0.207	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.21**
		$U_4 - L_5$			613.87	-----	-167	206	-67	96	-273	242	811	79	0.726	0.265	1.00	Yes	0.399	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_5 - L_6$			592.84	-----	-253	244	-36	84	-360	30	-819	-113	0.701	0.293	1.00	Yes	0.385	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_6 - L_7$			610.11	-----	-85	297	30	81	-113	14	-557	-295	0.721	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		$U_8 - L_9$			949.89	-----	-87	362	-26	173	-215	-357	547	156	0.759	0.231	1.00	Yes	0.470	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		$U_9 - L_{10}$			1014.45	-----	-302	267	-122	116	-400	-259	370	155	0.811	0.185	1.00	Yes	0.502	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_{10} - L_{11}$			887.43	-----	-219	175	-144	87	-513	-594	-1103	-539	0.750	0.246	1.00	Yes	0.464	0.141	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_{11} - L_{12}$			720.78	-----	-221	96	-167	14	-473	-435	-1191	-693	0.713	0.281	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		$U_{12} - L_{13}$			557.21	-----	-188	143	-108	42	-388	-380	-790	-362	0.679	0.318	1.00	Yes	0.427	0.183	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_{13} - L_{14}$			387.47	-----	-79	31	-33	-25	-139	-232	-676	-305	0.697	0.297	1.00	Yes	0.383	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		$U_{15} - L_{14}$			283.52	-236.79	-79	-3	9	-99	-309	-315	870	-253	0.510	0.379	0.89	Yes	0.280	0.208	0.49	Yes	0.555	0.440	1	Yes	0.501	0.127	0.63	Yes	1.00	**6.62**
		$U_{16} - L_{15}$			409.98	-9.66	-143	97	-21	-14	-206	-13	-259	-129	0.737	0.258	1.00	Yes	0.406	0.142	0.55	Yes	0.023	0.142	0.17	Yes	0.020	0.183	0.21	Yes	1.00	**5.43**
		$U_{17} - L_{16}$			526.34	-----	-144	101	-46	22	-332	-129	-305	-105	0.772	0.223	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{18} - L_{17}$			621.19	-----	-330	253	-130	89	-379	-7	-400	-112	0.734	0.259	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_{19} - L_{18}$			689.75	-----	-334	253	-132	96	-373	-132	-455	-203	0.747	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{20} - L_{19}$			700.91	-----	-376	323	-174	140	-148	-66	-259	-140	0.759	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
	Structure 2	$U_0 - L_1$			650.88	-----	-314	315	-101	128	-1374	-424	-158	5	0.644	0.352	1.00	Yes	0.354	0.193	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.30**
		$U_1 - L_2$			753.82	-----	-393	312	-158	112	-429	-395	156	-20	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_2 - L_3$			616.21	-----	-320	264	-112	83	-403	-458	138	-17	0.729	0.264	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_3 - L_4$			558.22	-----	-175	121	-49	23	-361	-447	178	16	0.744	0.254	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_4 - L_5$			351.62	-19.83	-122	85	-26	-19	-363	-307	-711	-232	0.632	0.362	1.00	Yes	0.348	0.199	0.55	Yes	0.049	0.280	0.33	Yes	0.042	0.156	0.20	Yes	1.00	**4.84**
		$U_5 - L_6$			289.29	-234.18	-89	34	52	-108	-397	-270	-1062	-190	0.520	0.445	0.97	Yes	0.286	0.245	0.54	Yes	0.553	0.444	1	Yes	0.496	0.138	0.64	Yes	1.00	**6.40**
		$U_6 - L_7$			-----	-362.75	-1	-39	41	-98	45	-72	-478	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1	Yes	0.695	0.112	0.81	Yes	1.00	**3.02**
		$U_8 - L_7$			606.03	-----	-191	154	-79	35	-244	-8	-55	-142	0.773	0.220	1.00	Yes	0.486	0.124	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
		$U_8 - L_9$			735.18	-----	-339	259	-183	111	-182	-63	35	-44	0.796	0.203	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		$U_{10} - L_9$			841.49	-----	-313	258	-149	124	-116	132	-115	13	0.832	0.165	1.00	Yes	0.458	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{11} - L_{10}$			890.96	-----	-344	309	-156	158	-219	179	-284	81	0.812	0.185	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{12} - L_{11}$			843.39	-----	-331	345	-132	174	-507	177	-566	62	0.768	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		$U_{13} - L_{12}$			733.98	-----	-411	381	-157	161	-486	53	-541	0	0.726	0.272	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{14} - L_{13}$			731.93	-----	-249	427	-17	125	-24	52	-491	-255	0.724	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		$U_{14} - L_{15}$			596.40	-----	-195	344	-22	164	154	-390	528	241	0.705	0.290	1.00	Yes	0.388	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_{15} - L_{16}$			604.40	-----	-360	326	-175	163	53	-288	429	104	0.715	0.282	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
		$U_{16} - L_{17}$			690.76	-----	-332	349	-127	154	43	-415	373	110	0.748	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_{17} - L_{18}$			649.13	-----	-285	287	-109	125	-73	-191	359	90	0.767	0.228	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{18} - L_{19}$			637.75	-----	-279	257	-80	94	-186	-465	293	80	0.754	0.243	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		$U_{19} - L_{20}$			564.62	-----	-185	167	-74	38	-283	-215	-529	-184	0.720	0.273	1.00	Yes	0.396	0.156	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{20} - L_{21}$			402.92	-----	-123	105	-24	-3	-189	-272	-400	-91	0.725	0.272	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{21} - L_{22}$			202.72	-221.49	-48	52	6	-95	290	67	-1392	-276	0.365	0.524	0.89	Yes	0.201	0.288	0.49	Yes	0.523	0.475	1	Yes	0.469	0.121	0.59	Yes	1.00	**7.45**
		$U_{23} - L_{22}$			433.53	-123.01	-116	63	10	-59	-239	-82	85	-136	0.780	0.217	1.00	Yes	0.429	0.119	0.55	Yes	0.293	0.140	0.44	Yes	0.260	0.148	0.41	Yes	1.00	**6.67**
		$U_{24} - L_{23}$			439.50	-----	-127	112	-32	14	-148	45	87	-58	0.790	0.205	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_{25} - L_{24}$			599.97	-----	-190	180	-40	48	-180	49	-301	-82	0.765	0.232	1.00	Yes	0.421	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{26} - L_{25}$			667.46	-----	-282	276	-79	97	-50	178	-253	-57	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_{27} - L_{26}$			646.44	-----	-280	293	-106	125	-266	160	-341	-8	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{28} - L_{27}$			676.59	-----	-307	343	-94	148	-417	233	-543	41	0.733	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{29} - L_{28}$			593.37	-----	-343	333	-92	105	-359	43	-549	-41	0.702	0.294	1.00	Yes	0.386	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{30} - L_{29}$			631.52	-----	-194	364	34	67	-87	5	-231	-196	0.747	0.248	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.46**
		$U_{31} - L_{30}$			735.92	-----	-258	436	-66	220	-41	-279	423	186	0.728	0.265	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		$U_{31} - L_{32}$			735.00	-----	-422	372	-233	217	12	-299	454	120	0.727	0.264	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		$U_{32} - L_{33}$			863.46	-----	-347	350	-159	191	-304	-412	285	60	0.787	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		$U_{33} - L_{34}$			858.65	-----	-327	281	-175	153	-429	-522	97	-92	0.782	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{34} - L_{35}$			776.88	-----	-289	238	-181	120	-479	-452	-642	-339	0.769	0.230	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{35} - L_{36}$			685.40	-----	-312	234	-183	97	-376	-335	-576	-300	0.742	0.254	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_{36} - L_{37}$			555.27	-----	-175	146	-79	20	-209	-444	-639	-264	0.708	0.287	1.00	Yes	0.446	0.164	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{38} - L_{37}$			-----	-368.62	-26	-28	51	-100	-309	-176	-52	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.194	1	Yes	0.706	0.114	0.83	Yes	1.00	**4.13**
		$U_{39} - L_{38}$			430.60	-230.54	-133	67	56	-105	-135	-113	192	-94	0.774	0.225	1.00	Yes	0.426	0.124	0.55	Yes	0.549	0.181	0.74	Yes	0.488	0.170	0.66	Yes	1.00	**7.99**
		$U_{40} - L_{39}$			396.49	-10.62	-135	91	-6	-9	-214	91	-379	-103	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	0.025	0.159	0.19	Yes	0.022	0.172	0.20	Yes	1.00	**4.74**
		$U_{41} - L_{40}$			561.86	-----	-176	127	-56	30	-321	-98	-413	-179	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{42} - L_{41}$			623.54	-----	-321	264	-120	90	-385	-73	-403	-171	0.737	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{43} - L_{42}$			771.15	-----	-378	310	-134	101	-362	-80	-376	-195	0.763	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{44} - L_{43}$			800.25	-----	-382	379	-159	152	-80	66	-171	11	0.792	0.203	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
	Structure 3	$U_0 - L_1$			606.18	-----	-294	267	-78	102	-1143	-436	-150	4	0.657	0.338	1.00	Yes	0.361	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_1 - L_2$			673.79	-----	-349	253	-157	107	-390	-517	169	-36	0.730	0.263	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_2 - L_3$			588.46	-----	-311	240	-123	84	-388	-691	134	-26	0.696	0.301	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
		$U_3 - L_4$			512.19	-----	-141	98	-39	17	-417	-362	170	-14	0.751	0.240	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_4 - L_5$			323.57	-24.32	-117	76	-38	-14	-314	-462	-910	-265	0.582	0.413	1.00	Yes	0.320	0.227	0.55	Yes	0.058	0.314	0.38	Yes	0.051	0.150	0.21	Yes	1.00	**4.46**
		$U_5 - L_6$			171.85	-244.25	-49	-12	23	-107	-198	-127	-917	-291	0.309	0.402	0.72	Yes	0.170	0.221	0.40	Yes	0.572	0.427	1	Yes	0.517	0.137	0.66	Yes	1.00	**5.36**
		$U_7 - L_6$			442.98	-----	-91	39	-36	-14	-211	-183	290	-126	0.797	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_8 - L_7$			620.77	-----	-201	160	-98	49	-163	1	323	-85	0.757	0.239	1.00	Yes	0.476	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_8 - L_9$			795.32	-----	-245	120	-166	29	-155	46	652	373	0.787	0.211	1.00	Yes	0.433	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{10} - L_9$			887.27	-----	-209	184	-107	89	-220	248	1103	225	0.749	0.242	1.00	Yes	0.464	0.139	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{11} - L_{10}$			942.14	-----	-274	267	-65	101	-285	152	-935	-232	0.753	0.241	1.00	Yes	0.467	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{12} - L_{11}$			917.97	-----	-78	354	26	113	58	239	-808	-282	0.734	0.261	1.00	Yes	0.455	0.148	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.40**
		$U_{12} - L_{13}$			613.82	-----	-90	287	-19	144	102	-398	570	166	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_{13} - L_{14}$			632.45	-----	-291	233	-113	115	-325	-319	443	156	0.748	0.246	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.21**
		$U_{14} - L_{15}$			607.15	-----	-166	211	-87	96	-189	-255	-872	-383	0.718	0.278	1.00	Yes	0.395	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_{15} - L_{16}$			344.53	-----	-7	86	-84	-15	502	265	-1720	-899	0.505	0.488	1.00	Yes	0.278	0.268	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
		$U_{17} - L_{16}$			-----	-301.24	46	-11	-48	-96	-246	-18	679	32	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.309	1	Yes	0.637	0.122	0.76	Yes	1.00	**6.81**
		$U_{18} - L_{17}$			374.22	-120.38	-122	12	-82	-77	-429	-237	562	-17	0.673	0.318	1.00	Yes	0.370	0.175	0.55	Yes	0.277	0.289	0.57	Yes	0.255	0.155	0.42	Yes	1.00	**9.52**
		$U_{19} - L_{18}$			364.46	-----	-72	14	-28	-21	-278	-251	854	378	0.656	0.339	1.00	Yes	0.361	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		$U_{20} - L_{19}$			623.04	-10.65	-119	80	-27	2	-146	-31	-54	22	0.817	0.176	1.00	Yes	0.494	0.097	0.60	Yes	0.018	0.091	0.11	Yes	0.016	0.139	0.16	Yes	1.00	**6.38**

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Upper Chord	Structure 1	U$_1$ - U$_2$	-71.60	19.47	-98.70			0.90	1.24	21.68	-109.88	0.00	0.00	Vehicle	Vehicle	-----	-331.16	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.70	4.49
		U$_2$ - U$_3$	-90.76	39.29	-162.79			0.90	1.24	43.74	-181.23	0.00	0.00	Vehicle	Vehicle	-----	-510.65	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	41.01	Pass	42.67	48.57	Pass	9.33	12.00	Pass	-----	-----	1.57	2.62
		U$_3$ - U$_5$	-61.05	58.35	-178.10			0.90	1.24	64.96	-198.27	0.00	0.00	Vehicle	Vehicle	61.39	-508.95	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	41.08	Pass	42.67	48.65	Pass	9.33	12.00	Pass	6.76	11.27	1.53	2.54
		U$_5$ - U$_6$	10.82	76.44	-163.98			0.90	1.24	85.10	-182.56	0.00	0.00	Vehicle	Vehicle	198.44	-381.48	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.66	7.76	1.89	3.16
		U$_6$ - U$_8$	12.98	76.85	-163.17			0.90	1.24	85.56	-181.66	0.00	0.00	Vehicle	Vehicle	202.25	-376.72	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.62	7.69	1.91	3.18
		U$_8$ - U$_9$	121.44	88.99	-122.02			0.90	1.24	99.07	-135.84	0.00	0.00	Vehicle	Vehicle	372.53	-136.45	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	3.33	5.55	3.03	5.06
		U$_9$ - U$_7$	249.52	98.48	-72.78			0.90	1.24	109.64	-81.03	0.00	0.00	Vehicle	Vehicle	561.94	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.04	5.06	-----	-----
		U$_7$ - U$_8$	376.85	100.54	-13.31			0.90	1.24	111.93	-14.82	0.00	0.00	Vehicle	Vehicle	732.42	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	3.93	6.55	-----	-----
		U$_8$ - U$_9$	319.70	105.43	-14.68			0.90	1.20	113.68	-15.82	0.00	0.00	Vehicle	Vehicle	661.91	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	3.27	5.45	-----	-----
		U$_9$ - U$_{10}$	128.80	98.06	-65.10			0.90	1.20	105.73	-70.19	0.00	0.00	Vehicle	Vehicle	396.51	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	3.29	5.49	-----	-----
		U$_{10}$ - U$_{11}$	-70.81	88.33	-124.16			0.90	1.20	95.24	-133.87	0.00	0.00	Vehicle	Vehicle	114.29	-382.11	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	4.91	8.19	2.36	3.93
		U$_{11}$ - U$_{12}$	-252.85	78.22	-176.83			0.90	1.20	84.34	-190.66	0.00	0.00	Vehicle	Vehicle	-----	-741.79	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	40.80	Pass	28.44	48.31	Pass	8.00	12.00	Pass	-----	-----	1.76	2.94
		U$_{12}$ - U$_{13}$	-391.81	67.06	-219.86			0.90	1.20	72.31	-237.07	0.00	0.00	Vehicle	Vehicle	-----	-1023.00	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	41.17	Pass	28.44	48.76	Pass	8.00	12.00	Pass	-----	-----	1.89	3.15
		U$_{13}$ - U$_{14}$	-482.83	55.98	-248.11			0.90	1.20	60.36	-267.51	0.00	0.00	Vehicle	Vehicle	-----	-1207.28	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.91	Pass	25.60	48.45	Pass	6.40	12.00	Pass	-----	-----	1.89	3.16
		U$_{14}$ - U$_{15}$	-484.28	55.77	-248.69			0.90	1.20	60.13	-268.14	0.00	0.00	Vehicle	Vehicle	-----	-1210.54	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.85	Pass	25.60	48.38	Pass	6.40	12.00	Pass	-----	-----	1.89	3.14
		U$_{15}$ - U$_{16}$	-501.86	42.81	-250.85			0.90	1.20	46.16	-270.47	0.00	0.00	Vehicle	Vehicle	-----	-1238.42	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.39	Pass	25.60	47.83	Pass	6.40	12.00	Pass	-----	-----	1.83	3.05
		U$_{16}$ - U$_{17}$	-467.82	31.15	-232.33			0.90	1.20	33.59	-250.50	0.00	0.00	Vehicle	Vehicle	-----	-1150.91	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	41.90	Pass	25.60	49.62	Pass	6.40	12.00	Pass	-----	-----	2.06	3.43
		U$_{17}$ - U$_{18}$	-368.70	19.28	-177.64			0.90	1.20	20.79	-191.53	0.00	0.00	Vehicle	Vehicle	-----	-894.30	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	40.69	Pass	32.00	48.18	Pass	10.67	12.00	Pass	-----	-----	1.89	3.14
		U$_{18}$ - U$_{19}$	-251.42	9.64	-120.30			0.90	1.20	10.39	-129.71	0.00	0.00	Vehicle	Vehicle	-----	-607.88	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	41.15	Pass	32.00	48.73	Pass	10.67	12.00	Pass	-----	-----	1.97	3.29
		U$_{19}$ - U$_{20}$	-117.77	2.39	-56.98			0.90	1.20	2.58	-61.44	0.00	0.00	Vehicle	Vehicle	-----	-286.21	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.47	9.11
	Structure 2	U$_1$ - U$_4$	-118.16	7.61	-61.06			0.90	1.18	8.11	-65.01	0.00	0.00	Vehicle	Vehicle	-----	-294.47	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.88	8.14
		U$_1$ - U$_2$	-239.45	17.43	-128.08			0.90	1.18	18.56	-136.37	0.00	0.00	Vehicle	Vehicle	-----	-606.75	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.47	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.43	4.05
		U$_2$ - U$_5$	-350.29	29.09	-182.19			0.90	1.18	30.97	-193.98	0.00	0.00	Vehicle	Vehicle	-----	-875.66	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	43.17	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.25	3.75
		U$_4$ - U$_6$	-448.96	43.38	-227.13			0.90	1.18	46.18	-241.83	0.00	0.00	Vehicle	Vehicle	-----	-1107.60	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	42.86	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.21	3.69
		U$_5$ - U$_7$	-483.05	57.20	-253.97			0.90	1.18	61.56	-270.41	0.00	0.00	Vehicle	Vehicle	-----	-1213.84	5.50	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.11	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.23	3.71
		U$_6$ - U$_8$	-485.65	73.15	-269.37			0.90	1.18	77.89	-286.80	0.00	0.00	Vehicle	Vehicle	-----	-1252.73	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	42.44	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.10	3.49
		U$_7$ - U$_9$	-428.66	86.68	-259.78			0.90	1.18	92.29	-276.59	0.00	0.00	Vehicle	Vehicle	-----	-1156.54	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.94	Pass	23.27	49.66	Pass	5.82	12.00	Pass	-----	-----	1.98	3.30
		U$_8$ - U$_8$	-428.18	86.89	-259.26			0.90	1.18	92.51	-276.03	0.00	0.00	Vehicle	Vehicle	-----	-1154.70	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.97	Pass	23.27	49.70	Pass	5.82	12.00	Pass	-----	-----	1.98	3.31
		U$_9$ - U$_9$	-335.25	99.65	-235.31			0.90	1.18	106.10	-250.53	0.00	0.00	Vehicle	Vehicle	-----	-978.65	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	41.77	Pass	32.00	49.47	Pass	6.40	12.00	Pass	-----	-----	1.89	3.16
		U$_9$ - U$_{10}$	-200.15	107.83	-192.16			0.90	1.18	114.81	-204.59	0.00	0.00	Vehicle	Vehicle	-----	-703.49	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	43.68	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.01	3.35
		U$_{10}$ - U$_{11}$	-52.03	114.47	-147.53			0.90	1.18	121.88	-157.07	0.00	0.00	Vehicle	Vehicle	196.43	-407.96	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	4.74	7.90	2.74	4.57
		U$_{11}$ - U$_{12}$	107.09	114.27	-92.43			0.90	1.18	121.66	-98.41	0.00	0.00	Vehicle	Vehicle	402.82	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	3.96	6.61	-----	-----
		U$_{12}$ - U$_{13}$	259.37	113.21	-47.38			0.90	1.18	120.54	-50.44	0.00	0.00	Vehicle	Vehicle	598.35	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.38	7.30	-----	-----
		U$_{13}$ - U$_{14}$	391.99	106.62	-21.55			0.90	1.18	113.52	-22.55	0.00	0.00	Vehicle	Vehicle	755.54	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	6.20	10.33	-----	-----
		U$_{14}$ - U$_{15}$	439.80	107.32	-18.71			0.90	1.17	112.91	-19.69	0.00	0.00	Vehicle	Vehicle	815.86	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	5.98	9.96	-----	-----
		U$_{15}$ - U$_{16}$	369.68	105.59	-35.53			0.90	1.17	111.09	-37.38	0.00	0.00	Vehicle	Vehicle	721.29	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	4.88	8.13	-----	-----
		U$_{16}$ - U$_{17}$	271.42	101.72	-64.99			0.90	1.17	107.02	-68.38	0.00	0.00	Vehicle	Vehicle	584.72	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	4.33	7.22	-----	-----
		U$_{17}$ - U$_{18}$	171.80	96.89	-100.89			0.90	1.17	101.94	-106.15	0.00	0.00	Vehicle	Vehicle	444.20	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	3.50	5.83	-----	-----
		U$_{18}$ - U$_{19}$	72.84	88.32	-138.86			0.90	1.17	92.93	-146.10	0.00	0.00	Vehicle	Vehicle	296.03	-221.85	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	4.48	7.46	2.96	4.93
		U$_{19}$ - U$_{20}$	-8.04	78.67	-173.49			0.90	1.17	82.77	-182.52	0.00	0.00	Vehicle	Vehicle	168.88	-405.92	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.00	10.01	2.25	3.75
		U$_{20}$ - U$_{21}$	-60.07	66.48	-198.07			0.90	1.17	69.94	-208.39	0.00	0.00	Vehicle	Vehicle	73.44	-529.60	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.02	15.04	2.24	3.73
		U$_{21}$ - U$_{22}$	-82.15	52.85	-210.34			0.90	1.17	55.60	-221.30	0.00	0.00	Vehicle	Vehicle	-----	-586.28	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.05	3.41
		U$_{22}$ - U$_{23}$	-82.37	52.65	-210.04			0.90	1.17	55.40	-220.98	0.00	0.00	Vehicle	Vehicle	-----	-585.89	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.05	3.41
		U$_{23}$ - U$_{24}$	-65.94	65.27	-204.72			0.90	1.17	68.67	-215.39	0.00	0.00	Vehicle	Vehicle	63.07	-552.39	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.24	15.40	2.15	3.58
		U$_{24}$ - U$_{25}$	-11.98	77.83	-183.13			0.90	1.17	81.58	-197.94	0.00	0.00	Vehicle	Vehicle	154.04	-452.24	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.14	10.24	2.05	3.41
		U$_{25}$ - U$_{26}$	54.95	88.43	-156.15			0.90	1.17	93.03	-164.29	0.00	0.00	Vehicle	Vehicle	273.00	-284.52	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	4.59	7.65	2.57	4.28
		U$_{26}$ - U$_{27}$	135.89	97.23	-115.61			0.90	1.17	102.29	-121.63	0.00	0.00	Vehicle	Vehicle	398.29	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	3.70	6.16	-----	-----
		U$_{27}$ - U$_{28}$	216.69	101.40	-76.34			0.90	1.17	106.69	-80.32	0.00	0.00	Vehicle	Vehicle	512.86	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	4.65	7.75	-----	-----
		U$_{28}$ - U$_{29}$	293.53	103.78	-39.92			0.90	1.17	109.19	-42.00	0.00	0.00	Vehicle	Vehicle	618.17	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	5.38	8.96	-----	-----
		U$_{29}$ - U$_{30}$	357.86	102.57	-25.63			0.90	1.17	107.91	-26.97	0.00	0.00	Vehicle	Vehicle	699.02	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	6.71	11.18	-----	-----
		U$_{30}$ - U$_{31}$	339.12	116.06	-29.27			0.90	1.18	123.57	-31.16	0.00	0.00	Vehicle	Vehicle	708.60	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	5.95	9.91	-----	-----
		U$_{31}$ - U$_{32}$	251.34	115.82	-34.51			0.90	1.18	123.32	-36.75	0.00	0.00	Vehicle	Vehicle	593.92	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl

(Case I considered in Max. Tension/Compression Load)

North Truss - Lower Chord

Location	Member	D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0- L_1	4.73	6.89	-4.61			0.90	1.24	7.67	-5.14	0.00	0.00	Vehicle	Vehicle	22.75	-4.98	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**38.96**	**64.94**	**50.05**	**83.41**
	L_1 - L_2	74.19	95.78	-22.41			0.90	1.24	106.63	-24.94	0.00	0.00	Vehicle	Vehicle	327.48	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**2.41**	**4.02**	-----	-----
	L_2 - L_3	97.64	154.60	-42.31			0.90	1.24	172.12	-47.11	0.00	0.00	Vehicle	Vehicle	499.84	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**1.99**	**3.32**	-----	-----
	L_3 - L_4	66.79	171.01	-61.25			0.90	1.24	190.38	-68.19	0.00	0.00	Vehicle	Vehicle	499.31	-60.93	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**1.90**	**3.16**	**5.54**	**9.24**
	L_4 - L_5	-108.59	117.92	-91.98			0.90	1.24	131.28	-102.40	0.00	0.00	Vehicle	Vehicle	143.28	-363.04	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**3.21**	**5.35**	**2.30**	**3.83**
	L_5 - L_6	-237.42	68.86	-101.51			0.90	1.24	76.66	-113.01	0.00	0.00	Vehicle	Vehicle	-----	-553.50	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	42.59	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.24**	**3.73**
	L_6 - L_7	-362.38	8.75	-106.11			0.90	1.24	9.74	-118.13	0.00	0.00	Vehicle	Vehicle	-----	-727.04	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	44.49	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**2.96**	**4.93**
	L_7 - L_8	-478.62	1.34	-114.26			0.90	1.24	1.50	-127.21	0.00	0.00	Vehicle	Vehicle	-----	-897.82	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.40**	**5.67**
	L_8 - L_9	-476.97	0.60	-117.12			0.90	1.20	0.64	-126.28	0.00	0.00	Vehicle	Vehicle	-----	-893.66	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.43**	**5.72**
	L_9 - L_{10}	-301.47	8.51	-98.29			0.90	1.20	9.17	-105.98	0.00	0.00	Vehicle	Vehicle	-----	-621.52	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.65**	**6.08**
	L_{10} - L_{11}	-104.56	51.46	-86.88			0.90	1.20	55.48	-93.68	0.00	0.00	Vehicle	Vehicle	-----	-338.89	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.54**	**4.23**
	L_{11} - L_{12}	96.98	103.21	-76.82			0.90	1.20	111.28	-82.83	0.00	0.00	Vehicle	Vehicle	367.18	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.68**	**4.47**	-----	-----
	L_{12} - L_{13}	268.60	147.79	-66.46			0.90	1.20	159.35	-71.66	0.00	0.00	Vehicle	Vehicle	694.43	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.66**	**4.43**	-----	-----
	L_{13} - L_{14}	405.49	187.39	-56.03			0.90	1.20	202.04	-60.41	0.00	0.00	Vehicle	Vehicle	964.90	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.66**	**4.47**	-----	-----
	L_{14} - L_{15}	502.59	207.79	-31.42			0.90	1.20	224.03	-33.88	0.00	0.00	Vehicle	Vehicle	1138.78	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.87**	**4.78**	-----	-----
	L_{15} - L_{16}	469.06	188.65	-25.46			0.90	1.20	203.41	-27.46	0.00	0.00	Vehicle	Vehicle	1050.50	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.26**	**5.43**	-----	-----
	L_{16} - L_{17}	365.26	131.72	-17.19			0.90	1.20	142.02	-18.53	0.00	0.00	Vehicle	Vehicle	782.54	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.60**	**5.99**	-----	-----
	L_{17} - L_{18}	248.52	83.98	-12.59			0.90	1.20	90.55	-13.57	0.00	0.00	Vehicle	Vehicle	519.26	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.21**	**7.01**	-----	-----
	L_{18} - L_{19}	112.87	44.71	-37.23			0.90	1.20	48.21	-40.14	0.00	0.00	Vehicle	Vehicle	251.17	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.85**	**8.09**	-----	-----
	L_{19} - L_{20}	-14.36	34.77	-75.20			0.90	1.20	37.49	-81.08	0.00	0.00	Vehicle	Vehicle	62.55	-194.34	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**8.27**	**13.79**	**3.03**	**5.05**
Structure 2	L_0- L_1	15.25	11.56	-11.90			0.90	1.18	12.31	-12.67	0.00	0.00	Vehicle	Vehicle	46.49	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**30.13**	**50.22**	-----	-----
	L_1 - L_2	136.09	52.78	-7.73			0.90	1.18	56.19	-8.23	0.00	0.00	Vehicle	Vehicle	298.67	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**5.31**	**8.85**	-----	-----
	L_2 - L_3	262.77	110.65	-15.60			0.90	1.18	117.81	-16.61	0.00	0.00	Vehicle	Vehicle	596.86	-----	6.20	37.95	31.7500	1252.35	131.71	10.7370	6.1375	15.74	32.76	-1056.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.57**	**5.95**	-----	-----
	L_3 - L_4	373.14	163.34	-27.05			0.90	1.18	173.91	-28.80	0.00	0.00	Vehicle	Vehicle	861.89	-----	9.45	51.08	41.6250	1685.48	131.71	10.7370	5.7282	16.87	32.73	-1420.90	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.19**	**5.31**	-----	-----
	L_4 - L_5	456.37	206.20	-40.74			0.90	1.18	219.54	-43.37	0.00	0.00	Vehicle	Vehicle	1069.21	-----	11.88	65.05	54.1000	2145.00	131.71	10.6406	5.6658	16.93	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.26**	**5.44**	-----	-----
	L_5 - L_6	489.37	232.80	-55.05			0.90	1.18	247.86	-58.61	0.00	0.00	Vehicle	Vehicle	1173.21	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.16**	**5.26**	-----	-----
	L_6 - L_7	479.01	246.44	-69.77			0.90	1.18	262.39	-74.28	0.00	0.00	Vehicle	Vehicle	1191.22	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.06**	**5.10**	-----	-----
	L_7 - L_8	330.07	214.88	-95.56			0.90	1.18	228.78	-101.74	0.00	0.00	Vehicle	Vehicle	924.80	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**2.65**	**4.42**	-----	-----
	L_8 - L_9	188.98	170.52	-103.35			0.90	1.18	181.55	-110.04	0.00	0.00	Vehicle	Vehicle	639.04	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**3.01**	**5.02**	-----	-----
	L_9 - L_{10}	39.77	127.71	-110.13			0.90	1.18	135.97	-117.26	0.00	0.00	Vehicle	Vehicle	346.30	-202.35	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**3.63**	**6.05**	**3.93**	**6.54**
	L_{10} - L_{11}	-127.39	74.08	-111.06			0.90	1.18	78.87	-118.24	0.00	0.00	Vehicle	Vehicle	-----	-421.79	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**2.65**	**4.42**
	L_{11} - L_{12}	-282.64	36.63	-110.13			0.90	1.18	38.99	-117.25	0.00	0.00	Vehicle	Vehicle	-----	-621.48	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.32**	**5.53**
	L_{12} - L_{13}	-426.73	26.10	-106.50			0.90	1.18	27.79	-113.39	0.00	0.00	Vehicle	Vehicle	-----	-800.43	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.49**	**7.48**
	L_{13} - L_{14}	-536.42	24.28	-136.07			0.90	1.18	25.85	-144.88	0.00	0.00	Vehicle	Vehicle	-----	-1011.25	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.05**	**6.76**
	L_{14} - L_{15}	-537.75	28.94	-118.14			0.90	1.17	30.44	-124.30	0.00	0.00	Vehicle	Vehicle	-968.39	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.72**	**7.86**
	L_{15} - L_{16}	-475.65	28.74	-115.81			0.90	1.17	28.13	-121.84	0.00	0.00	Vehicle	Vehicle	-882.33	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.94**	**6.56**
	L_{16} - L_{17}	-384.35	27.18	-104.78			0.90	1.17	28.59	-110.24	0.00	0.00	Vehicle	Vehicle	-738.51	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.61**	**6.01**
	L_{17} - L_{18}	-281.86	52.97	-100.61			0.90	1.17	55.73	-105.85	0.00	0.00	Vehicle	Vehicle	-----	-595.76	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.03	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**2.53**	**4.21**
	L_{18} - L_{19}	-175.17	80.81	-91.78			0.90	1.17	85.02	-96.56	0.00	0.00	Vehicle	Vehicle	-----	-436.92	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	44.60	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**2.48**	**4.13**
	L_{19} - L_{20}	-76.53	116.10	-83.09			0.90	1.17	122.15	-87.42	0.00	0.00	Vehicle	Vehicle	165.15	-288.91	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.71**	**6.19**	**3.41**	**5.69**
	L_{20} - L_{21}	4.38	140.79	-70.71			0.90	1.17	148.12	-74.40	0.00	0.00	Vehicle	Vehicle	326.62	-155.50	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.84**	**6.40**	**6.52**	**10.86**
	L_{21} - L_{22}	55.94	163.21	-58.60			0.90	1.17	171.71	-61.65	0.00	0.00	Vehicle	Vehicle	444.77	-60.86	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.13**	**5.22**	**8.36**	**13.94**
	L_{22} - L_{23}	62.99	156.56	-37.59			0.90	1.17	164.71	-39.55	0.00	0.00	Vehicle	Vehicle	438.76	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.24**	**5.40**	-----	-----
	L_{23} - L_{24}	15.54	138.76	-50.11			0.90	1.17	145.98	-52.72	0.00	0.00	Vehicle	Vehicle	336.50	-94.02	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.85**	**6.41**	**9.32**	**15.54**
	L_{24} - L_{25}	-56.00	99.13	-56.73			0.90	1.17	104.30	-59.69	0.00	0.00	Vehicle	Vehicle	153.17	-202.13	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.23**	**7.05**	**5.20**	**8.67**
	L_{25} - L_{26}	-136.37	71.81	-65.48			0.90	1.17	75.55	-68.89	0.00	0.00	Vehicle	Vehicle	-----	-326.55	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.81**	**6.35**
	L_{26} - L_{27}	-217.73	41.02	-89.94			0.90	1.17	43.16	-94.62	0.00	0.00	Vehicle	Vehicle	-----	-488.06	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.23**	**5.39**
	L_{27} - L_{28}	-296.25	38.04	-127.28			0.90	1.17	40.03	-133.91	0.00	0.00	Vehicle	Vehicle	-----	-675.27	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.37**	**5.61**
	L_{28} - L_{29}	-364.18	45.81	-167.39			0.90	1.17	48.20	-176.11	0.00	0.00	Vehicle	Vehicle	-----	-855.01	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.10**	**5.17**
	L_{29} - L_{30}	-418.23	48.97	-194.22			0.90	1.17	51.52	-204.34	0.00	0.00	Vehicle	Vehicle	-----	-986.43	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.22**	**5.37**
	L_{30} - L_{31}	-350.38	24.26	-128.30			0.90	1.18	25.83	-136.60	0.00	0.00	Vehicle	Vehicle	-----	-751.45	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.11**	**8.52**
	L_{31} - L_{32}	-275.46	24.87	-103.97			0.90	1.18	26.48	-110.70	0.00	0.00	Vehicle	Vehicle	-----	-597.94	9.73	59.10	49.3700	1950.30	131.71	11.1432	5.8186	17.24	32.72	-1643.56	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.36**	**8.93**
	L_{32} - L_{33}	-179.08	27.17	-90.93

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals																																															
Structure 1	U_0 - L_0	-77.19	17.49	-113.42			0.90	1.24	19.47	-126.27	0.00	0.00	Vehicle	Vehicle	------	-373.93	1.63	15.26	13.6300	503.58	131.71	9.3438	1.9120	43.98	31.16	-404.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	38.00	Fail	6.56	12.00	Pass	------	------	------	------	------	------	1.11	1.85
	U_1 - L_1	-33.88	15.72	-79.67			0.90	1.24	17.50	-88.70	0.00	0.00	Vehicle	Vehicle	------	-236.22	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	2.15	3.59
	U_2 - L_2	10.43	14.79	-59.05			0.90	1.24	16.46	-65.74	0.00	0.00	Vehicle	Vehicle	49.23	-128.88	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	15.21	25.35	3.31	5.51
	U_3 - L_3	44.39	14.76	-41.26			0.90	1.24	16.44	-45.93	0.00	0.00	Vehicle	Vehicle	93.32	-41.82	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	13.99	23.32	5.17	8.61
	U_4 - L_4	-16.67	1.46	-55.66			0.90	1.24	1.63	-61.96	0.00	0.00	Vehicle	Vehicle	------	-155.91	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	3.23	5.38
	U_5 - L_5	-109.51	3.48	-85.41			0.90	1.24	3.88	-95.08	0.00	0.00	Vehicle	Vehicle	------	-348.37	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	43.90	Pass	5.37	12.00	Pass	------	------	------	------	------	1.99	3.32
	U_6 - L_6	-143.60	0.60	-100.98			0.90	1.24	0.66	-112.43	0.00	0.00	Vehicle	Vehicle	------	-430.27	3.13	23.61	20.4794	779.11	131.71	9.9479	2.0237	44.24	31.14	-624.88	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	42.22	Pass	8.89	12.00	Pass	------	------	------	------	------	1.80	3.00
	U_7 - L_7	-142.61	3.28	-114.18			0.90	1.24	3.65	-127.12	0.00	0.00	Vehicle	Vehicle	------	-460.81	2.88	21.86	18.9794	721.36	131.71	11.7292	1.9657	53.70	30.26	-562.19	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	39.26	Pass	10.00	12.00	Pass	------	------	------	------	------	1.37	2.28
	U_8 - L_8	-391.97	3.07	-132.45			0.90	1.24	3.42	-147.45	0.00	0.00	Vehicle	Vehicle	------	-829.04	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	44.89	Pass	5.96	12.00	Pass	------	------	------	------	------	2.74	4.57
	U_9 - L_9	-223.13	10.76	-106.42			0.90	1.20	11.61	-114.75	0.00	0.00	Vehicle	Vehicle	------	-538.69	3.50	30.81	27.3125	1016.81	131.71	12.1563	2.5246	43.34	31.21	-817.50	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	43.11	Pass	9.60	12.00	Pass	------	------	------	------	------	2.12	3.54
	U_{10} - L_{10}	-225.77	7.59	-106.54			0.90	1.20	8.19	-114.87	0.00	0.00	Vehicle	Vehicle	------	-542.39	2.76	34.69	31.9300	1144.77	131.71	10.7083	2.3304	41.36	31.37	-925.09	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	2.54	4.23
	U_{11} - L_{11}	-198.79	5.30	-97.04			0.90	1.20	5.72	-104.63	0.00	0.00	Vehicle	Vehicle	------	-485.11	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.54	4.23
	U_{12} - L_{12}	-154.77	9.37	-87.40			0.90	1.20	10.10	-94.24	0.00	0.00	Vehicle	Vehicle	------	-405.38	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	2.41	4.01
	U_{13} - L_{13}	-109.04	16.49	-80.73			0.90	1.20	17.78	-87.04	0.00	0.00	Vehicle	Vehicle	------	-330.33	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	42.78	Pass	5.94	12.00	Pass	------	------	------	------	------	1.87	3.12
	U_{14} - L_{14}	-12.30	1.95	-49.76			0.90	1.20	2.10	-53.65	0.00	0.00	Vehicle	Vehicle	------	-132.23	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	3.72	6.20
	U_{15} - L_{15}	-5.62	31.48	-53.89			0.90	1.20	33.94	-58.11	0.00	0.00	Vehicle	Vehicle	66.24	-133.21	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	7.66	12.77	3.49	5.81
	U_{16} - L_{16}	-51.74	15.75	-72.44			0.90	1.20	16.98	-78.11	0.00	0.00	Vehicle	Vehicle	------	-236.49	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.22	3.71
	U_{17} - L_{17}	-127.31	12.81	-95.14			0.90	1.20	13.81	-102.58	0.00	0.00	Vehicle	Vehicle	------	-387.74	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	41.61	Pass	5.37	12.00	Pass	------	------	------	------	------	1.66	2.77
	U_{18} - L_{18}	-159.89	11.83	-105.23			0.90	1.20	12.75	-113.46	0.00	0.00	Vehicle	Vehicle	------	-453.69	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	42.84	Pass	7.23	12.00	Pass	------	------	------	------	------	1.93	3.22
	U_{19} - L_{19}	-191.17	10.03	-117.55			0.90	1.20	10.81	-126.74	0.00	0.00	Vehicle	Vehicle	------	-523.12	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	43.62	Pass	6.06	12.00	Pass	------	------	------	------	------	2.01	3.35
	U_{20} - L_{20}	-211.94	10.02	-123.61			0.90	1.20	10.81	-133.28	0.00	0.00	Vehicle	Vehicle	------	-564.30	0.00	29.13	29.1305	961.31	131.71	20.3229	2.8884	63.32	29.19	-722.67	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	40.95	Pass	6.06	12.00	Pass	------	------	------	------	------	1.55	2.58
Structure 2	U_0 - L_0	-206.53	12.94	-111.93			0.90	1.18	13.78	-119.17	0.00	0.00	Vehicle	Vehicle	------	-526.69	0.00	31.81	31.8100	1049.73	131.71	19.1510	2.8323	60.85	29.48	-797.03	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	44.30	Pass	5.62	12.00	Pass	------	------	------	------	------	2.05	3.41
	U_1 - L_1	-188.72	13.29	-105.89			0.90	1.18	14.15	-112.74	0.00	0.00	Vehicle	Vehicle	------	-489.61	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	2.57	4.29
	U_2 - L_2	-155.84	14.02	-105.06			0.90	1.18	14.93	-111.86	0.00	0.00	Vehicle	Vehicle	------	-444.96	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.24	3.74
	U_3 - L_3	-134.53	15.89	-92.00			0.90	1.18	16.92	-97.95	0.00	0.00	Vehicle	Vehicle	------	-387.12	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	43.68	Pass	4.91	12.00	Pass	------	------	------	------	------	1.94	3.24
	U_4 - L_4	-64.47	15.18	-76.05			0.90	1.18	16.16	-80.97	0.00	0.00	Vehicle	Vehicle	------	-259.23	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.04	3.39
	U_5 - L_5	-19.94	23.23	-70.33			0.90	1.18	24.74	-74.88	0.00	0.00	Vehicle	Vehicle	27.68	-188.15	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	10.86	18.10	2.57	4.28
	U_6 - L_6	40.07	38.86	-45.01			0.90	1.18	41.37	-47.93	0.00	0.00	Vehicle	Vehicle	141.73	-51.75	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	5.62	9.37	4.78	7.97
	U_7 - L_7	-26.03	0.52	-51.57			0.90	1.18	0.55	-54.90	0.00	0.00	Vehicle	Vehicle	------	-152.80	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	3.44	5.73
	U_8 - L_8	-125.22	19.71	-75.97			0.90	1.18	20.98	-80.88	0.00	0.00	Vehicle	Vehicle	------	-338.03	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	3.01	5.01
	U_9 - L_9	-174.50	8.65	-95.34			0.90	1.18	9.21	-101.51	0.00	0.00	Vehicle	Vehicle	------	-446.78	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	3.05	5.09
	U_{10} - L_{10}	-202.62	4.58	-105.23			0.90	1.18	4.88	-112.04	0.00	0.00	Vehicle	Vehicle	------	-506.15	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	3.08	5.14
	U_{11} - L_{11}	-229.48	3.08	-117.92			0.90	1.18	3.28	-125.55	0.00	0.00	Vehicle	Vehicle	------	-570.35	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.56	4.26
	U_{12} - L_{12}	-250.80	4.36	-122.33			0.90	1.18	4.64	-130.24	0.00	0.00	Vehicle	Vehicle	------	-608.24	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.54	4.23
	U_{13} - L_{13}	-223.27	13.40	-116.62			0.90	1.18	14.27	-124.17	0.00	0.00	Vehicle	Vehicle	------	-559.28	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.26	3.76
	U_{14} - L_{14}	-343.24	2.61	-126.42			0.90	1.18	2.78	-134.60	0.00	0.00	Vehicle	Vehicle	------	-737.85	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0516	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	3.16	5.26
	U_{15} - L_{15}	-123.12	12.91	-99.62			0.90	1.17	13.58	-104.81	0.00	0.00	Vehicle	Vehicle	------	-387.14	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	3.25	5.41
	U_{16} - L_{16}	-156.68	9.95	-105.42			0.90	1.17	10.47	-110.91	0.00	0.00	Vehicle	Vehicle	------	-443.98	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	2.76	4.59
	U_{17} - L_{17}	-147.89	9.69	-110.48			0.90	1.17	10.19	-116.24	0.00	0.00	Vehicle	Vehicle	------	-444.11	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.45	4.09
	U_{18} - L_{18}	-142.21	12.16	-96.83			0.90	1.17	12.79	-101.88	0.00	0.00	Vehicle	Vehicle	------	-405.61	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.56	4.27
	U_{19} - L_{19}	-111.47	13.59	-95.77			0.90	1.17	14.30	-100.75	0.00	0.00	Vehicle	Vehicle	------	-363.21	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	2.38	3.97
	U_{20} - L_{20}	-76.56	17.93	-84.59			0.90	1.17	18.87	-88.99	0.00	0.00	Vehicle	Vehicle	------	-292.35	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	2.01	3.36
	U_{21} - L_{21}	-44.33	22.50	-66.38			0.90	1.17	23.67	-69.84	0.00	0.00	Vehicle	Vehicle	------	-208.95	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.54	4.24
	U_{22} - L_{22}	-21.25	1.60	-51.07			0.90	1.17	1.69	-53.73	0.00	0.00	Vehicle	Vehicle	------	-144.04	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	3.58	5.97
	U_{23} - L_{23}	-39.04	29.66	-60.33			0.90	1.17	31.20	-63.47	0.00	0.00	Vehicle	Vehicle	------	-188.27	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.85	4.75
	U_{24} - L_{24}	-74.80	22.56	-73.34			0.90	1.17	23.74	-77.16	0.00	0.00	Vehicle	Vehicle	------	-264.43	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	2.34	3.89
	U_{25} - L_{25}	-103.21	16.61	-89.74			0.90	1.17	17.47	-94.42	0.00	0.00	Vehicle	Vehicle	------	-338.74	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	2.59	4.32
	U_{26} - L_{26}	-120.15	15.67	-101.35			0.90	1.17	16.49	-106.63	0.00	0.00	Vehicle	Vehicle	------	-387.22	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.57	4.29
	U_{27} - L_{27}	-123.87	12.94	-107.86			0.90	1.17	13.61	-113.48	0.00	0.00	Vehicle	Vehicle	------	-406.90	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.64	4.40
	U_{28} - L_{28}	-135.49	11.77	-114.40			0.90	1.17	12.38	-120.36	0.00	0.00	Vehicle	Vehicle	------	-436.92	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	2.64	4.41
	U_{29} - L_{29}	-116.90	6.89	-113.25			0.90	1.17	7.25	-119.15	0.00	0.00	Vehicle	Vehicle	------	-410.11	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.89	4.81
	U_{30} - L_{30}	-261.40	4.97	-121.13			0.90	1.18	5.29	-128.96	0.00	0.00	Vehicle	Vehicle	------	-619.24	11.02	52.76	41.7400	1741.08	131.71	25.6094	4.0676	56.66	29.95	-1342.96	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	3.59	5.98
	U_{31} - L_{31}	-156.06	16.18	-104.75			0.90	1.18	17.23	-111.53	0.00	0.00	Vehicle	Vehicle	------	-444.52	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.87	4.79
	U_{32} - L_{32}	-185.16	11.52	-115.47			0.90	1.18	12.27	-122.94	0.00	0.00	Vehicle	Vehicle	------	-507.08	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	3.01	5.02
	U_{33} - L_{33}	-186.07	9.64	-110.16			0.90	1.18	10.26

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals Structure 1	U$_1$ - L$_1$	87.39	122.16	-24.54			0.90	1.24	136.00	-27.32	0.00	0.00	Vehicle	Vehicle	408.27	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**2.20**	**3.67**	-----	-----
	U$_1$ - L$_2$	23.29	94.25	-24.47			0.90	1.24	104.93	-27.25	0.00	0.00	Vehicle	Vehicle	257.62	-28.75	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**2.31**	**3.85**	**7.90**	**13.16**
	U$_3$ - L$_3$	-37.87	64.33	-23.83			0.90	1.24	71.62	-26.53	0.00	0.00	Vehicle	Vehicle	105.95	-106.71	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.90**	**6.50**	**6.70**	**11.17**
	U$_3$ - L$_4$	-92.23	42.99	-63.49			0.90	1.24	47.86	-70.69	0.00	0.00	Vehicle	Vehicle	-----	-273.05	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	44.77	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**2.07**	**3.45**
	U$_5$ - L$_4$	143.29	102.43	-13.91			0.90	1.24	114.04	-15.49	0.00	0.00	Vehicle	Vehicle	433.36	-----	0.00	20.48	20.4800	675.84	131.71	11.6953	2.0102	52.36	30.39	-529.06	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**1.98**	**3.30**	-----	-----
	U$_5$ - L$_5$	177.89	113.33	-4.11			0.90	1.24	126.17	-4.57	0.00	0.00	Vehicle	Vehicle	504.61	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.25**	**3.75**	-----	-----
	U$_7$ - L$_6$	184.40	124.26	-2.88			0.90	1.24	138.33	-3.21	0.00	0.00	Vehicle	Vehicle	539.45	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.02**	**3.37**	-----	-----
	U$_7$ - L$_7$	179.98	125.38	-4.64			0.90	1.24	139.59	-5.16	0.00	0.00	Vehicle	Vehicle	536.41	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.02**	**3.37**	-----	-----
	U$_9$ - L$_8$	268.90	116.71	-12.59			0.90	1.20	125.84	-13.58	0.00	0.00	Vehicle	Vehicle	622.22	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.31**	**5.51**	-----	-----
	U$_9$ - L$_{10}$	278.76	125.17	-12.27			0.90	1.20	134.95	-13.22	0.00	0.00	Vehicle	Vehicle	654.79	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.04**	**5.06**	-----	-----
	U$_{10}$ - L$_{11}$	284.98	122.11	-6.92			0.90	1.20	131.65	-7.46	0.00	0.00	Vehicle	Vehicle	655.72	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**2.85**	**4.75**	-----	-----
	U$_{11}$ - L$_{12}$	250.55	118.27	-11.32			0.90	1.20	127.51	-12.20	0.00	0.00	Vehicle	Vehicle	601.99	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.48**	**4.13**	-----	-----
	U$_{12}$ - L$_{13}$	189.62	109.55	-22.69			0.90	1.20	118.11	-24.46	0.00	0.00	Vehicle	Vehicle	502.41	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**2.24**	**3.74**	-----	-----
	U$_{13}$ - L$_{14}$	123.30	83.25	-31.45			0.90	1.20	89.76	-33.91	0.00	0.00	Vehicle	Vehicle	354.77	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.03**	**3.39**	-----	-----
	U$_{13}$ - L$_{14}$	-24.40	57.19	-60.64			0.90	1.20	61.67	-65.39	0.00	0.00	Vehicle	Vehicle	101.89	-173.39	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.40**	**7.33**	**2.79**	**4.65**
	U$_{15}$ - L$_{15}$	48.54	73.90	-42.00			0.90	1.20	79.68	-45.29	0.00	0.00	Vehicle	Vehicle	235.73	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.86**	**4.76**	-----	-----
	U$_{15}$ - L$_{16}$	146.57	108.30	-17.51			0.90	1.20	116.76	-18.88	0.00	0.00	Vehicle	Vehicle	443.54	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**1.94**	**3.24**	-----	-----
	U$_{16}$ - L$_{17}$	182.43	112.12	-15.09			0.90	1.20	120.89	-16.27	0.00	0.00	Vehicle	Vehicle	499.09	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.32**	**3.87**	-----	-----
	U$_{18}$ - L$_{18}$	223.79	119.83	-12.66			0.90	1.20	129.20	-13.65	0.00	0.00	Vehicle	Vehicle	570.86	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.26**	**3.76**	-----	-----
	U$_{20}$ - L$_{19}$	232.63	123.11	-10.59			0.90	1.20	132.73	-11.41	0.00	0.00	Vehicle	Vehicle	590.01	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.16**	**3.60**	-----	-----
	U$_1$ - L$_1$	213.47	110.16	-13.81			0.90	1.18	117.29	-14.70	0.00	0.00	Vehicle	Vehicle	531.62	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.89**	**4.81**	-----	-----
	U$_1$ - L$_2$	200.39	118.10	-16.22			0.90	1.18	125.74	-17.27	0.00	0.00	Vehicle	Vehicle	532.95	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.75**	**4.59**	-----	-----
	U$_3$ - L$_3$	172.76	105.60	-18.15			0.90	1.18	112.43	-19.32	0.00	0.00	Vehicle	Vehicle	468.19	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.55**	**4.25**	-----	-----
	U$_3$ - L$_4$	147.11	105.58	-21.35			0.90	1.18	112.41	-22.73	0.00	0.00	Vehicle	Vehicle	434.81	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**2.29**	**3.82**	-----	-----
	U$_5$ - L$_5$	49.07	88.23	-28.11			0.90	1.18	93.94	-29.92	0.00	0.00	Vehicle	Vehicle	267.32	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	67.41	28.25	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.42**	**4.03**	-----	-----
	U$_5$ - L$_6$	2.97	72.17	-42.12			0.90	1.18	76.84	-44.84	0.00	0.00	Vehicle	Vehicle	170.35	-93.31	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.32**	**5.53**	**4.40**	**7.33**
	U$_7$ - L$_7$	-85.72	48.67	-69.52			0.90	1.18	51.81	-74.02	0.00	0.00	Vehicle	Vehicle	-----	-271.81	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.22**	**3.70**
	U$_7$ - L$_8$	140.27	86.11	-41.76			0.90	1.18	91.68	-44.46	0.00	0.00	Vehicle	Vehicle	381.00	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.03**	**5.05**	-----	-----
	U$_9$ - L$_8$	204.17	108.15	-16.78			0.90	1.18	115.15	-17.86	0.00	0.00	Vehicle	Vehicle	514.91	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.64**	**4.39**	-----	-----
	U$_9$ - L$_9$	234.82	116.76	-9.83			0.90	1.18	124.32	-10.47	0.00	0.00	Vehicle	Vehicle	574.63	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.62**	**4.37**	-----	-----
	U$_{11}$ - L$_{10}$	263.04	127.66	-3.15			0.90	1.18	135.92	-3.35	0.00	0.00	Vehicle	Vehicle	636.44	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**2.57**	**4.28**	-----	-----
	U$_{11}$ - L$_{11}$	273.97	128.11	-3.86			0.90	1.18	136.40	-4.11	0.00	0.00	Vehicle	Vehicle	651.68	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**2.51**	**4.18**	-----	-----
	U$_{13}$ - L$_{12}$	254.88	124.96	-13.91			0.90	1.18	133.04	-14.80	0.00	0.00	Vehicle	Vehicle	619.59	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.36**	**3.93**	-----	-----
	U$_{13}$ - L$_{13}$	217.66	110.42	-16.13			0.90	1.18	117.57	-17.17	0.00	0.00	Vehicle	Vehicle	537.69	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.86**	**4.76**	-----	-----
	U$_{15}$ - L$_{15}$	110.03	89.88	-13.53			0.90	1.17	94.57	-14.24	0.00	0.00	Vehicle	Vehicle	347.93	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.43**	**5.72**	-----	-----
	U$_{15}$ - L$_{16}$	132.26	99.89	-14.40			0.90	1.17	105.10	-15.15	0.00	0.00	Vehicle	Vehicle	399.65	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.96**	**4.93**	-----	-----
	U$_{17}$ - L$_{17}$	172.87	116.11	-10.17			0.90	1.17	122.16	-10.70	0.00	0.00	Vehicle	Vehicle	489.40	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.64**	**4.40**	-----	-----
	U$_{17}$ - L$_{18}$	160.16	108.25	-12.11			0.90	1.17	113.89	-12.74	0.00	0.00	Vehicle	Vehicle	454.97	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.58**	**4.31**	-----	-----
	U$_{19}$ - L$_{19}$	152.33	112.34	-15.84			0.90	1.17	118.19	-16.66	0.00	0.00	Vehicle	Vehicle	454.11	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.53**	**4.22**	-----	-----
	U$_{20}$ - L$_{20}$	120.67	109.94	-19.22			0.90	1.17	115.67	-20.22	0.00	0.00	Vehicle	Vehicle	407.48	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**2.50**	**4.17**	-----	-----
	U$_{20}$ - L$_{21}$	76.10	86.28	-27.76			0.90	1.17	90.78	-29.20	0.00	0.00	Vehicle	Vehicle	295.61	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.32**	**3.87**	-----	-----
	U$_{21}$ - L$_{22}$	31.50	74.61	-44.56			0.90	1.17	78.49	-46.88	0.00	0.00	Vehicle	Vehicle	211.01	-60.62	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.03**	**5.05**	**4.57**	**7.62**
	U$_{23}$ - L$_{22}$	24.27	64.44	-60.35			0.90	1.17	67.80	-63.50	0.00	0.00	Vehicle	Vehicle	178.45	-106.03	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.57**	**5.95**	**3.28**	**5.47**
	U$_{23}$ - L$_{23}$	72.21	79.50	-37.93			0.90	1.17	83.64	-39.91	0.00	0.00	Vehicle	Vehicle	275.09	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.55**	**4.25**	-----	-----
	U$_{24}$ - L$_{24}$	112.05	100.58	-23.69			0.90	1.17	105.82	-24.92	0.00	0.00	Vehicle	Vehicle	374.95	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**2.79**	**4.64**	-----	-----
	U$_{25}$ - L$_{25}$	127.76	109.12	-20.00			0.90	1.17	114.80	-21.04	0.00	0.00	Vehicle	Vehicle	414.83	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.73**	**4.55**	-----	-----
	U$_{25}$ - L$_{26}$	132.58	117.58	-16.19			0.90	1.17	123.71	-17.04	0.00	0.00	Vehicle	Vehicle	440.39	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.51**	**4.19**	-----	-----
	U$_{27}$ - L$_{27}$	137.86	118.44	-13.95			0.90	1.17	124.61	-14.68	0.00	0.00	Vehicle	Vehicle	449.20	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.76**	**4.59**	-----	-----
	U$_{29}$ - L$_{28}$	122.74	113.69	-8.24			0.90	1.17	119.61	-8.67	0.00	0.00	Vehicle	Vehicle	418.73	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.65**	**4.41**	-----	-----
	U$_{29}$ - L$_{29}$	102.60	103.85	-10.02			0.90	1.17	109.26	-10.54	0.00	0.00	Vehicle	Vehicle	370.10	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.01**	**5.02**	-----	-----
	U$_{31}$ - L$_{31}$	139.84	96.06	-16.69			0.90	1.18	102.28	-17.77	0.00	0.00	Vehicle	Vehicle	403.39	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.74**	**6.24**	-----	-----
	U$_{31}$ - L$_{32}$	166.63	109.01	-18.41			0.90	1.18	116.06	-19.60	0.00	0.00	Vehicle	Vehicle	468.08	-----	0.00	29.18	29.1800	962.94	131.71	17.8750	2.8156	57.14	29.89	-741.48	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.97**	**4.95**	-----	-----
	U$_{33}$ - L$_{33}$	202.12	116.76	-10.80			0.90	1.18	124.31	-11.49	0.00	0.00	Vehicle	Vehicle	532.11	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.10**	**5.17**	-----	-----
	U$_{33}$ - L$_{34}$	201.72	123.66	-10.87			0.90	1.18	131.66	-11.57	0.00	0.00	Vehicle	Vehicle	547.49	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**2.93**	**4.88**	-----	-----
	U$_{35}$ - L$_{35}$	180.72	125.05	-9.57			0.90	1.18	133.14	-10.19	0.00	0.00	Vehicle	Vehicle	523.40	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (I+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.70	20.57	-102.04			0.75	1.24	19.08	-94.66	0.00	0.00	Vehicle	Vehicle	-----	-273.62	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**3.25**	**5.42**
		U_1 - U_2	-61.66	36.75	-147.87			0.75	1.24	34.09	-137.19	0.00	0.00	Vehicle	Vehicle	-----	-377.39	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**2.20**	**3.67**
		U_2 - U_3	-27.05	50.76	-162.46			0.75	1.24	47.09	-150.72	0.00	0.00	Vehicle	Vehicle	66.86	-361.72	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**8.90**	**14.83**	**2.14**	**3.57**
		U_3 - U_4	32.90	65.04	-143.24			0.75	1.24	60.34	-132.89	0.00	0.00	Vehicle	Vehicle	173.51	-245.16	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**6.35**	**10.58**	**2.70**	**4.50**
		U_4 - U_5	34.76	65.35	-141.96			0.75	1.24	60.63	-131.70	0.00	0.00	Vehicle	Vehicle	176.55	-240.17	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**6.30**	**10.50**	**2.73**	**4.56**
		U_5 - U_6	124.19	77.53	-115.04			0.75	1.24	71.93	-106.73	0.00	0.00	Vehicle	Vehicle	317.29	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	**4.56**	**7.60**	-----	-----
		U_6 - U_7	223.31	91.46	-73.86			0.75	1.24	84.85	-68.53	0.00	0.00	Vehicle	Vehicle	474.14	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	**4.11**	**6.85**	-----	-----
		U_7 - U_8	331.92	103.28	-25.34			0.75	1.24	95.82	-23.51	0.00	0.00	Vehicle	Vehicle	639.09	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**4.87**	**8.12**	-----	-----
		U_8 - U_9	267.71	87.83	-21.56			0.75	1.20	78.91	-19.37	0.00	0.00	Vehicle	Vehicle	519.00	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**5.10**	**8.50**	-----	-----
		U_9 - U_{10}	89.12	76.56	-73.22			0.75	1.20	68.79	-65.78	0.00	0.00	Vehicle	Vehicle	264.90	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**5.41**	**9.01**	-----	-----
		U_{10} - U_{11}	-76.89	65.74	-121.77			0.75	1.20	59.06	-109.41	0.00	0.00	Vehicle	Vehicle	-----	-337.02	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.85**	**4.76**
		U_{11} - U_{12}	-230.86	55.81	-164.93			0.75	1.20	50.15	-148.19	0.00	0.00	Vehicle	Vehicle	-----	-621.19	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	44.58	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	**2.36**	**3.93**
		U_{12} - U_{13}	-342.15	47.23	-202.20			0.75	1.20	42.44	-181.68	0.00	0.00	Vehicle	Vehicle	-----	-838.42	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	**2.63**	**4.38**
		U_{13} - U_{14}	-421.98	39.45	-218.15			0.75	1.20	35.45	-196.01	0.00	0.00	Vehicle	Vehicle	-----	-973.26	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.77**	**4.62**
		U_{14} - U_{15}	-422.87	39.28	-218.54			0.75	1.20	35.29	-196.36	0.00	0.00	Vehicle	Vehicle	-----	-975.18	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.76**	**4.61**
		U_{15} - U_{16}	-440.39	30.68	-227.46			0.75	1.20	27.56	-204.37	0.00	0.00	Vehicle	Vehicle	-----	-1015.32	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.61	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.60**	**4.34**
		U_{16} - U_{17}	-422.93	23.33	-219.19			0.75	1.20	20.96	-196.94	0.00	0.00	Vehicle	Vehicle	-----	-976.52	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.76**	**4.59**
		U_{17} - U_{18}	-341.45	15.65	-175.08			0.75	1.20	14.06	-157.31	0.00	0.00	Vehicle	Vehicle	-----	-784.72	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	43.43	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.40**	**4.00**
		U_{18} - U_{19}	-247.63	9.52	-126.15			0.75	1.20	8.55	-113.35	0.00	0.00	Vehicle	Vehicle	-----	-567.50	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	42.59	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.28**	**3.79**
		U_{19} - U_{20}	-132.06	4.72	-63.83			0.75	1.20	4.24	-57.35	0.00	0.00	Vehicle	Vehicle	-----	-295.94	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**5.71**	**9.51**
	Structure 2	U_0 - U_1	-131.63	10.54	-70.36			0.75	1.18	9.36	-62.42	0.00	0.00	Vehicle	Vehicle	-----	-306.37	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**4.96**	**8.26**
		U_1 - U_2	-247.12	22.57	-131.48			0.75	1.18	20.02	-116.65	0.00	0.00	Vehicle	Vehicle	-----	-574.00	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.80**	**4.67**
		U_2 - U_3	-347.28	34.97	-177.87			0.75	1.18	31.03	-157.81	0.00	0.00	Vehicle	Vehicle	-----	-793.38	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**2.78**	**4.63**
		U_3 - U_4	-437.20	48.98	-213.42			0.75	1.18	43.46	-189.36	0.00	0.00	Vehicle	Vehicle	-----	-978.63	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**2.86**	**4.77**
		U_4 - U_5	-468.83	60.06	-232.64			0.75	1.18	53.29	-206.41	0.00	0.00	Vehicle	Vehicle	-----	-1056.70	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.96**	**4.93**
		U_5 - U_6	-471.14	71.02	-236.93			0.75	1.18	63.02	-210.22	0.00	0.00	Vehicle	Vehicle	-----	-1067.96	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.90**	**4.83**
		U_6 - U_7	-414.50	79.18	-222.93			0.75	1.18	70.26	-197.79	0.00	0.00	Vehicle	Vehicle	-----	-967.40	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**2.81**	**4.69**
		U_7 - U_8	-413.54	79.30	-222.16			0.75	1.18	70.35	-197.11	0.00	0.00	Vehicle	Vehicle	-----	-964.69	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**2.82**	**4.71**
		U_8 - U_9	-322.06	86.70	-201.26			0.75	1.18	76.93	-178.56	0.00	0.00	Vehicle	Vehicle	-----	-805.56	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.70**	**4.50**
		U_9 - U_{10}	-182.16	91.12	-168.27			0.75	1.18	80.84	-149.29	0.00	0.00	Vehicle	Vehicle	-----	-560.28	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**2.83**	**4.72**
		U_{10} - U_{11}	-32.61	96.66	-131.85			0.75	1.18	85.76	-116.99	0.00	0.00	Vehicle	Vehicle	143.42	-295.87	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**6.60**	**11.00**	**3.78**	**6.30**
		U_{11} - U_{12}	133.57	99.85	-91.57			0.75	1.18	88.59	-81.25	0.00	0.00	Vehicle	Vehicle	365.58	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	**5.26**	**8.77**	-----	-----
		U_{12} - U_{13}	289.98	102.70	-50.88			0.75	1.18	91.12	-45.14	0.00	0.00	Vehicle	Vehicle	574.39	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	**5.59**	**9.32**	-----	-----
		U_{13} - U_{14}	434.77	104.88	-26.95			0.75	1.18	93.05	-23.91	0.00	0.00	Vehicle	Vehicle	766.81	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**7.28**	**12.14**	-----	-----
		U_{14} - U_{15}	474.48	88.68	-22.71			0.75	1.17	77.75	-19.91	0.00	0.00	Vehicle	Vehicle	785.27	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**8.41**	**14.02**	-----	-----
		U_{15} - U_{16}	383.31	85.62	-46.03			0.75	1.17	75.07	-40.36	0.00	0.00	Vehicle	Vehicle	660.96	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**7.11**	**11.84**	-----	-----
		U_{16} - U_{17}	279.61	80.71	-74.84			0.75	1.17	70.76	-65.62	0.00	0.00	Vehicle	Vehicle	516.81	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	**6.48**	**10.80**	-----	-----
		U_{17} - U_{18}	172.67	75.07	-104.51			0.75	1.17	65.82	-91.63	0.00	0.00	Vehicle	Vehicle	367.07	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**5.41**	**9.02**	-----	-----
		U_{18} - U_{19}	74.40	66.98	-134.95			0.75	1.17	58.73	-118.32	0.00	0.00	Vehicle	Vehicle	223.96	-159.63	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	**7.07**	**11.78**	**3.66**	**6.10**
		U_{19} - U_{20}	-9.98	58.61	-154.57			0.75	1.17	51.39	-135.52	0.00	0.00	Vehicle	Vehicle	98.37	-306.60	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	**9.69**	**16.16**	**3.02**	**5.04**
	Structure 3	U_0 - U_{21}	-62.02	49.14	-173.61			0.75	1.17	43.08	-152.21	0.00	0.00	Vehicle	Vehicle	-----	-410.41	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**3.05**	**5.09**
		U_{21} - U_{22}	-88.69	42.51	-175.20			0.75	1.17	37.27	-153.60	0.00	0.00	Vehicle	Vehicle	-----	-448.10	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.92**	**4.87**
		U_{22} - U_{23}	-88.87	42.69	-174.63			0.75	1.17	37.43	-153.11	0.00	0.00	Vehicle	Vehicle	-----	-447.25	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.93**	**4.88**
		U_{23} - U_{24}	-76.60	52.34	-174.22			0.75	1.17	45.89	-152.75	0.00	0.00	Vehicle	Vehicle	-----	-430.53	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**2.99**	**4.98**
		U_{24} - U_{25}	-37.55	61.01	-160.28			0.75	1.17	53.49	-140.52	0.00	0.00	Vehicle	Vehicle	67.07	-353.28	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	**9.62**	**16.04**	**2.80**	**4.66**
		U_{25} - U_{26}	37.36	68.75	-138.07			0.75	1.17	60.27	-121.05	0.00	0.00	Vehicle	Vehicle	179.16	-213.71	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	**7.26**	**12.09**	**3.39**	**5.66**
		U_{26} - U_{27}	128.18	76.55	-105.21			0.75	1.17	67.11	-92.24	0.00	0.00	Vehicle	Vehicle	312.05	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**5.70**	**9.51**	-----	-----
		U_{27} - U_{28}	233.91	81.67	-77.01			0.75	1.17	71.60	-67.52	0.00	0.00	Vehicle	Vehicle	459.22	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	**6.79**	**11.31**	-----	-----
		U_{28} - U_{29}	337.95	86.24	-42.38			0.75	1.17	75.61	-37.16	0.00	0.00	Vehicle	Vehicle	603.14	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**7.42**	**12.36**	-----	-----
		U_{29} - U_{30}	437.48	89.41	-21.20			0.75	1.17	78.39	-18.59	0.00	0.00	Vehicle	Vehicle	738.57	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**8.62**	**14.37**	-----	-----
		U_{30} - U_{31}	420.86	106.28	-24.96			0.75	1.18	94.29	-22.14	0.00	0.00	Vehicle	Vehicle	751.42	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**7.28**	**12.13**	-----	-----
		U_{31} - U_{32}	300.88	104.52	-49.41			0.75	1.18	92.73	-43.84	0.00	0.00	Vehicle	Vehicle	592.06	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	13.65	-11.20			0.75	1.24	12.66	-10.39	0.00	0.00	Vehicle	Vehicle	38.46	-11.50	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**23.41**	**39.02**	**24.94**	**41.57**
		L$_1$ - L$_2$	50.83	96.53	-21.42			0.75	1.24	89.56	-19.87	0.00	0.00	Vehicle	Vehicle	260.13	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.03**	**5.04**	-----	-----
		L$_2$ - L$_3$	61.27	133.78	-36.51			0.75	1.24	124.11	-33.88	0.00	0.00	Vehicle	Vehicle	348.56	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**2.94**	**4.89**	-----	-----
		L$_3$ - L$_4$	25.72	146.27	-50.43			0.75	1.24	135.70	-46.79	0.00	0.00	Vehicle	Vehicle	327.46	-67.94	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**2.84**	**4.74**	**7.55**	**12.58**
		L$_4$ - L$_5$	-118.55	102.96	-73.88			0.75	1.24	95.52	-68.54	0.00	0.00	Vehicle	Vehicle	-----	-302.63	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.34**	**5.57**
		L$_5$ - L$_6$	-217.97	63.55	-88.21			0.75	1.24	58.96	-81.83	0.00	0.00	Vehicle	Vehicle	-----	-460.66	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.24**	**5.40**
		L$_6$ - L$_7$	-320.57	20.73	-101.24			0.75	1.24	19.23	-93.92	0.00	0.00	Vehicle	Vehicle	-----	-620.23	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.99**	**6.65**
		L$_7$ - L$_8$	-417.42	0.14	-109.08			0.75	1.24	0.13	-101.20	0.00	0.00	Vehicle	Vehicle	-----	-761.91	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.64**	**7.73**
		L$_8$ - L$_9$	-411.08	0.00	-116.71			0.75	1.20	0.00	-104.86	0.00	0.00	Vehicle	Vehicle	-----	-761.61	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.51**	**7.52**
		L$_9$ - L$_{10}$	-247.97	18.85	-83.34			0.75	1.20	16.94	-74.88	0.00	0.00	Vehicle	Vehicle	-----	-484.60	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.59**	**9.31**
		L$_{10}$ - L$_{11}$	-65.37	71.18	-72.39			0.75	1.20	63.95	-65.04	0.00	0.00	Vehicle	Vehicle	-----	-225.90	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.01**	**6.69**
		L$_{11}$ - L$_{12}$	101.81	112.63	-61.78			0.75	1.20	101.20	-55.51	0.00	0.00	Vehicle	Vehicle	351.61	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.92**	**4.86**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	152.75	-53.06			0.75	1.20	137.25	-47.68	0.00	0.00	Vehicle	Vehicle	640.66	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.11**	**5.18**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	187.74	-44.66			0.75	1.20	168.68	-40.13	0.00	0.00	Vehicle	Vehicle	851.42	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.32**	**5.54**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	208.49	-29.18			0.75	1.20	187.33	-26.21	0.00	0.00	Vehicle	Vehicle	1025.39	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.52**	**5.86**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	197.01	-21.81			0.75	1.20	177.02	-19.60	0.00	0.00	Vehicle	Vehicle	981.84	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.78**	**6.29**	-----	-----
		L$_{16}$ - L$_{17}$	381.61	150.79	-14.51			0.75	1.20	135.49	-13.04	0.00	0.00	Vehicle	Vehicle	789.65	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.70**	**6.16**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	102.73	-9.66			0.75	1.20	92.30	-8.68	0.00	0.00	Vehicle	Vehicle	575.93	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.86**	**6.44**	-----	-----
		L$_{18}$ - L$_{19}$	176.31	48.66	-8.20			0.75	1.20	43.72	-7.37	0.00	0.00	Vehicle	Vehicle	323.93	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.48**	**7.46**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	18.36	-28.06			0.75	1.20	16.50	-25.21	0.00	0.00	Vehicle	Vehicle	126.39	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**15.74**	**26.24**	-----	-----
		L$_0$ - L$_1$	24.42	8.72	-12.43			0.75	1.18	7.74	-11.03	0.00	0.00	Vehicle	Vehicle	48.51	-----	1.88	20.08	18.2000	662.64	131.71	10.8828	6.9064	14.18	32.81	-559.98	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**37.63**	**62.72**	-----	-----
		L$_1$ - L$_2$	138.42	70.99	-11.70			0.75	1.18	62.98	-10.38	0.00	0.00	Vehicle	Vehicle	316.41	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**4.71**	**7.86**	-----	-----
		L$_2$ - L$_3$	252.76	133.69	-24.46			0.75	1.18	118.61	-21.70	0.00	0.00	Vehicle	Vehicle	585.58	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.66**	**6.10**	-----	-----
		L$_3$ - L$_4$	352.26	176.69	-36.89			0.75	1.18	156.77	-32.73	0.00	0.00	Vehicle	Vehicle	797.61	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.66**	**6.10**	-----	-----
		L$_4$ - L$_5$	447.15	208.07	-51.01			0.75	1.18	184.61	-45.26	0.00	0.00	Vehicle	Vehicle	981.28	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.91**	**6.52**	-----	-----
		L$_5$ - L$_6$	477.91	218.92	-61.99			0.75	1.18	194.23	-55.00	0.00	0.00	Vehicle	Vehicle	1042.13	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.06**	**6.77**	-----	-----
		L$_6$ - L$_7$	482.67	222.28	-72.91			0.75	1.18	197.22	-64.69	0.00	0.00	Vehicle	Vehicle	1054.78	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**4.06**	**6.77**	-----	-----
		L$_7$ - L$_8$	336.57	188.65	-88.11			0.75	1.18	167.38	-78.17	0.00	0.00	Vehicle	Vehicle	800.20	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.60**	**6.00**	-----	-----
		L$_8$ - L$_9$	196.00	154.35	-91.83			0.75	1.18	136.95	-81.47	0.00	0.00	Vehicle	Vehicle	551.53	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**3.96**	**6.60**	-----	-----
		L$_9$ - L$_{10}$	45.53	117.09	-96.50			0.75	1.18	103.89	-85.62	0.00	0.00	Vehicle	Vehicle	284.28	-126.31	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**4.71**	**7.86**	**5.42**	**9.03**
		L$_{10}$ - L$_{11}$	-126.32	77.77	-98.93			0.75	1.18	69.00	-87.77	0.00	0.00	Vehicle	Vehicle	-----	-354.39	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**3.58**	**5.97**	-----	-----
		L$_{11}$ - L$_{12}$	-284.95	42.53	-102.00			0.75	1.18	37.73	-90.50	0.00	0.00	Vehicle	Vehicle	-----	-566.52	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**4.28**	**7.14**	-----	-----
		L$_{12}$ - L$_{13}$	-433.89	29.02	-109.36			0.75	1.18	25.74	-97.03	0.00	0.00	Vehicle	Vehicle	-----	-774.28	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**5.20**	**8.67**	-----	-----
		L$_{13}$ - L$_{14}$	-552.76	28.24	-111.13			0.75	1.18	25.06	-98.60	0.00	0.00	Vehicle	Vehicle	-----	-932.22	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**5.86**	**9.76**	-----	-----
		L$_{14}$ - L$_{15}$	-573.53	28.05	-117.53			0.75	1.17	24.59	-103.04	0.00	0.00	Vehicle	Vehicle	-----	-968.84	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**5.48**	**9.14**	-----	-----
		L$_{15}$ - L$_{16}$	-493.00	24.45	-92.90			0.75	1.17	21.44	-81.45	0.00	0.00	Vehicle	Vehicle	-----	-817.36	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**5.76**	**9.61**	-----	-----
		L$_{16}$ - L$_{17}$	-395.34	37.92	-86.86			0.75	1.17	33.24	-76.16	0.00	0.00	Vehicle	Vehicle	-----	-678.95	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**5.14**	**8.56**	-----	-----
		L$_{17}$ - L$_{18}$	-288.08	69.34	-81.96			0.75	1.17	60.79	-71.86	0.00	0.00	Vehicle	Vehicle	-----	-530.20	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.67**	**6.11**	-----	-----
		L$_{18}$ - L$_{19}$	-175.85	98.37	-75.89			0.75	1.17	86.24	-66.54	0.00	0.00	Vehicle	Vehicle	-----	-372.77	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.59**	**5.98**
		L$_{19}$ - L$_{20}$	-78.08	121.11	-67.88			0.75	1.17	106.18	-59.52	0.00	0.00	Vehicle	Vehicle	128.56	-230.45	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.28**	**7.13**	**5.00**	**8.33**
	Structure 2	L$_{20}$ - L$_{21}$	7.59	146.12	-59.68			0.75	1.17	128.11	-52.32	0.00	0.00	Vehicle	Vehicle	287.45	-103.49	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.48**	**7.47**	**9.42**	**15.71**
		L$_{21}$ - L$_{22}$	59.10	164.76	-50.17			0.75	1.17	144.45	-43.99	0.00	0.00	Vehicle	Vehicle	389.81	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.76**	**6.27**	-----	-----
		L$_{22}$ - L$_{23}$	72.03	166.14	-53.68			0.75	1.17	145.66	-47.06	0.00	0.00	Vehicle	Vehicle	409.23	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.68**	**6.13**	-----	-----
		L$_{23}$ - L$_{24}$	33.57	147.85	-62.26			0.75	1.17	129.62	-54.59	0.00	0.00	Vehicle	Vehicle	324.49	-74.63	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.31**	**7.18**	**9.32**	**15.53**
		L$_{24}$ - L$_{25}$	-45.06	119.68	-69.18			0.75	1.17	104.93	-60.66	0.00	0.00	Vehicle	Vehicle	168.77	-190.00	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.14**	**6.90**	**5.23**	**8.71**
		L$_{25}$ - L$_{26}$	-134.95	85.11	-75.92			0.75	1.17	74.62	-66.56	0.00	0.00	Vehicle	Vehicle	-----	-319.65	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.95**	**6.59**
		L$_{26}$ - L$_{27}$	-245.92	58.02	-79.93			0.75	1.17	50.87	-70.08	0.00	0.00	Vehicle	Vehicle	-----	-471.54	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**4.12**	**6.87**
		L$_{27}$ - L$_{28}$	-351.86	28.53	-84.27			0.75	1.17	25.02	-73.88	0.00	0.00	Vehicle	Vehicle	-----	-617.50	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.65**	**9.42**
		L$_{28}$ - L$_{29}$	-458.41	20.13	-96.79			0.75	1.17	17.65	-84.86	0.00	0.00	Vehicle	Vehicle	-----	-779.80	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.78**	**9.63**
		L$_{29}$ - L$_{30}$	-542.36	23.05	-124.78			0.75	1.17	20.21	-109.40	0.00	0.00	Vehicle	Vehicle	-----	-942.11	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.34**	**8.89**
		L$_{30}$ - L$_{31}$	-514.21	27.45	-108.70			0.75	1.18	24.36	-96.44	0.00	0.00	Vehicle	Vehicle	-----	-877.44	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.22**	**10.37**
		L$_{31}$ - L$_{32}$	-411.27	28.41	-101.96			0.75	1.18	25.21	-90.47	0.00	0.00	Vehicle	Vehicle	-----	-730.66	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.68	14.46	-200.38			0.75	1.24	13.42	-185.90	0.00	0.00	Vehicle	Vehicle	-----	-490.76	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	38.00	Fail	6.56	12.00	Pass	-----	-----	-----	-----	-----	0.89	1.49
		U_1 - L_1	-24.09	13.98	-86.25			0.75	1.24	12.97	-80.02	0.00	0.00	Vehicle	Vehicle	-----	-204.69	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.46	4.10
		U_2 - L_2	12.87	11.70	-64.73			0.75	1.24	10.85	-60.05	0.00	0.00	Vehicle	Vehicle	40.25	-113.37	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	22.94	38.23	3.65	6.08
		U_3 - L_3	37.37	26.20	-50.77			0.75	1.24	24.31	-47.10	0.00	0.00	Vehicle	Vehicle	101.25	-53.47	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	9.64	16.06	4.95	8.25
		U_4 - L_4	-15.55	7.95	-66.25			0.75	1.24	7.37	-61.46	0.00	0.00	Vehicle	Vehicle	-----	-153.38	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.26	5.44
		U_5 - L_5	-92.59	17.18	-84.16			0.75	1.24	15.94	-78.08	0.00	0.00	Vehicle	Vehicle	-----	-289.53	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	2.56	4.26
		U_6 - L_6	-117.07	0.93	-108.16			0.75	1.24	0.86	-100.35	0.00	0.00	Vehicle	Vehicle	-----	-369.60	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	2.34	3.90
		U_7 - L_7	-127.52	0.26	-126.64			0.75	1.24	0.24	-117.49	0.00	0.00	Vehicle	Vehicle	-----	-420.32	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	42.26	Pass	10.00	12.00	Pass	-----	-----	1.70	2.83
		U_8 - L_8	-368.71	3.84	-173.80			0.75	1.24	3.56	-161.24	0.00	0.00	Vehicle	Vehicle	-----	-828.68	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	44.90	Pass	5.96	12.00	Pass	-----	-----	2.59	4.32
		U_9 - L_9	-214.56	6.39	-135.74			0.75	1.20	5.74	-121.96	0.00	0.00	Vehicle	Vehicle	-----	-543.17	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.45	Pass	9.60	12.00	Pass	-----	-----	2.12	3.53
		U_{10} - L_{10}	-198.68	1.66	-122.84			0.75	1.20	1.49	-110.37	0.00	0.00	Vehicle	Vehicle	-----	-497.42	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	2.96	4.93
		U_{11} - L_{11}	-171.40	5.89	-107.59			0.75	1.20	5.29	-96.67	0.00	0.00	Vehicle	Vehicle	-----	-432.26	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.92	4.86
		U_{12} - L_{12}	-128.37	17.15	-96.83			0.75	1.20	15.41	-87.00	0.00	0.00	Vehicle	Vehicle	-----	-355.39	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	2.79	4.65
		U_{13} - L_{13}	-96.65	24.36	-86.63			0.75	1.20	21.89	-77.84	0.00	0.00	Vehicle	Vehicle	-----	-294.28	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	2.19	3.65
		U_{14} - L_{14}	-11.04	8.76	-59.69			0.75	1.20	7.87	-53.63	0.00	0.00	Vehicle	Vehicle	-----	-130.56	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.73	6.22
		U_{15} - L_{15}	-2.47	44.16	-64.55			0.75	1.20	39.68	-57.99	0.00	0.00	Vehicle	Vehicle	82.75	-128.87	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	6.51	10.84	3.53	5.88
		U_{16} - L_{16}	-31.27	31.95	-74.49			0.75	1.20	28.70	-66.93	0.00	0.00	Vehicle	Vehicle	-----	-185.67	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	2.78	4.63
		U_{17} - L_{17}	-105.05	13.61	-93.73			0.75	1.20	12.23	-84.21	0.00	0.00	Vehicle	Vehicle	-----	-319.03	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	2.18	3.64
		U_{18} - L_{18}	-126.74	6.62	-110.52			0.75	1.20	5.95	-99.30	0.00	0.00	Vehicle	Vehicle	-----	-379.92	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	2.41	4.01
		U_{19} - L_{19}	-166.77	6.19	-116.46			0.75	1.20	5.56	-104.64	0.00	0.00	Vehicle	Vehicle	-----	-443.51	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.58	4.30
		U_{20} - L_{20}	-184.59	5.76	-118.85			0.75	1.20	5.17	-106.78	0.00	0.00	Vehicle	Vehicle	-----	-471.33	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.23	3.72
	Structure 2	U_0 - L_0	-203.59	15.76	-127.26			0.75	1.18	13.98	-112.91	0.00	0.00	Vehicle	Vehicle	-----	-509.30	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	2.33	3.89
		U_1 - L_1	-176.11	17.02	-118.85			0.75	1.18	15.10	-105.45	0.00	0.00	Vehicle	Vehicle	-----	-457.41	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	2.82	4.71
		U_2 - L_2	-137.55	16.11	-112.30			0.75	1.18	14.30	-99.64	0.00	0.00	Vehicle	Vehicle	-----	-394.70	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.63	4.38
		U_3 - L_3	-117.62	16.74	-99.13			0.75	1.18	14.85	-87.96	0.00	0.00	Vehicle	Vehicle	-----	-343.47	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	2.28	3.80
		U_4 - L_4	-50.97	20.93	-84.70			0.75	1.18	18.57	-75.15	0.00	0.00	Vehicle	Vehicle	-----	-229.08	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	2.30	3.84
		U_5 - L_5	-13.78	33.90	-74.24			0.75	1.18	30.08	-65.87	0.00	0.00	Vehicle	Vehicle	47.26	-160.63	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	8.81	14.68	2.98	4.96
		U_6 - L_6	45.47	47.92	-54.05			0.75	1.18	42.52	-47.96	0.00	0.00	Vehicle	Vehicle	151.23	-44.80	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	5.39	8.99	4.85	8.08
		U_7 - L_7	-22.33	4.78	-67.03			0.75	1.18	4.24	-59.47	0.00	0.00	Vehicle	Vehicle	-----	-157.88	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.21	5.35
		U_8 - L_8	-120.08	32.86	-80.49			0.75	1.18	29.16	-71.41	0.00	0.00	Vehicle	Vehicle	-----	-310.83	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	3.45	5.75
		U_9 - L_9	-177.03	25.84	-91.75			0.75	1.18	22.93	-81.41	0.00	0.00	Vehicle	Vehicle	-----	-406.51	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.79	6.32
		U_{10} - L_{10}	-205.88	19.27	-105.95			0.75	1.18	17.10	-94.00	0.00	0.00	Vehicle	Vehicle	-----	-471.31	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.66	6.09
		U_{11} - L_{11}	-239.23	12.40	-117.46			0.75	1.18	11.00	-104.22	0.00	0.00	Vehicle	Vehicle	-----	-536.81	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.03	5.04
		U_{12} - L_{12}	-257.95	2.85	-118.63			0.75	1.18	2.53	-105.25	0.00	0.00	Vehicle	Vehicle	-----	-563.38	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	3.10	5.17
		U_{13} - L_{13}	-243.82	7.98	-128.38			0.75	1.18	7.08	-113.90	0.00	0.00	Vehicle	Vehicle	-----	-563.76	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	2.35	3.92
		U_{14} - L_{14}	-420.85	7.74	-160.72			0.75	1.18	6.86	-142.60	0.00	0.00	Vehicle	Vehicle	-----	-856.08	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	2.65	4.42
		U_{15} - L_{15}	-158.83	13.28	-125.15			0.75	1.17	11.65	-109.73	0.00	0.00	Vehicle	Vehicle	-----	-444.22	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.91	4.84
		U_{16} - L_{16}	-174.02	10.37	-126.71			0.75	1.17	9.09	-111.10	0.00	0.00	Vehicle	Vehicle	-----	-466.94	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	2.66	4.43
		U_{17} - L_{17}	-156.46	11.91	-117.93			0.75	1.17	10.44	-103.40	0.00	0.00	Vehicle	Vehicle	-----	-427.42	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.71	4.51
		U_{18} - L_{18}	-142.21	12.61	-104.14			0.75	1.17	11.05	-91.31	0.00	0.00	Vehicle	Vehicle	-----	-382.70	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.86	4.76
		U_{19} - L_{19}	-113.66	19.87	-102.71			0.75	1.17	17.42	-90.05	0.00	0.00	Vehicle	Vehicle	-----	-342.86	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	2.65	4.42
		U_{20} - L_{20}	-76.51	26.66	-88.20			0.75	1.17	23.38	-77.32	0.00	0.00	Vehicle	Vehicle	-----	-267.00	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	2.32	3.86
		U_{21} - L_{21}	-45.77	31.33	-73.20			0.75	1.17	27.47	-64.18	0.00	0.00	Vehicle	Vehicle	-----	-198.56	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	2.76	4.59
		U_{22} - L_{22}	-17.72	7.84	-63.21			0.75	1.17	6.87	-55.42	0.00	0.00	Vehicle	Vehicle	-----	-143.10	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.51	5.85
		U_{23} - L_{23}	-30.69	38.65	-66.31			0.75	1.17	33.89	-58.13	0.00	0.00	Vehicle	Vehicle	33.53	-165.85	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	8.12	13.53	3.20	5.33
		U_{24} - L_{24}	-62.06	35.84	-72.59			0.75	1.17	31.42	-63.64	0.00	0.00	Vehicle	Vehicle	-----	-218.58	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	2.95	4.92
		U_{25} - L_{25}	-103.15	25.70	-94.58			0.75	1.17	22.54	-82.93	0.00	0.00	Vehicle	Vehicle	-----	-313.76	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	2.95	4.92
		U_{26} - L_{26}	-134.38	17.17	-103.17			0.75	1.17	15.06	-90.45	0.00	0.00	Vehicle	Vehicle	-----	-370.67	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.94	4.90
		U_{27} - L_{27}	-156.03	10.36	-108.08			0.75	1.17	9.09	-94.76	0.00	0.00	Vehicle	Vehicle	-----	-408.15	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	2.96	4.93
		U_{28} - L_{28}	-179.40	8.91	-121.20			0.75	1.17	7.81	-106.26	0.00	0.00	Vehicle	Vehicle	-----	-463.46	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	2.75	4.58
		U_{29} - L_{29}	-171.60	6.29	-127.94			0.75	1.17	5.51	-112.17	0.00	0.00	Vehicle	Vehicle	-----	-466.12	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	2.77	4.62
		U_{30} - L_{30}	-393.29	11.53	-158.87			0.75	1.18	10.23	-140.96	0.00	0.00	Vehicle	Vehicle	-----	-816.69	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	2.80	4.67
		U_{31} - L_{31}	-203.49	13.44	-134.84			0.75	1.18	11.92	-119.63	0.00	0.00	Vehicle	Vehicle	-----	-523.74	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	2.44	4.07
		U_{32} - L_{32}	-222.61	5.34	-130.15			0.75	1.18	4.74	-115.47	0.00	0.00	Vehicle	Vehicle	-----	-539.59	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	3.01	5.02
		U_{33} - L_{33}	-211.72	4.26	-119.67			0.75	1.18	3.78	-106.18	0.00	0.00	Vehicle	Vehicle	-----	-505.28	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.13	5.21
		U_{34} - L_{34}	-191.28	11.81	-115.78			0.75	1.18	10.47	-102.72	0.00	0.00	Vehicle	Vehicle	-----	-471.23	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.43	5.72
		U_{35} - L_{35}	-171.54	17.90	-106.53			0.75	1.18	15.88	-94.52	0.00	0.00	Vehicle	Vehicle	-----	-427.78	0.00	33.27	33.2657	1097.77	131.71	11.3776

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.29	131.58	-21.77			0.75	1.24	122.07	-20.19	0.00	0.00	Vehicle	Vehicle	333.77	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**2.62**	**4.37**	-----	-----
		U_1 - L_2	10.80	94.69	-19.99			0.75	1.24	87.85	-18.55	0.00	0.00	Vehicle	Vehicle	204.38	-26.14	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**2.85**	**4.75**	**11.20**	**18.66**
		U_2 - L_3	-44.05	77.04	-40.97			0.75	1.24	71.47	-38.01	0.00	0.00	Vehicle	Vehicle	97.58	-139.62	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.96**	**6.60**	**4.58**	**7.63**
		U_3 - L_4	-76.77	56.24	-88.77			0.75	1.24	52.18	-82.36	0.00	0.00	Vehicle	Vehicle	-----	-278.24	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	44.36	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**1.89**	**3.15**
		U_4 - L_4	118.48	101.13	-41.54			0.75	1.24	93.82	-38.54	0.00	0.00	Vehicle	Vehicle	357.31	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.60**	**4.33**	-----	-----
		U_5 - L_5	137.62	110.63	-22.30			0.75	1.24	102.63	-20.69	0.00	0.00	Vehicle	Vehicle	401.27	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U_6 - L_6	157.39	127.11	-1.59			0.75	1.24	117.93	-1.48	0.00	0.00	Vehicle	Vehicle	460.11	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.51**	**4.18**	-----	-----
		U_7 - L_7	149.33	137.86	-0.30			0.75	1.24	127.90	-0.27	0.00	0.00	Vehicle	Vehicle	471.24	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.35**	**3.92**	-----	-----
		U_8 - L_9	249.21	147.79	-7.31			0.75	1.20	132.79	-6.56	0.00	0.00	Vehicle	Vehicle	611.69	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.22**	**5.37**	-----	-----
		U_9 - L_{10}	260.39	143.13	-5.79			0.75	1.20	128.61	-5.20	0.00	0.00	Vehicle	Vehicle	617.15	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.27**	**5.46**	-----	-----
		U_{10} - L_{11}	236.43	134.77	-7.66			0.75	1.20	121.09	-6.88	0.00	0.00	Vehicle	Vehicle	569.72	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**3.34**	**5.57**	-----	-----
		U_{11} - L_{12}	212.05	124.35	-23.10			0.75	1.20	111.73	-20.76	0.00	0.00	Vehicle	Vehicle	517.75	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.04**	**5.06**	-----	-----
		U_{12} - L_{13}	151.78	116.20	-34.72			0.75	1.20	104.41	-31.19	0.00	0.00	Vehicle	Vehicle	423.53	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**2.75**	**4.59**	-----	-----
		U_{13} - L_{14}	108.73	95.20	-50.39			0.75	1.20	85.54	-45.28	0.00	0.00	Vehicle	Vehicle	326.68	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.24**	**3.73**	-----	-----
		U_{15} - L_{14}	-24.56	62.38	-82.51			0.75	1.20	56.04	-74.14	0.00	0.00	Vehicle	Vehicle	89.50	-192.56	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.84**	**8.07**	**2.46**	**4.10**
		U_{16} - L_{15}	23.90	83.18	-59.50			0.75	1.20	74.73	-53.46	0.00	0.00	Vehicle	Vehicle	192.99	-84.75	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.24**	**5.40**	**3.91**	**6.52**
		U_{17} - L_{16}	120.04	103.97	-31.75			0.75	1.20	93.41	-28.53	0.00	0.00	Vehicle	Vehicle	358.44	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.60**	**4.33**	-----	-----
		U_{18} - L_{17}	144.84	109.90	-16.13			0.75	1.20	98.75	-14.49	0.00	0.00	Vehicle	Vehicle	402.25	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{19} - L_{18}	193.27	119.19	-8.01			0.75	1.20	107.09	-7.20	0.00	0.00	Vehicle	Vehicle	483.28	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.90**	**4.83**	-----	-----
		U_{20} - L_{19}	193.75	121.72	-6.54			0.75	1.20	109.37	-5.88	0.00	0.00	Vehicle	Vehicle	488.83	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.83**	**4.72**	-----	-----
		U_0 - L_1	202.60	123.03	-17.75			0.75	1.18	109.16	-15.75	0.00	0.00	Vehicle	Vehicle	499.88	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.16**	**5.27**	-----	-----
		U_1 - L_2	190.84	121.56	-19.87			0.75	1.18	107.86	-17.63	0.00	0.00	Vehicle	Vehicle	481.77	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_2 - L_3	155.90	112.77	-19.32			0.75	1.18	100.05	-17.15	0.00	0.00	Vehicle	Vehicle	419.45	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.97**	**4.94**	-----	-----
		U_3 - L_4	134.06	110.36	-21.50			0.75	1.18	97.92	-19.08	0.00	0.00	Vehicle	Vehicle	386.43	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U_4 - L_5	46.01	91.83	-42.66			0.75	1.18	81.48	-37.85	0.00	0.00	Vehicle	Vehicle	236.34	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.81**	**4.68**	-----	-----
		U_5 - L_6	3.43	74.20	-59.47			0.75	1.18	65.84	-52.77	0.00	0.00	Vehicle	Vehicle	147.10	-109.87	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.87**	**6.44**	**3.74**	**6.24**
		U_6 - L_7	-84.31	62.72	-77.83			0.75	1.18	55.65	-69.05	0.00	0.00	Vehicle	Vehicle	-----	-259.22	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.39**	**3.98**
		U_0 - L_7	137.33	93.07	-56.70			0.75	1.18	82.58	-50.31	0.00	0.00	Vehicle	Vehicle	357.44	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.39**	**5.64**	-----	-----
		U_8 - L_8	210.92	104.57	-40.23			0.75	1.18	92.78	-35.70	0.00	0.00	Vehicle	Vehicle	475.21	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.23**	**5.38**	-----	-----
		U_{10} - L_9	236.39	110.16	-30.91			0.75	1.18	97.74	-27.43	0.00	0.00	Vehicle	Vehicle	519.08	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.32**	**5.54**	-----	-----
		U_{11} - L_{10}	274.65	121.03	-20.56			0.75	1.18	107.39	-18.24	0.00	0.00	Vehicle	Vehicle	589.71	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.18**	**5.31**	-----	-----
		U_{12} - L_{11}	281.09	126.78	-13.61			0.75	1.18	112.48	-12.08	0.00	0.00	Vehicle	Vehicle	609.13	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.00**	**5.01**	-----	-----
		U_{13} - L_{12}	278.14	118.00	-8.70			0.75	1.18	104.70	-7.72	0.00	0.00	Vehicle	Vehicle	588.43	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
		U_{14} - L_{13}	235.47	117.33	-10.70			0.75	1.18	104.10	-9.49	0.00	0.00	Vehicle	Vehicle	531.67	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{15} - L_{14}	143.01	112.25	-13.07			0.75	1.17	98.42	-11.46	0.00	0.00	Vehicle	Vehicle	399.15	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.09**	**5.16**	-----	-----
		U_{16} - L_{15}	171.90	120.77	-13.07			0.75	1.17	105.89	-11.46	0.00	0.00	Vehicle	Vehicle	452.89	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U_{17} - L_{16}	181.04	123.55	-12.61			0.75	1.17	108.32	-11.06	0.00	0.00	Vehicle	Vehicle	470.04	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.93**	**4.89**	-----	-----
		U_{18} - L_{17}	171.16	111.81	-14.23			0.75	1.17	98.03	-12.48	0.00	0.00	Vehicle	Vehicle	434.90	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.93**	**4.89**	-----	-----
		U_{19} - L_{18}	150.64	119.59	-22.93			0.75	1.17	104.85	-20.10	0.00	0.00	Vehicle	Vehicle	423.02	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
	Structure 2	U_{20} - L_{20}	125.86	107.19	-33.87			0.75	1.17	93.98	-29.70	0.00	0.00	Vehicle	Vehicle	367.25	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.05**	**5.08**	-----	-----
		U_{20} - L_{21}	76.04	91.94	-39.43			0.75	1.17	80.61	-34.57	0.00	0.00	Vehicle	Vehicle	273.51	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.62**	**4.36**	-----	-----
		U_{21} - L_{22}	38.33	81.17	-57.33			0.75	1.17	71.16	-50.27	0.00	0.00	Vehicle	Vehicle	204.02	-59.08	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.28**	**5.47**	**4.34**	**7.24**
		U_{23} - L_{22}	18.05	67.89	-75.13			0.75	1.17	59.53	-65.87	0.00	0.00	Vehicle	Vehicle	152.44	-119.26	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.13**	**6.88**	**3.11**	**5.18**
		U_{24} - L_{23}	58.57	84.30	-50.37			0.75	1.17	73.91	-44.16	0.00	0.00	Vehicle	Vehicle	236.28	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.00**	**4.99**	-----	-----
		U_{25} - L_{24}	114.98	91.75	-46.62			0.75	1.17	80.44	-40.87	0.00	0.00	Vehicle	Vehicle	323.76	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.64**	**6.07**	-----	-----
		U_{26} - L_{25}	143.00	113.10	-30.53			0.75	1.17	99.16	-26.76	0.00	0.00	Vehicle	Vehicle	400.74	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{27} - L_{26}	173.82	114.28	-20.26			0.75	1.17	100.20	-17.76	0.00	0.00	Vehicle	Vehicle	443.06	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.76**	-----	-----
		U_{28} - L_{27}	186.60	116.64	-11.38			0.75	1.17	102.26	-9.97	0.00	0.00	Vehicle	Vehicle	464.14	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{29} - L_{28}	190.75	118.03	-7.62			0.75	1.17	103.48	-6.68	0.00	0.00	Vehicle	Vehicle	472.18	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.67**	**4.44**	-----	-----
		U_{30} - L_{29}	161.86	116.04	-9.17			0.75	1.17	101.74	-8.04	0.00	0.00	Vehicle	Vehicle	430.85	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.88**	**4.80**	-----	-----
		U_{30} - L_{31}	191.72	122.46	-13.06			0.75	1.18	108.65	-11.59	0.00	0.00	Vehicle	Vehicle	484.65	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.24**	**5.39**	-----	-----
		U_{31} - L_{32}	226.45	124.27	-14.48			0.75	1.18	110.26	-12.84	0.00	0.00	Vehicle	Vehicle	533.28	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U_{32} - L_{33}	243.42	126.27	-4.98			0.75	1.18	112.03	-4.42	0.00	0.00	Vehicle	Vehicle	559.19	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.22**	**5.36**	-----	-----
		U_{33} - L_{34}	239.13	128.45	-13.05			0.75	1.18	113.97	-11.58	0.00	0.00	Vehicle	Vehicle	557.80	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.19**	**5.31**	-----	-----
		U_{34} - L_{35}	222.16	123.80	-20.77			0.75	1.18	109.84	-18.43	0.00	0.00	Vehicle	Vehicle	526.80	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (I+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.70	13.41	-58.77	2.21	-8.83	0.90	1.24	14.92	-65.43	2.21	-8.83	Vehicle	Vehicle	-----	-228.47	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.57	7.62
		U_1 - U_2	-86.55	31.81	-94.18	6.01	-16.34	0.90	1.24	35.41	-104.85	6.01	-16.34	Vehicle	Vehicle	-----	-339.69	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.74	4.57
		U_2 - U_3	-48.14	47.11	-100.06	9.46	-19.05	0.90	1.24	52.45	-111.39	9.46	-19.05	Vehicle	Vehicle	51.05	-303.93	4.88	26.44	21.1575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	8.23	13.71	2.79	4.64
		U_3 - U_4	36.58	60.74	-86.56	12.74	-17.47	0.90	1.24	67.62	-96.37	12.74	-17.47	Vehicle	Vehicle	194.07	-161.24	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.63	9.38	3.75	6.25
		U_4 - U_5	38.93	60.94	-85.82	12.80	-17.38	0.90	1.24	67.84	-95.54	12.80	-17.38	Vehicle	Vehicle	197.60	-156.40	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.59	9.32	3.79	6.32
		U_5 - U_6	154.60	68.40	-55.75	15.16	-12.03	0.90	1.24	76.15	-62.07	15.16	-12.03	Vehicle	Vehicle	365.96	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	4.07	6.78	-----	-----
		U_6 - U_7	288.38	74.31	-24.51	17.14	-4.31	0.90	1.24	82.73	-27.29	17.14	-4.31	Vehicle	Vehicle	554.13	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.74	6.24	-----	-----
		U_7 - U_8	410.94	76.13	-1.55	22.63	0.00	0.90	1.24	84.75	-1.72	22.63	0.00	Vehicle	Vehicle	717.85	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	4.95	8.25	-----	-----
		U_8 - U_9	311.57	57.08	-5.92	19.08	0.00	0.90	1.20	61.55	-6.39	19.08	0.00	Vehicle	Vehicle	538.40	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	6.12	10.19	-----	-----
		U_9 - U_{10}	78.52	57.58	-46.28	12.28	-6.79	0.90	1.20	62.09	-49.90	12.28	-6.79	Vehicle	Vehicle	236.60	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	6.09	10.16	-----	-----
		U_{10} - U_{11}	-141.43	54.28	-88.19	11.10	-18.41	0.90	1.20	58.52	-95.09	11.10	-18.41	Vehicle	Vehicle	-----	-389.88	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.88	4.80
		U_{11} - U_{12}	-338.03	49.99	-130.79	9.77	-27.93	0.90	1.20	53.90	-141.01	9.77	-27.93	Vehicle	Vehicle	-----	-744.98	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	40.71	Pass	28.44	48.21	Pass	8.00	12.00	Pass	-----	-----	2.02	3.37
		U_{12} - U_{13}	-480.08	43.76	-153.73	8.23	-34.32	0.90	1.20	47.18	-165.75	8.23	-34.32	Vehicle	Vehicle	-----	-983.22	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	42.00	Pass	28.44	49.73	Pass	8.00	12.00	Pass	-----	-----	2.38	3.97
		U_{13} - U_{14}	-570.65	37.16	-167.81	6.68	-37.21	0.90	1.20	40.06	-180.93	6.68	-37.21	Vehicle	Vehicle	-----	-1133.85	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.21	Pass	25.60	49.99	Pass	6.40	12.00	Pass	-----	-----	2.51	4.18
		U_{14} - U_{15}	-571.07	36.98	-167.56	6.65	-37.22	0.90	1.20	39.87	-180.66	6.65	-37.22	Vehicle	Vehicle	-----	-1133.82	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.21	Pass	25.60	49.99	Pass	6.40	12.00	Pass	-----	-----	2.51	4.19
		U_{15} - U_{16}	-581.88	28.86	-158.15	4.98	-36.12	0.90	1.20	31.12	-170.51	4.98	-36.12	Vehicle	Vehicle	-----	-1125.89	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.36	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.62	4.37
		U_{16} - U_{17}	-539.46	21.55	-138.82	3.52	-31.85	0.90	1.20	23.24	-149.68	3.52	-31.85	Vehicle	Vehicle	-----	-1025.61	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.38	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.16	5.26
		U_{17} - U_{18}	-422.33	13.95	-104.00	2.26	-25.05	0.90	1.20	15.04	-112.13	2.26	-25.05	Vehicle	Vehicle	-----	-791.97	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	43.23	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	2.93	4.89
		U_{18} - U_{19}	-286.19	7.87	-65.73	1.28	-16.96	0.90	1.20	8.48	-70.86	1.28	-16.96	Vehicle	Vehicle	-----	-525.58	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	44.26	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	3.31	5.52
		U_{19} - U_{20}	-140.84	3.34	-29.02	0.55	-8.68	0.90	1.20	3.60	-31.29	0.55	-8.68	Vehicle	Vehicle	-----	-250.89	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	10.29	17.15
	Structure 2	U_0 - U_1	-147.44	6.81	-42.90	0.45	-4.88	0.90	1.18	7.25	-45.68	0.45	-4.88	Vehicle	Vehicle	-----	-290.65	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.57	10.94
		U_1 - U_2	-319.06	14.40	-85.64	1.96	-13.36	0.90	1.18	15.33	-91.18	1.96	-13.36	Vehicle	Vehicle	-----	-612.33	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.27	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.11	5.18
		U_2 - U_3	-460.91	25.84	-125.27	3.77	-20.95	0.90	1.18	27.51	-133.38	3.77	-20.95	Vehicle	Vehicle	-----	-888.17	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	42.87	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.77	4.62
		U_3 - U_4	-580.03	39.31	-160.08	5.92	-27.68	0.90	1.18	41.86	-170.44	5.92	-27.68	Vehicle	Vehicle	-----	-1123.33	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	42.55	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.68	4.47
		U_4 - U_5	-616.49	51.02	-173.31	7.86	-31.35	0.90	1.18	54.33	-184.52	7.86	-31.35	Vehicle	Vehicle	-----	-1201.23	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.34	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.83	4.72
		U_5 - U_6	-604.71	62.83	-177.94	9.87	-32.88	0.90	1.18	66.90	-189.45	9.87	-32.88	Vehicle	Vehicle	-----	-1196.60	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.42	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.79	4.66
		U_6 - U_7	-514.78	71.78	-159.85	11.56	-31.23	0.90	1.18	76.43	-170.19	11.56	-31.23	Vehicle	Vehicle	-----	-1037.97	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.27	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.91	4.86
		U_7 - U_8	-512.83	71.85	-159.53	11.57	-31.18	0.90	1.18	76.50	-169.85	11.57	-31.18	Vehicle	Vehicle	-----	-1034.69	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.34	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.93	4.88
		U_8 - U_9	-373.51	79.89	-138.24	13.16	-27.41	0.90	1.18	85.06	-147.19	13.16	-27.41	Vehicle	Vehicle	-----	-804.46	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.07	5.11
		U_9 - U_{10}	-181.05	83.80	-105.05	14.25	-21.42	0.90	1.18	89.22	-111.84	14.25	-21.42	Vehicle	Vehicle	-----	-477.69	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.78	6.30
		U_{10} - U_{11}	26.18	86.84	-70.51	15.21	-14.40	0.90	1.18	92.46	-75.07	15.21	-14.40	Vehicle	Vehicle	234.35	-128.62	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	5.74	9.57	6.36	10.60
		U_{11} - U_{12}	237.39	85.05	-37.09	15.56	-6.85	0.90	1.18	90.55	-39.49	15.56	-6.85	Vehicle	Vehicle	504.80	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	4.46	7.44	-----	-----
		U_{12} - U_{13}	435.89	83.44	-22.09	18.37	0.00	0.90	1.18	88.84	-23.51	18.37	0.00	Vehicle	Vehicle	759.15	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.75	7.92	-----	-----
		U_{13} - U_{14}	595.84	79.53	-20.64	24.32	0.00	0.90	1.18	84.67	-21.97	24.32	0.00	Vehicle	Vehicle	958.04	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	6.86	11.44	-----	-----
		U_{14} - U_{15}	615.53	71.61	-17.88	24.37	0.00	0.90	1.17	75.34	-18.81	24.37	0.00	Vehicle	Vehicle	963.44	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	7.56	12.59	-----	-----
		U_{15} - U_{16}	486.15	74.72	-23.59	18.61	0.00	0.90	1.17	78.62	-24.81	18.61	0.00	Vehicle	Vehicle	802.33	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	6.00	10.00	-----	-----
		U_{16} - U_{17}	339.27	74.31	-48.95	14.66	-2.95	0.90	1.17	78.18	-51.50	14.66	-2.95	Vehicle	Vehicle	610.45	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	5.41	9.01	-----	-----
		U_{17} - U_{18}	192.13	72.68	-76.83	15.12	-9.49	0.90	1.17	76.46	-80.83	15.12	-9.49	Vehicle	Vehicle	415.44	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.51	7.51	-----	-----
		U_{18} - U_{19}	53.83	66.59	-100.96	15.12	-15.34	0.90	1.17	70.06	-106.22	15.12	-15.34	Vehicle	Vehicle	221.78	-160.17	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.10	10.17	3.96	6.60
		U_{19} - U_{20}	-58.94	59.06	-124.44	15.07	-19.84	0.90	1.17	62.13	-130.92	15.07	-19.84	Vehicle	Vehicle	58.00	-360.28	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.49	14.15	2.91	4.84
	Structure 3	U_{20} - U_{21}	-125.32	49.25	-134.05	14.77	-22.39	0.90	1.17	51.82	-141.04	14.77	-22.39	Vehicle	Vehicle	-----	-468.50	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.03	5.04
		U_{21} - U_{22}	-146.72	40.86	-133.94	14.37	-22.74	0.90	1.17	42.99	-140.92	14.37	-22.74	Pedestrian	Vehicle	-----	-496.06	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.94	4.90
		U_{22} - U_{23}	-146.49	40.98	-133.77	14.36	-22.72	0.90	1.17	43.12	-140.74	14.36	-22.72	Vehicle	Vehicle	-----	-495.38	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.94	4.90
		U_{23} - U_{24}	-112.53	49.88	-124.13	13.88	-21.04	0.90	1.17	52.47	-130.59	13.88	-21.04	Vehicle	Vehicle	-----	-429.24	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.33	5.55
		U_{24} - U_{25}	-36.03	57.51	-107.29	13.40	-17.33	0.90	1.17	60.51	-112.88	13.40	-17.33	Vehicle	Vehicle	84.27	-291.40	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.49	14.15	3.49	5.82
		U_{25} - U_{26}	80.94	62.58	-78.94	12.93	-12.15	0.90	1.17	65.84	-83.05	12.93	-12.15	Vehicle	Vehicle	247.88	-74.72	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.25	10.41	5.26	8.77
		U_{26} - U_{27}	220.82	66.57	-53.11	12.57	-7.08	0.90	1.17	70.03	-55.88	12.57	-7.08	Vehicle	Vehicle	438.80	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.67	7.79	-----	-----
		U_{27} - U_{28}	363.48	67.21	-28.59	14.90	-2.16	0.90	1.17	70.71	-30.08	14.90	-2.16	Vehicle	Vehicle	625.74	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	5.77	9.62	-----	-----
		U_{28} - U_{29}	503.92	67.28	-15.57	21.74	0.00	0.90	1.17	70.79	-16.38	21.74	0.00	Vehicle	Vehicle	808.46	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	6.51	10.86	-----	-----
		U_{29} - U_{30}	616.62	66.34	-18.30	27.08	0.00	0.90	1.17	69.80	-19.25	27.08	0.00	Pedestrian	Vehicle	959.04	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	7.83	9.78	-----	-----
		U_{30} - U_{31}	559.73	80.12	-21.39	25.79	0.00	0.90	1.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-1.94	11.61	-8.93	0.37	-2.06	0.90	1.24	12.92	-9.94	0.37	-2.06	Vehicle	Vehicle	25.47	-24.06	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**23.43**	**39.05**	**25.45**	**42.41**
		L_1 - L_2	67.93	57.44	-17.55	9.23	-3.35	0.90	1.24	63.95	-19.54	9.23	-3.35	Vehicle	Vehicle	226.87	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.08**	**6.80**	-----	-----
		L_2 - L_3	78.83	99.95	-38.01	15.48	-7.39	0.90	1.24	111.27	-42.32	15.48	-7.39	Vehicle	Vehicle	343.55	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**3.18**	**5.30**	-----	-----
		L_3 - L_4	39.11	104.87	-53.12	18.09	-10.83	0.90	1.24	116.75	-59.14	18.09	-10.83	Vehicle	Vehicle	303.79	-77.29	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**3.24**	**5.39**	**6.11**	**10.18**
		L_4 - L_5	-166.44	66.20	-76.64	10.96	-16.91	0.90	1.24	73.70	-85.32	10.96	-16.91	Vehicle	Vehicle	-----	-401.23	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	43.53	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.35**	**3.91**
		L_5 - L_6	-301.30	31.01	-82.77	3.24	-18.94	0.90	1.24	34.52	-92.15	3.24	-18.94	Vehicle	Vehicle	-----	-591.34	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	41.20	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.33**	**3.89**
		L_6 - L_7	-439.01	5.76	-89.38	0.00	-26.52	0.90	1.24	6.41	-99.50	0.00	-26.52	Vehicle	Vehicle	-----	-786.30	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	42.78	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.05**	**5.08**
		L_7 - L_8	-551.71	4.39	-89.74	0.00	-35.56	0.90	1.24	4.89	-99.91	0.00	-35.56	Vehicle	Pedestrian	-----	-937.35	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	44.17	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.83**	**4.78**
		L_8 - L_9	-570.55	11.01	-99.17	0.00	-37.48	0.90	1.20	11.87	-106.93	0.00	-37.48	Vehicle	Pedestrian	-----	-976.37	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	43.28	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.48**	**4.36**
		L_9 - L_{10}	-355.55	12.31	-58.15	0.00	-24.70	0.90	1.20	13.27	-62.70	0.00	-24.70	Vehicle	Pedestrian	-----	-604.22	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.40**	**6.75**
		L_{10} - L_{11}	-118.56	41.88	-48.25	0.00	-12.42	0.90	1.20	45.15	-52.02	0.00	-12.42	Vehicle	Vehicle	-----	-266.84	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.40**	**7.34**
		L_{11} - L_{12}	103.33	77.40	-44.79	9.97	-9.47	0.90	1.20	83.45	-48.30	9.97	-9.47	Vehicle	Vehicle	315.14	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.53**	**5.88**	-----	-----
		L_{12} - L_{13}	300.47	121.88	-41.57	17.86	-8.15	0.90	1.20	131.41	-44.82	17.86	-8.15	Vehicle	Vehicle	675.32	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.08**	**5.13**	-----	-----
		L_{13} - L_{14}	441.01	144.08	-35.40	24.18	-6.62	0.90	1.20	155.35	-38.16	24.18	-6.62	Vehicle	Vehicle	909.91	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.35**	**5.58**	-----	-----
		L_{14} - L_{15}	546.80	150.74	-22.61	24.61	-3.50	0.90	1.20	162.53	-24.38	24.61	-3.50	Vehicle	Vehicle	1062.99	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.79**	**6.32**	-----	-----
		L_{15} - L_{16}	505.90	130.12	-21.21	20.37	-2.04	0.90	1.20	140.30	-22.87	20.37	-2.04	Vehicle	Vehicle	961.64	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**4.57**	**7.62**	-----	-----
		L_{16} - L_{17}	398.64	97.00	-18.98	12.78	-0.84	0.90	1.20	104.58	-20.46	12.78	-0.84	Vehicle	Vehicle	744.83	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.69**	**7.82**	-----	-----
		L_{17} - L_{18}	263.76	61.01	-15.50	4.87	0.00	0.90	1.20	65.78	-16.71	4.87	0.00	Vehicle	Vehicle	485.40	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**5.65**	**9.42**	-----	-----
		L_{18} - L_{19}	118.86	48.69	-12.10	0.70	-3.28	0.90	1.20	52.50	-13.04	0.70	-3.28	Vehicle	Vehicle	268.26	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.39**	**7.31**	-----	-----
		L_{19} - L_{20}	-23.25	41.75	-10.97	1.27	-12.00	0.90	1.20	45.01	-11.83	1.27	-12.00	Vehicle	Pedestrian	67.30	-68.94	1.95	17.93	15.9750	591.53	131.71	10.8073	5.7170	17.13	32.72	-498.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**6.38**	**10.63**	**12.10**	**15.12**
	Structure 2	L_0- L_1	-35.95	25.88	-17.54	1.33	-5.13	0.90	1.18	27.55	-18.67	1.33	-5.13	Vehicle	Vehicle	-----	-87.19	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	**16.03**	**26.72**
		L_1 - L_2	132.83	40.42	-6.81	2.94	-0.07	0.90	1.18	43.03	-7.25	2.94	-0.07	Vehicle	Vehicle	265.91	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.98**	**11.63**	-----	-----
		L_2 - L_3	304.11	87.26	-14.53	10.53	-1.80	0.90	1.18	92.91	-15.47	10.53	-1.80	Vehicle	Vehicle	596.64	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**4.34**	**7.23**	-----	-----
		L_3 - L_4	445.92	122.23	-26.08	18.16	-3.63	0.90	1.18	130.14	-27.77	18.16	-3.63	Vehicle	Vehicle	861.67	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.98**	**6.63**	-----	-----
		L_4 - L_5	567.84	160.92	-41.81	24.82	-6.10	0.90	1.18	171.33	-44.52	24.82	-6.10	Vehicle	Vehicle	1109.40	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.79**	**6.32**	-----	-----
		L_5 - L_6	603.64	173.74	-53.60	28.47	-8.06	0.90	1.18	184.98	-57.06	28.47	-8.06	Vehicle	Vehicle	1185.51	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.86**	**6.43**	-----	-----
		L_6 - L_7	599.48	183.02	-67.88	30.26	-10.41	0.90	1.18	194.86	-72.27	30.26	-10.41	Vehicle	Vehicle	1201.53	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.75**	**6.25**	-----	-----
		L_7 - L_8	373.94	143.78	-84.65	24.93	-13.66	0.90	1.18	153.08	-90.13	24.93	-13.66	Vehicle	Vehicle	817.79	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.79**	**6.32**	-----	-----
		L_8 - L_9	195.71	115.76	-91.14	19.52	-15.12	0.90	1.18	123.25	-97.04	19.52	-15.12	Vehicle	Vehicle	521.47	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**4.40**	**7.34**	-----	-----
		L_9 - L_{10}	-13.21	79.38	-94.34	12.45	-16.11	0.90	1.18	84.51	-100.45	12.45	-16.11	Vehicle	Vehicle	165.94	-234.81	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**6.21**	**10.35**	**4.27**	**7.11**
		L_{10} - L_{11}	-217.32	45.63	-95.81	5.50	-17.02	0.90	1.18	48.58	-102.01	5.50	-17.02	Vehicle	Vehicle	-----	-503.53	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	44.25	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**2.55**	**4.25**
		L_{11} - L_{12}	-419.93	25.95	-94.38	0.00	-23.34	0.90	1.18	27.63	-100.48	0.00	-23.34	Vehicle	Vehicle	-----	-763.62	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	43.01	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.05**	**5.08**
		L_{12} - L_{13}	-591.41	26.05	-96.37	0.00	-30.09	0.90	1.18	27.74	-102.60	0.00	-30.09	Vehicle	Vehicle	-----	-991.14	9.73	59.10	49.3700	1950.30	131.71	10.9531	5.8186	16.94	32.73	-1644.04	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	44.02	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.94**	**6.56**
		L_{13} - L_{14}	-724.23	24.42	-92.33	0.00	-35.12	0.90	1.18	25.99	-98.30	0.00	-35.12	Vehicle	Pedestrian	-----	-1158.30	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	44.58	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.74**	**5.93**
		L_{14} - L_{15}	-747.05	28.10	-106.15	0.00	-36.29	0.90	1.17	29.57	-111.68	0.00	-36.29	Vehicle	Vehicle	-----	-1213.14	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	43.56	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.13**	**6.88**
		L_{15} - L_{16}	-632.15	25.83	-87.34	0.00	-31.21	0.90	1.17	27.17	-91.89	0.00	-31.21	Vehicle	Pedestrian	-----	-1021.84	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	43.53	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.18**	**5.23**
		L_{16} - L_{17}	-488.62	22.13	-62.65	0.00	-25.39	0.90	1.17	23.28	-65.91	0.00	-25.39	Vehicle	Pedestrian	-----	-783.58	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**4.90**	**6.12**
		L_{17} - L_{18}	-336.98	41.70	-62.12	0.00	-18.12	0.90	1.17	43.87	-65.35	0.00	-18.12	Vehicle	Vehicle	-----	-579.67	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.62	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.58**	**5.97**
		L_{18} - L_{19}	-183.61	71.17	-61.14	4.48	-11.34	0.90	1.17	74.87	-64.33	4.48	-11.34	Vehicle	Vehicle	-----	-378.07	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.64**	**6.06**
		L_{19} - L_{20}	-45.77	88.52	-55.00	8.92	-9.58	0.90	1.17	93.13	-57.86	8.92	-9.58	Vehicle	Vehicle	142.28	-184.87	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.67**	**7.78**	**5.47**	**9.12**
		L_{20} - L_{21}	68.00	115.63	-48.87	11.57	-9.12	0.90	1.17	121.65	-51.42	11.57	-9.12	Vehicle	Vehicle	351.97	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.42**	**7.37**	-----	-----
		L_{21} - L_{22}	133.90	123.64	-39.08	13.61	-8.82	0.90	1.17	130.08	-41.11	13.61	-8.82	Vehicle	Vehicle	455.92	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.83**	**6.39**	-----	-----
		L_{22} - L_{23}	122.50	118.23	-43.15	11.79	-7.58	0.90	1.17	124.38	-45.40	11.79	-7.58	Vehicle	Vehicle	428.75	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.06**	**6.77**	-----	-----
		L_{23} - L_{24}	46.70	99.82	-48.24	8.09	-7.09	0.90	1.17	105.02	-50.75	8.09	-7.09	Vehicle	Vehicle	288.24	-49.26	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**5.24**	**8.74**	**10.18**	**16.96**
		L_{24} - L_{25}	-66.76	75.56	-53.71	3.32	-6.24	0.90	1.17	79.49	-56.51	3.32	-6.24	Vehicle	Vehicle	85.45	-209.22	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**5.63**	**9.38**	**5.38**	**8.97**
		L_{25} - L_{26}	-205.83	55.26	-57.46	0.00	-11.78	0.90	1.17	58.14	-60.45	0.00	-11.78	Vehicle	Vehicle	-----	-398.56	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.65**	**6.08**
		L_{26} - L_{27}	-350.61	51.62	-58.55	0.00	-18.88	0.90	1.17	54.31	-61.60	0.00	-18.88	Vehicle	Vehicle	-----	-589.25	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.27	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.67**	**6.12**
		L_{27} - L_{28}	-494.76	43.25	-58.33	0.00	-25.89	0.90	1.17	45.51	-61.36	0.00	-25.89	Vehicle	Pedestrian	-----	-784.99	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.07**	**6.34**
		L_{28} - L_{29}	-620.88	37.17	-65.26	0.00	-31.79	0.90	1.17	39.11	-68.66	0.00	-31.79	Vehicle	Pedestrian	-----	-970.36	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	44.67	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.21**	**6.52**
		L_{29} - L_{30}	-716.82	29.22	-78.33	0.00	-36.30	0.90	1.17	30.74	-82.41	0.00	-36.30	Vehicle	Pedestrian	-----	-1124.75	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.38**	**6.73**
		L_{30} - L_{31}	-850.86	43.53	-113.94	0.00	-35.98	0.90	1.18	46.35	-121.31	0.00	-35.98	Vehicle	Vehicle	-----	-1368

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.63	17.35	-76.68	3.44	-12.32	0.90	1.24	19.32	-85.36	3.44	-12.32	Vehicle	Vehicle	-----	-306.67	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	42.25	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.76	2.94
		U_1 - L_1	-46.50	14.94	-49.90	2.93	-9.05	0.90	1.24	16.63	-55.55	2.93	-9.05	Vehicle	Vehicle	-----	-180.81	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.30	5.50
		U_2 - L_2	-0.07	13.51	-34.55	2.84	-5.68	0.90	1.24	15.04	-38.47	2.84	-5.68	Vehicle	Vehicle	32.49	-83.43	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	17.07	28.44	5.49	9.15
		U_3 - L_3	39.61	11.90	-20.17	2.70	-2.12	0.90	1.24	13.25	-22.46	2.70	-2.12	Vehicle	Vehicle	80.20	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	17.57	29.29	-----	-----
		U_4 - L_4	30.21	2.00	-23.61	0.00	-3.47	0.90	1.24	2.23	-26.28	0.00	-3.47	Vehicle	Vehicle	-----	-96.21	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.30	12.16
		U_5 - L_5	-130.50	3.03	-45.45	0.00	-10.24	0.90	1.24	3.38	-50.60	0.00	-10.24	Vehicle	Vehicle	-----	-279.29	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	3.49	5.82
		U_6 - L_6	-158.19	8.63	-47.21	0.00	-13.06	0.90	1.24	9.61	-52.55	0.00	-13.06	Vehicle	Vehicle	-----	-319.51	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	3.99	6.66
		U_7 - L_7	-152.33	14.54	-44.95	0.00	-13.25	0.90	1.24	16.19	-50.05	0.00	-13.25	Vehicle	Vehicle	-----	-306.46	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.69	6.15
		U_8 - L_8	-455.44	18.15	-77.50	0.00	-31.72	0.90	1.24	20.20	-86.28	0.00	-31.72	Vehicle	Pedestrian	-----	-783.82	3.28	51.23	47.9548	1690.75	131.71	16.6563	4.0434	37.07	31.69	-1380.20	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	4.11	5.14
		U_9 - L_9	-287.50	4.00	-76.03	0.00	-18.21	0.90	1.20	4.31	-81.97	0.00	-18.21	Vehicle	Vehicle	-----	-551.37	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.13	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	2.62	4.36
		U_{10} - L_{10}	-276.27	1.93	-74.01	0.00	-17.55	0.90	1.20	2.09	-79.80	0.00	-17.55	Vehicle	Vehicle	-----	-532.04	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	3.51	5.84
		U_{11} - L_{11}	-232.54	1.96	-67.68	0.00	-14.42	0.90	1.20	2.11	-72.97	0.00	-14.42	Vehicle	Vehicle	-----	-460.41	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.36	5.60
		U_{12} - L_{12}	-178.38	1.18	-55.06	0.00	-11.20	0.90	1.20	1.28	-59.36	0.00	-11.20	Vehicle	Vehicle	-----	-360.51	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	3.58	5.97
		U_{13} - L_{13}	-127.70	4.20	-42.61	0.00	-7.88	0.90	1.20	4.53	-45.94	0.00	-7.88	Vehicle	Vehicle	-----	-265.55	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	3.30	5.50
		U_{14} - L_{14}	-30.38	0.28	-29.81	0.00	-3.03	0.90	1.20	0.31	-32.14	0.00	-3.03	Vehicle	Vehicle	-----	-109.13	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.87	9.78
		U_{15} - L_{15}	-28.93	11.85	-32.76	1.55	-4.53	0.90	1.20	12.77	-35.32	1.55	-4.53	Vehicle	Vehicle	-----	-114.14	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.34	8.90
		U_{16} - L_{16}	-75.99	8.20	-37.20	1.39	-7.07	0.90	1.20	8.85	-40.10	1.39	-7.07	Vehicle	Vehicle	-----	-185.68	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.97	6.62
		U_{17} - L_{17}	-161.81	8.00	-51.37	1.30	-10.66	0.90	1.20	8.63	-55.38	1.30	-10.66	Vehicle	Vehicle	-----	-330.35	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	2.70	4.50
		U_{18} - L_{18}	-190.09	6.86	-52.00	1.12	-12.69	0.90	1.20	7.40	-56.06	1.12	-12.69	Vehicle	Vehicle	-----	-368.59	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	3.59	5.98
		U_{19} - L_{19}	-228.09	5.88	-51.08	0.97	-14.99	0.90	1.20	6.34	-55.08	0.97	-14.99	Vehicle	Vehicle	-----	-415.86	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.23	7.05
		U_{20} - L_{20}	-242.54	5.33	-49.98	0.95	-15.62	0.90	1.20	5.74	-53.88	0.95	-15.62	Vehicle	Vehicle	-----	-432.04	0.00	27.86	27.8600	919.38	131.71	20.3229	2.7881	65.60	28.91	-684.53	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.16	5.27
	Structure 2	U_0 - L_0	-302.99	13.31	-81.02	2.22	-15.08	0.90	1.18	14.17	-86.26	2.22	-15.08	Vehicle	Vehicle	-----	-580.78	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	43.14	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	2.36	3.94
		U_1 - L_1	-268.80	13.54	-75.10	2.12	-13.67	0.90	1.18	14.41	-79.95	2.12	-13.67	Vehicle	Vehicle	-----	-522.67	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.03	5.05
		U_2 - L_2	-220.88	14.58	-69.81	2.34	-12.32	0.90	1.18	15.52	-74.33	2.34	-12.32	Vehicle	Vehicle	-----	-448.20	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.85	4.76
		U_3 - L_3	-175.24	15.62	-64.50	2.49	-10.35	0.90	1.18	16.63	-68.67	2.49	-10.35	Vehicle	Vehicle	-----	-376.60	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	44.29	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	2.42	4.03
		U_4 - L_4	-82.09	13.52	-44.57	2.21	-6.62	0.90	1.18	14.40	-47.45	2.21	-6.62	Vehicle	Vehicle	-----	-209.52	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.25	5.42
		U_5 - L_5	-19.91	13.36	-35.17	2.23	-4.16	0.90	1.18	14.22	-37.44	2.23	-4.16	Vehicle	Vehicle	-----	-107.00	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.14	8.56
		U_6 - L_6	60.32	25.45	-20.15	1.75	-0.47	0.90	1.18	27.10	-21.45	1.75	-0.47	Vehicle	Vehicle	137.12	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	8.13	13.56	-----	-----
		U_7 - L_7	-41.78	1.24	-25.23	0.00	-2.50	0.90	1.18	1.32	-26.86	0.00	-2.50	Vehicle	Vehicle	-----	-112.50	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.67	11.12
		U_8 - L_8	-189.01	6.02	-46.84	0.00	-8.38	0.90	1.18	6.41	-49.87	0.00	-8.38	Vehicle	Vehicle	-----	-353.76	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	4.11	6.85
		U_9 - L_9	-254.00	2.40	-58.59	0.00	-10.55	0.90	1.18	2.55	-62.38	0.00	-10.55	Vehicle	Vehicle	-----	-465.35	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	4.21	7.01
		U_{10} - L_{10}	-290.02	4.61	-60.69	0.00	-12.18	0.90	1.18	4.91	-64.61	0.00	-12.18	Vehicle	Vehicle	-----	-517.01	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.54	7.56
		U_{11} - L_{11}	-312.19	10.00	-65.01	0.00	-12.59	0.90	1.18	10.64	-69.21	0.00	-12.59	Vehicle	Vehicle	-----	-555.81	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.92	6.54
		U_{12} - L_{12}	-327.27	14.49	-59.65	0.00	-13.75	0.90	1.18	15.42	-63.51	0.00	-13.75	Vehicle	Vehicle	-----	-563.04	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.48	7.47
		U_{13} - L_{13}	-277.23	19.67	-50.44	0.45	-12.38	0.90	1.18	20.94	-53.70	0.45	-12.38	Vehicle	Vehicle	-----	-476.76	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	4.61	7.69
		U_{14} - L_{14}	-505.47	24.83	-64.85	0.00	-21.42	0.90	1.18	26.44	-69.04	0.00	-21.42	Vehicle	Vehicle	-----	-806.71	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	4.75	7.91
		U_{15} - L_{15}	-232.92	6.91	-72.41	1.67	-12.16	0.90	1.17	7.27	-76.18	1.67	-12.16	Vehicle	Vehicle	-----	-467.85	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.60	6.00
		U_{16} - L_{16}	-260.09	7.97	-73.05	0.83	-13.04	0.90	1.17	8.39	-76.86	0.83	-13.04	Vehicle	Vehicle	-----	-504.64	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.17	5.28
		U_{17} - L_{17}	-228.20	8.99	-70.80	0.66	-11.76	0.90	1.17	9.46	-74.49	0.66	-11.76	Vehicle	Vehicle	-----	-458.06	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.18	5.30
		U_{18} - L_{18}	-209.23	10.81	-65.43	0.00	-11.28	0.90	1.17	11.37	-68.84	0.00	-11.28	Vehicle	Vehicle	-----	-421.15	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.21	5.35
		U_{19} - L_{19}	-166.51	11.57	-56.83	0.00	-9.53	0.90	1.17	12.17	-59.79	0.00	-9.53	Vehicle	Vehicle	-----	-346.01	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.46	5.77
		U_{20} - L_{20}	-113.91	11.62	-45.20	0.00	-7.50	0.90	1.17	12.22	-47.55	0.00	-7.50	Vehicle	Vehicle	-----	-251.10	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	3.30	5.49
		U_{21} - L_{21}	-62.73	15.02	-36.52	0.00	-5.22	0.90	1.17	15.80	-38.42	0.00	-5.22	Vehicle	Vehicle	-----	-164.79	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	4.34	7.23
		U_{22} - L_{22}	-38.93	1.07	-27.92	0.00	-2.15	0.90	1.17	1.12	-29.37	0.00	-2.15	Vehicle	Vehicle	-----	-114.25	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.19	10.31
		U_{23} - L_{23}	-74.45	12.27	-37.62	0.48	-6.10	0.90	1.17	12.91	-39.58	0.48	-6.10	Vehicle	Vehicle	-----	-182.55	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	4.03	6.72
		U_{24} - L_{24}	-121.37	12.03	-44.61	0.37	-8.17	0.90	1.17	12.65	-46.93	0.37	-8.17	Vehicle	Vehicle	-----	-259.47	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	3.24	5.41
		U_{25} - L_{25}	-169.10	11.57	-54.07	0.43	-9.94	0.90	1.17	12.17	-56.89	0.43	-9.94	Vehicle	Vehicle	-----	-343.10	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.61	6.02
		U_{26} - L_{26}	-207.93	10.46	-56.32	0.14	-11.42	0.90	1.17	11.00	-59.26	0.14	-11.42	Vehicle	Vehicle	-----	-398.70	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.74	6.23
		U_{27} - L_{27}	-219.90	8.62	-58.90	0.16	-11.49	0.90	1.17	9.07	-61.97	0.16	-11.49	Vehicle	Vehicle	-----	-420.12	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.91	6.51
		U_{28} - L_{28}	-240.66	12.43	-55.03	0.00	-12.59	0.90	1.17	13.07	-57.89	0.00	-12.59	Vehicle	Vehicle	-----	-438.29	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	4.41	7.35
		U_{29} - L_{29}	-202.76	18.92	-47.37	0.00	-10.35	0.90	1.17	19.91	-49.83	0.00	-10.35	Vehicle	Vehicle	-----	-371.55	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	5.87	9.78
		U_{30} - L_{30}	-516.45	19.87	-67.65	0.00	-22.02	0.90	1.18	21.16	-72.02	0.00	-22.02	Vehicle	Vehicle	-----	-827.43	11.02	51.81	40.7900	1709.73	131.71	25.6094	4.0330	57.15	29.89	-1316.46	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	4.13	6.89

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.61	77.34	-23.43	14.00	-4.60	0.90	1.24	86.10	-26.08	14.00	-4.60	Vehicle	Vehicle	300.45	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**3.48**	**5.79**	-----	-----
		U_1 - L_2	23.84	58.29	-22.94	9.20	-4.72	0.90	1.24	64.89	-25.54	9.20	-4.72	Vehicle	Vehicle	171.59	-24.34	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.73**	**6.22**	**8.44**	**14.06**
		U_2 - L_3	-49.05	31.03	-19.20	3.33	-4.33	0.90	1.24	34.54	-21.37	3.33	-4.33	Vehicle	Vehicle	-----	-110.06	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.01**	**13.34**
		U_3 - L_4	-108.90	15.06	-35.59	0.00	-6.31	0.90	1.24	16.77	-39.62	0.00	-6.31	Vehicle	Vehicle	-----	-227.40	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**3.45**	**5.74**
		U_4 - L_5	153.14	54.67	-7.20	10.12	0.00	0.90	1.24	60.87	-8.01	10.12	0.00	Vehicle	Vehicle	330.97	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.66**	**6.10**	-----	-----
		U_5 - L_6	186.37	59.93	-4.11	13.44	0.00	0.90	1.24	66.72	-4.57	13.44	0.00	Vehicle	Vehicle	386.85	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.17**	**6.96**	-----	-----
		U_6 - L_7	177.53	57.27	-14.70	14.14	0.00	0.90	1.24	63.76	-16.37	14.14	0.00	Vehicle	Vehicle	368.93	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.45**	**7.42**	-----	-----
		U_7 - L_8	173.15	49.79	-16.14	13.87	0.00	0.90	1.24	55.43	-17.97	13.87	0.00	Vehicle	Vehicle	345.19	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.17**	**8.61**	-----	-----
		U_8 - L_9	328.03	83.22	-5.11	19.45	-0.14	0.90	1.20	89.73	-5.51	19.45	-0.14	Vehicle	Vehicle	620.84	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.24**	**7.07**	-----	-----
		U_9 - L_{10}	339.64	89.77	-3.59	19.75	0.00	0.90	1.20	96.79	-3.87	19.75	0.00	Vehicle	Vehicle	651.24	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.86**	**6.43**	-----	-----
		U_{10} - L_{11}	313.15	85.51	-2.59	18.15	0.00	0.90	1.20	92.19	-2.79	18.15	0.00	Vehicle	Vehicle	606.85	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**3.89**	**6.48**	-----	-----
		U_{11} - L_{12}	270.62	78.01	-2.60	14.84	0.00	0.90	1.20	84.11	-2.81	14.84	0.00	Vehicle	Vehicle	534.03	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.62**	**6.03**	-----	-----
		U_{12} - L_{13}	194.11	58.69	-5.84	10.79	0.00	0.90	1.20	63.28	-6.30	10.79	0.00	Vehicle	Vehicle	389.44	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**4.14**	**6.91**	-----	-----
		U_{13} - L_{14}	123.52	46.86	-14.33	5.97	0.00	0.90	1.20	50.52	-15.45	5.97	0.00	Vehicle	Vehicle	270.04	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.61**	**6.02**	-----	-----
		U_{15} - L_{14}	-16.31	34.16	-25.47	1.47	-2.35	0.90	1.20	36.83	-27.46	1.47	-2.35	Vehicle	Vehicle	58.59	-80.70	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.23**	**12.06**	**6.82**	**11.36**
		U_{15} - L_{15}	59.11	44.16	-15.73	6.08	-2.09	0.90	1.20	47.61	-16.96	6.08	-2.09	Vehicle	Vehicle	180.00	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.64**	**7.74**	-----	-----
		U_{17} - L_{16}	172.05	61.06	-11.17	9.93	-1.86	0.90	1.20	65.83	-12.04	9.93	-1.86	Vehicle	Vehicle	366.31	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.21**	**5.35**	-----	-----
		U_{18} - L_{17}	210.69	61.12	-9.46	12.50	-1.53	0.90	1.20	65.90	-10.20	12.50	-1.53	Vehicle	Vehicle	416.68	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.01**	**6.68**	-----	-----
		U_{19} - L_{18}	242.30	61.67	-7.55	13.72	-1.21	0.90	1.20	66.49	-8.14	13.72	-1.21	Vehicle	Vehicle	459.06	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.22**	**7.04**	-----	-----
		U_{20} - L_{19}	257.77	53.99	-6.20	15.71	-1.03	0.90	1.20	58.22	-6.69	15.71	-1.03	Vehicle	Vehicle	461.23	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.66**	**7.77**	-----	-----
		U_0 - L_1	299.01	77.89	-14.13	14.21	-2.21	0.90	1.18	82.92	-15.04	14.21	-2.21	Vehicle	Vehicle	568.38	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.46**	**5.77**	-----	-----
		U_1 - L_2	284.23	82.35	-16.81	14.05	-2.66	0.90	1.18	87.68	-17.90	14.05	-2.66	Vehicle	Vehicle	559.47	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.38**	**5.63**	-----	-----
		U_2 - L_3	221.45	74.14	-17.93	11.83	-2.85	0.90	1.18	78.94	-19.09	11.83	-2.85	Vehicle	Vehicle	458.91	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_3 - L_4	178.33	68.97	-20.24	10.08	-3.23	0.90	1.18	73.43	-21.55	10.08	-3.23	Vehicle	Vehicle	390.93	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**3.26**	**5.43**	-----	-----
		U_4 - L_5	53.52	45.46	-17.30	5.38	-2.87	0.90	1.18	48.40	-18.42	5.38	-2.87	Vehicle	Vehicle	174.44	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.64**	**7.73**	-----	-----
		U_5 - L_6	-16.50	37.60	-24.07	2.23	-2.92	0.90	1.18	40.03	-25.62	2.23	-2.92	Vehicle	Vehicle	65.28	-76.97	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.66**	**11.10**	**7.24**	**12.07**
		U_6 - L_7	-133.20	17.39	-45.51	0.00	-5.36	0.90	1.18	18.52	-48.46	0.00	-5.36	Vehicle	Vehicle	-----	-278.15	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.80**	**4.67**
		U_7 - L_7	208.77	55.69	-12.84	8.33	0.00	0.90	1.18	59.29	-13.67	8.33	0.00	Vehicle	Vehicle	399.86	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.99**	**6.65**	-----	-----
		U_8 - L_8	289.58	70.00	-3.03	10.70	0.00	0.90	1.18	74.53	-3.22	10.70	0.00	Vehicle	Vehicle	537.94	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.39**	**5.64**	-----	-----
		U_{10} - L_9	327.97	71.53	-2.83	12.66	0.00	0.90	1.18	76.16	-3.02	12.66	0.00	Vehicle	Vehicle	591.37	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.54**	**5.90**	-----	-----
		U_{11} - L_{10}	349.27	76.48	-10.56	12.70	0.00	0.90	1.18	81.43	-11.24	12.70	0.00	Vehicle	Vehicle	630.48	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.65**	**6.08**	-----	-----
		U_{12} - L_{11}	358.20	71.36	-11.25	13.52	0.00	0.90	1.18	75.97	-11.97	13.52	0.00	Vehicle	Vehicle	630.26	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.84**	**6.40**	-----	-----
		U_{13} - L_{12}	307.76	58.48	-21.34	12.26	-0.24	0.90	1.18	62.26	-22.72	12.26	-0.24	Vehicle	Vehicle	534.98	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.53**	**7.55**	-----	-----
		U_{14} - L_{13}	260.25	48.04	-18.21	11.73	-1.50	0.90	1.18	51.15	-19.39	11.73	-1.50	Vehicle	Vehicle	449.15	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.07**	**10.11**	-----	-----
		U_{14} - L_{15}	208.41	66.31	-9.11	11.04	-2.52	0.90	1.17	69.76	-9.58	11.04	-2.52	Vehicle	Vehicle	422.08	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.80**	**6.34**	-----	-----
		U_{15} - L_{16}	243.53	74.31	-6.24	11.54	-1.48	0.90	1.17	78.18	-6.56	11.54	-1.48	Vehicle	Vehicle	485.97	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{16} - L_{17}	255.83	75.20	-9.47	12.23	-0.85	0.90	1.17	79.12	-9.96	12.23	-0.85	Vehicle	Vehicle	503.99	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.45**	**5.74**	-----	-----
		U_{17} - L_{18}	235.25	77.14	-11.09	11.35	-0.75	0.90	1.17	81.16	-11.67	11.35	-0.75	Vehicle	Vehicle	481.67	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{18} - L_{19}	212.06	67.16	-13.54	11.09	0.00	0.90	1.17	70.66	-14.25	11.09	0.00	Vehicle	Vehicle	428.76	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.72**	**6.21**	-----	-----
		U_{19} - L_{20}	168.18	62.84	-15.00	9.14	0.00	0.90	1.17	66.11	-15.78	9.14	0.00	Vehicle	Vehicle	361.88	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.95**	**6.58**	-----	-----
		U_{20} - L_{21}	97.21	46.98	-18.41	6.66	0.00	0.90	1.17	49.42	-19.36	6.66	0.00	Vehicle	Vehicle	233.45	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.01**	**6.69**	-----	-----
		U_{21} - L_{22}	30.55	36.47	-27.72	3.66	-2.18	0.90	1.17	38.37	-29.16	3.66	-2.18	Vehicle	Vehicle	122.86	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.21**	**10.35**	-----	-----
		U_{23} - L_{22}	49.81	43.35	-22.74	5.11	-0.95	0.90	1.17	45.61	-23.92	5.11	-0.95	Vehicle	Vehicle	163.58	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.97**	**8.29**	-----	-----
		U_{24} - L_{23}	115.09	50.97	-16.31	8.00	-0.72	0.90	1.17	53.63	-17.16	8.00	-0.72	Vehicle	Vehicle	265.81	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.50**	**5.83**	-----	-----
		U_{25} - L_{24}	179.20	63.59	-15.86	10.10	-0.73	0.90	1.17	66.90	-16.69	10.10	-0.73	Vehicle	Vehicle	377.92	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.80**	**6.34**	-----	-----
		U_{26} - L_{25}	220.95	65.81	-13.91	11.89	-0.57	0.90	1.17	69.24	-14.63	11.89	-0.57	Vehicle	Vehicle	437.25	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.72**	**6.21**	-----	-----
		U_{27} - L_{26}	234.79	67.56	-11.06	11.44	-0.35	0.90	1.17	71.08	-11.64	11.44	-0.35	Vehicle	Vehicle	459.24	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.51**	**5.85**	-----	-----
		U_{28} - L_{27}	253.01	64.45	-9.97	12.25	-0.28	0.90	1.17	67.81	-10.49	12.25	-0.28	Vehicle	Vehicle	475.83	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.05**	**6.74**	-----	-----
		U_{29} - L_{28}	215.83	52.72	-21.29	10.20	0.00	0.90	1.17	55.47	-22.40	10.20	0.00	Vehicle	Vehicle	400.76	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.70**	**7.84**	-----	-----
		U_{30} - L_{29}	179.92	44.84	-18.05	8.89	-0.93	0.90	1.17	47.17	-18.99	8.89	-0.93	Vehicle	Vehicle	336.10	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.99**	**9.98**	-----	-----
		U_{30} - L_{31}	294.37	65.93	-10.84	12.88	-1.65	0.90	1.18	70.19	-11.54	12.88	-1.65	Vehicle	Vehicle	534.76	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.13**	**6.88**	-----	-----
		U_{31} - L_{32}	342.78	77.03	-9.53	13.71	-0.55	0.90	1.18	82.02	-10.14	13.71	-0.55	Vehicle	Vehicle	623.32	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.18**	**5.30**	-----	-----
		U_{32} - L_{33}	363.31	80.73	-4.95	14.15	0.00	0.90	1.18	85.95	-5.27	14.15	0.00	Vehicle	Vehicle	658.53	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.36**	**5.60**	-----	-----
		$U_{33

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spreadsheet
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 4.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 4.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-131.25	-22.60	-0.29	1.77	3.90	-13.40				
	L_1-U_1	-54.49	-51.15	3.28	3.06	-2.66	-19.50				
	U_1-L_2	-29.28	50.99	3.08	4.27	-7.84	-13.16				
	L_2-U_2	-52.26	61.06	2.76	4.43	-10.29	-14.32				
	U_2-L_3	-29.29	50.99	3.08	4.27	-7.84	-13.16				
	L_3-U_3	-54.49	-51.15	3.28	3.06	-2.66	-19.50				
	U_3-L_4	-131.25	-22.60	-0.29	1.77	3.90	-13.40				
	L_0-U_1	53.73	-129.19	8.84	0.92	8.21	-10.83				
	U_1-L_1	68.54	43.95	2.35	3.00	1.89	-7.27				
	L_1-U_2	100.48	-176.70	3.86	3.08	1.66	-15.40				
	U_2-L_2	75.29	-160.18	4.41	2.50	1.92	-13.67				
	L_2-U_3	-56.66	-218.08	3.43	1.17	1.37	-17.44				
	U_3-L_3	-173.90	-144.23	2.52	1.80	4.69	-27.97				
	L_3-U_4	-287.80	-237.44	2.96	1.71	-26.40	-16.54				
	U_4-L_4	-196.20	-337.71	2.90	0.17	-17.34	-7.89				
	L_4-U_5	-290.83	-154.75	1.10	-0.20	-33.78	4.59				
	U_5-L_5	-189.93	-29.96	0.96	-0.89	-14.88	3.05				
	L_5-U_6	-179.63	-39.55	0.86	-0.92	-13.90	-2.25				
	U_6-L_6	-249.78	258.69	0.62	-0.38	-17.43	12.25				
	L_6-U_7	-28.62	-172.11	-0.61	1.44	7.43	-13.81				
	U_7-L_7	-24.91	-195.34	-0.28	1.78	8.19	-19.39				
	L_7-U_8	-53.03	-283.30	-0.85	1.97	0.08	-23.30				
	U_8-L_8	-39.66	-282.91	-0.69	1.93	0.11	-23.70				
	L_8-U_9	-360.46	-389.97	0.18	3.27	-18.45	-28.22				
	U_9-L_9	-403.42	-341.74	0.24	2.44	-8.27	-24.05				
	L_9-U_{10}	-349.63	-208.07	4.55	6.49	-23.79	-33.25				
	U_{10}-L_{10}	-253.78	-280.71	3.53	4.89	-33.50	-10.89				
	L_{10}-U_{11}	-332.32	-53.64	4.08	4.08	-10.66	-4.08				
	U_{11}-L_{11}	-237.02	-39.91	5.08	6.43	-20.57	-5.77				
	L_{11}-U_{12}	-116.69	-30.75	3.43	4.37	-20.03	-3.01				
	U_{12}-L_{12}	-116.69	-170.75	5.43	4.37	-20.27	-1.38				
	L_{12}-U_{13}	-24.91	-58.84	5.36	4.37	-10.83	-55.75				
	U_{13}-L_{13}	-211.04	-121.68	3.91	6.39	-0.59	-0.64				
	L_{13}-U_{14}	-1028.71	-26.69	15.19	1.76	-1.20	0.08				
	U_{14}-L_{14}	9.97	9.97	12.84	12.84	0.27	0.27				
	L_{14}-U_{15}	-271.38	25.19	3.73	3.50	-2.61	-15.58				
	U_{15}-L_{15}	-181.75	24.70	4.40	3.56	-2.61	-15.58				
	L_{15}-U_{16}	-156.55	-8.67	3.51	3.91	-6.50	-17.32				
	U_{16}-L_{16}	-48.55	11.41	5.09	4.10	-9.80	-15.54				
	L_{16}-U_{17}	-52.57	-65.85	2.04	2.22	-17.23	-26.18				
Structure 2	U_{17}-L_{17}	-59.44	-37.51	1.74	2.29	-26.05	10.16				
	L_{17}-U_{18}	-48.31	-31.52	0.15	4.15	-14.20	-11.69				
	U_{18}-L_{18}	-10.77	-13.67	3.17	4.73	-18.68	0.54				
	L_{18}-U_{19}	57.22	-122.85	4.03	3.56	-15.10	-3.49				
	U_{19}-L_{19}	85.41	4.86	3.84	1.61	-12.69	-14.38				
	L_{19}-U_{20}	75.52	806.57	2.29	0.39	-1.38	-21.37				
	U_{20}-L_{20}	821.42	-89.58	12.70	14.89	-1.58	-0.69				
	L_{20}-U_{21}	-25.52	87.45	2.61	1.18	-1.04	-14.65				
	U_{21}-L_{21}	145.61	-52.49	3.69	4.56	-4.71	-12.09				
	L_{21}-U_{22}	17.52	-88.46	4.86	5.12	-3.38	-13.91				
	U_{22}-L_{22}	29.53	-134.61	4.97	5.12	-3.38	-13.91				
	L_{22}-U_{23}	-75.13	-230.47	5.12	3.16	-2.13	-19.34				
	U_{23}-L_{23}	-208.03	-208.03	5.21	5.21	-11.68	-24.74				
	L_{23}-U_{24}	-84.17	-278.54	5.06	4.39	-24.15	-25.51				
	U_{24}-L_{24}	-139.31	-139.31	5.87	5.87	-25.27	-25.27				
Structure 3	L_{24}-U_{25}	-274.89	-274.55	5.20	5.42	-28.84	-16.77				
	U_{25}-L_{25}	-296.96	-269.01	1.91	0.28	-30.99	-11.18				
	L_{25}-U_{26}	-154.35	-69.69	1.87	0.26	-16.20	-3.89				
	U_{26}-L_{26}	-154.35	-34.80	1.29	-0.32	-17.09	-2.30				
	L_{26}-U_{27}	-136.36	-136.36	1.29	-0.32	-17.09	-2.30				
	U_{27}-L_{27}	40.05	-167.81	-0.55	0.55	3.19	-11.18				
	L_{27}-U_{28}	-10.43	-132.23	-0.43	0.72	3.03	-13.38				
	U_{28}-L_{28}	-140.08	-140.08	-0.44	0.72	3.03	-13.38				
	L_{28}-U_{29}	-140.08	-260.72	-0.07	0.65	-4.42	-18.61				
	U_{29}-L_{29}	-194.63	-194.63	-0.07	0.65	-4.42	-18.61				
	L_{29}-U_{30}	-187.91	-275.87	1.62	2.24	-16.19	-22.94				
	U_{30}-L_{30}	-322.39	-140.93	1.12	2.17	-14.49	-22.94				
	L_{30}-U_{31}	-162.87	-104.84	1.20	3.97	-11.75	-4.69				
	U_{31}-L_{31}	-147.74	-26.71	2.87	4.26	-18.87	-1.08				
	L_{31}-U_{32}	-136.36	-136.36	2.87	4.26	-18.87	-1.08				
	U_{32}-L_{32}	10.81	46.01	3.84	2.25	-9.62	-0.34				
	L_{32}-U_{33}	22.53	22.53	3.84	2.25	-9.62	-0.34				
	U_{33}-L_{33}	426.14	9.08	1.68	1.68	11.20	-11.65				
	L_{33}-U_{34}	426.14	9.08	1.68	1.68	11.20	-11.65				
	U_{34}-L_{34}	128.06	64.05	4.29	3.74	3.72	-15.11				
	L_{34}-U_{35}	70.11	43.65	4.61	3.55	-9.01	-12.82				
	U_{35}-L_{35}	-8.37	-50.47	4.29	3.74	-3.72	-15.11				
	L_{35}-U_{36}	-8.37	-50.47	4.29	3.74	-3.72	-15.11				
	U_{36}-L_{36}	-8.37	-50.47	3.98	-16.80	11.29	-19.23				

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{bot} (in^3)	S_{top} (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor	M_p (k-in)	Formula (If Term < 1.0) F'c/f_{bot}	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(cl)}$
Structure 1	U_0-L_1	-177.80	21.85	-57.79	-417.23	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.139	0.66	0.666
	L_1-U_1	-62.76	21.94	-147.77	-630.91	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.234	0.69	0.69
	U_1-L_2	-144.61	-87.33	-438.16	-322.87	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.329	0.72	0.72
	L_2-U_2	-36.82	59.16	-137.43	-191.36	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.917	0.97	0.97
	U_2-L_3	-41.18	56.99	-228.08	-75.46	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.917	0.97	0.97
	L_3-U_3	-52.41	-89.77	-438.16	-322.87	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.329	0.72	0.72
	U_3-L_4	-48.24	53.93	-150.64	9.24	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.585	0.37	0.585
	L_0-U_1	51.43	23.42	-156.76	-153.23	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.234	0.69	0.69
	U_1-L_1	43.92	69.87	-114.37	-214.38	-21.41	97.15	78.78	142.56	2586	1649.1	1.47	4704	0.9988004	3320.1	0.512	0.63	0.63
	L_1-U_2	-69.92	603.38	2.20	5.88	-19.79	22.64											
	U_2-L_3	53.77	-129.19	8.84	0.92	8.21	-10.83											
	L_3-U_3	68.54	43.95	2.35	3.00	1.89	-7.27											
	U_3-L_4	100.48	-176.70	3.86	3.08	1.66	-15.40											
	L_4-U_4	75.29	-160.18	4.41	2.50	1.92	-13.67											
	U_4-L_5	-56.66	-218.08	3.43	1.17	1.37	-17.44											
	L_5-U_5	-173.90	-144.23	2.52	1.80	4.69	-27.97											
	U_5-L_6	-287.80	-237.44	2.96	1.71	-26.40	-16.54											
	L_6-U_6	-196.20	-337.71	2.90	0.17	-17.34	-7.89											
	U_6-L_7	-290.83	-154.75	1.10	-0.20	-33.78	4.59											
	L_7-U_7	-189.93	-29.96	0.96	-0.89	-14.88	3.05											
	U_7-L_8	-179.63	-39.55	0.86	-0.92	-13.90	-2.25											
	L_8-U_8	-249.78	258.69	0.62	-0.38	-17.43	12.25											
	U_8-L_9	-28.62	-172.11	-0.61	1.44	7.43	-13.81											
	L_9-U_9	-24.91	-195.34	-0.28	1.78	8.19	-19.39											
	U_9-L_{10}	-53.03	-283.30	-0.85	1.97	0.08	-23.30											
	L_{10}-U_{10}	-39.66	-282.91	-0.69	1.93	0.11	-23.70											
	U_{10}-L_{11}	-360.46	-389.97	0.18	3.27	-18.45	-28.22											
	L_{11}-U_{11}	-403.42	-341.74	0.24	2.44	-8.27	-24.05											
	U_{11}-L_{12}	-349.63	-208.07	4.55	6.49	-23.79	-33.25											
	L_{12}-U_{12}	-253.78	-280.71	3.53	4.89	-33.50	-10.89											
	U_{12}-L_{13}	-332.32	-53.64	4.08	4.08	-10.66	-4.08											
	L_{13}-U_{13}	-237.02	-39.91	5.08	6.43	-20.57	-5.77											
	U_{13}-L_{14}	-116.69	-30.75	3.43	4.37	-20.03	-3.01											
	L_{14}-U_{14}	-116.69	-170.75	5.43	4.37	-20.27	-1.38											
	U_{14}-L_{15}	-24.91	-58.84	5.36	4.37	-10.83	-55.75											
	L_{15}-U_{15}	-211.04	-121.68	3.91	6.39	-0.59	-0.64											
	U_{15}-L_{16}	-1028.71	-26.69	15.19	1.76	-1.20	0.08											
	L_{16}-U_{16}	9.97	9.97	12.84	12.84	0.27	0.27											
	U_{16}-L_{17}	-271.38	25.19	3.73	3.50	-2.61	-15.58											
	L_{17}-U_{17}	-181.75	24.70	4.40	3.56	-2.61	-15.58											
	U_{17}-L_{18}	-156.55	-8.67	3.51	3.91	-6.50	-17.32											
	L_{18}-U_{18}	-48.55	11.41	5.09	4.10	-9.80	-15.54											
	U_{18}-L_{19}	-52.57	-65.85	2.04	2.22	-17.23	-26.18											
	L_{19}-U_{19}	-59.44	-37.51	1.74	2.29	-26.05	10.16											
	U_{19}-L_{20}	-48.31	-31.52	0.15	4.15	-14.20	-11.69											
	L_{20}-U_{20}	-10.77	-13.67	3.17	4.73	-18.68	0.54											
	U_{20}-L_{21}	57.22	-122.85	4.03	3.56	-15.10	-3.49											
	L_{21}-U_{21}	85.41	4.86	3.84	1.61	-12.69	-14.38											
	U_{21}-L_{22}	75.52	806.57	2.29	0.39	-1.38	-21.37											
	L_{22}-U_{22}	821.42	-89.58	12.70	14.89	-1.58	-0.69											
	U_{22}-L_{23}	-25.52	87.45	2.61	1.18	-1.04	-14.65											
	L_{23}-U_{23}	145.61	-52.49	3.69	4.56	-4.71	-12.09											
	U_{23}-L_{24}	17.52	-88.46	4.86	5.12	-3.38	-13.91											
	L_{24}-U_{24}	29.53	-134.61	4.97	5.12	-3.38	-13.91											
	U_{24}-L_{25}	-75.13	-230.47	5.12	3.16	-2.13	-19.34											
	L_{25}-U_{25}	-208.03	-208.03	5.21	5.21	-11.68	-24.74											
	U_{25}-L_{26}	-84.17	-278.54	5.06	4.39	-24.15	-25.51											
	L_{26}-U_{26}	-139.31	-139.31	5.87	5.87	-25.27	-25.27											
	U_{26}-L_{27}	-274.89	-274.55	5.20	5.42	-28.84	-16.77											
	L_{27}-U_{27}	-296.96	-269.01	1.91	0.28	-30.99	-11.18											
	U_{27}-L_{28}	-154.35	-69.69	1.87	0.26	-16.20	-3.89											
	L_{28}-U_{28}	-154.35	-34.80	1.29	-0.32	-17.09	-2.30											
	U_{28}-L_{29}	-136.36	-136.36	1.29	-0.32	-17.09	-2.30											
	L_{29}-U_{30}	40.05	-167.81	-0.55	0.55	3.19	-11.18											
	U_{30}-L_{31}	-10.43	-132.23	-0.43	0.72	3.03	-13.38											
	L_{31}-U_{32}	-140.08	-140.08	-0.44	0.72	3.03	-13.38											
	U_{32}-L_{33}	-140.08	-260.72	-0.07	0.65	-4.42	-18.61											
	L_{33}-U_{34}	-194.63	-194.63	-0.07	0.65	-4.42	-18.61											
	U_{34}-L_{35}	-187.91	-275.87	1.62	2.24	-16.19	-22.94											
	L_{35}-U_{36}	-322.39	-140.93	1.12	2.17	-14.49	-22.94											
	U_{36}-L_{37}	-162.87	-104.84	1.20	3.97	-11.75	-4.69											
	L_{37}-U_{38}	-147.74	-26.71	2.87	4.26	-18.87	-1.08											
	U_{38}-L_{39}	-136.36	-136.36	2.87	4.26	-18.87	-1.08											
	L_{39}-U_{40}	10.81	46.01	3.84	2.25	-9.62	-0.34											
	U_{40}-L_{41}	22.53	22.53	3.84	2.25	-9.62	-0.34											
	L_{41}-U_{42}	426.14	9.08	1.68	1.68	11.20	-11.65											
	U_{42}-L_{43}	426.14	9.08	1.68	1.68	11.20	-11.65											
	L_{43}-U_{44}	128.06	64.05	4.29	3.74	3.72	-15.11											
	U_{44}-L_{45}	70.11	43.65	4.61	3.55	-9.01	-12.82											
	L_{45}-U_{46}	-8.37	-50.47	4.29	3.74	-3.72	-15.11											
	U_{46}-L_{47}	-8.37	-50.47	4.29	3.74	-3.72	-15.11											
	L_{47}-U_{48}	-8.37	-50.47	3.98	-16.80	11.29	-19.23											

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	4.32	-17.87	0.07	0.26	-1.03	1.66				
	L_1-U_1	-0.45	-56.42	-0.04	1.22	-1.13	-2.94				
	L_2-U_2	-2.02	-27.84	-0.03	0.60	-0.52	-3.58				
	L_3-U_3	3.05	-3.73	-0.04	0.03	-0.01	-3.58				
	L_4-U_4	-18.50	-4.30	48.01	9.33	0.00	0.00				
	U_0-L_1	92.30	64.86	-1.90	0.10	3.35	1.83				
	L_1-U_1	-162.42	-136.87	72.36	-24.66	0.00	0.00				
	L_2-U_2	-238.77	-143.39	177.19	-661.39	96.6	96.61	83.55	130.29	2174	1387.9
	L_3-U_3	-162.42	-136.87	72.36	-24.66	0.00	0.00				
	L_4-U_4	-24.60	2.51	43.28	23.61	0.00	0.00				
	U_0-L_1	-22.53	128.49	-3.91	-0.09	0.39	5.09				
	L_1-U_1	-23.59	-3.70	503.43	0.13	0.65	0.65				
	L_2-U_2	-192.97	-296.62	-158.82	-11.62	1.26	2.12				
	L_3-U_3	-18.23	-4.33	119.85	40.67	0.00	0.00				
	L_4-U_4	-22.53	128.49	-3.91	-0.09	0.39	5.09				
	U_0-L_1	-15.49	-13.82	-0.38	0.41	-0.23	0.27				
	L_1-U_1	-32.34	-19.77	107.67	98.49	0.00	0.00				
	L_2-U_2	-19.15	-19.83	96.99	72.49	0.00	0.00				
	L_3-U_3	-27.25	-15.09	107.67	98.49	0.00	0.00				
	L_4-U_4	-25.07	-13.17	90.20	20.10	0.00	0.00				
	U_0-L_1	-20.94	-11.55	0.03	0.70	1.95	-1.34				
	L_1-U_1	-40.40	-9.52	112.28	27.79	0.00	0.00				
	L_2-U_2	-24.32	-24.08	2.61	0.00	-1.79	0.00				
	L_3-U_3	-41.76	-9.57	-3.16	-0.75	8.79	2.18				
	L_4-U_4	-38.55	-8.62	-1.96	-1.03	7.06	1.57

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	L_0-L_1	-49.04	-101.19	0.56	-9.93	4.62	-7.59	7.41	-12.38	61.69	-101.39
	L_1-L_2	-130.93	-112.57	-1.57	-13.06	-0.41	-2.65	-21.00	-174.53	-5.52	32.74
	L_2-L_3	-130.77	-79.27	-0.53	-14.29	1.25	2.85	-169.28	-169.48	16.74	38.11
	L_3-L_4	18.53	15.80	-13.41	-12.20	1.38	5.15	-179.11	-163.01	18.41	68.84
	L_4-L_5	-68.87	210.25	-2.94	-1.52	0.32	53.57	-226.01	-226.22	32.50	320.12
	L_5-L_6	7.25	228.45	-10.56	-4.12	3.10	59.99	-141.12	-55.07	41.39	79.97
	L_6-L_7	62.67	177.71	-9.69	-3.26	4.19	-6.70	-129.47	-84.63	75.87	-9.33
	L_7-L_8	7.98	461.19	0.01	-0.01	0.77	13.45	0.19	-0.17	10.31	179.63
	L_8-L_9	439.37	-23.36	-0.03	-0.02	7.84	0.41	-0.38	-0.26	101.46	5.33
	L_9-L_{10}	204.91	-116.77	-4.59	-0.02	-1.45	3.50	-67.60	-164.66	-64.96	-18.71
	L_{10}-L_{11}	168.38	-118.38	-3.16	-5.61	5.31	2.51	-40.91	-72.57	68.70	32.41
	L_{11}-L_{12}	234.10	-217.13	-1.38	-6.65	3.37	2.54	-17.82	-111.71	43.54	45.25
	L_{12}-L_{13}	-19.53	-128.46	-0.75	-11.22	3.29	1.61	-74.45	-145.12	-62.61	-20.88
	L_{13}-L_{14}	-179.73	-425.17	-7.94	-17.19	2.54	2.22	-102.76	-222.36	32.86	28.71
	L_{14}-L_{15}	-409.18	-267.00	-12.02	-3.94	1.89	2.22	-241.35	-243.92	-33.89	-43.55
	L_{15}-L_{16}	-209.34	-318.54	-16.11	-16.33	0.89	0.76	-208.46	-198.31	11.63	59.85
	L_{16}-L_{17}	-374.18	83.63	-17.07	-11.43	2.64	0.00	-360.45	10.57	-40.21	103.25
	L_{17}-L_{18}	-170.99	204.48	-13.19	-1.27	0.35	-0.04	-131.88	-16.37	4.49	-0.53
	L_{18}-L_{19}	-297.50	293.73	-2.64	-0.13	2.79	3.06	-34.14	14.38	39.99	0.00
	L_{19}-L_{20}	-69.23	0.16	1.67	0.73	4.60	3.51	-21.27	0.43	-59.53	45.39
	L_{20}-L_{21}	5.36	-218.26	0.58	-1.72	3.13	-7.15	7.45	-21.99	39.96	-91.29
	L_{21}-L_{22}	16.91	-247.31	0.96	-1.72	3.43	1.04	39.35	-249.87	0.46	-13.26
	L_{22}-L_{23}	1.07	-191.80	-2.62	-12.78	-0.57	1.16	-33.50	-163.74	-7.26	14.76
	L_{23}-L_{24}	47.79	-287.61	-4.78	-19.50	-4.45	2.15	-61.11	-244.29	-9.23	4.78
	L_{24}-L_{25}	-286.08	-298.86	-16.91	-17.25	-0.22	-2.06	-216.10	-222.39	-2.75	-26.29
	L_{25}-L_{26}	-287.44	-297.04	-17.24	-17.24	-0.22	-2.06	-214.22	-222.54	8.69	-27.19
	L_{26}-L_{27}	-467.27	-273.20	-28.47	-18.54	2.99	4.45	-363.80	-236.90	38.25	56.82
	L_{27}-L_{28}	-310.47	-45.78	-36.06	-13.04	3.66	6.75	-332.89	-166.64	-46.76	86.18
	L_{28}-L_{29}	-271.10	223.77	-18.34	-4.28	3.66	6.75	-234.26	-54.62	55.99	86.18
	L_{29}-L_{30}	-261.82	188.40	-14.69	-6.30	3.24	6.65	-187.66	-80.47	-41.45	85.01
	L_{30}-L_{31}	-131.41	389.79	-6.47	-6.81	3.72	6.73	-82.65	-86.98	-47.52	85.93
	L_{31}-L_{32}	-164.24	-140.43	-1.44	-0.01	5.79	2.51	-18.35	-0.13	73.91	-32.00
	L_{32}-L_{33}	-67.38	999.20	-0.34	-0.01	2.46	29.15	-8.22	-0.15	13.75	551.93
	L_{33}-L_{34}	911.85	-326.76	-0.65	-0.49	9.01	0.47	-8.22	-6.15	113.75	9.51
	L_{34}-L_{35}	288.04	42.03	1.03	-0.77	3.78	3.26	-14.42	-0.01	53.64	0.00
	L_{35}-L_{36}	515.61	-35.20	-1.67	0.10	7.13	2.21	-21.06	-1.20	90.02	27.89
	L_{36}-L_{37}	252.11	-254.04	-1.67	-2.77	8.48	6.28	-91.75	-107.10	79.06	34.48
	L_{37}-L_{38}	230.58	-46.22	-6.59	-11.63	3.69	4.16	-108.48	-144.86	-45.52	52.47
	L_{38}-L_{39}	43.89	-183.34	-14.60	-21.07	2.99	2.68	-196.92	-266.08	-37.71	33.82
	L_{39}-L_{40}	119.67	-384.31	-16.91	-21.07	2.99	2.68	-196.92	-266.08	-37.71	33.82
	L_{40}-L_{41}	-104.37	-8.61	-19.30	-12.38	1.83	5.02	-243.60	-156.34	23.12	63.43
	L_{41}-L_{42}	-67.38	999.20	-0.34	-0.01	2.46	29.15	-8.22	-0.15	13.75	551.93
	L_{42}-L_{43}	-65.51	170.40	-6.23	-11.00	2.40	5.56	-78.68	-138.89	30.31	70.15
	L_{43}-L_{44}	-30.91	151.01	-3.19	0.07	-2.23	6.07	-40.30	0.90	-26.17	76.60
	L_{44}-L_{45}	277.43	13.89	-0.16	0.00	0.00	0.00	-0.27	-0.01	0.00	0.00
	L_{45}-L_{46}	-19.86	-197.53	-1.09	-0.98	1.40	3.06	-13.75	-12.32	17.66	38.94
	L_{46}-L_{47}	277.43	-13.89	-0.16	0.00	0.00	0.00	-0.27	-0.01	0.00	0.00
	L_{47}-L_{48}	747.52	-264.15	-1.98	-0.11	12.16	-0.76	-17.69	1.46	-155.39	-9.70
	L_{48}-L_{49}	-140.80	-80.21	0.27	-1.11	3.72	-2.01	3.44	-14.17	-47.46	-0.09
	L_{49}-L_{50}	-119.39	-119.39	-0.09	-1.11	3.72	-2.01	3.44	-14.17	-47.46	-0.09
	L_{50}-L_{51}	-150.40	-145.70	-2.45	-8.27	2.56	4.54	-31.33	-105.67	32.69	58.06
	L_{51}-L_{52}	-94.80	-174.96	-2.45	-8.27	2.56	4.54	-31.33	-105.67	32.69	58.06
	L_{52}-L_{53}	95.69	-212.39	-2.65	-15.02	3.63	3.72	-33.86	-191.84	46.35	47.55
	L_{53}-L_{54}	95.69	-212.39	-2.65	-15.02	3.63	3.72	-33.86	-191.84	46.35	47.55
	L_{54}-L_{55}	-182.72	-415.40	-18.55	-28.76	3.10	2.96	-237.05	-367.40	39.62	38.02
	L_{55}-L_{56}	-370.16	-165.14	-30.16	-17.93	2.93	0.64	-385.32	-229.07	37.49	8.93
	L_{56}-L_{57}	-224.09	-218.61	-23.13	-2.79	3.06	0.64	-287.56	-258.30	12.80	8.93
	L_{57}-L_{58}	-304.14	-22.17	-21.75	-6.52	1.43	-0.32	-297.34	-63.28	18.32	-4.14
	L_{58}-L_{59}	-222.88	-59.03	-13.81	-6.96	0.91	-0.40	-176.38	-0.75	11.68	-5.33
	L_{59}-L_{60}	42.77	-120.03	0.39	1.46	3.81	-5.25	4.46	-18.86	49.27	-87.91
	L_{60}-L_{61}	192.98	-177.52	0.53	-2.55	1.54	-1.74	6.87	-33.01	19.86	-22.49
	L_{61}-L_{62}	55.38	-320.81	-2.97	-14.76	-0.16	0.81	38.40	-190.56	-2.10	10.45
	L_{62}-L_{63}	-64.00	-370.85	-12.27	-21.18	0.00	2.44	-158.70	-274.07	0.00	13.40
	L_{63}-L_{64}	-370.60	-82.46	-22.37	-5.43	1.64	2.76	-299.70	-70.24	21.15	55.65
	L_{64}-L_{65}	-200.72	-149.84	-10.71	-1.96	2.01	3.26	-138.65	-25.40	26.01	42.39
	L_{65}-L_{66}	-131.79	-166.74	-11.11	0.51	-2.40	5.01	-14.30	-6.55	-31.03	89.64
	L_{66}-L_{67}	361.79	-17.90	-0.04	0.00	10.61	0.11	-0.49	0.09	133.70	1.51
	L_{67}-L_{68}	91.95	21.70	-0.16	-10.09	-1.94	3.86	-2.16	-134.79	-25.96	51.51
	L_{68}-L_{69}	189.89	5.64	-1.99	-15.00	4.13	-4.39	-26.52	-200.45	55.11	58.60
	L_{69}-L_{70}	189.89	5.64	-1.99	-15.00	4.13	-4.39	-26.52	-200.45	55.11	58.60
	L_{70}-L_{71}	-38.98	-56.51	-13.65	-13.81	3.14	1.40	-182.32	-184.59	41.91	19.80
	L_{71}-L_{72}	-66.65	-75.79	-14.14	-1.23	4.33	3.52	-15.19	-16.47	-57.90	52.34

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	L_0-L_1	-2.22	-0.14	-0.07	-0.27	0.43	1.69	-0.96	-3.57	5.77	21.26
	L_1-L_2	-121.37	-33.99	-4.30	-8.88	0.00	0.00	-33.06	-1.59	-9.09	-2.54
	L_2-L_3	-39.64	-17.14	-3.49	-17.61	0.00	0.00	-16.08	-12.12	-2.62	-3.28
	L_3-L_4	-22.52	-10.77	20.41	2.50	0.00	0.00	-5.86	-66.88	-1.69	-0.81
	L_4-L_5	-54.57	-17.53	16.66	0.59	0.00	0.00	-3.81	-25.51	-4.09	-0.35
	L_5-L_6	59.21	-14.46	9.43	2.15	0.00	0.00	-16.19	87.23	-5.74	-30.53
	L_6-L_7	57.00	-39.33	5.61	0.48	0.00	0.00	75.93	-110.35	69.12	-91.54
	L_7-L_8	-11.49	-12.16	-4.80	-21.68	0.00	0.00	-89.35	-101.61	-74.85	-122.25
	L_8-L_9	57.37	-10.82	12.40	-5.24	0.00	0.00	-129.08	-148.78	-69.54	-155.55
	L_9-L_{10}	97.17	12.46	21.21	-3.75	0.00	0.00	-113.00	56.57	-51.58	67.32
	L_{10}-L_{11}	-15.27	24.47	8.37	19.08	0.00	0.00	77.97	14.91	124.84	3.24
	L_{11}-L_{12}	25.32	-12.56	2.21	-2.97	0.00	0.00	60.13	-22.81	52.45	-14.40
	L_{12}-L_{13}	4.83	44.46	13.28	-6.12	0.00	0.00	-27.70	199.88	-144.28	47.58
	L_{13}-L_{14}	23.73	-17.44	-1.82	-6.35	0.00	0.00	66.88	-15.43	111.51	8.60
	L_{14}-L_{15}	-0.38	30.61	1.15	-0.27	0.00	0.00	-150.51	58.49	-59.99	32.73
	L_{15}-L_{16}	38.91	-41.30	-2.35	5.59	0.00	0.00	-24.80	-172.74	-114.25	-71.14
	L_{16}-L_{17}	-68.16	50.76	20.58	-16.78	0.00	0.00	-32.71	37.18	302.9	300.99
	L_{17}-L_{18}	32.71	-33.85	-1.07	-0.60	0.00	0.00	-4.34	-88.02	-77.54	-15.95
	L_{18}-L_{19}	1.27	49.33	37.56	10.68	0.00	0.00	75.49	-149.46	198.78	133.11
	L_{19}-L_{20}	36.99	8.28	6.47	1.42	0.00	0.00	43.60	9.79	50.93	-11.23
	L_{20}-L_{21}	1.14	3.95	-4.34	-15.09	0.00	0.00	1.74	6.07	-10.14	-35.18
	L_{21}-L_{22}	-16.80	3.95	-4.34	-15.09	0.00	0.00	-26.14	6.07	-10.14	-35.18
	L_{22}-L_{23}	60.37	43.09	-0.28	2.41	-0.12	0.22	123.91	75.21	63.31	254.7
	L_{23}-L_{24}	-17.77	2.36	32.74	8.75	0.43	0.80	112.64	8.53	191.7	29.81
	L_{24}-L_{25}	-4.43	21.54	-5.18	11.31	0.00	0.00	75.20	188.26	83.09	166.59
	L_{25}-L_{26}	-17.07	-11.39	-5.18	11.31	0.00	0.00	75.20	188.26	83.09	166.59
	L_{26}-L_{27}	11.69	-29.17	-1.60	-3.59	-0.12	0.22	123.91	75.21	63.31	254.7
	L_{27}-L_{28}	-0.96	67.32	8.22	-3.12	0.00	0.00	-127.70	199.88	-144.28	47.58
	L_{28}-L_{29}	64.96	-20.31	1.16	3.04	0.00	0.00	4.61	-48.42	-133.61	2.18
	L_{29}-L_{30}	36.04	86.87	21.69	-4.88	0.00	0.00	138.43	34.29	208.45	20.09
	L_{30}-L_{31}	59.04	-34.20	12.81	15.41	0.00	0.00	71.79	-69.20	-28.37	-28.56
	L_{31}-L_{32}	-58.84	16.50	2.93	1.24	0.00	0.00	-58.84	16.50	2.93	1.24
	L_{32}-L_{33}	84.35	64.04	65.05	-215.88	294.1	294.09	243.18	323.60	1490.0	1.10
	L_{33}-L_{34}	-19.77	-121.04	139.78	-117.13	383.9	383.93	320.77	-431.84	2270.63	362.39
	L_{34}-L_{35}	-0.11	-4.32	23.01	-4.51	0.00	0.00	-19.77	-121.04	139.78	-117.13
	L_{35}-L_{36}	-11.89	-0.39	9.77	-2.56	0.00	0.00	-148.14	-37.91	44.02	10.77
	L_{36}-L_{37}	-19.78	-9.05	7.06	-25.45	0.00	0.00	-412.64	271.63	-354.48	-307.36
	L_{37}-L_{38}	-4.78	8.21	28.59	13.05	0.00	0.00	-412.64	271.63	-354.48	-307.36
	L_{38}-L_{39}	12.25	-6.11	2.46	-0.68	0.00	0.00	-152.35	38.52	230.50	35.16
	L_{39}-L_{40}	5.35	-23.67	-22.23	-4.19	0.00	0.00	-152.83	192.81	43.06	42.46
	L_{40}-L_{41}	67.01	-1.36	1.15	-5.46	0.00	0.00	-196.88	0.24	54.17	-15.13
	L_{41}-L_{42}	12.25	-6.11	2.46	-0.68	0.00	0.00	-152.35	38.52	230.50	35.16
	L_{42}-L_{43}	66.60	0.64	-6.56	-7.89	0.00	0.00	91.93	8.63	-70.91	-9.86
	L_{43}-L_{44}	42.95	-35.92	9.13	6.70	0.00	0.00	83.78	-53.16	-2.36	-43.65
	L_{44}-L_{45}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{45}-L_{46}	13.84	-48.47	7.49	14.17	0.00	0.00	20.82	-71.56	7.06	64.16
	L_{46}-L_{47}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{47}-L_{48}	-22.88	42.29	-40.21	30.28	149.0	149.01	-19.47	113.49	-57.03	29.10
	L_{48}-L_{49}	2.11	-3.24	-32.83	30.04	149.0	149.01	82.99	-63.64	-76.77	63.33
	L_{49}-L_{50}	5.20	2.90	-39.46	3.96	0.00	0.00	149.26	-31.70	61.15	-29.46
	L_{50}-L_{51}	4.74	8.21	28.59	13.05	0.00	0.00	-412.64	271.63	-354.48	-307.36
	L_{51}-L_{52}	0.65	4.32	-36.49	3.96	0.00	0.00	149.26	-31.70	61.15	-29.46
	L_{52}-L_{53}	9.65	4.32	-36.49	3.96	0.00	0.00	149.26	-31.70	61.15	-29.46
	L_{53}-L_{54}	7.43	8.32	-36.56	-7.26	0.00	0.00	-66.61	41.68	-163.16	49.29
	L_{54}-L_{55}	8.12	3.74	-36.56	-7.26	0.00	0.00	-66.61	41.68	-163.16	49.29
	L_{55}-L_{56}	278.84	18.90	102.26	-11.74	292.3	292.29	239.93	321.85	1516.9	1.10
	L_{56}-L_{57}	48.79	-20.10	-1.27	-15.15	0.00	0.00	-150.05	41.56	18.93	-30.85
	L_{57}-L_{58}	46.22	-29.63	-3.43	2.28	0.00	0.00	-46.02	-101.34	-48.88	-24.41
	L_{58}-L_{59}	-18.18	46.95	8.60	-6.61	0.00	0.00	-105.36	113.38	-47.33	-0.50
	L_{59}-L_{60}	32.71	-33.85	-1.07	-0.60	0.00	0.00	-4.34	-88.02	-77.54	-15.95
	L_{60}-L_{61}	1.27	49.33	37.56	10.68	0.00	0.00	75.49	-149.46	198.78	133.11
	L_{61}-L_{62}	36.99	8.28	6.47	1.42	0.00	0.00	43.60	9.79	50.93	-11.23
	L_{62}-L_{63}	1.14	3.95	-4.34	-15.09	0.00	0.00	1.74	6.07	-10.14	-35.18
	L_{63}-L_{64}	-16.80	3.95	-4.34	-15.09	0.00	0.00	-26.14	6.07	-10.14	-35.18
	L_{64}-L_{65}	60.37	43.09	-0.28	2.41	-0.12	0.22	123.91	75.21	63.31	254.7
	L_{65}-L_{66}	-17.77	2.36	32.74	8.75	0.43	0.80	112.64	8.53	191.7	29.81
	L_{66}-L_{67}	-4.43	21.54	-5.18	11.31	0.00	0.00	75.20	188.26	83.09	166.59
	L_{67}-L_{68}	-17.07	-11.39	-5.18	11.31	0.00	0.00	75.20	188.26	83.09	166.59
	L_{68}-L_{69}	11.69	-29.17	-1.60	-3.59	-0.12	0.22	123.91	75.21	63.31	254.7
	L_{69}-L_{70}	-0.96	67.32	8.22	-3.12	0.00	0.00	-127.70	199.88	-144.28	47.58
	L_{70}-L_{71}	64.96	-20.31	1.16	3.04	0.00	0.00	4.61	-48.42	-133.61	2.18
	L_{71}-L_{72}	36.04	86.87	21.69	-4.88	0.00	0.00	138.43	34.29	208.45	20.09

Tension

Location	Member	Axial Load (k)	Moment Start (k-in)	Moment End (k-in)	Total	Pass
Structure 1	L_0-L_1	0.020	0.509	0.509	Yes	Yes
	L_1-L_2	0.306	0.697	1.046	Yes	Yes
	L_2-L_3	0.333	0.885	0.885	Yes	Yes
	L_3-L_4	0.083	0.117	0.200	Yes	Yes
	L_4-L_5	0.082	0.088	0.168	Yes	Yes
	L_5-L_6	0.136	0.190	0.326	Yes	Yes
	L_6-L_7	0.777	0.639	1.104	Yes	Yes
	L_7-L_8	0.646	0.116	0.762	Yes	Yes
	L_8-L_9	0.592	0.566	0.644	Yes	Yes
	L_9-L_{10}	0.500	0.546	0.155	Yes	Yes
	L_{10}-L_{11}	0.527	0.077	0.600	Yes	Yes
	L_{11}-L_{12}	0.516	0.097	0.562	Yes	Yes
	L_{12}-L_{13}	0.573	0.111	0.699	Yes	Yes
	L_{13}-L_{14}	0.513	0.112	0.625	Yes	Yes
	L_{14}-L_{15}	0.497	0.125	0.622	Yes	Yes
	L_{15}-L_{16}	0.497	0.125	0.622	Yes	Yes
	L_{16}-L_{17}	0.447	0.124	0.571	Yes	Yes
	L_{17}-L_{18}	0.447	0.124	0.571	Yes	Yes
	L_{18}-L_{19}	0.353	0.050	0.403	Yes	Yes
	L_{19}-L_{20}	0.353	0.050	0.403	Yes	Yes
	L_{20}-L_{21}	0.034	0.067	0.111	Yes	Yes
	L_{21}-L_{22}	0.034	0.067	0.111	Yes	Yes
	L_{22}-L_{23}	0.306	0.697	1.046	Yes	Yes
	L_{23}-L_{24}	0.333	0.885	0.885	Yes	Yes
	L_{24}-L_{25}	0.082	0.088	0.168	Yes	Yes
	L_{25}-L_{26}	0.082	0.088	0.168	Yes	Yes
	L_{26}-L_{27}	0.136	0.190	0.326	Yes	Yes
	L_{27}-L_{28}	0.777	0.639	1.104	Yes	Yes
	L_{28}-L_{29}	0.212	0.119	0.334	Yes	Yes
	L_{29}-L_{30}	0.212	0.119	0.334	Yes	Yes
	L_{30}-L_{31}	0.447	0.124	0.571	Yes	Yes
	L_{31}-L_{32}	0.473	0.025	0.498	Yes	Yes
	L_{32}-L_{33}	0.483	0.034	0.517	Yes	Yes
	L_{33}-L_{34}	0.482	0.111	0.611	Yes	Yes
	L_{34}-L_{35}	0.497	0.125	0.622	Yes	Yes
	L_{35}-L_{36}	0.532	0.346	0.878	Yes	Yes
	L_{36}-L_{37}	0.542	0.106	0.648	Yes	Yes
	L_{37}-L_{38}	0.538	0.107	0.645	Yes	Yes
	L_{38}-L_{39}	0.628	0.106	0.734	Yes	Yes
	L_{39}-L_{40}	0.586	0.094	0.680	Yes	Yes
	L_{40}-L_{41}	0.582	0.096	0.678	Yes	Yes
	L_{41}-L_{42}	0.385	0.077	0.462	Yes	Yes
	L_{42}-L_{43}	0.385	0.077	0.462	Yes	Yes
	L_{43}-L_{44}	0.000	0.000	0.000	Yes	Yes
	L_{44}-L_{45}	0.000	0.000	0.000	Yes	Yes
	L_{45}-L_{46}	0.000	0.000	0.000	Yes	Yes
	L_{46}-L_{47}	0.000	0.000	0.000	Yes	Yes
	L_{47}-L_{48}	0.000	0.000	0.000	Yes	Yes
	L_{48}-L_{49}	0.000	0.000	0.000	Yes	Yes
	L_{49}-L_{50}	0.000	0.000	0.000	Yes	Yes
	L_{50}-L_{51}	0.000	0.000	0.000	Yes	Yes
	L_{51}-L_{52}	0.000	0.000	0.000	Yes	Yes
	L_{52}-L_{53}	0.000	0.000	0.000	Yes	Yes
	L_{53}-L_{54}	0.000	0.000	0.000	Yes	Yes
	L_{54}-L_{55}	0.000	0.000	0.000	Yes	Yes
	L_{55}-L_{56}	0.000	0.000	0.000	Yes	Yes
	L_{56}-L_{57}	0.000	0.000	0.000	Yes	Yes
	L_{57}-L_{58}	0.000	0.000	0.000	Yes	Yes
	L_{58}-L_{59}	0.000	0.000	0.000	Yes	Yes
	L_{59}-L_{60}	0.000	0.000	0.000	Yes	Yes
	L_{60}-L_{61}	0.000	0.000	0.000	Yes	Yes
	L_{61}-L_{62}	0.000	0.000	0.000	Yes	Yes
	L_{62}-L_{63}	0.000	0.000	0.000	Yes	Yes
	L_{63}-L_{64}	0.000	0.000	0.000	Yes	Yes
	L_{64}-L_{65}	0.000	0.000	0.000	Yes	Yes
	L_{65}-L_{66}	0.000	0.000	0.000	Yes	Yes
	L_{66}-L_{67}	0.000	0.000	0.000	Yes	Yes
	L_{67}-L_{68}	0.000	0.000	0.000	Yes	Yes
	L_{68}-L_{69}	0.000	0.000	0.000	Yes	Yes
	L_{69}-L_{70}	0.000	0.000	0.000	Yes	Yes
	L_{70}-L_{71}	0.000	0.000	0.000	Yes	Yes
	L_{71}-L_{72}	0.000	0.000	0.000	Yes	Yes

Compression

Location	Member	Axial Load (k)	Moment Start (k-in)	Moment End (k-in)	Total	Pass
Structure 1	L_0-L_1	0.029	0.052	0.109	Yes	Yes
	L_1-L_2	0.309	0.072	0.381	Yes	Yes
	L_2-L_3	0.336	0.091	0.427	Yes	Yes
	L_3-$L_4

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moment from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Min) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0–L_1	-55.75	82.39	0.68	-0.90	4.33	5.03	0.00	0.00	0.00	0.00
	U_1–L_1	-14.37	23.26	0.91	-0.92	-3.52	3.86	0.00	0.00	0.00	0.00
	U_1–L_2	8.53	5.37	-1.25	-2.86	3.42	1.44	0.00	0.00	0.00	0.00
	U_2–L_2	36.81	-39.20	1.73	-1.61	-2.03	2.54	0.00	0.00	0.00	0.00
	U_2–L_3	49.94	-49.31	1.71	2.01	-1.07	1.42	0.00	0.00	0.00	0.00
	U_3–L_3	57.83	-70.07	-0.20	0.03	3.20	-3.87	0.00	0.00	0.00	0.00
	U_3–L_4	67.02	-68.30	0.31	0.03	3.71	-3.75	0.00	0.00	0.00	0.00
	U_4–L_4	102.14	-112.44	0.14	0.12	5.19	-5.51	0.00	0.00	0.00	0.00
	U_4–L_5	-10.55	7.04	0.55	-0.65	2.47	-2.79	0.00	0.00	0.00	0.00
	U_5–L_5	-144.63	166.25	0.40	-0.50	-6.38	7.33	0.00	0.00	0.00	0.00
	U_5–L_6	-101.27	95.46	0.18	-0.38	-3.27	4.15	0.00	0.00	0.00	0.00
	U_6–L_6	-111.05	108.51	0.01	-0.18	-3.32	4.98	0.00	0.00	0.00	0.00
	U_6–L_7	-96.41	93.86	0.54	-0.46	-3.61	3.96	0.00	0.00	0.00	0.00
	U_7–L_7	-90.90	75.93	0.79	-0.90	-3.20	3.60	0.00	0.00	0.00	0.00
	U_7–L_8	-37.85	43.18	0.82	-0.79	-1.81	1.80	0.00	0.00	0.00	0.00
	U_8–L_8	-26.21	25.76	40.98	-44.78	0.00	0.00	0.00	0.00	0.00	0.00
	U_8–L_9	47.73	-50.39	30.64	-33.98	-43.91	0.00	0.00	0.00	0.00	0.00
	U_9–L_9	61.54	-72.81	-0.60	0.60	3.50	-3.85	0.00	0.00	0.00	0.00
	U_9–L_{10}	133.07	-138.05	0.83	0.27	4.60	-5.13	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	158.01	-154.56	-0.85	0.76	6.70	-7.02	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	131.43	-213.61	-0.37	0.62	4.82	-6.62	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	144.68	187.26	0.65	-0.84	6.79	7.16	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	-122.98	131.23	0.80	-0.82	-6.12	6.31	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	117.72	-124.26	0.98	-0.98	5.47	-5.91	0.00	0.00	0.00	0.00
	U_{12}–L_{13}	-62.37	68.66	0.63	-0.64	-3.32	3.52	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	37.85	-43.18	0.82	-0.79	1.81	-1.80	0.00	0.00	0.00	0.00
	U_{13}–L_{14}	-9.72	15.71	1.32	-1.30	-2.74	3.16	0.00	0.00	0.00	0.00
	U_{14}–L_{14}	14.83	-14.93	1.97	-2.08	-2.59	2.80	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	39.68	-43.44	1.35	-1.35	-3.72	4.01	0.00	0.00	0.00	0.00
	U_{15}–L_{15}	88.70	-97.90	-1.01	0.91	3.63	-4.15	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	133.02	-133.05	0.71	0.46	3.91	-3.98	0.00	0.00	0.00	0.00
	U_{16}–L_{16}	140.07	-146.97	-0.29	0.61	6.21	-6.44	0.00	0.00	0.00	0.00
	U_{16}–L_{17}	148.94	-153.41	-0.15	0.26	5.69	-5.77	0.00	0.00	0.00	0.00
	U_{17}–L_{17}	134.98	-139.93	0.43	-0.60	5.12	-5.40	0.00	0.00	0.00	0.00
	U_{17}–L_{18}	185.37	-182.48	-0.67	0.62	7.28	-7.51	0.00	0.00	0.00	0.00
	U_{18}–L_{18}	72.78	73.71	0.50	-0.50	3.00	4.08	0.00	0.00	0.00	0.00
	U_{18}–L_{19}	-128.23	129.95	0.72	-0.64	-5.90	5.82	0.00	0.00	0.00	0.00
	U_{19}–L_{19}	114.73	-117.39	0.72	-0.64	5.00	5.52	0.00	0.00	0.00	0.00
	U_{19}–L_{20}	-125.93	122.62	0.73	-0.69	-6.22	6.66	0.00	0.00	0.00	0.00
	U_{20}–L_{20}	109.68	106.90	0.97	-0.95	-6.37	6.91	0.00	0.00	0.00	0.00
	U_{20}–L_{21}	-133.02	133.05	0.71	0.46	-3.91	3.98	0.00	0.00	0.00	0.00
Structure 2	U_0–L_1	-43.26	43.75	0.80	-0.73	-2.98	3.34	0.00	0.00	0.00	0.00
	U_1–L_1	29.76	-30.24	0.91	-0.92	-2.03	2.54	0.00	0.00	0.00	0.00
	U_1–L_2	-5.29	1.62	-1.61	1.87	0.83	-0.77	0.00	0.00	0.00	0.00
	U_2–L_2	38.34	-39.53	1.43	-1.18	-2.63	3.01	0.00	0.00	0.00	0.00
	U_2–L_3	46.56	-51.19	-1.14	0.99	4.64	-4.16	0.00	0.00	0.00	0.00
	U_3–L_3	62.64	-61.32	-0.97	0.94	5.06	-4.95	0.00	0.00	0.00	0.00
	U_3–L_4	73.68	-73.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_4–L_4	108.55	-105.78	-1.04	1.00	8.32	8.39	0.00	0.00	0.00	0.00
	U_4–L_5	52.79	-74.30	0.16	-0.19	2.94	-3.90	0.00	0.00	0.00	0.00
	U_5–L_5	114.59	-114.85	-0.92	0.42	7.18	-7.10	0.00	0.00	0.00	0.00
	U_5–L_6	-12.83	4.66	-0.56	0.53	2.91	-3.07	0.00	0.00	0.00	0.00
	U_6–L_6	-122.25	119.98	0.79	-0.74	5.59	5.40	0.00	0.00	0.00	0.00
	U_6–L_7	-93.65	87.71	0.64	-0.87	4.68	5.11	0.00	0.00	0.00	0.00
	U_7–L_7	101.38	-97.49	0.42	-0.25	5.25	5.04	0.00	0.00	0.00	0.00
	U_7–L_8	-96.77	103.24	0.18	-0.15	-5.01	5.51	0.00	0.00	0.00	0.00
	U_8–L_8	87.84	-87.84	0.53	0.53	4.62	4.62	0.00	0.00	0.00	0.00
	U_8–L_9	-83.45	70.98	0.57	-0.91	4.83	4.82	0.00	0.00	0.00	0.00
	U_9–L_9	-32.67	38.68	0.50	-0.58	-0.12	0.24	0.00	0.00	0.00	0.00
	U_9–L_{10}	4.73	-12.77	0.39	-0.35	1.24	-0.38	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	4.43	-8.37	-2.11	1.98	3.32	-3.55	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	-14.13	14.13	-1.32	1.50	2.60	-3.44	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	47.21	-50.58	-0.75	0.77	3.28	-3.68	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	-47.21	50.58	0.75	-0.77	-3.28	3.68	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	104.42	-111.67	-1.10	1.03	7.41	-7.53	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	108.14	-102.78	-0.55	0.90	4.62	-4.59	0.00	0.00	0.00	0.00
Structure 3	U_0–L_1	-124.31	124.31	0.66	-0.66	-5.11	5.11	0.00	0.00	0.00	0.00
	U_1–L_1	-109.30	107.29	0.56	-0.63	-5.62	5.96	0.00	0.00	0.00	0.00
	U_1–L_2	-48.62	51.77	0.46	-0.47	-3.02	3.45	0.00	0.00	0.00	0.00
	U_2–L_2	-16.12	16.13	0.66	-0.66	-2.38	2.38	0.00	0.00	0.00	0.00
	U_2–L_3	-5.41	11.54	0.71	-1.24	-3.36	3.70	0.00	0.00	0.00	0.00
	U_3–L_3	27.84	-30.65	1.93	-2.12	-1.19	1.27	0.00	0.00	0.00	0.00
	U_3–L_4	39.13	-42.86	0.65	-0.65	-2.47	2.47	0.00	0.00	0.00	0.00
	U_4–L_4	75.15	-75.15	-0.53	0.53	4.47	4.47	0.00	0.00	0.00	0.00
	U_4–L_5	75.15	-75.15	-0.53	0.53	4.47	4.47	0.00	0.00	0.00	0.00
	U_5–L_5	39.13	-42.86	0.65	-0.65	-2.47	2.47	0.00	0.00	0.00	0.00
	U_5–L_6	27.84	-30.65	1.93	-2.12	-1.19	1.27	0.00	0.00	0.00	0.00
	U_6–L_6	-5.41	11.54	0.71	-1.24	-3.36	3.70	0.00	0.00	0.00	0.00
	U_6–L_7	-16.12	16.13	0.66	-0.66	-2.38	2.38	0.00	0.00	0.00	0.00
	U_7–L_7	-48.62	51.77	0.46	-0.47	-3.02	3.45	0.00	0.00	0.00	0.00
	U_7–L_8	-109.30	107.29	0.56	-0.63	-5.62	5.96	0.00	0.00	0.00	0.00
	U_8–L_8	-124.31	124.31	0.66	-0.66	-5.11	5.11	0.00	0.00	0.00	0.00
	U_8–L_9	-38.84	39.91	-0.12	0.10	-2.48	2.48	0.00	0.00	0.00	0.00
	U_9–L_9	-38.88	40.30	-2.69	2.77	1.08	-1.48	0.00	0.00	0.00	0.00
	U_9–L_{10}	-13.42	14.14	-1.32	1.50	2.60	-3.44	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	5.87	-8.62	-1.39	1.23	4.84	-4.71	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	20.18	-40.81	-0.29	0.95	-0.61	-1.36	0.00	0.00	0.00	0.00

YY Axis Moment from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Min) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0–L_1	-4.73	1.52	-1.09	-0.35	-11.19	-3.89	0.00	0.00	0.00	0.00
	U_1–L_1	-14.54	-4.66	-149.40	-47.66	0.00	0.00	0.00	0.00	0.00	0.00
	U_1–L_2	5.34	-2.66	90.08	44.81	0.00	0.00	0.00	0.00	0.00	0.00
	U_2–L_2	-17.87	2.93	0.40	-2.20	6.74	3.35	0.00	0.00	0.00	0.00
	U_2–L_3	-59.47	-7.60	29.53	14.76	-19.16	6.42	0.00	0.00	0.00	0.00
	U_3–L_3	-13.80	-3.14	1.36	-1.20	6.20	1.78	0.00	0.00	0.00	0.00
	U_3–L_4	-75.07	-24.93	150.50	32.66	0.00	0.00	0.00	0.00	0.00	0.00
	U_4–L_4	-6.49	-2.88	116.66	-44.27	113.4	113.37	90.38	120.15	82.8	125.1
	U_4–L_5	-173.23	-58.11	152.01	17.36	116.3	116.29	92.64	123.31	84.93	128.3
	U_5–L_5	-178.16	13.38	475.07	67.36	107.3	107.33	115.31	134.33	84.5	125.4
	U_5–L_6	-365.99	-234.11	-6.18	-2.67	-3.38	-1.86	0.00	0.00	0.00	0.00
	U_6–L_6	-64.72	-26.73	81.02	-10.97	0.00	-2.84	3.94	-0.78	0.00	0.00
	U_6–L_7	-58.92	-25.31	21.41	-105.79	138.9	138.93	102.69	132.64	110.7	137.7
	U_7–L_7	-43.12	-5.11	119.77	9.12	0.00	0.00	0.00	0.00	0.00	0.00
	U_7–L_8	2.56	2.56	158.28	158.28	0.00	0.00	0.00	0.00	0.00	0.00
	U_8–L_8	22.19	36.47	82.99	5.21	0.00	0.00	0.00	0.00	0.00	0.00
	U_8–L_9	33.77	12.87	213.41	5.13	0.00	16.49	0.71	0.00	0.00	0.00
	U_9–L_9	-6.30	5.74	149.53	1.77	0.00	0.00	0.00	0.00	0.00	0.00
	U_9–L_{10}	-5.33	-1.68	139.89	-1.54	0.00	10.81	-0.61	0.00	0.00	0.00
	U_{10}–L_{10}	-2.06	5.64	221.30	11.74	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	-6.02	-1.05	185.45	24.32	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	-16.83	-4.50	185.45	24.32	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	-1.57	-2.22	-169.10	-26.70	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	-5.21	-2.62	-149.43	-23.57	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	15.40	1.48	13.47	2.24	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}–L_{14}	20.44	-1.12	13.47	2.24	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}–L_{14}	-49.34	-7.90	82.59	-21.54	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	-10.74	-4.01	47.53	-11.79	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}–L_{15}	-19.11	-7.64	-131.95	-32.75	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	15.15	12.29	173.19	22.32	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}–L_{16}	15.15	12.29	173.19	22.32	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}–L_{17}	-11.64	-22.37	68.12	-17.63	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}–L_{17}	-17.01	2.20	-10.77	13.51	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}–L_{18}	-33.12	-1.71	90.89	3.16	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}–L_{18}	-37.80	-12.32	112.62	38.16	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}–L_{19}	-12.32	-4.44	99.29	-3.28	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}–L_{19}	-47.44	-8.68	165.13	-27.38	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}–L_{20}	-1.15	4.08	81.85	-35.38	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}–L_{20}	-272.04	-192.69	-82.21	-278.18	173.7	173.70	173.69	202.71	247.9	1.17
	U_{20}–L_{21}	-19.11	-7.64	-131.95	-32.75	0.00	0.00	0.00	0.00	0.00	0.00
Structure 2	U_0–L_1	-29.22	-85.65	326.19	-102.39	0.00	0.00	0.00	0.00	0.00	0.00
	U_1–L_1	-72.42	-10.15	54.42	-40.34	163.7	163.71	163.68	198.75	204.3	1.21
	U_1–L_2	-134.85	-29.16	227.15	-11.84	103.1	103.08	103.08	116.41	73.3	1.13
	U_2–L_2	-47.31	-27.43	59.99	-19.99	93.99	93.99	93.99	104.66	65.3	1.11
	U_2–L_3	-51.50	-17.01	0.11	-0.39	121.0	20.90	0.00	0.00	0.00	0.00
	U_3–L_3	-53.83	-20.64	29.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_3–L_4	-57.81	-39.06	29.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_4–L_4	-28.97	-20.07	63.30	-4.15	0.00	0.00	0.00	0.00	0.00	0.00
	U_4–L_5	-34.73	-32.08	-0.97	0.29	8.38	0.73	0.00	0.00	0.00	0.00
	U_5–L_5	-12.95	3.85	-50.25	-12.76	0.00	0.00	0.00	0.00	0.00	0.00
	U_5–L_6	-10.83	2.87	86.91	-11.08	0.00	0.00	0.00	0.00	0.00	0.00
	U_6–L_6	-11.96	2.19	-129.46	0.61	0.00	0.00	0.00	0.00	0.00	0.00
	U_6–L_7	-11.29	-1.04	210.17	7.97	0.00	0.00	0.00	0.00	0.00	0.00
	U_7–L_7	-13.21	4.78	68.56	-6.72	0.00	0.00	0.00	0.00	0.00	0.00
	U_7–L_8	-186.95	-44.19	-1.03	-5.37	-5.37	-0.53	0.00	0.00	0.00	0.00
	U_8–L_8	-60.32	-17.78	42.72	-1.39	4.54	-1.95	0.00	0.00	0.00	0.00
	U_8–L_9	-126.38	-27.49	42.72	-1.39	4.54	-1.95	0.00	0.00	0.00	0.00
	U_9–L_9	-33.30	-11.89	67.06	-21.06	0.00	0.00	0.00	0.00	0.00	0.00
	U_9–L_{10}	-48.08	-12.44	67.06	-21.06	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	-35.11	-2.43	43.77	-8.51	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	-24.99	-4.18	102.30	11.37	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	-7.35	-3.55	102.30	11.37	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	-17.95	-37.95	0.41	1.84	2.09	-0.79	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	-5.20	23.44	26.48	-10.13	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}–L_{13}	-0.09	-0.09	18.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	-7.09	8.89	156.11	5.29	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}–L_{14}	-3.29	-4.20	120.30	15.38	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}–L_{14}	-3.29	-4.20	120.30	15.38	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	-31.88	-5.40	240.15	44.78	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}–L_{15}	-63.96	-15.92	547.44	92.61	201.3	201.30	201.30	231.31	271.8	1.10
	U_{15}–L_{16}	-63.22	-36.10	-13.76	-42.40	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}–L_{16}	-34.12	-9.47	56.02	-11.62	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}–L_{17}	-71.15	-36.69	71.74	19.57	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}–L_{17}	-4.84	17.73	95.11	14.94	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}–L_{18}	-6.24	10.46	165.99	30.94	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}–L_{18}	-1.54	11.74	123.38	33.13	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}–L_{19}	-13.70	-5.05	-111.77	8.34	0.00	0.00	0.00	0.00	0.00	0.00

ZZ Axis Moment Properties

Location	Member	Max. Neg. Mom. Start	Max. Neg. Mom. End	S_{top} (in³)	S_b (in³)	Z_z (in³)	I_z (in⁴)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(UU)}$	Equivalent Mom. Factor $C_{b(SS)}$
Structure 1	U_0–L_1	-52.67	81.18	-197.78	252.56	13.2	13.18	15.42	20.35	2	615.4	1.54	672	1.5
	U_1–L_1	7.75	3.66	-120.57	141.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_1–L_2	-40.16	-43.34	-69.53	93.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_2–L_2	97.93	-92.42	-10.87	27.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_2–L_3	114.04	-113.49	14.74	-13.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_3–L_3	69.36	-90.10	167.81	-203.11	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_3–L_4	85.41	-82.01	203.22	-237.94	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_4–L_4	-128.64	-142.79	282.95	-305.73	16.2	16.18	18.36	27.38	3	928.7	1.69	904	1.5
	U_4–L_5	2.17	-9.78	57.81	-21.49	101.1	107.13	107.11	162.71	26	2058.9	1.52	5369	1.5
	U_5–L_5	-176.91	205.10	-325.47	363.38	31.4	31.42	32.91	52.07	14	1356.6	1.65	1718	1.5
	U_5–L_6	-126.61	113.56	-223.30	240.72	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
	U_6–L_6	-144.02	138.99	-327.49	343.04	42.7	42.74	42.74	65.36	8	1389.6	1.53	2155	1.5
	U_6–L_7	-110.31	109.01	-226.59	232.84	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5
	U_7–L_7	-56.94	76.20	-168.76	199.51	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_7–L_8	-60.42	64.53	-94.87	109.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_8–L_8	-45.98	35.17	99.09	-117.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_8–L_9	-39.24	39.22	148.44	-160.65	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_9–L_9	63.32	-77.78	177.98	-202.69	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
	U_9–L_{10}	148.81	-156.17	348.62	-364.00	19.3	20.09	20.09	32.51	3	1182.1	1.57	1766	1.5
	U_{10}–L_{10}	181.64	-179.54	360.20	-397.66	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{10}–L_{11}	160.63	-260.62	306.12	-462.91	42.0	41.97	42.74	63.05	8	1376.0	1.50	2080	1.5
	U_{11}–L_{11}	-170.13	220.30	-338.37	438.14	42.7	42.74	42.74	65.30

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1–L_1	-23.63	-7.60	0.87	0.74	0.27	-0.22				
	U_1–L_2	-3.36	-8.44	1.56	0.21	0.37	-0.14				
	U_1–L_3	-2.26	-9.11	-1.25	-0.12	-0.51	-0.60				
	U_1–L_4	7.94	-13.41	-0.93	-0.74	-0.40	-1.22				
	U_1–L_5	-14.57	-18.47	-1.77	-0.03	-0.41	-0.24				
	U_2–L_1	-37.80	-77.38	3.48	2.42	-0.72	-0.19				
	U_2–L_2	-73.28	-78.46	-0.13	2.70	0.35	0.44				
	U_2–L_3	-9.33	-102.64	-2.35	4.14	0.34	0.07				
	U_2–L_4	-5.01	-118.90	-1.40	3.08	-0.39	-0.24				
	U_2–L_5	-78.82	-74.40	-3.14	2.22	-0.42	-0.15				
	L_1–L_2	-64.28	-73.58	-2.85	1.32	0.39	0.05				
	L_2–L_3	-39.98	-39.98	-3.10	-0.20	-0.71	-0.71				
	L_3–L_4	-65.20	-48.77	-2.71	1.83	0.14	-0.67				
	L_4–L_5	-24.89	8.62	-1.36	0.71	0.18	-0.80				
	L_1–U_1	-0.81	-23.63	-0.03	0.87	0.04	-0.27				
	L_2–U_1	-25.30	9.99	-1.72	1.47	-0.04	-0.71				
	L_3–U_1	-37.00	20.00	-1.82	1.73	-0.39	-0.26				
	L_4–U_1	-101.98	74.35	-4.78	3.77	0.55	-0.54				
	L_5–U_1	-115.65	79.79	-5.24	3.90	-0.49	-0.40				
	L_2–U_2	-76.53	79.74	3.88	3.79	0.12	-0.28				
	L_3–U_2	-109.78	99.44	-3.62	3.94	0.51	-0.53				
	L_4–U_2	-89.86	78.41	-2.36	3.04	-0.31	-0.57				
	L_5–U_2	-90.94	71.81	-4.37	3.61	0.74	-0.64				
	U_1–U_2	-47.28	28.44	-2.53	2.07	0.31	-0.37				
	L_3–L_1	-20.34	9.87	-2.22	1.61	0.43	-0.70				
	L_4–L_2	-1.38	-11.20	-1.74	0.32	0.07	-0.58				
	L_5–L_3	6.85	-23.86	-1.33	0.42	1.62	-1.57				
	L_2–L_1	-44.40	35.30	-2.14	1.64	-0.22	-1.03				
	L_3–L_2	-96.54	69.68	-4.16	3.29	-0.43	-0.26				
	L_4–L_3	-85.37	67.20	-3.83	2.84	-0.47	-0.52				
	L_5–L_4	-37.89	20.00	-4.16	2.39	-0.43	0.26				
Structure 2	U_1–L_1	-109.81	116.52	-3.04	3.97	0.43	0.05				
	U_1–L_2	-141.94	130.59	-3.89	5.18	0.82	-0.42				
	U_1–L_3	-80.17	133.36	-2.67	4.61	0.28	-0.77				
	U_1–L_4	-11.95	79.18	-3.17	3.90	0.65	-0.51				
	U_1–L_5	-77.25	-7.26	-4.26	4.34	0.19	-0.51				
	U_2–L_1	-66.17	89.96	-4.79	4.31	0.34	-0.42				
	U_2–L_2	-56.05	72.68	-4.14	3.27	0.47	-0.53				
	U_2–L_3	-56.55	72.58	-4.14	3.27	0.47	-0.53				
	U_2–L_4	-31.83	37.99	-3.17	2.21	0.16	-0.71				
	U_2–L_5	-10.04	3.78	-1.83	0.68	0.59	-1.21				
	L_1–L_2	-10.04	3.78	-1.83	0.68	0.59	-1.21				
	L_2–L_3	-19.42	19.66	-1.95	1.66	0.36	-0.87				
	L_3–L_4	-46.48	58.24	-3.90	3.50	0.63	-0.71				
	L_4–L_5	-54.27	68.32	-4.73	3.67	0.52	-0.65				
	L_1–U_1	-49.31	71.94	-3.70	5.04	0.36	-0.43				
	L_2–U_1	-17.99	39.51	-1.34	2.82	0.07	-0.79				
	L_3–U_1	-36.18	54.54	-3.29	4.29	0.84	-0.69				
	L_4–U_1	-77.08	85.18	-4.04	3.68	0.66	-0.29				
	L_5–U_1	-78.35	71.28	-4.08	3.08	0.59	-0.55				
	L_2–U_2	-76.62	55.14	-4.17	3.25	0.04	-0.71				
	L_3–U_2	-77.04	59.91	-3.97	3.46	0.31	-0.61				
	L_4–U_2	-54.27	39.39	-3.13	2.62	0.19	-0.54				
	L_5–U_2	-6.27	-17.63	-0.91	0.36	0.67	-1.54				
	U_1–U_2	1.05	-9.86	-1.91	1.00	0.95	-1.40				
	L_3–L_1	-19.27	12.83	-1.29	0.99	-19.56	0.00				
	L_4–L_2	-33.48	19.38	-2.73	2.03	0.55	-0.49				
	L_5–L_3	-33.68	19.58	-2.73	2.03	0.55	-0.49				
	L_2–L_1	-78.90	59.78	-3.63	4.47	0.74	-0.67				
	L_3–L_2	-68.09	57.11	-3.48	4.08	-8.50	0.00				
	L_4–L_3	-67.26	51.22	-3.88	3.73	-0.63	-0.66				
	L_5–L_4	-60.31	64.36	-3.27	3.06	-0.33					
	L_1–U_1	-60.16	64.36	-3.27	3.06	-0.33					
	L_2–U_1	-33.50	18.26	-2.33	1.84	0.34	-0.31				
	L_3–U_1	-33.50	18.26	-2.33	1.84	0.34	-0.31				
	L_4–U_1	-1.49	-18.98	-1.56	0.27	0.53	-1.10				
	L_5–U_1	-1.49	-18.98	-1.56	0.27	0.53	-1.10				
	L_2–U_2	-53.83	37.97	-2.43	2.03	-0.32	-0.81				
	L_3–U_2	-61.79	22.37	-3.34	1.23	-1.45	-0.97				
	L_4–U_2	-75.25	65.79	-3.63	2.96	0.22	0.06				
	L_5–U_2	-75.25	65.79	-3.63	2.96	0.22	0.06				
	U_1–U_2	-5.27	64.89	-2.00	3.49	0.31	-0.20				
	L_3–L_1	-38.98	50.40	-4.18	3.40	-0.47	-0.13				
	L_4–L_2	-38.98	50.40	-4.18	3.40	-0.47	-0.13				
	L_5–L_3	-7.78	19.68	-1.65	0.19	-0.10	-0.26				
	L_2–L_1	-7.78	19.68	-1.65	0.19	-0.10	-0.26				
	L_3–L_2	-2.61	-8.77	-1.38	-0.19	-0.45	-0.81				
	L_4–L_3	-2.61	-8.77	-1.38	-0.19	-0.45	-0.81				
	L_5–L_4	-5.73	-35.14	-0.58	-0.14	-0.14	-0.14				

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y/S_{bot}	M_u (k-in)	Equivalent Mom. Factor a	C_{b1}	C_{b2}
Structure 1	U_1–L_1	-56.02	31.15	22.93	3.42	15.6	19.63	15.58	25.56	5	800.0	1.66	857	1.5	773.7
	U_1–L_2	-49.55	-4.92	15.61	8.41	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1–L_3	-76.16	18.51	6.77	-7.96	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1–L_4	-12.37	-9.90	-5.29	-16.27	0.00	0.00	0.00	0.00	0	-16.48	-38.89	-1.14	-52.69	15.4
	U_1–L_5	-14.57	18.47	-1.77	-0.03	-0.41	-0.24	-23.63	-7.60	0.87	0.74	0.27	-0.22	-29.16	-38.74
	U_2–L_1	-37.80	77.38	3.48	2.42	-0.72	-0.19	-46.45	32.33	-2.61	-2.51	0.00	0.00	-149.79	170.64
	U_2–L_2	-73.28	78.46	-0.13	2.70	0.35	0.44	-84.29	52.60	-3.35	-3.04	0.00	0.00	-244.39	210.80
	U_2–L_3	-9.33	102.64	-2.35	4.14	0.34	0.07	-31.44	55.26	4.50	5.92	0.00	0.00	-60.23	253.15
	U_2–L_4	-5.01	118.90	-1.40	3.08	-0.39	-0.24	-18.10	39.86	5.06	-3.14	0.00	0.00	-45.73	240.54
	U_2–L_5	-78.82	74.40	-3.14	2.22	-0.42	-0.15	-43.02	28.74	5.43	-1.98	0.00	0.00	-195.67	159.04
	L_1–L_2	-64.28	73.58	-2.85	1.32	0.39	0.05	-36.03	17.10	5.08	0.65	0.00	0.00	-163.57	132.72
	L_2–L_3	-39.98	39.98	-3.10	-0.20	-0.71	-0.71	-40.07	15.51	5.08	-0.24	0.00	0.00	-177.94	74.29
	L_3–L_4	-65.20	48.77	2.71	1.83	0.14	-0.67	-35.01	23.68	1.84	-8.68	0.00	0.00	-160.62	114.71
	L_4–L_5	-24.89	8.62	-1.36	0.71	0.18	-0.80	-17.54	9.21	2.37	-11.02	0.00	0.00	-70.38	31.17
	L_1–U_1	-0.81	23.63	-0.03	0.87	0.04	-0.27	-3.45	16.65	-2.24	-16.92	0.00	0.00	-37.41	76.64
	L_2–U_1	-25.30	9.99	-1.72	1.47	-0.04	-0.71	-11.11	54.28	-3.50	-7.00	0.00	0.00	-111.14	33.90
	L_3–U_1	-37.00	20.00	-1.82	1.73	-0.39	-0.26	-123.36	74.56	-37.14	16.13	0.00	0.00	-132.06	74.56
	L_4–U_1	-101.98	74.35	-4.78	3.77	0.55	-0.54	-61.67	-88.71	7.05	-6.57	0.00	0.00	-266.61	202.20
	L_5–U_1	-115.65	79.79	-5.24	3.90	-0.49	-0.40	-67.09	-92.63	7.05	-5.65	0.00	0.00	-297.09	212.97
	L_2–U_2	-76.53	79.74	3.88	3.79	0.12	-0.28	-50.23	48.97	1.49	-3.56	0.00	0.00	-208.32	209.77
	L_3–U_2	-109.78	99.44	-3.62	3.94	0.51	-0.53	-46.29	50.28	6.48	-6.80	0.00	0.00	-243.01	238.20
	L_4–U_2	-89.86	78.41	-2.36	3.04	-0.31	-0.57	-42.16	47.66	8.24	-2.31	0.00	0.00	-265.58	230.04
	L_5–U_2	-90.94	71.81	-4.37	3.61	0.74	-0.64	-55.87	46.17	9.47	-8.15	0.00	0.00	-229.27	170.29
	U_1–U_2	-47.28	28.44	-2.53	2.07	0.31	-0.37	-33.74	17.86	5.66	-6.54	0.00	0.00	-141.98	82.19
	L_3–L_1	-20.34	9.87	-2.22	1.61	0.43	-0.70	-28.38	20.56	5.49	-8.57	0.00	0.00	-87.82	57.37
	L_4–L_2	-1.38	-11.20	-1.74	0.32	0.07	-0.58	-22.28	-3.57	5.07	-15.88	0.00	0.00	-72.68	15.57
	L_5–L_3	6.85	-23.86	-1.33	0.42	1.62	-1.57	-27.97	-19.48	31.16	74.40	17.2	17.24	17.24	26.54
	L_2–L_1	-44.40	35.30	-2.14	1.64	-0.22	-1.03	-27.29	20.90	-2.82	-13.10	0.00	0.00	-116.86	91.18
	L_3–L_2	-96.54	69.68	-4.16	3.29	-0.43	-0.26	-56.73	33.09	-4.29	-13.29	0.00	0.00	-240.41	152.28
	L_4–L_3	-85.37	67.20	-3.83	2.84	-0.47	-0.52	-48.88	36.28	-0.04	-6.64	0.00	0.00	-216.90	166.13
	L_5–L_4	-37.89	20.00	-4.16	2.39	-0.43	0.26	-53.15	41.89	6.29	0.37	0.00	0.00	-242.45	211.59
Structure 2	U_1–L_1	-109.81	116.52	-3.04	3.97	0.43	0.05	-64.33	50.68	5.44	-5.66	0.00	0.00	-276.93	261.04
	U_1–L_2	-141.94	130.59	-3.89	5.18	0.82	-0.42	-75.28	66.18	10.53	-5.11	0.00	0.00	-347.62	313.16
	U_1–L_3	-80.17	133.36	-2.67	4.61	0.28	-0.77	-45.00	49.23	8.14	-6.41	0.00	0.00	-102.20	209.59
	U_1–L_4	-11.95	79.18	-3.17	3.90	0.65	-0.51	-40.00	49.23	8.14	-6.41	0.00	0.00	-102.20	209.59
	U_1–L_5	-77.25	-7.26	-4.26	4.34	0.19	-0.51	-61.13	24.74	8.14	-7.51	0.00	0.00	-102.20	209.59
	U_2–L_1	-66.17	89.96	-4.79	4.31	0.34	-0.42	-60.44	54.35	4.24	-5.29	0.00	0.00	-216.97	234.71
	U_2–L_2	-56.05	72.68	-4.14	3.27	0.47	-0.53	-52.31	41.27	5.97	-6.15	0.00	0.00	-186.19	183.78
	U_2–L_3	-56.55	72.58	-4.14	3.27	0.47	-0.53	-52.31	41.27	5.97	-6.69	0.00	0.00	-186.19	183.78
	U_2–L_4	-31.83	37.99	-3.17	2.21	0.16	-0.71	-39.98	27.86	2.07	-8.99	0.00	0.00	-128.02	109.24
	U_2–L_5	-10.04	3.78	-1.83	0.68	0.59	-1.21	-20.59	8.57	7.47	-15.25	0.00	0.00	-67.67	23.49
	L_1–L_2	-10.04	3.78	-1.83	0.68	0.59	-1.21	-20.59	8.57	7.47	-15.25	0.00	0.00	-67.67	23.49
	L_2–L_3	-19.42	19.66	-1.95	1.66	0.36	-0.87	-24.67	20.95	9.49	-11.00	0.00	0.00	-78.69	79.81
	L_3–L_4	-46.48	58.24	-3.90	3.50	0.63	-0.71	-35.05	38.83	5.80	-8.94	0.00	0.00	-167.18	171.32
	L_4–L_5	-54.27	68.32	-4.73	3.67	0.52	-0.65	-49.28	44.13	8.00	-8.94	0.00	0.00	-199.57	189.21
	L_1–U_1	-49.31	71.94	-3.70	5.04	0.36	-0.43	-39.73	66.33	5.04	-6.14	0.00	0.00	-245.94	231.42
	L_2–U_1	-17.99	39.51	-1.34	2.82	0.07	-0.79	-71.53	63.64	4.53	-5.45	0.00	0.00	-245.94	231.42
	L_3–U_1	-36.18	54.54	-3.29	4.29	0.84	-0.69	-43.35	54.54	5.73	-8.79	0.00	0.00	-140.96	241.52
	L_4–U_1	-77.08	85.18	-4.04	3.68	0.66	-0.29	-51.59	47.07	8.46	-3.61	0.00	0.00	-211.89	212.72
	L_5–U_1	-78.35	71.28	-4.08	3.08	0.59	-0.55	-52.14	39.39	7.17	-8.07	0.00	0.00	-214.82	178.01
	L_2–U_2	-76.62	55.14	-4.17	3.25	0.04	-0.71	-53.23	41.70	5.56	-9.07	0.00	0.00	-214.93	192.04
	L_3–U_2	-77.04	59.91	-3.97	3.46	0.31	-0.61	-53.46	46.19	5.56	-8.05	0.00	0.00	-214.93	192.04
	L_4–U_2	-54.27	39.39	-3.13	2.62	0.19	-0.54	-46.06	31.75	3.10	-9.05	0.00	0.00	-214.93	192.04
	L_5–U_2	-6.27	-17.63	-0.91	0.36	0.67	-1.54	-11.68	4.64	8.57	-19.73	0.00	0.00	-60.16	12.87
	U_1–U_2	1.05	-9.86	-1.91	1.00	0.95	-1.40	-19.27	12.83	12.09	-19.56	0.00	0.00	-40.38	14.98
	L_3–L_1	-19.27	12.83	-1.29	0.99	-19.56	0.00	-19.27	12.83	12.09	-19.56	0.00	0.00	-40.38	14.98
	L_4–L_2	-33.48	19.38	-2.73	2.03	0.55	-0.49	-33.48	19.38	-2.73	2.03	0.55	-0.49	-70.42	26.74
	L_5–L_3	-33.68	19.58	-2.73	2.03	0.55	-0.49	-33.68	19.58	-2.73	2.03	0.55	-0.49	-70.42	26.74
	L_2–L_1	-78.90	59.78	-3.63	4.47	0.74	-0.67	-45.40	49.21	-8.14	-8.50	0.00	0.00	-228.12	172.53
	L_3–L_2	-68.09	57.11	-3.48	4.08	-8.50	0.00	-48.09	37.51	-9.48	-8.50	0.00	0.00	-250.09	201.45
	L_4–L_3	-67.26	51.22	-3.88	3.73	-0.63	-0.66	-44.78	32.04	-3.50	-8.50	0.00	0.00	-250.09	201.45
	L_5–L_4	-60.31	64.36	-3.27	3.06	-0.33		-60.16	45.13	-3.50	-8.50	0.00	0.00	-239.48	175.28
	L_1–U_1	-60.16	64.36	-3.27	3.06	-0.33		-60.16	45.13	-3.50	-8.50	0.00	0.00	-239.48	175.28
	L_2–U_1	-33.50	18.26	-2.33	1.84	0.34	-0.31	-30.19	23.78	4.35	-4.01	0.00	0.00	-108.96	75.26
	L_3–U_1	-33.50	18.26	-2.33	1.84	0.34	-0.31	-30.19	23.78	4.35	-4.01	0.00	0.00	-108.96	75.26
	L_4–U_1	-1.49	-18.98	-1.56	0.27	0.53	-1.10	-20.20	3.52	8.88	-14.28	0.00	0.00	-65.69	17.05
	L_5–U_1	-1.49	-18.98	-1.56	0.27	0.53	-1.10	-20.20	3.52	8.88	-14.28	0.00	0.00	-65.69	17.05
	L_2–U_2	-53.83	37.97	-2.43	2.03	-0.32	-0.81	-37.49	26.25	-4.14	-7.67	0.00	0.00	-138.21	106.24
	L_3–U_2	-61.79	22.37	-3.34	1.23	-1.45	-0.97	-43.24	15.93	-18.77	-12.58	0.00	0.00	-114.02	63.59
	L_4–U_2	-75.25	65.79	-3.63	2.96	0.22	0.06	-52.64	46.05	2.63	-5.60	0.00	0.00	-194.18	168.59
	L_5–U_2	-75.25	65.79	-3.63	2.96	0.22	0.06	-52.64	46.05	2.63	-5.60	0.00	0.00	-194.18	168.59
	U_1–U_2	-5.27	64.89	-2.00	3.49	0.31	-0.20	-26.71	46.58	4.09	-2.63	0.00	0.00	-62.65	168.45
	L_3–L_1	-38.98	50.40	-4.18	3.40	-0.47	-0.13	-45.60	41.43	2.04	-6.24	0.00	0.00	-171.16	133.37
	L_4–L_2	-38.98	50.40	-4.18	3.40	-0.47	-0.13	-45.60	41.43	2.04	-6.24	0.00	0.00	-171.16	133.37
	L_5–L_3	-7.78	19.68	-1.65	0.19	-0.10	-0.26	-22.07	2.51	-1.31	-3.51	0.00	0.00	-57.94	31.03
	L_2–L_1	-7.78	19.68	-1.65	0.19	-0.10	-0.26	-7.17	3.46	-1.70	-12.92	0.00	0.00	-57.94	31.03
	L_3–L_2	-2.61	-8.77	-1.38	-0.19	-0.45	-0.81	-18.38	-2.58	-5.99	-10.83	0.00	0.00	-36.44	-16.99
	L_4–L_3	-2.61	-8.77	-1.38	-0.19	-0.45	-0.81	-18.38	-2.58	-5.99	-10.83	0.00	0.00	-36.44	-16.99
	L_5–L_4	-5.73	-35.14	-0.58	-0.14	-0.14	-0.14	-7.60	-7.76	-1.83	-1.82	0.00	0.00	-11.53	-17.12

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1–L_1	22.67	-10.26	8.09	11.02	0.00	0.00	0.00	0.00	12.21	42.31
	U_1–L_2	-27.28	-20.20	12.02	9.00	0.00	0.00	0.00	0.00	-16.52	-96.72
	U_1–L_3	-42.78	-3.06	17.76	12.76	4.94	0.00	0.00	0.00	-160.55	-33.80
	U_1–L_4	-48.60	-34.79	20.87	-49.88	0.00	0.00	0.00	0.00	-148.76	-123.89
	U_1–L_5	-68.70	-63.74	-42.26	-25.38	0.00	0.00	0.00	0.00	-143.61	-215.76
	U_2–L_1	-106.13	-85.53	-143.91	-29.14	0.00	0.00	0.00	0.00	-197.41	-216.87
	U_2–L_2	-134.58	-87.85	-89.43	-33.39	0.00	0.00	0.00	0.00	-139.70	-142.47
	U_2–L_3	-95.88	-95.90	-67.51	29.89	0.00	0.00	0.00	0.00	-37.99	-109.08
	U_2–L_4	47.94	61.26	50.25	7.81	0.00	0.00	0.00	0.00	23.54	112.60
	U_2–L_5	23.46	87.58	18.19	1.93	0.00	0.00	0.00	0.00	93.40	260.51
	L_1–L_2	-8.71	43.58	-2.64	8.07	0.00	0.00	0.00	0.00	11.74	240.79
	L_2–L_3	-12.98	32.59	-7.25	4.09	0.00	0.00	0.00	0.00	13.32	172.94
	L_3–L_4	-16.17	44.61	-10.29	-19.52	0.00	0.00	0.00	0.00	-47.86	62.77
	L_4–L_5	3.45	16.65	-2.24	-16.62	0.00	0.00	0.00	0.00	-57.66	-76.24
	L_1–U_1	-12.98	32.59	-7.25	4.09	0.00	0.00	0.00	0.00	13.32	172.94
	L_2–U_1	-16.17	44.61	-10.29	-19.52	0.00	0.00	0.00	0.00	-47.86	62.77
	L_3–U_1	3.45	16.65	-2.24	-16.62	0.00	0.00	0.00	0.00	-57.66	-76.24
	L_4–U_1	-50.11	-66.40	0.27	1.29	-0.11	-1.30				
	L_5–U_1	-89.44	-103.50	-2.00	-1.09	-7.25	0.42				
	L_2–U_2	-51.02	-38.60	-140.61	5.49	0.00	0.00	0.00	0.00	-263.29	-208.96
	L_3–U_2	-150.55	-130.86	-51.61	4.16	0.00	0.00	0.00	0.00	-263.29	-208.96
	L_4–U_2	-103.58	-87.49	21.63	-14.62	0.00	0.00	0.00	0.00	-138.44	-113.4
	L_5–U_2	-131.45	-107.03	22.85	17.31	0.00	0.00	0.00	0.00	-464.43	-401.48
	L_1–L_2	-138.32	-120.07	-10.88	-6.13	-1.63	-1.32				
	L_2–L_3	-120.33	-93.01	37.74	11.61	0.00	0.00	0.00	0.00	-415.31	-276.65
	L_3–L_4	10.89	-29.46	-1.29	1.46	0.00	0.00	0.00	0.00	-32.00	-120.45
	L_4–L_5	-28.58	5.63	-2.75	-118.22	0.00	0.00	0.00	0.00	-162.43	0.81
	L_1–U_1	-32.29	-6.72	4.74	7.09	0.00	0.00	0.00	0.00	-110.61	49.38
	L_2–U_1	-64.59	41.68	-26.08	-15.65	0.00	0.00	0.00	0.00	-115.53	5.99
	L_3–U_1	-18.82	32.94	-16.10	-7.49	-4.06	-0.32				
	L_4–U_1	-14.22	32.57	2.70	-25.76	0.00	0.00	0.00	0.00	-197.60	-131.67
	L_5–U_1	-24.30	-47.86	-142.39	12.19	0.00	0.00	0.00	0.00	-195.09	-318.08
	L_1–L_2	-88.52	-62.23	-91.45	-13.56	-1.63	-1.32				
	L_2–L_3	-92.60	-76.77	-48.98	-13.30	0.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
For Guidelines for Strength Design of Truss Bridges (LDF) 1985 rev 1998

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)
Structure 1	U_0 - U_1	-75.17	-0.72	1.24	1.41	6.42	-18.73
	U_1 - U_2	-46.82	-29.29	0.26	-2.45	-19.26	0.00
	U_2 - U_3	-112.29	86.52	1.33	3.65	-10.70	-17.60
	U_3 - U_4	-73.71	66.12	2.29	3.41	-3.49	-10.13
	U_4 - U_5	-9.25	61.62	2.28	3.43	-19.05	-1.87
	U_5 - U_6	-42.76	120.21	2.60	3.42	-15.97	-3.39
	U_6 - U_7	-93.19	43.60	2.57	2.96	-24.14	-2.27
	U_7 - U_8	-47.38	526.15	0.27	9.04	-24.35	24.96
	U_8 - U_9	475.03	-124.35	9.08	-2.04	72.41	-16.66
	U_9 - U_{10}	46.82	20.99	2.00	2.47	-3.60	-10.66
	U_{10} - U_{11}	64.59	-138.78	3.16	1.72	-13.71	-14.54
	U_{11} - U_{12}	27.91	-140.51	3.49	1.59	-6.34	-17.68
	U_{12} - U_{13}	-106.12	-155.13	2.49	0.89	2.47	-19.94
	U_{13} - U_{14}	-38.04	-302.76	1.65	0.53	-2.21	-21.76
	U_{14} - U_{15}	-245.82	-183.07	1.71	-1.27	-27.53	-16.40
	U_{15} - U_{16}	-123.51	-337.11	2.09	0.32	-26.26	-3.07
	U_{16} - U_{17}	-269.97	-145.19	0.82	0.10	-27.79	-4.23
	U_{17} - U_{18}	-134.36	-67.49	0.85	-2.38	-31.11	-3.83
	U_{18} - U_{19}	-170.82	-20.32	0.66	-0.07	-17.11	1.86
	U_{19} - U_{20}	-186.22	23.42	0.72	-0.58	-17.61	7.80
	U_{20} - U_{21}	-14.62	208.71	0.27	-2.12	-15.52	0.00
	U_{21} - U_{22}	-71.24	180.99	-0.27	2.09	0.03	-19.67
	U_{22} - U_{23}	-327.34	61.63	-1.61	-0.01	-21.08	-2.18
	U_{23} - U_{24}	-327.34	-325.40	1.39	2.97	-16.77	-21.18
	U_{24} - U_{25}	-336.58	-302.76	1.65	3.13	-16.77	-21.76
	U_{25} - U_{26}	-396.14	-197.74	2.90	5.63	-34.19	-18.58
	U_{26} - U_{27}	-344.18	-179.44	4.35	3.79	-17.45	-41.28
	U_{27} - U_{28}	-226.16	295.72	3.19	4.29	-22.09	4.66
	U_{28} - U_{29}	-350.21	-90.73	3.69	-22.99	-2.36	
	U_{29} - U_{30}	-237.26	31.56	4.27	4.06	-22.54	
	U_{30} - U_{31}	-167.09	39.84	4.65	4.71	-17.47	-3.59
	U_{31} - U_{32}	-109.78	170.74	4.17	3.78	-22.91	1.95
	U_{32} - U_{33}	-261.01	1266.00	0.54	13.67	-0.75	-1.50
	U_{33} - U_{34}	1192.78	1192.78	9.75	9.75	-1.50	-1.50
	U_{34} - U_{35}	-25.29	71.66	0.97	2.42	-14.14	-19.08
	U_{35} - U_{36}	34.15	34.15	2.27	3.04	-19.08	-14.14
	U_{36} - U_{37}	150.60	33.06	3.57	3.06	-9.83	-14.50
	U_{37} - U_{38}	147.31	4.37	4.12	2.95	-6.25	-21.74
	U_{38} - U_{39}	232.38	4.37	4.27	4.06	-3.24	-22.54
	U_{39} - U_{40}	-31.69	-33.99	3.36	0.64	-15.46	-18.28
	U_{40} - U_{41}	-86.03	-71.79	2.07	2.07	-15.15	-17.22
	U_{41} - U_{42}	-60.96	-66.58	1.35	1.84	-29.02	-7.21
	U_{42} - U_{43}	-21.55	-21.55	0.51	0.51	-1.98	-1.98
	U_{43} - U_{44}	-33.01	-28.69	0.37	0.98	-14.64	-8.34
	U_{44} - U_{45}	-15.13	-113.78	2.90	4.20	-18.84	0.47
	U_{45} - U_{46}	-2.74	-209.84	2.47	3.20	-19.30	-4.56
	U_{46} - U_{47}	-122.51	-1157.56	0.41	14.25	0.14	-1.94
	U_{47} - U_{48}	-1154.91	-197.36	12.83	1.23	-1.20	-0.84
	U_{48} - U_{49}	-67.84	-82.39	0.74	0.74	-15.98	-15.98
	U_{49} - U_{50}	178.89	-59.81	3.75	3.98	-6.43	-15.90
	U_{50} - U_{51}	232.38	4.37	4.27	4.06	-3.24	-22.54
	U_{51} - U_{52}	68.66	-178.68	5.06	4.08	-0.05	-26.83
	U_{52} - U_{53}	68.66	-178.68	5.06	4.08	-0.05	-26.83
	U_{53} - U_{54}	-236.51	-153.10	3.83	3.36	-13.75	-44.09
	U_{54} - U_{55}	-98.60	-313.21	4.06	3.80	-43.67	-7.79
	U_{55} - U_{56}	-0.34	-0.34	21.60	21.60	-1.50	-1.50
	U_{56} - U_{57}	-350.37	-386.86	3.01	0.83	-35.17	-9.39
	U_{57} - U_{58}	-262.51	-311.61	2.14	1.12	-18.42	-12.14
	U_{58} - U_{59}	-279.98	-117.76	2.03	-0.53	-31.79	0.52
	U_{59} - U_{60}	-262.51	-311.61	2.14	1.12	-18.42	-12.14
	U_{60} - U_{61}	-186.32	-74.12	1.50	0.87	-20.07	6.96
	U_{61} - U_{62}	-139.08	-187.97	-0.13	0.90	4.95	-16.34
	U_{62} - U_{63}	-47.36	-119.85	0.16	-1.07	-15.20	-22.25
	U_{63} - U_{64}	-52.58	-125.71	-0.23	1.15	4.02	-18.16
	U_{64} - U_{65}	-277.84	-111.68	0.87	2.25	-14.28	-20.86
	U_{65} - U_{66}	-166.98	-243.52	1.54	2.01	-20.16	-19.65
	U_{66} - U_{67}	-287.74	-127.82	1.52	1.61	-20.16	-8.53
	U_{67} - U_{68}	-141.43	-113.94	1.29	2.40	-16.48	-0.86
	U_{68} - U_{69}	-136.67	-67.04	2.06	2.97	-16.48	-0.86
	U_{69} - U_{70}	-497.26	-34.44	9.77	0.06	15.84	-18.15
	U_{70} - U_{71}	-24.63	-27.07	2.13	0.20	-20.76	-3.15
	U_{71} - U_{72}	-29.38	-160.66	1.46	-0.40	-15.31	2.75
Structure 2	U_{72} - U_{73}	-145.52	22.75	1.59	3.57	-16.17	-0.81
	U_{73} - U_{74}	-141.64	56.56	2.00	3.26	-18.36	1.66
	U_{74} - U_{75}	2.97	40.71	2.57	2.08	-11.11	0.01
	U_{75} - U_{76}	-136.67	471.04	0.46	7.30	-17.80	16.50
	U_{76} - U_{77}	497.26	-34.44	9.77	0.06	15.84	-18.15
	U_{77} - U_{78}	41.03	109.94	2.03	2.52	-6.49	-10.93
	U_{78} - U_{79}	113.04	44.48	3.62	2.45	-3.45	-10.76
	U_{79} - U_{80}	59.35	15.11	3.46	2.13	-8.83	-15.19
	U_{80} - U_{81}	86.09	-19.75	3.47	1.87	-14.68	-5.79
	U_{81} - U_{82}	80.30	-119.58	3.45	0.72	-17.03	-4.70
	U_{82} - U_{83}	24.63	-27.07	2.13	0.20	-20.76	-3.15
	U_{83} - U_{84}	29.38	-160.66	1.46	-0.40	-15.31	2.75

ZZ Axis Moment Capacity

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bc} (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Term 1 F_y*S_xx	M_y (k-in)	Equivalent Mom. Factor a	$C_{m(x)}$	$C_{m(b)}$
Structure 1	U_0 - U_1	61.22	33.14	63.61	-453.10	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.440	0.54	0.54
	U_1 - U_2	-64.76	63.74	-119.97	-913.18	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.440	0.54	0.54
	U_2 - U_3	-113.84	200.49	-604.02	-313.17	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.775	0.91	0.91
	U_3 - U_4	34.82	34.82	-176.73	-168.45	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.975	0.99	0.99
	U_4 - U_5	42.95	162.92	-741.56	34.93	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	-0.074	0.57	0.57
	U_5 - U_6	118.35	238.83	-319.99	74.49	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	-0.233	0.51	0.51
	U_6 - U_7	183.15	183.15	-376.85	-23.85	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	-0.000	0.50	0.50
	U_7 - U_8	-55.06	901.96	-648.88	1295.95	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6599	0.99850041	4554.8	-0.505	0.40	0.40
	U_8 - U_9	829.56	-162.93	907.54	-550.93	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6599	0.99850041	4554.8	-0.607	0.36	0.36
	U_9 - U_{10}	107.49	84.36	-23.12	-222.33	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873193	3184.1	0.104	0.64	0.64
	U_{10} - U_{11}	158.18	-137.33	158.18	-137.33	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873193	3184.1	0.000	0.50	0.50
	U_{11} - U_{12}	116.80	-145.63	-111.52	-599.64	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99872585	4241.5	-0.079	0.47	0.47
	U_{12} - U_{13}	-79.79	-180.84	-80.37	-667.99	151.8	151.76	130.94	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4	0.120	0.65	0.65
	U_{13} - U_{14}	-140.85	-239.52	-65.07	-667.99	151.8	151.76	130.94	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4	0.000	0.50	0.50
	U_{14} - U_{15}	-279.50	-238.37	-662.78	-621.20	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899941	6214.6	0.645	0.86	0.86
	U_{15} - U_{16}	-111.74	-417.75	-714.09	-949.92	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99899941	6214.6	0.000	0.50	0.50
	U_{16} - U_{17}	-331.93	-186.33	-1000.26	-267.46	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899941	6214.6	0.287	0.71	0.71
	U_{17} - U_{18}	-180.53	-96.52	-411.98	-14.76	127.3	127.33	110.40	199.23	3668	2526.5	1.46	6146	0.99907166	4197.7	0.024	0.51	0.51
	U_{18} - U_{19}	21.90	10.43	58.71	-0.66	127.3	127.33	104.75	86.43	1502.63	2589	1554.3	1444	4971	0.99885452	3452.6	-0.027	0.59
	U_{19} - U_{20}	-225.34	16.99	-653.41	214.16	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99885452	3452.6	-0.328	0.47	0.47
	U_{20} - U_{21}	-154.40	-231.62	-12.15	-1116.55	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99885452	3452.6	0.212	0.79	0.79
	U_{21} - U_{22}	-98.53	-187.05	-91.61	-693.65	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6599	0.99885081	4553.8	0.133	0.65	0.65
	U_{22} - U_{23}	-77.86	-262.53	-65.07	-1116.55	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6599	0.99885081	4553.8	0.000	0.50	0.50
	U_{23} - U_{24}	-393.48	-354.56	-812.33	-911.68	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885836	7670.6	0.196	0.96	0.96
	U_{24} - U_{25}	-393.48	-398.19	-1013.54	-1047.64	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885836	7670.6	0.000	0.50	0.50
	U_{25} - U_{26}	-468.04	-127.12	-1303.65	-685.61	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12993	0.99891031	8798.1	0.526	0.91	0.91
	U_{26} - U_{27}	-347.58	-145.74	-849.88	-1189.60	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885836	7670.6	0.717	0.85	0.89
	U_{27} - U_{28}	-220.07	-285.41	-1364.95	-913.82	232.7	251.73	189.45	340.10	6520	3217.6	1.46	9064	0.99899941	6214.6	0.689	0.75	0.75
	U_{28} - U_{29}	-370.11	-6.44	-885.57	-172.74	198.9	198.88	169.65	280.08	5137	2713.1	1.43	9408	0.99885083	6555.5	0.175	0.67	0.67
	U_{29} - U_{30}	-197.06	29.54	-1013.13	-1.64	198.9	198.88	169.65	280.08	5137	2713.1	1.43	9408	0.99885083	6555.5	0.000	0.50	0.50
	U_{30} - U_{31}	-109.85	160.47	-620.31	30.80	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.099	0.62	0.62
	U_{31} - U_{32}	-46.49	309.23	-511.30	267.79	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.399	0.44	0.44
	U_{32} - U_{33}	-77.86	-262.53	-65.07	-1116.55	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6599	0.99885081	4553.8	0.133	0.65	0.65
	U_{33} - U_{34}	-326.86	1901.21	-356.69	1611.31	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893350	7310.6	-0.167	0.53	0.53
	U_{34} - U_{35}	-25.29	71.66	-147.73	-200.54	60.0	60.00	49.33	85.17	1285	718.1	1.41	2530	0.99873193	1994.1	-0.072	0.52	0.52
	U_{35} - U_{36}	34.15	34.15	-219.08	-141.19	60.0	60.00	49.33	85.17	1285	718.1	1.41	2530	0.99873193	1994.1	0.000	0.50	0.50
	U_{36} - U_{37}	37.51	32.20	-100.21	-152.69	60.0	60.00	49.33	85.17	1285	718.1	1.41	2530	0.99873193	1994.1	0.014	0.50	0.50
	U_{37} - U_{38}	43.29	30.98	-65.71	-228.75	60.0	60.00	49.33	85.17	1285	718.1	1.41	2530	0.99873193	1994.1	0.029	0.50	0.50
	U_{38} - U_{39}	39.31	51.47	-244.75	-25.29	60.0	60.00	49.33	85.17	1285	718.1	1.41	2530	0.99873193	1994.1	0.000	0.50	0.50
	U_{39} - U_{40}	-232.38	4.37	-1013.13	-20.84	198.9	198.88	169.65	280.08	5137	2713.1	1.43	9408	0.99885083	6555.5	0.000	0.50	0.50
	U_{40} - U_{41}	48.55	50.16	-186.05	-38.17	100.4	100.39	84.52	144.32	2414	1282.3	1.37	7089	0.99854451	5168.9	0.000	0.62	0.62
	U_{41} - U_{42}	44.41	40.28	-243.97	21.13	100.4	100.39	84.52	144.32	2414	1282.3	1.37	7089	0.99854451	5168.9	0.399	0.44	0.44
	U_{42} - U_{43}	5.75	5.75	-145.53	-145.53	60.0	60.00	49.33	85.17	1285	718.1	1.41	2530	0.99873193	1994.1	0.000	0.50	0.50
	U_{43} - U_{44}	5.75	145.58	-8.62	-15.92	60.0	60.00	49.33	85.17	1285	718.1	1.41	2530	0.99873193	1994.1	0.000	0.50	0.50
	U_{44} - U_{45}	145.63	34.93	-2.34	-2.33	60.0	60.00	49.33	85.17	1285	718.1	1.41	2530	0.99873193	1994.1	0.000	0.50	0.50
	U_{45} - U_{46}	-10.67	148.25	-355.20	-345.20	185.1	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99886091	6201.2	0.961	0.96	0.98
	U_{46} - U_{47}	-1157.56	1157.56	-1157.56	1157.56	185.1	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99886091	6201.2	0.000	0.50	0.50
	U_{47} - U_{48}	953.13	91.33	-1013.13	-20.84	198.9	198.88	169.65	280.08	5137	2713.1	1.43	9408	0.99885083	6555.5	0.000	0.50	0.50
	U_{48} - U_{49}	277.04	112.76	21.35	-287.63	127.8	127.83	110.84	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	0.074	0.53	0.53
	U_{49} - U_{50}	-285.31	72.82	69.12	-489.54	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	0.100	0.56	0.56
	U_{50} - U_{51}	232.38	4.37	4.27	4.06	-3.24	-22.54
	U_{51} - U_{52}	35.36	6.75	-162.70	-192.27	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.049	0.52	0.52
	U_{52} - U_{53}	39.42	29.55	-393.71	-460.77	144.8	144.84	125.49	209.19	3613	2101.0	1.44	6903	0.99888742	4774.4	0.854	0.94	0.94
	U_{53} - U_{54}	64.99	64.99	-393.71	-460.77	144.8	144.84	125.49	209.19	3613	2101.0	1.44	6903	0.99888742	4774.4	0.000	0.50	0.50
	U_{54} - U_{55}	-48.52	-71.04	-740.80	-277.43	144.8	144.84	100.31	209.19	3613	2101.0	1.44	6903	0.99888742	4774.4	0.374	0.75	0.75
	U_{55} - U_{56}	-21.60	-21.60	-1.50	-1.50	60.0	60.00	49.33	85.17	1285	718.1	1.41	2530	0.99873193	1994.1	0.000	0.50	0.50
	U_{56} - U_{57}	-350.37	-386.86	-35.17	-9.39	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.353	0.46	0.46
	U_{57} - U_{58}	-262.51	-311.61	-18.42	-12.14	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.262	0.48	0.48
	U_{58} - U_{59}	-279.98	-117.76	-31.79	0.52	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.092	0.56	0.56
	U_{59} - U_{60}	-262.51	-311.61	-18.42	-12.14	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.262	0.48	0.48
	U_{60} - U_{61}	-186.32	-74.12	1.50	0.87	-20.07	6.96
	U_{61} - U_{62}	-139.08	-187.97	-0.13	0.90	4.95	-16.34
	U_{62} - U_{63}	-47.36	-119.85	0.16	-1.07	-15.20	-22.25
	U_{63} - U_{64}	-52.58	-125.71	-0.23	1.15	4.02	-18.16
	U_{64} - U_{65}	-277.84	-111.68	0.87	2.25	-14.28	-20.86
	U_{65} - U_{66}	-166.98	-243.52	1.54	2.01	-20.16	-19.65
	U_{66} - U_{67}	-287.74	-127.82	1.52	1.61	-20.16	-8.53
	U_{67} - U_{68}	-141.43	-113.94	1.29	2.40	-16.48	-0.86
	U_{68} - U_{69}	-136.67	-67.04	2.06	2.97	-16.48	-0.86
	U_{69} - U_{70}	-497.26	-34.44	9.77	0.06	15.84	-18.15
	U_{70} - U_{71}	-24.63	-27.07	2.13	0.20	-20.76	-3.15
	U_{71} - U_{72}	-29.38	-160.66	1.46	-0.40	-15.31	2.75
Structure 2	U_{72} - U_{73}	-145.52	22.75	1.59	3.57	-16.17	-0.81
	U_{73} - U_{74}	-141.64	56.56	2.00	3.26	-18.36	1.66
	U_{74} - U_{75}	2.97	40.71	2.57	2.08	-11.11	0.01
	U_{75} - U_{76}	-136.67	471.04	0.46	7.30	-17.80	16.50
	U_{76} - U_{77}	497.26	-34.44	9.77	0.06	15.84	-18.15
	U_{77} - U_{78}	41.03	109.94	2.03	2.52	-6.49	-10.93
	U_{78} - U_{79}	113.04	44.48	3.62	2.45	-3.45	-10.76
	U_{79} - U_{80}	59.35	15.11	3.46	2.13	-8.83	-15.19
	U_{80} - U_{81}	86.09	-19.75	3.47	1.87	-14.68	-5.79
	U_{81} - U_{82}	80.30	-119.58	3.45	0.72	-17.03	-4.70
	U_{82} - U_{83}	24.63	-27.07	2.13	0.20	-20.76	-3.15
	U_{83} - U_{84}	29.38	-160.66	1.46	-0.40	-15.31	2.75

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)
Structure 1	U_0 - U_1	32.31	1.11	7.13	-174.01	158.6	158.64
	U_1 - U_2	20.59	12.34	-5.63	81.18	158.6	158.64
	U_2 - U_3	24.47	-89.93	114.47	-97.53	158.6	158.64
	U_3 - U_4	-74.73	3.38	-15.58	136.5	158.6	158.64
	U_4 - U_5	-108.59	-36.42	-66.40	-72.94	158.6	158.64
	U_5 - U_6	-237.63	-57.95	-164.76	-173.54	158.6	158.64
	U_6 - U_7	-280.59	-104.91	-75.76	-209.32	158.6	158.64
	U_7 - U_8	-251.72	243.34	-272.41	-164.24	200.5	259.97
	U_8 - U_9	-11.36	205.34	22.82	-164.48	212.6	212.78
	U_9 - U_{10}	143.77	338.80	158.37	372.79	165.8	165.79
	U_{10} - U_{11}	187.14	42.29	-0.91	-1.36	0.00	0.00
	U_{11} - U_{12}	-10.36	9.93	16.96	18.87	0.00	0.00
	U_{12} - U_{13}	231.76	-53.92	242.15	-121.22	330.4	330.43
	U_{13} - U_{14}	154.87	-22.05	154.87	-22.05	330.4	330.43
	U_{14} - U_{15}	180.93	-63.47	164.15	-101.31	381.9	381.94
	U_{15} - U_{16}	312.64	-44.82	154.13	-45.45	381.9	381.94
	U_{16} - U_{17}	61.01	-189.65	3.24	-245.88	381.9	381.94
	U_{17} - U_{18}	232.57	327.18	193.01	114.74	381.9	381.94
	U_{18} - U_{19}	223.64	-186.59	-130.75	-180.40	134.8	134.82
	U_{19} - U_{20}	-163.02	-5.63	-13.74	-2.95	184.2	184.21
	U_{20} - U_{21}	96.09	15.47	48.18	20.79	184.2	184.21
	U_{21} - U_{22}	333.44	601.86	263.52	465.75	232.9	232.94
	U_{22} - U_{23}	141.50	-251.68	203.21	-164.11	375.8	375.78
	U_{23} - U_{24}	27.42	-225.64	22.38	-225.64	375.8	375.78
	U_{24} - U_{25}	-67.88	-257.80	15.41	-261.79	436.1	436.13

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
For Guardrail Design Loads see Guardrail Design Calculations

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

Gusset Plate - Lower Chord

Structure 1 | Structure 2 | Structure 3

M_2 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | ZZ Axis Moment: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_z (in^3) | I (in^4) | I_{DL} (in^4) | Shape Factor | M_p (k-in) | Formula I.8 Term F_y*S_{bb} | M_2 (k-in) | Equivalent Mom. Factor: a | C_m | C_{mDL} | Dead Load | Live Load (Max) | Live Load (Min) | Pedestrian Load (Max) | Pedestrian Load (Min) | Lane Reduction & Impact Live Load Max | Lane Reduction & Impact Live Load Min | Impact Pedestrian Load Max | Impact Pedestrian Load Min | YY Axis Moments from STAAD: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | Tension: S_{nb} (in^2) | S_n (in^2) | Z_y (in^3) | I_{gy} (in^4) | Shape Factor | M_p (k-in) | P_{yn} (kip) | Formula I.8 Term F_y*S_{nb} | M_n (k-in) | Equivalent Mom. Factor: a | C_m | C_{mDL} | Axial Moment Total | Pass | Buckle: Axial Load | Buckle: Moment Total | Pass | Fracture: Axial Load | Fracture: Moment Total | Pass | Compression: Yield: Axial Load | Yield: Moment Total | Pass |
|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guidelines for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moment from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0~L_1	-29.87	49.03	0.85	-0.93	-1.20	3.25	9.47	-10.32	-13.35	36.16
	U_1~L_1	-9.08	15.18	0.73	-0.78	-3.83	4.11	8.07	-8.72	-42.65	45.76
	U_1~L_2	10.00	9.70	0.89	-1.21	-2.61	3.45	9.88	-11.24	-29.03	38.43
	U_2~L_2	33.45	-34.40	2.44	-2.39	-2.22	2.79	27.15	-26.62	-24.74	31.06
	U_2~L_3	41.64	-42.40	1.39	-1.33	-2.16	2.46	21.64	-15.05	-23.45	24.35
	U_3~L_3	45.56	-51.10	-0.76	0.61	2.95	-3.60	40.82	51.69	130.45	-40.09
	U_3~L_4	53.60	-58.62	-0.48	0.42	2.82	-3.42	60.51	46.63	107.50	-19.09
	U_4~L_4	91.24	-101.87	-0.02	0.02	0.69	-6.19	0.22	0.24	30.33	68.86
	U_4~L_5	-20.57	21.23	0.43	-0.53	-2.66	3.27	4.79	-5.87	-29.64	36.42
	U_5~L_5	-68.47	89.21	0.00	-0.15	-3.44	4.52	-0.04	-1.56	-37.04	49.22
	U_5~L_6	-91.15	124.35	0.83	-0.25	-3.26	5.12	10.05	-2.05	-42.16	57.21
	U_6~L_6	-79.57	78.39	0.87	-0.83	-3.46	3.89	9.33	-8.91	-37.35	41.96
	U_6~L_7	-49.26	60.16	1.61	-1.48	-3.09	3.48	17.39	-15.91	-33.32	37.51
	U_7~L_7	-29.77	34.66	1.26	-1.16	-2.83	2.30	13.62	-12.47	-30.54	24.96
	U_7~L_8	-1.50	-2.65	2.80	2.81	2.68	-2.99	-30.15	30.32	28.85	-32.22
	U_8~L_8	24.13	-36.55	1.86	1.60	2.76	-3.00	-20.03	17.21	29.80	-33.32
	U_8~L_9	46.23	-55.85	-0.65	0.41	3.08	-3.48	-7.00	4.45	33.18	-37.02
	U_9~L_9	110.44	-114.63	-0.48	0.48	3.36	-5.54	-6.10	5.77	64.09	-64.09
	U_9~L_{10}	121.36	-131.24	-0.42	0.43	6.06	-6.58	-4.56	4.59	65.35	-70.92
	U_{10}~L_{10}	-134.59	-173.50	-0.26	0.36	7.24	-7.87	-2.82	3.88	78.07	-84.90
	U_{10}~L_{11}	-114.23	168.97	-0.99	0.99	-1.14	4.60	0.00	0.00	0.00	0.00
	U_{11}~L_{11}	-123.79	131.39	0.95	-1.01	-6.07	6.47	10.10	-10.73	-64.57	68.84
	U_{11}~L_{12}	-113.46	113.46	-1.01	1.01	-6.47	6.47	11.93	-11.93	-68.84	68.84
	U_{12}~L_{12}	-56.01	62.13	0.64	-0.67	-2.95	3.33	6.80	-7.18	-37.45	39.44
	U_{12}~L_{13}	-34.05	39.79	0.83	-0.83	-2.83	3.01	8.83	-8.83	-36.09	37.99
	U_{13}~L_{13}	-7.04	12.29	2.59	2.72	-2.77	3.17	25.39	-22.59	-32.68	-32.94
	U_{13}~L_{14}	15.85	-15.59	2.40	-2.62	-2.36	2.52	25.54	-27.87	-25.11	26.78
	U_{14}~L_{14}	38.85	-44.94	-1.21	1.35	2.49	-3.27	17.35	-17.91	17.05	-17.91
	U_{14}~L_{15}	86.91	-86.07	-1.78	1.72	3.79	-4.04	-18.88	18.28	40.34	-43.01
	U_{15}~L_{15}	95.08	-109.47	-1.91	1.91	3.91	-5.87	-20.66	20.66	51.34	-59.35
	U_{15}~L_{16}	141.23	-149.41	-1.19	0.77	4.37	-5.10	-12.65	8.24	46.56	-54.32
	U_{16}~L_{16}	192.55	-192.83	-0.67	0.42	4.63	-5.34	-7.10	4.49	49.32	-56.84
	U_{16}~L_{17}	187.61	-187.61	-0.37	0.37	4.63	-5.34	-3.92	3.92	49.32	-56.84
	U_{17}~L_{17}	203.52	-203.17	-0.32	0.55	6.72	-6.81	-5.49	5.86	71.58	-72.47
	U_{17}~L_{18}	92.05	33.01	1.72	-1.72	-7.32	7.32	-18.31	18.31	-77.92	77.92
	U_{18}~L_{18}	-109.89	162.81	0.84	-0.88	-7.22	7.18	8.81	-9.24	-75.94	75.58
	U_{18}~L_{19}	-113.73	113.73	0.88	-0.88	-7.18	7.18	9.24	-9.24	-75.58	75.58
	U_{19}~L_{19}	-130.37	-127.18	0.81	-0.79	-6.38	6.94	8.51	-8.31	-67.10	73.04
	U_{19}~L_{20}	-113.07	114.60	0.91	-0.93	-5.60	6.40	9.52	-9.76	-58.95	68.25
	U_{20}~L_{20}	-44.70	47.44	-1.34	1.34	-4.12	4.12	14.06	-14.06	-43.31	43.31
	U_{20}~L_{21}	-44.77	46.58	-1.17	1.15	-2.96	3.28	12.30	-12.05	-31.13	34.04
	U_{21}~L_{21}	-30.30	31.56	-0.81	0.80	-2.49	2.76	8.51	-8.37	-26.11	29.00
	U_{21}~L_{22}	-3.69	4.33	1.86	-2.10	1.23	-1.22	19.61	-22.08	12.95	-12.86
	U_{22}~L_{22}	22.65	-25.72	2.20	-2.20	1.27	-1.27	21.80	-21.80	13.04	-13.04
	U_{22}~L_{23}	23.41	-23.41	1.84	-1.69	2.74	-3.05	-19.32	17.75	28.86	-32.05
	U_{23}~L_{23}	66.57	-67.50	-1.41	1.13	3.63	-3.95	-14.80	11.91	38.22	-41.51
	U_{23}~L_{24}	70.00	-72.64	-1.41	1.13	3.63	-3.95	-14.80	11.91	38.22	-41.51
	U_{24}~L_{24}	138.29	-139.04	-0.76	0.75	6.65	-7.18	-7.54	7.84	70.05	-75.57
	U_{24}~L_{25}	134.94	-134.94	-0.32	0.32	6.65	-7.18	-3.32	3.32	70.05	-75.57
	U_{25}~L_{25}	179.36	-176.28	-0.43	0.37	7.74	-7.77	-4.47	3.90	81.44	-81.78
	U_{25}~L_{26}	179.36	-179.36	-0.43	0.43	7.74	-7.77	-4.47	4.47	81.44	-81.78
	U_{26}~L_{26}	167.25	-167.49	0.77	-0.85	6.62	-6.73	8.14	-9.04	-72.57	73.61
	U_{26}~L_{27}	-116.13	110.00	0.36	-0.60	-5.07	5.65	3.88	-6.33	-54.00	60.20
	U_{27}~L_{27}	-119.87	119.87	0.60	-0.60	-5.07	5.65	6.33	-6.33	-54.00	60.20
	U_{27}~L_{28}	-119.87	124.44	0.58	-0.47	-4.78	5.42	6.18	-5.03	-50.94	57.74
	U_{28}~L_{28}	-99.40	102.41	0.47	-0.47	-4.78	5.42	4.94	-5.03	-50.94	57.74
	U_{28}~L_{29}	-79.51	88.87	1.22	-1.20	-4.12	4.39	12.95	-12.79	-43.90	46.31
	U_{29}~L_{29}	-43.86	51.94	-2.15	2.60	0.54	-0.52	-22.90	27.66	5.72	-5.55
	U_{29}~L_{30}	-39.91	42.78	-2.66	3.52	-3.69	3.69	-29.59	28.27	37.46	-39.26
	U_{30}~L_{30}	-5.58	1.82	-2.78	2.66	3.52	-3.69	-29.59	28.27	37.46	-39.26
	U_{30}~L_{31}	55.25	41.69	-0.62	0.62	2.89	-3.33	-6.55	6.69	30.72	-35.25
	U_{31}~L_{31}	55.25	-61.09	-0.62	0.62	2.89	-3.33	-6.55	6.69	30.72	-35.25
	U_{31}~L_{32}	137.10	-150.77	-0.81	0.83	5.83	-6.42	-8.67	8.78	62.03	-68.28
	U_{32}~L_{32}	165.74	-206.85	-0.60	0.80	6.63	-7.85	-6.36	8.50	70.56	-83.56
	U_0~L_0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32}~L_{33}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1~L_0	-109.90	113.02	-0.56	-0.56	-5.64	6.21	9.68	-9.06	-60.85	66.97
	U_1~L_2	-11.03	96.29	0.37	-0.37	-3.57	2.28	5.51	-5.51	-39.39	39.39
	U_2~L_3	-38.43	48.15	0.39	-0.41	-3.02	3.45	4.15	-4.45	-32.56	37.15
	U_3~L_4	-34.08	34.15	1.41	-1.31	-2.61	2.98	14.13	-13.16	-29.30	27.30
	U_4~L_5	-2.76	8.97	3.73	-1.84	-3.17	3.52	18.63	-19.78	-34.16	37.95
	U_5~L_6	25.90	-28.71	2.28	-2.53	-1.49	1.56	24.55	-27.25	-16.13	16.85
	U_6~L_7	34.06	-34.06	1.36	-1.36	-2.47	2.47	13.62	-13.62	-24.69	24.69
	U_7~L_8	-79.40	77.51	-1.61	1.49	3.08	-3.54	-17.32	16.62	33.20	-38.17
	U_8~L_9	-71.54	71.54	-1.49	1.49	3.08	-3.54	-16.62	16.62	33.20	-38.17
	U_9~L_{10}	92.31	-85.87	-0.49	0.28	3.70	-4.65	-5.32	3.01	39.86	-50.17
	U_{10}~L_{11}	142.75	166.20	-0.09	0.12	5.79	-6.92	-0.56	1.29	62.43	-74.60
	U_{11}~L_{12}	37.93	-58.82	-0.12	0.14	2.92	-3.94	-1.30	1.50	32.55	-43.89
	U_{12}~L_{13}	-87.20	89.91	0.02	-0.05	-5.16	5.54	0.20	-0.51	-57.44	61.69
	U_{13}~L_{14}	-38.59	42.97	0.23	-0.20	-2.08	3.70	2.50	-2.19	-33.18	41.21
	U_{14}~L_{15}	-38.90	40.31	-3.45	3.34	0.06	0.21	-38.38	37.17	0.70	2.29
	U_{15}~L_{16}	-37.48	38.74	-3.13	3.25	1.54	-2.04	-34.81	36.10	17.11	-22.71
	U_{16}~L_{17}	-10.30	11.14	-1.22	1.35	2.49	-3.27	-13.62	15.07	27.71	-36.36
	U_{17}~L_{18}	3.52	-11.96	-0.76	0.73	3.98	-4.25	-8.41	8.16	44.35	-47.27
	U_{18}~L_{19}	44.79	-53.88	-0.51	0.71	3.10	-4.57	-5.70	7.93	34.50	-50.29

YY Axis Moment from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0~L_1	24.26	-7.78	-91.21	-29.26	0.00	0.00	0.00	0.00	-84.34	27.06
	U_1~L_1	15.52	7.82	-91.81	-20.05	0.00	0.00	0.00	0.00	17.31	5.90
	U_1~L_2	8.64	-0.38	-26.04	22.67	0.00	0.00	0.00	0.00	5.69	6.31
	U_2~L_2	-40.44	-21.23	19.95	25.37	0.00	0.00	0.00	0.00	-197.25	-48.68
	U_2~L_3	-22.63	-27.39	1.13	30.81	0.00	0.00	0.00	0.00	-133.09	-67.67
	U_3~L_3	12.54	10.06	69.70	25.13	0.00	0.00	0.00	0.00	-8.37	22.64
	U_3~L_4	7.01	0.76	48.44	2.75	0.00	0.00	0.00	0.00	-135.51	-44.85
	U_4~L_4	-13.52	15.21	33.00	8.43	0.00	0.00	0.00	0.00	-105.17	32.79
	U_4~L_5	-102.40	33.61	0.00	0.00	0.00	5.88	1.05	0.00	-129.68	46.30
	U_5~L_5	-168.73	-52.55	0.41	0.00	0.00	0.37	0.26	0.00	-209.45	-68.27
	U_5~L_6	-188.42	-131.91	0.51	0.00	0.00	0.46	0.32	0.00	-230.63	-162.58
	U_6~L_6	-156.08	-112.09	-0.04	-0.02	-1.11	-0.64	0.00	0.00	-203.79	-145.76
	U_6~L_7	-107.02	-24.24	0.27	0.81	5.18	2.65	0.00	0.00	-133.64	-12.54
	U_7~L_7	-9.16	-1.93	3.08	13.87	0.00	0.00	0.00	0.00	-144.76	1.12
	U_7~L_8	9.74	10.09	9.51	17.31	0.00	0.00	0.00	0.00	-93.97	66.97
	U_8~L_8	-11.08	8.71	18.53	24.00	0.00	0.00	0.00	0.00	-125.35	104.64
	U_8~L_9	9.74	3.73	10.61	10.34	0.00	0.00	0.00	0.00	-145.14	-108.67
	U_9~L_9	23.93	11.44	25.12	22.22	0.00	0.00	0.00	0.00	-118.68	-107.68
	U_9~L_{10}	24.00	16.28	60.76	11.27	0.00	0.00	0.00	0.00	-129.56	-78.47
	U_{10}~L_{10}	-138.58	-44.74	0.41	-0.09	1.91	0.74	0.00	0.00	-170.67	-60.35
	U_{10}~L_{11}	-2.31	-5.15	227.47	7.30	0.00	0.00	0.00	0.00	-60.78	21.65
	U_{11}~L_{11}	-11.01	-1.44	231.93	30.41	0.00	0.00	0.00	0.00	39.27	5.13
	U_{11}~L_{12}	6.36	1.73	19.91	30.41	0.00	0.00	0.00	0.00	-268.30	-65.49
	U_{12}~L_{12}	-2.45	-73.44	-352.82	-83.70	0.00	0.00	0.00	0.00	-183.98	-72.11
	U_{12}~L_{13}	13.47	-13.58	0.00	0.00	0.00	0.00	0.00	0.00	-20.63	-162.91
	U_{13}~L_{14}	7.79	6.45	31.43	11.91	0.00	0.00	0.00	0.00	1.00	113.69
	U_{14}~L_{14}	-6.18	-4.58	0.00	0.00	0.00	0.00	0.00	0.00	-53.20	82.54
	U_{14}~L_{15}	-42.96	41.04	-0.66	0.40	3.21	1.64	0.00	0.00	-102.06	62.67
	U_{15}~L_{15}	-5.97	6.33	43.92	19.31	0.00	0.00	0.00	0.00	-118.53	69.06
	U_{15}~L_{16}	-88.54	-20.95	0.00	0.00	0.00	0.00	0.00	0.00	-112.78	-10.43
	U_{16}~L_{16}	-127.87	-86.71	0.65	-0.47	5.03	2.24	0.00	0.00	-151.16	-123.52
	U_{16}~L_{17}	-169.08	-96.90	0.00	0.00	0.00	0.00	0.00	0.00	-185.79	-133.08
	U_{17}~L_{17}	-124.76	-94.02	0.00	0.00	0.00	0.00	0.00	0.00	-123.05	-45.50
	U_{17}~L_{18}	18.06	14.34	8.81	-5.23	0.00	0.00	0.00	0.00	-54.10	-87.90
	U_{18}~L_{18}	14.14	-23.44	57.30	9.31	0.00	0.00	0.00	0.00	-91.54	-83.73
	U_{18}~L_{19}	178.55	-178.55	0.00	0.00	0.00	0.00	0.00	0.00	-178.55	-178.55
	U_{19}~L_{19}	-7.92	-3.80	5.71	2.23	0.00	0.00	0.00	0.00	-71.85	69.38
	U_{19}~L_{20}	-7.61	13.03	39.13	14.53	0.00	0.00	0.00	0.00	-77.62	126.03
	U_{20}~L_{20}	8.68	6.82	36.43	-1.14	0.00	0.00	0.00	0.00	-101.84	-61.96
	U_{20}~L_{21}	4.58	2.83	0.00	0.00	0.00	0.00	0.00	0.00	-137.08	-89.02
	U_{21}~L_{21}	4.27	3.85	10.04	1.39	0.00	0.00	0.00	0.00	-109.85	-44.31
	U_{21}~L_{22}	4.83	3.88	41.23	11.80	0.00	0.00	0.00	0.00	-96.46	-23.33
	U_{22}~L_{22}	-60.57	-56.50	0.00	0.00	0.00	0.00	0.00	0.00	-133.33	-3.75
	U_{22}~L_{23}	-65.99	-10.12	-0.95	0.41	3.16	1.96	0.00	0.00	-133.33	-3.75
	U_{23}~L_{23}	-62.14	-39.79	0.00	0.00	0.00	0.00	0.00	0.00	-147.41	-61.61
	U_{23}~L_{24}	-7.50	-2.49	-0.18	-0.53	0.00	0.00	0.00	0.00	-147.41	-61.61
	U_{24}~L_{24}	8.34	-3.60	0.00	0.00	0.00	0.00	0.00	0.00	-108.89	-33.07
	U_{24}~L_{25}	-103.12	-39.19	1.26	-0.22	4.22	0.25	0.00	0.00	-105.40	-39.99
	U_{25}~L_{25}	-97.18	-21.29	0.99	0.83	-0.54	0.00	0.00	0.00	-103.87	-13.39
	U_{25}~L_{26}	-115.79	-32.39	0.00	0.00	0.00	0.00	0.00	0.00	-103.87	-13.39
	U_{26}~L_{26}	-106.86	6.96	-0.22	-0.18	4.81	0.83	0.00	0.00	-143.99	4.56
	U_{26}~L_{27}	-79.54	21.21	-0.38	0.00	0.00	0.00	0.00	0.00	-107.72	24.29
	U_{27}~L_{27}	-55.65	3.54	0.00	0.00	0.00	0.00	0.00	0.00	-107.72	24.29
	U_{27}~L_{28}	-75.72	29.87	-0.34	-0.27	5.15	0.45	0.00	0.00	-106.12	32.10
	U_{28}~L_{28}	-57.37	24.87	0.00	0.00	0.00	0.00	0.00	0.00	-106.12	32.10
	U_{28}~L_{29}	6.94	23.21	2.79	0.41	0.00	0.00	0.00	0.00	-174.14	18.96
	U_{29}~L_{29}	6.62	6.10	-0.64	-1.85	0.00	0.00	0.00	0.00	-133.26	-70.64
	U_{29}~L_{30}	-4.58	-4.33	69.58	20.90	0.00	0.00	0.00	0.00	-159.96	-79.11
	U_{30}~L_{30}	-23.31	-7.47	185.77	59.98	0.00	0.00	0.00	0.00	-194.67	-69.21
	U_{30}~L_{31}	11.49	-13.52	53.72	13.27	0.00	0.00	0.00	0.00	-129.55	-99.78
	U_{31}~L_{31}	11.49	-13.52	53.72	13.27	0.00	0.00	0.00	0.00	-129.55	-99.78
	U_{31}~L_{32}	16.01	12.30	51.40	25.16	0.00	0.00	0.00	0.00	-53.46	39.59
	U_{32}~L_{32}	-23.31	-7.47	185.77	59.98	0.00	0.00	0.00	0.00	-194.67	-69.21
	U_0~L_0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32}~L_{33}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1~L_0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1~L_2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_2~L_3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_3~L_4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_4~L_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_5~L_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_6~L_7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_7~L_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_8~L_9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9~L_{10}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}~L_{11}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}~L_{12}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}~L_{13}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}~L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}~L_{15}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}~L_{16}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}~L_{17}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}~L_{18}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}~L_{19}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}~L_{19}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}~L_{20}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}~L_{20}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}~L_{21}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21}~L_{21}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21}~L_{22}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22}~L_{22}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22}~L_{23}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23}~L_{23}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23}~L_{24}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24}~L_{24}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24}~L_{25}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25}~L_{25}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25}~L_{26}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26}~L_{26}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26}~L_{27}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27}~L_{27}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27}~L_{28}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28}~L_{28}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28}~L_{29}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29}~L_{29}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29}~L_{30}	0.00	0.00	0.00	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
(-) Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

M_z Information

M_y Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | End (k-in) | Live Load (Max) Start (k-in) | End (k-in) | Live Load (Min) Start (k-in) | End (k-in) | Pedestrian Load (Max) Start (k-in) | End (k-in) | Pedestrian Load (Min) Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Min Start (k-in) | End (k-in) | Impact Pedestrian Load Max Start (k-in) | End (k-in) | Impact Pedestrian Load Min Start (k-in) | End (k-in) | Max. Pos. Mom. Start (k-in) | End (k-in) | Max. Neg. Mom. Start (k-in) | End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_z (in^4) | $I_{t/n}$ (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_x | M_z (k-in) | Equivalent Mom. Factor a | $C_{b/n}$ | C_{max} | YY Axis Moments from STAAD: Dead Load Start (k-in) | End (k-in) | Live Load (Max) Start (k-in) | End (k-in) | Live Load (Min) Start (k-in) | End (k-in) | Pedestrian Load (Max) Start (k-in) | End (k-in) | Pedestrian Load (Min) Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Max Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Min Start (k-in) | End (k-in) | Impact Pedestrian Load Max Start (k-in) | End (k-in) | Impact Pedestrian Load Min Start (k-in) | End (k-in) | Max. Pos. Mom. Start (k-in) | End (k-in) | Max. Neg. Mom. Start (k-in) | End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_y (in^3) | $I_{y/n}$ (in^4) | Shape Factor | M_p (k-in) | $P_{n/n}$ (kips) | Formula 1.8 Term * F_y/S_y | M_y (k-in) | Equivalent Mom. Factor a | $C_{b/n}$ | C_{max} | Axial Tension (kips) | Moment Tension (k-in) | Total | Pass | Axial Compression Portion | Moment Portion | Total | Pass | Axial Compression Portion | Moment Portion | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Min) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	U_1–U_2	88.99	-98.04	-2.39	2.13	0.39	-7.66	-0.65	0.45	2.38	-2.03
	U_2–U_3	153.53	-143.94	5.64	-4.89	-1.05	0.51	-1.04	0.49	4.13	-3.61
	U_3–U_4	-130.85	58.79	1.28	3.74	-7.23	-7.00	2.20	0.80	-3.90	-1.36
	U_4–U_5	-48.24	76.71	2.37	3.85	-7.13	-7.13	0.72	-1.15	-1.44	-2.51
	U_5–U_6	-26.00	75.03	2.65	3.45	-7.96	-2.90	0.47	0.77	-1.36	-2.71
	U_6–U_7	19.49	179.90	2.96	3.06	-7.70	1.44	0.62	0.72	-1.27	0.17
	U_7–U_8	19.49	179.90	2.96	3.06	-7.70	1.44	0.62	0.72	-1.27	0.17
	U_8–U_9	-71.27	857.90	1.34	5.10	-1.03	-1.45	-1.34	3.99	0.00	0.00
	U_9–U_{10}	624.45	-195.13	3.04	1.36	-6.42	3.57	-1.52	0.00	0.00	0.00
	U_{10}–U_{11}	71.48	-13.72	1.36	2.47	0.34	-6.15	0.28	0.49	0.23	-0.97
	U_{11}–U_{12}	97.31	-222.34	2.47	2.03	-0.44	-6.43	0.49	0.39	0.26	-1.61
	U_{12}–U_{13}	35.40	-221.05	2.57	1.91	-0.43	-11.85	0.56	0.33	0.24	-1.66
	U_{13}–U_{14}	-120.52	-238.11	2.22	0.85	-3.55	-8.52	0.44	0.14	-0.62	-1.62
	U_{14}–U_{15}	-201.52	-422.66	1.47	0.00	-4.36	-2.91	0.00	0.00	0.00	-1.36
	U_{15}–U_{16}	-380.34	-263.67	-1.95	1.13	-18.71	-5.81	0.32	0.20	2.38	-1.60
	U_{16}–U_{17}	-227.22	-366.78	1.88	0.19	-9.04	-4.96	0.34	-0.48	-1.94	-2.34
	U_{17}–U_{18}	-263.09	-172.61	0.76	-0.02	-11.05	-3.98	0.05	-0.04	-1.64	-0.73
	U_{18}–U_{19}	-227.07	-24.53	0.70	-0.47	-8.13	1.01	0.10	-0.09	-1.48	0.22
	U_{19}–U_{20}	-214.18	21.72	0.57	0.23	1.09	-0.06	-1.43	0.35	7.34	-2.96
	U_{20}–U_{21}	-229.66	4.07	0.53	-0.08	-4.56	2.13	0.06	-0.04	-1.34	-0.03
	U_{21}–U_{22}	419.98	-379.23	1.31	-0.26	-5.16	-11.20	0.22	-0.23	-1.33	2.33
	U_{22}–U_{23}	-113.09	-299.12	-0.05	-1.26	-1.85	-10.33	0.00	0.18	-0.50	-1.31
	U_{23}–U_{24}	-74.19	-427.71	0.00	-1.42	-1.34	-6.29	0.00	0.20	-0.34	-1.48
	U_{24}–U_{25}	-433.77	-494.94	0.70	2.00	-6.26	-18.96	0.08	0.31	1.29	-2.04
	U_{25}–U_{26}	-485.42	-543.03	0.70	2.11	-6.37	-20.97	-0.06	0.34	1.29	-2.07
	U_{26}–U_{27}	-543.33	-230.04	2.53	5.55	-15.89	-16.31	0.37	0.87	2.85	-1.70
	U_{27}–U_{28}	-414.64	-309.81	4.17	3.59	-14.16	-14.41	0.64	0.58	1.77	-2.26
	U_{28}–U_{29}	-384.32	-328.61	3.32	4.22	-13.71	-14.11	0.51	0.64	2.44	-2.44
	U_{29}–U_{30}	-443.98	-59.22	3.63	4.80	-13.15	-3.70	0.49	0.82	2.01	-0.82
	U_{30}–U_{31}	-319.08	132.43	4.32	4.60	-14.48	7.86	0.60	0.71	2.00	0.32
	U_{31}–U_{32}	-166.00	101.73	5.02	4.37	-8.61	-2.75	0.77	0.79	1.44	-0.29
	U_{32}–U_{33}	-149.75	284.71	4.43	3.68	-8.16	0.86	0.73	0.60	1.58	0.29
	U_{33}–U_{34}	-60.65	60.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34}–U_{35}	-290.99	1663.47	2.39	7.96	-0.75	-0.15	-1.34	5.47	0.00	0.00
	U_{35}–U_{36}	1538.20	1538.20	1.93	1.93	-1.10	-1.10	0.00	0.00	0.00	0.00
	U_{36}–U_{37}	-27.64	20.42	1.60	3.42	-6.76	-8.61	-0.01	-0.26	0.00	0.00
	U_{37}–U_{38}	301.84	301.84	2.78	2.78	3.49	3.49	-0.71	-0.71	-1.46	-1.46
	U_{38}–U_{39}	186.19	-22.97	2.96	3.49	-2.71	-11.70	0.46	0.70	0.18	-1.19
	U_{39}–U_{40}	179.26	-73.23	3.90	2.81	-4.56	-9.50	0.59	0.06	0.03	-1.32
	U_{40}–U_{41}	179.26	-73.23	3.90	2.81	-4.56	-9.50	0.59	0.06	0.03	-1.32
	U_{41}–U_{42}	-76.59	-111.03	3.39	0.26	-8.90	-10.92	0.37	0.02	-1.32	-2.37
	U_{42}–U_{43}	-158.20	-160.94	2.42	0.11	-9.45	-9.45	0.22	-0.02	-1.32	-2.37
	U_{43}–U_{44}	-164.13	-164.69	1.53	1.48	-13.69	-8.38	0.68	0.50	-1.67	-1.21
	U_{44}–U_{45}	-137.33	-137.33	0.61	0.61	-12.25	-12.25	-0.39	-0.39	-1.67	-1.67
	U_{45}–U_{46}	-44.00	54.78	3.00	3.40	-12.80	-2.57	0.49	0.43	0.96	-0.34
	U_{46}–U_{47}	-69.00	212.40	2.73	3.42	-9.00	-1.20	0.54	-1.17	0.41	-0.43
	U_{47}–U_{48}	-69.00	212.40	2.73	3.42	-9.00	-1.20	0.54	-1.17	0.41	-0.43
	U_{48}–U_{49}	-40.57	345.28	2.41	2.25	-7.63	-0.19	-0.61	1.30	-0.96	0.63
	U_{49}–U_{50}	91.11	-72.05	2.03	1.10	-5.70	-2.60	0.20	-0.03	-0.74	-0.35
	U_{50}–U_{51}	-146.81	1530.30	1.32	8.02	-0.17	-1.27	-0.51	6.60	0.00	0.00
	U_{51}–U_{52}	1613.34	-340.01	4.14	2.69	-0.57	-0.78	1.66	-1.52	0.00	0.00
	U_{52}–U_{53}	-85.52	-112.27	2.69	2.66	-1.88	-7.55	0.70	0.62	0.15	-1.34
	U_{53}–U_{54}	-358.50	-362.03	3.57	3.20	-12.02	-15.17	0.54	0.55	1.52	-2.40
	U_{54}–U_{55}	-300.96	-456.91	3.92	3.47	-14.77	-12.73	0.69	0.52	2.31	-2.62
	U_{55}–U_{56}	-327.28	-587.63	3.92	3.47	-14.77	-12.73	0.69	0.52	2.31	-2.62
	U_{56}–U_{57}	-569.38	-449.72	2.58	0.39	-16.56	-6.51	0.36	-0.04	-2.55	-1.21
	U_{57}–U_{58}	-407.37	-551.16	1.61	-0.84	-10.52	0.64	0.21	-0.18	1.89	0.04
	U_{58}–U_{59}	-407.37	-551.16	1.61	-0.84	-10.52	0.64	0.21	-0.18	1.89	0.04
	U_{59}–U_{60}	-290.40	-12.26	1.25	1.28	-6.69	3.42	0.20	-0.01	-1.64	0.87
	U_{60}–U_{61}	-431.42	-311.55	0.60	0.38	-5.45	-9.75	0.25	0.07	3.50	-2.01
	U_{61}–U_{62}	-54.47	-205.39	0.42	0.42	-3.21	-9.07	0.08	0.08	-0.77	-2.04
	U_{62}–U_{63}	-21.98	-218.86	0.52	0.89	-3.24	-7.91	-0.12	0.10	0.40	-1.52
	U_{63}–U_{64}	-361.39	-187.99	0.55	0.20	-10.72	-7.34	-0.02	0.37	1.24	-1.70
	U_{64}–U_{65}	-252.02	-374.51	1.46	0.42	-15.89	0.20	0.27	-0.33	2.63	-2.33
	U_{65}–U_{66}	-444.47	-187.50	1.46	-0.76	-4.56	-9.12	0.26	-0.14	-1.38	-2.33
	U_{66}–U_{67}	-235.18	-84.39	1.24	2.53	-8.93	-0.90	0.14	0.46	-1.65	-0.50
	U_{67}–U_{68}	-214.86	-128.23	2.46	2.35	-7.51	0.63	0.39	0.50	4.29	-2.47
	U_{68}–U_{69}	-186.98	-640.79	2.49	5.01	-6.52	5.22	-1.47	3.55	0.00	0.00
	U_{69}–U_{70}	705.55	-109.11	3.07	1.77	-0.93	0.07	1.55	-0.71	0.00	0.00
	U_{70}–U_{71}	156.84	-12.62	2.69	2.56	-1.88	-7.55	0.70	0.62	0.15	-1.34
	U_{71}–U_{72}	46.75	-46.31	2.97	2.58	-4.12	-8.96	0.74	0.52	-0.74	-1.39
	U_{72}–U_{73}	57.88	-78.76	2.48	1.95	-7.78	-6.35	0.74	0.46	-1.03	-1.25
	U_{73}–U_{74}	20.58	-172.42	3.19	0.83	-7.68	-4.99	0.76	0.23	-1.42	-1.15
	U_{74}–U_{75}	-101.33	-63.03	2.25	0.18	-8.92	-1.22	0.53	0.02	-1.79	-0.65
	U_{75}–U_{76}	-55.81	-170.19	1.36	-0.61	-4.07	1.34	0.26	0.12	1.52	-0.15

Location	Member	ZZ Axis Moment Properties: Start (k-in)	ZZ Axis Moment Properties: End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F$_y$*S_{top}	M_n (k-in)	Equivalent Mem. Factor: a	Equivalent Mem. Factor: $C_{b(UU)}$	$C_{b(UU)}$
Structure 1	U_1–U_2	88.99	-98.04	-2.39	2.13	0.39	-7.66	-0.65	0.45	2.38	-2.03	28.61	-24.37	46.45	-65.94	126.71	-349.09	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.333	0.73	0.73
	U_2–U_3	153.53	-143.94	5.64	-4.89	-1.05	0.51	-1.04	0.49	4.13	-3.61	77.89	-117.45	84.63	-265.96	355.33	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.333	0.73	0.73
	U_3–U_4	-130.85	58.79	1.28	3.74	-7.23	-7.00	2.20	0.80	-3.90	-1.36	-133.06	184.65	-379.39	-126.17	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.333	0.73	0.73
	U_4–U_5	-48.24	76.71	2.37	3.85	-7.13	-7.13	0.72	-1.15	-1.44	-2.51	-64.85	-76.56	0.68	8.60	-131.81	-54.48	8.38	25.72	-32.53	-665.85	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.052	0.58	0.58
	U_5–U_6	-26.00	75.03	2.65	3.45	-7.96	-2.90	0.47	0.77	-1.36	-2.71	-35.43	-144.31	-106.43	-158.65	126.71	-349.09	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.052	0.58	0.58
	U_6–U_7	19.49	179.90	2.96	3.06	-7.70	1.44	0.62	0.72	-1.27	0.17	39.54	40.83	-102.83	19.26	7.44	8.60	-15.23	2.03	111.01	322.33	-197.47	275.62	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.344	0.74	0.74
	U_7–U_8	19.49	179.90	2.96	3.06	-7.70	1.44	0.62	0.72	-1.27	0.17	39.54	40.83	-102.83	19.26	7.44	8.60	-15.23	2.03	111.01	322.33	-197.47	275.62	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.344	0.74	0.74
	U_8–U_9	-71.27	857.90	1.34	5.10	-1.03	-1.45	-1.34	3.99	0.00	0.00	17.94	68.11	-13.71	39.30	-16.03	47.90	0.00	0.00	0.00	0.00	3642	2197.7	1.45	6599	0.99850004	4264.8	-0.090	0.56	0.56
	U_9–U_{10}	624.45	-195.13	3.04	1.36	-6.42	3.57	-1.52	0.00	0.00	0.00	89.32	21.75	83.09	42.89	-18.23	0.00	0.00	0.00	897.72	-215.11	979.19	433.66	130.3	130.26	105.11	180.77	2960	1799.3	1.39
	U_{10}–U_{11}	71.48	-13.72	1.36	2.47	0.34	-6.15	0.28	0.49	0.23	-0.97	17.56	31.93	4.44	-79.55	3.32	5.93	2.80	-11.68	130.97	51.35	102.54	-190.18	96.6	96.61	79.12	135.29	2174	1387.9	1.40
	U_{11}–U_{12}	97.31	-222.34	2.47	2.03	-0.44	-6.43	0.49	0.39	0.26	-1.61	-8.53	27.56	5.42	-112.94	0.00	4.66	3.16	-21.66	180.32	-231.32	114.11	-534.32	96.6	96.61	83.93	135.29	2174	1387.9	1.40
	U_{12}–U_{13}	35.40	-221.05	2.57	1.91	-0.43	-11.85	0.56	0.33	0.24	-1.66	-13.33	33.48	3.95	-2.92	-20.66	118.11	-224.53	33.96	-220.29	128.71	-1.55	128.69	105.26	182.66	3153	1864.4	1.42	6028
	U_{13}–U_{14}	-120.52	-238.11	2.22	0.85	-3.55	-8.52	0.44	0.14	-0.62	-1.62	-28.76	11.02	-45.93	-110.25	5.30	1.67	-7.40	-19.49	-94.36	-285.93	-254.20	-548.41	151.8	151.76	130.54	219.77	4535	2932.6	1.45
	U_{14}–U_{15}	-201.52	-422.66	1.47	0.00	-4.36	-2.91	0.00	0.00	0.00	-1.36	-28.87	-28.87	-45.93	-45.93	0.00	0.00	0.00	0.00	-94.64	-394.64	-521.41	-1009.05	151.8	151.76	130.54	219.77	4535	2932.6	1.45
	U_{15}–U_{16}	-380.34	-263.67	-1.95	1.13	-18.71	-5.81	0.32	0.20	2.38	-1.60	25.27	14.65	-242.04	75.17	3.88	2.41	-28.52	-19.14	-439.76	-311.04	-1018.86	-505.65	188.5	188.51	157.55	274.68	5476	3413.6	1.46
	U_{16}–U_{17}	-227.22	-366.78	1.88	0.19	-9.04	-4.96	0.34	-0.48	-1.94	-2.34	-24.32	-7.34	-259.24	-84.54	-1.16	-98.89	-897.97	-4.34	-0.39	-227.07	-12.53	-242.66	-871.43	-648.83	-671.16	-188.5	188.51	157.55	274.68	5476	3413.6	1.46
	U_{17}–U_{18}	-263.09	-172.61	0.76	-0.02	-11.05	-3.98	0.05	-0.04	-1.64	-0.73	9.86	-9.25	-143.00	-51.43	0.69	-0.47	-19.69	-8.76	-437.61	-224.52	-768.79	-335.82	188.5	188.51	157.55	274.68	5476	3413.6	1.46
	U_{18}–U_{19}	-227.07	-24.53	0.70	-0.47	-8.13	1.01	0.10	-0.09	-1.48	0.22	-7.68	-17.46	-2.64	25.53	-45.58	-322.98	4.38	127.33	19.73	199.23	3668	2585.6	1.42	6146	0.99827149	4197.7	0.095	0.60	0.60
	U_{19}–U_{20}	-214.18	21.72	0.57	0.23	1.09	-0.06	-1.43	0.35	7.34	-2.96	-74.27	14.05	1.07	-0.74	-17.11	4.25	282.94	21.82	-439.34	58.68	1504.8	1054.3	1.44	4971	0.99880342	3452.6	-0.138	0.55	0.55
	U_{20}–U_{21}	-229.66	4.07	0.53	-0.08	-4.56	2.13	0.06	-0.04	-1.34	-0.03	6.83	-12.52	-39.04	37.60	0.74	-0.50	-16.08	-0.31	-283.76	-21.58	-426.47	54.50	104.8	104.75	86.43	150.63	2589	1554.3	1.44
	U_{21}–U_{22}	419.98	-379.23	1.31	-0.26	-5.16	-11.20	0.22	-0.23	-1.33	2.33	39.77	-25.71	56.18	-48.62	62.37	-69.32	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880342	3452.6	-0.138	0.55	0.55
	U_{22}–U_{23}	-113.09	-299.12	-0.05	-1.26	-1.85	-10.33	0.00	0.18	-0.50	-1.31	-0.60	16.05	-23.65	-131.94	0.04	2.10	-6.01	-15.77	-148.31	-354.09	-158.25	-614.73	138.2	138.17	119.05	199.70	3434	1990.9	1.45
	U_{23}–U_{24}	-74.19	-427.71	0.00	-1.42	-1.34	-6.29	0.00	0.20	-0.34	-1.48	0.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	-74.19	-427.71	-158.25	-614.73	138.2	138.17	119.05	199.70	3434	1990.9	1.45
	U_{24}–U_{25}	-433.77	-494.94	0.70	2.00	-6.26	-18.96	0.08	0.31	1.29	-2.04	8.88	28.07	-79.95	242.18	0.96	3.68	-15.44	-24.50	-644.66	-652.61	-737.14	-1168.14	232.7	232.70	198.86	340.10	6520	3217.6	1.46
	U_{25}–U_{26}	-485.42	-543.03	0.70	2.11	-6.37	-20.97	-0.06	0.34	1.29	-2.07	8.88	28.07	-79.95	242.18	0.96	3.68	-15.44	-24.50	-644.66	-652.61	-737.14	-1168.14	232.7	232.70	198.86	340.10	6520	3217.6	1.46
	U_{26}–U_{27}	-543.33	-230.04	2.53	5.55	-15.89	-16.31	0.37	0.87	2.85	-1.70	32.27	70.95	-203.04	208.02	0.40	10.49	-25.74	-20.91	-636.40	-145.33	-1146.29	-750.41	251.1	251.73	216.47	370.63	7035	3484.1	1.47
	U_{27}–U_{28}	-414.64	-309.81	4.17	3.59	-14.16	-14.41	0.64	0.58	1.77	-2.26	53.33	45.84	-180.90	-184.13	7.69	7.01	-21.25	-27.12	-423.49	-298.23	-930.99	-796.51	232.7	232.70	199.45	340.10	6520	3217.6	1.46
	U_{28}–U_{29}	-384.32	-328.61	3.32	4.22	-13.71	-14.11	0.51	0.64	2.44	-2.44	38.38	53.83	-183.70	-193.79	5.52	7.63	-21.32	-27.52	-18.08	-298.23	-1008.14	-822.01	232.7	232.70	199.45	340.10	6520	3217.6	1.46
	U_{29}–U_{30}	-443.98	-59.22	3.63	4.80	-13.15	-3.70	0.49	0.82	2.01	-0.82	66.43	61.31	-167.95	-41.21	5.63	9.86	-24.13	-9.85	-476.58	55.86	-941.06	-179.27	198.9	198.88	169.65	289.08	5137	2713.1	1.43
	U_{30}–U_{31}	-319.08	132.43	4.32	4.60	-14.48	7.86	0.60	0.71	2.00	0.32	66.43	61.31	-167.95	-41.21	5.63	9.86	-24.13	-9.85	-476.58	55.86	-941.06	-179.27	198.9	198.88	169.65	289.08	5137	2713.1	1.43
	U_{31}–U_{32}	-166.00	101.73	5.02	4.37	-8.61	-2.75	0.77	0.79	1.44	-0.29	84.41	62.65	-210.27	-42.01	7.16	7.02	-27.51	-9.73	-605.72	57.03	-1196.29	-183.01	198.9	198.88	169.65	289.08	5137	2713.1	1.43
	U_{32}–U_{33}	-149.75	284.71	4.43	3.68	-8.16	0.86	0.73	0.60	1.58	0.29	56.58	40.68	-190.62	10.96	6.72	7.72	-26.18	-9.62	-572.12	-458.26	-426.12	-393.87	198.9	198.88	169.65	289.08	5137	2713.1	1.43
	U_{33}–U_{34}	-60.65	60.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34}–U_{35}	-290.99	1663.47	2.39	7.96	-0.75	-0.15	-1.34	5.47	0.00	0.00	30.54	101.64	-9.52	-9.68	-1.88	-18.13	65.60	0.00	0.00	-312.13	2292.72	-368.91	2038.44	221.8	221.77	186.91	327.26	6244	3427.0	1.48
	U_{35}–U_{36}	1538.20	1538.20	1.93	1.93	-1.10	-1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36}–U_{37}	-27.64	20.42	1.60	3.42	-6.76	-8.61	-0.01	-0.26	0.00	0.00	20.14	43.15	-85.38	-108.70	-0.06	-3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{37}–U_{38}	301.84	301.84	2.78	2.78	3.49	3.49	-0.71	-0.71	-1.46	-1.46	36.27	36.27	-111.53	-111.53	4.62	4.62	-14.54	-14.54	-698.32	-698.32	-1117.13	-1117.13	198.9	198.88	169.65	289.08	5137	2713.1	1.43
	U_{38}–U_{39}	186.19	-22.97	2.96	3.49	-2.71	-11.70	0.46	0.70	0.18	-1.19	37.38	44.04	-64.01	-147.70	5.47	8.84	2.11	-14.28	323.04	65.56	167.91	-349.88	127.9	127.93	109.14	178.51	2762	1538.8	1.40
	U_{39}–U_{40}	179.26	-73.23	3.90	2.81	-4.56	-9.50	0.59	0.06	0.03	-1.32	49.26	35.45	-57.53	-119.91	7.09	7.04	1.32	-15.76	339.77	-18.39	108.38	-355.01	127.8	127.83	108.61	178.51	2762	1538.8	1.40
	U_{40}–U_{41}	179.26	-73.23	3.90	2.81	-4.56	-9.50	0.59	0.06	0.03	-1.32	49.26	35.45	-57.53	-119.91	7.09	7.04	1.32	-15.76	339.77	-18.39	108.38	-355.01	127.8	127.83	108.61	178.51	2762	1538.8	1.40
	U_{41}–U_{42}	-76.59	-111.03	3.39	0.26	-8.90	-10.92	0.37	0.02	-1.32	-2.37	-132.37	-137.82	6.89	5.36	-9.48	-15.61	-6.81	-137.37	-342.92	-443.05	-144.8	-144.84	129.49	209.19	3613	2101.0	1.44	6903
	U_{42}–U_{43}	-158.20	-160.94	2.42	0.11	-9.45	-9.45	0.22	-0.02	-1.32	-2.37	-132.37	-137.82	6.89	5.36	-9.48	-15.61	-6.81	-137.37	-342.92	-443.05	-144.8	-144.84	129.49	209.19	3613	2101.0	1.44	6903
	U_{43}–U_{44}	-164.13	-164.69	1.53	1.48	-13.69	-8.38	0.68	0.50	-1.67	-1.21	19.35	18.70	-171.59	-105.77	8.17	5.95	-20.02	-14.51	-17.44	-172.58	-585.15	-443.27	144.8	144.84	120.31	209.19	3613	2101.0	1.44
	U_{44}–U_{45}	-137.33	-137.33	0.61	0.61	-12.25	-12.25	-0.39	-0.39	-1.67	-1.67	-22.86	-22.86	-105.77	-105.77	5.95	5.95	-14.51	-14.51	-172.58	-172.58	-443.27	-443.27	144.8	144.84	120.31	209.19	3613	2101.0	1.44
	U_{45}–U_{46}	-44.00	54.78	3.00	3.40	-12.80	-2.57	0.49	0.43	0.96	-0.34	42.95	40.56	-167.92	-37.47	5.87	5.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Reference for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	L_0-L_1	-19.48	-91.69	0.70	-0.38	2.57	-2.00	-0.11	0.13	0.00
	L_1-L_2	30.30	-116.56	-1.47	-16.16	-0.66	2.31	-0.07	-13.33	-0.16
	L_2-L_3	52.07	-78.01	-1.50	-7.21	1.50	-1.04	-1.27	-29.21	-0.50
	L_3-L_4	-65.02	-14.74	-7.70	-5.22	1.31	4.20	-1.19	-1.34	0.23
	L_4-L_5	-50.69	-234.13	-7.82	-6.42	1.12	4.12	-1.19	-0.09	0.03
	L_5-L_6	-2.17	269.23	-4.32	-9.64	2.47	4.65	-0.84	0.05	0.53
	L_6-L_7	-3.29	229.47	-5.79	-7.22	0.93	3.31	-0.84	0.00	0.53
	L_7-L_8	-38.81	57.46	0.32	-1.42	0.25	6.09	0.00	0.00	0.00
	L_8-L_9	555.91	-39.94	-1.34	0.44	7.19	-0.09	0.00	0.00	0.00
	L_9-L_{10}	185.62	-153.59	1.16	-0.30	3.81	-2.10	0.00	0.00	0.53
	L_{10}-L_{11}	164.49	-164.37	-2.32	-3.85	2.94	1.65	0.00	0.00	0.00
	L_{11}-L_{12}	78.56	-251.78	2.01	-4.95	0.19	-1.26	-0.42	0.00	0.00
	L_{12}-L_{13}	-57.21	-170.41	-4.96	-6.49	2.14	1.07	-0.57	-0.97	0.43
	L_{13}-L_{14}	70.10	-469.56	-0.27	-10.95	1.63	1.47	-0.45	-2.28	0.35
	L_{14}-L_{15}	-488.53	-137.75	-6.97	-5.24	1.09	3.34	-0.22	-0.26	0.08
	L_{15}-L_{16}	-272.75	-394.04	-8.77	-8.25	0.56	1.60	-1.43	-1.04	0.13
	L_{16}-L_{17}	-389.62	-47.36	-9.00	-2.07	1.07	1.28	-1.26	-0.12	0.05
	L_{17}-L_{18}	-202.39	-202.51	-1.00	-6.43	0.30	0.06	-0.91	0.20	0.00
	L_{18}-L_{19}	-240.60	-180.28	-1.94	-5.53	0.00	0.06	-0.06	-1.12	0.07
	L_{19}-L_{20}	-192.40	90.95	-0.98	-0.14	3.57	2.32	0.06	-0.06	-1.23
	L_{20}-L_{21}	26.60	-260.09	0.42	-0.39	1.45	3.18	-0.05	0.10	0.35
	L_{21}-L_{22}	201.84	-347.07	1.16	-0.45	0.40	3.04	-0.05	-1.27	-0.12
	L_{22}-L_{23}	7.16	-277.32	-2.09	-8.29	-0.69	1.13	-0.13	0.17	-0.68
	L_{23}-L_{24}	16.19	-479.24	-2.26	-13.21	-0.48	1.13	-0.13	0.17	-0.68
	L_{24}-L_{25}	-367.51	-421.35	-11.00	-13.05	0.55	2.06	-1.24	-1.72	0.04
	L_{25}-L_{26}	-419.43	-397.54	-12.24	-12.42	0.55	2.06	-1.24	-1.72	0.04
	L_{26}-L_{27}	-419.43	-397.04	-20.67	-8.97	3.40	3.65	-2.41	-2.51	0.47
	L_{27}-L_{28}	-394.52	-7.37	-14.14	-7.11	2.99	5.56	-1.94	-0.96	0.46
	L_{28}-L_{29}	-324.29	-260.70	-14.43	-14.43	0.00	5.56	-1.94	-0.96	0.46
	L_{29}-L_{30}	-295.59	262.58	-8.06	-1.94	2.68	5.23	-1.43	-0.05	0.41
	L_{30}-L_{31}	-133.08	244.11	-7.95	-1.61	3.07	3.24	-1.43	-0.05	0.41
	L_{31}-L_{32}	-188.97	586.21	-0.78	-1.30	2.74	5.41	0.00	-0.58	0.00
	L_{32}-L_{33}	-129.46	-276.11	-1.32	0.09	3.80	3.81	0.00	0.00	-0.23
	L_{33}-L_{34}	-472.24	1091.46	-0.13	-0.06	3.53	3.53	0.00	0.00	0.00
	L_{34}-L_{35}	1356.12	-488.32	-0.77	-0.40	9.27	-0.64	0.00	0.00	0.00
	L_{35}-L_{36}	-396.66	-69.01	-0.77	-0.37	3.00	-0.64	0.00	0.00	0.00
	L_{36}-L_{37}	579.83	-109.25	-1.43	0.14	4.38	2.06	0.00	0.00	0.00
	L_{37}-L_{38}	1.63	-1.63	-0.14	-0.14	0.00	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	275.68	-101.76	-6.46	-9.61	3.50	2.11	-0.11	-0.89	1.05
	L_{39}-L_{40}	209.89	-114.91	-3.70	-9.74	2.60	3.10	-0.29	-1.04	0.42
	L_{40}-L_{41}	-33.73	-318.64	-11.13	-12.04	2.23	1.81	-0.99	-2.03	0.43
	L_{41}-L_{42}	-328.90	-38.44	-11.13	-11.13	0.00	1.81	-0.99	-2.03	0.43
	L_{42}-L_{43}	-183.23	53.46	-10.04	-7.62	1.83	3.97	-1.14	-0.36	0.42
	L_{43}-L_{44}	-472.24	1091.46	-0.13	-0.06	3.53	3.53	0.00	0.00	0.00
	L_{44}-L_{45}	1356.12	-488.32	-0.77	-0.40	9.27	-0.64	0.00	0.00	0.00
	L_{45}-L_{46}	-396.66	-69.01	-0.77	-0.37	3.00	-0.64	0.00	0.00	0.00
	L_{46}-L_{47}	579.83	-109.25	-1.43	0.14	4.38	2.06	0.00	0.00	0.00
	L_{47}-L_{48}	1.63	-1.63	-0.14	-0.14	0.00	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	275.68	-101.76	-6.46	-9.61	3.50	2.11	-0.11	-0.89	1.05
	L_{49}-L_{50}	209.89	-114.91	-3.70	-9.74	2.60	3.10	-0.29	-1.04	0.42
	L_{50}-L_{51}	-33.73	-318.64	-11.13	-12.04	2.23	1.81	-0.99	-2.03	0.43
	L_{51}-L_{52}	-328.90	-38.44	-11.13	-11.13	0.00	1.81	-0.99	-2.03	0.43
	L_{52}-L_{53}	-183.23	53.46	-10.04	-7.62	1.83	3.97	-1.14	-0.36	0.42
	L_{53}-L_{54}	-394.52	-7.37	-14.14	-7.11	2.99	5.56	-1.94	-0.96	0.46
	L_{54}-L_{55}	-100.74	310.70	-7.75	-2.72	2.05	4.15	0.00	-0.56	0.00
	L_{55}-L_{56}	-69.72	308.73	-3.37	0.39	3.51	1.22	0.00	0.00	-0.22
	L_{56}-L_{57}	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{57}-L_{58}	-18.47	-438.87	-3.01	0.45	0.55	3.05	0.00	0.00	0.00
	L_{58}-L_{59}	-550.01	-7.94	-3.01	-0.96	0.55	3.05	0.00	0.00	0.00
	L_{59}-L_{60}	1437.37	-471.51	-6.84	2.21	15.68	-1.50	0.00	0.00	0.29
	L_{60}-L_{61}	-253.75	-181.16	2.59	-0.94	1.91	-1.13	0.00	0.00	0.00
	L_{61}-L_{62}	544.71	-195.75	-1.34	-0.96	3.57	-1.97	0.00	0.00	0.00
	L_{62}-L_{63}	390.20	-203.85	-0.19	-2.02	1.94	3.96	0.00	0.00	0.00
	L_{63}-L_{64}	243.13	-341.77	-4.31	-8.64	2.86	3.13	-0.15	-1.37	0.50
	L_{64}-L_{65}	243.13	-341.77	-4.31	-8.64	2.86	3.13	-0.15	-1.37	0.50
	L_{65}-L_{66}	-365.08	-644.79	-14.38	-18.04	1.88	2.42	-2.07	-2.23	0.68
	L_{66}-L_{67}	-620.48	-212.54	-17.36	-8.90	2.40	0.66	-2.14	-1.36	0.38
	L_{67}-L_{68}	-434.07	-326.96	-14.38	-14.38	0.00	0.66	-2.14	-1.36	0.38
	L_{68}-L_{69}	-457.92	-50.37	-10.37	-0.71	1.45	-0.08	-1.31	-0.26	0.11
	L_{69}-L_{70}	-332.43	-186.70	-9.78	-2.35	1.12	-0.20	-1.04	0.21	0.00
	L_{70}-L_{71}	-332.43	-186.70	-9.78	-2.35	1.12	-0.20	-1.04	0.21	0.00
	L_{71}-L_{72}	53.61	-162.26	-0.01	-0.70	2.98	-2.92	-0.06	0.54	0.53
	L_{72}-L_{73}	-192.76	-240.13	-2.45	-1.51	1.77	-1.77	-0.10	0.04	0.65
	L_{73}-L_{74}	24.14	-186.41	-1.93	-1.93	0.00	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	40.28	-374.07	-1.76	-0.94	-0.06	0.71	-0.04	-1.42	0.00
	L_{75}-L_{76}	40.28	-374.07	-1.76	-0.94	-0.06	0.71	-0.04	-1.42	0.00
	L_{76}-L_{77}	-121.39	-479.27	-7.17	-12.26	0.24	2.35	-1.04	-2.51	0.00
	L_{77}-L_{78}	-476.75	95.76	-13.40	-1.86	1.76	-2.32	-0.58	0.31	0.00
	L_{78}-L_{79}	-241.27	199.03	-5.80	-0.25	1.23	2.06	0.19	0.23	0.47
	L_{79}-L_{80}	-241.27	199.03	-5.80	-0.25	1.23	2.06	0.19	0.23	0.47
	L_{80}-L_{81}	-127.13	162.45	-1.21	0.89	2.32	-1.31	0.00	0.00	-0.42
	L_{81}-L_{82}	-127.13	162.45	-1.21	0.89	2.32	-1.31	0.00	0.00	-0.42
	L_{82}-L_{83}	-606.98	-34.68	-1.58	0.53	8.12	0.04	0.00	0.00	0.00
	L_{83}-L_{84}	-606.98	-34.68	-1.58	0.53	8.12	0.04	0.00	0.00	0.00
	L_{84}-L_{85}	98.33	-47.56	-1.16	-0.40	-0.53	2.52	0.00	0.00	0.00
	L_{85}-L_{86}	98.33	-47.56	-1.16	-0.40	-0.53	2.52	0.00	0.00	0.00
	L_{86}-L_{87}	-217.20	-65.09	-2.37	-7.39	2.54	3.20	-0.04	-1.53	0.66
	L_{87}-L_{88}	-217.20	-65.09	-2.37	-7.39	2.54	3.20	-0.04	-1.53	0.66
	L_{88}-L_{89}	-112.39	-133.89	-7.15	-4.90	2.06	0.85	-1.38	-1.22	0.49
	L_{89}-L_{90}	-120.88	-38.04	-0.95	-0.71	0.67	-0.69	-0.00	0.00	0.00

Location	Member	Live Load (Min) Start (k-in)	Live Load (Min) End (k-in)	Pedestrian Load (Min) (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 2	L_0-L_1	0.13	0.00	-0.64	9.33	-5.10	28.88	26.75
	L_1-L_2	-0.13	-0.43	-19.81	-122.37	-8.76	30.90	-8.82
	L_2-L_3	-1.27	-78.01	-7.50	-107.91	-102.36	18.66	33.55
	L_3-L_4	1.31	4.20	-1.19	-1.34	0.23	0.86	-102.84
	L_4-L_5	0.09	0.03	-1.72	-1.72	-45.29	-40.33	-17.61
	L_5-L_6	0.53	1.12	-57.71	-8.60	-32.98	62.14	-10.07
	L_6-L_7	0.53	1.12	-29.12	-4.14	-16.33	73.32	-40.93
	L_7-L_8	0.00	0.35	3.66	4.29	-18.98	3.30	81.35
	L_8-L_9	0.00	0.00	3.41	-0.27	-17.39	5.74	92.99
	L_9-L_{10}	0.00	0.53	0.00	0.00	14.96	-1.10	66.71
	L_{10}-L_{11}	0.00	0.00	0.00	-0.23	-30.07	-49.80	38.00
	L_{11}-L_{12}	0.00	0.00	0.00	-0.42	-36.40	-69.35	2.68
	L_{12}-L_{13}	0.43	0.97	-0.57	-0.97	6.43	20.40	-64.23
	L_{13}-L_{14}	0.35	0.23	-0.45	-2.28	0.35	0.23	-68.15
	L_{14}-L_{15}	0.06	0.34	-0.22	-0.26	-1.09	0.34	-141.17
	L_{15}-L_{16}	0.53	1.13	-1.04	-1.60	-1.04	0.13	-0.03
	L_{16}-L_{17}	0.05	0.12	-0.12	-0.12	0.05	-0.27	-13.22
	L_{17}-L_{18}	0.00	0.20	0.00	0.00	0.00	0.00	-0.58
	L_{18}-L_{19}	0.06	0.06	-0.06	-0.06	-1.12	-1.12	-29.28
	L_{19}-L_{20}	0.96	0.98	-0.84	-0.96	-0.06	-12.63	-1.79
	L_{20}-L_{21}	0.10	0.35	-1.08	-3.31	-4.92	18.55	-40.62
	L_{21}-L_{22}	0.00	0.00	-0.27	-1.27	-16.54	11.12	-40.62
	L_{22}-L_{23}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{23}-L_{24}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{24}-L_{25}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{25}-L_{26}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{26}-L_{27}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{27}-L_{28}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{28}-L_{29}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{29}-L_{30}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{30}-L_{31}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{31}-L_{32}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{32}-L_{33}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{33}-L_{34}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{34}-L_{35}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{35}-L_{36}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{36}-L_{37}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{37}-L_{38}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{38}-L_{39}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{39}-L_{40}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{40}-L_{41}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{41}-L_{42}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{42}-L_{43}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{43}-L_{44}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{44}-L_{45}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{45}-L_{46}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{46}-L_{47}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{47}-L_{48}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{48}-L_{49}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{49}-L_{50}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{50}-L_{51}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{51}-L_{52}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{52}-L_{53}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{53}-L_{54}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{54}-L_{55}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{55}-L_{56}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{56}-L_{57}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{57}-L_{58}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{58}-L_{59}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{59}-L_{60}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{60}-L_{61}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{61}-L_{62}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{62}-L_{63}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{63}-L_{64}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{64}-L_{65}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{65}-L_{66}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{66}-L_{67}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{67}-L_{68}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{68}-L_{69}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{69}-L_{70}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{70}-L_{71}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{71}-L_{72}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{72}-L_{73}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{73}-L_{74}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{74}-L_{75}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{75}-L_{76}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{76}-L_{77}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{77}-L_{78}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{78}-L_{79}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{79}-L_{80}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{80}-L_{81}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{81}-L_{82}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{82}-L_{83}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{83}-L_{84}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{84}-L_{85}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{85}-L_{86}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{86}-L_{87}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{87}-L_{88}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{88}-L_{89}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99
	L_{89}-L_{90}	0.00	0.00	-0.27	-0.27	-17.39	5.74	92.99

M_y Information

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	L_0-L_1	39.17	129.34	0.64	2.34	-1.00	-3.69	-0.03	-0.11	0.46
	L_1-L_2	169.27	-70.78	-19.97	6.74	1.76	-0.92	1.96	-0.87	0.15
	L_2-L_3	138.55	-132.12	-5.76	42.17	11.15	-3.11	13.92	-3.88	0.00
	L_3-L_4	135.58	-144.75	-15.80	3.13	1.65	-0.69	1.79	-1.01	0.04
	L_4-L_5	66.40	-172.43	5.00	-7.42	1.12	-0.29	-0.66	0.73	-0.04
	L_5-L_6	141.01	-149.73	-5.73	-2.04	-0.39	-0.81	1.33	-0.87	-0.36
	L_6-L_7	157.28	-205.53	-2.51	-7.61	-1.37	-1.34	-1.17	0.00	-0.64
	L_7-L_8	131.37	154.78	1.63	-0.10	2.29	5.77	0.00	-0.77	-0.09
	L_8-L_9	167.60	215.89	-1.01	2.67	5.56	2.29	0.00	0.00	2.10
	L_9-L_{10}	185.55	-32.16	-6.25	2.76	4.27	11.15	-3.11	13.92	0.00
	L_{10}-L_{11}	139.57	67.49	3.79	-6.23	-1.05	-0.45	0.00	0.00	-1.06
	L_{11}-L_{12}	14.09	-32.14	-2.22	4.72	0.55	-0.74	1.53	0.00	-0.60
	L_{12}-L_{13}	167.60	215.89	-1.01	2.67	5.56	2.29	0.00	0.00	2.10
	L_{13}-L_{14}	185.55	-32.16	-6.25	2.76	4.27	11.15	-3.11	13.92	0.00
	L_{14}-L_{15}	139.57	67.49	3.79	-6.23	-1.05	-0.45	0.00	0.00	-1.06
	L_{15}-L_{16}	14.09	-32.14	-2.22	4.72	0.55	-0.74	1.53	0.00	-0.60
	L_{16}-L_{17}	157.28	-205.53	-2.51	-7.61	-1.37	-1.34	-1.17	0.00	-0.64
	L_{17}-L_{18}	131.37	154.78	1.63	-0.10	2.29	5.77	0.00	-0.77	-0.09
	L_{18}-L_{19}	167.60	215.89	-1.01	2.67	5.56	2.29	0.00	0.00	2.10
	L_{19}-L_{20}	185.55	-32.16	-6.25	2.76	4.27	11.15	-3.11	13.92	0.00
	L_{20}-L_{21}	139.57	67.49	3.79	-6.23	-1.05	-0.45	0.00	0.00	-1.06
	L_{21}-L_{22}	14.09	-32.14	-2.22	4.72	0.55	-0.74	1.53	0.00	-0.60
	L_{22}-L_{23}	157.28	-205.53	-2.51	-7.61	-1.37	-1.34	-1.17	0.00	-0.64
	L_{23}-L_{24}	131.37	154.78	1.63	-0.10	2.29	5.77	0.00	-0.77	-0.09
	L_{24}-L_{25}	167.60	215.89	-1.01	2.67	5.56	2.29	0.00	0.00	2.10
	L_{25}-L_{26}	185.55	-32.16	-6.25	2.76	4.27	11.15	-3.11	13.92	0.00
	L_{26}-L_{27}	139.57	67.49	3.79	-6.23	-1.05	-0.45	0.00	0.00	-1.06
	L_{27}-L_{28}	14.09	-32.14	-2.22	4.72	0.55	-0.74	1.53	0.00	-0.60
	L_{28}-L_{29}	157.28	-205.53	-2.51	-7.61	-1.37	-1.34	-1.17	0.00	-0.64
	L_{29}-L_{30}	131.37	154.78	1.63	-0.10	2.29	5.77	0.00	-0.77	-0.09
	L_{30}-L_{31}	167.60	215.89	-1.01	2.67	5.56	2.29	0.00	0.00	2.10
	L_{31}-L_{32}	185.55	-32.16	-6.25	2.76	4.27	11.15	-3.11	13.92	0.00
	L_{32}-L_{33}	139.57	67.49	3.79	-6.23	-1.05	-0.45	0.00	0.00	-1.06
	L_{33}-L_{34}	14.09	-32.14	-2.22	4.72	0.55	-0.74	1.53	0.00	-0.60
	L_{34}-L_{35}	157.28	-205.53	-2.51	-7.61	-1.37	-1.34	-1.17	0.00	-0.64
	L_{35}-L_{36}	131.37	154.78	1.63	-0.10	2.29	5.77	0.00	-0.77	-0.09
	L_{36}-L_{37}	167.60	215.89	-1.01	2.67	5.56	2.29	0.00	0.00	2.10
	L_{37}-L_{38}	185.55	-32.16	-6.25

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Inertia

M_y Inertia

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_z (in^4) | $I_{z/c}$ (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term * F_y/S_top | M_y (k-in) | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_y (in^3) | $I_{y/c}$ (in^4) | Shape Factor f | M_p (k-in) | P_{allow} (kips) | Formula 1.8 Term * F_y/S_top | M_n (k-in) | Yield: Axial Axial+ | Yield: Moment Positive | Yield: Total | Yield: Pass | Tension: Axial Axial+ | Tension: Moment Positive | Tension: Total | Tension: Pass | Compression: Axial Axial+ | Compression: Moment Positive | Compression: Total | Compression: Pass | Buckle: Axial Axial+ | Buckle: Moment Positive | Buckle: Total | Buckle: Pass | Overall: Axial Axial+ | Overall: Moment Positive | Overall: Total | Overall: Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 2.17
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.60

Axial - AI2

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Start (k-ft)	Impact Pedestrian Load End (k-ft)
Structure 1	U_0-L_1	3.62	-1.41	0.27	0.43	-0.05	-0.12	0.15	0.01	0.00	-0.03
	U_1-L_1	-11.46	-3.33	-1.01	0.16	0.39	-0.16	-0.25	0.07	0.00	-0.04
	U_1-L_2	-10.66	-3.10	-0.94	0.15	0.36	-0.15	-0.23	0.06	0.00	-0.03
	U_2-L_2	9.82	-15.00	-0.34	-0.26	-0.14	-0.68	0.00	0.00	0.00	-0.11
	U_2-L_3	-16.21	-7.07	-0.47	-0.24	-0.19	-0.14	-0.17	-2.55	-1.69	-1.26
	U_3-L_3	-34.06	-19.11	-1.12	0.12	-0.09	-0.28	0.44	0.00	0.00	-0.22
	U_3-L_4	-31.67	-18.04	-1.06	0.27	-0.08	-0.27	0.42	0.00	0.00	-0.21
	U_4-L_4	-1.45	103.74	-0.93	1.70	0.34	-0.58	-0.29	0.65	0.00	0.00
	U_4-L_5	-12.32	139.19	-1.04	2.36	0.37	0.05	-0.19	0.58	0.21	0.13
	U_5-L_5	-100.86	90.26	-2.35	1.72	0.25	0.15	-0.50	0.51	0.00	0.00
	U_5-L_6	-73.41	69.80	-2.01	1.00	0.18	0.07	-0.31	0.35	0.00	0.00
	U_6-L_6	-81.96	81.96	-2.29	2.29	0.21	0.21	-0.39	0.23	0.00	0.00
	U_6-L_7	-69.88	47.84	-1.60	1.09	-0.14	-0.24	-0.31	0.21	0.00	0.00
	U_7-L_7	-27.39	6.37	-0.86	0.20	0.08	-0.50	-0.15	0.03	0.00	0.00
	U_7-L_8	-0.38	-20.70	-0.06	-0.82	-0.10	-0.05	0.04	0.00	0.00	0.00
	U_8-L_8	-31.03	12.71	-1.18	0.79	0.04	-0.33	0.11	0.05	-0.04	-0.15
	U_8-L_9	-46.63	27.25	-1.47	1.03	0.13	-0.39	0.23	0.09	-0.06	-0.23
	U_9-L_9	-118.88	85.28	-2.58	2.08	0.35	-0.33	-0.55	0.42	0.06	-0.05
	U_9-L_{10}	-117.64	87.57	-2.47	1.91	0.34	-0.54	-0.54	0.41	0.06	-0.04
	U_{10}-L_{10}	-148.08	120.85	-2.30	2.06	0.20	-0.29	-0.79	0.63	0.04	0.04
	U_{10}-L_{11}	-86.91	116.74	-2.77	2.87	0.22	-0.43	-0.13	0.38	0.01	-0.06
	U_{11}-L_{11}	-134.13	114.46	-2.92	2.49	0.32	-0.69	-0.33	0.12	0.00	-0.05
	U_{11}-L_{12}	-118.23	92.26	-2.25	2.54	0.73	-0.65	-0.52	0.43	0.11	-0.10
	U_{12}-L_{12}	-59.39	59.39	-1.87	1.87	0.49	-0.49	-0.42	0.42	0.09	-0.09
	U_{12}-L_{13}	-24.33	8.61	-1.27	0.90	0.44	-0.36	-0.18	0.11	0.07	-0.06
	U_{13}-L_{13}	-1.47	13.42	-0.83	0.61	0.31	-0.25	-0.11	0.07	0.04	-0.04
	U_{13}-L_{14}	13.33	-37.03	0.57	0.13	0.47	-0.91	0.00	0.00	0.00	0.00
	U_{14}-L_{14}	-66.01	54.01	-1.46	1.10	-0.19	-0.40	-0.23	0.17	0.00	0.00
	U_{14}-L_{15}	-133.77	104.34	-2.60	2.03	-0.36	-0.78	-0.42	0.33	0.00	0.00
	U_{15}-L_{15}	-116.17	105.67	-2.46	1.69	0.34	0.05	-0.36	0.36	0.00	0.00
	U_{15}-L_{16}	-139.28	139.28	-2.70	2.70	0.40	0.40	-0.45	0.45	0.00	0.00
	U_{16}-L_{16}	-131.97	151.07	-2.50	2.95	0.63	-0.39	-0.42	0.51	0.00	0.00
	U_{16}-L_{17}	-175.19	162.79	-2.67	2.48	1.03	-0.74	-0.56	0.54	0.02	0.00
	U_{17}-L_{17}	-84.29	98.07	-2.01	2.34	0.98	-0.33	-0.52	0.61	0.04	0.00
	U_{17}-L_{18}	-45.28	135.71	-2.32	2.84	0.67	-0.18	-0.36	0.49	0.18	-0.02
	U_{18}-L_{18}	-143.90	191.87	-3.73	3.73	0.89	-0.89	-0.63	0.63	0.00	0.00
	U_{18}-L_{19}	-112.49	136.83	-3.24	3.01	0.33	-0.40	-0.48	0.55	0.07	0.00
	U_{19}-L_{19}	-83.86	83.86	-2.85	2.85	0.61	-0.37	-0.37	0.49	0.00	0.00
	U_{19}-L_{20}	-83.86	94.66	-2.85	1.97	0.44	-0.45	-0.37	0.40	0.00	0.00
	U_{20}-L_{20}	-91.74	54.21	-1.84	1.25	0.40	-0.37	-0.27	0.25	0.00	0.00
	U_{20}-L_{21}	-36.67	36.67	-1.25	1.25	0.34	-0.34	-0.25	0.25	0.00	0.00
	U_{21}-L_{21}	-14.00	1.02	-0.81	0.33	0.34	-0.75	-0.11	0.03	-0.01	-0.08
	U_{21}-L_{22}	18.17	5.29	-0.44	0.08	0.34	-0.74	-0.07	0.02	-0.01	-0.08
	U_{22}-L_{22}	-32.82	30.91	-1.24	1.03	0.38	-0.35	-0.20	0.17	0.03	-0.03
	U_{22}-L_{23}	-53.04	53.04	-1.85	1.85	0.43	-0.43	-0.29	0.29	0.00	0.00
	U_{23}-L_{23}	-83.88	100.04	-2.49	2.11	0.44	-0.48	-0.39	0.44	0.06	0.03
	U_{23}-L_{24}	-98.49	117.09	-2.65	2.25	0.37	-0.45	-0.42	0.49	0.05	0.02
	U_{24}-L_{24}	-125.58	125.58	-2.98	2.98	0.58	-0.58	-0.46	0.46	0.00	0.00
	U_{24}-L_{25}	-125.63	123.54	-2.51	2.41	1.02	-0.79	-0.52	0.49	0.00	0.00
	U_{25}-L_{25}	-30.08	133.80	-1.48	2.49	0.69	-0.69	-0.27	0.48	0.00	0.00
	U_{25}-L_{26}	-83.58	187.86	-2.37	3.05	0.80	-0.29	-0.45	0.61	0.17	0.01
	U_{26}-L_{26}	-118.46	118.46	-3.00	3.00	0.67	-0.67	-0.45	0.45	0.00	0.00
	U_{26}-L_{27}	-118.54	150.45	-3.00	2.50	0.36	-0.36	-0.45	0.53	0.00	0.00
	U_{27}-L_{27}	-128.90	122.99	-2.82	1.85	0.38	0.06	-0.40	0.44	0.00	0.00
	U_{27}-L_{28}	-128.46	128.46	-2.96	2.96	0.58	-0.58	-0.46	0.46	0.00	0.00
	U_{28}-L_{28}	-128.40	95.00	-2.70	1.69	-0.17	-0.37	-0.41	0.35	0.00	0.00
	U_{28}-L_{29}	-113.95	113.95	-2.63	2.63	0.61	-0.61	-0.44	0.44	0.00	0.00
	U_{29}-L_{29}	8.88	-32.25	-0.62	0.18	0.36	-0.83	0.00	0.00	0.03	-0.12
	U_{29}-L_{30}	-4.65	-13.30	-0.97	0.61	-0.22	-0.62	-0.11	0.00	0.03	-0.07
	U_{30}-L_{30}	-43.21	40.39	-1.58	1.26	0.44	-0.38	-0.27	0.19	0.07	-0.07
	U_{30}-L_{31}	-43.21	40.39	-1.58	1.26	0.44	-0.38	-0.27	0.19	0.07	-0.07
	U_{31}-L_{31}	-135.93	107.52	-2.59	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08
	U_{31}-L_{32}	-135.93	107.52	-2.59	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08
	U_{32}-L_{32}	-66.35	89.44	-2.85	2.60	0.13	-0.24	-0.21	0.30	0.03	0.00
	U_{32}-L_{33}	-137.90	96.45	-3.29	2.30	0.42	-0.35	-0.75	0.56	0.05	0.00
	U_{33}-L_{33}	-113.95	82.81	-2.64	1.92	0.61	-0.61	-0.44	0.32	0.00	0.00
	U_{33}-L_{34}	-43.89	24.72	-1.82	1.06	0.30	-0.25	-0.30	0.20	0.00	0.00
	U_{34}-L_{34}	-43.89	24.72	-1.82	1.06	0.30	-0.25	-0.30	0.20	0.00	0.00
	U_{34}-L_{35}	-2.65	-25.29	-0.70	0.10	0.30	-0.79	-0.09	-0.06	0.04	0.03
	U_{35}-L_{35}	-4.49	-12.52	-0.81	0.94	0.37	-0.13	-0.14	-0.05	0.03	-0.03
	U_{35}-L_{36}	-4.49	-12.52	-0.81	0.94	0.37	-0.13	-0.14	-0.05	0.03	-0.03
	U_{36}-L_{36}	-34.24	14.49	-0.63	0.52	0.10	-0.20	-0.13	0.07	0.00	0.00

YY Axis Moments from STAAD

Location	Member	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bot}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m/cb}$	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Start (k-ft)	Impact Pedestrian Load End (k-ft)
Structure 1	U_0-L_1	0.00	0.00	144	144	144	3970	1.00	3970	144	0.94257576	3126.1	0.854	0.95	0.95	0.50	0.50	-66.06	-84.15	-31.48	31.25	-16.17	-8.33
	U_1-L_1	-33.33	-1.01	0.16	0.39	-0.16	-0.25	0.07	0.00	-0.04	-0.16	-0.23	-0.09	0.60	0.60	-122.41	-23.66	-7.96	-6.42	3.07	2.43	1.18	-0.11
	U_1-L_2	-31.09	-0.94	0.15	0.36	-0.15	-0.23	0.06	0.00	-0.03	-0.15	-0.21	-0.08	0.60	0.60	-114.21	-22.08	-7.43	-5.99	2.86	2.27	1.10	-0.10
	U_2-L_2	-15.00	-0.34	-0.26	-0.14	-0.68	0.00	0.00	-0.11	-4.50	-3.41	-1.84	-0.12	0.00	0.00	-0.02	-1.27	3.01	-26.88	8.77	-39.27	15.4	15.42	15.42	23.71
	U_2-L_3	-7.07	-0.47	-0.24	-0.19	-0.14	-0.17	-2.55	-1.69	-1.26	-0.84	-0.56	-0.37	-0.36	-0.49	-0.31	-0.36	-47.59	-10.00	-3.31	-16.39	7.27	7.27	7.27	11.18
	U_3-L_3	-19.11	-1.12	0.12	-0.09	-0.28	0.44	0.00	0.00	-0.22	-0.44	-0.14	-0.32	-0.22	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32
	U_3-L_4	-18.04	-1.06	0.27	-0.08	-0.27	0.42	0.00	0.00	-0.21	-0.42	-0.14	-0.31	-0.21	-0.31	-0.31	-0.31	-0.31	-0.31	-0.31	-0.31	-0.31	-0.31
	U_4-L_4	103.74	-0.93	1.70	0.34	-0.58	-0.29	0.65	0.00	0.00	0.00	-28.81	184.01	7.81	118.10	35.1	35.09	35.09	53.13	4	1753	1753	1753	1753	1753
	U_4-L_5	139.19	-1.04	2.36	0.37	0.05	-0.19	0.58	0.21	0.13	-13.49	29.27	47.77	0.65	-45.26	244.35	-0.57	182.34	40.7	40.70	40.44	67.92	25	1693.0	1.67	2241	1.5	2014.7	-0.185	0.53	0.53	251.85	97.14	-7.01	-8.78
	U_5-L_5	90.26	-2.35	1.72	0.25	0.15	-0.50	0.51	0.00	0.00	-30.35	22.28	3.98	-6.82	0.07	0.00	-196.85	193.61	-123.80	121.62	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.241	0.47	0.47	226.36	86.22	32.43	10.70
	U_5-L_6	69.80	-2.01	1.00	0.18	0.07	-0.31	0.35	0.00	0.00	-26.06	12.93	2.34	0.84	-3.77	4.25	0.00	0.00	-151.89	118.74	-90.36	92.56	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.782	2.25	2.29	42.33	-128.50	17.36	15.63
	U_6-L_6	81.96	-2.29	2.29	0.21	0.21	-0.39	0.23	0.00	0.00	-29.07	15.37	2.71	1.06	-4.52	2.71	0.00	0.00	-170.83	137.01	-101.42	103.82	45.06	45.06	42.74	42.74	65.30	8	1389.8	1.53	2155	1.5	2115.6	-0.241	0.47	0.47	226.36	86.22	32.43	10.70
	U_6-L_7	47.84	-1.60	1.09	-0.14	-0.24	-0.31	0.21	0.00	0.00	-20.73	14.10	-1.75	-3.13	3.70	2.56	0.00	0.00	-135.75	92.75	-94.63	55.41	20.8	20.80	20.67	34.66	1	1070.0	1.67	1744	1.5	1629.6	-0.683	0.33	0.33	180.89	77.45	24.97	8.24
	U_7-L_7	6.37	-0.86	0.20	0.08	-0.50	-0.15	0.03	0.00	0.00	-11.06	2.61	1.01	-0.60	-1.75	0.34	0.00	0.00	-59.57	13.94	-33.41	-5.60	15.4	15.42	15.42	23.71	1	791.9	1.54	782	1.5	783.3	-0.234	0.51	0.51	59.26	-19.74	-3.77	-6.53
	U_7-L_8	-20.70	-0.06	-0.82	-0.10	-0.05	0.04	0.00	0.00	0.00	-0.38	-0.14	-0.23	-0.11	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
	U_8-L_8	12.71	-1.18	0.79	0.04	-0.33	0.11	0.05	-0.04	-0.15	-15.31	10.25	-0.47	-2.20	-2.29	1.32	0.56	-0.52	-7.53	58.72	-39.33	7.41	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	783.3	-0.527	0.35	0.39	-199.71	-100.30	0.03	3.20
	U_8-L_9	27.25	-1.47	1.03	0.13	-0.39	0.23	0.09	-0.06	-0.23	-22.25	14.89	-0.69	-3.20	-3.32	1.92	0.81	-0.76	-10.94	85.28	-57.13	10.76	15.4	15.42	15.42	23.71	3	907.0	1.54	986	1.5	958.8	-0.639	0.35	0.35	216.68	-60.69	0.94	4.89
	U_9-L_9	85.28	-2.58	2.08	0.35	-0.33	-0.55	0.42	0.06	-0.05	-33.26	26.89	4.58	4.24	-6.59	5.04	0.67	-0.62	-226.55	169.12	-144.36	101.67	35.1	35.09	53.51	4	1183.7	1.53	1753	1.5	1737.0	-0.746	0.30	0.30	302.82	-67.43	0.17	1.17
	U_9-L_{10}	87.57	-2.47	1.91	0.34	-0.54	-0.54	0.41	0.06	-0.04	-31.98	24.83	3.93	-3.30	-6.79	5.49	0.52	-0.46	-222.22	167.30	-144.63	98.69	35.4	35.43	35.43	53.29	3	1284.6	1.53	1955	1.5	1922.1	-0.832	0.32	0.32	359.59	-101.21	1.23	1.68
	U_{10}-L_{10}	120.85	-2.30	2.06	0.20	-0.29	-0.79	0.63	0.04	0.04	-29.71	26.61	2.52	-2.63	0.47	7.56	0.50	-0.46	-296.89	214.77	-187.02	151.42	38.83	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.836	0.32	0.32	361.49	-102.77	1.41	1.92
	U_{11}-L_{11}	116.74	-2.87	2.87	0.22	-0.43	-0.13	0.38	0.01	-0.06	-35.43	34.69	2.86	-5.46	-1.51	4.57	0.14	-0.70	-189.76	231.27	-106.78	139.94	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.820	0.27	0.27	-189.45	-31.21	-7.89	-9.85
	U_{11}-L_{12}	114.46	-2.92	2.49	0.32	-0.69	-0.33	0.12	0.00	-0.05	-34.59	33.10	2.79	-5.33	-1.37	4.37	0.12	-0.67	-298.05	229.91	-139.13	135.49	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.731	0.29	0.29	-330.10	-100.66	0.73	2.52
	U_{12}-L_{12}	92.26	-2.25	2.54	0.73	-0.65	-0.52	0.43	0.11	-0.10	-41.56	32.48	9.38	-8.28	-6.28	5.11	1.37	-1.25	-243.76	190.28	-133.39	102.00	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.781	0.25	0.29	32.87	-71.82	-13.62	-14.70
	U_{12}-L_{13}	59.39	-1.87	1.87	0.49	-0.49	-0.42	0.42	0.09	-0.09	-24.33	20.33	2.42	2.42	-2.39	2.39	0.00	0.00	-97.39	59.39	-59.39	59.39	21.4	21.54	21.54	32.24	1	967.2	1.54	1009	1.5	1009.0	-0.783	0.33	0.33	190.13	59.39	-3.96	-4.16
	U_{13}-L_{13}	8.61	-1.27	0.90	0.44	-0.36	-0.18	0.11	0.07	-0.06	-16.16	11.42	1.62	-4.64	-2.14	1.27	0.86	-0.72	-66.64	36.05	-19.45	1.14	15.4	15.42	15.42	23.71	1	791.9	1.54	782	1.5	783.3	-0.541	0.38	0.38	88.13	-32.25	-4.58	-7.12
	U_{13}-L_{14}	13.42	-0.83	0.61	0.31	-0.25	-0.11	0.07	0.04	-0.04	-6.44	5.08	-1.17	0.00	-0.86	0.00	0.00	0.00	-28.97	13.33	-11.98	2.38	15.4	15.42	15.42	23.71	1	791.9	1.54	782	1.5	783.3	-0.446	0.46	0.46	124.38	-37.03	0.57	0.13
	U_{14}-L_{14}	-37.03	0.57	0.13	0.47	-0.91	0.00	0.00	0.00	0.00	12.44	0.00	0.00	0.00	0.00	-1.54	1.66	-0.46	33.33	75.10	17.72	17.24	17.24	26.54	8	824.7	1.54	878	1.5	853.4	-0.404	0.44	0.44	131.99	1.76	-2.78	-4.78
	U_{14}-L_{15}	54.01	-1.46	1.10	-0.19	-0.40	-0.23	0.17	0.00	0.00	-18.69	14.07	-2.44	-5.05	-2.80	2.04	0.00	0.00	-126.32	100.69	-91.11	59.28	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.797	0.26	0.28	243.56	-138.11	0.84	2.78
	U_{15}-L_{15}	104.34	-2.60	2.03	-0.36	-0.78	-0.42	0.33	0.00	0.00	-34.27	24.69	-0.19	-3.87	-0.67	4.35	0.00	0.00	-240.03	169.30	-133.77	107.13	38.5	38.53	38.53	59.23	1	1183.7	1.53	1766	1.5	1737.0	-0.783	0.33	0.33	302.82	-67.43	0.17	1.17
	U_{15}-L_{16}	105.67	-2.46	1.69	0.34	0.05	-0.36	0.36	0.00	0.00	-31.48	21.59	4.26	6.66	-4.27	4.31	0.00	0.00	-219.23	184.15	-141.58	138.61	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	-0.840	0.26	0.26	-153.55	-20.51	2.47	3.43
	U_{16}-L_{16}	139.28	-2.70	2.70	0.40	0.40	-0.45	0.45	0.00	0.00	-32.85	29.01	-1.02	-6.00	-1.02	6.00	0.00	0.00	-238.72	220.73	-154.38	137.15	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.845	0.25	0.25	-222.63	-33.61	2.74	3.81
	U_{16}-L_{17}	162.79	-2.67	2.48	1.03	-0.74	-0.56	0.54	0.02	0.00	-34.14	31.63	13.15	-9.45	-7.64	6.66	0.42	-0.22	-301.72	290.19	-184.15	179.12	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.529	0.23	0.23	-292.05	-39.57	2.61	4.68
	U_{17}-L_{17}	98.07	-2.01	2.34	0.98	-0.33	-0.52	0.61	0.04	0.00	-20.96	18.29	8.52	-11.61	-4.64	3.33	1.42	-0.29	-130.36	174.58	-65.49	107.77	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.671	0.23	0.23	-370.49	-58.36	0.83	6.63
	U_{17}-L_{18}	135.71	-2.32	2.84	0.67	-0.18	-0.36	0.49	0.18	-0.02	-29.23	35.87	8.48	-2.30	-4.34	5.62	2.17	-0.28	-122.20	254.14	-60.49	171.45	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.481	0.41	0.41	254.55	116.13	-3.00	-8.19
	U_{18}-L_{18}	191.87	-3.73	3.73	0.89	-0.89	-0.63	0.63	0.00	0.00	-44.48	44.48	0.00	0.00	0.00	0.00	0.00	0.00	-289.07	191.87	-191.87	191.87	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.576	0.21	0.21	307.43	191.87	-9.75	-13.28
	U_{19}-L_{19}	136.83	-3.24	3.01	0.33	-0.40	-0.48	0.55	0.07	0.00	-40.04	37.99	4.18	-5.04	-5.76	6.59	0.83	0.01	-234.91	258.88	-137.14	165.66	38.8	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.907	0.24	0.24	282.74	74.75	-5.68	-8.95
	U_{19}-L_{20}	83.86	94.66	-2.85	1.97	0.44	-0.45	-0.37	0.40	0.00	-35.93	24.87	5.61	-5.37	-2.69	4.49	0.00	0.00	-186.60	176.95	-96.61	110.67	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.948	0.22	0.22	287.84	74.75	-5.68	-8.95
	U_{20}-L_{20}	54.21	-1.84	1.25	0.40	-0.37	-0.27	0.25	0.00	0.00	-23.27	15.93	0.68	-4.72	-3.26	3.01	0.00	0.00	-117.68	104.78	-56.27	60.24	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.890	0.24	0.24	176.96	23.37	-7.44	-7.69
	U_{20}-L_{21}	36.67	-1.25	1.25	0.34	-0.34	-0.25	0.25	0.00	0.00	-32.85	29.01	0.00	-6.40	-4.16	4.16	0.00	0.00	-152.01	104.78	-73.14	60.24	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.890	0.24	0.24	176.96	23.37	-7.44	-7.69
	U_{21}-L_{21}	1.02	-0.81	0.33	0.34	-0.75	-0.11	0.03	-0.01	-0.08	-10.26	4.18	4.27	-0.42	-1.36	0.41	-0.16	-0.98	-40.44	10.38	-8.95	-19.08	15.4	15.42	15.42	23.71	1	791.9	1.54	782	1.5	783.3	-0.257	0.50	0.50	168.53	39.17	-3.96	-4.16
	U_{21}-L_{22}	5.29	-0.44	0.08	0.34	-0.74	-0.07	0.02	-0.01	-0.08	-10.26	4.18	4.27	-0.42	-1.36	0.41	-0.16	-0.98	-40.44	10.38	-8.95	-19.08	15.4	15.42	15.42	23.71	1	791.9	1.54	782	1.5	783.3	-0.257	0.50	0.50	168.53	39.17	-3.96	-4.16
	U_{22}-L_{22}	30.91	-1.24

Axial AI Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-588.44	-186	77	64	-836	10	-8	-56	77	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.193	1.00	Yes	0.794	0.199	1.00	Yes	1.00	**2.08**
		U_1 - U_2			-----	-583.51	-61	38	-162	-736	-7	-34	-44	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.201	1.00	Yes	0.787	0.175	0.97	Yes	1.00	**1.19**
		U_2 - U_3			95.43	-612.84	-136	219	-463	-415	6	26	-3	147	0.109	0.135	0.25	Yes	0.074	0.088	0.17	Yes	0.834	0.164	1.00	Yes	0.826	0.110	0.94	Yes	1.00	**1.24**
		U_3 - U_4			288.57	-574.82	51	270	-511	-538	14	36	222	80	0.331	0.165	0.50	Yes	0.227	0.113	0.35	Yes	0.782	0.213	1.00	Yes	0.775	0.128	0.91	Yes	1.00	**1.49**
		U_4 - U_5			301.13	-586.65	100	256	-795	-184	21	-28	92	-211	0.345	0.225	0.57	Yes	0.237	0.154	0.40	Yes	0.798	0.201	1.00	Yes	0.791	0.189	0.98	Yes	1.00	**1.53**
		U_5 - U_6			660.98	-531.96	248	463	-762	190	-140	-62	330	-15	0.758	0.237	1.00	Yes	0.511	0.155	0.67	Yes	0.724	0.130	0.86	Yes	0.717	0.181	0.90	Yes	1.00	**2.34**
		U_6 - U_7			841.61	-----	366	217	-616	-48	-288	-114	410	-107	0.805	0.187	1.00	Yes	0.562	0.129	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		U_7 - U_8			936.35	-----	26	1098	-1145	1991	-430	-25	144	-247	0.649	0.345	1.00	Yes	0.453	0.235	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		U_8 - U_9			912.16	-----	1191	-116	1155	-780	-378	-211	-361	98	0.747	0.246	1.00	Yes	0.511	0.167	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		U_9 - U_{10}			740.59	-----	254	309	-29	-452	-169	6	-139	532	0.803	0.187	1.00	Yes	0.544	0.125	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		U_{10} - U_{11}			271.15	-602.60	321	-78	213	-990	26	94	285	174	0.294	0.267	0.57	Yes	0.196	0.172	0.37	Yes	0.776	0.203	0.98	Yes	0.769	0.222	1.00	Yes	1.00	**1.76**
		U_{11} - U_{12}			-----	-875.48	222	-114	2	-693	100	405	182	615	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.163	1.00	Yes	0.821	0.115	0.94	Yes	1.00	**1.32**
		U_{12} - U_{13}			-----	-1211.60	6	-239	-73	-952	339	214	566	385	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.175	1.00	Yes	0.809	0.131	0.95	Yes	1.00	**1.37**
		U_{13} - U_{14}			-----	-1357.90	-147	-383	-391	-1436	221	177	391	518	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1.00	Yes	0.778	0.158	0.94	Yes	1.00	**1.26**
		U_{14} - U_{15}			-----	-1342.09	-272	-250	-1282	-877	213	31	580	151	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.221	1.00	Yes	0.769	0.141	0.92	Yes	1.00	**1.23**
		U_{15} - U_{16}			-----	-1420.76	-149	-433	-892	-729	85	38	470	185	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.171	1.00	Yes	0.814	0.098	0.92	Yes	1.00	**1.31**
		U_{16} - U_{17}			-----	-1372.56	-341	-209	-1403	-382	137	-51	616	104	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1.00	Yes	0.787	0.155	0.95	Yes	1.00	**1.41**
		U_{17} - U_{18}			-----	-1071.42	-209	-74	-842	83	-5	-61	429	17	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.148	1.00	Yes	0.838	0.137	0.98	Yes	1.00	**1.43**
		U_{18} - U_{19}			-----	-725.11	-200	-69	-786	-61	26	-120	386	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.175	1.00	Yes	0.816	0.158	0.98	Yes	1.00	**1.42**
		U_{19} - U_{20}			-----	-559.53	-271	304	-1816	1385	-68	-130	376	-537	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.189	0.83	Yes	0.630	0.365	1.00	Yes	1.00	**3.05**
	Structure 2	U_0 - U_1			-----	-628.56	-94	-89	656	-1513	4	-71	-37	62	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.186	0.94	Yes	0.742	0.257	1.00	Yes	1.00	**3.37**
		U_1 - U_2			-----	-832.91	-46	-191	25	-1201	-71	-222	-41	-289	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.804	0.182	0.99	Yes	1.00	**1.77**
		U_2 - U_3			-----	-1174.84	-100	-275	-65	-1472	-29	370	-20	386	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.158	1.00	Yes	0.834	0.150	0.99	Yes	1.00	**1.71**
		U_3 - U_4			-----	-1350.10	-424	-417	-932	-1316	530	906	330	453	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.220	1.00	Yes	0.769	0.117	0.89	Yes	1.00	**1.46**
		U_4 - U_5			-----	-1481.28	-461	-375	-1212	-1645	773	307	340	272	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.225	1.00	Yes	0.761	0.136	0.90	Yes	1.00	**1.46**
		U_5 - U_6			-----	-1517.88	-428	-10	-1761	-981	187	-211	249	441	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.208	1.00	Yes	0.779	0.146	0.93	Yes	1.00	**1.43**
		U_6 - U_7			-----	-1357.85	-286	-105	-1334	-1501	-134	-185	300	157	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.214	1.00	Yes	0.773	0.134	0.91	Yes	1.00	**1.34**
		U_7 - U_8			-----	-1403.06	-192	-173	-1642	-791	-107	-185	249	98	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.195	1.00	Yes	0.799	0.146	0.95	Yes	1.00	**1.42**
		U_8 - U_9			-----	-1206.32	-280	110	-1395	-281	-93	-198	374	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.168	1.00	Yes	0.818	0.148	0.97	Yes	1.00	**1.42**
		U_9 - U_{10}			-----	-976.16	-81	339	-1228	-207	-138	-152	266	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.150	1.00	Yes	0.842	0.149	1.00	Yes	1.00	**1.62**
		U_{10} - U_{11}			498.68	-797.48	175	373	-1393	-159	-178	-163	440	-3	0.421	0.250	0.68	Yes	0.287	0.162	0.45	Yes	0.797	0.201	1.00	Yes	0.792	0.197	0.99	Yes	1.00	**2.14**
		U_{11} - U_{12}			830.19	-----	242	539	-1623	322	-349	-126	518	86	0.701	0.292	1.00	Yes	0.471	0.195	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		U_{12} - U_{13}			1186.62	-----	495	160	-1142	-741	-449	-390	503	-265	0.801	0.192	1.00	Yes	0.571	0.131	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		U_{13} - U_{14}			1481.97	-----	153	2158	-339	1388	-945	-458	-414	-492	0.729	0.264	1.00	Yes	0.516	0.174	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		U_{14} - U_{15}			1379.02	-----	2709	124	1229	-27	-1022	-806	-554	-487	0.678	0.321	1.00	Yes	0.480	0.211	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.30**
		U_{15} - U_{16}			1316.95	-----	149	494	-1172	-1031	-648	-435	-317	791	0.796	0.200	1.00	Yes	0.566	0.136	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		U_{16} - U_{17}			1064.76	-----	666	327	133	-1275	-227	-33	492	429	0.785	0.212	1.00	Yes	0.522	0.139	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		U_{17} - U_{18}			747.55	-----	470	337	-290	-751	-4	242	74	808	0.750	0.246	1.00	Yes	0.500	0.162	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		U_{18} - U_{19}			563.72	-642.73	530	238	-211	-1115	100	117	411	467	0.566	0.258	0.83	Yes	0.371	0.165	0.54	Yes	0.764	0.232	1.00	Yes	0.759	0.189	0.95	Yes	1.00	**2.33**
		U_{19} - U_{20}			310.91	-719.13	313	216	-417	-767	22	14	130	481	0.292	0.188	0.48	Yes	0.193	0.123	0.32	Yes	0.798	0.196	1.00	Yes	0.793	0.123	0.92	Yes	1.00	**1.79**
		U_{20} - U_{21}			189.54	-875.54	182	-24	-734	-753	-23	-59	259	292	0.147	0.141	0.29	Yes	0.103	0.092	0.20	Yes	0.805	0.193	1.00	Yes	0.799	0.109	0.91	Yes	1.00	**1.77**
		U_{21} - U_{22}			-----	-807.76	-39	3	-809	-1132	-4	65	152	393	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.254	1.00	Yes	0.737	0.164	0.91	Yes	1.00	**1.46**
		U_{22} - U_{23}			-----	-822.15	68	-39	-1162	-547	58	-2	464	145	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.241	1.00	Yes	0.750	0.168	0.92	Yes	1.00	**1.49**
		U_{23} - U_{24}			172.06	-894.27	-56	156	-736	-593	-28	-57	352	57	0.133	0.145	0.28	Yes	0.093	0.095	0.19	Yes	0.822	0.173	1.00	Yes	0.816	0.107	0.93	Yes	1.00	**1.73**
		U_{24} - U_{25}			279.41	-755.30	181	275	-787	-250	-60	-86	396	-93	0.262	0.179	0.45	Yes	0.174	0.118	0.30	Yes	0.839	0.155	1.00	Yes	0.833	0.126	0.96	Yes	1.00	**1.71**
		U_{25} - U_{26}			502.63	-690.02	200	455	-1079	210	-159	-76	318	-24	0.505	0.230	0.74	Yes	0.331	0.146	0.48	Yes	0.820	0.162	0.99	Yes	0.815	0.183	1.00	Yes	1.00	**2.14**
		U_{26} - U_{27}			762.34	-----	366	417	-1017	-92	-249	-68	416	-168	0.765	0.234	1.00	Yes	0.510	0.155	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.64**
		U_{27} - U_{28}			1054.37	-----	326	569	-1354	-306	-369	-12	458	-17	0.777	0.218	1.00	Yes	0.517	0.144	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		U_{28} - U_{29}			1290.47	-----	514	176	-1223	-1505	-404	-277	522	-299	0.780	0.215	1.00	Yes	0.555	0.145	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		U_{29} - U_{30}			1495.46	-----	254	2143	-55	749	-861	-480	-268	-23	0.735	0.257	1.00	Yes	0.521	0.169	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		U_{30} - U_{31}			1473.54	-----	2424	42	900	-190	-707	-605	-201	-56	0.725	0.273	1.00	Yes	0.513	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		U_{31} - U_{32}			1193.58	-----	72	434	-847	-881	-419	-244	-93	851	0.806	0.192	1.00	Yes	0.575	0.132	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		U_{32} - U_{33}			931.18	-----	482	293	-184	-1027	-103	-6	423	509	0.787	0.207	1.00	Yes	0.528	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		U_{33} - U_{34}			735.09	-732.37	398	279	-238	-1187	10	249	405	989	0.621	0.288	0.91	Yes	0.423	0.190	0.62	Yes	0.732	0.263	1.00	Yes	0.728	0.167	0.90	Yes	1.00	**2.78**
		U_{34} - U_{35}			344.98	-883.60	345	63	89	-1556	201	164	646	532	0.253	0.260	0.52	Yes	0.171	0.175	0.35	Yes	0.767	0.225	1.00	Yes	0.763	0.189	0.96	Yes	1.00	**1.98**
		U_{35} - U_{36}			-----	-1181.48	163	-139	-206	-1286	106	90	404	563	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.187	1.00	Yes	0.801	0.137	0.94	Yes	1.00	**1.84**
		U_{36} - U_{37}			-----	-1396.78	-53	42	-858	-1414	83	-4	405	329	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1.00	Yes	0.795	0.126	0.93	Yes	1.00	**1.82**
		U_{37} - U_{38}			-----	-1358.25	121	-150	-1287	-1592	45	17	364	280	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.216	1.00	Yes	0.773	0.142	0.92	Yes	1.00	**1.74**
		U_{38} - U_{39}			-----	-1530.36	109	-295	-1049	-1648	132	-34	691	180	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.786	0.137	0.93	Yes	1.00	**1.78**
		U_{39} - U_{40}			-----	-1509.07	-202	-337	-1757	-1171	32	-27	515	177	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.217	1.00	Yes	0.775	0.146	0.93	Yes	1.00	**1.75**
		U_{40} - U_{41}			-----	-1349.89	-247	-337	-1747	-860	48	-115	566	61	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1.00	Yes	0.769	0.156	0.93	Yes	1.00	**1.65**
		U_{41} - U_{42}			-----	-1152.87	-148	-132	-1624	-85	-68	-100	418	40	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1.00	Yes	0.818	0.165	0.99	Yes	1.00	**1.83**
		U_{42} - U_{43}			-----	-837.95	-130	-63	-1144	-172	-39	-93	376	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1.00	Yes	0.809	0.174	0.99	Yes	1.00	**1.99**
		U_{43} - U_{44}			-----	-564.04	-12	-220	-1929	1039	-69	37	292	-411	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.232	0.91	Yes	0.666	0.328	1.00	Yes	1.00	**3.24**
	Structure 3	U_0 - U_1			-----	-637.79	-4	-161	379	-1363	8	-78	174	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.210	0.94	Yes	0.718	0.274	1.00	Yes	1.00	**3.65**
		U_1 - U_2			-----	-731.81	-33	-139	123	-775	-62	-233	-65	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.167	1.00	Yes	0.823	0.156	0.98	Yes	1.00	**1.61**
		U_2 - U_3			-----	-1055.63	-73	-165	133	-984	-51	337	8	390	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.162	1.00	Yes	0.826	0.160	0.99	Yes	1.00	**1.51**
		U_3 - U_4			-----	-1370.81	-190	-310	-379	-1167	494	829	361	478	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.201	1.00	Yes	0.786	0.129	0.92	Yes	1.00	**1.59**
		U_4 - U_5			-----	-1380.91	-399	-63	-953	-878	688	228	476	285	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.191	1.00	Yes	0.792	0.105	0.90	Yes	1.00	**1.39**
		U_5 - U_6			-----	-1363.61	-182	-274	-854	-1225	139	-153	227	362	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.207	1.00	Yes	0.782	0.135	0.92	Yes	1.00	**1.35**
		U_6 - U_7			-----	-1387.52	-376	-98	-1302	-625	-95	-191	451	60	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.194	1.00	Yes	0.795	0.144	0.94	Yes	1.00	**1.39**
		U_7 - U_8			-----	-1274.41	-163	8	-688	-326	-63	-183	323	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.129	1.00	Yes	0.851	0.095	0.95	Yes	1.00	**1.44**
		U_8 - U_9			-----	-909.04	-101	180	-835	-2	-33	-157	294	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.139	1.00	Yes	0.853	0.139	1.00	Yes	1.00	**1.22**
		U_9 - U_{10}			-----	-618.95	-76	229	-897	131	-98	-108	221	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.172	0.97	Yes	0.790	0.201	1.00	Yes	1.00	**1.44**
		U_{10} - U_{11}			700.23	-445.36	318	238	-748	33	-246	-139	423	-250	0.760	0.236	1.00	Yes	0.514	0.158	0.68	Yes	0.573	0.149	0.73	Yes	0.568	0.168	0.74	Yes	1.00	**2.83**
		U_{11} - U_{12}			835.56	-----	-39	973	-1211	1552	-410	-109	173	-366	0.685	0.311	1.00	Yes	0.468	0.211	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		U_{12} - U_{13}			1058.49	-----	1182	120	1368	-834	-545	-504	-369	-2	0.733	0.263	1.00	Yes	0.512	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		U_{13} - U_{14}			871.16	-----	231	438	-290	-385	-341	-222	-172	479	0.833	0.159	1.00	Yes	0.582	0.110	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		U_{14} - U_{15}			646.51	-----	425	296	391	-841	-128	-40	291	102	0.741	0.249	1.00	Yes	0.500	0.163	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		U_{15} - U_{16}			424.94	-563.57	333	232	-380	-614	-67	132	6	478	0.487	0.227	0.72	Yes	0.334	0.155	0.49	Yes	0.767	0.231	1.00	Yes	0.760	0.146	0.91	Yes	1.00	**1.81**
		U_{16} - U_{17}			411.56	-551.39	394	128	-361	-717	76	74	402	149	0.472	0.238	0.72	Yes	0.324	0.163	0.49	Yes	0.750	0.243	1.00	Yes	0.744	0.170	0.92	Yes	1.00	**1.76**
		U_{17} - U_{18}			191.73	-563.31	300	-74	-570	-377	-43	71	279	209	0.220	0.183	0.41	Yes	0.148	0.120	0.27	Yes	0.766	0.231	1.00	Yes	0.760	0.135	0.90	Yes	1.00	**1.35**
		U_{18} - U_{19}			76.82	-543.67	148	-42	-764	-266	-22	27	449	16	0.088	0.257	0.35	Yes	0.060	0.176	0.24	Yes	0.740	0.252	1.00	Yes	0.733	0.182	0.92	Yes	1.00	**1.32**
		U_{19} - U_{20}			-----	-539.82	175	-305	-1132	714	-117	111	371	-359	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.163	0.90	Yes	0.728	0.269	1.00	Yes	1.00	**2.31**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
North Truss - Lower Chord	Structure 1	L_0 - L_1	162.07	-98.30	87	-383	1191	-2193	-22	-83	114	422	0.248	0.749	1.00	Yes	0.146	0.458	0.61	Yes	0.178	0.488	0.67	Yes	0.177	0.658	0.84	Yes	1.00	**9.39**
		L_1 - L_2	446.38	-----	101	-719	152	-39	-441	-114	-29	-31	0.683	0.311	1.00	Yes	0.417	0.205	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.51**
		L_2 - L_3	692.58	-----	-631	-727	-20	22	-151	41	-32	23	0.797	0.200	1.00	Yes	0.461	0.120	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.52**
		L_3 - L_4	729.11	-143.24	-580	-529	86	253	-84	25	61	69	0.839	0.154	1.00	Yes	0.498	0.100	0.60	Yes	0.196	0.184	0.38	Yes	0.194	0.140	0.34	Yes	1.00	**1.56**
		L_4 - L_5	317.91	-499.26	-883	301	98	592	-196	305	53	35	0.412	0.288	0.70	Yes	0.247	0.188	0.44	Yes	0.768	0.131	0.90	Yes	0.761	0.234	1.00	Yes	1.00	**1.61**
		L_5 - L_6	-----	-721.66	-506	96	161	589	253	66	71	126	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.153	1.00	Yes	0.833	0.130	0.97	Yes	1.00	**1.69**
		L_6 - L_7	-----	-1082.40	-751	-9	208	175	78	371	120	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.111	1.00	Yes	0.871	0.118	0.99	Yes	1.00	**2.39**
		L_7 - L_8	-----	-1233.48	11	599	60	1463	-120	-134	-88	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.208	1.00	Yes	0.781	0.194	0.98	Yes	1.00	**2.22**
		L_8 - L_9	-----	-1304.96	569	-32	1122	-1	-140	-151	9	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.156	1.00	Yes	0.826	0.149	0.98	Yes	1.00	**2.50**
		L_9 - L_{10}	-----	-1100.16	-131	-586	141	151	552	113	44	145	-----	-----	-----	-----	-----	-----	-----	-----	0.895	0.101	1.00	Yes	0.886	0.092	0.98	Yes	1.00	**3.08**
		L_{10} - L_{11}	-----	-560.77	33	-483	530	-7	42	73	140	48	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.108	0.98	Yes	0.854	0.140	1.00	Yes	1.00	**2.09**
		L_{11} - L_{12}	588.63	-----	231	-817	486	-172	111	-51	96	-35	0.762	0.236	1.00	Yes	0.457	0.155	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**
		L_{12} - L_{13}	1042.71	-----	-349	-799	160	-76	113	255	26	35	0.823	0.172	1.00	Yes	0.526	0.103	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.01**
		L_{13} - L_{14}	1331.64	-----	-181	-1438	359	-438	110	-47	8	-3	0.783	0.207	1.00	Yes	0.507	0.126	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		L_{14} - L_{15}	1544.92	-----	-1838	-646	-371	-27	-169	218	-118	-66	0.755	0.237	1.00	Yes	0.490	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		L_{15} - L_{16}	1643.75	-----	-1332	-1422	-214	-364	89	-293	-121	-55	0.803	0.192	1.00	Yes	0.515	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		L_{16} - L_{17}	1154.79	-----	-1544	-97	-432	96	-453	212	-105	-45	0.730	0.267	1.00	Yes	0.474	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		L_{17} - L_{18}	881.58	-----	-1036	-74	-195	23	127	-224	-82	-18	0.768	0.228	1.00	Yes	0.491	0.137	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		L_{18} - L_{19}	485.94	-----	-511	338	-524	605	-59	317	-332	-25	0.744	0.250	1.00	Yes	0.503	0.159	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		L_{19} - L_{20}	192.24	-474.85	-250	53	-464	256	172	38	-73	-16	0.294	0.175	0.47	Yes	0.179	0.117	0.30	Yes	0.863	0.105	0.97	Yes	0.855	0.139	1.00	Yes	1.00	**2.60**
	Structure 2	L_0 - L_1	332.38	-----	196	-842	1022	-2602	28	98	-111	-386	0.404	0.593	1.00	Yes	0.240	0.382	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.72**
		L_1 - L_2	535.20	-----	461	-1277	176	-237	-509	-102	-45	17	0.650	0.343	1.00	Yes	0.387	0.218	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		L_2 - L_3	999.75	-----	-186	-1161	-39	-167	59	229	70	73	0.798	0.196	1.00	Yes	0.525	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		L_3 - L_4	1310.24	-----	-229	-1710	32	-431	199	69	156	81	0.777	0.219	1.00	Yes	0.525	0.141	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		L_4 - L_5	1774.14	-----	-1534	-1574	-387	-247	48	257	93	202	0.827	0.166	1.00	Yes	0.548	0.099	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		L_5 - L_6	1828.45	-----	-1218	-2295	-145	-382	148	-68	113	-15	0.785	0.213	1.00	Yes	0.527	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		L_6 - L_7	1821.18	-----	-2269	-1437	-433	-96	-129	358	-164	45	0.771	0.222	1.00	Yes	0.512	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		L_7 - L_8	1374.34	-----	-1779	-748	-210	297	132	-88	-131	8	0.788	0.207	1.00	Yes	0.518	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		L_8 - L_9	1094.38	-----	-1449	35	-92	534	-227	409	-26	16	0.765	0.234	1.00	Yes	0.516	0.147	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		L_9 - L_{10}	828.22	-617.95	-1412	-215	-104	730	281	-190	17	93	0.739	0.260	1.00	Yes	0.430	0.161	0.60	Yes	0.653	0.173	0.83	Yes	0.649	0.226	0.88	Yes	1.00	**2.64**
		L_{10} - L_{11}	-----	-706.19	-964	246	105	537	-292	283	61	0	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.093	0.93	Yes	0.830	0.169	1.00	Yes	1.00	**2.11**
		L_{11} - L_{12}	-----	-1045.07	-648	3	104	1003	135	-166	83	239	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.124	0.99	Yes	0.857	0.137	1.00	Yes	1.00	**2.67**
		L_{12} - L_{13}	-----	-1541.41	-373	-184	430	-461	119	-162	199	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.930	0.061	1.00	Yes	0.922	0.046	0.97	Yes	1.00	**4.02**
		L_{13} - L_{14}	-----	-1522.42	-367	1230	-591	2582	-262	-454	-247	-546	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.192	0.97	Yes	0.766	0.225	1.00	Yes	1.00	**2.63**
		L_{14} - L_{15}	-----	-1622.29	1124	-470	2030	-381	-517	-319	-317	-441	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.155	0.98	Yes	0.816	0.177	1.00	Yes	1.00	**3.43**
		L_{15} - L_{16}	-----	-1497.57	-470	-15	-994	352	-214	97	12	400	-----	-----	-----	-----	-----	-----	-----	-----	0.903	0.084	0.99	Yes	0.896	0.099	1.00	Yes	1.00	**3.33**
		L_{16} - L_{17}	-----	-1151.66	546	-39	1203	119	187	-16	400	188	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.152	1.00	Yes	0.839	0.148	0.99	Yes	1.00	**2.73**
		L_{17} - L_{18}	-----	-856.86	-1	-475	482	249	164	71	110	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.906	0.088	1.00	Yes	0.900	0.077	0.98	Yes	1.00	**2.14**
		L_{18} - L_{19}	-----	-646.01	-70	-497	670	117	114	154	-5	33	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.130	1.00	Yes	0.861	0.129	1.00	Yes	1.00	**2.00**
		L_{19} - L_{20}	603.05	-602.32	-324	-905	567	242	437	-5	58	-45	0.683	0.241	0.93	Yes	0.404	0.152	0.56	Yes	0.808	0.189	1.00	Yes	0.803	0.175	0.98	Yes	1.00	**2.65**
		L_{20} - L_{21}	952.05	-469.64	-950	-1190	565	51	59	401	-98	-102	0.769	0.221	1.00	Yes	0.506	0.129	0.64	Yes	0.450	0.218	0.67	Yes	0.446	0.177	0.63	Yes	1.00	**2.95**
		L_{21} - L_{22}	910.61	-228.11	-904	-1537	241	-73	273	10	-94	-31	0.736	0.258	1.00	Yes	0.494	0.157	0.66	Yes	0.218	0.257	0.48	Yes	0.217	0.229	0.45	Yes	1.00	**2.25**
		L_{22} - L_{23}	845.05	-----	-1844	-806	-153	203	-127	365	-20	3	0.683	0.314	1.00	Yes	0.458	0.191	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		L_{23} - L_{24}	903.81	-298.89	-1610	-959	4	371	251	-193	10	77	0.730	0.267	1.00	Yes	0.480	0.154	0.64	Yes	0.286	0.267	0.56	Yes	0.284	0.240	0.53	Yes	1.00	**2.79**
		L_{24} - L_{25}	561.79	-435.98	-1426	-257	240	359	-323	521	62	0	0.636	0.355	1.00	Yes	0.376	0.224	0.61	Yes	0.585	0.243	0.83	Yes	0.581	0.275	0.86	Yes	1.00	**2.81**
		L_{25} - L_{26}	-----	-642.96	-617	-713	120	700	84	-294	41	129	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.125	0.99	Yes	0.857	0.138	1.00	Yes	1.00	**3.12**
		L_{26} - L_{27}	-----	-852.11	-283	202	-210	657	-107	276	-212	17	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.087	0.99	Yes	0.895	0.105	1.00	Yes	1.00	**2.78**
		L_{27} - L_{28}	-----	-1171.09	-67	217	-232	1153	88	197	-42	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.119	0.98	Yes	0.853	0.142	1.00	Yes	1.00	**2.71**
		L_{28} - L_{29}	-----	-1588.68	-113	-335	86	-10	171	-20	-87	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.958	0.039	1.00	Yes	0.950	0.033	0.99	Yes	1.00	**2.92**
		L_{29} - L_{30}	-----	-1631.32	-378	808	-468	1996	-66	-130	-13	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.128	0.96	Yes	0.821	0.174	1.00	Yes	1.00	**2.46**
		L_{30} - L_{31}	-----	-1586.51	825	-331	2258	-424	-134	-117	-597	-464	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.176	0.99	Yes	0.798	0.197	1.00	Yes	1.00	**3.82**
		L_{31} - L_{32}	-----	-1539.54	-146	-255	324	-105	-60	74	-390	111	-----	-----	-----	-----	-----	-----	-----	-----	0.937	0.057	1.00	Yes	0.929	0.033	0.97	Yes	1.00	**4.93**
		L_{32} - L_{33}	-----	-1045.79	361	-370	1009	158	171	34	-146	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.114	0.98	Yes	0.858	0.137	1.00	Yes	1.00	**3.88**
		L_{33} - L_{34}	-----	-714.49	-14	-897	414	199	352	-133	6	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.121	0.97	Yes	0.839	0.157	1.00	Yes	1.00	**3.09**
		L_{34} - L_{35}	806.30	-601.87	-328	-1204	632	36	321	685	-28	69	0.720	0.275	1.00	Yes	0.419	0.169	0.59	Yes	0.636	0.229	0.87	Yes	0.632	0.193	0.83	Yes	1.00	**3.31**
		L_{35} - L_{36}	1086.52	-----	-66	-1357	386	-8	560	32	101	-48	0.760	0.236	1.00	Yes	0.512	0.148	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		L_{36} - L_{37}	1321.98	-----	-635	-1859	241	0	-18	396	-100	10	0.758	0.238	1.00	Yes	0.498	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		L_{37} - L_{38}	1827.02	-----	-1443	-2409	-36	-347	181	-188	-42	-7	0.773	0.223	1.00	Yes	0.514	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		L_{38} - L_{39}	1780.96	-----	-2421	-1368	-293	-174	-157	248	-23	-17	0.764	0.230	1.00	Yes	0.513	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		L_{39} - L_{40}	1710.55	-----	-1842	-1609	-197	-306	112	-353	-51	-34	0.797	0.198	1.00	Yes	0.528	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		L_{40} - L_{41}	1291.79	-----	-1766	-439	-305	-49	-374	367	-58	-11	0.759	0.237	1.00	Yes	0.511	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**
		L_{41} - L_{42}	1025.43	-----	-1203	-173	-157	-63	145	-68	-27	11	0.808	0.189	1.00	Yes	0.530	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		L_{42} - L_{43}	486.75	-----	-1351	72	-219	46	-387	458	-4	-10	0.622	0.374	1.00	Yes	0.372	0.216	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_{43} - L_{44}	310.26	-502.11	-646	258	-1387	595	572	167	187	55	0.377	0.376	0.76	Yes	0.224	0.239	0.47	Yes	0.722	0.233	0.96	Yes	0.717	0.282	1.00	Yes	1.00	**7.09**
	Structure 3	L_0 - L_1	379.14	-399.67	100	-342	542	-826	-28	-129	9	41	0.603	0.278	0.89	Yes	0.370	0.186	0.56	Yes	0.754	0.141	0.90	Yes	0.748	0.249	1.00	Yes	1.00	**4.56**
		L_1 - L_2	537.79	-----	249	-485	349	-404	-68	33	41	115	0.823	0.170	1.00	Yes	0.557	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		L_2 - L_3	914.31	-----	21	-932	6	-174	182	103	16	2	0.796	0.203	1.00	Yes	0.510	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		L_3 - L_4	1211.19	-----	-119	-1366	62	-365	294	127	44	54	0.766	0.227	1.00	Yes	0.497	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**
		L_4 - L_5	1647.03	-----	-1220	-1414	-328	-215	81	281	79	116	0.805	0.190	1.00	Yes	0.517	0.111	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		L_5 - L_6	1597.44	-----	-787	-1697	-83	-342	-50	-47	142	78	0.780	0.214	1.00	Yes	0.507	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.05**
		L_6 - L_7	1274.15	-----	-1576	-149	-405	237	-98	346	-185	17	0.749	0.246	1.00	Yes	0.485	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.68**
		L_7 - L_8	1058.61	-----	-785	-492	-87	110	200	19	-30	38	0.835	0.163	1.00	Yes	0.534	0.097	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**
		L_8 - L_9	564.84	-----	-743	106	-171	342	-202	410	-17	47	0.731	0.268	1.00	Yes	0.439	0.174	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.60**
		L_9 - L_{10}	262.05	-518.38	-774	-43	-2	481	315	26	67	125	0.339	0.260	0.60	Yes	0.198	0.156	0.36	Yes	0.797	0.190	0.99	Yes	0.790	0.205	1.00	Yes	1.00	**2.41**
		L_{10} - L_{11}	-----	-1088.61	-291	271	-430	764	-81	232	-55	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.070	0.96	Yes	0.876	0.120	1.00	Yes	1.00	**3.85**
		L_{11} - L_{12}	-----	-1249.17	-41	471	-68	1191	-167	-187	-349	-538	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.190	1.00	Yes	0.791	0.158	0.95	Yes	1.00	**2.20**
		L_{12} - L_{13}	-----	-1253.43	468	-23	1162	-15	-243	-216	-568	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1.00	Yes	0.794	0.154	0.95	Yes	1.00	**2.39**
		L_{13} - L_{14}	-----	-1112.05	70	-639	-48	283	61	-17	-228	123	-----	-----	-----	-----	-----	-----	-----	-----	0.905	0.080	0.99	Yes	0.895	0.100	1.00	Yes	1.00	**2.28**
		L_{14} - L_{15}	-----	-740.01	96	-297	565	164	45	21	148	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.129	1.00	Yes	0.854	0.125	0.98	Yes	1.00	**1.62**
		L_{15} - L_{16}	-----	-541.72	162	-632	423	194	44	-50	16	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.098	0.94	Yes	0.825	0.167	1.00	Yes	1.00	**1.47**
		L_{16} - L_{17}	667.82	-247.76	-519	-717	340	34	120	319	92	-34	0.768	0.225	1.00	Yes	0.456	0.144	0.61	Yes	0.338	0.236	0.58	Yes	0.335	0.173	0.51	Yes	1.00	**1.60**
		L_{17} - L_{18}	681.51	-130.95	-710	-741	101	-2	191	-1	2	12	0.784	0.210	1.00	Yes	0.454	0.126	0.58	Yes	0.179	0.242	0.43	Yes	0.177	0.179	0.36	Yes	1.00	**1.67**
		L_{18} - L_{19}	438.28	-----	-773	-68	64	-5	-188	413	28	-115	0.671	0.321	1.00	Yes	0.409	0.212	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		L_{19} - L_{20}	184.33	-324.85	-381	284	-1208	981	1206	328	301	82	0.282	0.622	0.91	Yes	0.166	0.373	0.54	Yes	0.590	0.407	1.00	Yes	0.585	0.363	0.95	Yes	1.00	**8.94**

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

			Inventory Loads - HS20 Truck																													
			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:		Vehicle 1.300	Pedestrian 1.300	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
LL Factor:		2.167	1.625	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
North Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-292.84	-59	89	-161	209	-28	-9	-234	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.198	0.93	Yes	0.684	0.312	1.00	Yes	1.00	**0.70**
		$U_1 - L_1$	-----	-345.41	23	-11	-178	205	-5	-5	283	156	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.163	0.92	Yes	0.731	0.262	1.00	Yes	1.00	**1.57**
		$U_2 - L_2$	99.34	-329.02	85	-94	-177	235	63	29	359	185	0.179	0.404	0.59	Yes	0.098	0.222	0.33	Yes	0.719	0.217	0.94	Yes	0.696	0.300	1.00	Yes	1.00	**2.41**
		$U_3 - L_3$	194.74	-325.24	241	-225	-178	237	134	130	673	195	0.350	0.502	0.86	Yes	0.193	0.276	0.47	Yes	0.713	0.253	0.97	Yes	0.688	0.307	1.00	Yes	1.00	**3.85**
		$U_4 - L_4$	-----	-332.67	179	-179	225	-220	-382	-148	499	141	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.196	0.93	Yes	0.704	0.288	1.00	Yes	1.00	**2.32**
		$U_5 - L_5$	-----	-430.30	67	-90	205	-248	16	18	187	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.108	0.89	Yes	0.742	0.251	1.00	Yes	1.00	**1.40**
		$U_6 - L_6$	-----	-493.79	85	-82	233	-257	-196	-66	265	30	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.133	0.93	Yes	0.746	0.249	1.00	Yes	1.00	**1.26**
		$U_7 - L_7$	-----	-421.06	129	-143	261	-283	-164	14	396	60	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.204	0.96	Yes	0.687	0.313	1.00	Yes	1.00	**0.86**
		$U_8 - L_8$	-----	-1201.75	21	-32	141	-166	-5	38	1260	346	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.129	1.00	Yes	0.833	0.031	0.87	Yes	1.00	**2.17**
		$U_9 - L_9$	-----	-644.16	-172	201	-377	426	-355	-150	-172	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.144	0.94	Yes	0.745	0.248	1.00	Yes	1.00	**1.42**
		$U_{10} - L_{10}$	-----	-723.25	-123	106	-290	325	-775	-434	-312	-394	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.213	1.00	Yes	0.743	0.182	0.93	Yes	1.00	**1.73**
		$U_{11} - L_{11}$	-----	-673.98	-144	195	-315	460	-569	-388	-110	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.176	0.99	Yes	0.784	0.213	1.00	Yes	1.00	**1.83**
		$U_{12} - L_{12}$	-----	-535.00	-101	101	-291	303	-326	-201	110	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.147	0.92	Yes	0.734	0.259	1.00	Yes	1.00	**1.63**
		$U_{13} - L_{13}$	-----	-382.40	-51	70	-193	227	-164	-10	287	29	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.149	0.93	Yes	0.733	0.260	1.00	Yes	1.00	**1.28**
		$U_{14} - L_{14}$	-----	-315.46	-163	189	-175	188	-22	-15	839	145	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.288	1.00	Yes	0.667	0.242	0.91	Yes	1.00	**2.58**
		$U_{15} - L_{15}$	171.34	-313.12	-127	115	226	-256	61	115	380	-49	0.308	0.438	0.75	Yes	0.169	0.241	0.42	Yes	0.702	0.161	0.87	Yes	0.663	0.328	1.00	Yes	1.00	**2.43**
		$U_{16} - L_{16}$	-----	-337.80	26	-35	200	-218	57	-77	680	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.218	0.98	Yes	0.715	0.278	1.00	Yes	1.00	**1.60**
		$U_{17} - L_{17}$	-----	-441.38	59	-74	202	-229	-123	-113	296	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.118	0.95	Yes	0.761	0.232	1.00	Yes	1.00	**1.24**
		$U_{18} - L_{18}$	-----	-538.27	142	-148	409	-430	-136	-121	287	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.082	0.87	Yes	0.749	0.244	1.00	Yes	1.00	**1.34**
		$U_{19} - L_{19}$	-----	-658.69	170	-169	486	-495	-118	-46	605	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.138	0.96	Yes	0.767	0.230	1.00	Yes	1.00	**1.49**
		$U_{20} - L_{20}$	-----	-573.71	160	-260	311	-469	27	4	460	60	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.202	1.00	Yes	0.702	0.225	0.93	Yes	1.00	**1.03**
	Structure 2	$U_0 - L_0$	-----	-645.42	-162	210	-422	532	-41	-7	-492	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.723	0.240	0.97	Yes	1.00	**1.46**
		$U_1 - L_1$	-----	-723.69	-117	126	-492	512	-107	-7	-817	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.163	1.00	Yes	0.776	0.217	1.00	Yes	1.00	**1.96**
		$U_2 - L_2$	-----	-607.91	-108	118	-398	431	-108	-38	385	54	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.117	0.94	Yes	0.775	0.221	1.00	Yes	1.00	**1.67**
		$U_3 - L_3$	-----	-495.33	-55	63	-220	237	77	-46	71	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.075	0.92	Yes	0.777	0.216	1.00	Yes	1.00	**1.51**
		$U_4 - L_4$	-----	-351.34	-15	23	-184	193	243	74	198	29	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.145	0.95	Yes	0.743	0.247	1.00	Yes	1.00	**1.53**
		$U_5 - L_5$	77.47	-338.85	59	-49	-158	189	-46	85	505	26	0.139	0.388	0.53	Yes	0.077	0.214	0.30	Yes	0.765	0.225	1.00	Yes	0.717	0.242	0.96	Yes	1.00	**1.93**
		$U_6 - L_6$	328.78	-268.44	187	-197	-202	219	53	99	442	47	0.591	0.409	1.00	Yes	0.325	0.225	0.55	Yes	0.604	0.206	0.81	Yes	0.568	0.280	0.85	Yes	1.00	**3.09**
		$U_7 - L_7$	-----	-326.07	143	-168	144	-154	-65	-34	739	76	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.262	1.00	Yes	0.690	0.214	0.91	Yes	1.00	**2.46**
		$U_8 - L_8$	-----	-484.29	64	-81	310	-338	-2	-63	650	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.161	0.87	Yes	0.698	0.296	1.00	Yes	1.00	**1.83**
		$U_9 - L_9$	-----	-685.97	158	-172	598	-604	-37	-194	120	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.086	0.85	Yes	0.735	0.256	1.00	Yes	1.00	**2.09**
		$U_{10} - L_{10}$	-----	-794.85	164	-190	558	-581	-39	-221	229	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.106	0.90	Yes	0.743	0.257	1.00	Yes	1.00	**2.19**
		$U_{11} - L_{11}$	-----	-824.70	186	-185	466	-505	-190	-69	668	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.145	0.98	Yes	0.771	0.223	1.00	Yes	1.00	**1.94**
		$U_{12} - L_{12}$	-----	-878.19	161	-149	533	-540	-219	-30	171	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.107	0.95	Yes	0.761	0.231	1.00	Yes	1.00	**1.96**
		$U_{13} - L_{13}$	-----	-745.85	210	-208	582	-561	-175	22	280	40	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1.00	Yes	0.719	0.278	1.00	Yes	1.00	**1.69**
		$U_{14} - L_{14}$	-----	-1121.58	120	-116	353	-340	-30	198	1242	292	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.171	1.00	Yes	0.744	0.062	0.81	Yes	1.00	**2.32**
		$U_{15} - L_{15}$	-----	-744.39	-116	124	-582	578	-307	9	299	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.154	0.99	Yes	0.718	0.279	1.00	Yes	1.00	**2.57**
		$U_{16} - L_{16}$	-----	-710.69	-89	63	-480	476	-807	-260	-491	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.177	1.00	Yes	0.762	0.204	0.97	Yes	1.00	**2.11**
		$U_{17} - L_{17}$	-----	-656.65	-127	125	-477	495	-274	-185	57	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.114	0.93	Yes	0.764	0.230	1.00	Yes	1.00	**1.84**
		$U_{18} - L_{18}$	-----	-586.68	-95	94	-460	486	-114	-127	-81	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.111	0.90	Yes	0.748	0.249	1.00	Yes	1.00	**1.82**
		$U_{19} - L_{19}$	-----	-488.49	-56	60	-267	275	-66	-32	151	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.075	0.81	Yes	0.729	0.265	1.00	Yes	1.00	**1.57**
		$U_{20} - L_{20}$	-----	-400.96	-22	26	-184	200	-159	-34	391	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.154	0.98	Yes	0.768	0.228	1.00	Yes	1.00	**1.56**
	Structure 3	$U_0 - L_0$	-----	-328.95	14	-10	-213	234	-90	28	156	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.122	0.87	Yes	0.696	0.299	1.00	Yes	1.00	**1.79**
		$U_1 - L_1$	-----	-324.53	-114	133	56	-52	-46	-50	784	138	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.261	1.00	Yes	0.687	0.170	0.86	Yes	1.00	**2.55**
		$U_2 - L_2$	-----	-335.35	-53	49	200	-223	84	72	617	28	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.236	1.00	Yes	0.710	0.285	1.00	Yes	1.00	**2.07**
		$U_3 - L_3$	-----	-371.03	9	-22	242	-253	76	27	197	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.109	0.87	Yes	0.711	0.288	1.00	Yes	1.00	**1.64**
		$U_4 - L_4$	-----	-468.56	38	-38	308	-301	-89	-29	240	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.097	0.81	Yes	0.700	0.296	1.00	Yes	1.00	**1.63**
		$U_5 - L_5$	-----	-581.57	66	-69	445	-496	-124	-22	883	71	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.192	0.97	Yes	0.741	0.254	1.00	Yes	1.00	**1.84**
		$U_6 - L_6$	-----	-628.43	85	-85	571	-574	-136	3	266	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.101	0.88	Yes	0.731	0.266	1.00	Yes	1.00	**1.90**
		$U_7 - L_7$	-----	-706.39	74	-72	556	-548	-156	16	355	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.104	0.92	Yes	0.757	0.236	1.00	Yes	1.00	**2.03**
		$U_8 - L_8$	-----	-670.86	121	-126	544	-539	-113	27	852	63	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.243	1.00	Yes	0.647	0.260	0.91	Yes	1.00	**2.01**
		$U_9 - L_9$	-----	-1126.39	-60	49	197	-205	-177	66	1156	205	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.152	1.00	Yes	0.761	0.037	0.80	Yes	1.00	**2.82**
		$U_{10} - L_{10}$	-----	-756.76	-109	109	-513	499	-309	-34	97	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.155	1.00	Yes	0.730	0.246	0.98	Yes	1.00	**2.29**
		$U_{11} - L_{11}$	-----	-847.05	-82	59	-416	436	-690	-276	-107	-311	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1.00	Yes	0.734	0.187	0.93	Yes	1.00	**2.28**
		$U_{12} - L_{12}$	-----	-830.51	-117	106	-458	470	-468	-354	-253	-432	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.155	1.00	Yes	0.783	0.211	1.00	Yes	1.00	**2.32**
		$U_{13} - L_{13}$	-----	-827.46	-114	124	-465	507	-172	-157	360	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.083	0.91	Yes	0.774	0.224	1.00	Yes	1.00	**2.45**
		$U_{14} - L_{14}$	-----	-726.72	-112	126	-463	513	-143	-12	729	82	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.142	0.96	Yes	0.779	0.218	1.00	Yes	1.00	**2.16**
		$U_{15} - L_{15}$	-----	-488.15	-55	66	-306	330	-47	62	258	38	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.120	0.83	Yes	0.703	0.288	1.00	Yes	1.00	**1.78**
		$U_{16} - L_{16}$	-----	-344.68	-6	7	-52	68	-70	7	665	96	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.215	1.00	Yes	0.729	0.087	0.82	Yes	1.00	**2.66**
		$U_{17} - L_{17}$	296.86	-139.06	-189	202	72	-78	95	40	703	30	0.534	0.461	1.00	Yes	0.294	0.254	0.55	Yes	0.313	0.214	0.53	Yes	0.294	0.258	0.56	Yes	1.00	**2.30**
		$U_{18} - L_{18}$	153.61	-322.61	-134	120	225	-245	50	72	161	-102	0.276	0.360	0.64	Yes	0.152	0.198	0.35	Yes	0.729	0.110	0.84	Yes	0.683	0.313	1.00	Yes	1.00	**2.38**
		$U_{19} - L_{19}$	-----	-339.54	-19	1	217	-216	23	3	166	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.087	0.86	Yes	0.718	0.277	1.00	Yes	1.00	**1.74**
		$U_{20} - L_{20}$	-----	-489.91	27	-31	208	-231	7	-31	530	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.164	1.00	Yes	0.768	0.210	0.98	Yes	1.00	**1.62**
		$U_{21} - L_{21}$	-----	-580.27	60	-68	490	-495	11	-35	163	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.075	0.86	Yes	0.739	0.253	1.00	Yes	1.00	**1.76**
		$U_{22} - L_{22}$	-----	-708.86	77	-90	534	-550	-50	-51	511	36	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.123	0.94	Yes	0.760	0.233	1.00	Yes	1.00	**1.94**
		$U_{23} - L_{23}$	-----	-651.64	117	-134	340	-456	-132	-22	865	147	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1.00	Yes	0.698	0.194	0.90	Yes	1.00	**1.56**
		$U_0 - L_0$	-----	-562.64	-145	194	-396	456	-56	-7	-779	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.227	1.00	Yes	0.676	0.219	0.90	Yes	1.00	**1.18**
		$U_1 - L_1$	-----	-670.11	-113	124	-439	467	-123	-4	-415	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.123	0.96	Yes	0.780	0.217	1.00	Yes	1.00	**1.88**
		$U_2 - L_2$	-----	-550.75	-111	117	-373	396	-149	-46	184	40	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.093	0.90	Yes	0.766	0.224	1.00	Yes	1.00	**1.55**
		$U_3 - L_3$	-----	-460.27	-47	60	-172	200	42	-64	338	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.139	1.00	Yes	0.794	0.203	1.00	Yes	1.00	**1.28**
		$U_4 - L_4$	-----	-335.50	-22	30	-212	224	13	22	105	8	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.107	0.87	Yes	0.710	0.286	1.00	Yes	1.00	**1.62**
		$U_5 - L_5$	88.72	-334.77	60	-56	-199	226	-67	86	381	33	0.160	0.399	0.56	Yes	0.088	0.220	0.31	Yes	0.750	0.200	0.96	Yes	0.708	0.289	1.00	Yes	1.00	**2.04**
		$U_6 - L_6$	-----	-318.55	159	-175	-39	41	-197	-32	867	93	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.285	1.00	Yes	0.674	0.223	0.90	Yes	1.00	**2.27**
		$U_7 - L_7$	-----	-374.31	8	-22	212	-240	-11	-18	266	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.120	0.88	Yes	0.717	0.274	1.00	Yes	1.00	**1.66**
		$U_8 - L_8$	-----	-518.84	63	-69	316	-327	-14	-84	315	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.102	0.86	Yes	0.712	0.280	1.00	Yes	1.00	**1.87**
		$U_9 - L_9$	-----	-664.32	117	-173	335	-471	6	-35	579	7	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.134	0.94	Yes	0.773	0.218	1.00	Yes	1.00	**1.92**
		$U_{10} - L_{10}$	-----	-780.63	119	-115	406	-441	-215	-100	201	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.106	0.92	Yes	0.770	0.229	1.00	Yes	1.00	**2.03**
		$U_{11} - L_{11}$	-----	-648.15	167	-192	419	-471	-166	-33	439	118	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.150	0.93	Yes	0.732	0.262	1.00	Yes	1.00	**1.43**
		$U_{12} - L_{12}$	-----	-1147.37	79	-109	263	-354	-123	33	1552	441	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.172	1.00	Yes	0.795	0.066	0.87	Yes	1.00	**2.28**
		$U_{13} - L_{13}$	-----	-462.55	-67	76	-267	287	-297	-42	33	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.156	0.93	Yes	0.714	0.283	1.00	Yes	1.00	**1.47**
		$U_{14} - L_{14}$	-----	-514.15	-45	30	-217	238	-707	-338	-459	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.217	1.00	Yes	0.737	0.208	0.95	Yes	1.00	**1.65**
		$U_{15} - L_{15}$	-----	-453.19	-45	50	-175	210	-355	-203	-61	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.164	0.99	Yes	0.782	0.214	1.00	Yes	1.00	**1.50**
		$U_{16} - L_{16}$	-----	-319.16	-61	60	-247	247	-533	-312	309	19	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.242	0.95	Yes	0.675	0.316	1.00	Yes	1.00	**2.72**
		$U_{17} - L_{17}$	263.92	-205.00	-281	290	42	-74	-118	89	523	71	0.475	0.522	1.00	Yes	0.261	0.287	0.55	Yes	0.449	0.201	0.66	Yes	0.434	0.371	0.81	Yes	1.00	**2.96**
		$U_{18} - L_{18}$	118.48	-326.23	-110	123	165	-223	-110	16	794	123	0.213	0.514	0.73	Yes	0.117	0.283	0.41	Yes	0.713	0.284	1.00	Yes	0.690	0.284	0.98	Yes	1.00	**2.42**
		$U_{19} - L_{19}$	47.20	-333.71	-56	44	229	-228	-84	-3	344	70	0.085	0.392	0.48	Yes	0.047	0.215	0.27	Yes	0.729	0.149	0.88	Yes	0.706	0.292	1.00	Yes	1.00	**1.58**
		$U_{20} - L_{20}$	-----	-380.64	19	-28	10	-89	-46	-15	-235	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.148	1.00	Yes	0.805	0.113	0.92	Yes	1.00	**0.91**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
	Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$	673.01	-----	-79	50	-16	-2	56	-82	-12	5	0.883	0.113	1.00	Yes	0.533	0.062	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_1 - L_2$	463.17	-82.13	-90	1	16	-19	-170	-136	-8	-16	0.833	0.165	1.00	Yes	0.458	0.091	0.55	Yes	0.188	0.137	0.33	Yes	0.174	0.116	0.29	Yes	1.00	**1.90**
		$U_2 - L_3$	417.73	-222.19	-113	-2	-48	-65	-347	-47	139	-59	0.751	0.244	1.00	Yes	0.413	0.134	0.55	Yes	0.511	0.215	0.73	Yes	0.470	0.144	0.62	Yes	1.00	**3.01**
		$U_3 - L_4$	-----	-375.00	-34	-53	-9	-76	-219	-174	32	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.140	1.00	Yes	0.793	0.097	0.90	Yes	1.00	**1.67**
		$U_4 - L_4$	557.99	-----	-96	23	-37	0	-197	-285	-306	-173	0.826	0.169	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.50**
		$U_5 - L_5$	667.51	-----	-210	212	-82	92	-334	-327	-465	-133	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.60**
		$U_1 - L_6$	649.20	-----	-299	251	-85	104	-245	-212	295	123	0.768	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.37**
		$U_6 - L_7$	650.62	-----	-106	298	1	136	-116	-188	312	188	0.769	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.38**
		$U_8 - L_8$	987.37	-----	-98	357	19	139	328	374	340	103	0.789	0.207	1.00	Yes	0.489	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_9 - L_{10}$	1003.81	-----	-307	233	-77	87	154	444	120	132	0.802	0.193	1.00	Yes	0.497	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		$U_{10} - L_{11}$	987.81	-----	-257	176	-60	99	-10	351	18	184	0.834	0.165	1.00	Yes	0.516	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_{11} - L_{12}$	850.34	-----	-256	106	-105	1	-12	235	-29	70	0.841	0.154	1.00	Yes	0.463	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_{12} - L_{13}$	650.03	-----	-204	144	-78	34	-68	119	-58	-101	0.792	0.202	1.00	Yes	0.499	0.113	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.58**
		$U_{13} - L_{14}$	459.01	-----	-91	42	-24	-25	-54	-57	-73	-168	0.826	0.165	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.54**
		$U_{15} - L_{14}$	227.98	-307.09	-60	-4	18	-96	-264	-235	-524	-112	0.410	0.274	0.69	Yes	0.226	0.151	0.38	Yes	0.719	0.271	1.00	Yes	0.650	0.122	0.78	Yes	1.00	**1.94**
		$U_{16} - L_{15}$	359.50	-----	-116	84	-35	-21	-343	-269	-676	-105	0.647	0.344	1.00	Yes	0.356	0.189	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.72**
		$U_{17} - L_{16}$	508.78	-----	-143	87	-34	14	-451	-409	-110	-130	0.746	0.250	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.26**
		$U_{18} - L_{17}$	600.85	-----	-319	243	-111	76	-575	-492	-111	-118	0.710	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.39**
		$U_{19} - L_{18}$	674.33	-----	-351	253	-131	86	-537	-468	-64	-105	0.730	0.268	1.00	Yes	0.402	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.37**
		$U_{20} - L_{19}$	714.69	-----	-255	256	-95	93	-528	-364	-100	-39	0.774	0.218	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.43**
	Structure 2	$U_0 - L_1$	806.71	-----	-352	356	-113	99	-6	-190	-61	-50	0.798	0.194	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		$U_1 - L_2$	791.35	-----	-395	303	-95	71	-221	38	-100	-29	0.783	0.216	1.00	Yes	0.431	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		$U_2 - L_3$	657.43	-----	-333	271	-82	62	-165	38	-22	91	0.777	0.219	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$U_3 - L_4$	596.79	-----	-183	130	-37	16	-160	11	105	61	0.796	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_4 - L_5$	422.78	-----	-135	91	-5	-21	-226	75	-71	-144	0.760	0.238	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.76**
		$U_5 - L_6$	436.32	-248.52	-127	72	58	-105	-161	20	-171	-164	0.785	0.212	1.00	Yes	0.432	0.117	0.55	Yes	0.587	0.161	0.75	Yes	0.526	0.163	0.69	Yes	1.00	**2.60**
		$U_6 - L_7$	-----	-382.27	-53	-12	57	-104	-159	-83	-97	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.173	1.00	Yes	0.732	0.119	0.86	Yes	1.00	**1.69**
		$U_8 - L_7$	549.21	-----	-167	130	-69	-7	-240	-406	-712	-166	0.700	0.295	1.00	Yes	0.441	0.169	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.85**
		$U_8 - L_8$	680.70	-----	-330	210	-141	43	-479	-467	-517	-241	0.737	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.66**
		$U_{10} - L_9$	792.35	-----	-303	230	-135	61	-472	-441	74	-192	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_{11} - L_{10}$	867.97	-----	-333	285	-108	131	-442	-461	139	-2	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**
		$U_{12} - L_{11}$	850.56	-----	-371	335	-118	154	-384	-435	223	77	0.775	0.217	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_{13} - L_{12}$	753.46	-----	-423	380	-151	154	-192	-159	336	128	0.745	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.46**
		$U_{14} - L_{13}$	743.83	-----	-270	423	-19	155	-258	-130	397	194	0.736	0.255	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_{14} - L_{15}$	634.78	-----	-224	359	27	70	236	163	216	-43	0.750	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		$U_{15} - L_{16}$	636.22	-----	-370	343	-62	68	-163	202	-10	21	0.752	0.246	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{16} - L_{17}$	711.33	-----	-327	333	-69	96	-296	314	-149	63	0.770	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_{17} - L_{18}$	658.84	-----	-290	285	-66	78	-43	293	-27	101	0.779	0.217	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.83**
		$U_{18} - L_{19}$	670.67	-----	-282	259	-49	68	68	256	33	20	0.793	0.206	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.85**
		$U_{19} - L_{20}$	604.32	-----	-196	157	-33	14	25	230	-13	-39	0.771	0.222	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**
		$U_{20} - L_{21}$	448.44	-----	-126	113	-8	-7	19	90	-56	-89	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$U_{21} - L_{22}$	442.18	-198.68	-118	49	25	-73	-32	98	-41	-179	0.795	0.203	1.00	Yes	0.437	0.112	0.55	Yes	0.469	0.143	0.62	Yes	0.420	0.151	0.58	Yes	1.00	**2.36**
		$U_{23} - L_{22}$	374.68	-289.80	-95	49	-1	-70	-219	-256	-675	-23	0.674	0.317	1.00	Yes	0.371	0.174	0.55	Yes	0.690	0.281	0.98	Yes	0.613	0.121	0.74	Yes	1.00	**2.34**
		$U_{24} - L_{23}$	411.64	-----	-119	105	-8	-16	-313	-214	-346	-44	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.75**
		$U_{25} - L_{24}$	563.11	-----	-183	177	-53	19	-390	-306	-546	-133	0.718	0.275	1.00	Yes	0.395	0.157	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{26} - L_{25}$	657.05	-----	-271	264	-26	37	-362	-353	120	47	0.777	0.219	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_{27} - L_{26}$	645.65	-----	-299	266	-45	58	-333	-353	177	69	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.77**
		$U_{28} - L_{27}$	708.02	-----	-332	360	-47	66	-273	-248	204	113	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
		$U_{29} - L_{28}$	626.74	-----	-371	342	-72	72	-225	-169	211	102	0.741	0.251	1.00	Yes	0.408	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		$U_{30} - L_{29}$	626.77	-----	-225	347	36	103	-169	-225	318	159	0.741	0.254	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		$U_{30} - L_{31}$	762.97	-----	-293	434	14	73	152	190	283	0	0.755	0.244	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		$U_{31} - L_{32}$	725.11	-----	-411	360	-74	77	-180	236	10	47	0.753	0.242	1.00	Yes	0.414	0.124	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{32} - L_{33}$	881.44	-----	-357	345	-58	93	-283	277	-147	140	0.803	0.190	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_{33} - L_{34}$	877.99	-----	-346	277	-67	90	-43	366	24	209	0.800	0.197	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_{34} - L_{35}$	815.89	-----	-311	222	-93	48	15	264	86	-23	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.01**
		$U_{35} - L_{36}$	743.99	-----	-334	256	-97	32	14	84	-72	-132	0.806	0.193	1.00	Yes	0.443	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{36} - L_{37}$	611.49	-----	-195	144	-34	-11	-111	76	-69	-217	0.780	0.218	1.00	Yes	0.491	0.123	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{38} - L_{37}$	-----	-368.17	-24	-10	32	-78	-169	-211	-462	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.200	1.00	Yes	0.705	0.089	0.80	Yes	1.00	**1.29**
		$U_{39} - L_{38}$	323.85	-312.04	-99	54	64	-109	-365	-250	-464	-93	0.582	0.274	0.86	Yes	0.320	0.151	0.48	Yes	0.743	0.252	1.00	Yes	0.660	0.140	0.81	Yes	1.00	**2.40**
		$U_{40} - L_{39}$	378.07	-140.16	-122	94	-6	-34	-342	-271	-555	-96	0.680	0.317	1.00	Yes	0.374	0.174	0.55	Yes	0.335	0.218	0.56	Yes	0.297	0.156	0.46	Yes	1.00	**1.97**
		$U_{41} - L_{40}$	548.90	-----	-175	123	-17	2	-479	-383	-93	-78	0.732	0.260	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.74**
		$U_{42} - L_{41}$	607.54	-----	-328	248	-49	32	-475	-487	-67	-64	0.718	0.274	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.70**
		$U_{43} - L_{42}$	753.07	-----	-383	313	-64	43	-486	-434	-3	-44	0.745	0.250	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_{44} - L_{43}$	770.14	-----	-281	325	-93	79	-575	-325	60	-22	0.762	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
	Structure 3	$U_0 - L_1$	702.90	-----	-375	315	-112	94	-262	-165	-63	-53	0.761	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.86**
		$U_1 - L_2$	717.61	-----	-343	253	-99	67	-281	-52	-126	-45	0.777	0.222	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.85**
		$U_2 - L_3$	645.62	-----	-331	242	-97	63	-254	126	-49	78	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.63**
		$U_3 - L_4$	553.02	-----	-150	108	-28	10	-140	-18	73	48	0.811	0.185	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.63**
		$U_4 - L_5$	424.24	-----	-133	90	-8	-29	-212	25	-102	-165	0.763	0.231	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.86**
		$U_5 - L_6$	418.03	-295.01	-112	-5	36	-103	-240	-11	-221	-330	0.752	0.239	1.00	Yes	0.414	0.132	0.55	Yes	0.691	0.218	0.91	Yes	0.624	0.144	0.77	Yes	1.00	**2.52**
		$U_7 - L_6$	426.05	-----	-85	34	-16	-37	-256	-287	-402	-185	0.766	0.225	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.73**
		$U_8 - L_7$	576.69	-----	-187	147	-85	11	-419	-372	-666	-227	0.703	0.293	1.00	Yes	0.442	0.168	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.71**
		$U_8 - L_8$	747.05	-----	-247	90	-153	-19	-593	-547	-934	-460	0.739	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$U_{10} - L_9$	933.82	-----	-268	148	-109	56	-590	-646	-632	-303	0.789	0.209	1.00	Yes	0.488	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		$U_{11} - L_{10}$	997.48	-----	-302	259	-82	89	-502	-426	231	89	0.797	0.198	1.00	Yes	0.494	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		$U_{12} - L_{11}$	975.01	-----	-112	358	3	133	-453	-312	324	183	0.779	0.217	1.00	Yes	0.483	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_{12} - L_{13}$	657.21	-----	-113	293	25	73	274	182	173	-14	0.777	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		$U_{13} - L_{14}$	666.69	-----	-285	240	-24	58	-81	228	-32	49	0.788	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.94**
		$U_{14} - L_{15}$	706.92	-----	-195	192	-17	64	-204	243	33	74	0.836	0.155	1.00	Yes	0.460	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.88**
		$U_{15} - L_{16}$	585.35	-----	-102	36	-16	11	-21	143	-45	55	0.858	0.137	1.00	Yes	0.472	0.075	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**
		$U_{17} - L_{16}$	-----	-389.65	-12	-22	7	-53	25	20	-251	23	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.105	1.00	Yes	0.824	0.068	0.90	Yes	1.00	**1.60**
		$U_{18} - L_{17}$	228.07	-311.37	-83	-24	-25	-62	-294	-247	-643	-33	0.410	0.292	0.71	Yes	0.226	0.161	0.39	Yes	0.717	0.278	1.00	Yes	0.659	0.106	0.77	Yes	1.00	**2.17**
		$U_{19} - L_{18}$	409.17	-123.69	-100	12	24	-19	-443	-372	152	117	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	0.284	0.236	0.52	Yes	0.262	0.128	0.39	Yes	1.00	**1.73**
		$U_{20} - L_{19}$	633.33	-----	-15	31	-15	-7	-515	-399	105	118	0.831	0.166	1.00	Yes	0.502	0.091	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-548.59	-21	79	271	-1059	18	-28	-41	-438	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.249	1	Yes	0.740	0.252	1.00	Yes	1.00	**2.34**
		U_1 - U_2	-----	-583.35	-50	92	-161	-814	-6	43	-42	73	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.205	1	Yes	0.787	0.193	0.99	Yes	1.00	**1.69**
		U_2 - U_3	136.88	-585.84	-92	261	-581	-605	0	-90	151	-102	0.157	0.169	0.33	Yes	0.106	0.110	0.22	Yes	0.797	0.198	1	Yes	0.790	0.144	0.94	Yes	1.00	**1.69**
		U_3 - U_4	312.10	-550.37	93	255	-541	-666	-85	-80	4	-161	0.358	0.186	0.55	Yes	0.246	0.127	0.38	Yes	0.749	0.247	1	Yes	0.742	0.158	0.91	Yes	1.00	**2.06**
		U_4 - U_5	325.23	-563.13	105	257	-992	-16	-169	-21	-79	-98	0.373	0.264	0.64	Yes	0.256	0.181	0.44	Yes	0.766	0.220	0.99	Yes	0.759	0.236	1.00	Yes	1.00	**2.13**
		U_5 - U_6	604.81	-----	234	391	-1013	-76	-339	-16	-132	-344	0.693	0.299	1.00	Yes	0.468	0.195	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.84**
		U_6 - U_7	791.22	-----	290	191	-808	39	-346	85	-468	-164	0.757	0.236	1.00	Yes	0.529	0.162	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		U_7 - U_8	923.50	-----	-46	1201	-1453	2111	-264	339	-313	151	0.640	0.354	1.00	Yes	0.446	0.241	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		U_8 - U_9	872.20	-----	1268	-164	1507	-1355	-101	248	4	215	0.715	0.283	1.00	Yes	0.489	0.193	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		U_9 - U_{10}	651.92	-----	229	234	-241	-869	108	436	160	558	0.707	0.284	1.00	Yes	0.479	0.191	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		U_{10} - U_{11}	-----	-615.71	245	-74	141	-919	224	101	314	46	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.193	0.99	Yes	0.786	0.206	1.00	Yes	1.00	**2.18**
		U_{11} - U_{12}	-----	-862.91	177	-118	-223	-907	166	102	270	136	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.178	1	Yes	0.810	0.150	0.96	Yes	1.00	**1.75**
		U_{12} - U_{13}	-----	-1233.16	-21	-160	-23	-1135	220	-32	241	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.162	1	Yes	0.824	0.156	0.99	Yes	1.00	**2.00**
		U_{13} - U_{14}	-----	-1362.32	-105	-349	-920	-1367	150	70	203	49	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.205	1	Yes	0.781	0.151	0.94	Yes	1.00	**1.92**
		U_{14} - U_{15}	-----	-1333.72	-246	-183	-1505	-944	185	-50	136	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.222	1	Yes	0.765	0.166	0.94	Yes	1.00	**1.84**
		U_{15} - U_{16}	-----	-1392.50	-70	-411	-1297	-558	22	-61	223	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.191	1	Yes	0.798	0.143	0.95	Yes	1.00	**1.85**
		U_{16} - U_{17}	-----	-1364.39	-315	-184	-1590	-377	53	-173	-57	-280	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.203	1	Yes	0.782	0.175	0.96	Yes	1.00	**1.91**
		U_{17} - U_{18}	-----	-1050.30	-166	-103	-932	42	-155	-226	-74	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.162	1	Yes	0.822	0.152	0.98	Yes	1.00	**1.78**
		U_{18} - U_{19}	-----	-718.68	-197	-29	-868	44	-194	-173	-44	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.183	1	Yes	0.809	0.175	0.99	Yes	1.00	**1.62**
		U_{19} - U_{20}	-----	-593.86	-185	-15	-1640	655	-130	3	377	12	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.267	0.95	Yes	0.668	0.330	1.00	Yes	1.00	**3.40**
	Structure 2	U_0 - U_1	-----	-628.44	170	-137	108	-1513	95	184	102	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.213	0.97	Yes	0.742	0.257	1.00	Yes	1.00	**3.38**
		U_1 - U_2	-----	-785.38	-104	-147	-91	-1077	338	642	210	282	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.228	1	Yes	0.758	0.163	0.93	Yes	1.00	**1.84**
		U_2 - U_3	-----	-1158.79	-80	-214	-125	-1347	610	1	461	0	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.167	1	Yes	0.822	0.137	0.96	Yes	1.00	**2.07**
		U_3 - U_4	-----	-1408.04	-360	-283	-1217	-1423	117	-306	243	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.191	1	Yes	0.802	0.127	0.93	Yes	1.00	**2.05**
		U_4 - U_5	-----	-1485.07	-361	-318	-1565	-1818	-68	-356	131	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.762	0.151	0.92	Yes	1.00	**1.96**
		U_5 - U_6	-----	-1498.45	-385	-4	-2049	-1091	-108	-295	34	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1	Yes	0.769	0.170	0.94	Yes	1.00	**1.95**
		U_6 - U_7	-----	-1315.45	-266	-75	-1177	-1959	-87	-263	-16	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.749	0.175	0.93	Yes	1.00	**1.81**
		U_7 - U_8	-----	-1338.87	-156	-199	-2116	-586	-184	-217	-88	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.762	0.189	0.96	Yes	1.00	**1.88**
		U_8 - U_9	-----	-1194.10	-285	106	-1518	-228	-227	-184	-48	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.179	1	Yes	0.810	0.161	0.98	Yes	1.00	**2.00**
		U_9 - U_{10}	-----	-937.82	-82	297	-1472	-92	-282	-131	-83	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.182	1	Yes	0.809	0.179	0.99	Yes	1.00	**2.17**
		U_{10} - U_{11}	508.37	-793.69	101	374	-1412	-193	-178	-79	-151	-213	0.429	0.225	0.66	Yes	0.292	0.145	0.44	Yes	0.794	0.199	1	Yes	0.789	0.199	0.99	Yes	1.00	**2.96**
		U_{11} - U_{12}	803.54	-----	173	508	-1877	372	-382	-180	-202	-436	0.679	0.318	1.00	Yes	0.456	0.213	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		U_{12} - U_{13}	1157.62	-----	305	35	-1119	-996	-530	-105	-784	-493	0.782	0.216	1.00	Yes	0.557	0.148	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		U_{13} - U_{14}	1377.18	-----	-289	2916	-409	1507	-650	300	-538	-176	0.677	0.314	1.00	Yes	0.479	0.206	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		U_{14} - U_{15}	1384.96	-----	2989	-26	1307	-98	-543	281	-248	147	0.681	0.314	1.00	Yes	0.482	0.206	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		U_{15} - U_{16}	1198.40	-----	63	330	-1420	-1777	57	745	378	864	0.724	0.275	1.00	Yes	0.515	0.186	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		U_{16} - U_{17}	966.96	-----	612	258	-19	-1766	308	326	576	368	0.713	0.282	1.00	Yes	0.474	0.186	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		U_{17} - U_{18}	755.94	-----	499	303	-613	-1189	33	169	201	171	0.759	0.231	1.00	Yes	0.505	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		U_{18} - U_{19}	460.47	-636.12	460	198	-216	-1411	12	48	179	-18	0.462	0.266	0.73	Yes	0.303	0.169	0.48	Yes	0.756	0.206	0.97	Yes	0.751	0.240	1.00	Yes	1.00	**2.86**
		U_{19} - U_{20}	256.53	-723.71	294	157	-706	-831	11	152	133	42	0.241	0.154	0.40	Yes	0.159	0.101	0.27	Yes	0.803	0.188	1	Yes	0.798	0.133	0.94	Yes	1.00	**2.42**
		U_{20} - U_{21}	-----	-845.72	137	-10	-859	-1011	106	-8	208	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.213	1	Yes	0.772	0.146	0.92	Yes	1.00	**2.32**
		U_{21} - U_{22}	-----	-803.20	-14	14	-826	-1405	-14	-50	58	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.259	1	Yes	0.733	0.203	0.94	Yes	1.00	**2.07**
		U_{22} - U_{23}	-----	-812.95	-15	-25	-1470	-459	-70	-101	92	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.245	1	Yes	0.742	0.213	0.96	Yes	1.00	**2.10**
		U_{23} - U_{24}	-----	-844.66	19	94	-1370	-135	-212	-105	24	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1	Yes	0.771	0.198	0.97	Yes	1.00	**2.25**
		U_{24} - U_{25}	216.99	-747.14	118	245	-808	-399	-240	-32	-139	-162	0.203	0.162	0.37	Yes	0.135	0.106	0.25	Yes	0.830	0.169	1	Yes	0.824	0.129	0.96	Yes	1.00	**2.29**
		U_{25} - U_{26}	405.64	-668.56	161	410	-1194	177	-216	50	-95	-80	0.407	0.234	0.65	Yes	0.267	0.149	0.42	Yes	0.794	0.153	0.95	Yes	0.790	0.203	1.00	Yes	1.00	**2.73**
		U_{26} - U_{27}	744.14	-----	271	478	-1243	-390	-222	37	-250	-200	0.747	0.248	1.00	Yes	0.497	0.164	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		U_{27} - U_{28}	959.85	-----	234	581	-1863	-361	-353	-43	-279	-527	0.707	0.289	1.00	Yes	0.471	0.191	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		U_{28} - U_{29}	1156.44	-----	267	60	-1211	-2046	-435	70	-756	-369	0.699	0.296	1.00	Yes	0.497	0.200	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		U_{29} - U_{30}	1365.40	-----	-115	3028	-144	1298	-575	577	-128	331	0.671	0.320	1.00	Yes	0.475	0.210	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		U_{30} - U_{31}	1446.25	-----	2804	-131	1379	-342	-220	425	283	402	0.711	0.289	1.00	Yes	0.503	0.189	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		U_{31} - U_{32}	1111.23	-----	11	342	-1380	-742	191	655	459	758	0.750	0.246	1.00	Yes	0.535	0.168	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		U_{32} - U_{33}	872.21	-----	529	236	-274	-1332	327	298	604	131	0.737	0.262	1.00	Yes	0.495	0.175	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		U_{33} - U_{34}	603.42	-764.30	402	193	-564	-1483	131	187	255	134	0.510	0.240	0.75	Yes	0.347	0.155	0.51	Yes	0.764	0.230	1	Yes	0.760	0.209	0.97	Yes	1.00	**3.16**
		U_{34} - U_{35}	-----	-912.86	361	-14	87	-1670	114	-2	174	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.166	0.96	Yes	0.788	0.203	1.00	Yes	1.00	**2.32**
		U_{35} - U_{36}	-----	-1194.34	161	-241	-849	-1261	98	93	244	24	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.176	1	Yes	0.810	0.134	0.95	Yes	1.00	**2.22**
		U_{36} - U_{37}	-----	-1302.31	-134	-47	-930	-2192	163	-48	262	26	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.246	1	Yes	0.742	0.195	0.94	Yes	1.00	**1.96**
		U_{37} - U_{38}	-----	-1316.24	59	-232	-2137	-765	19	15	241	9	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.240	1	Yes	0.749	0.190	0.94	Yes	1.00	**1.99**
		U_{38} - U_{39}	-----	-1603.51	64	-388	-921	-1668	83	-100	267	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.170	1	Yes	0.823	0.138	0.97	Yes	1.00	**2.32**
		U_{39} - U_{40}	-----	-1481.24	-316	-465	-2080	-937	-116	-136	-7	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.224	1	Yes	0.760	0.172	0.94	Yes	1.00	**2.00**
		U_{40} - U_{41}	-----	-1379.83	-393	-428	-1636	-939	-90	-129	-174	-286	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.208	1	Yes	0.786	0.146	0.94	Yes	1.00	**1.95**
		U_{41} - U_{42}	-----	-1141.65	-272	-177	-1780	-130	-96	38	-72	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.176	1	Yes	0.810	0.181	1.00	Yes	1.00	**1.93**
		U_{42} - U_{43}	-----	-842.54	-268	-55	-1145	-103	112	-57	232	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.172	1	Yes	0.813	0.174	0.99	Yes	1.00	**2.07**
		U_{43} - U_{44}	-----	-584.46	-126	-164	-1797	444	-64	3	304	7	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.277	0.98	Yes	0.690	0.305	1.00	Yes	1.00	**3.36**
	Structure 3	U_0 - U_1	-----	-612.61	171	-173	571	-1533	62	129	-47	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.208	0.91	Yes	0.689	0.308	1.00	Yes	1.00	**3.37**
		U_1 - U_2	-----	-692.67	-68	-114	37	-778	252	511	198	286	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.209	1	Yes	0.779	0.157	0.94	Yes	1.00	**1.65**
		U_2 - U_3	-----	-1033.94	-78	-119	104	-946	513	5	496	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.171	1	Yes	0.809	0.154	0.97	Yes	1.00	**1.83**
		U_3 - U_4	-----	-1372.94	-142	-202	-899	-1377	129	-237	248	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.203	1	Yes	0.787	0.152	0.94	Yes	1.00	**2.12**
		U_4 - U_5	-----	-1384.70	-322	-43	-1009	-1091	-15	-312	190	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.190	1	Yes	0.794	0.120	0.92	Yes	1.00	**1.94**
		U_5 - U_6	-----	-1360.33	-145	-219	-1163	-1229	-54	-211	-21	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1	Yes	0.780	0.136	0.92	Yes	1.00	**1.99**
		U_6 - U_7	-----	-1392.17	-300	-78	-1349	-598	-98	-234	65	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.798	0.149	0.95	Yes	1.00	**2.07**
		U_7 - U_8	-----	-1229.92	-123	-35	-963	-189	-216	-206	-32	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.164	1	Yes	0.821	0.133	0.96	Yes	1.00	**2.02**
		U_8 - U_9	-----	-895.80	-123	179	-865	-4	-103	-108	-80	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.147	1	Yes	0.840	0.144	0.99	Yes	1.00	**1.79**
		U_9 - U_{10}	-----	-598.17	-92	224	-1030	150	-205	-127	-142	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.209	0.98	Yes	0.763	0.231	1.00	Yes	1.00	**1.97**
		U_{10} - U_{11}	661.73	-----	227	233	-959	53	-333	-60	-388	-167	0.718	0.277	1.00	Yes	0.486	0.186	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		U_{11} - U_{12}	817.04	-----	-147	1110	-1359	1707	-314	146	-321	12	0.669	0.326	1.00	Yes	0.458	0.222	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.84**
		U_{12} - U_{13}	1002.99	-----	1318	-41	1736	-1293	-363	110	-137	134	0.695	0.300	1.00	Yes	0.485	0.205	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		U_{13} - U_{14}	825.00	-----	199	319	-414	-648	-108	377	124	472	0.789	0.203	1.00	Yes	0.551	0.139	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.98**
		U_{14} - U_{15}	645.39	-----	424	245	-114	-766	46	155	419	9	0.740	0.253	1.00	Yes	0.499	0.166	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		U_{15} - U_{16}	307.59	-563.89	254	129	-375	-759	-4	135	141	168	0.353	0.209	0.57	Yes	0.242	0.143	0.39	Yes	0.767	0.229	1	Yes	0.760	0.181	0.95	Yes	1.00	**2.13**
		U_{16} - U_{17}	303.61	-566.37	290	70	-641	-322	39	63	254	0	0.348	0.195	0.55	Yes	0.239	0.134	0.38	Yes	0.771	0.223	1	Yes	0.764	0.152	0.92	Yes	1.00	**2.13**
		U_{17} - U_{18}	119.99	-579.42	244	-126	-585	-346	-69	156	76	-74	0.138	0.165	0.31	Yes	0.093	0.108	0.21	Yes	0.788	0.204	1	Yes	0.781	0.139	0.93	Yes	1.00	**1.68**
		U_{18} - U_{19}	-----	-570.70	50	-28	-835	-157	159	24	125	25	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.216	1	Yes	0.770	0.198	0.97	Yes	1.00	**1.60**
		U_{19} - U_{20}	-----	-535.54	123	-232	-868	-46	-60	19	285	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.264	1	Yes	0.722	0.206	0.93	Yes	1.00	**2.45**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	205.04	-148.21	652	-1278	523	-554	-382	-1403	74	273	0.314	0.685	1.00	Yes	0.185	0.411	0.60	Yes	0.269	0.465	0.74	Yes	0.267	0.384	0.66	Yes	1.00	**7.07**
		L_1 - L_2	453.46	-----	-224	-730	46	-3	-396	29	24	18	0.694	0.304	1.00	Yes	0.423	0.201	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		L_2 - L_3	667.14	-----	-622	-872	-27	73	-82	-20	8	-10	0.768	0.224	1.00	Yes	0.444	0.135	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		L_3 - L_4	628.61	-171.77	-972	-176	47	211	-78	221	-31	34	0.723	0.270	1.00	Yes	0.430	0.174	0.61	Yes	0.235	0.214	0.45	Yes	0.232	0.235	0.47	Yes	1.00	**2.02**
		L_4 - L_5	-----	-564.19	-452	-453	112	516	-261	33	185	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.117	0.99	Yes	0.860	0.137	1.00	Yes	1.00	**2.76**
		L_5 - L_6	-----	-750.06	-381	-170	140	581	-60	-17	18	84	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.122	1	Yes	0.865	0.129	1.00	Yes	1.00	**2.63**
		L_6 - L_7	-----	-1038.31	-1005	-258	140	14	66	71	189	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.146	1	Yes	0.836	0.158	1.00	Yes	1.00	**3.05**
		L_7 - L_8	-----	-1259.91	-32	583	-42	1373	41	73	156	212	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.798	0.182	0.98	Yes	1.00	**3.27**
		L_8 - L_9	-----	-1265.79	554	-47	1396	-95	38	-14	130	29	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1	Yes	0.802	0.185	0.99	Yes	1.00	**3.22**
		L_9 - L_{10}	-----	-1063.80	-650	-853	106	94	23	9	-6	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.113	0.98	Yes	0.856	0.134	1.00	Yes	1.00	**4.57**
		L_{10} - L_{11}	-----	-555.02	-198	-564	500	-13	90	-164	72	8	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.112	0.97	Yes	0.846	0.149	1.00	Yes	1.00	**3.34**
		L_{11} - L_{12}	605.25	-----	-82	-547	347	-190	-387	168	-12	14	0.784	0.212	1.00	Yes	0.470	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		L_{12} - L_{13}	1061.40	-----	-415	-736	76	-94	-44	-261	-21	-35	0.838	0.161	1.00	Yes	0.536	0.097	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		L_{13} - L_{14}	1289.67	-----	-177	-1576	223	-392	-222	130	-106	63	0.758	0.236	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		L_{14} - L_{15}	1572.96	-----	-1730	-981	-352	-81	-201	46	-66	-49	0.768	0.223	1.00	Yes	0.499	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		L_{15} - L_{16}	1668.43	-----	-1410	-1479	-192	-388	-57	-17	-76	14	0.815	0.184	1.00	Yes	0.523	0.107	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_{16} - L_{17}	1240.94	-----	-1337	-174	-396	38	-150	76	-34	-64	0.785	0.210	1.00	Yes	0.509	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		L_{17} - L_{18}	916.24	-----	-943	-141	-187	-51	-15	-135	-40	1	0.798	0.199	1.00	Yes	0.511	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.70**
		L_{18} - L_{19}	446.79	-----	-819	230	-263	188	-182	308	3	-14	0.684	0.310	1.00	Yes	0.463	0.195	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		L_{19} - L_{20}	360.55	-----	-308	31	-1433	916	1	0	-50	-11	0.552	0.440	1.00	Yes	0.337	0.299	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.55**
	Structure 2	L_0 - L_1	185.43	-----	524	-1603	819	-1838	-370	-1286	24	83	0.280	0.716	1.00	Yes	0.170	0.353	0.53	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.17**
		L_1 - L_2	545.67	-----	277	-1224	165	-205	-495	298	77	102	0.663	0.330	1.00	Yes	0.394	0.210	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		L_2 - L_3	1036.25	-----	-304	-1077	-19	-140	177	-212	124	164	0.817	0.178	1.00	Yes	0.536	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**
		L_3 - L_4	1329.73	-----	-254	-1594	57	-321	-393	198	44	124	0.781	0.218	1.00	Yes	0.526	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
		L_4 - L_5	1734.39	-----	-1661	-1357	-236	-222	421	36	16	-11	0.809	0.185	1.00	Yes	0.535	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
		L_5 - L_6	1879.22	-----	-1591	-1830	-26	-319	-452	158	-93	57	0.806	0.190	1.00	Yes	0.541	0.117	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		L_6 - L_7	1813.39	-----	-2454	-1271	-376	-87	84	191	52	-15	0.767	0.227	1.00	Yes	0.510	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_7 - L_8	1347.81	-----	-1934	-759	-186	231	-132	57	-69	78	0.773	0.224	1.00	Yes	0.508	0.131	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		L_8 - L_9	1102.34	-----	-1540	-84	-125	492	-99	29	43	-124	0.771	0.219	1.00	Yes	0.519	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		L_9 - L_{10}	842.21	-586.11	-1497	-252	-85	604	10	-50	-38	32	0.752	0.246	1.00	Yes	0.438	0.154	0.60	Yes	0.620	0.176	0.8	Yes	0.615	0.239	0.86	Yes	1.00	**3.48**
		L_{10} - L_{11}	-----	-680.19	-1140	197	1	560	-109	45	119	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.103	0.91	Yes	0.799	0.199	1.00	Yes	1.00	**2.71**
		L_{11} - L_{12}	-----	-1049.10	-696	-168	3	991	-43	-123	33	91	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.103	0.97	Yes	0.860	0.135	1.00	Yes	1.00	**3.46**
		L_{12} - L_{13}	-----	-1447.79	-382	-239	-59	-934	-22	-179	430	206	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.124	1	Yes	0.866	0.093	0.96	Yes	1.00	**4.20**
		L_{13} - L_{14}	-----	-1501.64	-477	1323	-1007	2724	-190	-257	212	218	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.172	0.94	Yes	0.756	0.238	1.00	Yes	1.00	**3.67**
		L_{14} - L_{15}	-----	-1478.03	1259	-546	2821	-844	-238	-166	11	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.178	0.93	Yes	0.744	0.246	1.00	Yes	1.00	**3.28**
		L_{15} - L_{16}	-----	-1481.99	-512	-92	-1105	204	-114	7	-192	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.105	1	Yes	0.886	0.110	1.00	Yes	1.00	**4.77**
		L_{16} - L_{17}	-----	-1165.50	-62	-801	1160	77	163	72	6	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.128	0.99	Yes	0.849	0.143	1.00	Yes	1.00	**3.95**
		L_{17} - L_{18}	-----	-833.89	-28	-698	497	186	-365	143	17	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.111	1	Yes	0.876	0.112	0.99	Yes	1.00	**2.95**
		L_{18} - L_{19}	-----	-654.12	-369	-529	631	85	252	-48	-11	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.112	0.99	Yes	0.872	0.122	1.00	Yes	1.00	**2.95**
		L_{19} - L_{20}	695.57	-548.28	-681	-889	512	167	-74	221	-29	-32	0.788	0.205	1.00	Yes	0.466	0.131	0.60	Yes	0.735	0.140	0.88	Yes	0.731	0.172	0.91	Yes	1.00	**3.46**
		L_{20} - L_{21}	996.59	-393.09	-1169	-1001	402	17	245	-36	-2	-40	0.795	0.197	1.00	Yes	0.521	0.118	0.64	Yes	0.371	0.217	0.59	Yes	0.369	0.171	0.54	Yes	1.00	**3.55**
		L_{21} - L_{22}	970.43	-----	-1304	-1254	220	-141	-71	264	-54	18	0.774	0.219	1.00	Yes	0.518	0.137	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		L_{22} - L_{23}	912.59	-----	-1738	-1050	-143	186	-128	133	23	-40	0.728	0.268	1.00	Yes	0.487	0.167	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		L_{23} - L_{24}	926.46	-328.12	-1716	-807	-3	311	-82	72	-5	68	0.739	0.259	1.00	Yes	0.484	0.153	0.64	Yes	0.310	0.250	0.56	Yes	0.308	0.250	0.56	Yes	1.00	**3.14**
		L_{24} - L_{25}	647.53	-466.76	-1269	-293	111	458	-62	24	98	-92	0.734	0.260	1.00	Yes	0.434	0.167	0.61	Yes	0.626	0.169	0.8	Yes	0.622	0.245	0.87	Yes	1.00	**3.11**
		L_{25} - L_{26}	-----	-621.69	-840	-302	71	582	-36	-80	12	80	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.123	0.96	Yes	0.829	0.162	1.00	Yes	1.00	**3.09**
		L_{26} - L_{27}	-----	-841.86	-684	-449	166	502	-73	34	150	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.090	0.99	Yes	0.884	0.109	1.00	Yes	1.00	**3.44**
		L_{27} - L_{28}	-----	-1180.45	-1008	-77	61	1127	-89	-267	89	193	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.128	1	Yes	0.860	0.139	1.00	Yes	1.00	**4.52**
		L_{28} - L_{29}	-----	-1546.84	-177	-449	-182	-143	142	101	289	18	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.062	1	Yes	0.925	0.045	0.97	Yes	1.00	**5.17**
		L_{29} - L_{30}	-----	-1506.42	-499	1195	-743	2751	92	121	42	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.170	0.94	Yes	0.758	0.240	1.00	Yes	1.00	**3.38**
		L_{30} - L_{31}	-----	-1444.59	1249	-471	3032	-904	121	68	148	4	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.182	0.92	Yes	0.727	0.265	1.00	Yes	1.00	**3.71**
		L_{31} - L_{32}	-----	-1503.69	-279	-308	-810	211	88	57	-155	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.907	0.090	1	Yes	0.899	0.081	0.98	Yes	1.00	**4.94**
		L_{32} - L_{33}	-----	-1046.25	33	-739	1013	52	290	-99	-26	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.122	0.99	Yes	0.858	0.138	1.00	Yes	1.00	**3.51**
		L_{33} - L_{34}	-----	-735.89	54	-747	543	107	-300	209	20	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.102	0.98	Yes	0.864	0.131	1.00	Yes	1.00	**2.96**
		L_{34} - L_{35}	872.82	-691.28	-432	-1060	705	-4	404	-99	-9	-67	0.779	0.218	1.00	Yes	0.454	0.135	0.59	Yes	0.731	0.149	0.88	Yes	0.726	0.170	0.90	Yes	1.00	**3.91**
		L_{35} - L_{36}	1112.02	-----	-66	-1464	522	-61	-212	140	-80	11	0.778	0.218	1.00	Yes	0.524	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**
		L_{36} - L_{37}	1303.70	-----	-431	-2119	315	-77	25	161	36	-7	0.748	0.247	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		L_{37} - L_{38}	1834.47	-----	-1950	-2425	33	-425	-97	110	-65	51	0.776	0.220	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		L_{38} - L_{39}	1793.10	-----	-2425	-1424	-371	-78	-85	136	11	-61	0.769	0.224	1.00	Yes	0.516	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.84**
		L_{39} - L_{40}	1703.91	-----	-2063	-1445	-258	-388	-43	-75	-57	6	0.794	0.200	1.00	Yes	0.526	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		L_{40} - L_{41}	1321.30	-----	-1754	-498	-415	24	-134	136	-7	-14	0.776	0.216	1.00	Yes	0.523	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		L_{41} - L_{42}	1026.78	-----	-1180	-230	-195	-99	98	60	28	119	0.809	0.183	1.00	Yes	0.531	0.109	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		L_{42} - L_{43}	543.24	-----	-1304	95	-320	174	-76	441	151	66	0.660	0.338	1.00	Yes	0.392	0.215	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		L_{43} - L_{44}	229.18	-----	-624	72	-3071	1216	-579	-169	153	45	0.278	0.720	1.00	Yes	0.166	0.463	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.72**
	Structure 3	L_0 - L_1	271.06	-----	642	-1136	721	-1100	-250	-1132	39	176	0.415	0.576	1.00	Yes	0.253	0.376	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		L_1 - L_2	454.28	-----	279	-757	157	-187	-341	269	37	61	0.695	0.298	1.00	Yes	0.470	0.188	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		L_2 - L_3	937.54	-----	-123	-782	-21	-145	118	-220	92	134	0.816	0.179	1.00	Yes	0.523	0.107	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		L_3 - L_4	1254.71	-----	-406	-1133	45	-304	-399	194	30	118	0.793	0.202	1.00	Yes	0.515	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		L_4 - L_5	1666.21	-----	-1352	-1035	-272	-133	281	-29	26	12	0.814	0.183	1.00	Yes	0.523	0.107	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_5 - L_6	1659.16	-----	-1299	-1258	-30	-295	-27	392	-64	131	0.811	0.184	1.00	Yes	0.527	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.77**
		L_6 - L_7	1298.21	-----	-1586	-280	-348	203	-104	71	2	-29	0.764	0.227	1.00	Yes	0.495	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		L_7 - L_8	1047.46	-----	-898	-482	-91	51	18	106	-23	67	0.827	0.172	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		L_8 - L_9	607.65	-----	-727	30	-200	337	-45	64	61	-92	0.787	0.209	1.00	Yes	0.472	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**
		L_9 - L_{10}	383.14	-566.01	-516	-335	-20	511	13	22	-23	19	0.496	0.141	0.64	Yes	0.289	0.085	0.38	Yes	0.870	0.106	0.98	Yes	0.862	0.137	1.00	Yes	1.00	**3.54**
		L_{10} - L_{11}	-----	-971.19	-1305	-62	56	150	69	29	105	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.143	0.94	Yes	0.786	0.207	1.00	Yes	1.00	**4.16**
		L_{11} - L_{12}	-----	-1253.07	-57	533	-146	1449	-92	-109	-136	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1	Yes	0.794	0.192	0.99	Yes	1.00	**3.32**
		L_{12} - L_{13}	-----	-1242.03	555	-35	1385	-59	-136	-142	-282	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.787	0.183	0.98	Yes	1.00	**3.19**
		L_{13} - L_{14}	-----	-1061.66	-387	-591	-56	144	-463	-165	-131	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.132	1	Yes	0.855	0.093	0.95	Yes	1.00	**3.18**
		L_{14} - L_{15}	-----	-748.72	-128	-393	574	138	126	-81	-4	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.118	1	Yes	0.864	0.127	1.00	Yes	1.00	**2.69**
		L_{15} - L_{16}	-----	-552.32	-210	-565	479	156	-444	439	12	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.143	1	Yes	0.841	0.150	1.00	Yes	1.00	**2.71**
		L_{16} - L_{17}	679.85	-152.54	-607	-794	252	9	-90	131	33	-74	0.782	0.213	1.00	Yes	0.465	0.138	0.61	Yes	0.208	0.223	0.44	Yes	0.206	0.192	0.40	Yes	1.00	**2.15**
		L_{17} - L_{18}	675.54	-----	-752	-794	44	-69	75	181	17	105	0.777	0.221	1.00	Yes	0.450	0.132	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		L_{18} - L_{19}	467.91	-----	-747	-185	-18	29	10	255	51	-75	0.716	0.279	1.00	Yes	0.437	0.186	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
		L_{19} - L_{20}	109.99	-----	-2001	897	-1147	912	1053	286	-173	-47	0.168	0.827	1.00	Yes	0.099	0.501	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.54**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression													
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield									
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Controlling Bi-Axial Moment & Axial Value	Rating
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-375.00	-24	48	-59	120	-99	-32	-278	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1	Yes	0.793	0.153	0.95	Yes	1.00	**0.71**
		$U_1 - L_1$	-----	-349.78	20	-15	-182	202	45	20	-382	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.170	0.94	Yes	0.740	0.258	1.00	Yes	1.00	**1.84**
		$U_2 - L_2$	80.98	-338.79	72	-79	-159	215	34	7	137	132	0.146	0.314	0.47	Yes	0.080	0.173	0.26	Yes	0.740	0.143	0.89	Yes	0.717	0.275	1.00	Yes	1.00	**2.73**
		$U_3 - L_3$	236.99	-316.51	254	-251	-148	196	-423	-167	45	194	0.426	0.447	0.88	Yes	0.234	0.246	0.49	Yes	0.694	0.181	0.88	Yes	0.670	0.325	1.00	Yes	1.00	**3.58**
		$U_4 - L_4$	-----	-353.88	-27	20	192	-187	-93	-20	218	62	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.120	0.9	Yes	0.749	0.246	1.00	Yes	1.00	**2.51**
		$U_5 - L_5$	-----	-439.37	25	-39	194	-230	-122	-43	47	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.101	0.9	Yes	0.758	0.234	1.00	Yes	1.00	**1.89**
		$U_6 - L_6$	-----	-535.18	52	-63	222	-260	-82	58	-9	31	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.086	0.9	Yes	0.768	0.228	1.00	Yes	1.00	**1.76**
		$U_7 - L_7$	-----	-452.44	118	-132	273	-300	-130	46	29	75	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.118	0.88	Yes	0.698	0.296	1.00	Yes	1.00	**1.13**
		$U_8 - L_8$	-----	-1340.27	-1	-4	-185	222	-195	-68	-198	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.968	0.031	1	Yes	0.929	0.041	0.98	Yes	1.00	**2.46**
		$U_9 - L_9$	-----	-670.75	-166	190	-373	432	-224	-158	-249	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.128	0.93	Yes	0.758	0.240	1.00	Yes	1.00	**1.48**
		$U_{10} - L_{10}$	-----	-819.13	-115	107	-303	365	-205	-147	-264	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.113	0.97	Yes	0.808	0.189	1.00	Yes	1.00	**2.35**
		$U_{11} - L_{11}$	-----	-684.71	-70	148	-286	425	-126	10	127	105	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.087	0.91	Yes	0.797	0.197	1.00	Yes	1.00	**2.21**
		$U_{12} - L_{12}$	-----	-546.03	-63	63	-266	285	-165	-3	-111	70	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.096	0.89	Yes	0.749	0.243	1.00	Yes	1.00	**2.01**
		$U_{13} - L_{13}$	-----	-395.57	-4	23	-180	208	-87	80	-77	105	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.087	0.89	Yes	0.758	0.238	1.00	Yes	1.00	**1.60**
		$U_{14} - L_{14}$	-----	-317.01	-237	256	-175	186	-87	-11	154	40	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.134	0.85	Yes	0.671	0.327	1.00	Yes	1.00	**2.60**
		$U_{15} - L_{15}$	236.06	-352.95	-184	179	172	-198	-108	-94	-102	-179	0.425	0.305	0.73	Yes	0.234	0.168	0.41	Yes	0.791	0.149	0.94	Yes	0.747	0.253	1.00	Yes	1.00	**2.78**
		$U_{16} - L_{16}$	-----	-348.84	-48	32	182	-201	-60	-79	153	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.117	0.91	Yes	0.738	0.257	1.00	Yes	1.00	**2.13**
		$U_{17} - L_{17}$	-----	-450.38	34	-56	184	-212	-92	-53	45	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.104	0.95	Yes	0.777	0.215	1.00	Yes	1.00	**1.72**
		$U_{18} - L_{18}$	-----	-552.73	123	-129	369	-399	-163	-62	69	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.092	0.91	Yes	0.769	0.226	1.00	Yes	1.00	**1.80**
		$U_{19} - L_{19}$	-----	-647.12	139	-152	427	-462	-65	12	855	63	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.189	1	Yes	0.753	0.215	0.97	Yes	1.00	**1.90**
		$U_{20} - L_{20}$	-----	-577.13	166	-213	421	-494	28	4	795	104	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.233	1	Yes	0.672	0.229	0.91	Yes	1.00	**1.46**
	Structure 2	$U_0 - L_0$	-----	-637.09	-114	180	-380	501	-261	-44	-929	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.231	1	Yes	0.683	0.213	0.90	Yes	1.00	**1.52**
		$U_1 - L_1$	-----	-728.47	-113	120	-467	497	37	-67	-730	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.159	1	Yes	0.781	0.211	1.00	Yes	1.00	**2.19**
		$U_2 - L_2$	-----	-611.46	-87	96	-390	426	90	41	-204	31	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.083	0.91	Yes	0.779	0.218	1.00	Yes	1.00	**2.00**
		$U_3 - L_3$	-----	-503.44	-46	52	-198	222	15	125	109	147	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.106	0.97	Yes	0.790	0.202	1.00	Yes	1.00	**1.84**
		$U_4 - L_4$	-----	-358.61	-6	17	-172	184	-93	60	-82	110	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.083	0.9	Yes	0.759	0.235	1.00	Yes	1.00	**1.80**
		$U_5 - L_5$	135.70	-354.31	121	-99	-159	188	-123	75	87	143	0.244	0.282	0.53	Yes	0.134	0.155	0.29	Yes	0.800	0.104	0.91	Yes	0.750	0.241	1.00	Yes	1.00	**2.36**
		$U_6 - L_6$	363.86	-284.64	204	-220	-159	172	-148	81	209	174	0.654	0.342	1.00	Yes	0.360	0.188	0.55	Yes	0.641	0.111	0.76	Yes	0.602	0.281	0.89	Yes	1.00	**3.31**
		$U_7 - L_7$	-----	-373.32	-24	31	149	-162	-87	-11	-97	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.094	0.94	Yes	0.790	0.207	1.00	Yes	1.00	**2.67**
		$U_8 - L_8$	-----	-494.48	23	-38	304	-329	-133	-136	88	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.107	0.83	Yes	0.712	0.288	1.00	Yes	1.00	**2.19**
		$U_9 - L_9$	-----	-708.31	78	-114	503	-556	-127	-106	133	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.081	0.87	Yes	0.759	0.236	1.00	Yes	1.00	**2.71**
		$U_{10} - L_{10}$	-----	-821.57	109	-146	458	-514	-56	8	-110	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.087	0.9	Yes	0.768	0.227	1.00	Yes	1.00	**2.72**
		$U_{11} - L_{11}$	-----	-838.11	160	-173	445	-484	-51	-132	168	34	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.096	0.94	Yes	0.784	0.213	1.00	Yes	1.00	**2.33**
		$U_{12} - L_{12}$	-----	-896.27	159	-152	483	-516	-3	54	231	124	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.124	0.99	Yes	0.777	0.221	1.00	Yes	1.00	**2.46**
		$U_{13} - L_{13}$	-----	-763.57	243	-241	545	-548	-86	43	-32	66	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.103	0.96	Yes	0.736	0.262	1.00	Yes	1.00	**1.81**
		$U_{14} - L_{14}$	-----	-1331.15	153	-148	317	-307	-59	128	175	57	-----	-----	-----	-----	-----	-----	-----	-----	0.973	0.024	1	Yes	0.883	0.056	0.94	Yes	1.00	**2.54**
		$U_{15} - L_{15}$	-----	-746.66	-164	166	-582	584	-77	-43	58	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.121	0.96	Yes	0.720	0.279	1.00	Yes	1.00	**2.27**
		$U_{16} - L_{16}$	-----	-739.62	-116	104	-477	483	-157	-92	-284	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.103	0.96	Yes	0.793	0.205	1.00	Yes	1.00	**2.13**
		$U_{17} - L_{17}$	-----	-662.31	-132	128	-467	489	-100	-36	-164	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.086	0.91	Yes	0.771	0.227	1.00	Yes	1.00	**2.05**
		$U_{18} - L_{18}$	-----	-597.29	-104	105	-413	457	-85	-14	79	49	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.076	0.88	Yes	0.761	0.234	1.00	Yes	1.00	**2.08**
		$U_{19} - L_{19}$	-----	-502.51	-49	53	-249	259	-151	-13	-140	23	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.086	0.85	Yes	0.750	0.249	1.00	Yes	1.00	**1.82**
		$U_{20} - L_{20}$	-----	-400.74	-10	14	-179	195	-151	4	18	67	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.101	0.93	Yes	0.768	0.223	1.00	Yes	1.00	**1.80**
		$U_{21} - L_{21}$	-----	-344.74	38	-36	-185	205	-152	23	54	81	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.115	0.9	Yes	0.729	0.262	1.00	Yes	1.00	**2.05**
		$U_{22} - L_{22}$	-----	-387.66	124	-140	80	-79	-181	-63	-139	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.111	0.99	Yes	0.820	0.178	1.00	Yes	1.00	**3.04**
		$U_{23} - L_{23}$	140.60	-349.52	-94	91	181	-203	-89	-78	124	-67	0.253	0.295	0.55	Yes	0.139	0.162	0.31	Yes	0.790	0.123	0.92	Yes	0.740	0.259	1.00	Yes	1.00	**2.46**
		$U_{24} - L_{24}$	-----	-391.91	-43	32	193	-212	-69	-62	83	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.097	0.91	Yes	0.751	0.242	1.00	Yes	1.00	**2.26**
		$U_{25} - L_{25}$	-----	-494.74	22	-36	253	-268	-81	1	-85	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.082	0.83	Yes	0.739	0.258	1.00	Yes	1.00	**2.01**
		$U_{26} - L_{26}$	-----	-587.32	90	-111	427	-483	-90	-5	155	26	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.092	0.88	Yes	0.748	0.247	1.00	Yes	1.00	**2.11**
		$U_{27} - L_{27}$	-----	-644.08	143	-144	506	-533	-150	0	97	50	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.084	0.88	Yes	0.750	0.247	1.00	Yes	1.00	**2.15**
		$U_{28} - L_{28}$	-----	-727.76	139	-135	487	-513	-118	23	33	63	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.072	0.92	Yes	0.780	0.217	1.00	Yes	1.00	**2.15**
		$U_{29} - L_{29}$	-----	-730.13	206	-212	594	-599	-114	26	146	60	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.122	0.94	Yes	0.704	0.287	1.00	Yes	1.00	**2.09**
		$U_{30} - L_{30}$	-----	-1325.38	51	-63	233	-242	-92	115	-127	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.969	0.030	1	Yes	0.879	0.043	0.93	Yes	1.00	**2.67**
		$U_{31} - L_{31}$	-----	-768.08	-183	180	-523	519	-119	-60	-174	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.134	1	Yes	0.741	0.250	1.00	Yes	1.00	**1.94**
		$U_{32} - L_{32}$	-----	-915.39	-130	109	-444	469	-185	-96	-292	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.121	1	Yes	0.793	0.201	1.00	Yes	1.00	**2.50**
		$U_{33} - L_{33}$	-----	-841.08	-156	156	-449	468	-141	-51	-124	1	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.080	0.93	Yes	0.786	0.206	1.00	Yes	1.00	**2.46**
		$U_{34} - L_{34}$	-----	-831.48	-121	133	-445	489	-168	-14	-137	58	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.083	0.91	Yes	0.777	0.216	1.00	Yes	1.00	**2.62**
		$U_{35} - L_{35}$	-----	-729.26	-117	132	-462	515	-173	37	163	183	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.074	0.89	Yes	0.782	0.218	1.00	Yes	1.00	**2.47**
		$U_{36} - L_{36}$	-----	-495.88	-47	60	-294	317	-150	64	108	154	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.089	0.81	Yes	0.714	0.277	1.00	Yes	1.00	**2.00**
		$U_{37} - L_{37}$	-----	-341.57	-179	214	-27	38	-81	32	-145	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.128	0.9	Yes	0.723	0.274	1.00	Yes	1.00	**2.45**
		$U_{38} - L_{38}$	357.73	-----	-245	252	72	-78	-69	-104	110	-111	0.643	0.354	1.00	Yes	0.354	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		$U_{39} - L_{39}$	248.26	-321.63	-192	179	227	-243	-111	-107	-126	-164	0.447	0.358	0.81	Yes	0.246	0.197	0.45	Yes	0.727	0.154	0.89	Yes	0.681	0.310	1.00	Yes	1.00	**2.88**
		$U_{40} - L_{40}$	-----	-358.76	-52	30	167	-183	-84	-40	-102	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.120	0.94	Yes	0.759	0.234	1.00	Yes	1.00	**2.17**
		$U_{41} - L_{41}$	-----	-501.39	44	-51	202	-229	-105	-44	148	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.109	0.97	Yes	0.786	0.208	1.00	Yes	1.00	**1.96**
		$U_{42} - L_{42}$	-----	-594.87	102	-112	431	-461	-84	-49	279	23	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.113	0.91	Yes	0.758	0.236	1.00	Yes	1.00	**2.15**
		$U_{43} - L_{43}$	-----	-716.34	137	-154	473	-521	-39	-18	822	122	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1	Yes	0.768	0.221	0.99	Yes	1.00	**2.20**
		$U_{44} - L_{44}$	-----	-641.33	195	-242	437	-532	-24	-4	925	157	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.227	1	Yes	0.687	0.226	0.92	Yes	1.00	**1.45**
	Structure 3	$U_0 - L_0$	-----	-585.05	-106	171	-289	395	-249	-33	-759	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.223	1	Yes	0.681	0.183	0.87	Yes	1.00	**1.24**
		$U_1 - L_1$	-----	-618.54	-115	123	-379	413	-3	-78	-1138	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.227	1	Yes	0.720	0.191	0.92	Yes	1.00	**1.83**
		$U_2 - L_2$	-----	-562.81	-94	100	-350	381	83	31	-159	46	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.089	0.92	Yes	0.783	0.216	1.00	Yes	1.00	**1.81**
		$U_3 - L_3$	-----	-463.37	-35	47	-166	195	-1	118	98	162	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.116	0.99	Yes	0.799	0.198	1.00	Yes	1.00	**1.64**
		$U_4 - L_4$	-----	-342.26	25	-7	-197	210	-121	121	-135	147	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.089	0.87	Yes	0.724	0.268	1.00	Yes	1.00	**1.99**
		$U_5 - L_5$	138.88	-345.07	91	-90	-177	204	-147	63	-143	117	0.250	0.303	0.56	Yes	0.137	0.167	0.31	Yes	0.773	0.109	0.89	Yes	0.730	0.260	1.00	Yes	1.00	**2.34**
		$U_6 - L_6$	-----	-343.11	188	-209	-68	69	-213	-55	165	22	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.136	0.91	Yes	0.726	0.267	1.00	Yes	1.00	**2.91**
		$U_7 - L_7$	-----	-373.48	-33	21	218	-245	-175	-141	-210	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.153	0.91	Yes	0.715	0.279	1.00	Yes	1.00	**1.94**
		$U_8 - L_8$	-----	-541.52	17	-20	269	-291	-137	-103	-184	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.115	0.9	Yes	0.743	0.248	1.00	Yes	1.00	**2.31**
		$U_9 - L_9$	-----	-677.87	70	-119	306	-447	-95	-140	123	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.099	0.92	Yes	0.789	0.208	1.00	Yes	1.00	**2.38**
		$U_{10} - L_{10}$	-----	-796.88	90	-108	345	-408	2	81	202	154	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.100	0.93	Yes	0.786	0.211	1.00	Yes	1.00	**2.60**
		$U_{11} - L_{11}$	-----	-657.46	182	-212	390	-461	-51	62	-32	84	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.095	0.88	Yes	0.743	0.256	1.00	Yes	1.00	**1.51**
		$U_{12} - L_{12}$	-----	-1320.35	42	-69	221	-308	-111	8	212	76	-----	-----	-----	-----	-----	-----	-----	-----	0.953	0.037	1	Yes	0.915	0.057	0.98	Yes	1.00	**2.44**
		$U_{13} - L_{13}$	-----	-461.34	-105	115	-264	288	-113	-92	-31	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.127	0.9	Yes	0.712	0.283	1.00	Yes	1.00	**1.28**
		$U_{14} - L_{14}$	-----	-544.62	-62	58	-216	245	-162	-135	-269	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.132	0.96	Yes	0.781	0.214	1.00	Yes	1.00	**1.76**
		$U_{15} - L_{15}$	-----	-454.32	-41	48	-174	209	-163	-75	14	40	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.108	0.94	Yes	0.784	0.213	1.00	Yes	1.00	**1.72**
		$U_{16} - L_{16}$	-----	-306.24	-273	266	-48	66	-139	-28	-233	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.150	0.83	Yes	0.648	0.348	1.00	Yes	1.00	**2.65**
		$U_{17} - L_{17}$	291.53	-240.61	-291	302	71	-108	-111	-23	-288	-225	0.524	0.470	1.00	Yes	0.288	0.258	0.55	Yes	0.527	0.176	0.71	Yes	0.509	0.386	0.90	Yes	1.00	**3.22**
		$U_{18} - L_{18}$	117.75	-338.87	-101	111	165	-219	377	64	325	18	0.212	0.389	0.61	Yes	0.116	0.214	0.34	Yes	0.741	0.209	0.95	Yes	0.717	0.280	1.00	Yes	1.00	**2.96**
		$U_{19} - L_{19}$	-----	-340.14	-32	20	196	-219	-167	-88	147	20	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.130	0.88	Yes	0.720	0.280	1.00	Yes	1.00	**1.99**
		$U_{20} - L_{20}$	-----	-371.04	49	-57	116	-162	-173	-56	176	57	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.133	0.97	Yes	0.785	0.208	1.00	Yes	1.00	**0.77**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$			663.97	-----	-51	35	6	-9	-203	-264	-46	-19	0.871	0.127	1.00	Yes	0.526	0.070	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_1 - L_2$			463.59	-80.87	-94	9	14	-13	-44	-140	16	10	0.834	0.161	1.00	Yes	0.459	0.089	0.55	Yes	0.185	0.120	0.31	Yes	0.171	0.120	0.30	Yes	1.00	**2.36**
		$U_2 - L_3$			362.84	-280.70	-73	-2	-37	-62	-178	-298	-787	-265	0.653	0.322	0.98	Yes	0.359	0.177	0.54	Yes	0.646	0.352	1	Yes	0.594	0.094	0.69	Yes	1.00	**2.71**
		$U_3 - L_4$			-----	-372.52	-20	-32	-1	-53	-233	-185	-209	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.143	1	Yes	0.788	0.068	0.86	Yes	1.00	**1.53**
		$U_4 - L_4$			582.22	-----	-97	22	-50	-11	-70	-181	-130	-113	0.854	0.140	1.00	Yes	0.470	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_4 - L_5$			721.66	-----	-220	204	-68	45	40	-109	117	52	0.853	0.146	1.00	Yes	0.469	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		$U_5 - L_6$			603.72	-----	-276	211	-117	100	340	155	674	285	0.714	0.280	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.56**
		$U_6 - L_7$			657.78	-----	-111	292	-8	115	303	154	242	174	0.778	0.221	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_8 - L_8$			1005.84	-----	-108	357	4	136	257	211	81	103	0.804	0.192	1.00	Yes	0.498	0.107	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_8 - L_{10}$			1034.06	-----	-325	226	-77	92	208	156	85	104	0.827	0.172	1.00	Yes	0.512	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		$U_{10} - L_{11}$			1018.35	-----	-262	162	-149	44	-122	-118	68	-79	0.860	0.137	1.00	Yes	0.532	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_{11} - L_{12}$			840.37	-----	-253	101	-86	-17	-290	-304	-251	-199	0.831	0.163	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.33**
		$U_{12} - L_{13}$			620.01	-----	-191	129	-93	14	-347	-316	-356	-284	0.756	0.237	1.00	Yes	0.476	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.87**
		$U_{13} - L_{14}$			440.77	-----	-91	33	-35	-20	-292	-296	-191	-300	0.793	0.204	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.62**
		$U_{15} - L_{14}$			201.17	-340.30	-46	3	21	-83	-193	-308	-191	-283	0.362	0.195	0.56	Yes	0.199	0.107	0.31	Yes	0.797	0.198	1	Yes	0.720	0.106	0.83	Yes	1.00	**1.92**
		$U_{16} - L_{15}$			411.59	-241.12	-133	73	-5	-52	-243	-255	-306	-171	0.740	0.259	1.00	Yes	0.407	0.142	0.55	Yes	0.572	0.217	0.79	Yes	0.510	0.170	0.69	Yes	1.00	**2.35**
		$U_{17} - L_{16}$			533.20	-----	-151	88	-45	-10	-151	-229	-264	-145	0.782	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.86**
		$U_{18} - L_{17}$			641.48	-----	-347	245	-158	71	-197	-184	-215	-85	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$U_{19} - L_{18}$			724.42	-----	-365	247	-105	68	-152	-140	46	6	0.785	0.212	1.00	Yes	0.432	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{20} - L_{19}$			714.61	-----	-349	297	-127	106	-147	-262	0	34	0.774	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
	Structure 2	$U_0 - L_1$			809.60	-----	-313	330	-64	73	-183	-239	-121	50	0.801	0.189	1.00	Yes	0.441	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_1 - L_2$			787.80	-----	-413	307	-86	58	-113	-167	43	11	0.779	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_2 - L_3$			651.69	-----	-332	255	-65	49	-207	-199	-76	-177	0.770	0.225	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		$U_3 - L_4$			576.50	-----	-177	124	-44	7	-313	-283	-291	-206	0.768	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_4 - L_5$			413.82	-----	-124	84	-20	-25	-336	-237	-297	-220	0.744	0.255	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.01**
		$U_5 - L_6$			402.69	-314.72	-114	67	86	-117	-414	-300	-366	-246	0.724	0.270	1.00	Yes	0.398	0.148	0.55	Yes	0.743	0.251	1	Yes	0.666	0.150	0.82	Yes	1.00	**2.79**
		$U_6 - L_7$			-----	-374.27	-52	-9	63	-98	-326	-277	-299	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.198	1	Yes	0.717	0.112	0.83	Yes	1.00	**1.77**
		$U_8 - L_7$			590.74	-----	-201	111	-47	-20	-138	-259	-280	-221	0.753	0.237	1.00	Yes	0.474	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_8 - L_9$			722.63	-----	-345	224	-117	16	-140	-226	-123	-155	0.783	0.214	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		$U_{10} - L_9$			822.29	-----	-335	228	-143	50	-62	-170	-50	-84	0.814	0.181	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{11} - L_{10}$			904.33	-----	-375	275	-179	103	54	-52	-101	2	0.824	0.173	1.00	Yes	0.453	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		$U_{12} - L_{11}$			820.62	-----	-351	311	-150	146	167	34	728	149	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.87**
		$U_{13} - L_{12}$			753.82	-----	-446	378	-180	173	267	124	267	150	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.73**
		$U_{14} - L_{13}$			725.06	-----	-265	413	-30	217	269	155	598	140	0.717	0.281	1.00	Yes	0.395	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.86**
		$U_{14} - L_{15}$			639.86	-----	-217	365	-1	102	161	93	49	36	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		$U_{15} - L_{16}$			641.01	-----	-373	334	-99	104	121	89	50	67	0.758	0.233	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{16} - L_{17}$			747.88	-----	-358	353	-73	98	9	-7	9	5	0.810	0.185	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		$U_{17} - L_{18}$			678.12	-----	-310	284	-64	81	-101	-58	-58	-32	0.802	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{18} - L_{19}$			682.18	-----	-282	248	-48	41	-150	-148	-138	-96	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{19} - L_{20}$			604.38	-----	-194	164	-17	3	-244	-165	-166	-128	0.771	0.224	1.00	Yes	0.424	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_{20} - L_{21}$			432.45	-----	-121	98	7	-20	-224	-145	-207	-147	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		$U_{21} - L_{22}$			432.61	-220.54	-112	49	33	-63	-266	-242	-263	-228	0.778	0.220	1.00	Yes	0.428	0.121	0.55	Yes	0.521	0.183	0.71	Yes	0.467	0.143	0.61	Yes	1.00	**2.48**
		$U_{23} - L_{22}$			349.67	-337.51	-111	31	13	-66	-106	-201	-230	-183	0.629	0.208	0.84	Yes	0.346	0.115	0.47	Yes	0.804	0.188	1	Yes	0.714	0.142	0.86	Yes	1.00	**2.53**
		$U_{24} - L_{23}$			438.18	-----	-127	91	6	-33	-66	-154	-67	-85	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.26**
		$U_{25} - L_{24}$			606.56	-----	-216	167	-40	-13	-16	-119	-34	-66	0.773	0.217	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		$U_{26} - L_{25}$			678.91	-----	-306	244	-95	42	59	-25	-93	13	0.803	0.190	1.00	Yes	0.441	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**
		$U_{27} - L_{26}$			667.70	-----	-309	270	-107	89	147	8	132	69	0.789	0.201	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		$U_{28} - L_{27}$			721.47	-----	-359	353	-136	138	174	70	166	124	0.781	0.212	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_{29} - L_{28}$			622.07	-----	-370	325	-125	119	250	118	217	111	0.735	0.255	1.00	Yes	0.404	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_{30} - L_{29}$			590.74	-----	-200	333	-25	170	212	80	611	116	0.698	0.299	1.00	Yes	0.384	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.73**
		$U_{30} - L_{31}$			775.95	-----	-286	445	-24	134	122	68	62	39	0.768	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{31} - L_{32}$			781.78	-----	-459	388	-129	130	56	40	36	47	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{32} - L_{33}$			908.07	-----	-365	344	-105	127	-117	-98	32	5	0.827	0.171	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		$U_{33} - L_{34}$			895.71	-----	-348	271	-111	82	-248	-220	-211	-138	0.816	0.182	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_{34} - L_{35}$			813.63	-----	-296	217	-89	50	-324	-261	-218	-215	0.805	0.186	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		$U_{35} - L_{36}$			705.33	-----	-321	230	-90	20	-387	-277	-376	-268	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_{36} - L_{37}$			598.49	-----	-185	130	-26	-6	-306	-334	-320	-304	0.763	0.233	1.00	Yes	0.480	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{38} - L_{37}$			-----	-394.36	-17	-14	44	-85	-112	-225	-199	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.145	1	Yes	0.755	0.097	0.86	Yes	1.00	**1.43**
		$U_{39} - L_{38}$			264.73	-335.18	-76	48	48	-100	-161	-222	-277	-181	0.476	0.207	0.69	Yes	0.262	0.114	0.38	Yes	0.799	0.195	1	Yes	0.709	0.127	0.84	Yes	1.00	**2.26**
		$U_{40} - L_{39}$			432.11	-254.56	-126	97	13	-61	-140	-202	-117	-128	0.777	0.219	1.00	Yes	0.427	0.121	0.55	Yes	0.609	0.150	0.76	Yes	0.539	0.161	0.70	Yes	1.00	**2.66**
		$U_{41} - L_{40}$			578.76	-----	-189	119	-55	-7	-98	-141	-227	-70	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
		$U_{42} - L_{41}$			655.20	-----	-351	253	-74	50	-129	-128	-1	-4	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{43} - L_{42}$			782.03	-----	-407	301	-94	64	-223	-172	-6	-30	0.774	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{44} - L_{43}$			795.04	-----	-373	358	-137	121	-141	-220	35	4	0.787	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
	Structure 3	$U_0 - L_1$			707.48	-----	-340	291	-69	72	-160	-314	-131	45	0.766	0.226	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.05**
		$U_1 - L_2$			721.31	-----	-363	253	-91	57	-62	-148	37	13	0.781	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_2 - L_3$			653.20	-----	-325	238	-78	48	-224	-229	-74	-167	0.772	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		$U_3 - L_4$			528.93	-----	-142	99	-52	-1	-324	-315	-229	-239	0.776	0.219	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**
		$U_4 - L_5$			405.79	-126.83	-120	79	7	-39	-376	-298	-317	-222	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	0.301	0.197	0.5	Yes	0.268	0.154	0.43	Yes	1.00	**2.01**
		$U_5 - L_6$			309.99	-309.89	-78	-1	2	-84	-426	-327	-392	-334	0.558	0.231	0.79	Yes	0.307	0.127	0.44	Yes	0.726	0.268	1	Yes	0.656	0.108	0.77	Yes	1.00	**2.16**
		$U_7 - L_6$			451.01	-----	-80	47	-10	-34	-107	-279	-112	-252	0.811	0.183	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_8 - L_7$			639.85	-----	-191	163	-67	-16	-166	-237	-171	-179	0.780	0.213	1.00	Yes	0.491	0.120	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_8 - L_9$			833.86	-----	-285	88	-138	-40	-51	-189	-228	-146	0.825	0.166	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		$U_{10} - L_9$			922.73	-----	-257	141	-96	45	116	-44	735	146	0.779	0.215	1.00	Yes	0.482	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		$U_{11} - L_{10}$			932.53	-----	-315	227	-128	90	382	226	895	480	0.745	0.254	1.00	Yes	0.462	0.145	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_{12} - L_{11}$			988.14	-----	-111	351	-9	143	396	280	272	206	0.790	0.207	1.00	Yes	0.489	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{12} - L_{13}$			666.14	-----	-114	298	12	114	201	168	93	95	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		$U_{13} - L_{14}$			677.76	-----	-291	231	-69	76	146	98	93	116	0.801	0.192	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		$U_{14} - L_{15}$			727.66	-----	-195	194	-21	56	-126	-109	89	36	0.860	0.134	1.00	Yes	0.473	0.074	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{15} - L_{16}$			580.48	-----	-92	37	-55	-10	-221	-203	-66	-109	0.851	0.145	1.00	Yes	0.468	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{17} - L_{16}$			-----	-401.79	-7	-16	7	-45	-29	-136	-30	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.919	0.077	1	Yes	0.850	0.058	0.91	Yes	1.00	**1.57**
		$U_{18} - L_{17}$			275.06	-352.78	-75	-16	-21	-60	-116	-199	-277	-71	0.495	0.176	0.68	Yes	0.272	0.097	0.37	Yes	0.812	0.185	1	Yes	0.746	0.096	0.85	Yes	1.00	**2.44**
		$U_{19} - L_{18}$			418.45	-99.79	-86	1	-22	-16	-87	-182	448	19	0.753	0.240	1.00	Yes	0.414	0.132	0.55	Yes	0.229	0.176	0.41	Yes	0.211	0.110	0.33	Yes	1.00	**2.21**
		$U_{20} - L_{19}$			629.42	-----	-92	56	-21	2	-250	-202	31	-7	0.826	0.170	1.00	Yes	0.499	0.094	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression																				Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield																				
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass																				
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																																
South Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-582.15	-126	88	154	-902	-69	136	298	-843	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.200	1	Yes	0.785	0.214	1.00	Yes	1.00	**3.49**
		$U_1 - U_2$	-----	-551.24	-100	101	-387	-633	-158	131	121	-446	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.248	1	Yes	0.743	0.150	0.90	Yes	1.00	**1.93**
		$U_2 - U_3$	174.90	-566.97	-93	303	-607	-347	-117	121	75	-537	0.200	0.235	0.44	Yes	0.135	0.155	0.30	Yes	0.771	0.220	1	Yes	0.765	0.144	0.91	Yes	1.00	**2.09**
		$U_3 - U_4$	480.82	-569.88	142	404	-668	-391	-222	-11	229	-402	0.551	0.227	0.78	Yes	0.378	0.155	0.54	Yes	0.775	0.219	1	Yes	0.768	0.159	0.93	Yes	1.00	**2.96**
		$U_4 - U_5$	493.60	-573.26	198	399	-728	-155	-90	-16	-443	-101	0.566	0.248	0.82	Yes	0.388	0.170	0.56	Yes	0.780	0.215	1	Yes	0.773	0.173	0.95	Yes	1.00	**3.01**
		$U_5 - U_6$	678.71	-----	273	490	-620	355	98	132	-297	-422	0.778	0.219	1.00	Yes	0.525	0.144	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		$U_6 - U_7$	900.66	-----	420	224	-151	-37	320	287	-321	199	0.861	0.133	1.00	Yes	0.602	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_7 - U_8$	1053.76	-----	17	1273	-177	974	530	702	182	356	0.730	0.264	1.00	Yes	0.509	0.181	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
		$U_8 - U_9$	853.32	-----	1099	-124	1371	-859	239	496	479	-542	0.699	0.297	1.00	Yes	0.478	0.202	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		$U_9 - U_{10}$	682.10	-----	257	280	134	-761	-10	321	355	-541	0.740	0.257	1.00	Yes	0.501	0.173	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{10} - U_{11}$	-----	-634.76	262	-162	99	-825	45	113	247	-513	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.168	0.99	Yes	0.810	0.185	1.00	Yes	1.00	**2.19**
		$U_{11} - U_{12}$	-----	-911.77	157	-205	27	-802	12	103	-6	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.129	1	Yes	0.855	0.133	0.99	Yes	1.00	**1.55**
		$U_{12} - U_{13}$	-----	-1263.86	-46	-267	-334	-735	82	8	263	-468	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.136	1	Yes	0.844	0.101	0.95	Yes	1.00	**1.78**
		$U_{13} - U_{14}$	-----	-1390.27	-194	-504	-598	-1403	-42	-7	51	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.189	1	Yes	0.797	0.155	0.96	Yes	1.00	**1.65**
		$U_{14} - U_{15}$	-----	-1377.33	-406	-291	-1345	-607	42	-276	-124	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.200	1	Yes	0.790	0.148	0.94	Yes	1.00	**1.62**
		$U_{15} - U_{16}$	-----	-1443.85	-197	-467	-767	-840	-112	-428	-331	-231	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.155	1	Yes	0.828	0.093	0.93	Yes	1.00	**1.86**
		$U_{16} - U_{17}$	-----	-1413.55	-412	-226	-1139	-469	-285	-373	-130	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.176	1	Yes	0.810	0.126	0.94	Yes	1.00	**2.20**
		$U_{17} - U_{18}$	-----	-1085.30	-252	-61	-798	30	-116	71	-151	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.133	1	Yes	0.849	0.130	0.98	Yes	1.00	**2.21**
		$U_{18} - U_{19}$	-----	-751.74	-239	12	-676	104	362	-142	68	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.138	1	Yes	0.846	0.136	0.99	Yes	1.00	**2.47**
		$U_{19} - U_{20}$	-----	-669.10	-192	-122	-1216	423	-34	-123	-106	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.213	0.98	Yes	0.753	0.245	1.00	Yes	1.00	**7.17**
	Structure 2	$U_0 - U_1$	-----	-590.80	692	-451	1010	-1744	341	-70	307	-725	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.190	0.9	Yes	0.698	0.296	1.00	Yes	1.00	**4.03**
		$U_1 - U_2$	-----	-842.66	-150	-314	-258	-1008	-23	26	182	-334	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.179	1	Yes	0.813	0.153	0.97	Yes	1.00	**2.17**
		$U_2 - U_3$	-----	-1152.39	-133	-427	-80	-1343	-35	-59	-181	-639	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1	Yes	0.818	0.137	0.96	Yes	1.00	**1.91**
		$U_3 - U_4$	-----	-1371.72	-532	-542	-854	-1521	-116	-38	-233	-449	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.204	1	Yes	0.781	0.136	0.92	Yes	1.00	**1.67**
		$U_4 - U_5$	-----	-1508.40	-582	-553	-1428	-1612	-123	-86	69	-674	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.774	0.134	0.91	Yes	1.00	**1.77**
		$U_5 - U_6$	-----	-1544.48	-577	-15	-1519	-1133	-195	-51	-204	-599	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1	Yes	0.793	0.126	0.92	Yes	1.00	**1.85**
		$U_6 - U_7$	-----	-1411.89	-306	-198	-1328	-1201	-172	-91	12	-372	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.189	1	Yes	0.804	0.118	0.93	Yes	1.00	**2.01**
		$U_7 - U_8$	-----	-1413.69	-336	-188	-1354	-944	-80	-178	-343	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.189	1	Yes	0.805	0.121	0.93	Yes	1.00	**2.03**
		$U_8 - U_9$	-----	-1180.66	-358	213	-1370	-300	-14	-191	-443	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.184	1	Yes	0.801	0.146	0.95	Yes	1.00	**2.18**
		$U_9 - U_{10}$	-----	-903.13	-85	538	-1519	15	-121	-226	-601	-620	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1	Yes	0.779	0.185	0.97	Yes	1.00	**2.76**
		$U_{10} - U_{11}$	827.92	-610.57	335	612	-1259	-169	-171	-92	-975	-249	0.699	0.296	1.00	Yes	0.476	0.195	0.68	Yes	0.610	0.251	0.87	Yes	0.607	0.178	0.79	Yes	1.00	**3.96**
		$U_{11} - U_{12}$	950.16	-----	206	658	-951	448	36	42	-464	-441	0.803	0.191	1.00	Yes	0.539	0.127	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_{12} - U_{13}$	1322.83	-----	479	82	-24	-125	347	443	-91	20	0.893	0.103	1.00	Yes	0.637	0.071	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{13} - U_{14}$	1369.48	-----	-164	2747	-445	2019	646	995	288	582	0.673	0.322	1.00	Yes	0.477	0.212	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		$U_{14} - U_{15}$	1440.89	-----	2561	5	1926	-242	540	731	517	410	0.709	0.287	1.00	Yes	0.502	0.189	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_{15} - U_{16}$	1362.69	-----	151	428	-830	-984	179	430	705	-377	0.824	0.171	1.00	Yes	0.586	0.117	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{16} - U_{17}$	1066.50	-----	673	220	80	-963	-32	322	501	-807	0.786	0.206	1.00	Yes	0.523	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{17} - U_{18}$	751.56	-----	487	259	18	-999	-59	287	240	-493	0.754	0.242	1.00	Yes	0.502	0.160	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_{18} - U_{19}$	579.81	-703.00	592	163	-186	-968	3	160	557	-751	0.582	0.274	0.86	Yes	0.382	0.176	0.56	Yes	0.835	0.141	0.98	Yes	0.830	0.164	1.00	Yes	1.00	**3.36**
		$U_{19} - U_{20}$	236.53	-736.44	269	104	-467	-932	-55	133	330	-385	0.222	0.201	0.43	Yes	0.147	0.132	0.28	Yes	0.818	0.179	1	Yes	0.813	0.149	0.97	Yes	1.00	**2.33**
		$U_{20} - U_{21}$	-----	-859.21	112	-128	-654	-825	-9	16	97	-606	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.204	1	Yes	0.784	0.120	0.91	Yes	1.00	**2.28**
		$U_{21} - U_{22}$	-----	-839.99	-110	-76	-822	-988	-181	-101	113	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.226	1	Yes	0.767	0.143	0.91	Yes	1.00	**2.13**
		$U_{22} - U_{23}$	-----	-843.27	-124	-127	-1009	-705	-123	-169	-250	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.221	1	Yes	0.770	0.146	0.92	Yes	1.00	**2.14**
		$U_{23} - U_{24}$	-----	-864.46	-136	178	-907	-344	0	-81	-475	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1	Yes	0.789	0.131	0.93	Yes	1.00	**2.54**
		$U_{24} - U_{25}$	313.19	-718.46	183	327	-1019	-122	-9	-78	-406	-246	0.294	0.218	0.52	Yes	0.195	0.143	0.34	Yes	0.798	0.199	1	Yes	0.793	0.163	0.96	Yes	1.00	**2.75**
		$U_{25} - U_{26}$	676.72	-615.62	209	651	-1076	145	19	-39	-666	-249	0.679	0.280	0.96	Yes	0.446	0.179	0.63	Yes	0.731	0.262	1	Yes	0.727	0.183	0.91	Yes	1.00	**4.01**
		$U_{26} - U_{27}$	764.16	-----	285	473	-809	277	-37	17	-645	-178	0.767	0.232	1.00	Yes	0.511	0.153	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_{27} - U_{28}$	1113.33	-----	223	707	-926	427	257	282	-526	-197	0.820	0.171	1.00	Yes	0.546	0.113	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_{28} - U_{29}$	1454.77	-----	471	83	66	-128	648	711	261	294	0.879	0.114	1.00	Yes	0.626	0.078	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		$U_{29} - U_{30}$	1327.77	-----	-164	2904	-207	1878	806	1070	517	707	0.653	0.342	1.00	Yes	0.462	0.225	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_{30} - U_{31}$	1447.37	-----	2546	-152	2039	-527	627	712	674	370	0.712	0.284	1.00	Yes	0.504	0.187	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		$U_{31} - U_{32}$	1237.23	-----	99	375	-755	-816	203	396	599	-579	0.835	0.160	1.00	Yes	0.596	0.110	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{32} - U_{33}$	885.75	-----	606	166	228	-1020	5	234	366	-817	0.748	0.244	1.00	Yes	0.503	0.162	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		$U_{33} - U_{34}$	609.54	-801.07	476	159	13	-1377	-26	215	-93	-541	0.515	0.260	0.78	Yes	0.350	0.170	0.52	Yes	0.801	0.193	1	Yes	0.796	0.194	1.00	Yes	1.00	**3.37**
		$U_{34} - U_{35}$	-----	-971.91	383	-196	-66	-1191	43	41	156	-525	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.149	1	Yes	0.839	0.145	0.99	Yes	1.00	**2.21**
		$U_{35} - U_{36}$	-----	-1243.63	101	-462	-393	-1242	-18	90	236	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.148	1	Yes	0.843	0.132	0.98	Yes	1.00	**1.88**
		$U_{36} - U_{37}$	-----	-1439.77	-288	-311	-1066	-1227	-22	-119	322	-330	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.166	1	Yes	0.820	0.109	0.93	Yes	1.00	**1.80**
		$U_{37} - U_{38}$	-----	-1425.89	-200	-425	-1112	-1215	-94	-198	-289	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.175	1	Yes	0.812	0.108	0.93	Yes	1.00	**1.76**
		$U_{38} - U_{39}$	-----	-1595.12	-161	-631	-1171	-1292	8	-210	-406	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.172	1	Yes	0.819	0.107	0.93	Yes	1.00	**1.85**
		$U_{39} - U_{40}$	-----	-1547.03	-606	-565	-1702	-922	15	-81	-248	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1	Yes	0.794	0.141	0.94	Yes	1.00	**1.87**
		$U_{40} - U_{41}$	-----	-1439.46	-530	-519	-1405	-822	172	-152	151	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.169	1	Yes	0.820	0.125	0.95	Yes	1.00	**2.01**
		$U_{41} - U_{42}$	-----	-1208.44	-422	-128	-1237	-29	58	-28	-8	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.129	1	Yes	0.858	0.126	0.99	Yes	1.00	**2.43**
		$U_{42} - U_{43}$	-----	-870.39	-313	-44	-926	13	168	-214	-111	-335	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.145	1	Yes	0.840	0.141	0.99	Yes	1.00	**2.83**
		$U_{43} - U_{44}$	-----	-639.96	-169	-229	-1391	554	-123	-129	-219	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.217	0.98	Yes	0.756	0.236	1.00	Yes	1.00	**6.02**
	Structure 3	$U_0 - U_1$	-----	-592.81	637	-356	1257	-1649	281	-46	200	-1007	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.215	0.89	Yes	0.667	0.332	1.00	Yes	1.00	**4.55**
		$U_1 - U_2$	-----	-721.12	-82	-226	-49	-750	-22	7	30	-340	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.177	1	Yes	0.811	0.151	0.97	Yes	1.00	**1.87**
		$U_2 - U_3$	-----	-1060.26	-56	-237	-16	-707	-34	-55	99	-676	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.150	1	Yes	0.830	0.115	0.95	Yes	1.00	**1.91**
		$U_3 - U_4$	-----	-1406.47	-221	-365	-577	-1181	-110	-32	91	-524	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.184	1	Yes	0.806	0.130	0.94	Yes	1.00	**2.08**
		$U_4 - U_5$	-----	-1419.91	-441	-130	-1028	-626	-93	-55	218	-679	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.172	1	Yes	0.814	0.113	0.93	Yes	1.00	**1.86**
		$U_5 - U_6$	-----	-1366.28	-254	-374	-805	-1292	-186	-149	31	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.783	0.143	0.93	Yes	1.00	**1.81**
		$U_6 - U_7$	-----	-1359.49	-497	-153	-1424	-471	-119	-298	-261	-399	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.203	1	Yes	0.779	0.157	0.94	Yes	1.00	**1.80**
		$U_7 - U_8$	-----	-1230.99	-234	37	-826	-162	-108	-316	-445	-537	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.165	1	Yes	0.822	0.114	0.94	Yes	1.00	**2.08**
		$U_8 - U_9$	-----	-886.98	-126	262	-787	98	-215	-186	-383	-262	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.152	1	Yes	0.832	0.131	0.97	Yes	1.00	**2.12**
		$U_9 - U_{10}$	-----	-610.72	-52	383	-974	225	5	2	-271	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.191	0.98	Yes	0.779	0.218	1.00	Yes	1.00	**3.30**
		$U_{10} - U_{11}$	718.68	-----	315	256	-519	161	132	151	-623	-189	0.780	0.216	1.00	Yes	0.528	0.145	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{11} - U_{12}$	874.82	-----	-184	1264	-675	1282	183	533	-223	400	0.717	0.280	1.00	Yes	0.490	0.191	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_{12} - U_{13}$	1050.04	-----	1203	23	831	-135	51	520	697	883	0.728	0.272	1.00	Yes	0.507	0.186	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_{13} - U_{14}$	846.18	-----	223	366	-240	-405	-102	381	705	-476	0.809	0.183	1.00	Yes	0.566	0.126	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_{14} - U_{15}$	601.69	-----	440	209	39	-681	-56	245	448	-826	0.690	0.301	1.00	Yes	0.465	0.199	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{15} - U_{16}$	302.62	-596.74	269	121	-228	-689	-75	200	283	36	0.347	0.211	0.56	Yes	0.238	0.145	0.39	Yes	0.812	0.180	1	Yes	0.805	0.164	0.97	Yes	1.00	**2.42**
		$U_{16} - U_{17}$	304.03	-613.61	325	37	-482	-556	179	-68	79	75	0.348	0.163	0.52	Yes	0.239	0.111	0.36	Yes	0.835	0.164	1	Yes	0.827	0.132	0.96	Yes	1.00	**2.47**
		$U_{17} - U_{18}$	-----	-606.28	213	-175	-423	-516	69	35	-85	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.169	1	Yes	0.818	0.123	0.95	Yes	1.00	**2.02**
		$U_{18} - U_{19}$	-----	-598.07	14	-70	-681	-161	208	-197	5	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.182	1	Yes	0.806	0.162	0.97	Yes	1.00	**2.23**
		$U_{19} - U_{20}$	-----	-609.70	114	-305	-632	-37	-149	-111	-31	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.170	1	Yes	0.822	0.150	0.98	Yes	1.00	**4.75**

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Inventory Loads - HS20 Truck																															
					Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression													
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating		
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass								
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																						
South Truss - Lower Chord	Structure 1	L_0 - L_1			334.88	-262.15	218	-252	731	-818	268	985	-305	-1118	0.513	0.485	1.00	Yes	0.302	0.290	0.60	Yes	0.476	0.346	0.83	Yes	0.472	0.245	0.72	Yes	1.00	**12.05**				
		L_1 - L_2			374.23	-----	-48	-699	0	-13	-973	311	325	-147	0.573	0.418	1.00	Yes	0.349	0.271	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**				
		L_2 - L_3			655.75	-----	-667	-600	-40	65	466	-431	-183	124	0.754	0.236	1.00	Yes	0.436	0.140	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**				
		L_3 - L_4			622.38	-238.67	-588	-388	1	294	-857	16	284	-233	0.716	0.280	1.00	Yes	0.425	0.175	0.60	Yes	0.326	0.260	0.59	Yes	0.323	0.142	0.47	Yes	1.00	**2.26**				
		L_4 - L_5			-----	-556.96	-549	288	102	465	180	-177	-73	202	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.133	0.99	Yes	0.849	0.145	1.00	Yes	1.00	**1.84**				
		L_5 - L_6			-----	-745.21	-224	317	124	588	-109	-90	163	-236	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.127	1	Yes	0.860	0.130	0.99	Yes	1.00	**1.77**				
		L_6 - L_7			-----	-1169.55	-101	115	238	-21	-112	267	-200	407	-----	-----	-----	-----	-----	-----	-----	-----	0.952	0.042	1	Yes	0.941	0.037	0.98	Yes	1.00	**2.78**				
		L_7 - L_8			-----	-1245.96	-28	644	-54	1232	396	207	446	510	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1	Yes	0.789	0.163	0.96	Yes	1.00	**2.40**				
		L_8 - L_9			-----	-1167.44	654	-29	1117	-65	213	417	438	417	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.251	1	Yes	0.739	0.148	0.89	Yes	1.00	**1.81**				
		L_9 - L_{10}			-----	-1056.29	377	-235	586	-425	623	-19	336	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.139	1	Yes	0.850	0.092	0.95	Yes	1.00	**4.18**				
		L_{10} - L_{11}			-----	-550.21	-15	-593	503	-51	197	-526	-285	44	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.130	0.98	Yes	0.838	0.157	1.00	Yes	1.00	**3.51**				
		L_{11} - L_{12}			502.03	-----	73	-609	343	-244	-1057	227	128	-85	0.650	0.346	1.00	Yes	0.390	0.218	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**				
		L_{12} - L_{13}			1024.61	-----	-384	-626	59	-155	-163	-672	-160	120	0.809	0.190	1.00	Yes	0.517	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**				
		L_{13} - L_{14}			1265.73	-----	-213	-1242	186	-526	-916	202	146	21	0.744	0.247	1.00	Yes	0.482	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**				
		L_{14} - L_{15}			1558.20	-----	-1578	-601	-566	-152	-120	-633	-153	162	0.761	0.235	1.00	Yes	0.495	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**				
		L_{15} - L_{16}			1640.74	-----	-1149	-1208	-304	-370	-729	123	108	-139	0.802	0.197	1.00	Yes	0.515	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**				
		L_{16} - L_{17}			1219.95	-----	-1294	-26	-421	54	183	-385	-127	170	0.771	0.224	1.00	Yes	0.500	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**				
		L_{17} - L_{18}			1006.65	-----	-393	-30	-224	34	-96	-310	114	-92	0.877	0.115	1.00	Yes	0.561	0.070	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**				
		L_{18} - L_{19}			514.50	-----	-485	238	-266	230	-136	303	-164	124	0.787	0.208	1.00	Yes	0.533	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**				
		L_{19} - L_{20}			405.47	-203.19	-372	101	-693	411	364	82	225	50	0.685	0.311	1.00	Yes	0.423	0.183	0.61	Yes	0.408	0.299	0.71	Yes	0.404	0.226	0.64	Yes	1.00	**4.47**				
	Structure 2	L_0 - L_1			-----	-506.03	165	-459	491	-1337	110	383	-92	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.230	0.96	Yes	0.723	0.272	1.00	Yes	1.00	**11.35**				
		L_1 - L_2			466.08	-----	332	-1244	242	-394	-1073	547	117	43	0.566	0.429	1.00	Yes	0.337	0.269	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**				
		L_2 - L_3			984.74	-----	-160	-1033	-47	-269	147	-637	-74	155	0.776	0.217	1.00	Yes	0.509	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**				
		L_3 - L_4			1275.33	-----	-133	-1520	-12	-507	-818	386	181	-4	0.749	0.243	1.00	Yes	0.505	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**				
		L_4 - L_5			1733.29	-----	-1294	-1516	-437	-395	267	-649	-82	163	0.808	0.187	1.00	Yes	0.535	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**				
		L_5 - L_6			1807.20	-----	-1170	-1814	-219	-492	-936	96	191	-91	0.775	0.219	1.00	Yes	0.520	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**				
		L_6 - L_7			1834.22	-----	-2235	-1057	-570	-209	283	-313	-161	219	0.776	0.216	1.00	Yes	0.516	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**				
		L_7 - L_8			1339.46	-----	-1520	-516	-300	386	-726	251	218	-143	0.768	0.227	1.00	Yes	0.505	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**				
		L_8 - L_9			1067.89	-----	-1292	242	-96	597	195	-834	-83	178	0.747	0.253	1.00	Yes	0.503	0.160	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**				
		L_9 - L_{10}			595.74	-745.66	-1131	162	-136	826	-844	-98	142	-137	0.532	0.282	0.82	Yes	0.310	0.172	0.49	Yes	0.788	0.207	1	Yes	0.783	0.181	0.97	Yes	1.00	**3.35**				
		L_{10} - L_{11}			-----	-740.67	-708	483	10	568	148	-152	-76	74	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.085	0.97	Yes	0.870	0.124	1.00	Yes	1.00	**2.07**				
		L_{11} - L_{12}			-----	-1027.72	-294	682	-78	1093	158	-218	50	-385	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.127	0.98	Yes	0.843	0.149	1.00	Yes	1.00	**2.21**				
		L_{12} - L_{13}			-----	-1509.78	-289	-351	184	-710	-111	114	-327	172	-----	-----	-----	-----	-----	-----	-----	-----	0.918	0.073	1	Yes	0.911	0.072	0.99	Yes	1.00	**3.33**				
		L_{13} - L_{14}			-----	-1554.84	-624	1730	-876	2476	153	89	339	488	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.174	0.97	Yes	0.782	0.216	1.00	Yes	1.00	**2.83**				
		L_{14} - L_{15}			-----	-1564.47	1711	-661	2385	-678	98	141	534	340	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.174	0.97	Yes	0.787	0.208	1.00	Yes	1.00	**2.45**				
		L_{15} - L_{16}			-----	-1525.41	-549	-143	-382	-135	95	-127	260	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.920	0.071	1	Yes	0.912	0.055	0.97	Yes	1.00	**3.52**				
		L_{16} - L_{17}			-----	-1054.96	643	-131	1120	-52	-194	69	-386	68	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.219	1	Yes	0.768	0.138	0.91	Yes	1.00	**2.83**				
		L_{17} - L_{18}			-----	-800.33	267	-625	514	165	-869	205	126	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.146	1	Yes	0.840	0.100	0.95	Yes	1.00	**2.56**				
		L_{18} - L_{19}			-----	-641.56	-152	-568	718	35	354	-315	-212	60	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.117	0.98	Yes	0.855	0.139	1.00	Yes	1.00	**2.89**				
		L_{19} - L_{20}			565.18	-447.62	-40	-974	497	113	-1061	504	149	-171	0.640	0.350	1.00	Yes	0.379	0.217	0.60	Yes	0.600	0.184	0.79	Yes	0.597	0.188	0.79	Yes	1.00	**3.10**				
		L_{20} - L_{21}			993.45	-----	-988	-1020	412	-76	500	-383	-186	69	0.792	0.203	1.00	Yes	0.520	0.123	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**				
		L_{21} - L_{22}			884.11	-----	-811	-1244	110	-290	-987	107	136	-103	0.705	0.288	1.00	Yes	0.472	0.184	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**				
		L_{22} - L_{23}			853.45	-----	-1638	-586	-354	76	-140	-743	-57	207	0.681	0.319	1.00	Yes	0.455	0.202	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**				
		L_{23} - L_{24}			891.03	-340.59	-1240	-691	-55	466	-943	-3	164	-139	0.711	0.282	1.00	Yes	0.466	0.173	0.64	Yes	0.322	0.257	0.58	Yes	0.320	0.181	0.51	Yes	1.00	**3.65**				
		L_{24} - L_{25}			564.78	-549.97	-1113	58	199	525	346	-907	-105	150	0.640	0.354	1.00	Yes	0.378	0.220	0.60	Yes	0.738	0.188	0.93	Yes	0.733	0.215	0.95	Yes	1.00	**3.78**				
		L_{25} - L_{26}			-----	-640.59	-267	192	29	727	-12	-77	102	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.108	0.97	Yes	0.854	0.140	1.00	Yes	1.00	**2.85**				
		L_{26} - L_{27}			-----	-862.48	-360	433	214	503	-46	23	-48	226	-----	-----	-----	-----	-----	-----	-----	-----	0.912	0.079	1	Yes	0.906	0.080	0.99	Yes	1.00	**3.05**				
		L_{27} - L_{28}			-----	-1144.14	-276	701	-35	1309	-7	-206	281	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.142	0.99	Yes	0.833	0.161	1.00	Yes	1.00	**3.53**				
		L_{28} - L_{29}			-----	-1555.22	-402	-515	68	-414	-190	-118	-93	398	-----	-----	-----	-----	-----	-----	-----	-----	0.938	0.058	1	Yes	0.930	0.051	0.99	Yes	1.00	**4.58**				
		L_{29} - L_{30}			-----	-1550.43	-755	2018	-804	2457	0	-28	421	380	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.165	0.96	Yes	0.780	0.215	1.00	Yes	1.00	**3.21**				
		L_{30} - L_{31}			-----	-1570.96	1680	-505	2387	-686	577	447	295	235	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.181	0.98	Yes	0.790	0.208	1.00	Yes	1.00	**1.77**				
		L_{31} - L_{32}			-----	-1555.17	-111	-315	-168	-333	422	-424	181	58	-----	-----	-----	-----	-----	-----	-----	-----	0.938	0.055	1	Yes	0.930	0.033	0.97	Yes	1.00	**3.06**				
		L_{32} - L_{33}			-----	-1040.99	589	-318	1013	-73	-582	78	-327	28	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.128	0.99	Yes	0.854	0.138	1.00	Yes	1.00	**2.55**				
		L_{33} - L_{34}			-----	-758.36	442	-404	589	8	179	5	101	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.897	0.078	0.98	Yes	0.891	0.103	1.00	Yes	1.00	**2.49**				
		L_{34} - L_{35}			683.33	-761.44	-163	-1212	843	-97	825	-711	-219	95	0.610	0.293	0.91	Yes	0.355	0.179	0.54	Yes	0.805	0.145	0.95	Yes	0.800	0.194	1.00	Yes	1.00	**4.27**				
		L_{35} - L_{36}			967.30	-----	-62	-1202	567	-170	-1655	319	165	-122	0.677	0.318	1.00	Yes	0.456	0.205	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**				
		L_{36} - L_{37}			1357.52	-----	-698	-1582	302	-258	516	-487	-204	152	0.778	0.217	1.00	Yes	0.511	0.129	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**				
		L_{37} - L_{38}			1723.53	-----	-1547	-2184	-335	-657	-1226	174	106	-172	0.729	0.268	1.00	Yes	0.485	0.161	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.69**				
		L_{38} - L_{39}			1804.09	-----	-2231	-1007	-609	-223	297	-403	-102	172	0.774	0.223	1.00	Yes	0.520	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**				
		L_{39} - L_{40}			1725.38	-----	-1627	-1156	-444	-324	-479	318	124	-128	0.804	0.186	1.00	Yes	0.533	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**				
		L_{40} - L_{41}			1308.95	-----	-1531	-24	-463	32	437	-35	-47	270	0.777	0.217	1.00	Yes	0.524	0.140	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**				
		L_{41} - L_{42}			1005.22	-----	-1065	111	-258	53	-289	64	270	89	0.803	0.188	1.00	Yes	0.528	0.109	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**				
		L_{42} - L_{43}			546.32	-----	-1283	588	-267	213	450	347	143	353	0.664	0.335	1.00	Yes	0.395	0.214	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**				
		L_{43} - L_{44}			-----	-459.29	-987	253	-515	163	-374	-109	1220	356	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.338	1	Yes	0.656	0.201	0.86	Yes	1.00	**18.63**				
	Structure 3	L_0 - L_1			-----	-467.20	68	-284	288	-518	37	168	3	14	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.110	0.96	Yes	0.841	0.156	1.00	Yes	1.00	**3.75**				
		L_1 - L_2			524.14	-----	211	-444	406	-467	227	-245	100	184	0.802	0.191	1.00	Yes	0.543	0.121	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**				
		L_2 - L_3			884.90	-----	-84	-789	48	-229	194	-600	-21	164	0.771	0.229	1.00	Yes	0.493	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**				
		L_3 - L_4			1156.00	-----	-90	-1289	47	-429	-845	540	143	59	0.731	0.264	1.00	Yes	0.474	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**				
		L_4 - L_5			1625.19	-----	-1305	-1025	-372	-254	568	-346	-34	225	0.794	0.197	1.00	Yes	0.510	0.117	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**				
		L_5 - L_6			1546.05	-----	-674	-1505	-141	-454	-763	292	250	-41	0.755	0.235	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**				
		L_6 - L_7			1261.46	-----	-1519	17	-496	243	137	-528	-53	254	0.742	0.253	1.00	Yes	0.481	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.38**				
		L_7 - L_8			1017.35	-----	-655	-263	-101	165	-652	-67	140	-169	0.803	0.192	1.00	Yes	0.514	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**				
		L_8 - L_9			552.80	-----	-806	237	-167	434	280	-356	-108	166	0.716	0.276	1.00	Yes	0.430	0.179	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**				
		L_9 - L_{10}			-----	-564.47	-286	223	-64	519	-71	-323	145	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.104	0.98	Yes	0.860	0.137	1.00	Yes	1.00	**2.76**				
		L_{10} - L_{11}			-----	-1176.58	-329	332	33	102	-335	46	-309	159	-----	-----	-----	-----	-----	-----	-----	-----	0.958	0.027	0.99	Yes	0.947	0.052	1.00	Yes	1.00	**4.83**				
		L_{11} - L_{12}			-----	-1275.91	-22	620	-59	1265	395	67	284	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.179	1	Yes	0.808	0.167	0.98	Yes	1.00	**3.24**				
		L_{12} - L_{13}			-----	-1122.84	689	-11	1331	-56	-8	309	56	143	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.273	1	Yes	0.711	0.176	0.89	Yes	1.00	**2.19**				
		L_{13} - L_{14}			-----	-1130.53	239	-110	71	145	552	185	346	-306	-----	-----	-----	-----	-----	-----	-----	-----	0.920	0.075	1	Yes	0.910	0.038	0.95	Yes	1.00	**3.63**				
		L_{14} - L_{15}			-----	-722.78	98	-336	567	106	187	-451	-260	86	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.140	1	Yes	0.848	0.128	0.98	Yes	1.00	**2.33**				
		L_{15} - L_{16}			-----	-494.25	67	-598	450	100	-1168	378	252	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.236	1	Yes	0.753	0.158	0.92	Yes	1.00	**2.28**				
		L_{16} - L_{17}			695.11	-----	-643	-537	265	-66	273	-150	-171	192	0.800	0.199	1.00	Yes	0.475	0.128	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**				
		L_{17} - L_{18}			674.05	-----	-688	-545	10	-110	-329	162	113	-113	0.775	0.219	1.00	Yes	0.449	0.131	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**				
		L_{18} - L_{19}			456.15	-----	-735	94	-40	-16	296	335	-101	212	0.698	0.293	1.00	Yes	0.426	0.194	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**				
		L_{19} - L_{20}			354.13	-122.64	-737	483	-125	-46	715	194	1066	290	0.542	0.450	1.00	Yes	0.319	0.269	0.59	Yes	0.223	0.364	0.59	Yes	0.221	0.221	0.45	Yes	1.00	**21.19**				

Axial AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-284.84	-13	52	-108	165	196	63	-1011	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.363	1	Yes	0.603	0.211	0.82	Yes	1.00	**0.88**
		$U_1 - L_1$			-----	-298.17	20	-14	-192	194	567	211	-1056	-356	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.346	1	Yes	0.631	0.247	0.88	Yes	1.00	**1.98**
		$U_2 - L_2$			74.68	-191.34	72	-77	-87	126	737	235	-1990	-594	0.134	0.737	0.88	Yes	0.074	0.405	0.48	Yes	0.418	0.575	1	Yes	0.405	0.161	0.57	Yes	1.00	**2.29**
		$U_3 - L_3$			133.46	-----	113	-128	0	22	636	194	-2051	-526	0.240	0.758	1.00	Yes	0.132	0.417	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		$U_4 - L_4$			-----	-203.18	79	-81	120	-124	1135	570	-1820	-678	-----	-----	-----	-----	-----	-----	-----	-----	0.447	0.550	1	Yes	0.430	0.158	0.59	Yes	1.00	**2.88**
		$U_5 - L_5$			-----	-392.48	78	-88	174	-204	879	408	-863	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.284	1	Yes	0.677	0.207	0.89	Yes	1.00	**2.03**
		$U_6 - L_6$			-----	-401.10	80	-69	186	-199	1615	761	231	222	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.386	1	Yes	0.575	0.174	0.75	Yes	1.00	**1.72**
		$U_7 - L_7$			-----	-384.78	102	-116	254	-276	1225	305	127	96	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.352	1	Yes	0.594	0.271	0.87	Yes	1.00	**1.72**
		$U_8 - L_8$			-----	-1122.29	-129	147	-214	252	1482	319	-1794	-488	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1	Yes	0.781	0.047	0.83	Yes	1.00	**2.77**
		$U_9 - L_9$			-----	-623.29	-229	260	-369	418	603	233	-1194	-286	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.247	1	Yes	0.704	0.232	0.94	Yes	1.00	**1.40**
		$U_{10} - L_{10}$			-----	-704.66	-158	156	-305	339	623	295	-1206	-378	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.262	1	Yes	0.695	0.176	0.88	Yes	1.00	**2.00**
		$U_{11} - L_{11}$			-----	-595.93	-167	218	-297	410	628	366	-1319	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.280	1	Yes	0.694	0.190	0.89	Yes	1.00	**1.86**
		$U_{12} - L_{12}$			-----	-456.63	-137	138	-234	252	673	368	-1644	-424	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.335	1	Yes	0.626	0.215	0.85	Yes	1.00	**1.75**
		$U_{13} - L_{13}$			-----	-347.67	-73	92	-184	213	317	194	-744	22	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.292	1	Yes	0.666	0.243	0.91	Yes	1.00	**1.82**
		$U_{14} - L_{14}$			-----	-203.28	-42	49	-20	28	631	192	-2222	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.454	0.543	1	Yes	0.430	0.062	0.50	Yes	1.00	**2.35**
		$U_{15} - L_{15}$			-----	-264.44	-39	31	172	-194	400	-135	-1417	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.593	0.403	1	Yes	0.560	0.248	0.81	Yes	1.00	**2.96**
		$U_{16} - L_{16}$			-----	-325.81	47	-59	229	-242	605	-106	-720	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1	Yes	0.689	0.309	1.00	Yes	1.00	**2.61**
		$U_{17} - L_{17}$			-----	-419.49	79	-92	199	-219	505	200	-89	42	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.210	1	Yes	0.724	0.222	0.95	Yes	1.00	**1.74**
		$U_{18} - L_{18}$			-----	-540.35	172	-178	413	-432	679	172	-717	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.189	0.99	Yes	0.752	0.245	1.00	Yes	1.00	**2.41**
		$U_{19} - L_{19}$			-----	-647.75	177	-191	494	-512	586	117	212	44	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.157	0.97	Yes	0.754	0.238	1.00	Yes	1.00	**2.94**
		$U_{20} - L_{20}$			-----	-543.56	229	-275	390	-470	433	57	314	41	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.203	1	Yes	0.696	0.249	0.95	Yes	1.00	**1.96**
	Structure 2	$U_0 - L_0$			-----	-607.00	-161	269	-316	451	37	6	-1206	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.264	1	Yes	0.651	0.191	0.85	Yes	1.00	**1.14**
		$U_1 - L_1$			-----	-652.85	-217	224	-454	475	629	165	-1437	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.247	1	Yes	0.700	0.201	0.91	Yes	1.00	**1.75**
		$U_2 - L_2$			-----	-572.71	-159	175	-399	427	623	289	-935	66	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.228	1	Yes	0.730	0.218	0.95	Yes	1.00	**1.77**
		$U_3 - L_3$			-----	-434.35	-80	91	-185	206	543	269	-740	89	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.254	1	Yes	0.681	0.188	0.87	Yes	1.00	**1.39**
		$U_4 - L_4$			-----	-274.96	-29	40	-140	155	552	241	-1010	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.375	1	Yes	0.582	0.199	0.79	Yes	1.00	**1.64**
		$U_5 - L_5$			-----	-235.60	48	-41	-115	142	541	183	-1359	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.532	0.458	1	Yes	0.499	0.182	0.69	Yes	1.00	**2.59**
		$U_6 - L_6$			216.17	-----	117	-121	-24	31	87	9	-1551	-152	0.389	0.604	1.00	Yes	0.214	0.332	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		$U_7 - L_7$			-----	-215.17	79	-91	96	-110	581	70	-1819	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.486	0.508	1	Yes	0.455	0.141	0.60	Yes	1.00	**2.76**
		$U_8 - L_8$			-----	-472.07	149	-170	333	-358	417	-30	-290	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.149	0.84	Yes	0.680	0.313	1.00	Yes	1.00	**2.09**
		$U_9 - L_9$			-----	-698.08	270	-277	570	-590	732	345	-670	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.160	0.94	Yes	0.748	0.250	1.00	Yes	1.00	**2.72**
		$U_{10} - L_{10}$			-----	-745.12	233	-234	509	-531	1179	693	-8	216	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.697	0.234	0.94	Yes	1.00	**2.63**
		$U_{11} - L_{11}$			-----	-733.69	226	-219	459	-462	1187	668	526	493	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.260	1	Yes	0.686	0.204	0.90	Yes	1.00	**2.19**
		$U_{12} - L_{12}$			-----	-722.04	186	-169	418	-410	1479	645	1012	507	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.304	1	Yes	0.626	0.179	0.81	Yes	1.00	**2.16**
		$U_{13} - L_{13}$			-----	-602.03	231	-229	481	-469	1326	333	532	177	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.323	1	Yes	0.580	0.230	0.82	Yes	1.00	**2.08**
		$U_{14} - L_{14}$			-----	-1097.05	-44	37	-195	175	1284	-96	-2035	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.189	1	Yes	0.727	0.035	0.77	Yes	1.00	**2.94**
		$U_{15} - L_{15}$			-----	-616.35	-274	277	-516	507	635	67	-1307	11	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.310	1	Yes	0.594	0.247	0.85	Yes	1.00	**1.90**
		$U_{16} - L_{16}$			-----	-639.37	-194	181	-422	422	673	191	-1464	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.252	1	Yes	0.685	0.179	0.87	Yes	1.00	**1.81**
		$U_{17} - L_{17}$			-----	-620.26	-201	201	-482	493	595	195	-1080	16	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1	Yes	0.722	0.229	0.96	Yes	1.00	**2.00**
		$U_{18} - L_{18}$			-----	-536.18	-168	174	-393	428	621	218	-1379	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.284	1	Yes	0.683	0.219	0.91	Yes	1.00	**1.77**
		$U_{19} - L_{19}$			-----	-451.89	-92	93	-241	250	518	197	-1296	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.317	1	Yes	0.675	0.240	0.92	Yes	1.00	**1.82**
		$U_{20} - L_{20}$			-----	-336.56	-47	51	-167	181	521	186	-892	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.306	1	Yes	0.645	0.207	0.86	Yes	1.00	**1.83**
	Structure 3	$U_0 - L_0$			-----	-531.07	-165	251	-268	380	312	41	-680	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.665	0.195	0.87	Yes	1.00	**1.03**
		$U_1 - L_1$			-----	-601.57	-214	213	-430	438	619	147	-1218	7	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.243	1	Yes	0.700	0.203	0.91	Yes	1.00	**1.66**
		$U_2 - L_2$			-----	-498.51	-163	174	-333	360	655	310	-1067	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.264	1	Yes	0.693	0.204	0.90	Yes	1.00	**1.52**
		$U_3 - L_3$			-----	-405.18	-70	85	-169	193	561	271	-605	139	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.238	1	Yes	0.699	0.196	0.90	Yes	1.00	**1.37**
		$U_4 - L_4$			-----	-280.96	-40	46	-160	175	589	226	-1438	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.362	1	Yes	0.595	0.224	0.82	Yes	1.00	**1.79**
		$U_5 - L_5$			-----	-228.77	42	-32	-132	156	-87	-34	-2018	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.513	0.478	1	Yes	0.484	0.199	0.69	Yes	1.00	**2.72**
		$U_6 - L_6$			-----	-190.93	63	-70	111	-116	856	259	-2012	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.426	0.566	1	Yes	0.404	0.148	0.56	Yes	1.00	**2.52**
		$U_7 - L_7$			-----	-354.10	82	-97	201	-227	500	90	-813	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.279	1	Yes	0.678	0.259	0.94	Yes	1.00	**1.84**
		$U_8 - L_8$			-----	-507.44	133	-134	333	-334	897	373	-51	47	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.258	1	Yes	0.696	0.285	0.99	Yes	1.00	**2.41**
		$U_9 - L_9$			-----	-625.53	160	-220	382	-479	1162	420	448	423	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.249	1	Yes	0.728	0.222	0.96	Yes	1.00	**2.54**
		$U_{10} - L_{10}$			-----	-604.87	154	-142	306	-318	1888	1001	1082	669	-----	-----	-----	-----	-----	-----	-----	-----	0.626	0.371	1	Yes	0.597	0.165	0.77	Yes	1.00	**2.07**
		$U_{11} - L_{11}$			-----	-564.63	190	-220	374	-421	1500	672	745	423	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.320	1	Yes	0.638	0.234	0.88	Yes	1.00	**1.85**
		$U_{12} - L_{12}$			-----	-1146.42	-40	28	-185	175	1626	410	-1664	-374	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1	Yes	0.795	0.035	0.83	Yes	1.00	**2.95**
		$U_{13} - L_{13}$			-----	-436.05	-154	169	-263	283	648	119	-875	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.264	1	Yes	0.673	0.278	0.96	Yes	1.00	**1.14**
		$U_{14} - L_{14}$			-----	-458.36	-98	96	-191	212	608	247	-1275	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.305	1	Yes	0.657	0.185	0.85	Yes	1.00	**1.48**
		$U_{15} - L_{15}$			-----	-394.68	-79	88	-168	197	527	246	-886	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.281	1	Yes	0.681	0.200	0.89	Yes	1.00	**1.79**
		$U_{16} - L_{16}$			-----	-199.22	-86	87	-81	90	966	361	-1952	-684	-----	-----	-----	-----	-----	-----	-----	-----	0.438	0.553	1	Yes	0.422	0.115	0.54	Yes	1.00	**2.17**
		$U_{17} - L_{17}$			148.68	-----	-150	166	77	-103	460	167	-1775	-641	0.267	0.726	1.00	Yes	0.147	0.399	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{18} - L_{18}$			95.75	-281.98	-102	110	209	-252	476	152	-1088	-498	0.172	0.637	0.81	Yes	0.095	0.350	0.45	Yes	0.616	0.382	1	Yes	0.597	0.322	0.92	Yes	1.00	**4.02**
		$U_{19} - L_{19}$			-----	-328.84	-30	14	224	-237	425	219	-258	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.207	0.93	Yes	0.696	0.303	1.00	Yes	1.00	**3.04**
		$U_{20} - L_{20}$			-----	-327.36	79	-92	179	-219	604	194	135	43	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.264	1	Yes	0.693	0.280	0.98	Yes	1.00	**1.64**

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

				Inventory Loads - HS20 Truck																															
				Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression													
						Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:		Vehicle 1.300	Pedestrian 1.300	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
LL Factor:		2.167	1.625	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$		626.86	-----	-16	32	1	-12	-504	-538	77	150	0.822	0.173	1.00	Yes	0.497	0.095	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**
		$U_1 - L_2$		409.09	-117.83	-93	8	16	-17	-460	-469	398	220	0.736	0.255	1.00	Yes	0.405	0.140	0.55	Yes	0.270	0.211	0.49	Yes	0.249	0.119	0.37	Yes	1.00	**2.69**
		$U_2 - L_3$		-----	-270.35	-99	-23	55	-31	-355	-715	549	295	-----	-----	-----	-----	-----	-----	-----	-----	0.622	0.371	1	Yes	0.572	0.126	0.70	Yes	1.00	**4.46**
		$U_3 - L_4$		-----	-320.32	-8	-35	4	-61	176	22	-692	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.265	1	Yes	0.678	0.078	0.76	Yes	1.00	**2.08**
		$U_4 - L_4$		523.28	-----	-86	45	-43	19	-80	5	588	191	0.767	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.46**
		$U_5 - L_5$		676.72	-----	-193	200	-34	99	-458	452	274	80	0.800	0.197	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.01**
		$U_7 - L_6$		588.44	-----	-263	232	-39	85	-262	142	-799	-110	0.696	0.295	1.00	Yes	0.383	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		$U_8 - L_7$		615.33	-----	-89	295	30	80	37	189	-560	-296	0.727	0.269	1.00	Yes	0.400	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_9 - L_9$		953.74	-----	-95	353	12	185	-206	-618	594	287	0.762	0.236	1.00	Yes	0.472	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_9 - L_{10}$		980.72	-----	-300	241	-112	128	-368	-496	606	262	0.784	0.211	1.00	Yes	0.486	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
		$U_{10} - L_{11}$		921.44	-----	-241	163	-82	95	-378	-819	178	-15	0.778	0.219	1.00	Yes	0.482	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
		$U_{11} - L_{12}$		770.32	-----	-254	75	-95	48	-620	-786	166	-23	0.762	0.235	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_{12} - L_{13}$		575.58	-----	-197	134	-100	46	-332	-621	-483	-269	0.702	0.293	1.00	Yes	0.441	0.167	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		$U_{13} - L_{14}$		406.42	-----	-89	21	-31	-23	-161	-515	-453	-259	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_{15} - L_{14}$		224.05	-204.09	-73	-14	-11	-80	-198	-236	1124	-234	0.403	0.428	0.84	Yes	0.222	0.235	0.46	Yes	0.478	0.516	1	Yes	0.432	0.103	0.54	Yes	1.00	**3.07**
		$U_{16} - L_{15}$		381.93	-----	-138	82	-37	-10	-257	135	442	-233	0.687	0.305	1.00	Yes	0.378	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		$U_{17} - L_{16}$		526.41	-----	-148	96	-46	23	-249	-45	-306	-105	0.772	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$U_{18} - L_{17}$		621.81	-----	-330	253	-130	88	-382	-8	-402	-112	0.735	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		$U_{19} - L_{18}$		691.35	-----	-334	253	-131	95	-377	-132	-458	-204	0.749	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		$U_{20} - L_{19}$		698.45	-----	-378	323	-177	141	-160	-66	-273	-139	0.757	0.238	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
	Structure 2	$U_0 - L_1$		753.41	-----	-269	313	-100	128	-689	-594	-155	6	0.745	0.248	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		$U_1 - L_2$		733.54	-----	-388	293	-163	116	-381	-602	145	-29	0.726	0.270	1.00	Yes	0.399	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**
		$U_2 - L_3$		591.68	-----	-314	245	-118	88	-288	-663	126	-27	0.700	0.298	1.00	Yes	0.385	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**
		$U_3 - L_4$		534.03	-----	-173	110	-52	25	-450	-582	169	9	0.712	0.280	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_4 - L_5$		363.20	-----	-130	81	2	-17	-271	-595	235	35	0.653	0.338	1.00	Yes	0.359	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		$U_5 - L_6$		341.99	-254.10	-106	26	60	-115	-449	-802	-781	-185	0.615	0.379	1.00	Yes	0.338	0.208	0.55	Yes	0.600	0.292	0.9	Yes	0.538	0.146	0.69	Yes	1.00	**4.19**
		$U_6 - L_7$		-----	-369.79	-12	-41	42	-99	27	-245	-452	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.206	1	Yes	0.708	0.113	0.83	Yes	1.00	**1.87**
		$U_8 - L_7$		560.93	-----	-177	139	-98	46	-258	-6	604	-200	0.715	0.282	1.00	Yes	0.450	0.161	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_8 - L_8$		723.06	-----	-333	251	-175	118	-157	-2	-225	-111	0.783	0.207	1.00	Yes	0.431	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{10} - L_9$		823.75	-----	-315	250	-128	141	-35	202	-188	106	0.815	0.176	1.00	Yes	0.448	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{11} - L_{10}$		878.28	-----	-339	305	-136	164	-222	175	-403	130	0.800	0.199	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		$U_{12} - L_{11}$		851.49	-----	-334	349	-131	174	-509	181	-551	56	0.776	0.223	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{13} - L_{12}$		734.85	-----	-411	382	-157	161	-486	53	-542	0	0.727	0.272	1.00	Yes	0.400	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		$U_{14} - L_{13}$		731.33	-----	-249	427	-17	126	-24	52	-490	-254	0.724	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{14} - L_{15}$		598.50	-----	-196	345	-19	166	153	-394	531	241	0.708	0.292	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
		$U_{15} - L_{16}$		586.38	-----	-350	316	-171	168	76	-264	590	179	0.693	0.305	1.00	Yes	0.381	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.59**
		$U_{16} - L_{17}$		690.82	-----	-332	349	-127	154	43	-415	373	110	0.748	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		$U_{17} - L_{18}$		641.16	-----	-286	273	-111	127	-43	-432	358	88	0.758	0.240	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		$U_{18} - L_{19}$		610.28	-----	-279	241	-82	96	-242	-612	290	77	0.722	0.269	1.00	Yes	0.397	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		$U_{19} - L_{20}$		567.48	-----	-190	154	-40	46	-265	-482	294	83	0.724	0.268	1.00	Yes	0.398	0.153	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		$U_{20} - L_{21}$		384.33	-----	-120	92	-26	1	-90	-516	-330	-79	0.691	0.303	1.00	Yes	0.380	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{21} - L_{22}$		378.87	-----	-109	38	20	-82	-225	-413	-612	-64	0.681	0.316	1.00	Yes	0.375	0.174	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{23} - L_{22}$		353.96	-----	-99	44	-19	-37	-87	-57	804	-159	0.637	0.360	1.00	Yes	0.350	0.198	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{24} - L_{23}$		425.29	-----	-123	107	-18	17	-141	99	-256	-63	0.765	0.232	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_{25} - L_{24}$		596.10	-----	-195	174	-41	49	-67	112	-300	-82	0.760	0.236	1.00	Yes	0.418	0.133	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		$U_{26} - L_{25}$		669.43	-----	-283	277	-79	96	-50	179	-254	-57	0.791	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{27} - L_{26}$		650.86	-----	-291	290	-105	125	-158	255	-342	-8	0.769	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{28} - L_{27}$		674.88	-----	-306	342	-94	148	-418	232	-545	41	0.731	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		$U_{29} - L_{28}$		590.47	-----	-341	330	-92	105	-360	42	-550	-42	0.698	0.293	1.00	Yes	0.384	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		$U_{30} - L_{29}$		629.19	-----	-196	367	33	69	-91	5	-236	-197	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{30} - L_{31}$		724.22	-----	-256	434	-59	226	-30	-267	500	217	0.716	0.276	1.00	Yes	0.394	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**
		$U_{31} - L_{32}$		735.28	-----	-422	371	-232	216	13	-299	452	119	0.727	0.263	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.63**
		$U_{32} - L_{33}$		836.47	-----	-343	331	-160	192	-179	-648	281	58	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
		$U_{33} - L_{34}$		832.48	-----	-326	264	-146	163	-555	-702	238	37	0.758	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**
		$U_{34} - L_{35}$		771.21	-----	-295	226	-154	122	-371	-641	9	-137	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		$U_{35} - L_{36}$		678.56	-----	-314	215	-176	103	-360	-612	-299	-205	0.735	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_{36} - L_{37}$		553.01	-----	-182	137	-79	25	-194	-622	-563	-243	0.705	0.290	1.00	Yes	0.444	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		$U_{38} - L_{37}$		-----	-345.77	-21	-33	31	-86	-280	-142	491	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.250	1	Yes	0.662	0.098	0.77	Yes	1.00	**1.92**
		$U_{39} - L_{38}$		298.56	-172.60	-93	38	14	-73	-166	-32	1179	-183	0.537	0.460	1.00	Yes	0.295	0.253	0.55	Yes	0.411	0.443	0.86	Yes	0.365	0.118	0.49	Yes	1.00	**3.24**
		$U_{40} - L_{39}$		397.09	-----	-135	91	-6	-9	-214	91	-379	-103	0.714	0.282	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_{41} - L_{40}$		559.76	-----	-175	127	-56	30	-322	-99	-413	-179	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		$U_{42} - L_{41}$		624.74	-----	-322	264	-120	90	-385	-73	-403	-171	0.739	0.255	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$U_{43} - L_{42}$		771.39	-----	-378	310	-134	101	-362	-80	-375	-195	0.763	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		$U_{44} - L_{43}$		800.45	-----	-371	371	-175	155	-111	42	-211	-88	0.792	0.204	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
	Structure 3	$U_0 - L_1$		700.98	-----	-246	262	-79	103	-495	-622	-143	6	0.759	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		$U_1 - L_2$		658.37	-----	-348	243	-158	107	-552	-633	166	-39	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.83**
		$U_2 - L_3$		587.76	-----	-311	240	-123	84	-387	-689	134	-26	0.695	0.301	1.00	Yes	0.382	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_3 - L_4$		494.16	-----	-138	86	-42	19	-342	-564	155	-25	0.725	0.272	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		$U_4 - L_5$		332.54	-----	-120	78	-37	-15	-327	-476	-831	-213	0.598	0.394	1.00	Yes	0.329	0.217	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.77**
		$U_5 - L_6$		246.12	-279.19	-77	-22	28	-116	-342	-554	-868	-273	0.443	0.400	0.85	Yes	0.243	0.220	0.47	Yes	0.654	0.336	1	Yes	0.591	0.149	0.74	Yes	1.00	**3.75**
		$U_7 - L_6$		396.17	-----	-82	32	-45	-8	-198	-130	610	-149	0.713	0.281	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		$U_8 - L_7$		620.74	-----	-206	156	-98	49	-106	77	305	-86	0.757	0.239	1.00	Yes	0.476	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.49**
		$U_8 - L_8$		792.34	-----	-244	120	-132	30	-156	46	624	183	0.784	0.206	1.00	Yes	0.431	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		$U_{10} - L_9$		886.55	-----	-209	183	-107	89	-220	248	1101	225	0.749	0.241	1.00	Yes	0.464	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_{11} - L_{10}$		942.12	-----	-274	267	-65	101	-285	152	-935	-232	0.753	0.241	1.00	Yes	0.467	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_{12} - L_{11}$		916.89	-----	-78	353	26	113	58	239	-807	-281	0.733	0.260	1.00	Yes	0.454	0.147	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_{12} - L_{13}$		613.97	-----	-90	287	6	156	101	-398	588	304	0.726	0.270	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{13} - L_{14}$		603.02	-----	-277	224	-100	124	-263	-281	674	269	0.713	0.280	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.77**
		$U_{14} - L_{15}$		663.67	-----	-196	202	-52	97	-151	-534	313	104	0.785	0.212	1.00	Yes	0.432	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_{15} - L_{16}$		538.08	-----	-87	28	-40	6	-65	-359	-508	-298	0.789	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		$U_{17} - L_{16}$		-----	-326.24	-25	-44	-2	-58	-261	-395	499	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.251	1	Yes	0.690	0.074	0.77	Yes	1.00	**2.45**
		$U_{18} - L_{17}$		-----	-286.74	-135	-10	53	-37	-530	-137	-193	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.338	1	Yes	0.607	0.173	0.78	Yes	1.00	**5.52**
		$U_{19} - L_{18}$		450.14	-----	-92	12	19	-21	-225	-224	-204	-116	0.810	0.183	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_{20} - L_{19}$		632.81	-----	-112	74	-29	3	-146	2	-60	13	0.830	0.167	1.00	Yes	0.501	0.092	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-589.45	-186	77	65	-838	10	-8	-57	77	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.193	1.00	Yes	0.795	0.199	1.00	Yes	1.00	**3.47**
		U_1 - U_2			-----	-585.17	-61	39	-162	-738	-7	-34	-45	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.201	1.00	Yes	0.789	0.175	0.97	Yes	1.00	**1.98**
		U_2 - U_3			93.94	-608.32	-136	217	-461	-411	5	26	-3	146	0.108	0.134	0.25	Yes	0.073	0.088	0.17	Yes	0.828	0.163	1.00	Yes	0.820	0.110	0.93	Yes	1.00	**2.05**
		U_3 - U_4			288.40	-574.46	51	270	-511	-538	14	36	222	80	0.331	0.165	0.50	Yes	0.227	0.113	0.35	Yes	0.782	0.213	1.00	Yes	0.775	0.128	0.91	Yes	1.00	**2.48**
		U_4 - U_5			299.43	-583.06	99	255	-790	-183	22	-28	92	-210	0.343	0.223	0.57	Yes	0.236	0.153	0.39	Yes	0.793	0.200	1.00	Yes	0.786	0.188	0.98	Yes	1.00	**2.54**
		U_5 - U_6			660.74	-531.63	248	462	-762	190	-140	-62	330	-15	0.757	0.237	1.00	Yes	0.511	0.155	0.67	Yes	0.723	0.130	0.86	Yes	0.717	0.181	0.90	Yes	1.00	**3.90**
		U_6 - U_7			842.87	-----	366	217	-618	-49	-288	-114	412	-107	0.806	0.188	1.00	Yes	0.563	0.129	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		U_7 - U_8			934.17	-----	25	1096	-1140	1985	-429	-25	142	-247	0.647	0.344	1.00	Yes	0.451	0.235	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		U_8 - U_9			917.13	-----	1196	-116	1160	-786	-379	-212	-362	100	0.751	0.247	1.00	Yes	0.514	0.168	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		U_9 - U_{10}			741.06	-----	254	310	-29	-453	-169	6	-139	533	0.804	0.187	1.00	Yes	0.544	0.125	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		U_{10} - U_{11}			271.46	-603.03	321	-78	213	-990	26	94	285	174	0.294	0.268	0.57	Yes	0.196	0.172	0.37	Yes	0.776	0.203	0.98	Yes	0.770	0.222	1.00	Yes	1.00	**2.94**
		U_{11} - U_{12}			-----	-875.16	222	-114	2	-693	100	405	182	614	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.163	1.00	Yes	0.821	0.115	0.94	Yes	1.00	**2.20**
		U_{12} - U_{13}			-----	-1208.81	5	-239	-73	-949	339	214	566	384	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.174	1.00	Yes	0.807	0.131	0.94	Yes	1.00	**2.27**
		U_{13} - U_{14}			-----	-1355.56	-147	-383	-391	-1433	221	177	390	517	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.210	1.00	Yes	0.777	0.158	0.94	Yes	1.00	**2.09**
		U_{14} - U_{15}			-----	-1339.00	-273	-250	-1278	-875	214	31	579	150	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.220	1.00	Yes	0.768	0.141	0.91	Yes	1.00	**2.04**
		U_{15} - U_{16}			-----	-1419.88	-149	-433	-892	-729	85	38	470	185	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.171	1.00	Yes	0.814	0.098	0.92	Yes	1.00	**2.18**
		U_{16} - U_{17}			-----	-1372.89	-341	-209	-1404	-383	137	-51	616	104	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.201	1.00	Yes	0.787	0.155	0.95	Yes	1.00	**2.35**
		U_{17} - U_{18}			-----	-1073.46	-209	-74	-844	84	-5	-60	431	17	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.148	1.00	Yes	0.840	0.137	0.98	Yes	1.00	**2.39**
		U_{18} - U_{19}			-----	-721.54	-200	-69	-781	-61	26	-120	383	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1.00	Yes	0.812	0.157	0.97	Yes	1.00	**2.34**
		U_{19} - U_{20}			-----	-559.80	-271	304	-1817	1386	-68	-130	376	-537	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.189	0.83	Yes	0.630	0.366	1.00	Yes	1.00	**5.09**
	Structure 2	U_0 - U_1			-----	-625.29	-93	-90	651	-1504	4	-71	-37	61	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.185	0.93	Yes	0.738	0.255	1.00	Yes	1.00	**5.58**
		U_1 - U_2			-----	-832.63	-46	-191	25	-1201	-71	-222	-41	-289	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.188	1.00	Yes	0.804	0.182	0.99	Yes	1.00	**2.94**
		U_2 - U_3			-----	-1174.84	-100	-275	-65	-1472	-29	370	-20	386	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.158	1.00	Yes	0.834	0.150	0.99	Yes	1.00	**2.85**
		U_3 - U_4			-----	-1350.69	-424	-417	-932	-1316	530	907	330	453	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.220	1.00	Yes	0.769	0.117	0.89	Yes	1.00	**2.44**
		U_4 - U_5			-----	-1480.78	-461	-375	-1212	-1644	773	307	340	272	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.225	1.00	Yes	0.760	0.136	0.90	Yes	1.00	**2.43**
		U_5 - U_6			-----	-1527.35	-427	-7	-1774	-988	187	-212	249	447	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.209	1.00	Yes	0.784	0.147	0.94	Yes	1.00	**2.40**
		U_6 - U_7			-----	-1363.66	-285	-104	-1341	-1510	-135	-185	303	159	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1.00	Yes	0.776	0.135	0.92	Yes	1.00	**2.24**
		U_7 - U_8			-----	-1393.31	-193	-176	-1627	-787	-106	-185	246	95	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1.00	Yes	0.793	0.145	0.94	Yes	1.00	**2.33**
		U_8 - U_9			-----	-1212.15	-279	112	-1403	-282	-94	-199	377	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.169	1.00	Yes	0.822	0.149	0.98	Yes	1.00	**2.38**
		U_9 - U_{10}			-----	-971.58	-82	337	-1222	-205	-137	-152	264	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.149	1.00	Yes	0.838	0.149	0.99	Yes	1.00	**2.67**
		U_{10} - U_{11}			496.00	-794.03	173	371	-1387	-158	-178	-163	438	-4	0.419	0.249	0.67	Yes	0.285	0.162	0.45	Yes	0.794	0.200	1.00	Yes	0.789	0.196	0.99	Yes	1.00	**3.56**
		U_{11} - U_{12}			829.93	-----	242	539	-1622	322	-349	-126	518	86	0.701	0.292	1.00	Yes	0.471	0.195	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		U_{12} - U_{13}			1189.43	-----	496	161	-1146	-743	-450	-390	505	-265	0.803	0.192	1.00	Yes	0.573	0.131	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		U_{13} - U_{14}			1484.57	-----	154	2159	-339	1388	-947	-458	-414	-492	0.730	0.265	1.00	Yes	0.517	0.174	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		U_{14} - U_{15}			1375.37	-----	2703	123	1229	-27	-1020	-804	-554	-487	0.676	0.320	1.00	Yes	0.479	0.211	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		U_{15} - U_{16}			1321.05	-----	150	496	-1178	-1037	-650	-437	-317	794	0.799	0.201	1.00	Yes	0.568	0.137	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		U_{16} - U_{17}			1060.99	-----	664	325	134	-1269	-225	-32	489	427	0.782	0.211	1.00	Yes	0.520	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		U_{17} - U_{18}			746.47	-----	469	336	-289	-750	-4	242	74	807	0.749	0.245	1.00	Yes	0.499	0.162	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		U_{18} - U_{19}			564.86	-644.51	531	238	-212	-1118	100	117	411	468	0.567	0.258	0.83	Yes	0.372	0.165	0.54	Yes	0.766	0.233	1.00	Yes	0.761	0.190	0.96	Yes	1.00	**3.89**
		U_{19} - U_{20}			311.82	-721.15	313	216	-418	-769	22	14	130	482	0.292	0.188	0.49	Yes	0.194	0.123	0.32	Yes	0.801	0.196	1.00	Yes	0.796	0.123	0.92	Yes	1.00	**3.00**
		U_{20} - U_{21}			187.74	-870.17	181	-25	-729	-749	-22	-59	257	290	0.146	0.140	0.29	Yes	0.102	0.091	0.20	Yes	0.800	0.192	1.00	Yes	0.794	0.108	0.91	Yes	1.00	**2.92**
		U_{21} - U_{22}			-----	-808.72	-38	3	-810	-1134	-4	65	152	393	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.255	1.00	Yes	0.738	0.164	0.91	Yes	1.00	**2.44**
		U_{22} - U_{23}			-----	-820.10	67	-39	-1159	-546	58	-2	463	144	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.240	1.00	Yes	0.748	0.168	0.92	Yes	1.00	**2.48**
		U_{23} - U_{24}			172.04	-894.20	-56	156	-736	-593	-28	-57	352	57	0.133	0.145	0.28	Yes	0.093	0.095	0.19	Yes	0.822	0.173	1.00	Yes	0.816	0.107	0.93	Yes	1.00	**2.89**
		U_{24} - U_{25}			279.64	-755.84	181	275	-788	-250	-60	-86	396	-93	0.262	0.180	0.45	Yes	0.174	0.118	0.30	Yes	0.839	0.155	1.00	Yes	0.834	0.126	0.97	Yes	1.00	**2.85**
		U_{25} - U_{26}			500.78	-686.74	199	454	-1075	210	-159	-76	316	-24	0.503	0.229	0.74	Yes	0.330	0.146	0.48	Yes	0.816	0.161	0.98	Yes	0.811	0.182	1.00	Yes	1.00	**3.55**
		U_{26} - U_{27}			761.79	-----	365	417	-1016	-92	-249	-68	416	-168	0.765	0.233	1.00	Yes	0.509	0.154	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		U_{27} - U_{28}			1056.68	-----	327	570	-1358	-308	-369	-12	460	-17	0.779	0.219	1.00	Yes	0.518	0.144	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		U_{28} - U_{29}			1291.81	-----	515	176	-1225	-1507	-405	-277	523	-299	0.781	0.216	1.00	Yes	0.556	0.145	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		U_{29} - U_{30}			1496.80	-----	254	2144	-55	749	-862	-480	-268	-23	0.736	0.257	1.00	Yes	0.521	0.170	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.35**
		U_{30} - U_{31}			1470.60	-----	2420	41	900	-190	-706	-604	-202	-56	0.723	0.272	1.00	Yes	0.512	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		U_{31} - U_{32}			1193.41	-----	72	434	-847	-881	-419	-244	-93	851	0.806	0.192	1.00	Yes	0.574	0.132	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		U_{32} - U_{33}			931.41	-----	482	293	-184	-1027	-104	-6	423	509	0.787	0.207	1.00	Yes	0.528	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		U_{33} - U_{34}			736.89	-734.25	399	280	-238	-1190	9	248	406	990	0.622	0.289	0.92	Yes	0.424	0.190	0.62	Yes	0.734	0.263	1.00	Yes	0.730	0.168	0.90	Yes	1.00	**4.65**
		U_{34} - U_{35}			345.38	-884.21	345	64	89	-1558	201	164	646	532	0.253	0.260	0.52	Yes	0.172	0.176	0.35	Yes	0.768	0.225	1.00	Yes	0.763	0.190	0.96	Yes	1.00	**3.30**
		U_{35} - U_{36}			-----	-1181.03	163	-139	-206	-1285	106	90	404	563	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.187	1.00	Yes	0.801	0.137	0.94	Yes	1.00	**3.07**
		U_{36} - U_{37}			-----	-1396.88	-53	42	-858	-1414	83	-4	405	329	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1.00	Yes	0.795	0.126	0.93	Yes	1.00	**3.03**
		U_{37} - U_{38}			-----	-1354.76	120	-151	-1282	-1588	45	17	363	279	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.216	1.00	Yes	0.771	0.141	0.92	Yes	1.00	**2.89**
		U_{38} - U_{39}			-----	-1525.74	107	-296	-1046	-1642	132	-34	689	179	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.204	1.00	Yes	0.783	0.136	0.92	Yes	1.00	**2.95**
		U_{39} - U_{40}			-----	-1505.92	-202	-337	-1753	-1168	32	-28	514	176	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.216	1.00	Yes	0.773	0.145	0.92	Yes	1.00	**2.91**
		U_{40} - U_{41}			-----	-1358.60	-246	-337	-1760	-864	48	-115	571	63	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.220	1.00	Yes	0.774	0.157	0.94	Yes	1.00	**2.77**
		U_{41} - U_{42}			-----	-1153.25	-148	-132	-1625	-85	-68	-100	418	40	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1.00	Yes	0.818	0.165	0.99	Yes	1.00	**3.05**
		U_{42} - U_{43}			-----	-833.49	-130	-62	-1137	-171	-39	-93	373	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.181	1.00	Yes	0.804	0.172	0.98	Yes	1.00	**3.30**
		U_{43} - U_{44}			-----	-563.60	-12	-220	-1928	1038	-69	37	292	-410	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.232	0.91	Yes	0.666	0.327	1.00	Yes	1.00	**5.40**
	Structure 3	U_0 - U_1			-----	-637.35	-4	-161	378	-1362	8	-78	174	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.210	0.94	Yes	0.717	0.274	1.00	Yes	1.00	**6.08**
		U_1 - U_2			-----	-730.70	-33	-140	123	-774	-62	-233	-65	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.167	1.00	Yes	0.822	0.156	0.98	Yes	1.00	**2.67**
		U_2 - U_3			-----	-1056.41	-73	-165	133	-985	-51	337	8	390	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.162	1.00	Yes	0.827	0.160	0.99	Yes	1.00	**2.52**
		U_3 - U_4			-----	-1368.64	-190	-310	-378	-1165	494	829	361	478	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.201	1.00	Yes	0.785	0.128	0.92	Yes	1.00	**2.64**
		U_4 - U_5			-----	-1388.82	-399	-62	-959	-885	688	228	474	286	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1.00	Yes	0.796	0.106	0.91	Yes	1.00	**2.33**
		U_5 - U_6			-----	-1356.86	-183	-275	-849	-1218	139	-152	227	358	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.206	1.00	Yes	0.778	0.134	0.92	Yes	1.00	**2.23**
		U_6 - U_7			-----	-1380.27	-376	-99	-1294	-621	-94	-190	447	58	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.192	1.00	Yes	0.791	0.143	0.94	Yes	1.00	**2.29**
		U_7 - U_8			-----	-1283.76	-162	10	-693	-328	-63	-184	327	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.130	1.00	Yes	0.857	0.096	0.96	Yes	1.00	**2.44**
		U_8 - U_9			-----	-905.08	-102	179	-831	-2	-33	-157	292	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.138	1.00	Yes	0.849	0.138	0.99	Yes	1.00	**2.01**
		U_9 - U_{10}			-----	-622.80	-75	231	-903	132	-98	-108	224	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.173	0.98	Yes	0.795	0.202	1.00	Yes	1.00	**2.41**
		U_{10} - U_{11}			701.99	-446.81	319	238	-751	33	-247	-139	425	-250	0.761	0.236	1.00	Yes	0.516	0.159	0.68	Yes	0.575	0.150	0.73	Yes	0.570	0.168	0.74	Yes	1.00	**4.72**
		U_{11} - U_{12}			836.24	-----	-39	974	-1213	1553	-410	-109	174	-366	0.685	0.311	1.00	Yes	0.469	0.212	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		U_{12} - U_{13}			1057.12	-----	1181	119	1366	-833	-544	-504	-369	-2	0.732	0.262	1.00	Yes	0.511	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		U_{13} - U_{14}			873.49	-----	231	439	-291	-387	-342	-223	-173	481	0.835	0.160	1.00	Yes	0.584	0.110	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		U_{14} - U_{15}			648.74	-----	427	297	392	-846	-129	-40	292	103	0.744	0.250	1.00	Yes	0.502	0.164	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		U_{15} - U_{16}			424.68	-563.09	332	232	-380	-614	-67	132	6	477	0.487	0.227	0.72	Yes	0.334	0.155	0.49	Yes	0.766	0.231	1.00	Yes	0.759	0.146	0.91	Yes	1.00	**3.01**
		U_{16} - U_{17}			411.53	-551.33	394	128	-361	-717	76	74	402	149	0.472	0.238	0.71	Yes	0.324	0.163	0.49	Yes	0.750	0.243	1.00	Yes	0.743	0.170	0.92	Yes	1.00	**2.93**
		U_{17} - U_{18}			191.45	-562.52	299	-74	-569	-376	-43	71	279	209	0.219	0.182	0.41	Yes	0.148	0.119	0.27	Yes	0.765	0.231	1.00	Yes	0.759	0.135	0.90	Yes	1.00	**2.25**
		U_{18} - U_{19}			77.67	-547.10	149	-42	-769	-267	-22	28	451	16	0.089	0.259	0.35	Yes	0.061	0.177	0.24	Yes	0.744	0.254	1.00	Yes	0.738	0.183	0.93	Yes	1.00	**2.21**
		U_{19} - U_{20}			-----	-537.67	174	-304	-1128	710	-116	111	369	-358	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.162	0.90	Yes	0.725	0.268	1.00	Yes	1.00	**3.83**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
North Truss - Lower Chord	Structure 1	L_0 - L_1	161.86	-98.16	87	-383	1189	-2191	-22	-83	114	421	0.248	0.748	1.00	Yes	0.146	0.457	0.61	Yes	0.178	0.487	0.67	Yes	0.177	0.657	0.84	Yes	1.00	**15.62**
		L_1 - L_2	445.10	-----	102	-717	152	-39	-440	-113	-29	-31	0.681	0.310	1.00	Yes	0.416	0.204	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		L_2 - L_3	692.19	-----	-631	-726	-20	22	-151	41	-32	23	0.796	0.200	1.00	Yes	0.461	0.120	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		L_3 - L_4	730.57	-143.76	-582	-531	86	253	-84	25	61	69	0.840	0.154	1.00	Yes	0.499	0.100	0.60	Yes	0.196	0.184	0.39	Yes	0.195	0.140	0.34	Yes	1.00	**2.60**
		L_4 - L_5	321.28	-501.89	-889	300	99	593	-197	307	54	35	0.416	0.290	0.71	Yes	0.250	0.189	0.44	Yes	0.772	0.132	0.91	Yes	0.765	0.235	1.00	Yes	1.00	**2.71**
		L_5 - L_6	-----	-722.83	-508	95	161	590	254	66	71	126	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.153	1.00	Yes	0.834	0.131	0.97	Yes	1.00	**2.82**
		L_6 - L_7	-----	-1085.74	-755	-10	209	175	78	373	120	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.884	0.112	1.00	Yes	0.874	0.119	1.00	Yes	1.00	**4.00**
		L_7 - L_8	-----	-1230.97	11	599	60	1459	-119	-133	-87	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.207	1.00	Yes	0.780	0.193	0.98	Yes	1.00	**3.68**
		L_8 - L_9	-----	-1310.64	569	-32	1126	-1	-141	-151	10	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.156	1.00	Yes	0.830	0.149	0.98	Yes	1.00	**4.21**
		L_9 - L_{10}	-----	-1100.62	-131	-586	141	151	552	113	44	145	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.101	1.00	Yes	0.886	0.092	0.98	Yes	1.00	**5.14**
		L_{10} - L_{11}	-----	-559.53	34	-482	530	-7	42	73	140	48	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.108	0.97	Yes	0.852	0.140	1.00	Yes	1.00	**3.48**
		L_{11} - L_{12}	587.14	-----	232	-816	486	-173	110	-51	96	-34	0.760	0.235	1.00	Yes	0.456	0.155	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		L_{12} - L_{13}	1042.58	-----	-349	-798	160	-76	113	255	26	35	0.823	0.171	1.00	Yes	0.526	0.103	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		L_{13} - L_{14}	1334.68	-----	-182	-1441	360	-438	110	-47	8	-3	0.785	0.208	1.00	Yes	0.509	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		L_{14} - L_{15}	1547.99	-----	-1842	-648	-371	-27	-169	219	-118	-66	0.756	0.237	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		L_{15} - L_{16}	1643.32	-----	-1331	-1422	-214	-364	89	-293	-121	-55	0.803	0.192	1.00	Yes	0.515	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		L_{16} - L_{17}	1151.50	-----	-1539	-96	-432	96	-452	210	-105	-45	0.728	0.266	1.00	Yes	0.472	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_{17} - L_{18}	880.56	-----	-1034	-74	-195	23	126	-223	-82	-18	0.767	0.228	1.00	Yes	0.491	0.137	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		L_{18} - L_{19}	484.09	-----	-509	338	-523	603	-59	315	-331	-25	0.741	0.250	1.00	Yes	0.501	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		L_{19} - L_{20}	192.19	-474.73	-250	53	-464	256	172	38	-73	-16	0.294	0.175	0.47	Yes	0.179	0.117	0.30	Yes	0.862	0.105	0.97	Yes	0.855	0.139	1.00	Yes	1.00	**4.33**
	Structure 2	L_0 - L_1	330.74	-----	195	-839	1017	-2590	28	97	-110	-384	0.402	0.590	1.00	Yes	0.239	0.380	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.43**
		L_1 - L_2	538.30	-----	463	-1285	175	-236	-513	-103	-45	16	0.654	0.346	1.00	Yes	0.389	0.220	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		L_2 - L_3	1000.85	-----	-186	-1163	-39	-167	59	229	70	73	0.799	0.196	1.00	Yes	0.525	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		L_3 - L_4	1311.95	-----	-229	-1713	32	-431	199	69	156	81	0.778	0.220	1.00	Yes	0.525	0.141	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		L_4 - L_5	1777.66	-----	-1537	-1577	-387	-247	48	258	93	203	0.829	0.166	1.00	Yes	0.549	0.099	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		L_5 - L_6	1826.36	-----	-1216	-2292	-145	-383	148	-68	113	-15	0.784	0.212	1.00	Yes	0.526	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		L_6 - L_7	1821.22	-----	-2269	-1437	-433	-96	-129	358	-164	45	0.771	0.222	1.00	Yes	0.512	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		L_7 - L_8	1373.03	-----	-1777	-747	-211	296	132	-88	-131	8	0.787	0.207	1.00	Yes	0.517	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		L_8 - L_9	1089.64	-----	-1443	36	-94	533	-226	406	-27	16	0.762	0.233	1.00	Yes	0.513	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		L_9 - L_{10}	822.09	-612.66	-1404	-211	-106	727	278	-189	16	92	0.734	0.258	1.00	Yes	0.427	0.160	0.59	Yes	0.648	0.171	0.82	Yes	0.643	0.225	0.87	Yes	1.00	**4.36**
		L_{10} - L_{11}	-----	-704.04	-961	246	104	536	-291	282	60	0	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.093	0.93	Yes	0.827	0.168	1.00	Yes	1.00	**3.50**
		L_{11} - L_{12}	-----	-1042.61	-647	5	103	1001	134	-165	83	238	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.124	0.99	Yes	0.855	0.136	1.00	Yes	1.00	**4.43**
		L_{12} - L_{13}	-----	-1540.76	-373	-184	429	-461	119	-162	199	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.061	1.00	Yes	0.922	0.046	0.97	Yes	1.00	**6.69**
		L_{13} - L_{14}	-----	-1526.25	-367	1230	-592	2588	-262	-454	-247	-547	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.193	0.97	Yes	0.768	0.226	1.00	Yes	1.00	**4.40**
		L_{14} - L_{15}	-----	-1622.42	1124	-470	2030	-381	-517	-319	-317	-441	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.155	0.98	Yes	0.816	0.177	1.00	Yes	1.00	**5.71**
		L_{15} - L_{16}	-----	-1494.20	-469	-15	-992	351	-214	97	11	398	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.084	0.99	Yes	0.894	0.099	1.00	Yes	1.00	**5.53**
		L_{16} - L_{17}	-----	-1154.09	545	-39	1205	120	187	-16	401	189	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.152	1.00	Yes	0.841	0.149	0.99	Yes	1.00	**4.57**
		L_{17} - L_{18}	-----	-854.35	1	-473	481	248	163	71	110	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.903	0.087	1.00	Yes	0.897	0.077	0.98	Yes	1.00	**3.55**
		L_{18} - L_{19}	-----	-643.16	-67	-493	668	116	114	153	-4	34	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.129	1.00	Yes	0.857	0.129	0.99	Yes	1.00	**3.31**
		L_{19} - L_{20}	599.13	-599.52	-321	-900	566	240	435	-5	58	-45	0.679	0.240	0.92	Yes	0.402	0.151	0.56	Yes	0.804	0.188	1.00	Yes	0.799	0.174	0.98	Yes	1.00	**4.40**
		L_{20} - L_{21}	952.05	-469.64	-950	-1190	565	51	59	401	-98	-102	0.769	0.221	1.00	Yes	0.506	0.129	0.64	Yes	0.450	0.218	0.67	Yes	0.446	0.177	0.63	Yes	1.00	**4.91**
		L_{21} - L_{22}	914.17	-229.39	-908	-1542	242	-73	274	10	-94	-31	0.739	0.259	1.00	Yes	0.495	0.158	0.66	Yes	0.220	0.257	0.48	Yes	0.218	0.230	0.45	Yes	1.00	**3.77**
		L_{22} - L_{23}	846.87	-----	-1847	-808	-153	203	-128	366	-20	3	0.684	0.315	1.00	Yes	0.459	0.191	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		L_{23} - L_{24}	898.35	-296.92	-1601	-953	3	369	249	-191	10	77	0.726	0.265	1.00	Yes	0.477	0.153	0.64	Yes	0.284	0.266	0.56	Yes	0.282	0.238	0.53	Yes	1.00	**4.63**
		L_{24} - L_{25}	565.28	-437.98	-1434	-259	242	360	-325	524	62	0	0.640	0.357	1.00	Yes	0.379	0.226	0.61	Yes	0.587	0.244	0.84	Yes	0.584	0.277	0.87	Yes	1.00	**4.71**
		L_{25} - L_{26}	-----	-642.41	-616	-712	119	699	84	-294	41	129	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.125	0.99	Yes	0.856	0.137	1.00	Yes	1.00	**5.19**
		L_{26} - L_{27}	-----	-849.04	-281	202	-209	654	-107	275	-210	17	-----	-----	-----	-----	-----	-----	-----	-----	0.898	0.086	0.99	Yes	0.892	0.105	1.00	Yes	1.00	**4.60**
		L_{27} - L_{28}	-----	-1167.41	-67	217	-231	1150	88	197	-42	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.118	0.98	Yes	0.850	0.142	1.00	Yes	1.00	**4.49**
		L_{28} - L_{29}	-----	-1584.69	-113	-335	86	-11	171	-20	-86	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.956	0.039	1.00	Yes	0.948	0.033	0.99	Yes	1.00	**4.85**
		L_{29} - L_{30}	-----	-1636.62	-378	807	-469	2001	-66	-129	-13	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.128	0.96	Yes	0.824	0.175	1.00	Yes	1.00	**4.11**
		L_{30} - L_{31}	-----	-1592.19	825	-331	2264	-424	-133	-117	-599	-465	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.177	0.99	Yes	0.801	0.198	1.00	Yes	1.00	**6.40**
		L_{31} - L_{32}	-----	-1533.90	-147	-255	321	-105	-60	73	-388	111	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.057	1.00	Yes	0.925	0.032	0.96	Yes	1.00	**8.17**
		L_{32} - L_{33}	-----	-1042.17	361	-369	1006	156	171	34	-145	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.113	0.98	Yes	0.855	0.137	1.00	Yes	1.00	**6.43**
		L_{33} - L_{34}	-----	-712.72	-14	-895	414	198	351	-132	6	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.121	0.97	Yes	0.837	0.157	1.00	Yes	1.00	**5.14**
		L_{34} - L_{35}	808.70	-604.09	-329	-1207	633	37	322	687	-29	69	0.722	0.276	1.00	Yes	0.420	0.169	0.59	Yes	0.639	0.230	0.87	Yes	0.634	0.193	0.83	Yes	1.00	**5.53**
		L_{35} - L_{36}	1089.29	-----	-67	-1360	386	-7	561	32	101	-48	0.762	0.236	1.00	Yes	0.513	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_{36} - L_{37}	1321.24	-----	-635	-1858	241	-1	-18	396	-100	10	0.758	0.238	1.00	Yes	0.498	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		L_{37} - L_{38}	1823.31	-----	-1440	-2403	-37	-347	180	-187	-42	-7	0.772	0.223	1.00	Yes	0.513	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		L_{38} - L_{39}	1783.59	-----	-2425	-1370	-292	-174	-158	248	-23	-17	0.765	0.231	1.00	Yes	0.514	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		L_{39} - L_{40}	1711.26	-----	-1842	-1609	-197	-306	112	-353	-51	-34	0.798	0.198	1.00	Yes	0.528	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_{40} - L_{41}	1290.77	-----	-1765	-439	-305	-49	-373	366	-58	-11	0.758	0.236	1.00	Yes	0.511	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		L_{41} - L_{42}	1027.10	-----	-1205	-173	-157	-63	145	-68	-27	11	0.809	0.190	1.00	Yes	0.531	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		L_{42} - L_{43}	487.05	-----	-1352	72	-219	46	-387	459	-3	-10	0.623	0.374	1.00	Yes	0.372	0.216	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_{43} - L_{44}	308.79	-499.15	-644	257	-1381	592	569	166	186	54	0.375	0.374	0.75	Yes	0.223	0.238	0.47	Yes	0.718	0.232	0.95	Yes	0.713	0.281	1.00	Yes	1.00	**11.76**
	Structure 3	L_0 - L_1	379.22	-399.77	100	-342	542	-826	-28	-129	9	41	0.603	0.278	0.89	Yes	0.370	0.186	0.56	Yes	0.754	0.141	0.90	Yes	0.748	0.249	1.00	Yes	1.00	**7.59**
		L_1 - L_2	538.48	-----	249	-486	350	-405	-68	33	41	115	0.824	0.170	1.00	Yes	0.557	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_2 - L_3	913.56	-----	21	-932	6	-174	181	103	16	2	0.796	0.203	1.00	Yes	0.509	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_3 - L_4	1208.57	-----	-118	-1363	62	-365	293	127	44	54	0.764	0.226	1.00	Yes	0.496	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		L_4 - L_5	1648.07	-----	-1221	-1415	-328	-215	81	281	79	116	0.805	0.190	1.00	Yes	0.517	0.111	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		L_5 - L_6	1595.10	-----	-785	-1694	-83	-343	-49	-46	142	78	0.779	0.214	1.00	Yes	0.506	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		L_6 - L_7	1268.66	-----	-1568	-147	-405	236	-99	343	-185	17	0.746	0.245	1.00	Yes	0.483	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_7 - L_8	1055.37	-----	-782	-490	-88	109	199	19	-30	38	0.833	0.162	1.00	Yes	0.533	0.097	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		L_8 - L_9	563.01	-----	-741	107	-171	341	-201	408	-17	47	0.729	0.267	1.00	Yes	0.437	0.173	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.66**
		L_9 - L_{10}	260.69	-516.57	-772	-42	-3	480	313	26	67	125	0.338	0.259	0.60	Yes	0.197	0.156	0.36	Yes	0.794	0.189	0.99	Yes	0.787	0.204	1.00	Yes	1.00	**3.99**
		L_{10} - L_{11}	-----	-1086.25	-290	271	-429	763	-81	231	-55	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.884	0.070	0.96	Yes	0.874	0.120	1.00	Yes	1.00	**6.40**
		L_{11} - L_{12}	-----	-1255.33	-41	471	-69	1197	-167	-187	-350	-541	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.191	1.00	Yes	0.795	0.159	0.96	Yes	1.00	**3.70**
		L_{12} - L_{13}	-----	-1248.84	468	-23	1158	-16	-243	-216	-566	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.192	1.00	Yes	0.791	0.153	0.95	Yes	1.00	**3.96**
		L_{13} - L_{14}	-----	-1106.48	70	-633	-47	281	59	-17	-228	122	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.080	0.99	Yes	0.891	0.100	1.00	Yes	1.00	**3.78**
		L_{14} - L_{15}	-----	-745.88	94	-301	569	166	45	23	149	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.130	1.00	Yes	0.861	0.126	0.99	Yes	1.00	**2.74**
		L_{15} - L_{16}	-----	-541.12	162	-631	422	194	44	-50	16	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.098	0.93	Yes	0.824	0.167	1.00	Yes	1.00	**2.45**
		L_{16} - L_{17}	668.45	-248.01	-519	-718	340	34	120	319	92	-34	0.769	0.225	1.00	Yes	0.457	0.144	0.61	Yes	0.339	0.236	0.58	Yes	0.336	0.173	0.51	Yes	1.00	**2.66**
		L_{17} - L_{18}	681.97	-131.08	-710	-741	101	-2	191	-1	2	12	0.785	0.210	1.00	Yes	0.454	0.126	0.58	Yes	0.179	0.242	0.43	Yes	0.177	0.179	0.36	Yes	1.00	**2.78**
		L_{18} - L_{19}	438.43	-----	-773	-68	64	-5	-188	413	28	-115	0.671	0.321	1.00	Yes	0.409	0.212	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		L_{19} - L_{20}	183.32	-322.86	-379	282	-1202	975	1199	326	299	82	0.281	0.618	0.90	Yes	0.165	0.371	0.54	Yes	0.586	0.405	1.00	Yes	0.581	0.361	0.95	Yes	1.00	**14.82**

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.198	0.93	Yes	0.685	0.312	1.00	Yes	1.00	**1.18**
North Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-293.24	-59	89	-161	210	-28	-9	-234	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.198	0.93	Yes	0.685	0.312	1.00	Yes	1.00	**1.18**
		$U_1 - L_1$			-----	-347.11	23	-12	-179	206	-5	-5	285	157	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.164	0.93	Yes	0.734	0.264	1.00	Yes	1.00	**2.63**
		$U_2 - L_2$			99.32	-328.94	85	-94	-177	235	63	29	359	185	0.179	0.404	0.59	Yes	0.098	0.222	0.33	Yes	0.719	0.217	0.94	Yes	0.696	0.300	1.00	Yes	1.00	**4.01**
		$U_3 - L_3$			194.30	-324.02	240	-225	-177	236	133	129	671	194	0.349	0.501	0.86	Yes	0.192	0.275	0.47	Yes	0.710	0.253	0.97	Yes	0.686	0.307	1.00	Yes	1.00	**6.39**
		$U_4 - L_4$			-----	-334.59	179	-179	226	-221	-384	-149	502	142	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.198	0.94	Yes	0.708	0.289	1.00	Yes	1.00	**3.88**
		$U_5 - L_5$			-----	-431.53	67	-90	205	-248	16	18	188	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.108	0.89	Yes	0.744	0.252	1.00	Yes	1.00	**2.34**
		$U_6 - L_6$			-----	-494.28	85	-82	234	-258	-196	-66	265	30	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.133	0.93	Yes	0.746	0.250	1.00	Yes	1.00	**2.10**
		$U_7 - L_7$			-----	-416.95	129	-143	259	-280	-162	14	388	59	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.201	0.95	Yes	0.680	0.310	1.00	Yes	1.00	**1.40**
		$U_8 - L_8$			-----	-1202.08	21	-32	141	-166	-5	38	1261	346	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.129	1.00	Yes	0.833	0.031	0.87	Yes	1.00	**3.61**
		$U_9 - L_9$			-----	-644.71	-172	201	-377	426	-355	-150	-171	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.144	0.94	Yes	0.746	0.248	1.00	Yes	1.00	**2.38**
		$U_{10} - L_{10}$			-----	-724.03	-123	106	-290	326	-776	-434	-312	-394	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.214	1.00	Yes	0.744	0.182	0.93	Yes	1.00	**2.88**
		$U_{11} - L_{11}$			-----	-673.10	-144	195	-315	459	-569	-387	-110	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.176	0.99	Yes	0.783	0.213	1.00	Yes	1.00	**3.05**
		$U_{12} - L_{12}$			-----	-537.57	-101	101	-292	305	-328	-202	111	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.148	0.93	Yes	0.738	0.260	1.00	Yes	1.00	**2.75**
		$U_{13} - L_{13}$			-----	-384.03	-51	70	-194	228	-164	-10	289	30	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.150	0.93	Yes	0.736	0.261	1.00	Yes	1.00	**2.14**
		$U_{14} - L_{14}$			-----	-315.36	-163	189	-175	188	-22	-15	839	145	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.288	1.00	Yes	0.667	0.242	0.91	Yes	1.00	**4.29**
		$U_{15} - L_{15}$			172.84	-315.68	-128	116	228	-258	62	117	383	-49	0.311	0.441	0.76	Yes	0.171	0.243	0.42	Yes	0.708	0.163	0.88	Yes	0.668	0.330	1.00	Yes	1.00	**4.08**
		$U_{16} - L_{16}$			-----	-338.74	26	-35	201	-218	58	-77	682	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.218	0.99	Yes	0.717	0.279	1.00	Yes	1.00	**2.67**
		$U_{17} - L_{17}$			-----	-442.64	59	-74	202	-229	-123	-113	298	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.119	0.95	Yes	0.764	0.233	1.00	Yes	1.00	**2.08**
		$U_{18} - L_{18}$			-----	-540.38	142	-148	411	-432	-136	-120	290	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.082	0.88	Yes	0.752	0.245	1.00	Yes	1.00	**2.25**
		$U_{19} - L_{19}$			-----	-659.09	170	-169	486	-495	-118	-46	605	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.138	0.97	Yes	0.767	0.230	1.00	Yes	1.00	**2.49**
		$U_{20} - L_{20}$			-----	-573.81	160	-260	311	-469	27	4	460	60	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.202	1.00	Yes	0.702	0.225	0.93	Yes	1.00	**1.72**
	Structure 2	$U_0 - L_0$			-----	-646.76	-162	210	-423	533	-41	-7	-494	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.188	1.00	Yes	0.725	0.240	0.97	Yes	1.00	**2.44**
		$U_1 - L_1$			-----	-726.26	-116	126	-494	514	-107	-7	-821	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.164	1.00	Yes	0.778	0.218	1.00	Yes	1.00	**3.28**
		$U_2 - L_2$			-----	-607.49	-108	118	-398	431	-108	-38	384	54	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.117	0.94	Yes	0.774	0.221	1.00	Yes	1.00	**2.78**
		$U_3 - L_3$			-----	-495.80	-55	63	-220	237	77	-46	71	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.075	0.92	Yes	0.778	0.216	1.00	Yes	1.00	**2.52**
		$U_4 - L_4$			-----	-353.00	-15	23	-185	194	244	74	199	29	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.145	0.95	Yes	0.747	0.248	1.00	Yes	1.00	**2.56**
		$U_5 - L_5$			77.96	-340.34	59	-49	-159	190	-47	84	507	25	0.140	0.390	0.54	Yes	0.077	0.214	0.30	Yes	0.769	0.226	1.00	Yes	0.720	0.243	0.97	Yes	1.00	**3.23**
		$U_6 - L_6$			326.91	-266.28	186	-196	-201	218	53	99	440	48	0.588	0.406	1.00	Yes	0.323	0.223	0.55	Yes	0.599	0.204	0.81	Yes	0.563	0.278	0.85	Yes	1.00	**5.11**
		$U_7 - L_7$			-----	-324.18	142	-167	143	-153	-64	-34	735	75	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.260	1.00	Yes	0.686	0.213	0.90	Yes	1.00	**4.07**
		$U_8 - L_8$			-----	-486.04	64	-81	311	-339	-1	-63	654	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.162	0.87	Yes	0.700	0.297	1.00	Yes	1.00	**3.07**
		$U_9 - L_9$			-----	-689.43	158	-172	601	-607	-36	-195	121	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.086	0.86	Yes	0.739	0.258	1.00	Yes	1.00	**3.51**
		$U_{10} - L_{10}$			-----	-790.72	164	-190	555	-578	-39	-221	227	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.105	0.89	Yes	0.739	0.255	1.00	Yes	1.00	**3.62**
		$U_{11} - L_{11}$			-----	-824.56	186	-185	466	-505	-190	-69	668	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.145	0.98	Yes	0.771	0.223	1.00	Yes	1.00	**3.22**
		$U_{12} - L_{12}$			-----	-878.12	161	-149	533	-540	-219	-30	171	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.107	0.95	Yes	0.761	0.231	1.00	Yes	1.00	**3.26**
		$U_{13} - L_{13}$			-----	-742.96	210	-208	580	-559	-175	22	277	40	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.162	1.00	Yes	0.716	0.277	1.00	Yes	1.00	**2.80**
		$U_{14} - L_{14}$			-----	-1121.53	120	-116	353	-340	-30	198	1242	292	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.171	1.00	Yes	0.744	0.062	0.81	Yes	1.00	**3.86**
		$U_{15} - L_{15}$			-----	-744.81	-116	124	-583	579	-307	9	299	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.154	0.99	Yes	0.718	0.279	1.00	Yes	1.00	**4.29**
		$U_{16} - L_{16}$			-----	-710.85	-89	63	-480	476	-807	-260	-491	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.177	1.00	Yes	0.762	0.204	0.97	Yes	1.00	**3.52**
		$U_{17} - L_{17}$			-----	-656.77	-127	125	-478	495	-274	-185	58	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.114	0.93	Yes	0.764	0.230	1.00	Yes	1.00	**3.07**
		$U_{18} - L_{18}$			-----	-585.09	-95	95	-458	484	-114	-127	-82	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.111	0.90	Yes	0.746	0.248	1.00	Yes	1.00	**3.02**
		$U_{19} - L_{19}$			-----	-488.45	-56	60	-267	275	-66	-32	151	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.075	0.81	Yes	0.729	0.265	1.00	Yes	1.00	**2.62**
		$U_{20} - L_{20}$			-----	-401.71	-22	26	-184	200	-160	-34	392	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.154	0.98	Yes	0.770	0.228	1.00	Yes	1.00	**2.61**
	Structure 3	$U_0 - L_0$			-----	-561.92	-145	194	-396	456	-56	-7	-777	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.226	1.00	Yes	0.675	0.218	0.90	Yes	1.00	**1.97**
		$U_1 - L_1$			-----	-667.64	-113	125	-437	465	-123	-4	-413	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.123	0.96	Yes	0.777	0.216	1.00	Yes	1.00	**3.12**
		$U_2 - L_2$			-----	-553.30	-111	117	-374	398	-149	-46	187	40	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.094	0.91	Yes	0.770	0.225	1.00	Yes	1.00	**2.59**
		$U_3 - L_3$			-----	-457.10	-47	60	-171	199	42	-64	335	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.138	1.00	Yes	0.789	0.202	1.00	Yes	1.00	**2.11**
		$U_4 - L_4$			-----	-336.60	-21	30	-213	225	12	22	104	8	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.107	0.87	Yes	0.712	0.287	1.00	Yes	1.00	**2.71**
		$U_5 - L_5$			88.81	-335.03	60	-56	-199	226	-67	86	381	33	0.160	0.400	0.56	Yes	0.088	0.220	0.31	Yes	0.751	0.200	0.96	Yes	0.709	0.289	1.00	Yes	1.00	**3.40**
		$U_6 - L_6$			-----	-318.46	158	-175	-39	41	-197	-32	866	93	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.285	1.00	Yes	0.674	0.223	0.90	Yes	1.00	**3.78**
		$U_7 - L_7$			-----	-375.71	8	-22	213	-241	-11	-18	268	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.121	0.89	Yes	0.720	0.275	1.00	Yes	1.00	**2.78**
		$U_8 - L_8$			-----	-523.00	62	-69	318	-330	-14	-84	320	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.104	0.86	Yes	0.718	0.282	1.00	Yes	1.00	**3.15**
		$U_9 - L_9$			-----	-664.18	117	-173	335	-471	6	-35	579	7	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.134	0.94	Yes	0.773	0.218	1.00	Yes	1.00	**3.20**
		$U_{10} - L_{10}$			-----	-777.21	119	-116	404	-439	-214	-99	199	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.105	0.92	Yes	0.767	0.228	1.00	Yes	1.00	**3.37**
		$U_{11} - L_{11}$			-----	-649.47	167	-192	420	-472	-166	-34	441	119	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.151	0.93	Yes	0.734	0.262	1.00	Yes	1.00	**2.39**
		$U_{12} - L_{12}$			-----	-1142.13	79	-109	262	-352	-122	34	1541	438	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.170	1.00	Yes	0.792	0.066	0.86	Yes	1.00	**3.78**
		$U_{13} - L_{13}$			-----	-461.37	-67	76	-266	287	-297	-42	32	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.156	0.93	Yes	0.712	0.282	1.00	Yes	1.00	**2.45**
		$U_{14} - L_{14}$			-----	-515.00	-45	30	-218	238	-708	-339	-459	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.217	1.00	Yes	0.739	0.208	0.95	Yes	1.00	**2.76**
		$U_{15} - L_{15}$			-----	-455.11	-45	50	-175	211	-355	-204	-60	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.165	0.99	Yes	0.785	0.214	1.00	Yes	1.00	**2.52**
		$U_{16} - L_{16}$			-----	-319.64	-61	60	-247	248	-534	-313	310	19	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.242	0.95	Yes	0.676	0.317	1.00	Yes	1.00	**4.54**
		$U_{17} - L_{17}$			262.83	-203.73	-280	289	41	-74	-118	89	520	71	0.473	0.520	1.00	Yes	0.260	0.286	0.55	Yes	0.446	0.200	0.65	Yes	0.431	0.369	0.81	Yes	1.00	**4.91**
		$U_{18} - L_{18}$			118.18	-325.19	-110	123	164	-222	-110	16	792	123	0.213	0.513	0.73	Yes	0.117	0.282	0.40	Yes	0.711	0.283	1.00	Yes	0.688	0.284	0.98	Yes	1.00	**4.03**
		$U_{19} - L_{19}$			47.03	-332.96	-56	44	228	-227	-84	-3	343	69	0.085	0.391	0.48	Yes	0.047	0.215	0.27	Yes	0.727	0.149	0.88	Yes	0.705	0.291	1.00	Yes	1.00	**2.62**
		$U_{20} - L_{20}$			-----	-377.98	19	-28	10	-88	-46	-15	-233	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.147	1.00	Yes	0.800	0.113	0.92	Yes	1.00	**1.50**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End																		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
North Truss - Diagonals	Structure 1	$U_0 - L_1$	671.79	-----	-79	50	-16	-2	56	-82	-12	5	0.881	0.113	1.00	Yes	0.532	0.062	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_1 - L_2$	460.87	-81.53	-90	0	16	-19	-169	-136	-8	-16	0.829	0.164	1.00	Yes	0.456	0.090	0.55	Yes	0.187	0.136	0.33	Yes	0.173	0.115	0.29	Yes	1.00	**3.16**
		$U_2 - L_3$	417.73	-222.19	-113	-2	-48	-65	-347	-47	139	-59	0.751	0.244	1.00	Yes	0.413	0.134	0.55	Yes	0.511	0.215	0.73	Yes	0.470	0.144	0.62	Yes	1.00	**5.02**
		$U_3 - L_4$	-----	-375.15	-34	-53	-9	-76	-219	-174	32	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.140	1.00	Yes	0.794	0.097	0.90	Yes	1.00	**2.78**
		$U_4 - L_4$	557.38	-----	-96	23	-37	0	-197	-285	-306	-173	0.825	0.169	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		$U_5 - L_5$	668.17	-----	-210	213	-82	92	-335	-327	-466	-134	0.790	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.66**
		$U_1 - L_6$	653.00	-----	-301	252	-85	104	-249	-215	296	124	0.772	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_6 - L_7$	651.73	-----	-106	299	1	136	-117	-188	312	188	0.771	0.227	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_5 - L_8$	983.93	-----	-98	356	19	139	327	372	339	103	0.787	0.206	1.00	Yes	0.487	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_9 - L_{10}$	1004.33	-----	-307	233	-77	87	154	444	120	132	0.803	0.193	1.00	Yes	0.497	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_{10} - L_{11}$	979.95	-----	-255	175	-60	99	-10	348	18	184	0.828	0.163	1.00	Yes	0.512	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{11} - L_{12}$	850.73	-----	-256	106	-105	0	-12	236	-29	70	0.842	0.154	1.00	Yes	0.463	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		$U_{12} - L_{13}$	650.89	-----	-205	144	-78	34	-68	119	-58	-101	0.793	0.202	1.00	Yes	0.499	0.113	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		$U_{13} - L_{14}$	459.31	-----	-91	42	-24	-26	-54	-57	-73	-168	0.826	0.165	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		$U_{15} - L_{14}$	228.32	-307.45	-60	-4	18	-96	-264	-235	-525	-112	0.411	0.275	0.69	Yes	0.226	0.151	0.38	Yes	0.720	0.272	1.00	Yes	0.651	0.123	0.78	Yes	1.00	**3.24**
		$U_{16} - L_{15}$	361.70	-----	-116	84	-35	-22	-344	-270	-680	-105	0.651	0.345	1.00	Yes	0.358	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
		$U_{17} - L_{16}$	509.66	-----	-143	87	-34	14	-452	-409	-110	-130	0.747	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		$U_{18} - L_{17}$	602.00	-----	-319	244	-111	76	-576	-493	-111	-117	0.712	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		$U_{19} - L_{18}$	670.44	-----	-349	252	-132	87	-533	-465	-65	-106	0.726	0.266	1.00	Yes	0.399	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.26**
		$U_{20} - L_{19}$	717.35	-----	-257	257	-95	93	-531	-366	-100	-39	0.777	0.219	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
	Structure 2	$U_0 - L_1$	806.25	-----	-351	356	-114	99	-7	-189	-61	-50	0.798	0.193	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_1 - L_2$	787.07	-----	-392	301	-95	71	-220	37	-100	-29	0.779	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_2 - L_3$	654.28	-----	-332	270	-82	62	-164	38	-23	91	0.774	0.218	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		$U_3 - L_4$	598.82	-----	-184	131	-37	15	-161	10	105	61	0.798	0.201	1.00	Yes	0.439	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_4 - L_5$	420.73	-----	-134	91	-6	-21	-224	74	-70	-144	0.757	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**
		$U_5 - L_6$	437.30	-249.09	-127	72	58	-105	-162	20	-171	-164	0.787	0.212	1.00	Yes	0.433	0.117	0.55	Yes	0.588	0.162	0.75	Yes	0.527	0.163	0.70	Yes	1.00	**4.34**
		$U_6 - L_7$	-----	-382.59	-53	-12	57	-104	-159	-83	-97	-297	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1.00	Yes	0.733	0.119	0.86	Yes	1.00	**2.82**
		$U_8 - L_7$	550.03	-----	-167	130	-69	-7	-240	-406	-713	-166	0.701	0.295	1.00	Yes	0.441	0.169	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_8 - L_8$	682.27	-----	-331	210	-141	42	-480	-468	-518	-242	0.739	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		$U_{10} - L_9$	792.71	-----	-303	230	-135	61	-473	-441	75	-192	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{11} - L_{10}$	871.37	-----	-334	287	-107	131	-445	-464	141	-1	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{12} - L_{11}$	850.24	-----	-371	335	-118	154	-383	-435	223	77	0.775	0.217	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_{13} - L_{12}$	754.39	-----	-424	380	-151	154	-193	-159	336	128	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		$U_{14} - L_{13}$	748.70	-----	-272	425	-18	155	-262	-132	400	195	0.741	0.257	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_{14} - L_{15}$	632.51	-----	-223	358	27	70	235	162	215	-43	0.748	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_{15} - L_{16}$	632.92	-----	-369	342	-62	68	-163	201	-10	21	0.748	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_{16} - L_{17}$	711.86	-----	-327	334	-69	96	-296	315	-149	63	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_{17} - L_{18}$	655.91	-----	-289	284	-66	79	-43	292	-27	102	0.775	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{18} - L_{19}$	670.95	-----	-282	259	-49	68	68	256	33	20	0.793	0.206	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_{19} - L_{20}$	607.97	-----	-197	158	-33	14	25	232	-13	-39	0.775	0.224	1.00	Yes	0.426	0.126	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{20} - L_{21}$	448.64	-----	-126	113	-8	-7	19	90	-56	-89	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		$U_{21} - L_{22}$	441.57	-198.31	-118	49	25	-73	-32	98	-41	-178	0.794	0.203	1.00	Yes	0.437	0.111	0.55	Yes	0.468	0.142	0.62	Yes	0.420	0.151	0.58	Yes	1.00	**3.93**
		$U_{23} - L_{22}$	375.55	-290.62	-95	49	-1	-70	-220	-256	-677	-23	0.675	0.317	1.00	Yes	0.371	0.175	0.55	Yes	0.692	0.282	0.98	Yes	0.615	0.122	0.74	Yes	1.00	**3.90**
		$U_{24} - L_{23}$	410.72	-----	-119	105	-8	-16	-313	-214	-346	-44	0.739	0.252	1.00	Yes	0.406	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		$U_{25} - L_{24}$	562.91	-----	-183	177	-53	19	-389	-306	-546	-133	0.718	0.275	1.00	Yes	0.395	0.157	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_{26} - L_{25}$	655.14	-----	-270	264	-26	38	-360	-352	120	47	0.775	0.218	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		$U_{27} - L_{26}$	643.30	-----	-298	265	-45	58	-331	-352	177	68	0.761	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{28} - L_{27}$	705.58	-----	-331	359	-47	66	-271	-246	204	113	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_{29} - L_{28}$	626.59	-----	-371	342	-72	72	-225	-169	211	102	0.741	0.251	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{30} - L_{29}$	627.23	-----	-225	347	36	103	-169	-225	318	159	0.742	0.254	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_{30} - L_{31}$	761.02	-----	-293	433	14	73	152	189	282	0	0.753	0.243	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_{31} - L_{32}$	726.53	-----	-412	360	-74	77	-180	237	10	47	0.754	0.242	1.00	Yes	0.415	0.124	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{32} - L_{33}$	879.28	-----	-356	344	-58	93	-282	276	-147	140	0.801	0.190	1.00	Yes	0.441	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{33} - L_{34}$	878.63	-----	-346	277	-67	90	-43	367	24	209	0.800	0.197	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		$U_{34} - L_{35}$	822.56	-----	-313	224	-93	47	14	267	86	-24	0.814	0.185	1.00	Yes	0.448	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{35} - L_{36}$	744.80	-----	-335	256	-97	32	14	84	-72	-133	0.807	0.193	1.00	Yes	0.444	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{36} - L_{37}$	607.46	-----	-194	143	-34	-10	-111	74	-69	-216	0.775	0.217	1.00	Yes	0.488	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_{38} - L_{37}$	-----	-367.54	-24	-10	32	-78	-169	-211	-461	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.200	1.00	Yes	0.704	0.089	0.80	Yes	1.00	**2.15**
		$U_{39} - L_{38}$	324.64	-312.77	-99	54	64	-110	-365	-251	-464	-93	0.584	0.275	0.86	Yes	0.321	0.151	0.48	Yes	0.745	0.252	1.00	Yes	0.662	0.140	0.81	Yes	1.00	**4.01**
		$U_{40} - L_{39}$	377.04	-139.62	-122	94	-6	-33	-341	-271	-554	-96	0.678	0.316	1.00	Yes	0.373	0.174	0.55	Yes	0.334	0.217	0.56	Yes	0.295	0.156	0.46	Yes	1.00	**3.28**
		$U_{41} - L_{40}$	549.63	-----	-175	123	-17	2	-480	-383	-93	-78	0.733	0.260	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		$U_{42} - L_{41}$	608.74	-----	-329	248	-49	32	-476	-488	-67	-64	0.720	0.275	1.00	Yes	0.396	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_{43} - L_{42}$	752.14	-----	-382	312	-64	43	-486	-434	-3	-44	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{44} - L_{43}$	767.15	-----	-281	324	-93	79	-572	-323	59	-22	0.759	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
	Structure 3	$U_0 - L_1$	703.74	-----	-375	316	-112	94	-262	-165	-63	-53	0.762	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.11**
		$U_1 - L_2$	717.43	-----	-343	253	-99	67	-281	-52	-126	-45	0.777	0.222	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_2 - L_3$	645.95	-----	-331	243	-97	63	-254	126	-49	78	0.764	0.234	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		$U_3 - L_4$	554.49	-----	-150	108	-28	10	-141	-18	73	48	0.813	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		$U_4 - L_5$	424.11	-----	-132	90	-8	-29	-212	25	-102	-165	0.763	0.231	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		$U_5 - L_6$	420.79	-296.74	-113	-5	36	-103	-242	-10	-222	-331	0.757	0.240	1.00	Yes	0.416	0.132	0.55	Yes	0.695	0.219	0.92	Yes	0.628	0.145	0.78	Yes	1.00	**4.23**
		$U_7 - L_6$	429.59	-----	-85	34	-16	-37	-257	-288	-405	-185	0.773	0.226	1.00	Yes	0.425	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		$U_8 - L_7$	576.23	-----	-187	147	-85	11	-419	-372	-665	-227	0.702	0.293	1.00	Yes	0.442	0.168	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_8 - L_8$	748.00	-----	-247	91	-153	-19	-594	-548	-935	-461	0.740	0.255	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		$U_{10} - L_9$	927.56	-----	-266	147	-108	56	-585	-640	-626	-301	0.783	0.207	1.00	Yes	0.485	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{11} - L_{10}$	993.21	-----	-301	258	-82	89	-498	-423	230	89	0.794	0.197	1.00	Yes	0.492	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$U_{12} - L_{11}$	976.26	-----	-113	358	4	133	-454	-313	325	183	0.780	0.217	1.00	Yes	0.483	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		$U_{12} - L_{13}$	659.54	-----	-113	294	25	73	275	183	173	-14	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$U_{13} - L_{14}$	670.32	-----	-287	241	-24	58	-81	230	-32	49	0.792	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		$U_{14} - L_{15}$	707.27	-----	-196	192	-17	64	-204	243	33	74	0.836	0.156	1.00	Yes	0.460	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{15} - L_{16}$	586.90	-----	-102	36	-16	11	-21	144	-46	55	0.861	0.137	1.00	Yes	0.473	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_{17} - L_{16}$	-----	-389.58	-12	-22	7	-53	25	20	-251	23	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.105	1.00	Yes	0.824	0.068	0.90	Yes	1.00	**2.67**
		$U_{18} - L_{17}$	226.93	-310.36	-83	-23	-25	-62	-293	-246	-640	-33	0.408	0.291	0.70	Yes	0.224	0.160	0.39	Yes	0.714	0.276	1.00	Yes	0.657	0.106	0.77	Yes	1.00	**3.61**
		$U_{19} - L_{18}$	411.44	-124.39	-101	12	24	-19	-445	-374	153	117	0.740	0.258	1.00	Yes	0.407	0.142	0.55	Yes	0.285	0.237	0.53	Yes	0.263	0.129	0.40	Yes	1.00	**2.90**
		$U_{20} - L_{19}$	633.51	-----	-15	31	-15	-7	-515	-399	105	118	0.831	0.166	1.00	Yes	0.502	0.091	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-546.98	-21	79	270	-1056	18	-27	-41	-436	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.248	1	Yes	0.738	0.251	0.99	Yes	1.00	**3.89**
		U_1 - U_2			-----	-579.82	-50	91	-160	-808	-6	43	-42	73	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.204	1	Yes	0.782	0.192	0.98	Yes	1.00	**2.80**
		U_2 - U_3			137.63	-588.25	-92	262	-583	-608	-1	-90	152	-102	0.158	0.170	0.33	Yes	0.106	0.111	0.22	Yes	0.800	0.199	1	Yes	0.793	0.145	0.94	Yes	1.00	**2.82**
		U_3 - U_4			311.05	-548.07	93	255	-539	-663	-85	-80	4	-161	0.357	0.185	0.55	Yes	0.245	0.127	0.38	Yes	0.746	0.246	1	Yes	0.739	0.158	0.90	Yes	1.00	**3.42**
		U_4 - U_5			325.62	-563.98	105	257	-993	-16	-170	-21	-80	-99	0.373	0.265	0.64	Yes	0.256	0.182	0.44	Yes	0.767	0.220	0.99	Yes	0.761	0.236	1.00	Yes	1.00	**3.56**
		U_5 - U_6			605.08	-----	234	391	-1014	-77	-339	-16	-132	-345	0.694	0.299	1.00	Yes	0.468	0.195	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		U_6 - U_7			790.20	-----	290	191	-806	39	-346	85	-468	-164	0.756	0.236	1.00	Yes	0.528	0.162	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		U_7 - U_8			922.25	-----	-46	1199	-1450	2107	-264	338	-313	151	0.639	0.354	1.00	Yes	0.446	0.241	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		U_8 - U_9			872.99	-----	1269	-164	1508	-1357	-101	248	4	215	0.715	0.283	1.00	Yes	0.489	0.193	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		U_9 - U_{10}			652.12	-----	229	234	-241	-870	108	436	160	558	0.707	0.284	1.00	Yes	0.479	0.191	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		U_{10} - U_{11}			-----	-617.58	246	-73	142	-922	224	101	314	46	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.193	0.99	Yes	0.788	0.207	1.00	Yes	1.00	**3.64**
		U_{11} - U_{12}			-----	-865.06	178	-118	-224	-909	166	102	270	136	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.179	1	Yes	0.812	0.151	0.97	Yes	1.00	**2.93**
		U_{12} - U_{13}			-----	-1234.88	-21	-160	-22	-1137	220	-31	241	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.163	1	Yes	0.825	0.157	0.99	Yes	1.00	**3.35**
		U_{13} - U_{14}			-----	-1367.16	-105	-349	-924	-1373	150	70	203	49	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.206	1	Yes	0.784	0.151	0.94	Yes	1.00	**3.21**
		U_{14} - U_{15}			-----	-1335.60	-246	-183	-1508	-946	185	-50	136	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.222	1	Yes	0.766	0.166	0.94	Yes	1.00	**3.08**
		U_{15} - U_{16}			-----	-1392.62	-70	-411	-1297	-558	22	-61	223	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.191	1	Yes	0.798	0.143	0.95	Yes	1.00	**3.09**
		U_{16} - U_{17}			-----	-1367.59	-314	-184	-1595	-378	53	-173	-58	-280	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1	Yes	0.784	0.176	0.97	Yes	1.00	**3.19**
		U_{17} - U_{18}			-----	-1048.55	-166	-103	-930	42	-155	-226	-75	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.162	1	Yes	0.820	0.151	0.98	Yes	1.00	**2.96**
		U_{18} - U_{19}			-----	-716.07	-197	-29	-864	43	-195	-173	-46	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1	Yes	0.806	0.174	0.98	Yes	1.00	**2.67**
		U_{19} - U_{20}			-----	-594.32	-185	-15	-1641	655	-130	3	378	12	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.268	0.95	Yes	0.669	0.330	1.00	Yes	1.00	**5.67**
	Structure 2	U_0 - U_1			-----	-626.31	170	-138	108	-1507	95	184	102	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.213	0.96	Yes	0.740	0.256	1.00	Yes	1.00	**5.61**
		U_1 - U_2			-----	-784.23	-104	-147	-91	-1075	338	642	210	282	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.228	1	Yes	0.757	0.163	0.93	Yes	1.00	**3.05**
		U_2 - U_3			-----	-1158.00	-80	-215	-125	-1346	610	1	461	0	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.167	1	Yes	0.822	0.137	0.96	Yes	1.00	**3.44**
		U_3 - U_4			-----	-1401.40	-360	-284	-1211	-1415	117	-305	243	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.190	1	Yes	0.798	0.126	0.93	Yes	1.00	**3.38**
		U_4 - U_5			-----	-1477.23	-361	-320	-1555	-1806	-67	-356	130	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.227	1	Yes	0.758	0.150	0.91	Yes	1.00	**3.23**
		U_5 - U_6			-----	-1508.28	-383	-1	-2066	-1100	-109	-296	35	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.774	0.171	0.95	Yes	1.00	**3.28**
		U_6 - U_7			-----	-1314.64	-266	-75	-1176	-1957	-86	-263	-16	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.749	0.174	0.93	Yes	1.00	**3.02**
		U_7 - U_8			-----	-1335.45	-157	-199	-2108	-585	-184	-217	-88	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.228	1	Yes	0.760	0.188	0.95	Yes	1.00	**3.11**
		U_8 - U_9			-----	-1193.77	-285	105	-1518	-228	-227	-184	-48	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.179	1	Yes	0.810	0.161	0.98	Yes	1.00	**3.34**
		U_9 - U_{10}			-----	-940.45	-81	298	-1477	-92	-282	-131	-83	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.183	1	Yes	0.812	0.180	1.00	Yes	1.00	**3.63**
		U_{10} - U_{11}			510.91	-797.16	102	375	-1418	-194	-179	-78	-152	-214	0.432	0.226	0.66	Yes	0.294	0.146	0.44	Yes	0.797	0.199	1	Yes	0.792	0.200	1.00	Yes	1.00	**4.96**
		U_{11} - U_{12}			801.82	-----	172	508	-1873	372	-382	-180	-203	-435	0.677	0.317	1.00	Yes	0.455	0.212	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		U_{12} - U_{13}			1157.08	-----	305	34	-1118	-995	-530	-106	-784	-492	0.781	0.215	1.00	Yes	0.557	0.148	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.59**
		U_{13} - U_{14}			1375.86	-----	-289	2914	-409	1507	-649	300	-538	-176	0.677	0.314	1.00	Yes	0.479	0.206	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		U_{14} - U_{15}			1382.05	-----	2984	-27	1308	-98	-542	281	-247	147	0.680	0.313	1.00	Yes	0.481	0.205	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.57**
		U_{15} - U_{16}			1190.72	-----	62	328	-1405	-1757	58	742	376	860	0.720	0.272	1.00	Yes	0.512	0.184	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.10**
		U_{16} - U_{17}			966.41	-----	612	258	-19	-1765	308	326	576	368	0.712	0.282	1.00	Yes	0.474	0.186	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		U_{17} - U_{18}			758.81	-----	500	304	-618	-1196	33	170	201	171	0.762	0.232	1.00	Yes	0.507	0.154	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		U_{18} - U_{19}			462.16	-639.53	461	198	-217	-1418	11	48	180	-18	0.464	0.267	0.74	Yes	0.304	0.169	0.48	Yes	0.760	0.207	0.97	Yes	0.755	0.241	1.00	Yes	1.00	**4.79**
		U_{19} - U_{20}			258.46	-728.80	295	158	-711	-837	10	153	134	42	0.242	0.155	0.40	Yes	0.161	0.102	0.27	Yes	0.809	0.189	1	Yes	0.804	0.134	0.94	Yes	1.00	**4.06**
		U_{20} - U_{21}			-----	-848.78	137	-10	-862	-1015	106	-8	208	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1	Yes	0.775	0.147	0.93	Yes	1.00	**3.88**
		U_{21} - U_{22}			-----	-804.86	-14	15	-827	-1408	-14	-51	59	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.259	1	Yes	0.735	0.204	0.94	Yes	1.00	**3.45**
		U_{22} - U_{23}			-----	-817.08	-14	-24	-1478	-461	-71	-101	92	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.246	1	Yes	0.746	0.214	0.96	Yes	1.00	**3.52**
		U_{23} - U_{24}			-----	-848.50	20	95	-1377	-135	-213	-105	24	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.220	1	Yes	0.774	0.199	0.98	Yes	1.00	**3.77**
		U_{24} - U_{25}			215.49	-743.19	117	244	-804	-396	-240	-32	-139	-162	0.202	0.161	0.37	Yes	0.134	0.106	0.24	Yes	0.825	0.168	1	Yes	0.820	0.129	0.95	Yes	1.00	**3.80**
		U_{25} - U_{26}			406.06	-669.39	161	410	-1195	177	-216	50	-95	-80	0.408	0.234	0.65	Yes	0.267	0.149	0.42	Yes	0.795	0.153	0.95	Yes	0.791	0.203	1.00	Yes	1.00	**4.56**
		U_{26} - U_{27}			742.47	-----	270	477	-1239	-388	-222	37	-249	-200	0.745	0.247	1.00	Yes	0.496	0.164	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		U_{27} - U_{28}			961.72	-----	235	582	-1868	-363	-354	-42	-279	-528	0.709	0.290	1.00	Yes	0.472	0.191	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		U_{28} - U_{29}			1157.25	-----	267	60	-1212	-2048	-435	70	-756	-370	0.700	0.297	1.00	Yes	0.498	0.200	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.30**
		U_{29} - U_{30}			1376.12	-----	-115	3048	-144	1295	-579	582	-126	333	0.677	0.322	1.00	Yes	0.479	0.211	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.92**
		U_{30} - U_{31}			1441.00	-----	2796	-132	1380	-342	-218	424	282	401	0.709	0.288	1.00	Yes	0.502	0.189	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		U_{31} - U_{32}			1106.17	-----	10	340	-1371	-737	192	654	458	756	0.747	0.245	1.00	Yes	0.532	0.167	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		U_{32} - U_{33}			873.05	-----	529	237	-275	-1334	327	298	604	131	0.737	0.262	1.00	Yes	0.495	0.175	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		U_{33} - U_{34}			605.37	-766.90	403	195	-566	-1487	131	188	255	134	0.511	0.241	0.76	Yes	0.348	0.155	0.51	Yes	0.767	0.231	1	Yes	0.762	0.210	0.98	Yes	1.00	**5.28**
		U_{34} - U_{35}			-----	-913.43	361	-13	87	-1672	114	-2	174	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.166	0.96	Yes	0.788	0.203	1.00	Yes	1.00	**3.88**
		U_{35} - U_{36}			-----	-1204.02	163	-239	-858	-1271	98	94	245	25	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.177	1	Yes	0.817	0.135	0.96	Yes	1.00	**3.74**
		U_{36} - U_{37}			-----	-1307.84	-133	-46	-934	-2206	163	-48	263	27	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.248	1	Yes	0.745	0.197	0.95	Yes	1.00	**3.29**
		U_{37} - U_{38}			-----	-1317.63	59	-232	-2141	-766	19	15	241	9	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.240	1	Yes	0.750	0.191	0.95	Yes	1.00	**3.33**
		U_{38} - U_{39}			-----	-1596.52	62	-389	-916	-1660	83	-101	266	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.170	1	Yes	0.820	0.138	0.96	Yes	1.00	**3.84**
		U_{39} - U_{40}			-----	-1491.60	-315	-464	-2099	-942	-116	-135	-6	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.226	1	Yes	0.766	0.174	0.94	Yes	1.00	**3.38**
		U_{40} - U_{41}			-----	-1375.03	-394	-428	-1629	-936	-90	-129	-173	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.207	1	Yes	0.783	0.145	0.93	Yes	1.00	**3.23**
		U_{41} - U_{42}			-----	-1144.06	-272	-177	-1785	-130	-96	38	-72	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1	Yes	0.812	0.182	1.00	Yes	1.00	**3.23**
		U_{42} - U_{43}			-----	-842.27	-268	-55	-1144	-103	112	-57	231	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.172	1	Yes	0.813	0.174	0.99	Yes	1.00	**3.44**
		U_{43} - U_{44}			-----	-585.48	-126	-164	-1801	446	-64	3	305	7	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.278	0.98	Yes	0.691	0.306	1.00	Yes	1.00	**5.61**
	Structure 3	U_0 - U_1			-----	-611.29	171	-173	570	-1529	62	129	-47	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.208	0.91	Yes	0.688	0.308	1.00	Yes	1.00	**5.61**
		U_1 - U_2			-----	-690.11	-68	-114	37	-774	252	511	198	288	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.208	1	Yes	0.776	0.156	0.94	Yes	1.00	**2.72**
		U_2 - U_3			-----	-1033.55	-78	-119	104	-945	513	5	496	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.171	1	Yes	0.809	0.154	0.97	Yes	1.00	**3.05**
		U_3 - U_4			-----	-1366.76	-142	-202	-894	-1370	129	-237	247	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.784	0.151	0.94	Yes	1.00	**3.51**
		U_4 - U_5			-----	-1389.27	-322	-42	-1012	-1096	-15	-312	191	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.191	1	Yes	0.796	0.121	0.92	Yes	1.00	**3.25**
		U_5 - U_6			-----	-1360.95	-145	-219	-1164	-1230	-54	-211	-21	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.207	1	Yes	0.780	0.136	0.92	Yes	1.00	**3.32**
		U_6 - U_7			-----	-1390.58	-301	-78	-1347	-597	-98	-234	65	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.188	1	Yes	0.797	0.149	0.95	Yes	1.00	**3.45**
		U_7 - U_8			-----	-1224.81	-124	-35	-958	-188	-215	-206	-33	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.163	1	Yes	0.818	0.132	0.96	Yes	1.00	**3.35**
		U_8 - U_9			-----	-898.72	-123	179	-868	-5	-103	-108	-80	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.148	1	Yes	0.843	0.144	0.99	Yes	1.00	**3.00**
		U_9 - U_{10}			-----	-597.29	-92	224	-1028	150	-205	-127	-142	-194	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.209	0.98	Yes	0.762	0.230	1.00	Yes	1.00	**3.28**
		U_{10} - U_{11}			660.71	-----	226	232	-958	53	-333	-60	-388	-166	0.717	0.277	1.00	Yes	0.485	0.186	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		U_{11} - U_{12}			816.29	-----	-147	1110	-1357	1706	-314	146	-321	12	0.669	0.325	1.00	Yes	0.458	0.222	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		U_{12} - U_{13}			1003.87	-----	1319	-41	1738	-1295	-364	111	-137	134	0.696	0.300	1.00	Yes	0.485	0.205	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		U_{13} - U_{14}			828.57	-----	200	320	-417	-654	-109	378	125	474	0.792	0.204	1.00	Yes	0.554	0.140	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		U_{14} - U_{15}			647.18	-----	425	246	-115	-769	45	156	420	9	0.742	0.254	1.00	Yes	0.500	0.166	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		U_{15} - U_{16}			307.54	-563.76	254	129	-375	-759	-4	135	141	168	0.353	0.209	0.57	Yes	0.242	0.143	0.39	Yes	0.767	0.229	1	Yes	0.760	0.180	0.95	Yes	1.00	**3.54**
		U_{16} - U_{17}			302.89	-564.68	289	70	-639	-322	39	63	253	0	0.347	0.195	0.55	Yes	0.238	0.133	0.38	Yes	0.768	0.223	1	Yes	0.761	0.152	0.92	Yes	1.00	**3.53**
		U_{17} - U_{18}			120.60	-581.58	244	-126	-588	-346	-69	156	77	-74	0.138	0.166	0.31	Yes	0.093	0.108	0.21	Yes	0.791	0.205	1	Yes	0.784	0.140	0.93	Yes	1.00	**2.81**
		U_{18} - U_{19}			-----	-571.26	51	-28	-836	-157	159	24	125	25	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.216	1	Yes	0.770	0.199	0.97	Yes	1.00	**2.67**
		U_{19} - U_{20}			-----	-539.03	124	-232	-874	-45	-60	19	288	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.266	1	Yes	0.727	0.208	0.94	Yes	1.00	**4.11**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Lower Chord	Structure 1	L_0 - L_1	204.79	-148.01	651	-1277	523	-554	-381	-1401	74	273	0.313	0.684	1.00	Yes	0.184	0.410	0.60	Yes	0.269	0.464	0.74	Yes	0.266	0.383	0.65	Yes	1.00	**11.77**
		L_1 - L_2	450.53	-----	-222	-725	46	-4	-393	29	24	18	0.690	0.302	1.00	Yes	0.421	0.200	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.30**
		L_2 - L_3	670.38	-----	-625	-877	-27	74	-83	-20	8	-10	0.771	0.225	1.00	Yes	0.446	0.135	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		L_3 - L_4	627.84	-171.50	-971	-176	47	210	-78	221	-31	34	0.722	0.270	1.00	Yes	0.429	0.174	0.61	Yes	0.234	0.214	0.45	Yes	0.232	0.235	0.47	Yes	1.00	**3.37**
		L_4 - L_5	-----	-566.43	-454	-457	112	517	-263	34	186	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.118	0.99	Yes	0.863	0.137	1.00	Yes	1.00	**4.63**
		L_5 - L_6	-----	-748.54	-380	-169	140	580	-59	-17	18	84	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.122	1	Yes	0.864	0.128	1.00	Yes	1.00	**4.37**
		L_6 - L_7	-----	-1042.68	-1012	-261	141	13	66	72	189	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.147	1	Yes	0.839	0.159	1.00	Yes	1.00	**5.13**
		L_7 - L_8	-----	-1260.16	-32	583	-42	1374	41	73	156	212	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.798	0.182	0.99	Yes	1.00	**5.45**
		L_8 - L_9	-----	-1266.46	554	-47	1397	-95	38	-14	130	29	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1	Yes	0.802	0.185	0.99	Yes	1.00	**5.37**
		L_9 - L_{10}	-----	-1065.09	-652	-854	106	95	23	9	-6	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.113	0.98	Yes	0.857	0.134	1.00	Yes	1.00	**7.63**
		L_{10} - L_{11}	-----	-552.43	-196	-562	498	-14	90	-163	72	8	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.112	0.97	Yes	0.842	0.149	1.00	Yes	1.00	**5.53**
		L_{11} - L_{12}	605.65	-----	-82	-547	347	-190	-388	168	-12	14	0.784	0.213	1.00	Yes	0.471	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		L_{12} - L_{13}	1056.62	-----	-412	-732	76	-95	-44	-260	-21	-35	0.834	0.160	1.00	Yes	0.533	0.096	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		L_{13} - L_{14}	1290.38	-----	-177	-1577	223	-392	-222	130	-106	63	0.759	0.236	1.00	Yes	0.492	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_{14} - L_{15}	1571.89	-----	-1729	-980	-352	-81	-200	46	-66	-48	0.768	0.222	1.00	Yes	0.499	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		L_{15} - L_{16}	1661.43	-----	-1403	-1472	-192	-388	-57	-17	-76	14	0.812	0.183	1.00	Yes	0.521	0.106	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{16} - L_{17}	1240.35	-----	-1337	-174	-396	38	-150	75	-34	-64	0.784	0.210	1.00	Yes	0.509	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		L_{17} - L_{18}	916.63	-----	-944	-141	-187	-51	-15	-135	-40	1	0.798	0.199	1.00	Yes	0.511	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		L_{18} - L_{19}	447.09	-----	-820	230	-262	188	-182	309	3	-14	0.684	0.310	1.00	Yes	0.463	0.195	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		L_{19} - L_{20}	360.91	-----	-308	31	-1434	917	1	0	-50	-11	0.552	0.441	1.00	Yes	0.337	0.300	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.60**
	Structure 2	L_0 - L_1	185.28	-----	523	-1602	818	-1836	-370	-1285	24	83	0.280	0.715	1.00	Yes	0.170	0.353	0.53	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.26**
		L_1 - L_2	547.38	-----	277	-1228	164	-205	-498	299	77	102	0.665	0.332	1.00	Yes	0.395	0.211	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		L_2 - L_3	1036.22	-----	-304	-1077	-19	-140	177	-212	124	164	0.817	0.178	1.00	Yes	0.536	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		L_3 - L_4	1328.97	-----	-254	-1593	57	-321	-393	198	44	124	0.781	0.218	1.00	Yes	0.526	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		L_4 - L_5	1729.70	-----	-1656	-1353	-236	-222	420	36	16	-11	0.806	0.185	1.00	Yes	0.534	0.110	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		L_5 - L_6	1870.33	-----	-1580	-1821	-26	-321	-450	158	-93	57	0.803	0.190	1.00	Yes	0.539	0.116	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		L_6 - L_7	1814.04	-----	-2455	-1271	-376	-87	84	192	52	-15	0.768	0.228	1.00	Yes	0.510	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_7 - L_8	1341.97	-----	-1924	-754	-187	229	-132	57	-69	78	0.769	0.223	1.00	Yes	0.505	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		L_8 - L_9	1102.76	-----	-1541	-84	-125	492	-99	29	43	-124	0.771	0.220	1.00	Yes	0.520	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		L_9 - L_{10}	839.43	-583.82	-1493	-250	-86	602	10	-50	-38	32	0.749	0.245	1.00	Yes	0.436	0.153	0.59	Yes	0.617	0.176	0.8	Yes	0.613	0.239	0.86	Yes	1.00	**5.78**
		L_{10} - L_{11}	-----	-676.82	-1134	198	-1	558	-108	45	119	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.102	0.91	Yes	0.795	0.198	1.00	Yes	1.00	**4.49**
		L_{11} - L_{12}	-----	-1050.92	-698	-170	3	993	-43	-123	33	91	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.103	0.98	Yes	0.862	0.135	1.00	Yes	1.00	**5.78**
		L_{12} - L_{13}	-----	-1447.27	-382	-239	-59	-934	-22	-179	429	206	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.124	1	Yes	0.866	0.093	0.96	Yes	1.00	**7.00**
		L_{13} - L_{14}	-----	-1501.46	-477	1324	-1007	2724	-190	-257	212	218	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.172	0.94	Yes	0.756	0.238	1.00	Yes	1.00	**6.11**
		L_{14} - L_{15}	-----	-1480.08	1259	-546	2825	-845	-238	-166	12	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.178	0.93	Yes	0.745	0.247	1.00	Yes	1.00	**5.48**
		L_{15} - L_{16}	-----	-1474.67	-511	-92	-1099	202	-113	6	-191	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.104	1	Yes	0.882	0.109	1.00	Yes	1.00	**7.87**
		L_{16} - L_{17}	-----	-1169.16	-66	-805	1163	78	163	72	6	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.129	0.99	Yes	0.852	0.143	1.00	Yes	1.00	**6.62**
		L_{17} - L_{18}	-----	-832.29	-27	-696	497	185	-364	143	17	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.880	0.110	1	Yes	0.874	0.111	0.99	Yes	1.00	**4.90**
		L_{18} - L_{19}	-----	-655.69	-372	-531	633	85	253	-48	-11	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.113	1	Yes	0.874	0.122	1.00	Yes	1.00	**4.94**
		L_{19} - L_{20}	695.21	-548.08	-680	-889	512	167	-74	221	-29	-32	0.788	0.205	1.00	Yes	0.466	0.130	0.60	Yes	0.735	0.140	0.88	Yes	0.730	0.172	0.91	Yes	1.00	**5.77**
		L_{20} - L_{21}	995.22	-392.53	-1167	-1000	402	17	244	-36	-2	-40	0.794	0.197	1.00	Yes	0.520	0.118	0.64	Yes	0.371	0.216	0.59	Yes	0.368	0.170	0.54	Yes	1.00	**5.92**
		L_{21} - L_{22}	973.05	-----	-1308	-1257	221	-140	-71	265	-54	18	0.776	0.219	1.00	Yes	0.519	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		L_{22} - L_{23}	909.29	-----	-1732	-1046	-143	185	-127	133	23	-40	0.725	0.267	1.00	Yes	0.485	0.167	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_{23} - L_{24}	922.17	-326.31	-1708	-803	-4	310	-82	72	-5	68	0.735	0.258	1.00	Yes	0.482	0.152	0.64	Yes	0.308	0.249	0.56	Yes	0.306	0.249	0.56	Yes	1.00	**5.21**
		L_{24} - L_{25}	651.69	-469.16	-1276	-296	112	459	-62	24	98	-92	0.738	0.261	1.00	Yes	0.437	0.168	0.61	Yes	0.629	0.170	0.8	Yes	0.625	0.246	0.88	Yes	1.00	**5.21**
		L_{25} - L_{26}	-----	-622.94	-842	-304	71	583	-36	-81	12	80	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.123	0.96	Yes	0.830	0.162	1.00	Yes	1.00	**5.17**
		L_{26} - L_{27}	-----	-840.22	-682	-446	165	502	-72	33	150	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.090	0.98	Yes	0.882	0.109	1.00	Yes	1.00	**5.71**
		L_{27} - L_{28}	-----	-1175.40	-1002	-72	60	1123	-88	-265	89	192	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.128	1	Yes	0.856	0.139	1.00	Yes	1.00	**7.48**
		L_{28} - L_{29}	-----	-1548.71	-177	-450	-182	-143	142	101	289	18	-----	-----	-----	-----	-----	-----	-----	-----	0.934	0.062	1	Yes	0.926	0.045	0.98	Yes	1.00	**8.64**
		L_{29} - L_{30}	-----	-1505.62	-499	1195	-743	2750	92	121	42	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.170	0.94	Yes	0.758	0.240	1.00	Yes	1.00	**5.63**
		L_{30} - L_{31}	-----	-1444.38	1249	-471	3031	-904	121	68	147	4	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.182	0.92	Yes	0.727	0.265	1.00	Yes	1.00	**6.19**
		L_{31} - L_{32}	-----	-1502.34	-279	-308	-809	211	88	57	-155	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.906	0.090	1	Yes	0.899	0.080	0.98	Yes	1.00	**8.23**
		L_{32} - L_{33}	-----	-1043.20	35	-736	1011	51	289	-98	-25	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.121	0.99	Yes	0.855	0.138	1.00	Yes	1.00	**5.82**
		L_{33} - L_{34}	-----	-735.12	54	-746	543	107	-299	209	20	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.102	0.98	Yes	0.864	0.131	1.00	Yes	1.00	**4.93**
		L_{34} - L_{35}	868.63	-687.87	-429	-1056	702	-5	402	-99	-9	-66	0.775	0.217	1.00	Yes	0.451	0.134	0.59	Yes	0.727	0.148	0.88	Yes	0.722	0.169	0.90	Yes	1.00	**6.48**
		L_{35} - L_{36}	1111.61	-----	-66	-1463	522	-62	-212	140	-80	11	0.778	0.217	1.00	Yes	0.524	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		L_{36} - L_{37}	1305.19	-----	-431	-2122	315	-76	25	162	36	-7	0.748	0.248	1.00	Yes	0.492	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		L_{37} - L_{38}	1830.00	-----	-1944	-2419	32	-425	-97	110	-65	51	0.775	0.219	1.00	Yes	0.515	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		L_{38} - L_{39}	1792.38	-----	-2424	-1423	-371	-78	-85	136	11	-61	0.769	0.223	1.00	Yes	0.516	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		L_{39} - L_{40}	1707.64	-----	-2069	-1449	-258	-388	-43	-76	-57	6	0.796	0.201	1.00	Yes	0.527	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_{40} - L_{41}	1319.58	-----	-1751	-497	-416	24	-134	135	-7	-14	0.775	0.216	1.00	Yes	0.522	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		L_{41} - L_{42}	1028.99	-----	-1183	-230	-194	-99	99	60	28	120	0.811	0.184	1.00	Yes	0.532	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		L_{42} - L_{43}	542.58	-----	-1302	95	-320	174	-76	440	151	66	0.659	0.337	1.00	Yes	0.392	0.215	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_{43} - L_{44}	228.87	-----	-624	71	-3066	1214	-578	-169	153	45	0.278	0.719	1.00	Yes	0.165	0.462	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.49**
	Structure 3	L_0 - L_1	271.24	-----	643	-1137	721	-1101	-250	-1133	39	176	0.415	0.576	1.00	Yes	0.253	0.377	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.02**
		L_1 - L_2	454.23	-----	279	-757	157	-187	-341	268	37	61	0.695	0.298	1.00	Yes	0.470	0.188	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		L_2 - L_3	937.87	-----	-123	-782	-21	-145	118	-220	92	134	0.817	0.179	1.00	Yes	0.523	0.108	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_3 - L_4	1253.79	-----	-405	-1133	45	-304	-399	194	30	118	0.793	0.202	1.00	Yes	0.514	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		L_4 - L_5	1667.67	-----	-1353	-1036	-272	-133	281	-29	26	12	0.815	0.183	1.00	Yes	0.523	0.107	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_5 - L_6	1656.83	-----	-1296	-1256	-30	-296	-28	391	-64	131	0.809	0.184	1.00	Yes	0.526	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		L_6 - L_7	1310.03	-----	-1602	-285	-347	204	-105	72	2	-29	0.770	0.229	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		L_7 - L_8	1047.69	-----	-898	-482	-91	51	18	106	-23	67	0.827	0.172	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		L_8 - L_9	604.78	-----	-724	31	-200	336	-45	63	60	-92	0.783	0.208	1.00	Yes	0.470	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		L_9 - L_{10}	383.03	-565.89	-516	-335	-20	511	13	22	-23	19	0.496	0.141	0.64	Yes	0.289	0.085	0.38	Yes	0.870	0.106	0.98	Yes	0.862	0.137	1.00	Yes	1.00	**5.90**
		L_{10} - L_{11}	-----	-972.61	-1308	-63	57	150	69	29	105	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.143	0.94	Yes	0.787	0.207	1.00	Yes	1.00	**6.94**
		L_{11} - L_{12}	-----	-1253.88	-57	533	-146	1450	-92	-109	-136	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1	Yes	0.794	0.192	0.99	Yes	1.00	**5.55**
		L_{12} - L_{13}	-----	-1243.03	555	-35	1387	-59	-136	-142	-282	-265	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.787	0.184	0.98	Yes	1.00	**5.33**
		L_{13} - L_{14}	-----	-1059.53	-386	-589	-56	143	-462	-164	-131	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.132	1	Yes	0.853	0.093	0.95	Yes	1.00	**5.28**
		L_{14} - L_{15}	-----	-750.50	-130	-394	575	138	127	-81	-4	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.119	1	Yes	0.866	0.127	1.00	Yes	1.00	**4.49**
		L_{15} - L_{16}	-----	-553.21	-211	-566	480	157	-445	440	12	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.143	1	Yes	0.843	0.150	1.00	Yes	1.00	**4.53**
		L_{16} - L_{17}	681.75	-153.10	-609	-797	252	10	-90	132	33	-75	0.784	0.214	1.00	Yes	0.466	0.138	0.61	Yes	0.209	0.224	0.44	Yes	0.207	0.192	0.40	Yes	1.00	**3.60**
		L_{17} - L_{18}	672.48	-----	-749	-790	43	-70	75	181	17	105	0.774	0.220	1.00	Yes	0.448	0.132	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		L_{18} - L_{19}	466.35	-----	-744	-184	-19	29	10	253	51	-75	0.714	0.278	1.00	Yes	0.435	0.185	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		L_{19} - L_{20}	109.75	-----	-1996	895	-1144	910	1050	285	-173	-47	0.168	0.824	1.00	Yes	0.099	0.499	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.51**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-376.13	-24	48	-60	120	-99	-32	-278	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.158	1	Yes	0.796	0.153	0.95	Yes	1.00	**1.19**
		$U_1 - L_1$	-----	-348.28	20	-15	-181	201	45	20	-380	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.169	0.94	Yes	0.737	0.257	1.00	Yes	1.00	**3.05**
		$U_2 - L_2$	81.05	-339.15	72	-79	-159	215	34	7	137	132	0.146	0.315	0.47	Yes	0.080	0.173	0.26	Yes	0.741	0.143	0.89	Yes	0.718	0.275	1.00	Yes	1.00	**4.56**
		$U_3 - L_3$	237.30	-317.11	254	-251	-149	196	-424	-168	45	194	0.427	0.448	0.88	Yes	0.235	0.246	0.49	Yes	0.695	0.181	0.88	Yes	0.671	0.325	1.00	Yes	1.00	**5.97**
		$U_4 - L_4$	-----	-353.34	-27	20	192	-187	-93	-20	217	62	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.119	0.9	Yes	0.748	0.246	1.00	Yes	1.00	**4.17**
		$U_5 - L_5$	-----	-440.98	24	-38	194	-231	-122	-43	48	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.101	0.9	Yes	0.761	0.234	1.00	Yes	1.00	**3.16**
		$U_6 - L_6$	-----	-532.42	52	-63	221	-259	-83	57	-10	31	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.085	0.9	Yes	0.764	0.227	1.00	Yes	1.00	**2.91**
		$U_7 - L_7$	-----	-453.39	118	-132	274	-301	-130	46	30	75	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.119	0.88	Yes	0.699	0.296	1.00	Yes	1.00	**1.88**
		$U_8 - L_8$	-----	-1335.38	-1	-4	-184	221	-195	-68	-198	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.964	0.031	1	Yes	0.926	0.041	0.97	Yes	1.00	**4.08**
		$U_9 - L_9$	-----	-670.31	-166	190	-373	432	-224	-158	-249	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.128	0.93	Yes	0.757	0.240	1.00	Yes	1.00	**2.47**
		$U_{10} - L_{10}$	-----	-817.46	-115	107	-303	364	-205	-147	-264	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.112	0.96	Yes	0.807	0.189	1.00	Yes	1.00	**3.90**
		$U_{11} - L_{11}$	-----	-683.04	-71	148	-286	424	-126	10	126	104	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.087	0.91	Yes	0.795	0.197	1.00	Yes	1.00	**3.66**
		$U_{12} - L_{12}$	-----	-547.47	-63	63	-267	285	-165	-3	-111	70	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.096	0.89	Yes	0.751	0.244	1.00	Yes	1.00	**3.36**
		$U_{13} - L_{13}$	-----	-393.85	-4	23	-179	207	-87	80	-77	105	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.087	0.89	Yes	0.755	0.237	1.00	Yes	1.00	**2.65**
		$U_{14} - L_{14}$	-----	-316.76	-237	255	-174	186	-87	-11	154	40	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.134	0.85	Yes	0.670	0.327	1.00	Yes	1.00	**4.34**
		$U_{15} - L_{15}$	234.56	-350.76	-183	178	171	-197	-108	-95	-103	-179	0.422	0.303	0.73	Yes	0.232	0.167	0.40	Yes	0.786	0.148	0.94	Yes	0.742	0.251	1.00	Yes	1.00	**4.61**
		$U_{16} - L_{16}$	-----	-347.96	-48	31	181	-200	-61	-79	152	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.117	0.91	Yes	0.736	0.256	1.00	Yes	1.00	**3.53**
		$U_{17} - L_{17}$	-----	-450.60	34	-56	184	-213	-92	-53	45	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.104	0.95	Yes	0.777	0.216	1.00	Yes	1.00	**2.87**
		$U_{18} - L_{18}$	-----	-554.42	123	-128	370	-401	-163	-62	70	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.092	0.91	Yes	0.771	0.227	1.00	Yes	1.00	**3.02**
		$U_{19} - L_{19}$	-----	-647.71	139	-152	427	-463	-65	11	856	63	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.754	0.215	0.97	Yes	1.00	**3.17**
		$U_{20} - L_{20}$	-----	-579.05	166	-213	423	-495	28	4	800	105	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.234	1	Yes	0.674	0.230	0.91	Yes	1.00	**2.44**
	Structure 2	$U_0 - L_0$	-----	-639.22	-114	180	-382	503	-261	-44	-933	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.232	1	Yes	0.685	0.213	0.90	Yes	1.00	**2.55**
		$U_1 - L_1$	-----	-732.43	-113	120	-469	500	37	-66	-735	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.160	1	Yes	0.785	0.212	1.00	Yes	1.00	**3.67**
		$U_2 - L_2$	-----	-609.16	-87	96	-388	425	90	41	-203	30	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.083	0.9	Yes	0.776	0.217	1.00	Yes	1.00	**3.32**
		$U_3 - L_3$	-----	-504.43	-46	52	-199	222	15	125	110	147	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.106	0.97	Yes	0.791	0.203	1.00	Yes	1.00	**3.07**
		$U_4 - L_4$	-----	-359.73	-6	17	-173	185	-93	60	-82	110	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.083	0.9	Yes	0.761	0.236	1.00	Yes	1.00	**3.00**
		$U_5 - L_5$	136.37	-355.79	121	-100	-160	189	-123	75	88	143	0.245	0.283	0.53	Yes	0.135	0.156	0.30	Yes	0.804	0.105	0.91	Yes	0.753	0.242	1.00	Yes	1.00	**3.95**
		$U_6 - L_6$	364.05	-284.85	204	-220	-159	172	-148	81	209	174	0.655	0.342	1.00	Yes	0.360	0.188	0.55	Yes	0.641	0.111	0.76	Yes	0.603	0.281	0.89	Yes	1.00	**5.52**
		$U_7 - L_7$	-----	-373.93	-24	31	149	-162	-87	-11	-97	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.094	0.94	Yes	0.791	0.207	1.00	Yes	1.00	**4.46**
		$U_8 - L_8$	-----	-494.47	23	-38	304	-329	-133	-136	88	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.107	0.83	Yes	0.712	0.288	1.00	Yes	1.00	**3.64**
		$U_9 - L_9$	-----	-706.52	79	-114	502	-555	-128	-106	132	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.081	0.87	Yes	0.757	0.235	1.00	Yes	1.00	**4.50**
		$U_{10} - L_{10}$	-----	-818.58	109	-146	456	-513	-56	7	-111	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.087	0.9	Yes	0.765	0.226	1.00	Yes	1.00	**4.51**
		$U_{11} - L_{11}$	-----	-838.14	160	-173	445	-484	-51	-132	168	34	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.096	0.94	Yes	0.784	0.213	1.00	Yes	1.00	**3.89**
		$U_{12} - L_{12}$	-----	-895.87	159	-152	483	-516	-3	54	230	123	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.124	0.99	Yes	0.777	0.221	1.00	Yes	1.00	**4.10**
		$U_{13} - L_{13}$	-----	-762.90	243	-241	545	-548	-86	43	-32	66	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.103	0.96	Yes	0.736	0.262	1.00	Yes	1.00	**3.01**
		$U_{14} - L_{14}$	-----	-1332.37	153	-148	317	-307	-59	129	175	57	-----	-----	-----	-----	-----	-----	-----	-----	0.974	0.024	1	Yes	0.884	0.056	0.94	Yes	1.00	**4.24**
		$U_{15} - L_{15}$	-----	-745.81	-165	166	-581	583	-77	-43	58	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.121	0.96	Yes	0.719	0.279	1.00	Yes	1.00	**3.78**
		$U_{16} - L_{16}$	-----	-740.26	-116	104	-477	484	-157	-92	-284	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.104	0.96	Yes	0.793	0.205	1.00	Yes	1.00	**3.56**
		$U_{17} - L_{17}$	-----	-659.07	-132	129	-465	487	-100	-36	-163	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.085	0.9	Yes	0.767	0.226	1.00	Yes	1.00	**3.39**
		$U_{18} - L_{18}$	-----	-596.78	-104	105	-413	457	-85	-14	79	49	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.076	0.88	Yes	0.760	0.234	1.00	Yes	1.00	**3.47**
		$U_{19} - L_{19}$	-----	-499.87	-49	53	-248	257	-151	-13	-140	23	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.085	0.84	Yes	0.746	0.248	1.00	Yes	1.00	**3.01**
		$U_{20} - L_{20}$	-----	-401.03	-10	14	-180	195	-151	4	18	67	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.101	0.93	Yes	0.768	0.223	1.00	Yes	1.00	**3.00**
	Structure 3	$U_{17} - L_{17}$	-----	-659.07	-132	129	-465	487	-100	-36	-163	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.085	0.9	Yes	0.767	0.226	1.00	Yes	1.00	**3.39**
		$U_{18} - L_{18}$	-----	-596.78	-104	105	-413	457	-85	-14	79	49	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.076	0.88	Yes	0.760	0.234	1.00	Yes	1.00	**3.47**
		$U_{19} - L_{19}$	-----	-499.87	-49	53	-248	257	-151	-13	-140	23	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.085	0.84	Yes	0.746	0.248	1.00	Yes	1.00	**3.01**
		$U_{20} - L_{20}$	-----	-401.03	-10	14	-180	195	-151	4	18	67	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.101	0.93	Yes	0.768	0.223	1.00	Yes	1.00	**3.00**
		$U_{21} - L_{21}$	-----	-347.50	38	-37	-186	207	-153	23	56	81	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.116	0.91	Yes	0.735	0.264	1.00	Yes	1.00	**3.45**
		$U_{22} - L_{22}$	-----	-384.90	123	-138	80	-78	-180	-62	-139	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.110	0.98	Yes	0.814	0.177	1.00	Yes	1.00	**5.02**
		$U_{23} - L_{23}$	139.88	-348.29	-93	90	180	-202	-89	-78	123	-67	0.252	0.294	0.55	Yes	0.138	0.162	0.31	Yes	0.787	0.122	0.91	Yes	0.737	0.258	1.00	Yes	1.00	**4.08**
		$U_{24} - L_{24}$	-----	-392.87	-43	32	193	-212	-69	-62	84	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.098	0.91	Yes	0.753	0.242	1.00	Yes	1.00	**3.77**
		$U_{25} - L_{25}$	-----	-492.74	23	-36	252	-267	-82	1	-86	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.082	0.83	Yes	0.736	0.257	1.00	Yes	1.00	**3.33**
		$U_{26} - L_{26}$	-----	-588.39	90	-111	428	-484	-89	-5	156	26	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.092	0.88	Yes	0.750	0.247	1.00	Yes	1.00	**3.52**
		$U_{27} - L_{27}$	-----	-643.43	143	-144	505	-532	-150	0	96	50	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.084	0.88	Yes	0.749	0.247	1.00	Yes	1.00	**3.58**
		$U_{28} - L_{28}$	-----	-725.15	139	-136	486	-511	-118	23	32	63	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.072	0.91	Yes	0.777	0.217	1.00	Yes	1.00	**3.56**
		$U_{29} - L_{29}$	-----	-730.32	206	-212	594	-599	-114	26	147	60	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.122	0.94	Yes	0.704	0.287	1.00	Yes	1.00	**3.48**
		$U_{30} - L_{30}$	-----	-1320.04	51	-62	232	-241	-92	115	-127	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.965	0.030	1	Yes	0.875	0.043	0.92	Yes	1.00	**4.41**
		$U_{31} - L_{31}$	-----	-768.65	-183	180	-523	519	-119	-60	-174	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.134	1	Yes	0.741	0.250	1.00	Yes	1.00	**3.24**
		$U_{32} - L_{32}$	-----	-915.66	-130	109	-444	469	-185	-96	-292	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.121	1	Yes	0.794	0.201	1.00	Yes	1.00	**4.17**
		$U_{33} - L_{33}$	-----	-845.70	-156	156	-451	470	-142	-51	-125	1	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.081	0.94	Yes	0.791	0.207	1.00	Yes	1.00	**4.13**
		$U_{34} - L_{34}$	-----	-831.01	-121	133	-445	489	-168	-14	-137	58	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.083	0.91	Yes	0.777	0.216	1.00	Yes	1.00	**4.36**
		$U_{35} - L_{35}$	-----	-725.88	-117	133	-460	513	-173	37	161	182	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.074	0.89	Yes	0.778	0.218	1.00	Yes	1.00	**4.09**
		$U_{36} - L_{36}$	-----	-497.52	-47	60	-295	318	-151	65	109	154	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.089	0.82	Yes	0.717	0.278	1.00	Yes	1.00	**3.36**
		$U_{37} - L_{37}$	-----	-341.45	-179	214	-27	38	-81	32	-145	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.128	0.9	Yes	0.722	0.274	1.00	Yes	1.00	**4.08**
		$U_{38} - L_{38}$	358.26	-----	-245	252	73	-78	-69	-104	111	-111	0.644	0.355	1.00	Yes	0.354	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{39} - L_{39}$	250.09	-324.11	-193	180	228	-245	-110	-107	-125	-165	0.450	0.360	0.82	Yes	0.247	0.198	0.45	Yes	0.732	0.155	0.89	Yes	0.686	0.313	1.00	Yes	1.00	**4.84**
		$U_{40} - L_{40}$	-----	-360.15	-52	30	168	-184	-83	-40	-101	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.121	0.94	Yes	0.762	0.235	1.00	Yes	1.00	**3.64**
		$U_{41} - L_{41}$	-----	-500.67	44	-51	202	-229	-105	-44	147	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.109	0.97	Yes	0.785	0.208	1.00	Yes	1.00	**3.25**
		$U_{42} - L_{42}$	-----	-598.51	102	-112	433	-463	-84	-49	282	24	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.114	0.92	Yes	0.763	0.237	1.00	Yes	1.00	**3.62**
		$U_{43} - L_{43}$	-----	-718.05	137	-154	474	-522	-39	-18	825	122	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.174	1	Yes	0.770	0.221	1.00	Yes	1.00	**3.67**
		$U_{44} - L_{44}$	-----	-641.23	195	-242	437	-532	-24	-4	925	157	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.227	1	Yes	0.687	0.226	0.92	Yes	1.00	**2.42**
	Structure 4	$U_0 - L_0$	-----	-583.90	-106	171	-289	394	-249	-33	-757	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1	Yes	0.680	0.183	0.87	Yes	1.00	**2.06**
		$U_1 - L_1$	-----	-618.09	-115	123	-379	412	-3	-78	-1137	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.227	1	Yes	0.719	0.191	0.92	Yes	1.00	**3.05**
		$U_2 - L_2$	-----	-562.92	-94	100	-350	381	83	31	-159	46	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.089	0.92	Yes	0.783	0.216	1.00	Yes	1.00	**3.02**
		$U_3 - L_3$	-----	-461.69	-35	47	-165	194	-1	118	97	162	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.116	0.98	Yes	0.797	0.197	1.00	Yes	1.00	**2.72**
		$U_4 - L_4$	-----	-344.00	25	-7	-198	211	-121	122	-136	147	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.090	0.87	Yes	0.728	0.269	1.00	Yes	1.00	**3.33**
		$U_5 - L_5$	139.59	-346.66	91	-90	-178	204	-147	63	-144	117	0.251	0.304	0.56	Yes	0.138	0.167	0.31	Yes	0.777	0.110	0.89	Yes	0.734	0.261	1.00	Yes	1.00	**3.92**
		$U_6 - L_6$	-----	-345.53	189	-210	-68	70	-213	-55	168	23	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.137	0.91	Yes	0.731	0.269	1.00	Yes	1.00	**4.88**
		$U_7 - L_7$	-----	-373.57	-33	21	218	-245	-175	-141	-210	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.153	0.91	Yes	0.716	0.279	1.00	Yes	1.00	**3.24**
		$U_8 - L_8$	-----	-543.52	16	-20	270	-292	-136	-103	-184	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.116	0.91	Yes	0.746	0.249	1.00	Yes	1.00	**3.86**
		$U_9 - L_9$	-----	-674.86	71	-120	304	-445	-96	-140	121	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.099	0.91	Yes	0.785	0.207	1.00	Yes	1.00	**3.94**
		$U_{10} - L_{10}$	-----	-795.12	90	-108	344	-407	2	81	201	154	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.100	0.93	Yes	0.785	0.211	1.00	Yes	1.00	**4.33**
		$U_{11} - L_{11}$	-----	-657.55	182	-212	390	-461	-51	62	-32	84	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.095	0.88	Yes	0.743	0.256	1.00	Yes	1.00	**2.52**
		$U_{12} - L_{12}$	-----	-1323.13	42	-69	222	-309	-111	8	213	77	-----	-----	-----	-----	-----	-----	-----	-----	0.955	0.038	1	Yes	0.917	0.058	0.98	Yes	1.00	**4.07**
		$U_{13} - L_{13}$	-----	-461.89	-105	115	-265	288	-113	-92	-31	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.128	0.9	Yes	0.713	0.283	1.00	Yes	1.00	**2.13**
		$U_{14} - L_{14}$	-----	-546.74	-62	58	-217	246	-162	-135	-270	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.132	0.97	Yes	0.784	0.215	1.00	Yes	1.00	**2.95**
		$U_{15} - L_{15}$	-----	-455.88	-41	48	-175	210	-163	-75	15	40	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.108	0.94	Yes	0.786	0.213	1.00	Yes	1.00	**2.88**
		$U_{16} - L_{16}$	-----	-305.93	-272	266	-48	66	-139	-28	-233	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.150	0.83	Yes	0.647	0.348	1.00	Yes	1.00	**4.42**
		$U_{17} - L_{17}$	292.82	-242.13	-293	304	71	-109	-111	-23	-289	-225	0.527	0.472	1.00	Yes	0.290	0.259	0.55	Yes	0.531	0.177	0.71	Yes	0.512	0.388	0.91	Yes	1.00	**5.39**
		$U_{18} - L_{18}$	117.78	-339.01	-101	111	165	-219	377	64	325	18	0.212	0.389	0.61	Yes	0.117	0.214	0.34	Yes	0.741	0.209	0.95	Yes	0.717	0.280	1.00	Yes	1.00	**4.94**
		$U_{19} - L_{19}$	-----	-339.03	-31	19	195	-218	-167	-88	146	20	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.130	0.88	Yes	0.717	0.279	1.00	Yes	1.00	**3.30**
		$U_{20} - L_{20}$	-----	-372.63	49	-57	116	-163	-173	-56	178	57	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.134	0.97	Yes	0.788	0.208	1.00	Yes	1.00	**1.29**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	659.75	-----	-51	35	6	-8	-202	-262	-46	-19	0.866	0.126	1.00	Yes	0.523	0.069	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.72**
		$U_1 - L_2$	463.97	-80.94	-94	9	14	-13	-44	-140	16	10	0.834	0.161	1.00	Yes	0.459	0.089	0.55	Yes	0.186	0.121	0.31	Yes	0.171	0.121	0.30	Yes					1.00	**3.94**
		$U_2 - L_3$	359.68	-279.01	-73	-2	-36	-62	-177	-297	-782	-264	0.647	0.320	0.97	Yes	0.356	0.176	0.54	Yes	0.642	0.349	1	Yes	0.590	0.093	0.69	Yes					1.00	**4.49**
		$U_3 - L_4$	-----	-374.33	-20	-32	-1	-53	-234	-186	-209	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.143	1	Yes	0.792	0.068	0.87	Yes					1.00	**2.56**
		$U_4 - L_4$	582.25	-----	-97	22	-50	-11	-70	-181	-130	-113	0.854	0.140	1.00	Yes	0.470	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.51**
		$U_4 - L_5$	718.22	-----	-218	204	-68	45	41	-108	117	52	0.849	0.146	1.00	Yes	0.467	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.04**
		$U_5 - L_6$	603.19	-----	-276	211	-117	100	340	155	674	285	0.713	0.279	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.60**
		$U_6 - L_7$	652.20	-----	-110	290	-8	115	302	155	242	174	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.76**
		$U_3 - L_9$	1009.83	-----	-109	358	4	136	258	212	81	103	0.807	0.192	1.00	Yes	0.500	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.97**
		$U_9 - L_{10}$	1031.18	-----	-324	226	-77	92	208	156	85	104	0.824	0.171	1.00	Yes	0.511	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.14**
		$U_{10} - L_{11}$	1012.58	-----	-261	161	-148	44	-122	-118	67	-79	0.855	0.136	1.00	Yes	0.529	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.48**
		$U_{11} - L_{12}$	841.53	-----	-254	101	-86	-17	-290	-304	-251	-199	0.833	0.163	1.00	Yes	0.458	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.90**
		$U_{12} - L_{13}$	623.08	-----	-192	130	-93	14	-348	-317	-357	-284	0.760	0.237	1.00	Yes	0.478	0.134	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.14**
		$U_{13} - L_{14}$	440.21	-----	-91	33	-35	-19	-291	-295	-191	-300	0.792	0.203	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.69**
		$U_{15} - L_{14}$	202.35	-341.85	-46	3	21	-83	-193	-309	-191	-284	0.364	0.195	0.56	Yes	0.200	0.107	0.31	Yes	0.801	0.199	1	Yes	0.723	0.106	0.83	Yes					1.00	**3.22**
		$U_{16} - L_{15}$	408.96	-239.24	-132	72	-6	-52	-242	-254	-305	-171	0.736	0.258	1.00	Yes	0.405	0.142	0.55	Yes	0.567	0.216	0.79	Yes	0.506	0.169	0.68	Yes					1.00	**3.89**
		$U_{17} - L_{16}$	532.86	-----	-151	88	-45	-10	-151	-229	-264	-145	0.781	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.10**
		$U_{18} - L_{17}$	640.16	-----	-346	245	-158	71	-197	-184	-214	-85	0.757	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.52**
		$U_{19} - L_{18}$	722.74	-----	-365	246	-106	68	-151	-140	46	6	0.783	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.39**
		$U_{20} - L_{19}$	713.80	-----	-349	297	-127	106	-146	-262	0	34	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.25**
	Structure 2	$U_0 - L_1$	811.28	-----	-313	331	-64	73	-183	-240	-121	50	0.803	0.190	1.00	Yes	0.441	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.86**
		$U_1 - L_2$	787.48	-----	-412	307	-86	58	-113	-166	43	11	0.779	0.216	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.85**
		$U_2 - L_3$	648.80	-----	-330	254	-65	49	-206	-199	-76	-177	0.767	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.43**
		$U_3 - L_4$	573.22	-----	-176	123	-44	7	-313	-282	-290	-206	0.764	0.226	1.00	Yes	0.420	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.13**
		$U_4 - L_5$	410.70	-----	-123	83	-20	-25	-335	-237	-296	-220	0.739	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.31**
		$U_5 - L_6$	404.07	-315.83	-115	67	86	-118	-415	-301	-366	-247	0.727	0.271	1.00	Yes	0.400	0.149	0.55	Yes	0.746	0.251	1	Yes	0.668	0.150	0.82	Yes					1.00	**4.67**
		$U_6 - L_7$	-----	-374.23	-52	-9	63	-98	-326	-277	-299	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.198	1	Yes	0.717	0.112	0.83	Yes					1.00	**2.95**
		$U_8 - L_7$	591.10	-----	-201	111	-47	-20	-138	-259	-280	-221	0.754	0.237	1.00	Yes	0.474	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.84**
		$U_8 - L_9$	725.10	-----	-346	225	-117	16	-141	-227	-123	-156	0.785	0.214	1.00	Yes	0.432	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.74**
		$U_{10} - L_9$	824.76	-----	-336	229	-143	50	-63	-171	-50	-85	0.816	0.181	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.07**
		$U_{11} - L_{10}$	903.42	-----	-375	275	-179	103	54	-52	-101	3	0.823	0.173	1.00	Yes	0.453	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.91**
		$U_{12} - L_{11}$	821.46	-----	-351	311	-150	146	167	34	729	149	0.748	0.249	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.12**
		$U_{13} - L_{12}$	753.76	-----	-446	378	-180	173	267	124	267	150	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.88**
		$U_{14} - L_{13}$	719.85	-----	-263	410	-30	217	268	155	594	140	0.712	0.279	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.06**
		$U_{14} - L_{15}$	641.79	-----	-217	366	0	102	162	93	49	35	0.759	0.237	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.56**
		$U_{15} - L_{16}$	641.93	-----	-374	335	-99	104	121	89	50	67	0.759	0.234	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.04**
		$U_{16} - L_{17}$	745.47	-----	-357	352	-73	98	9	-7	9	5	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.62**
		$U_{17} - L_{18}$	679.14	-----	-311	284	-64	80	-101	-58	-58	-32	0.803	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.58**
		$U_{18} - L_{19}$	683.20	-----	-282	248	-48	41	-150	-148	-138	-96	0.808	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.58**
		$U_{19} - L_{20}$	607.12	-----	-195	164	-17	3	-245	-166	-166	-129	0.774	0.225	1.00	Yes	0.426	0.126	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.63**
		$U_{20} - L_{21}$	432.65	-----	-121	98	7	-20	-224	-145	-208	-147	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.19**
		$U_{21} - L_{22}$	431.99	-220.11	-112	49	33	-62	-266	-242	-263	-228	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	0.520	0.182	0.71	Yes	0.466	0.143	0.61	Yes					1.00	**4.13**
		$U_{23} - L_{22}$	351.08	-339.07	-111	31	13	-66	-107	-201	-231	-184	0.631	0.209	0.85	Yes	0.347	0.115	0.47	Yes	0.808	0.189	1	Yes	0.717	0.142	0.86	Yes					1.00	**4.23**
		$U_{24} - L_{23}$	440.37	-----	-128	91	6	-33	-67	-155	-68	-85	0.792	0.208	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.79**
		$U_{25} - L_{24}$	607.56	-----	-216	167	-40	-13	-16	-119	-34	-66	0.775	0.218	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.38**
		$U_{26} - L_{25}$	681.64	-----	-308	245	-95	42	58	-25	-95	13	0.806	0.191	1.00	Yes	0.443	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.85**
		$U_{27} - L_{26}$	669.99	-----	-310	271	-107	89	146	8	132	69	0.792	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.41**
		$U_{28} - L_{27}$	719.87	-----	-358	352	-136	138	174	70	166	124	0.780	0.212	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.59**
		$U_{29} - L_{28}$	624.89	-----	-372	327	-125	119	250	118	217	111	0.739	0.256	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.80**
		$U_{30} - L_{29}$	589.81	-----	-200	332	-26	170	212	80	610	116	0.697	0.299	1.00	Yes	0.384	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.87**
		$U_{30} - L_{31}$	775.59	-----	-286	445	-24	134	122	68	62	39	0.767	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_{31} - L_{32}$	781.22	-----	-459	387	-129	130	56	40	36	47	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.40**
		$U_{32} - L_{33}$	908.03	-----	-365	344	-105	127	-117	-98	32	5	0.827	0.171	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.06**
		$U_{33} - L_{34}$	893.51	-----	-347	270	-111	82	-248	-220	-211	-138	0.814	0.181	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.93**
		$U_{34} - L_{35}$	813.02	-----	-296	217	-89	50	-324	-261	-218	-215	0.804	0.186	1.00	Yes	0.442	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.67**
		$U_{35} - L_{36}$	705.80	-----	-322	230	-90	20	-387	-277	-376	-269	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.52**
		$U_{36} - L_{37}$	599.25	-----	-185	130	-26	-6	-306	-334	-320	-304	0.764	0.233	1.00	Yes	0.481	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.37**
		$U_{38} - L_{37}$	-----	-395.54	-18	-14	44	-85	-113	-226	-199	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.145	1	Yes	0.758	0.097	0.86	Yes					1.00	**2.39**
		$U_{39} - L_{38}$	264.85	-335.31	-76	48	48	-100	-161	-222	-277	-181	0.476	0.208	0.69	Yes	0.262	0.114	0.38	Yes	0.799	0.195	1	Yes	0.709	0.127	0.84	Yes					1.00	**3.77**
		$U_{40} - L_{39}$	430.01	-253.08	-125	97	13	-60	-139	-201	-116	-128	0.773	0.218	1.00	Yes	0.425	0.120	0.55	Yes	0.606	0.149	0.76	Yes	0.535	0.160	0.70	Yes					1.00	**4.41**
		$U_{41} - L_{40}$	579.66	-----	-189	119	-55	-7	-98	-141	-228	-70	0.773	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.63**
		$U_{42} - L_{41}$	650.94	-----	-349	252	-75	50	-127	-127	-1	-4	0.770	0.221	1.00	Yes	0.423	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.53**
		$U_{43} - L_{42}$	778.51	-----	-405	299	-95	64	-221	-170	-6	-30	0.770	0.221	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.88**
		$U_{44} - L_{43}$	796.33	-----	-373	358	-137	121	-141	-221	35	4	0.788	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
	Structure 3	$U_0 - L_1$	707.96	-----	-340	292	-69	72	-160	-314	-131	45	0.767	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.42**
		$U_1 - L_2$	725.01	-----	-365	254	-91	57	-63	-150	37	13	0.785	0.211	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.54**
		$U_2 - L_3$	651.03	-----	-324	237	-78	48	-224	-228	-74	-167	0.770	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.43**
		$U_3 - L_4$	526.58	-----	-141	99	-52	-1	-323	-314	-229	-239	0.772	0.219	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.18**
		$U_4 - L_5$	408.03	-127.84	-121	79	7	-39	-377	-299	-318	-222	0.734	0.263	1.00	Yes	0.404	0.145	0.55	Yes	0.303	0.198	0.51	Yes	0.271	0.154	0.43	Yes					1.00	**3.38**
		$U_5 - L_6$	310.58	-310.41	-78	-1	2	-85	-427	-328	-393	-334	0.559	0.232	0.80	Yes	0.307	0.127	0.44	Yes	0.727	0.268	1	Yes	0.657	0.108	0.77	Yes					1.00	**3.61**
		$U_7 - L_6$	452.30	-----	-81	48	-10	-35	-107	-279	-113	-252	0.813	0.184	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.38**
		$U_8 - L_7$	643.02	-----	-192	164	-67	-16	-167	-238	-172	-180	0.784	0.214	1.00	Yes	0.493	0.120	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.98**
		$U_8 - L_9$	834.92	-----	-285	88	-139	-40	-51	-189	-228	-146	0.826	0.166	1.00	Yes	0.454	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.23**
		$U_{10} - L_9$	919.88	-----	-256	141	-96	46	116	-44	732	145	0.777	0.215	1.00	Yes	0.481	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.07**
		$U_{11} - L_{10}$	932.22	-----	-315	227	-128	90	382	226	895	480	0.745	0.254	1.00	Yes	0.462	0.144	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.85**
		$U_{12} - L_{11}$	982.35	-----	-111	349	-10	143	395	280	272	206	0.785	0.206	1.00	Yes	0.486	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.87**
		$U_{12} - L_{13}$	668.54	-----	-114	299	12	114	201	168	93	95	0.790	0.207	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.20**
		$U_{13} - L_{14}$	675.35	-----	-290	230	-70	76	145	98	93	116	0.798	0.192	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.17**
		$U_{14} - L_{15}$	728.03	-----	-195	194	-21	56	-126	-109	89	36	0.861	0.134	1.00	Yes	0.473	0.074	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.74**
		$U_{15} - L_{16}$	581.06	-----	-93	37	-55	-10	-221	-203	-66	-109	0.852	0.145	1.00	Yes	0.469	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.58**
		$U_{17} - L_{16}$	-----	-400.64	-7	-16	7	-45	-29	-136	-30	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.916	0.077	1	Yes	0.848	0.058	0.91	Yes					1.00	**2.61**
		$U_{18} - L_{17}$	273.00	-350.95	-75	-16	-21	-60	-115	-198	-275	-71	0.491	0.175	0.67	Yes	0.270	0.096	0.37	Yes	0.808	0.184	1	Yes	0.743	0.095	0.84	Yes					1.00	**4.03**
		$U_{19} - L_{18}$	419.78	-100.16	-86	1	-22	-16	-88	-182	449	19	0.755	0.240	1.00	Yes	0.415	0.132	0.55	Yes	0.230	0.177	0.41	Yes	0.212	0.110	0.33	Yes					1.00	**3.69**
		$U_{20} - L_{19}$	627.95	-----	-91	56	-21	2	-249	-201	31	-7	0.824	0.170	1.00	Yes	0.497	0.093	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.78**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

| | | | Vehicle | Pedestrian | Axial Force | | ZZ Axis Bending | | | | YY Axis Bending | | | | Tension | | | | | | | | Compression | | | | | | | |

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1	334.97	-262.22	218	-252	732	-818	268	986	-305	-1119	0.513	0.486	1.00	Yes	0.302	0.290	0.60	Yes	0.476	0.346	0.83	Yes	0.472	0.245	0.72	Yes	1.00	**20.09**
		L_1 - L_2	374.00	-----	-48	-698	0	-13	-972	310	325	-147	0.572	0.418	1.00	Yes	0.349	0.271	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.44**
		L_2 - L_3	658.32	-----	-670	-603	-39	66	469	-434	-183	124	0.757	0.237	1.00	Yes	0.438	0.141	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		L_3 - L_4	623.53	-239.25	-589	-389	1	295	-859	17	284	-234	0.717	0.280	1.00	Yes	0.426	0.175	0.61	Yes	0.327	0.260	0.59	Yes	0.324	0.142	0.47	Yes	1.00	**3.77**
		L_4 - L_5	-----	-558.09	-551	288	102	466	181	-178	-73	201	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.134	1	Yes	0.850	0.146	1.00	Yes	1.00	**3.08**
		L_5 - L_6	-----	-747.03	-225	317	124	590	-110	-90	163	-236	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.127	1	Yes	0.862	0.130	1.00	Yes	1.00	**2.97**
		L_6 - L_7	-----	-1171.34	-101	115	239	-21	-112	267	-200	407	-----	-----	-----	-----	-----	-----	-----	-----	0.954	0.042	1	Yes	0.943	0.038	0.99	Yes	1.00	**4.64**
		L_7 - L_8	-----	-1247.47	-34	669	-54	1233	368	209	447	511	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.197	1	Yes	0.790	0.163	0.96	Yes	1.00	**3.01**
		L_8 - L_9	-----	-1164.49	672	-35	1115	-65	214	382	437	417	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.250	1	Yes	0.738	0.148	0.89	Yes	1.00	**2.25**
		L_9 - L_{10}	-----	-1055.01	343	-226	585	-424	527	-44	336	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.134	1	Yes	0.849	0.092	0.95	Yes	1.00	**5.22**
		L_{10} - L_{11}	-----	-549.14	-14	-592	502	-51	196	-524	-284	44	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.130	0.98	Yes	0.837	0.157	1.00	Yes	1.00	**5.84**
		L_{11} - L_{12}	501.23	-----	73	-609	343	-244	-1054	226	128	-85	0.649	0.345	1.00	Yes	0.389	0.218	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		L_{12} - L_{13}	1019.06	-----	-382	-623	58	-155	-163	-665	-159	121	0.804	0.188	1.00	Yes	0.514	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		L_{13} - L_{14}	1275.10	-----	-217	-1251	188	-524	-930	204	146	21	0.750	0.250	1.00	Yes	0.486	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		L_{14} - L_{15}	1559.04	-----	-1579	-601	-566	-152	-120	-634	-153	162	0.762	0.235	1.00	Yes	0.495	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_{15} - L_{16}	1639.88	-----	-1149	-1207	-304	-370	-728	123	108	-139	0.801	0.197	1.00	Yes	0.514	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_{16} - L_{17}	1218.76	-----	-1292	-26	-421	54	183	-384	-127	170	0.771	0.224	1.00	Yes	0.500	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_{17} - L_{18}	1011.99	-----	-394	-30	-224	34	-97	-311	114	-91	0.881	0.116	1.00	Yes	0.564	0.071	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.83**
		L_{18} - L_{19}	516.22	-----	-486	238	-266	230	-136	304	-164	124	0.790	0.209	1.00	Yes	0.534	0.133	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_{19} - L_{20}	385.11	-250.07	-367	102	-813	490	354	79	246	55	0.651	0.347	1.00	Yes	0.402	0.205	0.61	Yes	0.502	0.338	0.84	Yes	0.497	0.265	0.77	Yes	1.00	**7.10**
	Structure 2	L_0 - L_1	-----	-505.51	165	-459	490	-1336	110	383	-92	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.230	0.96	Yes	0.722	0.272	1.00	Yes	1.00	**18.90**
		L_1 - L_2	464.45	-----	331	-1240	242	-394	-1066	544	117	43	0.564	0.427	1.00	Yes	0.336	0.268	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		L_2 - L_3	988.48	-----	-161	-1037	-47	-269	148	-642	-75	155	0.779	0.218	1.00	Yes	0.511	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		L_3 - L_4	1276.67	-----	-134	-1522	-12	-506	-820	387	181	-4	0.750	0.243	1.00	Yes	0.505	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		L_4 - L_5	1726.71	-----	-1288	-1510	-437	-396	265	-644	-81	163	0.805	0.186	1.00	Yes	0.533	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		L_5 - L_6	1806.24	-----	-1169	-1813	-219	-492	-935	96	191	-91	0.775	0.219	1.00	Yes	0.520	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		L_6 - L_7	1834.72	-----	-2236	-1057	-570	-209	283	-313	-161	219	0.777	0.216	1.00	Yes	0.516	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_7 - L_8	1339.17	-----	-1519	-516	-300	386	-726	251	218	-143	0.768	0.227	1.00	Yes	0.504	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		L_8 - L_9	1058.18	-----	-1282	243	-100	594	192	-822	-83	178	0.740	0.250	1.00	Yes	0.499	0.159	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_9 - L_{10}	597.25	-747.45	-1133	161	-135	827	-846	-98	142	-137	0.533	0.283	0.82	Yes	0.310	0.173	0.49	Yes	0.790	0.207	1	Yes	0.785	0.181	0.97	Yes	1.00	**5.59**
		L_{10} - L_{11}	-----	-742.52	-710	483	11	569	149	-154	-76	74	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.085	0.97	Yes	0.872	0.124	1.00	Yes	1.00	**3.47**
		L_{11} - L_{12}	-----	-1036.16	-294	681	-75	1099	158	-218	49	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.128	0.99	Yes	0.850	0.150	1.00	Yes	1.00	**3.75**
		L_{12} - L_{13}	-----	-1520.05	-290	-351	189	-715	-111	114	-329	172	-----	-----	-----	-----	-----	-----	-----	-----	0.925	0.074	1	Yes	0.917	0.072	0.99	Yes	1.00	**5.63**
		L_{13} - L_{14}	-----	-1551.96	-621	1737	-875	2473	174	127	339	487	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.174	0.97	Yes	0.781	0.216	1.00	Yes	1.00	**3.52**
		L_{14} - L_{15}	-----	-1562.72	1711	-661	2383	-678	99	141	533	340	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.174	0.97	Yes	0.786	0.208	1.00	Yes	1.00	**4.07**
		L_{15} - L_{16}	-----	-1537.28	-529	-129	-381	-136	108	-137	261	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.927	0.069	1	Yes	0.920	0.053	0.98	Yes	1.00	**4.47**
		L_{16} - L_{17}	-----	-1053.24	671	-134	1118	-53	-210	64	-385	68	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.219	1	Yes	0.767	0.138	0.91	Yes	1.00	**3.52**
		L_{17} - L_{18}	-----	-803.40	266	-630	515	167	-877	207	126	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.147	1	Yes	0.844	0.101	0.95	Yes	1.00	**4.30**
		L_{18} - L_{19}	-----	-640.65	-151	-567	718	34	353	-314	-211	60	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.117	0.98	Yes	0.854	0.138	1.00	Yes	1.00	**4.81**
		L_{19} - L_{20}	569.48	-450.29	-42	-980	499	115	-1069	508	149	-172	0.645	0.353	1.00	Yes	0.382	0.218	0.60	Yes	0.604	0.186	0.79	Yes	0.600	0.189	0.79	Yes	1.00	**5.20**
		L_{20} - L_{21}	996.12	-----	-991	-1023	413	-75	502	-384	-186	69	0.794	0.203	1.00	Yes	0.521	0.123	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		L_{21} - L_{22}	883.24	-----	-810	-1243	110	-290	-986	107	136	-103	0.704	0.287	1.00	Yes	0.471	0.183	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		L_{22} - L_{23}	852.95	-----	-1638	-586	-354	76	-140	-743	-57	207	0.680	0.319	1.00	Yes	0.455	0.202	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		L_{23} - L_{24}	890.79	-340.47	-1240	-691	-55	466	-942	-3	164	-139	0.710	0.282	1.00	Yes	0.466	0.173	0.64	Yes	0.322	0.257	0.58	Yes	0.319	0.181	0.51	Yes	1.00	**6.08**
		L_{24} - L_{25}	563.36	-548.96	-1111	59	198	524	345	-905	-105	150	0.638	0.353	1.00	Yes	0.378	0.220	0.60	Yes	0.736	0.188	0.93	Yes	0.732	0.214	0.95	Yes	1.00	**6.29**
		L_{25} - L_{26}	-----	-641.28	-268	191	29	728	-12	-77	102	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.108	0.97	Yes	0.855	0.141	1.00	Yes	1.00	**4.76**
		L_{26} - L_{27}	-----	-870.63	-366	434	220	505	-45	20	-47	227	-----	-----	-----	-----	-----	-----	-----	-----	0.921	0.079	1	Yes	0.914	0.081	1.00	Yes	1.00	**5.18**
		L_{27} - L_{28}	-----	-1144.17	-239	736	-35	1309	40	-193	281	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.142	0.99	Yes	0.833	0.161	1.00	Yes	1.00	**4.42**
		L_{28} - L_{29}	-----	-1553.99	-307	-529	68	-414	-160	-37	-93	398	-----	-----	-----	-----	-----	-----	-----	-----	0.937	0.060	1	Yes	0.930	0.053	0.99	Yes	1.00	**5.72**
		L_{29} - L_{30}	-----	-1551.06	-745	1952	-804	2458	62	41	421	380	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.165	0.96	Yes	0.780	0.215	1.00	Yes	1.00	**4.01**
		L_{30} - L_{31}	-----	-1570.76	1680	-505	2386	-686	577	447	295	235	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.181	0.98	Yes	0.790	0.208	1.00	Yes	1.00	**2.95**
		L_{31} - L_{32}	-----	-1561.53	-108	-316	-166	-334	424	-428	182	60	-----	-----	-----	-----	-----	-----	-----	-----	0.942	0.056	1	Yes	0.934	0.033	0.97	Yes	1.00	**5.15**
		L_{32} - L_{33}	-----	-1046.48	587	-319	1017	-70	-587	78	-329	27	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.129	1	Yes	0.858	0.139	1.00	Yes	1.00	**4.31**
		L_{33} - L_{34}	-----	-758.65	442	-404	589	8	179	5	101	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.897	0.078	0.98	Yes	0.891	0.103	1.00	Yes	1.00	**4.16**
		L_{34} - L_{35}	682.21	-760.33	-162	-1211	842	-97	824	-710	-219	95	0.609	0.293	0.91	Yes	0.355	0.179	0.54	Yes	0.804	0.144	0.95	Yes	0.798	0.194	1.00	Yes	1.00	**7.10**
		L_{35} - L_{36}	963.76	-----	-60	-1199	566	-171	-1647	317	164	-121	0.674	0.317	1.00	Yes	0.454	0.204	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		L_{36} - L_{37}	1353.97	-----	-695	-1578	300	-259	514	-485	-204	152	0.776	0.216	1.00	Yes	0.510	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_{37} - L_{38}	1714.12	-----	-1537	-2171	-336	-659	-1214	171	106	-171	0.725	0.266	1.00	Yes	0.482	0.160	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		L_{38} - L_{39}	1794.19	-----	-2218	-1000	-611	-223	293	-398	-101	172	0.770	0.221	1.00	Yes	0.517	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		L_{39} - L_{40}	1727.11	-----	-1629	-1157	-443	-324	-480	319	124	-128	0.805	0.186	1.00	Yes	0.533	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_{40} - L_{41}	1311.28	-----	-1534	-24	-463	32	439	-36	-47	270	0.778	0.218	1.00	Yes	0.525	0.140	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		L_{41} - L_{42}	1005.22	-----	-1065	111	-258	53	-289	64	270	89	0.803	0.188	1.00	Yes	0.528	0.109	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.36**
		L_{42} - L_{43}	543.94	-----	-1277	586	-268	213	447	346	141	352	0.661	0.333	1.00	Yes	0.393	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.81**
		L_{43} - L_{44}	-----	-469.46	-848	214	-518	165	-240	-70	1244	363	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.325	1	Yes	0.671	0.173	0.85	Yes	1.00	**23.84**
	Structure 3	L_0 - L_1	-----	-465.03	68	-284	287	-517	37	168	3	15	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.109	0.96	Yes	0.837	0.155	1.00	Yes	1.00	**6.22**
		L_1 - L_2	523.88	-----	211	-444	406	-467	227	-245	100	184	0.802	0.191	1.00	Yes	0.542	0.121	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		L_2 - L_3	881.15	-----	-83	-786	48	-229	192	-595	-21	164	0.767	0.228	1.00	Yes	0.491	0.139	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_3 - L_4	1150.83	-----	-89	-1283	47	-429	-837	536	143	59	0.728	0.263	1.00	Yes	0.472	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		L_4 - L_5	1631.80	-----	-1310	-1030	-372	-254	572	-350	-34	225	0.797	0.198	1.00	Yes	0.512	0.117	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		L_5 - L_6	1549.92	-----	-676	-1509	-141	-453	-767	293	251	-41	0.757	0.236	1.00	Yes	0.492	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		L_6 - L_7	1262.93	-----	-1520	17	-496	244	138	-530	-53	254	0.743	0.254	1.00	Yes	0.481	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		L_7 - L_8	1013.47	-----	-652	-261	-102	164	-648	-68	139	-170	0.800	0.191	1.00	Yes	0.512	0.117	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		L_8 - L_9	557.35	-----	-811	237	-165	435	283	-361	-108	165	0.722	0.278	1.00	Yes	0.433	0.181	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_9 - L_{10}	-----	-562.85	-285	223	-65	518	-70	-322	145	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.104	0.97	Yes	0.858	0.137	1.00	Yes	1.00	**4.58**
		L_{10} - L_{11}	-----	-1177.62	-289	302	33	102	-277	80	-309	159	-----	-----	-----	-----	-----	-----	-----	-----	0.959	0.024	0.99	Yes	0.948	0.047	1.00	Yes	1.00	**6.05**
		L_{11} - L_{12}	-----	-1281.76	-32	650	-59	1270	341	52	286	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.177	1	Yes	0.812	0.168	0.98	Yes	1.00	**4.09**
		L_{12} - L_{13}	-----	-1131.34	712	-19	1343	-56	-22	254	59	144	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.273	1	Yes	0.717	0.178	0.90	Yes	1.00	**2.80**
		L_{13} - L_{14}	-----	-1148.42	211	-99	70	151	463	110	351	-310	-----	-----	-----	-----	-----	-----	-----	-----	0.935	0.065	1	Yes	0.924	0.033	0.96	Yes	1.00	**4.67**
		L_{14} - L_{15}	-----	-722.78	98	-336	567	106	187	-451	-260	86	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.140	1	Yes	0.848	0.128	0.98	Yes	1.00	**3.88**
		L_{15} - L_{16}	-----	-493.13	67	-597	449	100	-1164	376	252	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1	Yes	0.751	0.158	0.91	Yes	1.00	**3.79**
		L_{16} - L_{17}	693.60	-----	-641	-535	265	-66	272	-150	-171	192	0.798	0.199	1.00	Yes	0.474	0.127	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_{17} - L_{18}	674.39	-----	-689	-545	10	-110	-329	163	113	-113	0.776	0.219	1.00	Yes	0.449	0.131	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		L_{18} - L_{19}	456.15	-----	-735	94	-40	-16	296	335	-101	212	0.698	0.293	1.00	Yes	0.426	0.194	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		L_{19} - L_{20}	332.91	-152.80	-703	457	-117	-70	685	186	1281	348	0.510	0.486	1.00	Yes	0.300	0.289	0.59	Yes	0.277	0.408	0.69	Yes	0.275	0.211	0.49	Yes	1.00	**33.22**

Axial AI Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-283.49	-13	52	-107	164	196	63	-1001	-321	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.360	1	Yes	0.600	0.210	0.81	Yes	1.00	**1.46**
		$U_1 - L_1$			-----	-298.27	20	-14	-192	194	567	211	-1057	-356	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.346	1	Yes	0.631	0.248	0.88	Yes	1.00	**3.29**
		$U_2 - L_2$			74.71	-191.42	72	-77	-87	126	737	235	-1991	-594	0.134	0.737	0.88	Yes	0.074	0.406	0.48	Yes	0.418	0.576	1	Yes	0.405	0.161	0.57	Yes	1.00	**3.83**
		$U_3 - L_3$			132.89	-----	112	-128	0	22	636	194	-2032	-521	0.239	0.752	1.00	Yes	0.131	0.414	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_4 - L_4$			-----	-202.61	79	-81	119	-124	1133	569	-1811	-675	-----	-----	-----	-----	-----	-----	-----	-----	0.445	0.547	1	Yes	0.429	0.158	0.59	Yes	1.00	**4.78**
		$U_5 - L_5$			-----	-394.39	78	-88	175	-205	881	408	-876	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.285	1	Yes	0.680	0.208	0.89	Yes	1.00	**3.42**
		$U_6 - L_6$			-----	-402.54	80	-69	187	-199	1620	763	226	220	-----	-----	-----	-----	-----	-----	-----	-----	0.610	0.388	1	Yes	0.577	0.174	0.76	Yes	1.00	**2.88**
		$U_7 - L_7$			-----	-385.15	102	-115	254	-276	1226	306	126	96	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.352	1	Yes	0.594	0.272	0.87	Yes	1.00	**2.88**
		$U_8 - L_8$			-----	-1122.29	-110	126	-214	252	1232	253	-1794	-488	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1	Yes	0.781	0.047	0.83	Yes	1.00	**3.46**
		$U_9 - L_9$			-----	-627.04	-229	260	-371	420	605	234	-1219	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.251	1	Yes	0.708	0.233	0.95	Yes	1.00	**2.38**
		$U_{10} - L_{10}$			-----	-705.31	-158	156	-305	339	623	295	-1209	-379	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.262	1	Yes	0.696	0.176	0.88	Yes	1.00	**3.34**
		$U_{11} - L_{11}$			-----	-595.37	-167	218	-296	410	628	366	-1315	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.279	1	Yes	0.693	0.190	0.89	Yes	1.00	**3.09**
		$U_{12} - L_{12}$			-----	-456.23	-137	138	-234	252	673	368	-1640	-422	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.334	1	Yes	0.626	0.215	0.85	Yes	1.00	**2.91**
		$U_{13} - L_{13}$			-----	-347.78	-73	92	-184	213	317	193	-745	22	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.292	1	Yes	0.666	0.244	0.91	Yes	1.00	**3.04**
		$U_{14} - L_{14}$			-----	-203.33	-42	49	-20	28	631	192	-2223	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.454	0.543	1	Yes	0.430	0.062	0.50	Yes	1.00	**3.92**
		$U_{15} - L_{15}$			-----	-264.59	-39	31	172	-194	400	-136	-1418	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.593	0.403	1	Yes	0.560	0.248	0.81	Yes	1.00	**4.94**
		$U_{16} - L_{16}$			-----	-325.19	47	-59	228	-241	605	-105	-717	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.264	1	Yes	0.688	0.308	1.00	Yes	1.00	**4.34**
		$U_{17} - L_{17}$			-----	-421.53	79	-92	200	-220	505	200	-94	41	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.211	1	Yes	0.727	0.223	0.96	Yes	1.00	**2.93**
		$U_{18} - L_{18}$			-----	-537.50	172	-178	411	-430	679	172	-703	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.186	0.98	Yes	0.748	0.243	1.00	Yes	1.00	**3.98**
		$U_{19} - L_{19}$			-----	-650.14	177	-191	496	-514	586	117	209	43	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.157	0.97	Yes	0.757	0.238	1.00	Yes	1.00	**4.94**
		$U_{20} - L_{20}$			-----	-540.56	229	-275	388	-468	433	57	316	41	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.202	1	Yes	0.692	0.247	0.94	Yes	1.00	**3.22**
	Structure 2	$U_0 - L_0$			-----	-606.67	-161	269	-316	451	37	6	-1204	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.264	1	Yes	0.650	0.191	0.85	Yes	1.00	**1.90**
		$U_1 - L_1$			-----	-652.50	-217	224	-454	475	629	165	-1434	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.247	1	Yes	0.699	0.201	0.91	Yes	1.00	**2.92**
		$U_2 - L_2$			-----	-572.01	-159	175	-399	427	623	289	-931	66	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.227	1	Yes	0.729	0.218	0.95	Yes	1.00	**2.95**
		$U_3 - L_3$			-----	-436.08	-80	91	-186	207	544	269	-750	87	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.257	1	Yes	0.684	0.189	0.88	Yes	1.00	**2.33**
		$U_4 - L_4$			-----	-274.76	-29	40	-140	155	552	241	-1008	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.374	1	Yes	0.581	0.198	0.78	Yes	1.00	**2.72**
		$U_5 - L_5$			-----	-236.99	48	-41	-116	143	541	183	-1372	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.535	0.462	1	Yes	0.501	0.183	0.69	Yes	1.00	**4.34**
		$U_6 - L_6$			216.41	-----	117	-121	-24	31	86	9	-1555	-153	0.389	0.605	1.00	Yes	0.214	0.333	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_7 - L_7$			-----	-215.27	79	-91	96	-110	581	70	-1821	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.486	0.508	1	Yes	0.455	0.141	0.60	Yes	1.00	**4.61**
		$U_8 - L_8$			-----	-472.90	149	-170	334	-358	417	-31	-293	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.149	0.84	Yes	0.681	0.313	1.00	Yes	1.00	**3.50**
		$U_9 - L_9$			-----	-697.01	270	-277	569	-589	731	345	-666	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.160	0.94	Yes	0.747	0.250	1.00	Yes	1.00	**4.52**
		$U_{10} - L_{10}$			-----	-744.16	233	-234	508	-530	1178	692	-6	216	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.256	1	Yes	0.696	0.234	0.93	Yes	1.00	**4.37**
		$U_{11} - L_{11}$			-----	-733.69	226	-219	459	-462	1167	668	526	493	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.260	1	Yes	0.686	0.204	0.90	Yes	1.00	**3.64**
		$U_{12} - L_{12}$			-----	-720.41	186	-169	417	-409	1477	644	1012	506	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.303	1	Yes	0.624	0.179	0.81	Yes	1.00	**3.57**
		$U_{13} - L_{13}$			-----	-600.83	232	-229	480	-469	1323	332	533	177	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.322	1	Yes	0.579	0.230	0.81	Yes	1.00	**3.44**
		$U_{14} - L_{14}$			-----	-1101.88	-45	37	-197	177	1292	-96	-2063	-334	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.192	1	Yes	0.731	0.035	0.77	Yes	1.00	**4.96**
		$U_{15} - L_{15}$			-----	-613.51	-274	277	-514	505	634	67	-1291	12	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.306	1	Yes	0.591	0.246	0.84	Yes	1.00	**3.14**
		$U_{16} - L_{16}$			-----	-640.10	-194	181	-422	423	673	191	-1470	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.253	1	Yes	0.686	0.179	0.87	Yes	1.00	**3.02**
		$U_{17} - L_{17}$			-----	-622.67	-200	201	-484	495	595	195	-1092	15	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.231	1	Yes	0.725	0.230	0.96	Yes	1.00	**3.37**
		$U_{18} - L_{18}$			-----	-535.27	-168	174	-392	428	621	218	-1372	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.283	1	Yes	0.682	0.219	0.91	Yes	1.00	**2.94**
		$U_{19} - L_{19}$			-----	-452.08	-92	93	-241	250	518	197	-1297	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.317	1	Yes	0.675	0.240	0.92	Yes	1.00	**3.03**
		$U_{20} - L_{20}$			-----	-337.34	-46	51	-167	182	521	186	-898	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.308	1	Yes	0.646	0.208	0.86	Yes	1.00	**3.06**
	Structure 3	$U_0 - L_0$			-----	-252.68	-4	11	-143	162	232	66	-1265	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.571	0.423	1	Yes	0.535	0.208	0.75	Yes	1.00	**3.43**
		$U_1 - L_1$			-----	-216.13	-2	4	-12	13	633	138	-1873	-391	-----	-----	-----	-----	-----	-----	-----	-----	0.486	0.506	1	Yes	0.457	0.017	0.48	Yes	1.00	**4.34**
		$U_2 - L_2$			-----	-321.38	11	-14	228	-246	525	166	-419	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.246	0.98	Yes	0.680	0.315	1.00	Yes	1.00	**4.36**
		$U_3 - L_3$			-----	-369.74	52	-57	217	-228	584	204	-241	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1	Yes	0.708	0.260	0.97	Yes	1.00	**3.47**
		$U_4 - L_4$			-----	-481.54	98	-100	286	-290	588	223	-600	4	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.184	0.91	Yes	0.719	0.279	1.00	Yes	1.00	**3.54**
		$U_5 - L_5$			-----	-571.77	168	-175	499	-523	708	301	227	273	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.190	0.96	Yes	0.729	0.267	1.00	Yes	1.00	**3.91**
		$U_6 - L_6$			-----	-597.49	220	-216	513	-522	1196	558	113	335	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.260	1	Yes	0.695	0.242	0.94	Yes	1.00	**3.87**
		$U_7 - L_7$			-----	-611.44	156	-129	465	-448	1651	558	902	389	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.289	1	Yes	0.655	0.197	0.86	Yes	1.00	**3.97**
		$U_8 - L_8$			-----	-617.65	151	-156	578	-563	1190	198	463	137	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.303	1	Yes	0.595	0.276	0.88	Yes	1.00	**5.47**
		$U_9 - L_9$			-----	-1061.33	-167	141	-321	277	947	-271	-1981	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.185	1	Yes	0.730	0.059	0.79	Yes	1.00	**4.16**
		$U_{10} - L_{10}$			-----	-710.00	-307	302	-531	515	522	97	-559	14	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.203	1	Yes	0.685	0.254	0.94	Yes	1.00	**3.00**
		$U_{11} - L_{11}$			-----	-803.27	-226	207	-420	423	469	171	-1007	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.228	1	Yes	0.696	0.181	0.88	Yes	1.00	**3.15**
		$U_{12} - L_{12}$			-----	-770.69	-248	237	-432	445	454	216	-1503	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.222	1	Yes	0.721	0.196	0.92	Yes	1.00	**3.29**
		$U_{13} - L_{13}$			-----	-753.85	-237	251	-468	496	552	334	-1121	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.245	1	Yes	0.705	0.219	0.93	Yes	1.00	**3.92**
		$U_{14} - L_{14}$			-----	-642.57	-256	270	-479	513	631	374	-1575	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.280	1	Yes	0.689	0.218	0.91	Yes	1.00	**3.61**
		$U_{15} - L_{15}$			-----	-475.77	-136	158	-286	318	252	182	-1662	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.305	1	Yes	0.685	0.278	0.97	Yes	1.00	**3.42**
		$U_{16} - L_{16}$			-----	-215.44	-80	95	-126	146	497	96	-1988	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.487	0.507	1	Yes	0.456	0.186	0.65	Yes	1.00	**4.30**
		$U_{17} - L_{17}$			149.21	-----	-150	166	78	-103	460	167	-1787	-645	0.268	0.730	1.00	Yes	0.148	0.402	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.94**
		$U_{18} - L_{18}$			95.20	-280.51	-101	109	208	-250	477	152	-1079	-494	0.171	0.632	0.81	Yes	0.094	0.348	0.45	Yes	0.613	0.379	1	Yes	0.594	0.320	0.92	Yes	1.00	**6.66**
		$U_{19} - L_{19}$			-----	-328.95	-30	14	225	-237	425	219	-259	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.207	0.93	Yes	0.696	0.303	1.00	Yes	1.00	**5.06**
		$U_{20} - L_{20}$			-----	-325.47	79	-92	178	-218	604	194	139	45	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.263	1	Yes	0.689	0.279	0.97	Yes	1.00	**2.71**

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
South Truss - Diagonals	Structure 1	$U_0 - L_1$	629.09	-----	-17	32	1	-12	-505	-540	78	151	0.825	0.174	1.00	Yes	0.498	0.096	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.60**
		$U_1 - L_2$	410.00	-118.18	-93	8	16	-17	-462	-470	399	221	0.737	0.256	1.00	Yes	0.406	0.141	0.55	Yes	0.271	0.211	0.49	Yes	0.250	0.119	0.37	Yes					1.00	**4.49**
		$U_2 - L_3$	-----	-270.85	-99	-23	55	-31	-356	-717	549	296	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.372	1	Yes	0.573	0.126	0.70	Yes					1.00	**7.45**
		$U_3 - L_4$	-----	-319.99	-8	-35	4	-61	176	22	-690	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.264	1	Yes	0.677	0.077	0.76	Yes					1.00	**3.46**
		$U_4 - L_4$	523.32	-----	-86	45	-43	19	-80	5	588	191	0.767	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.10**
		$U_5 - L_5$	678.50	-----	-194	200	-34	99	-459	453	276	80	0.802	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.03**
		$U_7 - L_6$	588.73	-----	-263	232	-39	85	-262	142	-799	-110	0.696	0.295	1.00	Yes	0.383	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.32**
		$U_6 - L_7$	616.42	-----	-90	295	30	80	37	190	-561	-296	0.729	0.270	1.00	Yes	0.401	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.43**
		$U_8 - L_9$	954.35	-----	-95	353	12	185	-206	-618	594	287	0.763	0.236	1.00	Yes	0.473	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.53**
		$U_9 - L_{10}$	980.48	-----	-300	241	-112	128	-368	-495	606	262	0.784	0.211	1.00	Yes	0.486	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.28**
		$U_{10} - L_{11}$	922.79	-----	-241	163	-82	95	-380	-821	178	-15	0.779	0.219	1.00	Yes	0.483	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.30**
		$U_{11} - L_{12}$	770.70	-----	-254	76	-95	48	-620	-787	166	-23	0.762	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.83**
		$U_{12} - L_{13}$	573.38	-----	-196	134	-100	46	-330	-618	-480	-268	0.699	0.292	1.00	Yes	0.440	0.167	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.90**
		$U_{13} - L_{14}$	407.30	-----	-90	21	-31	-23	-161	-516	-455	-260	0.733	0.264	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.76**
		$U_{15} - L_{14}$	223.96	-204.02	-73	-14	-11	-80	-198	-236	1123	-234	0.403	0.428	0.84	Yes	0.222	0.235	0.46	Yes	0.478	0.515	1	Yes	0.432	0.103	0.54	Yes					1.00	**5.12**
		$U_{16} - L_{15}$	383.12	-----	-139	82	-37	-11	-257	136	444	-233	0.689	0.306	1.00	Yes	0.379	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.95**
		$U_{17} - L_{16}$	525.70	-----	-148	96	-46	23	-249	-45	-305	-105	0.771	0.221	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.53**
		$U_{18} - L_{17}$	620.98	-----	-330	252	-130	89	-382	-8	-402	-112	0.734	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.05**
		$U_{19} - L_{18}$	689.04	-----	-333	253	-131	95	-378	-133	-458	-204	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.33**
		$U_{20} - L_{19}$	695.13	-----	-376	322	-177	141	-161	-67	-273	-139	0.753	0.237	1.00	Yes	0.414	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.76**
	Structure 2	$U_0 - L_1$	754.40	-----	-269	314	-100	128	-691	-595	-155	6	0.746	0.249	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.39**
		$U_1 - L_2$	731.75	-----	-387	292	-163	116	-379	-600	145	-30	0.724	0.269	1.00	Yes	0.398	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.18**
		$U_2 - L_3$	590.63	-----	-313	244	-118	88	-287	-661	126	-27	0.698	0.297	1.00	Yes	0.384	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.95**
		$U_3 - L_4$	535.66	-----	-173	111	-52	25	-453	-585	170	10	0.714	0.281	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.18**
		$U_4 - L_5$	365.51	-----	-130	81	3	-17	-274	-599	236	36	0.657	0.340	1.00	Yes	0.362	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.70**
		$U_5 - L_6$	341.53	-253.81	-106	26	60	-114	-448	-801	-779	-185	0.614	0.378	1.00	Yes	0.338	0.208	0.55	Yes	0.599	0.292	0.9	Yes	0.537	0.146	0.69	Yes					1.00	**6.98**
		$U_6 - L_7$	-----	-367.70	-12	-41	41	-98	29	-243	-445	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.203	1	Yes	0.704	0.112	0.82	Yes					1.00	**3.09**
		$U_8 - L_7$	559.63	-----	-177	139	-98	46	-258	-7	600	-200	0.714	0.281	1.00	Yes	0.449	0.160	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.74**
		$U_8 - L_8$	723.10	-----	-333	251	-175	118	-157	-2	-225	-111	0.783	0.207	1.00	Yes	0.431	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.58**
		$U_{10} - L_9$	830.17	-----	-318	252	-128	141	-32	205	-188	108	0.821	0.178	1.00	Yes	0.452	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.08**
		$U_{11} - L_{10}$	876.02	-----	-338	304	-136	164	-223	174	-402	129	0.798	0.198	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.99**
		$U_{12} - L_{11}$	851.48	-----	-334	349	-131	174	-509	181	-551	56	0.776	0.223	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.91**
		$U_{13} - L_{12}$	729.44	-----	-408	379	-158	162	-484	52	-539	-1	0.722	0.270	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.07**
		$U_{14} - L_{13}$	732.49	-----	-250	427	-17	125	-23	53	-491	-255	0.725	0.272	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.93**
		$U_{14} - L_{15}$	598.55	-----	-196	345	-19	166	153	-394	531	241	0.708	0.292	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.61**
		$U_{15} - L_{16}$	586.06	-----	-349	316	-171	168	77	-263	590	179	0.693	0.305	1.00	Yes	0.381	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.65**
		$U_{16} - L_{17}$	688.57	-----	-330	348	-127	154	45	-411	373	110	0.746	0.245	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.46**
		$U_{17} - L_{18}$	638.46	-----	-285	272	-111	127	-40	-428	358	88	0.755	0.239	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.15**
		$U_{18} - L_{19}$	613.62	-----	-281	242	-82	96	-247	-619	290	77	0.725	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.68**
		$U_{19} - L_{20}$	567.28	-----	-190	154	-41	46	-265	-482	294	83	0.723	0.268	1.00	Yes	0.398	0.153	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.06**
		$U_{20} - L_{21}$	383.26	-----	-120	91	-26	2	-89	-514	-328	-78	0.689	0.302	1.00	Yes	0.379	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.00**
		$U_{21} - L_{22}$	377.77	-----	-109	38	19	-82	-223	-412	-609	-63	0.679	0.315	1.00	Yes	0.374	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.78**
		$U_{23} - L_{22}$	353.82	-----	-99	44	-19	-37	-87	-57	803	-159	0.636	0.359	1.00	Yes	0.350	0.198	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.88**
		$U_{24} - L_{23}$	425.68	-----	-123	107	-18	17	-141	99	-256	-63	0.766	0.232	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.96**
		$U_{25} - L_{24}$	595.69	-----	-195	174	-41	49	-67	111	-300	-82	0.760	0.236	1.00	Yes	0.418	0.133	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.17**
		$U_{26} - L_{25}$	666.31	-----	-281	276	-79	97	-51	178	-254	-57	0.788	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.21**
		$U_{27} - L_{26}$	648.69	-----	-290	289	-106	125	-159	254	-342	-8	0.767	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.72**
		$U_{28} - L_{27}$	672.29	-----	-305	341	-95	148	-418	230	-544	40	0.728	0.264	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.90**
		$U_{29} - L_{28}$	593.30	-----	-342	332	-91	104	-361	43	-552	-42	0.701	0.294	1.00	Yes	0.386	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.34**
		$U_{30} - L_{29}$	631.95	-----	-197	368	34	68	-91	6	-237	-197	0.747	0.251	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.49**
		$U_{30} - L_{31}$	723.38	-----	-256	433	-59	226	-29	-267	500	216	0.716	0.276	1.00	Yes	0.394	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_{31} - L_{32}$	739.26	-----	-424	373	-232	216	9	-304	454	120	0.731	0.265	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.75**
		$U_{32} - L_{33}$	836.55	-----	-343	331	-160	192	-180	-648	281	58	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.26**
		$U_{33} - L_{34}$	834.36	-----	-327	264	-146	163	-559	-705	239	38	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.39**
		$U_{34} - L_{35}$	767.83	-----	-293	225	-154	122	-367	-636	9	-137	0.760	0.231	1.00	Yes	0.418	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.47**
		$U_{35} - L_{36}$	677.73	-----	-314	215	-176	104	-359	-611	-298	-205	0.734	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.27**
		$U_{36} - L_{37}$	552.54	-----	-182	137	-79	25	-194	-621	-562	-243	0.705	0.290	1.00	Yes	0.443	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.32**
		$U_{38} - L_{37}$	-----	-346.00	-21	-33	31	-86	-280	-142	492	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.250	1	Yes	0.663	0.098	0.77	Yes					1.00	**3.20**
		$U_{39} - L_{38}$	299.19	-172.98	-93	38	14	-73	-165	-32	1183	-184	0.538	0.461	1.00	Yes	0.296	0.254	0.55	Yes	0.412	0.445	0.86	Yes	0.366	0.119	0.49	Yes					1.00	**5.41**
		$U_{40} - L_{39}$	395.17	-----	-134	90	-6	-9	-215	90	-379	-103	0.711	0.281	1.00	Yes	0.391	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.72**
		$U_{41} - L_{40}$	561.84	-----	-175	127	-56	30	-321	-98	-413	-180	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.56**
		$U_{42} - L_{41}$	623.55	-----	-321	263	-120	90	-385	-73	-403	-171	0.737	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.69**
		$U_{43} - L_{42}$	771.01	-----	-378	310	-134	101	-362	-80	-375	-195	0.763	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.68**
		$U_{44} - L_{43}$	797.18	-----	-369	369	-175	155	-112	41	-211	-88	0.789	0.203	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.18**
	Structure 3	$U_0 - L_1$	701.37	-----	-247	262	-79	103	-495	-622	-143	6	0.760	0.237	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.34**
		$U_1 - L_2$	656.16	-----	-347	243	-158	107	-548	-629	165	-39	0.711	0.281	1.00	Yes	0.391	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.03**
		$U_2 - L_3$	588.40	-----	-311	240	-123	84	-388	-690	135	-25	0.696	0.301	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.29**
		$U_3 - L_4$	494.44	-----	-139	86	-42	19	-343	-564	155	-25	0.725	0.272	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.00**
		$U_4 - L_5$	332.86	-----	-120	78	-37	-15	-327	-476	-832	-213	0.599	0.394	1.00	Yes	0.329	0.217	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.62**
		$U_5 - L_6$	247.24	-280.14	-77	-22	28	-117	-344	-556	-872	-274	0.445	0.402	0.85	Yes	0.245	0.221	0.47	Yes	0.656	0.338	1	Yes	0.593	0.149	0.75	Yes					1.00	**6.28**
		$U_7 - L_6$	396.06	-----	-82	32	-45	-8	-198	-130	610	-149	0.712	0.281	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.17**
		$U_8 - L_7$	620.66	-----	-206	156	-98	49	-106	77	305	-86	0.757	0.239	1.00	Yes	0.476	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.16**
		$U_8 - L_8$	796.66	-----	-245	121	-132	30	-155	47	633	185	0.788	0.208	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.40**
		$U_{10} - L_9$	891.50	-----	-210	184	-108	89	-221	250	1115	227	0.753	0.244	1.00	Yes	0.466	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.70**
		$U_{11} - L_{10}$	939.97	-----	-273	266	-65	101	-284	151	-932	-231	0.751	0.240	1.00	Yes	0.465	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.69**
		$U_{12} - L_{11}$	920.08	-----	-78	355	26	113	59	240	-811	-283	0.736	0.261	1.00	Yes	0.456	0.148	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.43**
		$U_{13} - L_{12}$	614.23	-----	-91	288	6	156	101	-399	588	304	0.726	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.15**
		$U_{13} - L_{14}$	605.04	-----	-278	224	-100	124	-268	-283	676	270	0.715	0.281	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.96**
		$U_{14} - L_{15}$	663.20	-----	-195	202	-52	97	-151	-534	313	104	0.784	0.212	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.51**
		$U_{15} - L_{16}$	539.32	-----	-87	28	-40	6	-66	-360	-511	-299	0.791	0.207	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.33**
		$U_{17} - L_{16}$	-----	-325.98	-24	-44	-2	-58	-261	-394	498	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.251	1	Yes	0.690	0.074	0.77	Yes					1.00	**4.08**
		$U_{18} - L_{17}$	-----	-286.36	-135	-10	53	-37	-529	-137	-193	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.337	1	Yes	0.606	0.173	0.78	Yes					1.00	**9.18**
		$U_{19} - L_{18}$	449.87	-----	-92	12	19	-21	-226	-224	-204	-116	0.809	0.183	1.00	Yes	0.445	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.80**
		$U_{20} - L_{19}$	632.25	-----	-111	74	-29	3	-146	2	-60	13	0.829	0.167	1.00	Yes	0.501	0.092	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.13**

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_1 - U_1	-71.60	-98.70	-43.63			0.90	1.24	-48.57	-109.88	0.00	0.00	Vehicle	Vehicle	-----	-331.16	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.70	4.49
	U_1 - U_2	-90.76	-1.67	-140.58			0.90	1.24	-1.86	-156.51	0.00	0.00	Vehicle	Vehicle	-----	-457.08	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	43.35	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	1.82	3.03
	U_1 - U_3	-61.05	58.33	-174.43			0.90	1.24	64.93	-194.19	0.00	0.00	Vehicle	Vehicle	61.33	-500.11	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	41.44	Pass	42.67	49.08	Pass	9.33	12.00	Pass	6.77	11.28	1.56	2.60
	U_1 - U_4	10.82	76.38	-125.68			0.90	1.24	85.03	-139.92	0.00	0.00	Vehicle	Vehicle	198.30	-289.10	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.66	7.76	2.47	4.12
	U_1 - U_5	12.98	76.79	-162.18			0.90	1.24	85.49	-180.55	0.00	0.00	Vehicle	Vehicle	202.10	-374.32	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.62	7.70	1.92	3.20
	U_1 - U_6	121.44	88.76	-119.04			0.90	1.24	98.81	-132.53	0.00	0.00	Vehicle	Vehicle	371.97	-129.27	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	3.34	5.56	3.11	5.18
	U_2 - U_2	249.52	98.09	-72.78			0.90	1.24	109.20	-81.03	0.00	0.00	Vehicle	Vehicle	560.98	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.05	5.08	-----	-----
	U_2 - U_3	376.85	92.60	-13.31			0.90	1.24	103.09	-14.82	0.00	0.00	Vehicle	Vehicle	713.26	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	4.27	7.11	-----	-----
	U_3 - U_3	319.70	-2.76	1.22			0.90	1.20	1.32	-2.97	0.00	0.00	Vehicle	Vehicle	418.46	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	281.95	469.91	-----	-----
	U_3 - U_4	128.80	-10.71	-30.27			0.90	1.20	-11.54	-32.64	0.00	0.00	Vehicle	Vehicle	142.42	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_3 - U_5	-70.81	88.33	-64.70			0.90	1.20	95.24	-69.76	0.00	0.00	Vehicle	Vehicle	114.29	-243.20	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	4.91	8.19	4.53	7.55
	U_3 - U_6	-252.85	78.22	-97.94			0.90	1.20	84.34	-105.59	0.00	0.00	Vehicle	Vehicle	-----	-557.49	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.18	5.30
	U_4 - U_3	-391.81	67.06	-165.66			0.90	1.20	72.31	-178.62	0.00	0.00	Vehicle	Vehicle	-----	-896.36	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	43.98	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.51	4.18
	U_4 - U_4	-482.83	55.98	-187.86			0.90	1.20	60.36	-202.55	0.00	0.00	Vehicle	Vehicle	-----	-1066.54	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	43.52	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.50	4.17
	U_4 - U_5	-484.28	55.61	-246.69			0.90	1.20	59.96	-268.14	0.00	0.00	Vehicle	Vehicle	-----	-1210.54	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.85	Pass	25.60	48.38	Pass	6.40	12.00	Pass	-----	-----	1.89	3.14
	U_4 - U_6	-501.86	42.81	-250.85			0.90	1.20	46.16	-270.47	0.00	0.00	Vehicle	Vehicle	-----	-1238.42	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.39	Pass	25.60	47.83	Pass	6.40	12.00	Pass	-----	-----	1.83	3.05
	U_5 - U_7	-467.82	19.58	-232.33			0.90	1.20	21.11	-250.50	0.00	0.00	Vehicle	Vehicle	-----	-1150.91	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	41.90	Pass	25.60	49.62	Pass	6.40	12.00	Pass	-----	-----	2.06	3.43
	U_5 - U_8	-368.70	19.28	-159.98			0.90	1.20	20.79	-172.49	0.00	0.00	Vehicle	Vehicle	-----	-853.04	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	41.66	Pass	32.00	49.33	Pass	10.67	12.00	Pass	-----	-----	2.09	3.49
	U_6 - U_9	-251.42	9.64	-120.30			0.90	1.20	10.39	-129.71	0.00	0.00	Vehicle	Vehicle	-----	-607.88	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	41.15	Pass	32.00	48.73	Pass	10.67	12.00	Pass	-----	-----	1.97	3.29
	U_9 - U_{10}	-117.77	2.08	-56.98			0.90	1.20	2.25	-61.44	0.00	0.00	Vehicle	Vehicle	-----	-286.21	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.47	9.11
Structure 2	U_1 - U_1	-118.16	-61.06	-29.10			0.90	1.18	-30.99	-65.01	0.00	0.00	Vehicle	Vehicle	-----	-294.47	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.88	8.14
	U_1 - U_2	-239.45	-114.66	-45.29			0.90	1.18	-48.22	-122.07	0.00	0.00	Vehicle	Vehicle	-----	-575.77	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.71	4.52
	U_2 - U_3	-350.29	-148.76	-90.24			0.90	1.18	-96.08	-158.39	0.00	0.00	Vehicle	Vehicle	-----	-798.55	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.75	4.59
	U_3 - U_4	-448.96	26.15	-216.20			0.90	1.18	27.84	-232.31	0.00	0.00	Vehicle	Vehicle	-----	-1086.99	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	43.26	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.39	3.84
	U_4 - U_5	-483.05	33.53	-255.92			0.90	1.18	34.55	-273.24	0.00	0.00	Vehicle	Vehicle	-----	-1102.98	12.50	62.19	49.6875	2052.19	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.75	4.58
	U_4 - U_6	-485.65	72.53	-269.37			0.90	1.18	77.22	-286.80	0.00	0.00	Vehicle	Vehicle	-----	-1252.73	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	42.44	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.10	3.49
	U_5 - U_7	-428.66	86.68	-259.78			0.90	1.18	92.29	-276.59	0.00	0.00	Vehicle	Vehicle	-----	-1156.54	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.94	Pass	23.27	49.66	Pass	5.82	12.00	Pass	-----	-----	1.98	3.30
	U_6 - U_8	-428.18	86.89	-259.26			0.90	1.18	92.51	-276.03	0.00	0.00	Vehicle	Vehicle	-----	-1154.70	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.97	Pass	23.27	49.70	Pass	5.82	12.00	Pass	-----	-----	1.98	3.31
	U_7 - U_9	-335.25	98.57	-221.28			0.90	1.18	104.95	-235.60	0.00	0.00	Vehicle	Vehicle	-----	-946.28	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	42.48	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.01	3.36
	U_8 - U_{10}	-200.15	107.83	-185.36			0.90	1.18	114.81	-197.35	0.00	0.00	Vehicle	Vehicle	-----	-687.78	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	44.18	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.09	3.48
	U_{10} - U_{11}	-52.03	114.47	-147.53			0.90	1.18	121.88	-157.07	0.00	0.00	Vehicle	Vehicle	196.43	-407.96	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	4.74	7.90	2.74	4.57
	U_{11} - U_{12}	107.09	114.27	-92.43			0.90	1.18	121.66	-98.41	0.00	0.00	Vehicle	Vehicle	402.82	-74.01	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	3.96	6.61	5.34	8.91
	U_{12} - U_{13}	259.37	113.21	-39.17			0.90	1.18	120.54	-41.70	0.00	0.00	Vehicle	Vehicle	598.35	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.38	7.30	-----	-----
	U_{13} - U_{14}	391.99	103.01	-7.04			0.90	1.18	109.67	-7.50	0.00	0.00	Vehicle	Vehicle	747.21	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	6.41	10.69	-----	-----
	U_{14} - U_{15}	439.40	2.67	0.40			0.90	1.17	0.42	0.43	0.00	0.00	Vehicle	Vehicle	574.14	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	1591.89	2653.15	-----	-----
	U_{15} - U_{16}	369.68	58.82	-35.53			0.90	1.17	61.88	-37.38	0.00	0.00	Vehicle	Vehicle	614.66	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	8.75	14.59	-----	-----
	U_{16} - U_{17}	271.42	-17.11	-44.75			0.90	1.17	-18.01	-47.08	0.00	0.00	Vehicle	Vehicle	313.83	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{17} - U_{18}	171.80	-39.08	-68.51			0.90	1.17	-41.12	-72.08	0.00	0.00	Vehicle	Vehicle	134.24	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_{18} - U_{19}	72.84	-81.83	-90.97			0.90	1.17	-86.10	-95.71	0.00	0.00	Vehicle	Vehicle	-----	-112.68	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.52	7.53
	U_{19} - U_{20}	-8.04	78.67	-138.29			0.90	1.17	82.77	-145.49	0.00	0.00	Vehicle	Vehicle	168.88	-325.68	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.00	10.01	2.82	4.71
	U_{20} - U_{21}	-60.07	66.48	-153.31			0.90	1.17	69.94	-161.30	0.00	0.00	Vehicle	Vehicle	73.44	-427.58	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.02	15.04	2.89	4.82
	U_{21} - U_{22}	-82.15	52.55	-210.34			0.90	1.17	55.29	-221.30	0.00	0.00	Vehicle	Vehicle	13.00	-586.28	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	11.65	19.42	2.05	3.41
	U_{22} - U_{23}	-82.37	52.65	-210.04			0.90	1.17	55.40	-220.98	0.00	0.00	Vehicle	Vehicle	12.94	-585.89	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	11.63	19.39	2.05	3.41
	U_{23} - U_{24}	-65.94	37.42	-203.24			0.90	1.17	39.37	-213.82	0.00	0.00	Vehicle	Vehicle	-----	-549.00	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.16	3.60
	U_{24} - U_{25}	-11.98	77.79	-183.11			0.90	1.17	81.84	-192.65	0.00	0.00	Vehicle	Vehicle	153.94	-440.79	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.15	10.24	2.10	3.50
	U_{25} - U_{26}	54.95	88.34	-156.15			0.90	1.17	92.94	-164.29	0.00	0.00	Vehicle	Vehicle	272.81	-284.52	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	4.59	7.65	2.57	4.28
	U_{26} - U_{27}	135.89	97.10	-114.16			0.90	1.17	102.76	-120.11	0.00	0.00	Vehicle	Vehicle	398.00	-83.58	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	3.70	6.17	3.91	6.52
	U_{27} - U_{28}	216.69	101.18	-64.92			0.90	1.17	106.45	-68.31	0.00	0.00	Vehicle	Vehicle	512.34	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	4.66	7.77	-----	-----
	U_{28} - U_{29}	293.53	103.50	-39.54			0.90	1.17	108.89	-41.60	0.00	0.00	Vehicle	Vehicle	617.51	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	5.39	8.99	-----	-----
	U_{29} - U_{30}	357.86	97.22	-1.11			0.90	1.17	102.29	-1.17	0.00	0.00	Vehicle	Vehicle	686.84	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	7.08	11.80	-----	-----
	U_{30} - U_{31}	339.12	7.34	-29.22			0.90	1.18	7.82	-31.11	0.00	0.00	Vehicle	Vehicle	457.80	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	94.03	156.71	-----	-----
	U_{31} - U_{32}	251.34	52.00	-15.17			0.90	1.18	55.37	-16.15	0.00	0.00	Vehicle	Vehicle	446.70	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0- L_1	4.73	-1.32	-2.55			0.90	1.24	-1.47	-2.83	0.00	0.00	Vehicle	Vehicle	2.96	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
	L_1 - L_2	74.19	68.27	53.81			0.90	1.24	76.01	59.90	0.00	0.00	Vehicle	Vehicle	261.12	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.38**	**5.64**	-----	-----
	L_2 - L_3	97.64	-42.31	154.60			0.90	1.24	172.12	-47.11	0.00	0.00	Vehicle	Vehicle	499.84	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**1.99**	**3.32**	-----	-----
	L_3 - L_4	66.79	-61.25	164.27			0.90	1.24	182.89	-68.19	0.00	0.00	Vehicle	Vehicle	483.07	-60.93	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**1.97**	**3.29**	**5.54**	**9.24**
	L_4 - L_5	-108.59	-91.98	117.92			0.90	1.24	131.28	-102.40	0.00	0.00	Vehicle	Vehicle	143.28	-363.04	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**3.21**	**5.35**	**2.30**	**3.83**
	L_5 - L_6	-237.42	-101.51	68.86			0.90	1.24	76.66	-113.01	0.00	0.00	Vehicle	Vehicle	-----	-553.50	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	42.59	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.24**	**3.73**
	L_7 - L_7	-362.38	-106.11	8.51			0.90	1.24	9.48	-118.13	0.00	0.00	Vehicle	Vehicle	-----	-727.04	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	44.49	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**2.96**	**4.93**
	L_7 - L_8	478.62	-92.66	-35.53			0.90	1.24	-39.55	-103.16	0.00	0.00	Vehicle	Vehicle	-----	-845.71	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.19**	**6.99**
	L_8 - L_9	-476.97	-66.08	-2.18			0.90	1.20	-2.35	-71.24	0.00	0.00	Vehicle	Vehicle	-----	-774.42	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.08**	**10.14**
	L_9 - L_{10}	-301.47	-34.42	-35.89			0.90	1.20	-37.11	-38.70	0.00	0.00	Vehicle	Vehicle	-----	-475.76	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**9.98**	**16.64**
	L_{10} - L_{11}	-104.56	-86.88	49.31			0.90	1.20	53.16	-93.68	0.00	0.00	Vehicle	Vehicle	-----	-338.89	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.54**	**4.23**
	L_{11} - L_{12}	96.98	57.76	82.78			0.90	1.20	89.25	62.28	0.00	0.00	Vehicle	Vehicle	319.45	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.34**	**5.57**	-----	-----
	L_{12} - L_{13}	268.60	-65.93	142.10			0.90	1.20	153.22	-71.08	0.00	0.00	Vehicle	Vehicle	681.15	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.77**	**4.61**	-----	-----
	L_{13} - L_{14}	405.49	152.77	179.99			0.90	1.20	194.06	164.72	0.00	0.00	Vehicle	Vehicle	947.61	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.79**	**4.65**	-----	-----
	L_{14} - L_{15}	502.59	-31.42	207.79			0.90	1.20	224.03	-33.88	0.00	0.00	Vehicle	Vehicle	1138.78	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.87**	**4.78**	-----	-----
	L_{15} - L_{16}	469.06	-19.71	188.65			0.90	1.20	203.41	-21.25	0.00	0.00	Vehicle	Vehicle	1050.50	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.26**	**5.43**	-----	-----
	L_{16} - L_{17}	365.26	-16.04	131.72			0.90	1.20	142.02	-17.30	0.00	0.00	Vehicle	Vehicle	782.54	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.60**	**5.99**	-----	-----
	L_{17} - L_{18}	248.52	3.38	83.98			0.90	1.20	90.55	3.64	0.00	0.00	Vehicle	Vehicle	519.26	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.21**	**7.01**	-----	-----
	L_{18} - L_{19}	112.87	-2.94	9.75			0.90	1.20	10.52	-3.17	0.00	0.00	Vehicle	Vehicle	169.51	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**22.24**	**37.06**	-----	-----
	L_{19} - L_{20}	-14.36	17.69	-40.65			0.90	1.20	19.07	-43.82	0.00	0.00	Vehicle	Vehicle	22.65	-113.62	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**16.27**	**27.11**	**5.60**	**9.34**
	L_0- L_1	15.25	-7.97	0.91			0.90	1.18	0.96	-8.49	0.00	0.00	Vehicle	Vehicle	21.91	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**384.46**	**640.77**	-----	-----
	L_1 - L_2	136.09	46.56	14.57			0.90	1.18	49.57	15.51	0.00	0.00	Vehicle	Vehicle	284.32	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.02**	**10.03**	-----	-----
	L_2 - L_3	262.77	82.21	76.36			0.90	1.18	87.53	81.30	0.00	0.00	Vehicle	Vehicle	531.26	-----	6.20	37.95	31.7500	1252.35	131.71	10.7370	6.1375	15.74	32.76	-1056.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**4.80**	**8.00**	-----	-----
	L_3 - L_4	373.14	130.06	150.80			0.90	1.18	160.56	138.48	0.00	0.00	Vehicle	Vehicle	832.96	-----	9.45	51.08	41.6250	1685.48	131.71	10.7370	5.7282	16.87	32.73	-1420.90	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.45**	**5.75**	-----	-----
	L_4 - L_5	456.57	155.27	197.02			0.90	1.18	209.77	165.31	0.00	0.00	Vehicle	Vehicle	1048.04	-----	11.35	65.00	54.1000	2145.00	131.71	10.6406	5.6658	16.93	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.41**	**5.69**	-----	-----
	L_5 - L_6	489.37	-55.05	223.03			0.90	1.18	237.46	-58.61	0.00	0.00	Vehicle	Vehicle	1150.68	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5772	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.29**	**5.49**	-----	-----
	L_6 - L_7	479.01	-69.77	246.44			0.90	1.18	262.39	-74.28	0.00	0.00	Vehicle	Vehicle	1191.22	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.06**	**5.10**	-----	-----
	L_7 - L_8	330.07	-95.56	214.88			0.90	1.18	228.78	-101.74	0.00	0.00	Vehicle	Vehicle	924.80	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**2.65**	**4.42**	-----	-----
	L_8 - L_9	188.98	-103.35	170.52			0.90	1.18	181.55	-110.04	0.00	0.00	Vehicle	Vehicle	639.04	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**3.01**	**5.02**	-----	-----
	L_9 - L_{10}	39.77	-110.13	127.71			0.90	1.18	135.97	-117.26	0.00	0.00	Vehicle	Vehicle	346.30	-202.35	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**3.63**	**6.05**	**3.93**	**6.54**
	L_{10} - L_{11}	-127.39	-111.06	50.33			0.90	1.18	53.59	-118.24	0.00	0.00	Vehicle	Vehicle	-----	-421.79	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**2.65**	**4.42**
	L_{11} - L_{12}	-282.64	-110.13	0.07			0.90	1.18	0.07	-117.25	0.00	0.00	Vehicle	Vehicle	-----	-621.48	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.32**	**5.53**
	L_{12} - L_{13}	-426.73	-104.30	-3.65			0.90	1.18	-3.88	-111.05	0.00	0.00	Vehicle	Vehicle	-----	-795.36	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.59**	**7.64**
	L_{13} - L_{14}	-536.42	-72.12	-25.76			0.90	1.18	-27.43	-76.78	0.00	0.00	Vehicle	Vehicle	-----	-863.72	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.65**	**12.75**
	L_{14} - L_{15}	-537.75	-48.71	11.72			0.90	1.17	12.33	-51.25	0.00	0.00	Vehicle	Vehicle	-----	-810.12	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.44**	**19.07**
	L_{15} - L_{16}	-475.65	-99.18	-7.76			0.90	1.17	-8.17	-104.35	0.00	0.00	Vehicle	Vehicle	-----	-844.42	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.60**	**7.66**
	L_{16} - L_{17}	-384.35	-25.67	25.66			0.90	1.17	27.00	-27.01	0.00	0.00	Vehicle	Vehicle	-----	-558.17	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**14.73**	**24.55**
	L_{17} - L_{18}	-281.86	-9.80	52.97			0.90	1.17	55.73	-10.31	0.00	0.00	Vehicle	Vehicle	-----	-388.75	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**25.94**	**43.23**
	L_{18} - L_{19}	-175.17	-91.78	73.44			0.90	1.17	77.26	-96.56	0.00	0.00	Vehicle	Vehicle	-----	-436.92	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	44.60	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**2.48**	**4.13**
	L_{19} - L_{20}	-76.53	71.69	116.10			0.90	1.17	122.15	75.42	0.00	0.00	Vehicle	Vehicle	165.15	-----	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.71**	**6.19**	-----	-----
	L_{20} - L_{21}	4.38	-70.71	138.57			0.90	1.17	145.79	-74.40	0.00	0.00	Vehicle	Vehicle	321.58	-155.50	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.90**	**6.50**	**6.52**	**10.86**
	L_{21} - L_{22}	55.94	-58.43	163.21			0.90	1.17	171.71	-61.48	0.00	0.00	Vehicle	Vehicle	444.77	-60.48	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.13**	**5.22**	**8.39**	**13.98**
	L_{22} - L_{23}	62.99	-27.03	129.68			0.90	1.17	136.44	-28.44	0.00	0.00	Vehicle	Vehicle	377.50	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.91**	**6.52**	-----	-----
	L_{23} - L_{24}	15.54	-50.11	138.76			0.90	1.17	145.98	-52.72	0.00	0.00	Vehicle	Vehicle	336.50	-94.02	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.85**	**6.41**	**9.32**	**15.54**
	L_{24} - L_{25}	-56.00	-56.73	99.13			0.90	1.17	104.30	-59.69	0.00	0.00	Vehicle	Vehicle	153.17	-202.13	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.23**	**7.05**	**5.20**	**8.67**
	L_{25} - L_{26}	-136.37	-65.48	61.38			0.90	1.17	64.58	-68.89	0.00	0.00	Vehicle	Vehicle	-----	-326.55	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.81**	**6.35**	-----	-----
	L_{26} - L_{27}	-217.73	-66.55	29.59			0.90	1.17	31.13	-70.02	0.00	0.00	Vehicle	Vehicle	-----	-434.75	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**4.37**	**7.28**
	L_{27} - L_{28}	-296.25	-68.96	3.10			0.90	1.17	3.26	-72.55	0.00	0.00	Vehicle	Vehicle	-----	-542.32	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**6.21**	**10.36**
	L_{28} - L_{29}	-364.18	-64.19	-28.69			0.90	1.17	-30.18	-67.53	0.00	0.00	Vehicle	Vehicle	-----	-619.76	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.10**	**13.49**
	L_{29} - L_{30}	-418.23	-25.62	-26.65			0.90	1.17	-26.95	-28.04	0.00	0.00	Vehicle	Vehicle	-----	-604.45	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**23.47**	**39.12**
	L_{30} - L_{31}	-350.38	-42.16	24.14			0.90	1.18	25.71	-44.88	0.00	0.00	Vehicle	Vehicle	-----	-552.74	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.57**	**25.94**
	L_{31} - L_{32}	-275.46	-101.69	-27.44			0.90	1.18	-29.21	-108.27	0.00	0.00	Vehicle	Vehicle	-----	-592.68	9.73	59.10	49.3700	1950.30	131.71	11.1432	5.8186	17.24	32.72	-1643.56	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.48**	**9.13**
	L_{32}

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck — Fy = 33.0 ksi — DL Factor: 1.30 — DL Factor: 1.30
Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 2.17 — LL Factor: 1.63
E = 29000.0 ksi

Vehicle Load Factors — Pedestrian Load Factors

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals																																															
Structure 1	U$_1$ - L$_0$	-77.19	17.49	-101.74			0.90	1.24	19.47	-113.26	0.00	0.00	Vehicle	Vehicle	------	-345.75	1.63	15.26	13.6300	503.58	131.71	9.3438	1.9120	43.98	31.16	-404.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	38.00	Fail	6.56	12.00	Pass	------	------	------	------	------	------	------	------	1.24	2.06
	U$_1$ - L$_1$	-33.88	15.69	-68.57			0.90	1.24	17.47	-76.34	0.00	0.00	Vehicle	Vehicle	------	-209.44	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	2.50	4.17
	U$_2$ - L$_2$	10.43	14.79	-40.41			0.90	1.24	16.46	-44.98	0.00	0.00	Vehicle	Vehicle	49.23	-83.90	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	15.21	25.35	4.83	8.06
	U$_2$ - L$_3$	44.39	14.76	-29.48			0.90	1.24	16.44	-32.82	0.00	0.00	Vehicle	Vehicle	93.32	-13.40	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	13.99	23.32	7.23	12.05
	U$_3$ - L$_4$	-16.67	-17.25	-8.13			0.90	1.24	-9.05	-19.20	0.00	0.00	Vehicle	Vehicle	------	-83.27	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	10.41	17.35
	U$_4$ - L$_5$	-109.51	-79.14	3.48			0.90	1.24	3.88	-88.11	0.00	0.00	Vehicle	Vehicle	------	-333.26	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	44.88	Pass	5.37	12.00	Pass	------	------	------	------	------	2.15	3.58
	U$_5$ - L$_6$	-143.60	-96.61	-3.88			0.90	1.24	-4.32	-107.56	0.00	0.00	Vehicle	Vehicle	------	-419.73	3.13	23.61	20.4794	779.11	131.71	9.9479	2.0237	44.24	31.14	-624.88	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	42.75	Pass	8.89	12.00	Pass	------	------	------	------	------	1.88	3.13
	U$_6$ - L$_7$	-142.61	-107.65	2.97			0.90	1.24	3.31	-119.85	0.00	0.00	Vehicle	Vehicle	------	-445.07	2.88	21.86	18.9794	721.36	131.71	11.7292	1.9657	53.70	30.26	-562.19	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	39.95	Pass	10.00	12.00	Pass	------	------	------	------	------	1.45	2.42
	U$_7$ - L$_8$	-391.97	-123.00	-97.03			0.90	1.24	-108.03	-136.94	0.00	0.00	Vehicle	Vehicle	------	-806.26	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	2.95	4.92
	U$_8$ - L$_9$	-223.13	10.76	-92.65			0.90	1.20	11.61	-99.89	0.00	0.00	Vehicle	Vehicle	------	-506.51	3.50	30.81	27.3125	1016.81	131.71	12.1563	2.5246	43.34	31.21	-817.50	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	44.46	Pass	9.60	12.00	Pass	------	------	------	------	------	2.44	4.06
	U$_9$ - L$_{10}$	-225.77	7.30	-95.58			0.90	1.20	7.87	-103.05	0.00	0.00	Vehicle	Vehicle	------	-516.79	2.76	34.69	31.9300	1144.77	131.71	10.7083	2.3304	41.36	31.37	-925.09	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	2.83	4.71
	U$_{10}$ - L$_{11}$	-198.79	-2.12	-84.46			0.90	1.20	-2.28	-91.06	0.00	0.00	Vehicle	Vehicle	------	-455.72	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.92	4.86
	U$_{11}$ - L$_{12}$	-154.77	3.85	-77.20			0.90	1.20	4.15	-83.24	0.00	0.00	Vehicle	Vehicle	------	-381.54	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	2.72	4.54
	U$_{12}$ - L$_{13}$	-109.04	11.16	-69.65			0.90	1.20	12.04	-75.10	0.00	0.00	Vehicle	Vehicle	------	-304.46	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	44.56	Pass	5.94	12.00	Pass	------	------	------	------	------	2.17	3.61
	U$_{13}$ - L$_{14}$	-12.30	-10.46	0.61			0.90	1.20	0.66	-11.28	0.00	0.00	Vehicle	Vehicle	------	-40.44	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	17.68	29.47		
	U$_{14}$ - L$_{15}$	-5.62	-53.66	31.48			0.90	1.20	33.94	-57.86	0.00	0.00	Vehicle	Vehicle	66.24	-132.67	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	7.66	12.77	3.50	5.83
	U$_{15}$ - L$_{16}$	-51.74	-68.23	14.14			0.90	1.20	15.24	-73.56	0.00	0.00	Vehicle	Vehicle	------	-226.65	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.36	3.94
	U$_{16}$ - L$_{17}$	-127.31	-93.10	12.79			0.90	1.20	13.79	-100.38	0.00	0.00	Vehicle	Vehicle	------	-382.99	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	41.87	Pass	5.37	12.00	Pass	------	------	------	------	------	1.70	2.83
	U$_{17}$ - L$_{18}$	-159.89	-103.88	11.80			0.90	1.20	12.72	-112.01	0.00	0.00	Vehicle	Vehicle	------	-450.54	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	42.99	Pass	7.23	12.00	Pass	------	------	------	------	------	1.96	3.26
	U$_{18}$ - L$_{19}$	-191.17	-112.28	10.03			0.90	1.20	10.81	-121.05	0.00	0.00	Vehicle	Vehicle	------	-510.80	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	44.14	Pass	6.06	12.00	Pass	------	------	------	------	------	2.11	3.51
	U$_{19}$ - L$_{20}$	-211.94	-113.33	-43.91			0.90	1.20	-47.34	-122.19	0.00	0.00	Vehicle	Vehicle	------	-540.26	0.00	29.13	29.1305	961.31	131.71	20.3229	2.8884	63.32	29.19	-722.67	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	41.85	Pass	6.06	12.00	Pass	------	------	------	------	------	1.69	2.81
Structure 2	U$_1$ - L$_0$	-206.53	12.94	-111.93			0.90	1.18	13.78	-119.17	0.00	0.00	Vehicle	Vehicle	------	-526.69	0.00	31.81	31.8100	1049.73	131.71	19.1510	2.8323	60.85	29.48	-797.03	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	44.30	Pass	5.62	12.00	Pass	------	------	------	------	------	2.05	3.41
	U$_1$ - L$_1$	-188.72	13.29	-97.89			0.90	1.18	14.15	-104.22	0.00	0.00	Vehicle	Vehicle	------	-471.15	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	2.78	4.64
	U$_2$ - L$_2$	-155.84	14.02	-93.49			0.90	1.18	14.93	-99.54	0.00	0.00	Vehicle	Vehicle	------	-418.26	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.52	4.20
	U$_3$ - L$_3$	-134.53	15.89	-81.00			0.90	1.18	16.92	-86.24	0.00	0.00	Vehicle	Vehicle	------	-361.74	0.00	22.75	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	------	------	2.21	3.68
	U$_4$ - L$_4$	-64.47	15.18	-61.15			0.90	1.18	16.16	-71.50	0.00	0.00	Vehicle	Vehicle	------	-238.72	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.31	3.84
	U$_5$ - L$_5$	-19.94	20.96	-61.74			0.90	1.18	22.31	-65.73	0.00	0.00	Vehicle	Vehicle	22.43	-168.33	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	12.04	20.06	2.93	4.88
	U$_6$ - L$_6$	40.07	38.32	-38.06			0.90	1.18	40.80	-40.52	0.00	0.00	Vehicle	Vehicle	140.48	-35.69	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	5.70	9.50	5.66	9.43
	U$_7$ - L$_7$	-26.03	-14.93	-2.15			0.90	1.18	-2.29	-15.89	0.00	0.00	Vehicle	Vehicle	------	-68.27	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	11.87	19.79
	U$_8$ - L$_8$	-125.22	-74.81	19.71			0.90	1.18	20.98	-79.64	0.00	0.00	Vehicle	Vehicle	------	-335.35	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	3.05	5.09
	U$_9$ - L$_9$	-174.50	-95.34	8.64			0.90	1.18	9.20	-101.51	0.00	0.00	Vehicle	Vehicle	------	-446.78	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	3.05	5.09
	U$_{10}$ - L$_{10}$	-202.62	-105.23	3.55			0.90	1.18	3.78	-112.04	0.00	0.00	Vehicle	Vehicle	------	-506.15	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	3.08	5.14
	U$_{11}$ - L$_{11}$	-229.48	-116.25	2.79			0.90	1.18	2.97	-123.77	0.00	0.00	Vehicle	Vehicle	------	-566.50	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.60	4.33
	U$_{12}$ - L$_{12}$	-250.80	-122.33	2.65			0.90	1.18	2.83	-130.24	0.00	0.00	Vehicle	Vehicle	------	-608.24	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.54	4.23
	U$_{13}$ - L$_{13}$	-223.27	-116.62	12.67			0.90	1.18	13.49	-124.17	0.00	0.00	Vehicle	Vehicle	------	-559.28	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.26	3.76
	U$_{14}$ - L$_{14}$	-343.24	-112.14	-93.00			0.90	1.17	-99.01	-119.39	0.00	0.00	Vehicle	Vehicle	------	-704.90	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0516	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	3.56	5.93
	U$_{15}$ - L$_{15}$	-123.12	12.91	-96.95			0.90	1.17	13.58	-102.00	0.00	0.00	Vehicle	Vehicle	------	-381.06	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	3.34	5.56
	U$_{16}$ - L$_{16}$	-156.68	9.95	-93.81			0.90	1.17	10.47	-98.69	0.00	0.00	Vehicle	Vehicle	------	-417.52	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	3.10	5.16
	U$_{17}$ - L$_{17}$	-147.89	9.69	-98.00			0.90	1.17	10.19	-103.10	0.00	0.00	Vehicle	Vehicle	------	-415.65	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.77	4.61
	U$_{18}$ - L$_{18}$	-142.21	12.16	-86.28			0.90	1.17	12.79	-90.78	0.00	0.00	Vehicle	Vehicle	------	-381.56	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.88	4.79
	U$_{19}$ - L$_{19}$	-111.47	13.59	-84.87			0.90	1.17	14.30	-89.29	0.00	0.00	Vehicle	Vehicle	------	-338.37	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	2.69	4.48
	U$_{20}$ - L$_{20}$	-76.56	12.40	-74.81			0.90	1.17	13.05	-78.70	0.00	0.00	Vehicle	Vehicle	------	-270.05	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	2.28	3.79
	U$_{21}$ - L$_{21}$	-44.33	19.32	-56.88			0.90	1.17	20.32	-59.84	0.00	0.00	Vehicle	Vehicle	------	-187.29	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.97	4.95
	U$_{22}$ - L$_{22}$	-21.25	-13.65	-0.78			0.90	1.17	-0.82	-14.36	0.00	0.00	Vehicle	Vehicle	------	-58.74	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	13.39	22.32
	U$_{23}$ - L$_{23}$	-39.04	-58.25	24.53			0.90	1.17	25.81	-61.28	0.00	0.00	Vehicle	Vehicle	5.16	-183.53	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	10.85	18.09	2.95	4.92
	U$_{24}$ - L$_{24}$	-74.80	-73.34	22.56			0.90	1.17	23.74	-77.16	0.00	0.00	Vehicle	Vehicle	------	-264.43	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.34	3.89
	U$_{25}$ - L$_{25}$	-103.21	-89.74	16.61			0.90	1.17	17.47	-94.42	0.00	0.00	Vehicle	Vehicle	------	-338.74	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	2.59	4.32
	U$_{26}$ - L$_{26}$	-120.15	-99.71	15.67			0.90	1.17	16.49	-104.90	0.00	0.00	Vehicle	Vehicle	------	-383.48	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.61	4.36
	U$_{27}$ - L$_{27}$	-123.87	-107.86	12.94			0.90	1.17	13.61	-113.48	0.00	0.00	Vehicle	Vehicle	------	-406.90	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.64	4.40
	U$_{28}$ - L$_{28}$	-135.49	-114.40	11.77			0.90	1.17	12.38	-120.36	0.00	0.00	Vehicle	Vehicle	------	-436.92	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	2.64	4.41
	U$_{29}$ - L$_{29}$	-116.90	-109.92	6.88			0.90	1.17	7.24	-115.65	0.00	0.00	Vehicle	Vehicle	------	-402.53	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.97	4.96
	U$_{30}$ - L$_{30}$	-261.40	-110.05	-88.28			0.90	1.18	-93.99	-117.17	0.00	0.00	Vehicle	Vehicle	------	-593.69	11.02	52.76	41.7400	1741.08	131.71	25.6094	4.0676	56.66	29.95	-1342.96	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	3.95	6.59
	U$_{31}$ - L$_{31}$	-156.06	16.18	-91.37			0.90	1.18	17.23	-97.28	0.00	0.00	Vehicle	Vehicle	------	-413.65	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	3.29	5.49
	U$_{32}$ - L$_{32}$	-185.16	11.52	-104.84			0.90	1.18	12.27	-111.63	0.00	0.00	Vehicle	Vehicle	------	-482.57	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals																																														
Structure 1	U_1 - L_1	87.39	-23.18	91.10			0.90	1.24	101.42	-25.80	0.00	0.00	Vehicle	Vehicle	333.35	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**2.95**	**4.92**	-----	-----
	U_1 - L_2	23.29	-24.46	72.04			0.90	1.24	80.20	-27.24	0.00	0.00	Vehicle	Vehicle	204.06	-28.73	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.03**	**5.04**	**7.90**	**13.17**
	U_2 - L_3	-37.87	-23.78	47.96			0.90	1.24	53.39	-26.47	0.00	0.00	Vehicle	Vehicle	66.45	-106.58	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**5.23**	**8.72**	**6.72**	**11.19**
	U_3 - L_4	-92.23	-23.01	1.79			0.90	1.24	1.99	-25.62	0.00	0.00	Vehicle	Vehicle	-----	-175.40	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**-----**	**-----**	**5.72**	**9.53**
	U_3 - L_4	143.29	15.78	102.43			0.90	1.24	114.04	17.57	0.00	0.00	Vehicle	Vehicle	433.36	-----	0.00	20.48	20.4800	675.84	131.71	11.6953	2.0102	52.36	30.39	-529.06	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**1.98**	**3.30**	-----	-----
	U_4 - L_5	177.89	13.07	113.33			0.90	1.24	126.17	14.55	0.00	0.00	Vehicle	Vehicle	504.61	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.25**	**3.75**	-----	-----
	U_4 - L_6	184.40	1.21	124.00			0.90	1.24	138.05	1.35	0.00	0.00	Vehicle	Vehicle	538.84	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.03**	**3.38**	-----	-----
	U_5 - L_7	179.98	-1.64	125.38			0.90	1.24	139.59	-1.83	0.00	0.00	Vehicle	Vehicle	536.41	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.02**	**3.37**	-----	-----
	U_5 - L_8	268.90	1.95	116.71			0.90	1.20	125.84	2.10	0.00	0.00	Vehicle	Vehicle	622.22	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.31**	**5.51**	-----	-----
	U_6 - L_{10}	278.76	-12.27	90.23			0.90	1.20	97.29	-13.22	0.00	0.00	Vehicle	Vehicle	573.18	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.22**	**7.03**	-----	-----
	U_{10} - L_{11}	284.98	12.30	122.11			0.90	1.20	131.65	13.27	0.00	0.00	Vehicle	Vehicle	655.72	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**2.85**	**4.75**	-----	-----
	U_{11} - L_{12}	250.55	-3.44	100.08			0.90	1.20	107.91	-3.70	0.00	0.00	Vehicle	Vehicle	559.52	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.93**	**4.88**	-----	-----
	U_{12} - L_{13}	189.62	-14.67	109.55			0.90	1.20	118.11	-15.82	0.00	0.00	Vehicle	Vehicle	502.41	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**2.24**	**3.74**	-----	-----
	U_{13} - L_{14}	123.30	-22.01	83.19			0.90	1.20	89.69	-23.73	0.00	0.00	Vehicle	Vehicle	354.61	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.04**	**3.39**	-----	-----
	U_{14} - L_{14}	-24.40	-50.53	53.29			0.90	1.20	57.46	-54.49	0.00	0.00	Vehicle	Vehicle	92.77	-149.78	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.72**	**7.87**	**3.35**	**5.58**
	U_{14} - L_{15}	48.54	-33.08	73.19			0.90	1.20	78.91	-35.67	0.00	0.00	Vehicle	Vehicle	234.08	-14.19	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**2.88**	**4.80**	**6.28**	**10.46**
	U_{15} - L_{16}	146.57	-17.51	108.30			0.90	1.20	116.76	-18.88	0.00	0.00	Vehicle	Vehicle	443.54	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**1.94**	**3.24**	-----	-----
	U_{16} - L_{17}	182.43	-15.09	112.12			0.90	1.20	120.89	-16.27	0.00	0.00	Vehicle	Vehicle	499.09	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.32**	**3.87**	-----	-----
	U_{16} - L_{18}	223.79	-12.66	116.53			0.90	1.20	125.64	-13.65	0.00	0.00	Vehicle	Vehicle	563.15	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.32**	**3.87**	-----	-----
	U_{20} - L_{19}	232.63	3.18	98.52			0.90	1.20	106.22	3.43	0.00	0.00	Vehicle	Vehicle	532.57	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.70**	**4.50**	-----	-----
Structure 2	U_1 - L_1	213.47	-13.74	104.41			0.90	1.18	111.16	-14.63	0.00	0.00	Vehicle	Vehicle	518.36	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.04**	**5.07**	-----	-----
	U_1 - L_2	200.39	-16.22	118.10			0.90	1.18	125.74	-17.27	0.00	0.00	Vehicle	Vehicle	532.95	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.75**	**4.59**	-----	-----
	U_2 - L_3	172.76	-18.15	104.81			0.90	1.18	111.59	-19.32	0.00	0.00	Vehicle	Vehicle	466.37	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.57**	**4.28**	-----	-----
	U_3 - L_4	147.11	-21.35	105.58			0.90	1.18	112.41	-22.73	0.00	0.00	Vehicle	Vehicle	434.81	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**2.29**	**3.82**	-----	-----
	U_3 - L_5	49.07	-21.22	88.23			0.90	1.18	93.54	-22.59	0.00	0.00	Vehicle	Vehicle	267.32	-----	0.00	16.85	16.8486	556.00	131.71	13.3954	1.9682	68.01	28.25	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.42**	**4.03**	-----	-----
	U_4 - L_6	2.97	-42.12	68.40			0.90	1.18	72.83	-44.84	0.00	0.00	Vehicle	Vehicle	161.65	-93.31	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.56**	**5.83**	**4.40**	**7.33**
	U_4 - L_7	-85.72	-69.52	48.67			0.90	1.18	51.81	-74.02	0.00	0.00	Vehicle	Vehicle	0.83	-271.81	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	**6.46**	**10.77**	**2.22**	**3.70**
	U_5 - L_7	140.27	-28.15	74.93			0.90	1.18	79.78	-29.98	0.00	0.00	Vehicle	Vehicle	355.20	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.48**	**5.80**	-----	-----
	U_5 - L_8	204.17	-13.16	108.15			0.90	1.18	115.15	-14.01	0.00	0.00	Vehicle	Vehicle	514.91	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.64**	**4.39**	-----	-----
	U_8 - L_9	234.82	10.01	113.97			0.90	1.18	121.34	10.66	0.00	0.00	Vehicle	Vehicle	568.19	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.68**	**4.47**	-----	-----
	U_{11} - L_{10}	263.04	-1.04	123.18			0.90	1.18	131.15	-1.11	0.00	0.00	Vehicle	Vehicle	626.11	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**2.66**	**4.43**	-----	-----
	U_{12} - L_{11}	273.97	-2.31	128.11			0.90	1.18	136.40	-2.46	0.00	0.00	Vehicle	Vehicle	651.68	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**2.51**	**4.18**	-----	-----
	U_{13} - L_{12}	254.88	-13.87	123.75			0.90	1.18	131.75	-14.77	0.00	0.00	Vehicle	Vehicle	616.80	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.38**	**3.97**	-----	-----
	U_{13} - L_{13}	217.66	-14.45	108.69			0.90	1.18	115.72	-15.38	0.00	0.00	Vehicle	Vehicle	533.69	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.90**	**4.84**	-----	-----
	U_{14} - L_{15}	110.03	-9.04	89.88			0.90	1.17	94.57	-9.52	0.00	0.00	Vehicle	Vehicle	347.93	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.43**	**5.72**	-----	-----
	U_{15} - L_{16}	132.26	-14.30	86.23			0.90	1.17	90.72	-15.05	0.00	0.00	Vehicle	Vehicle	368.51	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.43**	**5.71**	-----	-----
	U_{16} - L_{17}	172.87	-8.39	116.11			0.90	1.17	122.16	-8.83	0.00	0.00	Vehicle	Vehicle	489.40	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.64**	**4.40**	-----	-----
	U_{17} - L_{18}	160.16	-12.11	108.08			0.90	1.17	113.71	-12.74	0.00	0.00	Vehicle	Vehicle	454.58	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.59**	**4.31**	-----	-----
	U_{18} - L_{19}	152.33	-15.84	112.34			0.90	1.17	118.19	-16.66	0.00	0.00	Vehicle	Vehicle	454.11	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.53**	**4.22**	-----	-----
	U_{19} - L_{20}	120.67	-18.12	109.94			0.90	1.17	115.67	-19.06	0.00	0.00	Vehicle	Vehicle	407.48	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**2.50**	**4.17**	-----	-----
	U_{20} - L_{21}	76.10	-19.17	83.68			0.90	1.17	88.04	-20.17	0.00	0.00	Vehicle	Vehicle	289.68	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.40**	**3.99**	-----	-----
	U_{21} - L_{22}	31.50	-44.56	74.61			0.90	1.17	78.49	-46.88	0.00	0.00	Vehicle	Vehicle	211.01	-60.62	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.03**	**5.05**	**4.57**	**7.62**
	U_{22} - L_{22}	24.27	-52.36	53.92			0.90	1.17	56.73	-55.08	0.00	0.00	Vehicle	Vehicle	154.45	-87.80	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.27**	**7.11**	**3.78**	**6.30**
	U_{23} - L_{23}	72.21	-31.11	78.61			0.90	1.17	82.71	-32.73	0.00	0.00	Vehicle	Vehicle	273.07	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.30**	**7.16**	-----	-----
	U_{23} - L_{24}	112.05	-22.13	98.00			0.90	1.17	103.11	-23.28	0.00	0.00	Vehicle	Vehicle	369.07	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**2.86**	**4.76**	-----	-----
	U_{24} - L_{25}	107.76	-20.00	104.57			0.90	1.17	110.01	-21.04	0.00	0.00	Vehicle	Vehicle	364.45	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.85**	**4.75**	-----	-----
	U_{25} - L_{26}	132.58	-16.19	117.58			0.90	1.17	123.71	-17.04	0.00	0.00	Vehicle	Vehicle	440.39	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.51**	**4.19**	-----	-----
	U_{26} - L_{27}	137.86	-13.95	117.00			0.90	1.17	123.09	-14.68	0.00	0.00	Vehicle	Vehicle	445.91	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.79**	**4.65**	-----	-----
	U_{26} - L_{28}	102.60	-8.95	103.85			0.90	1.17	109.26	-9.41	0.00	0.00	Vehicle	Vehicle	370.10	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.01**	**5.02**	-----	-----
	U_{30} - L_{31}	139.84	-10.93	96.06			0.90	1.18	102.28	-11.64	0.00	0.00	Vehicle	Vehicle	403.39	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.74**	**6.24**	-----	-----
	U_{31} - L_{32}	166.63	-18.24	109.01			0.90	1.18	116.06	-19.42	0.00	0.00	Vehicle	Vehicle	468.08	-----	0.00	29.18	29.1800	962.94	131.71	17.8750	2.8156	57.14	29.89	-741.48	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.97**	**4.95**	-----	-----
	U_{32} - L_{33}	202.12	-10.74	115.01			0.90	1.18	122.45	-11.43	0.00	0.00	Vehicle	Vehicle	528.07	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.15**	**5.25**	-----	-----
	U_{33} - L_{34}	201.72	-10.84	123.66			0.90	1.18	131.66	-11.54	0.00	0.00	Vehicle	Vehicle	547.49	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**2.93**	**4.88**	-----	-----
	U_{35} - L_{35}	180.72	-2.69	125.05			0.90	1.18	133.14	-2.87	0.00	0.00	Vehicle	Vehicle	523.40	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.69**	**4.48**	-----	-----
	U_{36} - L_{36}	162.90	-1.47	111.37			0.90	1.18	118.57	-1.56	0.00	0.00	Vehicle	Vehicle	468.68	-----	0.00	27.98	27.9777	923.26	131.71

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Axial Force Rating

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.70	-67.52	-82.70			0.75	1.24	-62.64	-76.73	0.00	0.00	Vehicle	Vehicle	-----	-234.76	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.01	6.68
		U_1 - U_2	-61.66	25.39	-137.58			0.75	1.24	23.55	-127.64	0.00	0.00	Vehicle	Vehicle	-----	-356.70	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.37	3.95
		U_2 - U_3	-27.05	49.67	-100.19			0.75	1.24	46.08	-92.95	0.00	0.00	Vehicle	Vehicle	64.67	-236.56	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	9.09	15.15	3.47	5.79
		U_3 - U_4	32.90	64.30	-94.18			0.75	1.24	59.65	-87.37	0.00	0.00	Vehicle	Vehicle	172.02	-146.53	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.42	10.70	4.11	6.85
		U_4 - U_5	34.76	64.58	-141.96			0.75	1.24	59.92	-131.70	0.00	0.00	Vehicle	Vehicle	175.00	-240.17	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.37	10.62	2.73	4.56
		U_5 - U_6	124.19	75.55	-115.04			0.75	1.24	70.09	-106.73	0.00	0.00	Vehicle	Vehicle	313.31	-69.80	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.68	7.80	3.88	6.46
		U_6 - U_7	223.31	89.45	-73.86			0.75	1.24	82.98	-68.53	0.00	0.00	Vehicle	Vehicle	470.10	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	4.20	7.00	-----	-----
		U_7 - U_8	331.92	76.88	-25.34			0.75	1.24	71.33	-23.51	0.00	0.00	Vehicle	Vehicle	586.03	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	6.55	10.91	-----	-----
		U_8 - U_9	267.71	-8.02	8.30			0.75	1.20	7.46	-7.20	0.00	0.00	Vehicle	Vehicle	364.18	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	54.00	89.99	-----	-----
		U_9 - U_{10}	89.12	-10.20	-32.05			0.75	1.20	-9.16	-28.80	0.00	0.00	Vehicle	Vehicle	96.01	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{10} - U_{11}	-76.89	-67.27	-68.69			0.75	1.20	-60.44	-61.72	0.00	0.00	Vehicle	Vehicle	-----	-233.68	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.06	8.43
		U_{11} - U_{12}	-230.86	-104.87	-108.14			0.75	1.20	-94.23	-97.17	0.00	0.00	Vehicle	Vehicle	-----	-510.65	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.59	5.99
		U_{12} - U_{13}	-342.15	-147.57	-140.40			0.75	1.20	-126.15	-132.59	0.00	0.00	Vehicle	Vehicle	-----	-732.06	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.60	6.00
		U_{13} - U_{14}	-421.98	39.45	-159.83			0.75	1.20	35.45	-143.60	0.00	0.00	Vehicle	Vehicle	-----	-859.72	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.78	6.31
		U_{14} - U_{15}	-422.87	-151.53	-218.54			0.75	1.20	-136.15	-196.36	0.00	0.00	Vehicle	Vehicle	-----	-975.18	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.76	4.61
		U_{15} - U_{16}	-440.39	-150.64	-227.46			0.75	1.20	-135.35	-204.37	0.00	0.00	Vehicle	Vehicle	-----	-1015.32	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.61	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.60	4.34
		U_{16} - U_{17}	-422.93	23.33	-219.19			0.75	1.20	20.96	-196.94	0.00	0.00	Vehicle	Vehicle	-----	-976.52	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.76	4.59
		U_{17} - U_{18}	-341.45	15.65	-159.28			0.75	1.20	14.06	-143.11	0.00	0.00	Vehicle	Vehicle	-----	-753.95	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	44.31	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	2.64	4.40
		U_{18} - U_{19}	-247.63	9.52	-126.15			0.75	1.20	8.55	-113.35	0.00	0.00	Vehicle	Vehicle	-----	-567.50	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	42.59	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	2.28	3.79
		U_{19} - U_{20}	-132.06	-7.25	-63.83			0.75	1.20	-6.52	-57.35	0.00	0.00	Vehicle	Vehicle	-----	-295.94	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.71	9.51
	Structure 2	U_0 - U_1	-131.63	-49.66	-22.66			0.75	1.18	-20.10	-44.06	0.00	0.00	Vehicle	Vehicle	-----	-266.58	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.02	11.71
		U_1 - U_2	-247.12	-110.05	-113.08			0.75	1.18	-97.64	-100.33	0.00	0.00	Vehicle	Vehicle	-----	-538.64	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.25	5.42
		U_2 - U_3	-347.28	-134.76	-93.44			0.75	1.18	-82.91	-119.57	0.00	0.00	Vehicle	Vehicle	-----	-710.52	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.66	6.11
		U_3 - U_4	-437.20	48.98	-203.39			0.75	1.18	43.46	-180.46	0.00	0.00	Vehicle	Vehicle	-----	-959.34	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.01	5.01
		U_4 - U_5	-468.83	-175.80	-180.28			0.75	1.18	-155.98	-159.95	0.00	0.00	Vehicle	Vehicle	-----	-956.05	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.82	6.37
		U_5 - U_6	-471.14	70.82	-236.93			0.75	1.18	62.84	-210.22	0.00	0.00	Vehicle	Vehicle	-----	-1067.96	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.90	4.83
		U_6 - U_7	-414.50	79.18	-220.74			0.75	1.18	70.26	-195.85	0.00	0.00	Vehicle	Vehicle	-----	-963.20	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.84	4.73
		U_7 - U_8	-413.54	79.30	-222.16			0.75	1.18	70.35	-197.11	0.00	0.00	Vehicle	Vehicle	-----	-964.69	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.82	4.71
		U_8 - U_9	-322.06	86.12	-201.26			0.75	1.18	76.41	-178.56	0.00	0.00	Vehicle	Vehicle	-----	-805.56	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.70	4.50
		U_9 - U_{10}	-182.16	90.95	-162.49			0.75	1.18	80.70	-144.16	0.00	0.00	Vehicle	Vehicle	-----	-549.17	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.93	4.88
		U_{10} - U_{11}	-32.61	94.92	-130.25			0.75	1.18	84.22	-115.56	0.00	0.00	Vehicle	Vehicle	140.08	-292.78	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	6.72	11.20	3.83	6.38
		U_{11} - U_{12}	133.57	97.36	-91.57			0.75	1.18	86.38	-81.25	0.00	0.00	Vehicle	Vehicle	360.80	-2.40	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	5.40	9.00	6.67	11.11
		U_{12} - U_{13}	289.98	99.28	-43.11			0.75	1.18	88.08	-38.25	0.00	0.00	Vehicle	Vehicle	567.82	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	5.78	9.64	-----	-----
		U_{13} - U_{14}	434.77	78.99	-13.76			0.75	1.18	70.08	-12.21	0.00	0.00	Vehicle	Vehicle	717.05	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	9.67	16.12	-----	-----
		U_{14} - U_{15}	474.48	9.87	-22.71			0.75	1.17	8.66	-19.91	0.00	0.00	Vehicle	Vehicle	635.58	-----	13.75	61.63	47.8750	2033.63	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	5.55	9.25	5.99	9.99
		U_{15} - U_{16}	383.31	58.60	-42.75			0.75	1.17	51.38	-37.48	0.00	0.00	Vehicle	Vehicle	609.63	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	10.38	17.30	-----	-----
		U_{16} - U_{17}	279.61	-23.34	-48.33			0.75	1.17	-20.46	-42.37	0.00	0.00	Vehicle	Vehicle	319.15	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{17} - U_{18}	172.67	-43.33	-68.91			0.75	1.17	-37.99	-60.42	0.00	0.00	Vehicle	Vehicle	142.16	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{18} - U_{19}	74.40	-70.84	-95.18			0.75	1.17	-62.11	-83.45	0.00	0.00	Vehicle	Vehicle	-----	-84.09	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.19	8.65
		U_{19} - U_{20}	-9.98	58.13	-114.14			0.75	1.17	50.97	-100.07	0.00	0.00	Vehicle	Vehicle	97.45	-229.80	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.77	16.29	4.09	6.82
	Structure 3	U_0 - U_1	-62.02	-106.79	-126.93			0.75	1.17	-93.63	-111.28	0.00	0.00	Vehicle	Vehicle	-----	-321.74	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.18	6.96
		U_1 - U_2	-88.69	42.42	-174.41			0.75	1.17	37.19	-152.91	0.00	0.00	Vehicle	Vehicle	-----	-446.59	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.94	4.89
		U_2 - U_3	-88.87	-116.42	-174.63			0.75	1.17	-102.07	-153.11	0.00	0.00	Vehicle	Vehicle	-----	-447.25	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.93	4.88
		U_3 - U_4	-76.60	27.42	-174.22			0.75	1.17	24.04	-152.75	0.00	0.00	Vehicle	Vehicle	-----	-430.53	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.99	4.98
		U_4 - U_5	-37.55	60.72	-157.40			0.75	1.17	53.23	-138.00	0.00	0.00	Vehicle	Vehicle	66.52	-347.82	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.67	16.11	2.85	4.75
		U_5 - U_6	37.36	67.82	-136.41			0.75	1.17	59.46	-119.60	0.00	0.00	Vehicle	Vehicle	177.40	-210.57	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	7.36	12.26	3.44	5.73
		U_6 - U_7	128.18	74.66	-104.94			0.75	1.17	65.45	-92.00	0.00	0.00	Vehicle	Vehicle	308.45	-32.71	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	5.85	9.75	5.06	8.43
		U_7 - U_8	233.91	78.97	-77.01			0.75	1.17	69.24	-67.52	0.00	0.00	Vehicle	Vehicle	454.10	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	7.02	11.70	-----	-----
		U_8 - U_9	337.95	14.24	-40.19			0.75	1.17	12.48	-35.24	0.00	0.00	Vehicle	Vehicle	466.37	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	44.92	74.87	-----	-----
		U_9 - U_{10}	437.48	65.47	-6.56			0.75	1.17	57.40	-5.75	0.00	0.00	Vehicle	Vehicle	693.09	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	11.78	19.63	-----	-----
		U_{10} - U_{11}	420.86	-6.07	44.82			0.75	1.18	39.76	-5.39	0.00	0.00	Vehicle	Vehicle	633.27	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	17.25	28.76	-----	-----
		U_{11} - U_{12}	300.88	76.62	-19.80			0.75	1.18	67.98	-17.57	0.00	0.00	Vehicle	Vehicle	538.43	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	7.40	12.33	-----	-----
		U_{12} - $U_{

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Center Truss - Lower Chord

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1		L$_0$- L$_1$	8.48	-2.87	-3.43			0.75	1.24	-2.66	-3.18	0.00	0.00	Vehicle	Vehicle	5.26	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	50.83	67.07	67.81			0.75	1.24	62.91	62.23	0.00	0.00	Vehicle	Vehicle	202.39	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	4.31	7.18	-----	-----
		L$_2$ - L$_3$	61.27	-36.06	129.82			0.75	1.24	120.44	-33.45	0.00	0.00	Vehicle	Vehicle	340.60	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	3.03	5.04	-----	-----
		L$_3$ - L$_4$	25.72	73.77	146.27			0.75	1.24	135.70	68.44	0.00	0.00	Vehicle	Vehicle	327.46	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	2.84	4.74	-----	-----
		L$_4$ - L$_5$	-118.55	-72.76	100.08			0.75	1.24	92.85	-67.50	0.00	0.00	Vehicle	Vehicle	47.06	-300.37	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	4.60	7.67	3.39	5.66
		L$_5$ - L$_6$	-217.97	-87.10	62.64			0.75	1.24	58.12	-80.80	0.00	0.00	Vehicle	Vehicle	-----	-458.43	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	3.28	5.46
		L$_6$ - L$_7$	-320.57	-97.89	20.73			0.75	1.24	19.23	-90.82	0.00	0.00	Vehicle	Vehicle	-----	-613.52	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	4.12	6.87
		L$_7$ - L$_8$	-417.42	-44.59	-39.36			0.75	1.24	-36.52	-41.37	0.00	0.00	Vehicle	Vehicle	-----	-632.26	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	11.34	18.91
		L$_8$ - L$_9$	-411.08	-93.37	-7.87			0.75	1.20	-7.07	-83.90	0.00	0.00	Vehicle	Vehicle	-----	-716.18	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	5.64	9.40
		L$_9$ - L$_{10}$	-247.97	-36.37	18.85			0.75	1.20	16.94	-32.68	0.00	0.00	Vehicle	Vehicle	-----	-393.16	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	12.80	21.34
		L$_{10}$ - L$_{11}$	-65.37	-70.25	63.14			0.75	1.20	56.73	-63.12	0.00	0.00	Vehicle	Vehicle	37.95	-221.75	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	6.97	11.62	4.13	6.89
		L$_{11}$ - L$_{12}$	101.81	59.08	92.50			0.75	1.20	83.11	53.08	0.00	0.00	Vehicle	Vehicle	312.44	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	3.55	5.92	-----	-----
		L$_{12}$ - L$_{13}$	264.06	62.73	150.43			0.75	1.20	135.16	56.36	0.00	0.00	Vehicle	Vehicle	636.13	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	3.15	5.26	-----	-----
		L$_{13}$ - L$_{14}$	373.80	134.33	180.01			0.75	1.20	161.73	120.70	0.00	0.00	Vehicle	Vehicle	836.36	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	3.47	5.78	-----	-----
		L$_{14}$ - L$_{15}$	476.54	-29.18	206.79			0.75	1.20	185.80	-26.21	0.00	0.00	Vehicle	Vehicle	1022.07	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	3.55	5.91	-----	-----
		L$_{15}$ - L$_{16}$	460.23	-21.81	197.01			0.75	1.20	177.02	-19.60	0.00	0.00	Vehicle	Vehicle	981.84	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	3.78	6.29	-----	-----
		L$_{16}$ - L$_{17}$	381.61	-14.51	148.20			0.75	1.20	133.15	-13.04	0.00	0.00	Vehicle	Vehicle	784.59	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	3.76	6.27	-----	-----
		L$_{17}$ - L$_{18}$	289.18	-8.38	102.73			0.75	1.20	92.30	-7.53	0.00	0.00	Vehicle	Vehicle	575.93	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	3.86	6.44	-----	-----
		L$_{18}$ - L$_{19}$	176.31	-4.47	32.37			0.75	1.20	29.09	-4.01	0.00	0.00	Vehicle	Vehicle	292.22	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	6.73	11.22	-----	-----
		L$_{19}$ - L$_{20}$	69.72	-0.85	-18.54			0.75	1.20	-0.77	-16.66	0.00	0.00	Vehicle	Vehicle	88.98	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_0$- L$_1$	24.42	8.04	-1.57			0.75	1.18	7.14	-1.39	0.00	0.00	Vehicle	Vehicle	47.21	-----	1.88	20.08	18.2000	662.64	131.71	10.8828	6.9064	14.18	32.81	-559.98	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	40.80	68.00	-----	-----
		L$_1$ - L$_2$	138.42	44.41	39.98			0.75	1.18	39.40	35.47	0.00	0.00	Vehicle	Vehicle	265.31	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	7.54	12.56	-----	-----
		L$_2$ - L$_3$	252.76	78.42	125.28			0.75	1.18	111.15	69.58	0.00	0.00	Vehicle	Vehicle	569.42	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	3.90	6.51	-----	-----
		L$_3$ - L$_4$	352.26	121.97	157.06			0.75	1.18	139.35	108.22	0.00	0.00	Vehicle	Vehicle	759.87	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	4.12	6.87	-----	-----
		L$_4$ - L$_5$	447.15	141.32	192.64			0.75	1.18	170.92	125.39	0.00	0.00	Vehicle	Vehicle	951.62	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	4.22	7.04	-----	-----
		L$_5$ - L$_6$	477.91	-61.99	207.02			0.75	1.18	183.68	-55.00	0.00	0.00	Vehicle	Vehicle	1019.26	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	4.30	7.16	-----	-----
		L$_6$ - L$_7$	482.67	-72.91	222.28			0.75	1.18	197.22	-64.69	0.00	0.00	Vehicle	Vehicle	1054.78	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	4.06	6.77	-----	-----
		L$_7$ - L$_8$	336.57	-88.11	184.49			0.75	1.18	163.69	-78.17	0.00	0.00	Vehicle	Vehicle	792.20	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	3.68	6.14	-----	-----
		L$_8$ - L$_9$	196.00	-91.83	154.35			0.75	1.18	136.95	-81.47	0.00	0.00	Vehicle	Vehicle	551.53	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	3.96	6.60	-----	-----
		L$_9$ - L$_{10}$	45.53	-96.06	117.09			0.75	1.18	103.89	-85.23	0.00	0.00	Vehicle	Vehicle	284.28	-125.48	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	4.71	7.86	5.44	9.07
		L$_{10}$ - L$_{11}$	-126.32	-96.86	44.33			0.75	1.18	39.33	-85.94	0.00	0.00	Vehicle	Vehicle	-----	-350.42	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	3.66	6.10
		L$_{11}$ - L$_{12}$	-284.95	-98.99	6.04			0.75	1.18	5.36	-87.83	0.00	0.00	Vehicle	Vehicle	-----	-560.73	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	4.41	7.35
		L$_{12}$ - L$_{13}$	-433.89	-86.21	5.69			0.75	1.18	5.05	-76.49	0.00	0.00	Vehicle	Vehicle	-----	-729.78	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	6.60	11.00
		L$_{13}$ - L$_{14}$	-552.76	-38.59	-29.64			0.75	1.18	-26.30	-34.24	0.00	0.00	Vehicle	Vehicle	-----	-792.78	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	16.86	28.11
		L$_{14}$ - L$_{15}$	-573.53	-56.70	28.05			0.75	1.17	24.59	-49.71	0.00	0.00	Vehicle	Vehicle	-----	-853.30	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.37	18.94
		L$_{15}$ - L$_{16}$	-493.00	-72.09	-2.67			0.75	1.17	-2.34	-63.20	0.00	0.00	Vehicle	Vehicle	-----	-777.83	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	7.43	12.38
		L$_{16}$ - L$_{17}$	-395.34	-25.72	37.92			0.75	1.17	33.24	-22.55	0.00	0.00	Vehicle	Vehicle	-----	-562.80	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	17.35	28.92
		L$_{17}$ - L$_{18}$	-288.08	-1.98	63.07			0.75	1.17	55.30	-1.73	0.00	0.00	Vehicle	Vehicle	-----	-378.26	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	152.09	253.48
		L$_{18}$ - L$_{19}$	-175.85	34.29	98.37			0.75	1.17	86.24	30.06	0.00	0.00	Vehicle	Vehicle	-----	-163.46	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{19}$ - L$_{20}$	-78.08	67.44	121.11			0.75	1.17	106.18	59.12	0.00	0.00	Vehicle	Vehicle	128.56	-----	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	-----	-----	6.40	-----	-----	6.40	-----	-----	4.28	7.13	-----	-----
Structure 2		L$_{20}$ - L$_{21}$	7.59	77.79	142.09			0.75	1.17	124.58	68.20	0.00	0.00	Vehicle	Vehicle	279.79	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	4.61	7.68	-----	-----
		L$_{21}$ - L$_{22}$	59.10	101.96	164.76			0.75	1.17	144.45	89.39	0.00	0.00	Vehicle	Vehicle	389.81	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	3.76	6.27	-----	-----
		L$_{22}$ - L$_{23}$	72.03	-28.97	125.27			0.75	1.17	109.83	-25.40	0.00	0.00	Vehicle	Vehicle	331.60	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	4.88	8.13	-----	-----
		L$_{23}$ - L$_{24}$	33.57	-62.26	147.85			0.75	1.17	129.62	-54.59	0.00	0.00	Vehicle	Vehicle	324.49	-74.63	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.31	7.18	9.32	15.53
		L$_{24}$ - L$_{25}$	-45.06	-69.18	119.02			0.75	1.17	104.35	-60.66	0.00	0.00	Vehicle	Vehicle	167.51	-190.00	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.16	6.94	5.23	8.71
		L$_{25}$ - L$_{26}$	-134.95	-75.92	84.76			0.75	1.17	74.32	-66.56	0.00	0.00	Vehicle	Vehicle	-----	-319.65	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	3.95	6.59
		L$_{26}$ - L$_{27}$	-245.92	-77.78	51.21			0.75	1.17	44.90	-68.19	0.00	0.00	Vehicle	Vehicle	-----	-467.45	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	4.24	7.06
		L$_{27}$ - L$_{28}$	-351.86	-81.26	22.44			0.75	1.17	19.68	-71.24	0.00	0.00	Vehicle	Vehicle	-----	-611.78	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	5.86	9.77
		L$_{28}$ - L$_{29}$	-458.41	-76.13	-8.09			0.75	1.17	-7.09	-66.75	0.00	0.00	Vehicle	Vehicle	-----	-740.56	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	7.34	12.24
		L$_{29}$ - L$_{30}$	-542.36	-32.43	-31.48			0.75	1.17	-27.60	-28.43	0.00	0.00	Vehicle	Vehicle	-----	-766.68	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	20.53	34.22
		L$_{30}$ - L$_{31}$	-514.21	-32.54	-62.38			0.75	1.18	-28.87	-55.35	0.00	0.00	Vehicle	Vehicle	-----	-788.39	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.85	18.08
		L$_{31}$ - L$_{32}$	-411.27	-67.35	3.56			0.75	1.18	3.16	-59.76	0.00	0.00	Vehicle	Vehicle	-----	-664.13	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.68	14.26	-119.60			0.75	1.24	13.23	-110.95	0.00	0.00	Vehicle	Vehicle	-----	-328.38	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	40.83	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.50	2.49
		U_1 - L_1	-24.09	13.81	-60.87			0.75	1.24	12.81	-56.47	0.00	0.00	Vehicle	Vehicle	-----	-153.67	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.48	5.81
		U_2 - L_2	12.87	8.63	-38.61			0.75	1.24	8.01	-35.82	0.00	0.00	Vehicle	Vehicle	34.08	-60.87	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	31.08	51.80	6.11	10.19
		U_3 - L_3	37.37	26.20	-33.18			0.75	1.24	24.31	-30.78	0.00	0.00	Vehicle	Vehicle	101.25	-18.11	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	9.64	16.06	7.57	12.62
		U_4 - L_4	-15.55	-2.49	3.75			0.75	1.24	3.48	-2.31	0.00	0.00	Vehicle	Vehicle	-----	-25.22	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	86.79	144.65
		U_5 - L_5	-92.59	-72.76	17.18			0.75	1.24	15.94	-67.50	0.00	0.00	Vehicle	Vehicle	-----	-266.61	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	2.96	4.93
		U_6 - L_6	-117.07	-86.46	0.35			0.75	1.24	0.32	-80.22	0.00	0.00	Vehicle	Vehicle	-----	-325.99	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	2.92	4.87
		U_7 - L_7	-127.52	-101.56	0.26			0.75	1.24	0.24	-94.22	0.00	0.00	Vehicle	Vehicle	-----	-369.92	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	2.12	3.53
		U_8 - L_8	-368.71	-144.06	-136.03			0.75	1.24	-126.20	-133.65	0.00	0.00	Vehicle	Vehicle	-----	-768.90	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	3.13	5.21
		U_9 - L_9	-214.56	6.39	-110.62			0.75	1.20	5.74	-99.39	0.00	0.00	Vehicle	Vehicle	-----	-494.27	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	2.60	4.33
		U_{10} - L_{10}	-198.68	-10.15	-97.37			0.75	1.20	-9.12	-87.49	0.00	0.00	Vehicle	Vehicle	-----	-447.84	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	3.73	6.22
		U_{11} - L_{11}	-171.40	5.89	-84.65			0.75	1.20	5.29	-76.06	0.00	0.00	Vehicle	Vehicle	-----	-387.61	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.71	6.18
		U_{12} - L_{12}	-128.37	13.22	-79.52			0.75	1.20	11.87	-71.44	0.00	0.00	Vehicle	Vehicle	-----	-321.67	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	3.39	5.66
		U_{13} - L_{13}	-96.65	24.36	-69.14			0.75	1.20	21.89	-62.12	0.00	0.00	Vehicle	Vehicle	-----	-260.23	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	2.74	4.57
		U_{14} - L_{14}	-11.04	-3.39	8.76			0.75	1.20	7.87	-3.04	0.00	0.00	Vehicle	Vehicle	2.69	-20.95	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	33.45	55.75	65.83	109.72
		U_{15} - L_{15}	-2.47	-53.12	43.33			0.75	1.20	38.93	-47.73	0.00	0.00	Vehicle	Vehicle	81.14	-106.62	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	6.63	11.05	4.28	7.14
		U_{16} - L_{16}	-31.27	-64.29	31.95			0.75	1.20	28.70	-57.76	0.00	0.00	Vehicle	Vehicle	21.54	-165.80	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	9.59	15.99	3.22	5.37
		U_{17} - L_{17}	-105.05	-85.78	13.61			0.75	1.20	12.23	-77.07	0.00	0.00	Vehicle	Vehicle	-----	-303.56	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	2.38	3.97
		U_{18} - L_{18}	-126.74	-94.34	6.62			0.75	1.20	5.95	-84.76	0.00	0.00	Vehicle	Vehicle	-----	-348.41	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	2.82	4.70
		U_{19} - L_{19}	-166.77	-103.28	-9.27			0.75	1.20	-8.33	-92.79	0.00	0.00	Vehicle	Vehicle	-----	-417.85	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	2.91	4.84
		U_{20} - L_{20}	-184.59	-118.85	-7.77			0.75	1.20	-6.98	-106.78	0.00	0.00	Vehicle	Vehicle	-----	-471.33	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	2.23	3.72
	Structure 2	U_0 - L_0	-203.59	15.55	-119.04			0.75	1.18	13.79	-105.61	0.00	0.00	Vehicle	Vehicle	-----	-493.50	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	2.49	4.16
		U_1 - L_1	-176.11	17.02	-105.47			0.75	1.18	15.10	-93.58	0.00	0.00	Vehicle	Vehicle	-----	-431.70	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.18	5.30
		U_2 - L_2	-137.55	16.11	-90.78			0.75	1.18	14.30	-80.54	0.00	0.00	Vehicle	Vehicle	-----	-353.33	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.25	5.42
		U_3 - L_3	-117.62	16.74	-81.05			0.75	1.18	14.85	-71.91	0.00	0.00	Vehicle	Vehicle	-----	-308.70	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	2.79	4.65
		U_4 - L_4	-50.97	18.04	-69.21			0.75	1.18	16.00	-61.40	0.00	0.00	Vehicle	Vehicle	-----	-199.31	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.82	4.69
		U_5 - L_5	-13.78	33.90	-59.71			0.75	1.18	30.08	-52.98	0.00	0.00	Vehicle	Vehicle	47.26	-132.69	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	8.81	14.68	3.70	6.17
		U_6 - L_6	45.47	47.92	-41.56			0.75	1.18	42.52	-36.87	0.00	0.00	Vehicle	Vehicle	151.23	-20.78	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	5.39	8.99	6.30	10.50
		U_7 - L_7	-22.33	-13.73	3.73			0.75	1.18	3.31	-12.18	0.00	0.00	Vehicle	Vehicle	-----	-55.43	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	15.67	26.12
		U_8 - L_8	-120.08	-76.22	30.25			0.75	1.18	26.84	-67.62	0.00	0.00	Vehicle	Vehicle	-----	-302.62	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	3.64	6.07
		U_9 - L_9	-177.03	-89.15	25.84			0.75	1.18	22.93	-79.10	0.00	0.00	Vehicle	Vehicle	-----	-401.52	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.90	6.50
		U_{10} - L_{10}	-205.88	-97.33	19.27			0.75	1.18	17.10	-86.35	0.00	0.00	Vehicle	Vehicle	-----	-454.74	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.98	6.63
		U_{11} - L_{11}	-239.23	-106.20	12.40			0.75	1.18	11.00	-94.22	0.00	0.00	Vehicle	Vehicle	-----	-515.16	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.35	5.58
		U_{12} - L_{12}	-257.95	-114.42	1.56			0.75	1.18	1.39	-101.52	0.00	0.00	Vehicle	Vehicle	-----	-555.30	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.21	5.36
		U_{13} - L_{13}	-243.82	-114.83	7.98			0.75	1.18	7.08	-101.88	0.00	0.00	Vehicle	Vehicle	-----	-537.72	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.63	4.38
		U_{14} - L_{14}	-420.85	-134.43	-120.50			0.75	1.18	-106.92	-119.27	0.00	0.00	Vehicle	Vehicle	-----	-805.53	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	3.17	5.29
		U_{15} - L_{15}	-158.83	13.14	-123.99			0.75	1.17	11.52	-108.71	0.00	0.00	Vehicle	Vehicle	-----	-442.01	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.93	4.89
		U_{16} - L_{16}	-174.02	10.37	-106.08			0.75	1.17	9.09	-93.00	0.00	0.00	Vehicle	Vehicle	-----	-427.73	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.17	5.29
		U_{17} - L_{17}	-156.46	11.91	-96.26			0.75	1.17	10.44	-84.39	0.00	0.00	Vehicle	Vehicle	-----	-386.25	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.32	5.53
		U_{18} - L_{18}	-142.21	8.47	-85.78			0.75	1.17	7.43	-75.20	0.00	0.00	Vehicle	Vehicle	-----	-347.81	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.47	5.78
		U_{19} - L_{19}	-113.66	10.75	-84.05			0.75	1.17	9.43	-73.69	0.00	0.00	Vehicle	Vehicle	-----	-307.42	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.24	5.40
		U_{20} - L_{20}	-76.51	24.73	-71.55			0.75	1.17	21.68	-62.73	0.00	0.00	Vehicle	Vehicle	-----	-235.39	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	2.86	4.76
		U_{21} - L_{21}	-45.77	27.41	-55.98			0.75	1.17	24.03	-49.08	0.00	0.00	Vehicle	Vehicle	-----	-165.84	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.60	6.01
		U_{22} - L_{22}	-17.72	-9.26	7.48			0.75	1.17	6.56	-8.12	0.00	0.00	Vehicle	Vehicle	-----	-40.63	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	23.95	39.92
		U_{23} - L_{23}	-30.69	-59.30	36.93			0.75	1.17	32.38	-51.99	0.00	0.00	Vehicle	Vehicle	30.26	-152.54	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	8.49	14.16	3.58	5.96
		U_{24} - L_{24}	-62.06	-70.04	35.84			0.75	1.17	31.42	-61.41	0.00	0.00	Vehicle	Vehicle	-----	-213.74	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	3.06	5.10
		U_{25} - L_{25}	-103.15	-84.22	25.70			0.75	1.17	22.54	-73.84	0.00	0.00	Vehicle	Vehicle	-----	-294.07	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.32	5.53
		U_{26} - L_{26}	-134.38	-92.83	11.88			0.75	1.17	10.41	-81.39	0.00	0.00	Vehicle	Vehicle	-----	-351.03	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.26	5.44
		U_{27} - L_{27}	-156.03	-102.64	10.23			0.75	1.17	8.97	-89.99	0.00	0.00	Vehicle	Vehicle	-----	-397.82	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	3.12	5.19
		U_{28} - L_{28}	-179.40	-110.45	2.62			0.75	1.17	2.29	-96.84	0.00	0.00	Vehicle	Vehicle	-----	-443.04	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	3.02	5.03
		U_{29} - L_{29}	-171.60	-110.37	6.29			0.75	1.17	5.51	-96.77	0.00	0.00	Vehicle	Vehicle	-----	-432.74	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	3.22	5.36
		U_{30} - L_{30}	-393.29	-131.98	-120.33			0.75	1.18	-106.77	-117.10	0.00	0.00	Vehicle	Vehicle	-----	-764.99	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	3.37	5.62
		U_{31} - L_{31}	-203.49	13.44	-111.68			0.75	1.18	11.92	-99.09	0.00	0.00	Vehicle	Vehicle	-----	-479.23	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	2.95	4.91
		U_{32} - L_{32}	-222.61	5.11	-108.25			0.75	1.18	4.53	-96.05	0.00	0.00	Vehicle	Vehicle	-----	-497.50	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.29	-20.63	86.21			0.75	1.24	79.98	-19.14	0.00	0.00	Vehicle	Vehicle	242.58	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**4.00**	**6.66**	-----	-----
		U_1 - L_2	10.80	-19.99	42.30			0.75	1.24	39.24	-18.55	0.00	0.00	Vehicle	Vehicle	99.07	-26.14	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.37**	**10.62**	**11.20**	**18.66**
		U_2 - L_3	-44.05	-18.04	7.40			0.75	1.24	6.86	-16.73	0.00	0.00	Vehicle	Vehicle	-----	-93.52	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**10.40**	**17.34**
		U_3 - L_4	-76.77	-55.27	-10.20			0.75	1.24	-9.46	-51.27	0.00	0.00	Vehicle	Vehicle	-----	-210.90	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**3.04**	**5.06**
		U_4 - L_5	118.48	-21.74	101.13			0.75	1.24	93.82	-20.17	0.00	0.00	Vehicle	Vehicle	357.31	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.60**	**4.33**	-----	-----
		U_5 - L_5	137.62	-8.75	110.63			0.75	1.24	102.63	-8.12	0.00	0.00	Vehicle	Vehicle	401.27	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U_6 - L_6	157.39	2.51	66.21			0.75	1.24	61.43	2.33	0.00	0.00	Vehicle	Vehicle	337.69	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.82**	**8.03**	-----	-----
		U_7 - L_7	149.33	8.50	137.86			0.75	1.24	127.90	7.88	0.00	0.00	Vehicle	Vehicle	471.24	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.35**	**3.92**	-----	-----
		U_8 - L_8	249.21	9.98	147.79			0.75	1.20	132.79	8.97	0.00	0.00	Vehicle	Vehicle	611.69	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.22**	**5.37**	-----	-----
		U_9 - L_{10}	260.39	-5.13	91.87			0.75	1.20	82.54	-4.61	0.00	0.00	Vehicle	Vehicle	517.35	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**5.10**	**8.50**	-----	-----
		U_{10} - L_{11}	236.43	8.75	134.77			0.75	1.20	121.09	7.86	0.00	0.00	Vehicle	Vehicle	569.72	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**3.34**	**5.57**	-----	-----
		U_{11} - L_{12}	212.05	6.47	85.81			0.75	1.20	77.10	5.82	0.00	0.00	Vehicle	Vehicle	442.72	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.40**	**7.33**	-----	-----
		U_{12} - L_{13}	151.78	-33.24	116.20			0.75	1.20	104.41	-29.86	0.00	0.00	Vehicle	Vehicle	423.53	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**2.75**	**4.59**	-----	-----
		U_{13} - L_{14}	108.73	-47.00	95.20			0.75	1.20	85.54	-42.23	0.00	0.00	Vehicle	Vehicle	326.68	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.24**	**3.73**	-----	-----
		U_{14} - L_{14}	-24.56	-65.11	57.44			0.75	1.20	51.61	-58.50	0.00	0.00	Vehicle	Vehicle	79.88	-158.68	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**5.26**	**8.76**	**3.12**	**5.19**
		U_{15} - L_{15}	23.90	-44.00	83.18			0.75	1.20	74.73	-39.54	0.00	0.00	Vehicle	Vehicle	192.99	-54.59	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.24**	**5.40**	**5.29**	**8.81**
		U_{17} - L_{16}	120.04	-16.85	103.97			0.75	1.20	93.41	-15.14	0.00	0.00	Vehicle	Vehicle	358.44	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.60**	**4.33**	-----	-----
		U_{18} - L_{17}	144.84	-9.53	109.90			0.75	1.20	98.75	-8.56	0.00	0.00	Vehicle	Vehicle	402.25	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{19} - L_{18}	193.27	1.87	119.19			0.75	1.20	107.09	1.68	0.00	0.00	Vehicle	Vehicle	483.28	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.90**	**4.83**	-----	-----
		U_{20} - L_{19}	193.75	9.51	95.10			0.75	1.20	85.45	8.55	0.00	0.00	Vehicle	Vehicle	437.01	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.63**	**6.04**	-----	-----
	Structure 2	U_0 - L_1	202.60	-17.49	87.49			0.75	1.18	77.62	-15.52	0.00	0.00	Vehicle	Vehicle	431.56	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.44**	**7.41**	-----	-----
		U_1 - L_2	190.84	-19.87	121.56			0.75	1.18	107.86	-17.63	0.00	0.00	Vehicle	Vehicle	481.77	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_2 - L_3	155.90	-19.31	112.77			0.75	1.18	100.05	-17.14	0.00	0.00	Vehicle	Vehicle	419.45	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.97**	**4.94**	-----	-----
		U_3 - L_4	134.06	-21.00	110.36			0.75	1.18	97.92	-18.63	0.00	0.00	Vehicle	Vehicle	386.43	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U_4 - L_5	46.01	-38.94	87.72			0.75	1.18	77.83	-34.55	0.00	0.00	Vehicle	Vehicle	228.44	-15.05	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**2.94**	**4.90**	**6.21**	**10.35**
		U_5 - L_6	3.43	-59.47	73.81			0.75	1.18	65.49	-52.77	0.00	0.00	Vehicle	Vehicle	146.35	-109.87	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.89**	**6.48**	**3.74**	**6.24**
		U_6 - L_7	-84.31	-75.31	62.72			0.75	1.18	55.65	-66.81	0.00	0.00	Vehicle	Vehicle	10.97	-254.37	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	**6.00**	**10.00**	**2.47**	**4.12**
		U_7 - L_7	137.33	-44.51	93.07			0.75	1.18	82.58	-39.49	0.00	0.00	Vehicle	Vehicle	357.44	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.39**	**5.64**	-----	-----
		U_8 - L_8	210.92	-29.77	104.57			0.75	1.18	92.78	-26.41	0.00	0.00	Vehicle	Vehicle	475.21	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.23**	**5.38**	-----	-----
		U_{10} - L_9	236.39	-18.94	110.16			0.75	1.18	97.74	-16.80	0.00	0.00	Vehicle	Vehicle	519.08	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.32**	**5.54**	-----	-----
		U_{11} - L_{10}	274.65	-13.58	121.03			0.75	1.18	107.39	-12.05	0.00	0.00	Vehicle	Vehicle	589.71	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.18**	**5.31**	-----	-----
		U_{12} - L_{11}	281.09	-4.54	126.78			0.75	1.18	112.48	-4.02	0.00	0.00	Vehicle	Vehicle	609.13	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.00**	**5.01**	-----	-----
		U_{13} - L_{12}	278.14	-8.53	118.00			0.75	1.18	104.70	-7.57	0.00	0.00	Vehicle	Vehicle	588.43	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
		U_{14} - L_{13}	235.47	-8.02	117.33			0.75	1.18	104.10	-7.12	0.00	0.00	Vehicle	Vehicle	531.67	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{15} - L_{14}	143.01	-3.39	112.08			0.75	1.17	98.27	-2.97	0.00	0.00	Vehicle	Vehicle	398.83	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.10**	**5.17**	-----	-----
		U_{16} - L_{15}	171.90	-13.07	120.77			0.75	1.17	105.89	-11.46	0.00	0.00	Vehicle	Vehicle	452.89	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U_{17} - L_{16}	181.04	-12.61	123.55			0.75	1.17	108.32	-11.06	0.00	0.00	Vehicle	Vehicle	470.04	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.93**	**4.89**	-----	-----
		U_{17} - L_{18}	171.16	-14.23	111.81			0.75	1.17	98.03	-12.48	0.00	0.00	Vehicle	Vehicle	434.90	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.93**	**4.89**	-----	-----
		U_{18} - L_{19}	150.64	-20.18	119.59			0.75	1.17	104.85	-17.69	0.00	0.00	Vehicle	Vehicle	423.02	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
		U_{19} - L_{20}	125.86	-33.87	104.19			0.75	1.17	91.34	-29.70	0.00	0.00	Vehicle	Vehicle	361.53	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.14**	**5.23**	-----	-----
		U_{20} - L_{21}	76.04	-39.43	91.94			0.75	1.17	80.61	-34.57	0.00	0.00	Vehicle	Vehicle	273.51	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.62**	**4.36**	-----	-----
		U_{21} - L_{22}	38.33	-54.60	81.17			0.75	1.17	71.16	-47.87	0.00	0.00	Vehicle	Vehicle	204.02	-53.90	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.28**	**5.47**	**4.56**	**7.60**
		U_{23} - L_{22}	18.05	-59.21	67.89			0.75	1.17	59.53	-51.91	0.00	0.00	Vehicle	Vehicle	152.44	-89.00	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.13**	**6.88**	**3.94**	**6.57**
		U_{24} - L_{23}	58.57	-37.91	84.30			0.75	1.17	73.91	-33.23	0.00	0.00	Vehicle	Vehicle	236.28	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.00**	**4.99**	-----	-----
		U_{25} - L_{24}	114.98	-30.26	91.75			0.75	1.17	80.44	-26.53	0.00	0.00	Vehicle	Vehicle	323.76	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.64**	**6.07**	-----	-----
		U_{26} - L_{25}	143.00	-14.26	113.10			0.75	1.17	99.16	-12.50	0.00	0.00	Vehicle	Vehicle	400.74	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{27} - L_{26}	173.82	-12.02	114.28			0.75	1.17	100.20	-10.54	0.00	0.00	Vehicle	Vehicle	443.06	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.76**	-----	-----
		U_{28} - L_{27}	186.60	-2.76	116.64			0.75	1.17	102.26	-2.42	0.00	0.00	Vehicle	Vehicle	464.14	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{29} - L_{28}	190.75	-7.62	118.03			0.75	1.17	103.48	-6.68	0.00	0.00	Vehicle	Vehicle	472.18	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.67**	**4.44**	-----	-----
		U_{30} - L_{29}	161.86	-7.91	116.04			0.75	1.17	101.74	-6.94	0.00	0.00	Vehicle	Vehicle	430.85	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.88**	**4.80**	-----	-----
		U_{30} - L_{31}	191.72	-6.68	122.46			0.75	1.18	108.65	-5.93	0.00	0.00	Vehicle	Vehicle	484.65	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.24**	**5.39**	-----	-----
		U_{31} - L_{32}	226.45	-14.48	124.27			0.75	1.18	110.26	-12.84	0.00	0.00	Vehicle	Vehicle	533.28	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U_{32} - L_{33}	243.42	-3.84	125.55			0.75	1.18	111.39	-3.40	0.00	0.00	Vehicle	Vehicle	557.80	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.24**	**5.40**	-----	-----
		U_{33} - L_{34}	239.13	-2.90	128.45			0.75	1.18	113.97	-2.57	0.00	0.00	Vehicle	Vehicle	557.80	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.19**	**5.31**	-----	-----
		U_{34} - L_{35}	222.16	5.11	122.12			0.75	1.18	108.35	4.54	0.00	0.00	Vehicle	Vehicle	523.56	-----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r_{min} (in)	KL/r_{min} ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U$_0$ - U$_1$	-66.70	-43.80	-48.72	-8.83	2.21	0.90	1.24	-48.76	-54.24	2.21	-8.83	Vehicle	Vehicle	-----	-204.24	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.52	9.19
		U$_1$ - U$_2$	-86.55	-10.18	-94.18	6.01	-16.34	0.90	1.24	-11.33	-104.85	6.01	-16.34	Vehicle	Vehicle	-----	-339.69	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.74	4.57
		U$_2$ - U$_3$	-48.14	46.56	-77.17	9.46	-19.05	0.90	1.24	51.83	-85.92	9.46	-19.05	Vehicle	Vehicle	49.72	-248.74	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	8.33	13.88	3.61	6.02
		U$_3$ - U$_4$	36.58	60.74	-85.37	12.74	-17.47	0.90	1.24	67.62	-95.04	12.74	-17.47	Vehicle	Vehicle	194.07	-158.37	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.63	9.38	3.80	6.33
		U$_4$ - U$_5$	38.93	59.74	-83.29	12.80	-17.38	0.90	1.24	66.51	-92.73	12.80	-17.38	Vehicle	Vehicle	194.71	-150.29	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.70	9.51	3.91	6.52
		U$_5$ - U$_6$	154.60	68.40	-55.75	15.16	-12.03	0.90	1.24	76.15	-62.07	15.16	-12.03	Vehicle	Vehicle	365.96	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	4.07	6.78	-----	-----
		U$_6$ - U$_7$	288.38	74.31	-22.76	17.14	-4.31	0.90	1.24	82.73	-25.34	17.14	-4.31	Vehicle	Vehicle	554.13	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.74	6.24	-----	-----
		U$_7$ - U$_8$	410.94	11.55	-0.32	18.28	4.35	0.90	1.24	12.86	-0.35	18.28	4.35	Pedestrian	Pedestrian	584.82	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	17.96	22.45	-----	-----
		U$_8$ - U$_9$	311.57	10.63	-2.29	19.08	0.00	0.90	1.20	11.46	-2.46	19.08	0.00	Pedestrian	Vehicle	454.68	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	16.43	20.53	-----	-----
		U$_9$ - U$_{10}$	78.52	-9.97	-19.35	5.48	0.00	0.90	1.20	-10.74	-20.86	5.48	0.00	Vehicle	Vehicle	78.80	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{10}$ - U$_{11}$	-141.43	54.28	-65.00	-7.31	0.00	0.90	1.20	58.52	-70.09	0.00	-7.31	Vehicle	Vehicle	-----	-335.71	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.90	6.51
		U$_{11}$ - U$_{12}$	-338.03	49.99	-96.13	9.77	-27.93	0.90	1.20	53.90	-103.65	9.77	-27.93	Vehicle	Vehicle	-----	-664.02	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	43.12	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.75	4.58
		U$_{12}$ - U$_{13}$	-480.08	43.76	-118.52	8.23	-34.32	0.90	1.20	47.18	-127.79	8.23	-34.32	Vehicle	Vehicle	-----	-900.98	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	43.87	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.09	5.15
		U$_{13}$ - U$_{14}$	-570.65	37.16	-162.28	6.68	-37.21	0.90	1.20	40.06	-174.96	6.68	-37.21	Vehicle	Vehicle	-----	-1120.93	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.46	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.60	4.33
		U$_{14}$ - U$_{15}$	-571.07	36.98	-167.56	6.65	-37.22	0.90	1.20	39.87	-180.66	6.65	-37.22	Vehicle	Vehicle	-----	-1133.82	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.21	Pass	25.60	49.99	Pass	6.40	12.00	Pass	-----	-----	2.51	4.19
		U$_{15}$ - U$_{16}$	-581.88	28.86	-155.53	4.98	-36.12	0.90	1.20	31.12	-167.69	4.98	-36.12	Vehicle	Vehicle	-----	-1119.76	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.48	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.67	4.45
		U$_{16}$ - U$_{17}$	-539.46	12.63	-130.19	3.52	-31.85	0.90	1.20	13.62	-140.37	3.52	-31.85	Vehicle	Vehicle	-----	-1005.43	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.83	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.37	5.61
		U$_{17}$ - U$_{18}$	-422.33	13.95	-99.26	2.26	-25.05	0.90	1.20	15.04	-107.02	2.26	-25.05	Vehicle	Vehicle	-----	-780.90	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	43.54	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	3.08	5.13
		U$_{18}$ - U$_{19}$	-286.19	7.87	-65.71	1.28	-16.96	0.90	1.20	8.48	-70.85	1.28	-16.96	Vehicle	Vehicle	-----	-525.56	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	44.26	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	3.31	5.52
		U$_{19}$ - U$_{20}$	-140.84	2.11	-28.77	0.55	-8.68	0.90	1.20	2.28	-31.01	0.55	-8.68	Vehicle	Vehicle	-----	-250.29	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	10.38	17.30
	Structure 2	U$_0$ - U$_1$	-147.44	-26.60	-13.89	-4.88	0.36	0.90	1.18	-14.79	-26.32	0.36	-4.88	Vehicle	Vehicle	-----	-253.03	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.59	17.65
		U$_1$ - U$_2$	-319.06	-9.53	-77.18	1.96	-13.36	0.90	1.18	-10.14	-82.17	1.96	-13.36	Vehicle	Vehicle	-----	-592.81	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.99	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.45	5.75
		U$_2$ - U$_3$	-460.91	-101.24	-90.98	-20.95	3.77	0.90	1.18	-96.87	-107.79	3.77	-20.95	Vehicle	Vehicle	-----	-832.73	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	44.27	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.43	5.72
		U$_3$ - U$_4$	-580.03	38.89	-123.10	5.92	-27.68	0.90	1.18	41.41	-131.06	5.92	-27.68	Vehicle	Vehicle	-----	-1038.00	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.27	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.49	5.81
		U$_4$ - U$_5$	-616.49	50.37	-167.01	7.86	-31.35	0.90	1.18	53.62	-177.82	7.86	-31.35	Vehicle	Vehicle	-----	-1186.71	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.60	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.94	4.90
		U$_5$ - U$_6$	-604.71	62.83	-172.78	9.87	-32.88	0.90	1.18	66.90	-183.96	9.87	-32.88	Vehicle	Vehicle	-----	-1184.71	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.64	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.88	4.80
		U$_6$ - U$_7$	-514.78	71.78	-158.60	11.56	-31.23	0.90	1.18	76.43	-168.86	11.56	-31.23	Vehicle	Vehicle	-----	-1035.07	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.33	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.94	4.90
		U$_7$ - U$_8$	-512.83	71.85	-154.91	11.57	-31.18	0.90	1.18	76.50	-164.93	11.57	-31.18	Vehicle	Vehicle	-----	-1024.02	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.57	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.01	5.02
		U$_8$ - U$_9$	-373.51	79.75	-138.24	13.16	-27.41	0.90	1.18	84.91	-147.19	13.16	-27.41	Vehicle	Vehicle	-----	-804.46	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.07	5.11
		U$_9$ - U$_{10}$	-181.05	83.23	-105.05	14.25	-21.42	0.90	1.18	88.61	-111.84	14.25	-21.42	Vehicle	Vehicle	-----	-477.69	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.78	6.30
		U$_{10}$ - U$_{11}$	26.18	85.79	-70.03	15.21	-14.40	0.90	1.18	91.34	-74.56	15.21	-14.40	Vehicle	Vehicle	231.93	-127.51	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	5.81	9.68	6.40	10.67
		U$_{11}$ - U$_{12}$	237.39	85.05	-36.97	15.56	-6.85	0.90	1.18	90.55	-39.36	15.56	-6.85	Vehicle	Vehicle	504.80	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	4.46	7.44	-----	-----
		U$_{12}$ - U$_{13}$	435.89	81.26	-14.10	15.82	0.56	0.90	1.18	86.52	-15.02	15.82	0.56	Vehicle	Vehicle	754.12	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.88	8.13	-----	-----
		U$_{13}$ - U$_{14}$	595.84	6.04	6.71	15.74	6.91	0.90	1.18	7.14	6.43	15.74	6.91	Pedestrian	Pedestrian	811.78	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	33.86	42.32	-----	-----
		U$_{14}$ - U$_{15}$	615.53	6.02	1.60	24.37	0.00	0.90	1.17	6.33	1.69	24.37	0.00	Pedestrian	Vehicle	850.08	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	24.73	30.91	-----	-----
		U$_{15}$ - U$_{16}$	486.15	37.04	-13.31	14.17	3.08	0.90	1.17	38.97	-14.01	14.17	3.08	Pedestrian	Vehicle	718.34	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	11.84	14.80	-----	-----
		U$_{16}$ - U$_{17}$	339.27	-1.31	-46.17	11.57	0.00	0.90	1.17	-1.38	-48.57	11.57	0.00	Pedestrian	Vehicle	457.62	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{17}$ - U$_{18}$	192.13	72.68	-64.44	4.46	0.00	0.90	1.17	76.46	-67.80	4.46	0.00	Vehicle	Vehicle	415.44	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.51	7.51	-----	-----
		U$_{18}$ - U$_{19}$	53.83	66.59	-82.13	-2.79	-12.78	0.90	1.17	70.06	-86.40	-2.79	-12.78	Vehicle	Vehicle	221.78	-117.23	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.10	10.17	4.87	8.12
		U$_{19}$ - U$_{20}$	-58.94	59.06	-119.23	15.07	-15.67	0.90	1.17	62.13	-125.44	15.07	-15.67	Vehicle	Vehicle	58.00	-348.41	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.49	14.15	3.03	5.05
	Structure 3	U$_0$ - U$_{21}$	-125.32	49.25	-119.89	14.77	-16.52	0.90	1.17	51.82	-126.14	14.77	-16.52	Vehicle	Vehicle	-----	-436.21	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.38	5.64
		U$_{21}$ - U$_{22}$	-146.72	40.74	-133.94	14.37	-22.74	0.90	1.17	42.86	-140.92	14.37	-22.74	Pedestrian	Vehicle	-----	-496.06	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.94	4.90
		U$_{22}$ - U$_{23}$	-146.49	38.01	-131.80	14.36	-22.72	0.90	1.17	39.99	-138.66	14.36	-22.72	Pedestrian	Vehicle	-----	-490.87	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.99	4.98
		U$_{23}$ - U$_{24}$	-112.53	26.30	-124.13	13.88	-21.04	0.90	1.17	27.67	-130.59	13.88	-21.04	Pedestrian	Vehicle	-----	-429.24	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.33	5.55
		U$_{24}$ - U$_{25}$	-36.03	57.08	-107.29	13.40	-15.01	0.90	1.17	60.05	-112.88	13.40	-15.01	Vehicle	Vehicle	83.27	-291.40	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.56	14.26	3.49	5.82
		U$_{25}$ - U$_{26}$	80.94	61.81	-76.55	12.93	-12.15	0.90	1.17	65.03	-80.54	12.93	-12.15	Vehicle	Vehicle	246.11	-69.29	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.32	10.54	5.43	9.04
		U$_{26}$ - U$_{27}$	220.82	65.44	-53.11	12.57	-5.86	0.90	1.17	68.84	-55.88	12.57	-5.86	Vehicle	Vehicle	436.22	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.75	7.92	-----	-----
		U$_{27}$ - U$_{28}$	363.48	65.61	-28.01	12.37	0.18	0.90	1.17	69.03	-29.47	12.37	0.18	Vehicle	Vehicle	622.09	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	5.91	9.86	-----	-----
		U$_{28}$ - U$_{29}$	503.92	8.63	-2.90	12.24	3.11	0.90	1.17	9.08	-3.05	12.24	3.11	Pedestrian	Vehicle	689.73	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	28.84	36.05	-----	-----
		U$_{29}$ - U$_{30}$	616.62	-2.53	0.63	0.00	7.42	0.90	1.17	0.66	-2.66	7.42	0.00	Pedestrian	Vehicle	814.75	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-1.94	0.36	1.42	-2.06	0.37	0.90	1.24	1.58	0.40	0.37	-2.06	Vehicle	Pedestrian	0.90	-5.22	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	191.50	319.16	-----	-----
		L_1 - L_2	67.93	43.16	47.77	0.00	5.88	0.90	1.24	53.18	48.05	5.88	0.00	Vehicle	Vehicle	203.53	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	4.90	8.17	-----	-----
		L_2 - L_3	78.83	-37.92	96.45	-7.39	15.48	0.90	1.24	107.38	-42.22	15.48	-7.39	Vehicle	Vehicle	335.13	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	3.30	5.49	-----	-----
		L_3 - L_4	39.11	-52.72	100.64	-10.83	18.09	0.90	1.24	112.05	-58.69	18.09	-10.83	Vehicle	Vehicle	293.61	-76.32	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	3.37	5.62	6.16	10.26
		L_4 - L_5	-166.44	-76.64	66.20	-16.91	10.96	0.90	1.24	73.70	-85.32	10.96	-16.91	Vehicle	Vehicle	-----	-401.23	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	43.53	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	2.35	3.91
		L_5 - L_6	-301.30	-82.77	21.03	-18.94	3.24	0.90	1.24	23.41	-92.15	3.24	-18.94	Vehicle	Vehicle	-----	-591.34	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	41.20	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	2.33	3.89
		L_6 - L_7	-439.01	-89.38	3.02	-21.52	-4.99	0.90	1.24	3.36	-99.50	-4.99	-21.52	Vehicle	Vehicle	-----	-786.30	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	42.78	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	3.05	5.08
		L_7 - L_8	-551.71	0.52	-22.10	0.00	-35.56	0.90	1.24	0.57	-24.61	0.00	-35.56	Vehicle	Pedestrian	-----	-814.99	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	8.61	10.77
		L_8 - L_9	-570.55	-90.99	10.83	-37.48	0.00	0.90	1.20	11.67	-98.11	0.00	-37.48	Vehicle	Pedestrian	-----	-962.04	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	43.60	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	3.71	4.64
		L_9 - L_{10}	-355.55	-39.99	-9.09	-13.03	-11.67	0.90	1.20	-9.80	-43.11	-11.67	-13.03	Pedestrian	Vehicle	-----	-555.62	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	8.21	13.68
		L_{10} - L_{11}	-118.56	-48.25	41.88	-12.42	0.00	0.90	1.20	45.15	-52.02	0.00	-12.42	Vehicle	Vehicle	-----	-266.84	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	4.40	7.34
		L_{11} - L_{12}	103.33	44.22	77.40	0.50	0.00	0.90	1.20	83.45	47.68	0.50	0.00	Vehicle	Vehicle	315.14	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	3.53	5.88	-----	-----
		L_{12} - L_{13}	300.47	-41.57	113.68	-8.15	17.86	0.90	1.20	122.57	-44.82	17.86	-8.15	Vehicle	Vehicle	656.16	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	3.30	5.50	-----	-----
		L_{13} - L_{14}	441.01	103.79	125.00	-6.62	24.18	0.90	1.20	134.77	111.90	24.18	-6.62	Vehicle	Vehicle	865.32	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	3.86	6.43	-----	-----
		L_{14} - L_{15}	546.80	-22.31	139.06	-3.50	24.61	0.90	1.20	149.93	-24.06	24.61	-3.50	Vehicle	Vehicle	1035.68	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	4.11	6.85	-----	-----
		L_{15} - L_{16}	505.90	-15.00	122.19	-2.04	20.37	0.90	1.20	131.75	-16.17	20.37	-2.04	Vehicle	Vehicle	943.12	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	4.87	8.11	-----	-----
		L_{16} - L_{17}	398.64	-18.98	97.00	-0.84	12.78	0.90	1.20	104.58	-20.46	12.78	-0.84	Vehicle	Vehicle	744.83	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	4.69	7.82	-----	-----
		L_{17} - L_{18}	263.76	-2.93	57.77	0.15	4.73	0.90	1.20	62.29	-3.16	4.73	0.15	Vehicle	Vehicle	477.85	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	5.97	9.95	-----	-----
		L_{18} - L_{19}	118.86	-12.10	23.85	0.70	-3.28	0.90	1.20	25.71	-13.04	0.70	-3.28	Vehicle	Vehicle	210.23	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	8.95	14.92	-----	-----
		L_{19} - L_{20}	-23.25	4.10	-6.39	1.27	-12.00	0.90	1.20	4.42	-6.89	1.27	-12.00	Vehicle	Pedestrian	-----	-60.92	1.95	17.93	15.9750	591.53	131.71	10.8073	5.7170	17.13	32.72	-498.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	15.26	19.07
	Structure 2	L_0- L_1	-35.95	0.68	5.03	-5.13	1.19	0.90	1.18	5.36	0.73	1.19	-5.13	Vehicle	Pedestrian	-----	-53.89	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	132.83	29.70	26.48	2.94	-0.07	0.90	1.18	31.62	28.19	2.94	-0.07	Vehicle	Vehicle	241.17	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	9.50	15.83	-----	-----
		L_2 - L_3	304.11	54.75	80.65	10.53	-1.80	0.90	1.18	85.87	58.29	10.53	-1.80	Vehicle	Vehicle	581.38	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	4.70	7.83	-----	-----
		L_3 - L_4	445.92	95.65	116.08	0.00	13.17	0.90	1.18	123.59	101.84	13.17	0.00	Vehicle	Vehicle	847.48	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	4.19	6.98	-----	-----
		L_4 - L_5	567.84	-33.47	149.16	-6.10	24.82	0.90	1.18	158.81	-35.64	24.82	-6.10	Vehicle	Vehicle	1082.28	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	4.09	6.81	-----	-----
		L_5 - L_6	603.64	-52.86	173.74	-8.06	28.47	0.90	1.18	184.98	-56.28	28.47	-8.06	Vehicle	Vehicle	1185.51	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	3.86	6.43	-----	-----
		L_6 - L_7	599.48	-67.88	183.02	-10.41	30.26	0.90	1.18	194.86	-72.27	30.26	-10.41	Vehicle	Vehicle	1201.53	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	3.75	6.25	-----	-----
		L_7 - L_8	373.94	-84.65	142.82	-13.66	24.93	0.90	1.18	152.06	-90.13	24.93	-13.66	Vehicle	Vehicle	815.58	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	3.82	6.36	-----	-----
		L_8 - L_9	195.71	-90.86	115.76	-15.12	19.52	0.90	1.18	123.25	-96.74	19.52	-15.12	Vehicle	Vehicle	521.47	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	4.40	7.34	-----	-----
		L_9 - L_{10}	-13.21	-93.60	71.84	-16.11	12.45	0.90	1.18	76.49	-99.65	12.45	-16.11	Vehicle	Vehicle	148.55	-233.09	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	6.86	11.44	4.30	7.17
		L_{10} - L_{11}	-217.32	-94.40	43.37	-17.02	5.50	0.90	1.18	46.18	-100.51	5.50	-17.02	Vehicle	Vehicle	-----	-500.28	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	44.40	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	2.59	4.31
		L_{11} - L_{12}	-419.93	-92.43	17.05	-17.31	-2.04	0.90	1.18	18.15	-98.41	-2.04	-17.31	Vehicle	Vehicle	-----	-759.14	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	43.14	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	3.11	5.19
		L_{12} - L_{13}	-591.41	-94.63	-2.69	-18.75	-7.09	0.90	1.18	-2.86	-100.75	-7.09	-18.75	Pedestrian	Vehicle	-----	-987.12	9.73	59.10	49.3700	1950.30	131.71	10.9531	5.8186	16.94	32.73	-1644.04	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	44.10	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	4.01	6.68
		L_{13} - L_{14}	-724.23	1.65	-17.07	0.00	-35.12	0.90	1.18	1.75	-18.17	0.00	-35.12	Vehicle	Pedestrian	-----	-1028.10	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.87	14.84
		L_{14} - L_{15}	-747.05	-67.72	17.62	-36.29	0.00	0.90	1.17	18.53	-71.25	0.00	-36.29	Vehicle	Pedestrian	-----	-1145.91	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	44.82	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	5.71	7.14
		L_{15} - L_{16}	-632.15	15.76	0.04	0.00	-31.21	0.90	1.17	16.58	0.04	0.00	-31.21	Vehicle	Pedestrian	-----	-872.45	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L_{16} - L_{17}	-488.62	-56.61	19.19	-25.39	0.00	0.90	1.17	20.19	-59.56	0.00	-25.39	Vehicle	Pedestrian	-----	-773.26	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	5.26	6.58
		L_{17} - L_{18}	-336.98	3.81	35.77	-18.12	0.00	0.90	1.17	37.64	4.01	0.00	-18.12	Vehicle	Pedestrian	-----	-461.01	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L_{18} - L_{19}	-183.61	-61.14	71.17	-11.34	4.48	0.90	1.17	74.87	-64.33	4.48	-11.34	Vehicle	Vehicle	-----	-378.07	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	3.64	6.06
		L_{19} - L_{20}	-45.77	-55.00	83.50	-9.58	8.92	0.90	1.17	87.85	-57.86	8.92	-9.58	Vehicle	Vehicle	130.84	-184.87	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.95	8.25	5.47	9.12
		L_{20} - L_{21}	68.00	-48.87	115.63	-9.12	11.57	0.90	1.17	121.65	-51.42	11.57	-9.12	Vehicle	Vehicle	351.97	-23.01	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.42	7.37	10.30	17.16
		L_{21} - L_{22}	133.90	-39.08	123.64	-8.82	13.61	0.90	1.17	130.08	-41.11	13.61	-8.82	Vehicle	Vehicle	455.92	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	3.83	6.39	-----	-----
		L_{22} - L_{23}	122.50	-18.46	116.19	-7.58	11.79	0.90	1.17	122.24	-19.42	11.79	-7.58	Vehicle	Pedestrian	424.10	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	4.13	6.89	-----	-----
		L_{23} - L_{24}	46.70	-48.24	99.82	-7.09	8.09	0.90	1.17	105.02	-50.75	8.09	-7.09	Vehicle	Vehicle	288.24	-49.26	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	5.24	8.74	10.18	16.96
		L_{24} - L_{25}	-66.76	-53.71	72.13	-6.24	2.64	0.90	1.17	75.89	-56.51	2.64	-6.24	Vehicle	Vehicle	77.65	-209.22	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	5.90	9.83	5.38	8.97
		L_{25} - L_{26}	-205.83	-57.46	48.03	-5.88	-3.61	0.90	1.17	50.53	-60.45	-3.61	-5.88	Vehicle	Vehicle	-----	-398.56	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	3.65	6.08
		L_{26} - L_{27}	-350.61	-58.55	23.00	-5.26	-6.72	0.90	1.17	24.20	-61.60	-5.26	-6.72	Vehicle	Vehicle	-----	-589.25	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.27	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	3.67	6.12
		L_{27} - L_{28}	-494.76	-58.33	-0.95	-5.10	-12.12	0.90	1.17	-1.00	-61.36	-5.10	-12.12	Pedestrian	Vehicle	-----	-776.15	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	5.41	9.01
		L_{28} - L_{29}	-620.88	-36.54	-9.66	-31.79	-17.19	0.90	1.17	-10.16	-38.44	-17.19	-31.79	Pedestrian	Pedestrian	-----	-921.26	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	7.46	9.32
		L_{29} - L_{30}	-716.82	-18.63	-22.36	0.00	-36.30	0.90	1.17	-19.60	-23.53	0.00	-36.30	Vehicle	Pedestrian	-----	-1029.07	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.68	13.35
		L_{30} - L_{31}	-850.86	-66.80	39.51	-35.98	0.00	0.90	1.18	42.07	-71.12	0.00	-35.98	Vehicle	Pedestrian	-----	-1

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17

Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.63	5.04	-76.68	3.44	-12.32	0.90	1.24	5.61	-85.36	3.44	-12.32	Pedestrian	Vehicle	-----	-306.67	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	42.25	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.76	2.94
		U_1 - L_1	-46.50	14.94	-40.72	2.93	-9.05	0.90	1.24	16.63	-45.33	2.93	-9.05	Vehicle	Vehicle	-----	-158.66	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	4.04	6.74
		U_2 - L_2	-0.07	13.51	-26.70	2.84	-5.68	0.90	1.24	15.04	-29.72	2.84	-5.68	Vehicle	Vehicle	32.49	-64.48	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	17.07	28.44	7.10	11.84
		U_3 - L_3	39.61	11.89	-16.29	2.70	-2.12	0.90	1.24	13.23	-18.13	2.70	-2.12	Vehicle	Vehicle	80.17	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	17.60	29.33	-----	-----
		U_4 - L_4	-30.21	-9.33	0.24	-3.47	0.00	0.90	1.24	0.27	-10.39	0.00	-3.47	Vehicle	Pedestrian	-----	-61.78	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	18.46	23.08
		U_5 - L_5	-130.50	-43.41	2.77	-10.24	0.00	0.90	1.24	3.09	-48.32	0.00	-10.24	Vehicle	Vehicle	-----	-274.36	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	3.66	6.10
		U_6 - L_6	-158.19	-43.83	7.49	-13.06	0.00	0.90	1.24	8.34	-48.79	0.00	-13.06	Vehicle	Vehicle	-----	-311.36	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	4.30	7.17
		U_7 - L_7	-152.33	-43.94	14.54	-13.25	0.00	0.90	1.24	16.19	-48.92	0.00	-13.25	Vehicle	Vehicle	-----	-304.01	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	3.78	6.29
		U_8 - L_8	-455.44	-45.41	-75.11	-12.74	-18.98	0.90	1.24	-50.55	-83.62	-12.74	-18.98	Vehicle	Vehicle	-----	-773.24	3.28	51.23	47.9548	1690.75	131.71	16.6563	4.0434	37.07	31.69	-1380.20	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	4.35	7.25
		U_9 - L_9	-287.50	4.00	-74.85	0.00	-18.21	0.90	1.20	4.31	-80.70	0.00	-18.21	Vehicle	Vehicle	-----	-548.60	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.23	Pass	9.60	12.00	Pass	-----	-----	2.66	4.43
		U_{10} - L_{10}	-276.27	1.93	-69.53	0.00	-17.55	0.90	1.20	2.09	-74.97	0.00	-17.55	Vehicle	Vehicle	-----	-521.58	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	3.73	6.22
		U_{11} - L_{11}	-232.54	0.14	-62.79	0.00	-14.42	0.90	1.20	0.15	-67.70	0.00	-14.42	Vehicle	Vehicle	-----	-448.99	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.62	6.04
		U_{12} - L_{12}	-178.38	-2.21	-46.46	0.00	-11.20	0.90	1.20	-2.38	-50.10	0.00	-11.20	Vehicle	Vehicle	-----	-340.44	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	4.24	7.07
		U_{13} - L_{13}	-127.70	2.59	-37.11	0.00	-7.88	0.90	1.20	2.79	-40.01	0.00	-7.88	Vehicle	Vehicle	-----	-252.70	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.79	6.32
		U_{14} - L_{14}	-30.38	-6.88	-4.64	0.00	-3.03	0.90	1.20	-5.01	-7.42	0.00	-3.03	Vehicle	Pedestrian	-----	-56.47	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	24.07	30.09
		U_{15} - L_{15}	-28.93	-31.31	11.85	-4.53	1.55	0.90	1.20	12.77	-33.76	1.55	-4.53	Vehicle	Vehicle	-----	-110.75	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	5.59	9.31
		U_{16} - L_{16}	-75.99	-36.83	7.45	-7.07	1.39	0.90	1.20	8.03	-39.71	1.39	-7.07	Vehicle	Vehicle	-----	-184.84	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.01	6.68
		U_{17} - L_{17}	-161.81	-50.00	8.00	-10.66	1.30	0.90	1.20	8.63	-53.91	1.30	-10.66	Vehicle	Vehicle	-----	-327.15	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	2.78	4.63
		U_{18} - L_{18}	-190.09	-48.87	6.86	-12.69	1.12	0.90	1.20	7.40	-52.69	1.12	-12.69	Vehicle	Vehicle	-----	-361.29	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	3.82	6.36
		U_{19} - L_{19}	-228.09	-51.08	5.88	-14.99	0.97	0.90	1.20	6.34	-55.08	0.97	-14.99	Vehicle	Vehicle	-----	-415.86	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	4.23	7.05
		U_{20} - L_{20}	-242.54	-48.28	5.33	-15.62	0.95	0.90	1.20	5.74	-52.06	0.95	-15.62	Vehicle	Vehicle	-----	-428.09	0.00	27.86	27.8600	919.38	131.71	20.3229	2.7881	65.60	28.91	-684.53	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.27	5.46
		U_0 - L_0	-302.99	3.00	-81.02	2.22	-15.08	0.90	1.18	3.19	-86.26	2.22	-15.08	Pedestrian	Vehicle	-----	-580.78	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	43.14	Pass	5.62	12.00	Pass	-----	-----	2.36	3.94
		U_1 - L_1	-268.80	13.54	-69.88	2.12	-13.67	0.90	1.18	14.41	-74.40	2.12	-13.67	Vehicle	Vehicle	-----	-510.63	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.26	5.43
		U_2 - L_2	-220.88	14.58	-65.20	2.34	-12.32	0.90	1.18	15.52	-69.42	2.34	-12.32	Vehicle	Vehicle	-----	-437.56	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.05	5.09
		U_3 - L_3	-175.24	15.60	-60.23	2.49	-10.35	0.90	1.18	16.61	-64.13	2.49	-10.35	Vehicle	Vehicle	-----	-366.76	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	44.88	Pass	4.91	12.00	Pass	-----	-----	2.59	4.31
		U_4 - L_4	-82.09	13.52	-40.03	2.21	-6.62	0.90	1.18	14.40	-42.62	2.21	-6.62	Vehicle	Vehicle	-----	-199.05	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.62	6.03
		U_5 - L_5	-19.91	10.91	-31.63	2.23	-4.16	0.90	1.18	11.62	-33.68	2.23	-4.16	Vehicle	Vehicle	-----	-98.84	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	5.71	9.52
		U_6 - L_6	60.32	24.65	-17.99	1.75	-0.47	0.90	1.18	26.25	-19.15	1.75	-0.47	Vehicle	Vehicle	135.28	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	8.40	14.00	-----	-----
		U_7 - L_7	-41.78	-8.14	-2.09	-2.49	0.00	0.90	1.18	-2.22	-8.67	0.00	-2.49	Vehicle	Vehicle	-----	-73.09	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	20.68	34.46
		U_8 - L_8	-189.01	-46.73	6.02	-8.38	0.00	0.90	1.18	6.41	-49.76	0.00	-8.38	Vehicle	Vehicle	-----	-353.51	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	4.12	6.86
		U_9 - L_9	-254.00	-58.06	1.97	-10.55	0.00	0.90	1.18	2.10	-61.81	0.00	-10.55	Vehicle	Vehicle	-----	-464.12	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	4.24	7.07
		U_{10} - L_{10}	-290.02	-60.69	4.61	-12.18	0.00	0.90	1.18	4.91	-64.61	0.00	-12.18	Vehicle	Vehicle	-----	-517.01	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	4.54	7.56
		U_{11} - L_{11}	-312.19	-65.01	10.00	-12.59	0.00	0.90	1.18	10.64	-69.21	0.00	-12.59	Vehicle	Vehicle	-----	-555.81	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.92	6.54
		U_{12} - L_{12}	-327.27	-59.65	14.45	-13.01	-0.93	0.90	1.18	15.38	-63.51	-0.93	-13.01	Vehicle	Vehicle	-----	-563.04	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	4.48	7.47
		U_{13} - L_{13}	-277.23	-50.44	19.24	-11.39	0.00	0.90	1.18	20.48	-53.70	0.00	-11.39	Vehicle	Vehicle	-----	-476.76	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	4.61	7.69
		U_{14} - L_{14}	-505.47	-37.23	-59.13	-9.95	-11.35	0.90	1.18	-39.64	-62.96	-9.95	-11.35	Vehicle	Vehicle	-----	-793.52	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	5.21	8.68
		U_{15} - L_{15}	-232.92	3.26	-68.59	1.67	-11.17	0.90	1.17	3.42	-72.17	1.67	-11.17	Pedestrian	Vehicle	-----	-459.16	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.80	6.34
		U_{16} - L_{16}	-260.09	7.97	-68.60	0.83	-12.63	0.90	1.17	8.39	-72.17	0.83	-12.63	Vehicle	Vehicle	-----	-494.48	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.38	5.63
		U_{17} - L_{17}	-228.20	8.99	-66.25	0.66	-11.76	0.90	1.17	9.46	-69.71	0.66	-11.76	Vehicle	Vehicle	-----	-447.69	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.40	5.67
		U_{18} - L_{18}	-209.23	10.81	-61.59	-0.02	-11.28	0.90	1.17	11.37	-64.80	-0.02	-11.28	Vehicle	Vehicle	-----	-412.40	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.41	5.68
		U_{19} - L_{19}	-166.51	11.57	-51.62	-0.07	-9.53	0.90	1.17	12.17	-54.31	-0.07	-9.53	Vehicle	Vehicle	-----	-334.13	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	3.81	6.35
	Structure 2	U_{20} - L_{20}	-113.91	11.57	-41.16	-0.43	-7.50	0.90	1.17	12.17	-43.30	-0.43	-7.50	Vehicle	Vehicle	-----	-241.90	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.62	6.03
		U_{21} - L_{21}	-62.73	13.26	-33.13	0.00	-5.22	0.90	1.17	13.96	-34.86	0.00	-5.22	Vehicle	Vehicle	-----	-157.06	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.78	7.97
		U_{22} - L_{22}	-38.93	-8.73	-3.12	-2.04	-2.15	0.90	1.17	-3.29	-9.18	-2.04	-2.15	Pedestrian	Vehicle	-----	-70.50	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	19.79	32.99
		U_{23} - L_{23}	-74.45	-37.36	12.27	-6.10	0.48	0.90	1.17	12.91	-39.30	0.48	-6.10	Vehicle	Vehicle	-----	-181.94	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.06	6.77
		U_{24} - L_{24}	-121.37	-44.13	12.03	-8.17	0.37	0.90	1.17	12.65	-46.43	0.37	-8.17	Vehicle	Vehicle	-----	-258.38	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.28	5.47
		U_{25} - L_{25}	-169.10	-53.19	11.57	-9.94	0.43	0.90	1.17	12.17	-55.96	0.43	-9.94	Vehicle	Vehicle	-----	-341.09	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	3.67	6.12
		U_{26} - L_{26}	-207.93	-56.32	10.46	-11.42	0.14	0.90	1.17	11.00	-59.26	0.14	-11.42	Vehicle	Vehicle	-----	-398.70	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.74	6.23
		U_{27} - L_{27}	-219.90	-58.28	8.60	-11.49	0.16	0.90	1.17	9.05	-61.31	0.16	-11.49	Vehicle	Vehicle	-----	-418.71	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.95	6.58
		U_{28} - L_{28}	-240.66	-55.03	12.43	-12.59	-0.25	0.90	1.17	13.07	-57.89	-0.25	-12.59	Vehicle	Vehicle	-----	-438.29	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	4.41	7.35
		U_{29} - L_{29}	-202.76	-47.37	18.92	-10.35	0.00	0.90	1.17	19.91	-49.83	0.00	-10.35	Vehicle	Vehicle	-----	-371.55	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	5.87	9.78
		U_{30} - L_{30}	-516.45	-36.45	-63.45	-8.21	-13.75	0.90	1.18	-38.81	-67.56	-8.21	-13.75	Vehicle	Vehicle	-----	-817.75	11.02	51.81	40.7900	1709.73	131.71	25.6094	4.0330	57.15	29.89	-1316.46	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	4.41	7.35
		U_{31} - L_{31}	-318.62	8.73	-71.19	0.00	-12.96	0.90	1.18	9.29	-75.80	0.00	-12.96	Vehicle	Vehicle	-----	-578.42	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	2.94	4.90
		U_{32} - L_{32}	-358.52	2.83	-73.88	-0.25	-14.65	0.90	1.18	3.01	-78.65	-0.25	-14.65	Vehicle	Vehicle	-----	-636.49	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	3.38	5.64
		U_{33} - L_{33}	-325.85	4.30	-72.59	0.00	-13.51	0.90	1.18	4.58	-77.28	0.00	-13.51	Vehicle	Vehicle	-----	-591.05	2.42	38

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.61	0.00	58.88	14.00	-4.60	0.90	1.24	65.55	0.00	14.00	-4.60	Vehicle	Pedestrian	255.91	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**4.57**	**7.61**	-----	-----
		U_1 - L_2	23.84	-22.94	46.90	-4.72	9.20	0.90	1.24	52.22	-25.54	9.20	-4.72	Vehicle	Vehicle	144.14	-24.34	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.64**	**7.73**	**8.44**	**14.06**
		U_2 - L_3	-49.05	-19.20	9.62	-4.33	3.33	0.90	1.24	10.71	-21.37	3.33	-4.33	Vehicle	Vehicle	-----	-110.06	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.01**	**13.34**
		U_3 - L_4	-108.90	-17.48	-12.29	-4.21	-2.10	0.90	1.24	-13.68	-19.46	-2.10	-4.21	Vehicle	Vehicle	-----	-183.73	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.01**	**11.69**
		U_4 - L_4	153.14	8.80	50.68	3.12	7.00	0.90	1.24	56.42	9.80	7.00	3.12	Vehicle	Vehicle	321.33	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.95**	**6.58**	-----	-----
		U_5 - L_5	186.37	1.96	59.78	2.79	10.66	0.90	1.24	66.55	2.18	10.66	2.79	Vehicle	Pedestrian	386.49	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.19**	**6.98**	-----	-----
		U_6 - L_6	177.53	-14.70	57.27	1.60	12.54	0.90	1.24	63.76	-16.37	12.54	1.60	Vehicle	Vehicle	368.93	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.45**	**7.42**	-----	-----
		U_7 - L_7	173.15	-3.25	49.79	0.41	13.46	0.90	1.24	55.43	-3.62	13.46	0.41	Vehicle	Vehicle	345.19	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.17**	**8.61**	-----	-----
		U_8 - L_8	328.03	-2.79	83.22	-0.14	19.45	0.90	1.20	89.73	-3.00	19.45	-0.14	Vehicle	Vehicle	620.84	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.24**	**7.07**	-----	-----
		U_9 - L_{10}	339.64	-1.24	82.81	0.85	18.90	0.90	1.20	89.28	-1.34	18.90	0.85	Vehicle	Vehicle	634.98	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.18**	**6.97**	-----	-----
		U_{10} - L_{11}	313.15	4.79	85.51	1.69	16.46	0.90	1.20	92.19	5.16	16.46	1.69	Vehicle	Vehicle	606.85	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**3.89**	**6.48**	-----	-----
		U_{11} - L_{12}	270.62	5.81	78.01	1.81	13.03	0.90	1.20	84.11	6.27	13.03	1.81	Vehicle	Vehicle	534.03	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.62**	**6.03**	-----	-----
		U_{12} - L_{13}	194.11	-1.38	52.67	0.00	10.79	0.90	1.20	56.79	-1.48	10.79	0.00	Vehicle	Vehicle	375.39	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**4.62**	**7.69**	-----	-----
		U_{13} - L_{14}	123.52	-14.33	46.86	0.00	5.97	0.90	1.20	50.52	-15.45	5.97	0.00	Vehicle	Vehicle	270.04	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.61**	**6.02**	-----	-----
		U_{15} - L_{14}	-16.31	-19.24	33.14	-2.35	1.47	0.90	1.20	35.73	-20.74	1.47	-2.35	Vehicle	Vehicle	56.22	-66.15	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.46**	**12.43**	**9.03**	**15.04**
		U_{15} - L_{15}	59.11	-10.47	44.16	-2.09	6.08	0.90	1.20	47.61	-11.29	6.08	-2.09	Vehicle	Vehicle	180.00	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.64**	**7.74**	-----	-----
		U_{17} - L_{16}	172.05	-11.17	61.06	-1.86	9.93	0.90	1.20	65.83	-12.04	9.93	-1.86	Vehicle	Vehicle	366.31	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.21**	**5.35**	-----	-----
		U_{18} - L_{17}	210.69	-9.46	59.21	-1.53	12.50	0.90	1.20	63.84	-10.20	12.50	-1.53	Vehicle	Vehicle	412.23	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.13**	**6.89**	-----	-----
		U_{19} - L_{18}	242.30	-7.55	61.67	-1.21	13.72	0.90	1.20	66.49	-8.14	13.72	-1.21	Vehicle	Vehicle	459.06	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.22**	**7.04**	-----	-----
		U_{20} - L_{19}	257.77	-6.20	50.18	-1.03	15.71	0.90	1.20	54.10	-6.69	15.71	-1.03	Vehicle	Vehicle	452.32	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.02**	**8.36**	-----	-----
		U_0 - L_1	299.01	-5.67	57.43	-2.21	14.21	0.90	1.18	61.14	-6.04	14.21	-2.21	Vehicle	Pedestrian	521.18	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.70**	**7.83**	-----	-----
		U_1 - L_2	284.23	-16.81	82.35	-2.66	14.05	0.90	1.18	87.68	-17.90	14.05	-2.66	Vehicle	Vehicle	559.47	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.38**	**5.63**	-----	-----
		U_2 - L_3	221.45	-17.93	74.14	-2.85	11.83	0.90	1.18	78.94	-19.09	11.83	-2.85	Vehicle	Vehicle	458.91	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_3 - L_4	178.33	-20.24	68.97	-3.23	10.08	0.90	1.18	73.43	-21.55	10.08	-3.23	Vehicle	Vehicle	390.93	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**3.26**	**5.43**	-----	-----
		U_4 - L_5	53.52	-17.28	45.46	-2.87	5.38	0.90	1.18	48.40	-18.40	5.38	-2.87	Vehicle	Vehicle	174.44	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.64**	**7.73**	-----	-----
		U_5 - L_6	-16.50	-24.07	37.60	-2.92	2.23	0.90	1.18	40.03	-25.62	2.23	-2.92	Vehicle	Vehicle	65.28	-76.97	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.66**	**11.10**	**7.24**	**12.07**
		U_6 - L_7	-133.20	-43.52	13.12	-2.50	-2.48	0.90	1.18	13.97	-46.33	-2.48	-2.50	Vehicle	Vehicle	-----	-273.55	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.93**	**4.88**
		U_7 - L_7	208.77	-11.40	54.05	0.00	8.33	0.90	1.18	57.54	-12.14	8.33	0.00	Vehicle	Vehicle	396.07	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**4.11**	**6.86**	-----	-----
		U_8 - L_8	289.58	0.25	69.19	0.00	8.99	0.90	1.18	73.66	0.27	8.99	0.00	Vehicle	Vehicle	536.06	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.43**	**5.71**	-----	-----
		U_{10} - L_9	327.97	-0.25	69.27	1.53	11.09	0.90	1.18	73.75	-0.27	11.09	1.53	Vehicle	Pedestrian	586.15	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.66**	**6.10**	-----	-----
		U_{11} - L_{10}	349.27	-4.54	76.06	0.55	12.45	0.90	1.18	80.98	-4.83	12.45	0.55	Vehicle	Vehicle	629.50	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.67**	**6.11**	-----	-----
		U_{12} - L_{11}	358.20	-10.94	69.96	0.48	13.32	0.90	1.18	74.48	-11.65	13.32	0.48	Vehicle	Vehicle	627.03	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.92**	**6.53**	-----	-----
		U_{13} - L_{12}	307.76	-21.34	58.06	-0.24	12.26	0.90	1.18	61.81	-22.72	12.26	-0.24	Vehicle	Vehicle	534.02	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.56**	**7.60**	-----	-----
		U_{14} - L_{13}	260.25	-13.56	48.04	-1.50	11.73	0.90	1.18	51.15	-14.43	11.73	-1.50	Vehicle	Vehicle	449.15	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.07**	**10.11**	-----	-----
		U_{14} - L_{15}	208.41	-9.07	66.31	-2.52	11.04	0.90	1.17	69.76	-9.54	11.04	-2.52	Vehicle	Vehicle	422.08	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.80**	**6.34**	-----	-----
		U_{15} - L_{16}	243.53	-6.24	74.31	-1.48	11.54	0.90	1.17	78.18	-6.56	11.54	-1.48	Vehicle	Vehicle	485.97	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{16} - L_{17}	255.83	-9.47	75.20	-0.85	11.67	0.90	1.17	79.12	-9.96	11.67	-0.85	Vehicle	Vehicle	503.99	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.45**	**5.74**	-----	-----
		U_{17} - L_{18}	235.25	-11.09	77.14	-0.75	10.45	0.90	1.17	81.16	-11.67	10.45	-0.75	Vehicle	Vehicle	481.67	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.07**	**5.12**	-----	-----
		U_{18} - L_{19}	212.06	-13.54	67.16	0.01	8.95	0.90	1.17	70.66	-14.25	8.95	0.01	Vehicle	Vehicle	428.76	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.72**	**6.21**	-----	-----
	Structure 2	U_{19} - L_{20}	168.18	-15.00	62.84	0.06	9.14	0.90	1.17	66.11	-15.78	9.14	0.06	Vehicle	Vehicle	361.88	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.95**	**6.58**	-----	-----
		U_{20} - L_{21}	97.21	-14.62	46.98	0.45	6.66	0.90	1.17	49.42	-15.38	6.66	0.45	Vehicle	Vehicle	233.45	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.01**	**6.69**	-----	-----
		U_{21} - L_{22}	30.55	-27.72	35.16	0.58	3.66	0.90	1.17	36.99	-29.16	3.66	0.58	Vehicle	Vehicle	119.86	-23.46	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.44**	**10.74**	**7.33**	**12.21**
		U_{23} - L_{22}	49.81	-17.44	42.12	-0.72	5.11	0.90	1.17	44.31	-18.35	5.11	-0.72	Vehicle	Vehicle	160.76	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.12**	**8.53**	-----	-----
		U_{24} - L_{23}	115.09	-16.31	50.12	-0.72	8.00	0.90	1.17	52.73	-17.16	8.00	-0.72	Vehicle	Vehicle	263.86	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.56**	**5.93**	-----	-----
		U_{25} - L_{24}	179.20	-15.86	62.19	-0.73	10.10	0.90	1.17	65.43	-16.69	10.10	-0.73	Vehicle	Vehicle	374.74	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.89**	**6.48**	-----	-----
		U_{26} - L_{25}	220.95	-13.91	65.78	-0.57	11.89	0.90	1.17	69.21	-14.63	11.89	-0.57	Vehicle	Vehicle	437.18	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.73**	**6.21**	-----	-----
		U_{27} - L_{26}	234.79	-9.18	67.56	-0.35	11.44	0.90	1.17	71.08	-9.66	11.44	-0.35	Vehicle	Vehicle	459.24	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.51**	**5.85**	-----	-----
		U_{28} - L_{27}	253.01	-9.97	62.31	-0.28	12.25	0.90	1.17	65.56	-10.49	12.25	-0.28	Vehicle	Vehicle	470.96	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.18**	**6.97**	-----	-----
		U_{29} - L_{28}	215.83	-21.29	52.65	0.00	10.20	0.90	1.17	55.40	-22.40	10.20	0.00	Vehicle	Vehicle	400.60	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.71**	**7.85**	-----	-----
		U_{30} - L_{29}	179.92	-10.37	43.75	-0.93	8.89	0.90	1.17	46.03	-10.91	8.89	-0.93	Vehicle	Vehicle	333.62	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.14**	**10.23**	-----	-----
		U_{30} - L_{31}	294.37	-10.08	65.14	-1.65	12.88	0.90	1.18	69.35	-10.73	12.88	-1.65	Vehicle	Vehicle	532.93	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.18**	**6.97**	-----	-----
		U_{31} - L_{32}	342.78	-9.22	77.03	-0.55	13.71	0.90	1.18	82.02	-9.82	13.71	-0.55	Vehicle	Vehicle	623.32	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.18**	**5.30**	-----	-----
		U_{32} - L_{33}	363.31	-3.36	80.73	0.37	13.77	0.90	1.18	85.95	-3.57	13.77	0.37	Vehicle	Vehicle	658.53	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spreads

Loading:	HS20 Truck
Condition:	As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-U_1	-131.25	-22.60	3.99	-13.40	-11.24	-4.16	52.09	-179.01	-150.20	-50.54
	U_1-U_2	-54.49	-51.15	0.61	-5.23	-8.12	-13.86	8.13	-3.11	-108.45	-185.22
	U_2-U_3	-139.27	-54.72	4.68	-13.15	-13.52	-4.72	-173.50	60.53	-116.61	-75.06
	U_3-U_4	-52.26	-51.06	2.78	-6.43	-12.40	-4.15	37.07	-59.16	-165.66	-55.48
	U_4-U_5	-28.29	-50.99	3.09	-5.23	-11.95	-4.01	41.28	-57.21	-249.21	-45.30
	U_5-U_6	2.12	-145.13	3.64	-4.04	-13.94	-3.38	48.64	-53.37	-180.82	-45.18
	U_6-U_7	84.93	-69.27	3.86	-2.75	-14.98	-2.50	51.67	-33.27	-136.35	-21.58
	U_7-U_8	-69.92	-603.38	2.37	4.40	-19.79	22.64	31.72	58.81	-264.36	302.39
	L_0-L_1	531.73	-129.19	12.84	-12.50	-0.45	0.74	166.13	-161.74	-5.77	9.59
	L_1-L_2	68.54	-61.95	3.05	-2.73	-3.40	-2.02	114.49	-19.34	-6.29	0.46
	L_2-L_3	100.48	-176.70	3.86	3.68	-3.63	-3.24	49.92	39.84	-47.02	-41.91
	L_3-L_4	100.48	-160.18	3.41	3.68	-3.63	-3.24	57.03	39.84	-84.87	-41.91
	L_4-L_5	-56.66	-218.08	3.43	1.17	-10.07	-6.27	44.39	-15.12	-130.25	-81.15
	L_5-L_6	-56.66	-173.90	3.43	1.17	-10.07	-6.27	44.39	-15.12	-130.25	-81.15
	L_6-L_7	-287.80	-237.44	2.98	1.71	-26.40	-16.54	38.52	22.15	-341.63	-213.95
	L_7-L_8	-196.20	-337.71	2.90	0.17	-17.34	-7.89	37.50	2.19	-224.31	-102.03
	L_8-L_9	-269.63	-154.75	1.25	-0.20	-25.83	-7.48	12.12	-23.60	-163.86	-113.39
	L_9-L_{10}	-189.93	-29.96	0.96	-0.89	-16.01	-3.69	12.36	-11.43	-207.08	-47.74
	L_{10}-L_{11}	-179.63	-39.55	0.86	-0.40	-13.90	-2.24	11.95	-8.34	-249.72	-33.13
	L_{11}-L_{12}	-249.78	-258.69	0.83	-2.10	-17.43	-12.25	10.70	-27.20	-225.48	-158.55
	L_{12}-L_{13}	-28.62	-172.11	1.43	-13.81	-6.27	-6.62	94.90	-176.47	-80.16	-84.68
	L_{13}-L_{14}	-24.91	-195.34	1.43	-13.81	-6.27	-6.62	94.90	-176.47	-80.09	-84.68
	L_{14}-L_{15}	-53.03	-283.30	4.04	-7.20	-10.25	-7.24	43.01	-58.57	-332.09	-368.82
	L_{15}-L_{16}	-53.03	-283.30	4.04	-7.20	-10.25	-7.24	51.67	-91.98	-130.92	-92.46
	L_{16}-L_{17}	-360.46	-389.97	0.96	-1.92	-23.20	-13.66	12.21	-24.47	-296.36	-174.54
	L_{17}-L_{18}	-403.42	-344.73	0.96	-2.44	-23.20	-13.66	12.03	-31.92	-296.36	-234.05
	L_{18}-L_{19}	-349.63	-209.87	4.55	-6.49	-23.79	-33.25	58.15	57.39	-303.94	-424.85
	L_{19}-L_{20}	-253.78	-280.71	3.53	-4.89	-33.50	-10.89	45.13	82.43	-427.97	-139.10
	L_{20}-L_{21}	-330.32	-53.64	3.53	-4.89	-33.50	-10.89	45.13	-53.64	-427.97	-139.10
	L_{21}-L_{22}	-237.02	-39.91	5.08	-6.43	-23.02	-2.83	64.96	82.13	-294.11	-36.09
	L_{22}-L_{23}	-237.02	-39.91	5.08	-6.43	-23.02	-2.83	64.96	-53.37	-294.11	-36.09
	L_{23}-L_{24}	-116.69	-110.75	5.43	-6.43	-20.27	-1.38	69.38	-55.88	-259.03	-17.67
	L_{24}-L_{25}	-116.69	-110.75	5.43	-6.43	-20.27	-1.38	69.38	-55.88	-259.03	-17.67
	L_{25}-L_{26}	-211.04	-121.68	4.08	-4.34	-23.85	-29.79	52.13	-55.44	-304.68	-380.65
	L_{26}-L_{27}	-1028.71	-26.69	-26.52	-26.99	-1.26	1.15	334.78	-264.97	-15.84	14.47
	L_{27}-L_{28}	-1152.13	-806.37	-26.52	-26.99	-1.26	1.15	334.78	-264.97	-15.84	14.47
	L_{28}-L_{29}	-271.35	-25.19	-7.62	-7.56	-5.26	-4.62	96.25	-99.43	-66.37	-58.34
	L_{29}-L_{30}	-341.75	-223.74	4.70	-5.35	-6.33	-7.28	96.25	-99.43	-66.37	-58.34
	L_{30}-L_{31}	-156.55	-8.67	5.35	-6.33	-7.28	-6.29	67.56	-79.87	-91.91	-79.26
	L_{31}-L_{32}	-48.55	-11.41	5.09	-6.10	-13.41	-9.47	64.27	51.76	-169.28	-119.59
	L_{32}-L_{33}	-48.55	-11.41	5.09	-6.10	-13.41	-9.47	64.27	-51.76	-169.28	-119.59
Structure 2	L_{33}-L_{34}	-92.57	-65.85	2.05	2.23	-17.23	-26.18	25.87	28.15	-217.52	-330.48
	L_{34}-L_{35}	-92.57	-65.85	2.05	2.23	-17.23	-26.18	25.87	28.15	-217.52	-330.48
	L_{35}-L_{36}	-48.31	-31.52	3.74	-0.49	-22.02	-3.77	47.23	-6.03	-278.01	-47.60
	L_{36}-L_{37}	-10.77	-13.83	3.83	4.74	-18.68	0.54	40.19	59.81	-235.88	6.79
	L_{37}-L_{38}	-10.77	-13.83	3.83	4.74	-18.68	0.54	40.19	59.81	-235.88	6.79
	L_{38}-L_{39}	-57.22	-122.85	4.05	3.65	-20.36	2.44	51.14	44.87	-257.04	30.79
	L_{39}-L_{40}	-40.66	-316.26	5.21	4.53	-19.78	2.21	48.67	22.27	-226.90	-51.41
	L_{40}-L_{41}	-85.41	-4.86	3.86	1.76	-18.76	4.07	48.67	22.27	-226.90	-51.41
	L_{41}-L_{42}	-152.13	-806.37	3.83	4.74	-18.68	0.54	36.35	-19.58	-224.39	-61.24
	L_{42}-L_{43}	-821.42	-89.58	26.08	-19.37	-1.58	-0.68	333.16	-247.52	-20.24	-8.73
	L_{43}-L_{44}	-25.52	-97.40	2.79	-1.77	-19.37	-1.58	28.42	-11.72	-19.32	-0.00
	L_{44}-L_{45}	-145.61	-52.49	5.59	-7.58	-4.71	-12.09	71.37	-96.90	-60.13	-104.48
	L_{45}-L_{46}	-17.52	-88.45	4.86	5.12	-7.57	-15.22	62.13	65.35	-96.73	-194.43
	L_{46}-L_{47}	-25.52	-97.40	2.79	-1.77	-19.37	-1.58	28.42	-11.72	-19.32	-0.00
	L_{47}-L_{48}	-75.13	-230.47	5.12	3.16	-13.59	-6.85	65.44	40.35	-173.68	-87.51
	L_{48}-L_{49}	-206.03	-13.62	5.12	3.16	-13.59	-6.85	55.25	40.35	-173.68	-87.51
	L_{49}-L_{50}	-64.17	-278.54	5.06	4.39	-32.71	-13.95	64.60	56.08	-417.93	-178.23
	L_{50}-L_{51}	-64.17	-278.54	5.06	4.39	-32.71	-13.95	64.60	56.08	-417.93	-178.23
	L_{51}-L_{52}	-274.89	-274.55	3.01	0.45	-32.92	-27.95	61.03	-5.70	-430.54	-367.15
	L_{52}-L_{53}	-296.96	-269.01	1.93	0.29	-30.99	-11.18	24.61	3.74	-395.90	-142.85
	L_{53}-L_{54}	-154.35	-34.80	1.29	-0.31	-17.09	-2.30	16.49	-3.97	-218.28	-29.41
	L_{54}-L_{55}	-154.35	-34.80	1.29	-0.31	-17.09	-2.30	16.49	-3.97	-218.28	-29.41
	L_{55}-L_{56}	-40.05	-167.81	6.49	-10.04	-9.69	-5.88	84.02	-129.94	-124.09	-76.08
	L_{56}-L_{57}	-10.43	-132.23	3.03	-13.38	-1.49	-2.69	39.14	-173.10	-19.21	-34.78
	L_{57}-L_{58}	-10.43	-132.23	3.03	-13.38	-1.49	-2.69	39.14	-173.10	-19.21	-34.78
	L_{58}-L_{59}	-140.08	-280.72	6.46	-2.19	-13.46	-17.09	5.98	-28.32	-174.20	-221.08
	L_{59}-L_{60}	-140.08	-280.72	6.46	-2.19	-13.46	-17.09	5.98	-28.32	-174.20	-221.08
	L_{60}-L_{61}	-187.91	-275.87	1.62	2.24	-16.19	-22.94	20.91	29.03	-209.42	-296.79
	L_{61}-L_{62}	-322.39	-140.32	1.62	2.24	-16.19	-22.94	20.91	29.03	-209.42	-296.79
	L_{62}-L_{63}	-187.92	-104.84	1.22	2.54	-15.43	-11.54	15.80	45.78	-199.69	-149.30
	L_{63}-L_{64}	-147.74	-26.71	2.68	4.20	-18.87	-1.08	34.73	54.32	-244.15	-13.96
	L_{64}-L_{65}	-322.39	-140.32	1.62	2.24	-16.19	-22.94	20.91	29.03	-209.42	-296.79
	L_{65}-L_{66}	-10.81	-46.01	3.85	2.20	-10.32	1.20	24.52	14.13	-133.52	-15.47
	L_{66}-L_{67}	-10.81	-46.01	3.85	2.20	-10.32	1.20	24.52	14.13	-133.52	-15.47
	L_{67}-L_{68}	-426.14	-9.58	-12.69	-12.63	-0.65	0.76	238.96	-168.73	-83.59	-84.62
	L_{68}-L_{69}	-426.14	-9.58	-12.69	-12.63	-0.65	0.76	238.96	-168.73	-83.59	-84.62
	L_{69}-L_{70}	-128.06	-54.05	4.29	3.74	-3.65	-4.03	57.35	-49.96	-48.72	-58.04
	L_{70}-L_{71}	-70.11	-43.65	4.61	3.35	-9.01	-12.82	61.64	-44.71	-120.33	-171.31
	L_{71}-L_{72}	-70.11	-43.65	4.61	3.35	-9.01	-12.82	61.64	-44.71	-120.33	-171.31
	L_{72}-L_{73}	-8.37	-30.47	2.84	-4.07	-16.80	-11.29	37.94	-54.31	-224.40	-160.78

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula (.8 Term * F'$_y$*S_{top})	M_u (k-in)	Equivalent Mom. Factor a	$C_{b(x)}$	$C_{b(y)}$
Structure 1	U_0-U_1	-67.79	-417.23	-486.08	-149.71	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.302	0.72
	U_1-U_2	-53.18	-172.24	-335.82	-467.80	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.654	0.96
	U_2-U_3	-143.68	-77.23	-333.73	-90.2	90.2	90.24	76.71	127.35	2147	1328.6	1.41	4206	0.99880041	2974.3	0.096	0.64
	U_3-U_4	12.38	-207.54	-426.87	-40.84	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.096	0.64
	U_4-U_5	52.67	-180.19	-334.82	-31.41	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.096	0.64
	U_5-U_6	108.15	-393.51	-389.02	90.77	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	-0.223	0.51
	U_6-U_7	23.50	-1301.75	-1927.75	-329.88	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899521	6214.6	0.893	0.98
	U_7-U_8	-220.14	-63.76	-695.58	-142.40	127.3	127.32	110.40	186.23	3668	2526.5	1.46	6146	0.99907190	4197.7	0.205	0.68
	L_0-L_1	-209.00	-64.05	-523.16	-58.25	104.5	104.75	86.43	150.33	2599	1554.3	1.44	4971	0.99880042	3452.8	0.093	0.64
	L_1-L_2	-301.52	277.37	-913.24	679.81	104.5	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.8	0.636	0.27
	L_2-L_3	168.42	-606.09	-210.88	-407.22	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.278	0.49
	L_3-L_4	17.48	-600.09	-196.15	-407.22	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.278	0.49
	L_4-L_5	43.01	-567.37	-332.09	-568.82	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9820	0.99857	7005.5	0.020	0.85
	L_5-L_6	43.01	-567.37	-332.09	-568.82	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9820	0.99857	7005.5	0.020	0.85
	L_6-L_7	442.13	-453.94	-1110.71	-885.12	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99899181	8298.1	0.797	0.92
	L_7-L_8	1033.31	-1.24	-1110.71	-885.12	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99899181	8298.1	0.797	0.92
	L_8-L_9	329.53	-146.63	-1113.05	-1191.79	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.934	0.91
	L_9-L_{10}	-232.15	-229.66	-1257.19	-666.30	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.530	0.81
	L_{10}-L_{11}	-224.76	-181.63	-1257.19	-666.30	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.530	0.81
	L_{11}-L_{12}	-167.36	229.30	-849.34	-264.84	181.9	181.87	147.20	249.02	3787	2047.8	1.37	7089	0.99864772	5992.8	0.028	0.61
	L_{12}-L_{13}	-23.92	-187.59	-1058.28	-1027.46	181.9	181.87	147.20	249.02	3787	2047.8	1.37	7089	0.99864772	5992.8	0.028	0.61
	L_{13}-L_{14}	-1.39	343.06	-712.93	260.26	156.6	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.9	-0.365	0.45
	L_{14}-L_{15}	-1.39	343.06	-712.93	260.26	156.6	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.9	-0.365	0.45
	L_{15}-L_{16}	-48.09	-52.62	-1185.20	-1810.48	169.39	169.39	140.54	239.14	3703	1852.3	1.37	7089	0.99854421	5168.9	-0.026	0.61
	L_{16}-L_{17}	-56.68	-5.92	-1078.30	-934.49	2282.92	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853350	7310.6	-0.295	0.48
	L_{17}-L_{18}	-56.68	-5.92	-1078.30	-934.49	2282.92	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853350	7310.6	-0.295	0.48
	L_{18}-L_{19}	-14.72	32.46	-2.21	-1.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{19}-L_{20}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{20}-L_{21}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{21}-L_{22}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{22}-L_{23}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{23}-L_{24}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{24}-L_{25}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{25}-L_{26}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{26}-L_{27}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{27}-L_{28}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
Structure 2	L_{28}-L_{29}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{29}-L_{30}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{30}-L_{31}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{31}-L_{32}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{32}-L_{33}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{33}-L_{34}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{34}-L_{35}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{35}-L_{36}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{36}-L_{37}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{37}-L_{38}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{38}-L_{39}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{39}-L_{40}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{40}-L_{41}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{41}-L_{42}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{42}-L_{43}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{43}-L_{44}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{44}-L_{45}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{45}-L_{46}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{46}-L_{47}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{47}-L_{48}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{48}-L_{49}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{49}-L_{50}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{50}-L_{51}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{51}-L_{52}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{52}-L_{53}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{53}-L_{54}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{54}-L_{55}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{55}-L_{56}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{56}-L_{57}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{57}-L_{58}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{58}-L_{59}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{59}-L_{60}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{60}-L_{61}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{61}-L_{62}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{62}-L_{63}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{63}-L_{64}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{64}-L_{65}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{65}-L_{66}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23	8.56	1.00	29	0.99999999	42.6	-0.031	0.57
	L_{66}-L_{67}	-242.79	93.48	-1.21	-2.21	1.24	1.24	1.03	1.71	23

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Per AASHTO Standard Specification for Truss Bridges (LDF) 1965 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-In (kip-ft)	Dead Load End-In (kip-ft)	Live Load (Max) Start-In (kip-ft)	Live Load (Max) End-In (kip-ft)	Pedestrian Load (Max) Start-In (kip-ft)	Pedestrian Load (Max) End-In (kip-ft)	Lane Reduction & Impact Live Load Start-In (kip-ft)	Lane Reduction & Impact Live Load End-In (kip-ft)	Impact Pedestrian Load Max Start-In (kip-ft)	Impact Pedestrian Load Max End-In (kip-ft)
Structure 1	L_0-L_1	-49.04	-101.19	5.27	-7.31	-0.91	1.04	70.34	-97.67	-12.21	13.67
	L_1-U_1	-130.92	-112.57	2.28	-9.68	-6.14	-5.09	30.47	-129.28	-82.01	-68.01
	L_1-L_2	-73.47	-79.27	2.65	-12.67	-14.20	-14.20	16.74	38.11	-169.28	-189.62
	L_2-U_2	18.53	15.80	1.38	5.15	-15.70	-8.04	18.41	68.84	-209.68	-107.34
	L_2-L_3	-68.87	-310.29	4.01	-4.04	-19.99	-20.91	53.37	-314.51	-226.91	-29.32
	L_3-U_3	7.25	-228.45	3.10	5.99	-15.66	-4.12	41.39	-79.97	-141.12	-50.07
	L_3-L_4	62.67	-171.77	4.18	-0.30	-11.61	-1.62	39.58	-203.19	-43.33	-37.64
	L_4-U_4	7.98	-161.19	1.16	4.61	-7.14	11.16	15.46	61.53	-95.44	149.15
	L_4-L_5	439.37	-23.36	11.65	-1.27	-0.30	0.16	150.77	-16.47	-3.89	2.06
	L_5-U_5	204.91	-116.77	9.04	-4.06	-4.09	0.31	435.68	-67.39	-36.15	9.58
	L_5-L_6	168.36	-118.36	5.31	2.51	-4.12	-4.00	68.72	32.41	-53.35	-31.69
	L_6-U_6	234.93	-217.13	4.36	4.62	-4.37	-4.05	56.46	-111.58	-66.37	-49.71
	L_6-L_7	-19.53	-128.46	3.31	1.60	-8.50	-7.36	42.81	20.73	-109.99	-95.10
	L_7-U_7	175.73	-425.17	5.84	-21.46	-11.47	-13.41	75.52	-277.68	-148.46	-173.52
	L_7-L_8	-408.18	-20.60	1.38	-2.61	-25.39	-12.62	44.00	-85.73	-252.91	-109.37
	L_8-U_8	-209.34	-318.54	1.24	0.18	-16.11	-15.33	16.08	2.32	-208.44	-198.31
	L_8-L_9	-30.36	-77.07	3.53	1.22	-22.02	-4.11	12.72	-3.93	-202.02	-43.11
	L_9-U_9	-170.99	-20.48	0.49	-0.81	-10.19	-1.27	6.30	-10.43	-131.88	-16.37
	L_9-L_{10}	-408.18	-20.60	1.38	-2.61	-25.39	-12.62	44.00	-85.73	-252.91	-109.37
	L_{10}-U_{10}	-297.50	250.73	0.63	-1.36	-13.45	4.78	8.14	-14.47	-167.73	63.58
	L_{10}-L_{11}	-99.23	0.16	0.49	-0.49	-9.96	5.25	6.28	-6.33	-129.32	67.94
	L_{11}-U_{11}	5.36	-218.26	3.86	-10.77	-0.48	1.14	49.30	-137.56	-6.17	14.51
	L_{11}-L_{12}	16.78	-247.31	4.37	-12.25	-0.56	-2.50	56.61	-153.72	-26.14	37.31
	L_{12}-U_{12}	1.07	-191.80	4.01	-8.22	-5.92	-7.16	51.28	-105.07	-75.59	-91.50
	L_{12}-L_{13}	37.43	-287.1	4.77	-11.65	-4.27	-15.26	44.42	-148.79	-117.98	-164.90
	L_{13}-U_{13}	-286.08	-298.86	1.56	-12.51	-21.27	-13.91	19.96	-159.85	-271.81	-177.69
	L_{13}-L_{14}	-142.96	-454.19	1.92	-4.69	-23.72	-24.83	8.69	-61.72	-280.72	-268.33
	L_{14}-U_{14}	-467.27	-273.20	2.99	6.45	-28.47	-18.54	38.20	-56.82	-363.80	-236.90
	L_{14}-L_{15}	-310.47	-45.78	3.66	6.75	-26.06	-13.54	46.76	86.18	-332.89	-166.64
	L_{15}-U_{15}	-271.10	-237.91	2.31	0.34	-4.28	-12.62	55.95	52.18	-234.26	-164.53
	L_{15}-L_{16}	-261.82	-188.40	3.24	6.65	-14.69	-6.30	41.45	85.01	-187.66	-80.47
	L_{16}-U_{16}	-267.38	-999.23	1.13	3.61	-1.88	-4.28	71.69	25.14	-330.42	-80.76
	L_{16}-L_{17}	-131.41	-389.19	3.72	6.73	-12.95	4.69	47.52	85.93	-165.48	59.86
	L_{17}-U_{17}	-164.24	-140.43	1.88	-1.23	-16.27	-9.84	75.18	-15.68	-207.87	-125.67
	L_{17}-L_{18}	-267.38	-999.23	1.13	3.61	-1.88	-4.28	71.69	25.14	-330.42	-80.76
	L_{18}-U_{18}	-911.85	-326.76	23.11	-13.69	-0.97	-0.16	291.79	-172.78	-12.25	-20.91
	L_{18}-L_{19}	-289.04	-42.03	4.31	-2.91	-2.29	-1.34	56.56	-106.38	-206.28	-84.56
	L_{19}-U_{19}	-515.61	-35.20	9.93	-10.65	-4.97	-4.96	125.34	-134.50	-62.72	-87.88
	L_{19}-L_{20}	-252.11	-25.04	6.26	2.73	-7.43	-6.10	79.66	34.48	-83.79	-76.98
	L_{20}-U_{20}	-230.58	-46.22	4.53	-12.95	-8.59	-11.63	57.24	-163.45	-108.48	-146.86
	L_{21}-U_{21}	-43.89	-183.34	3.00	2.67	-15.60	-21.07	37.81	33.67	-196.92	-266.06
	L_{21}-L_{22}	-19.77	-39.81	4.35	3.57	-15.60	-21.07	37.81	33.67	-196.92	-266.06
	L_{22}-U_{22}	-104.37	-8.61	1.83	5.02	-19.30	-12.38	23.12	63.43	-243.60	-156.34
	L_{23}-U_{23}	-65.51	170.40	2.60	5.56	-12.36	-5.59	30.31	70.15	-155.99	-64.12
	L_{24}-U_{24}	-30.91	151.01	4.33	2.22	-15.68	-9.55	54.65	27.98	-198.00	-6.98
	L_{25}-U_{25}	-19.86	313.89	2.31	1.18	-7.01	-4.33	30.53	72.10	-113.03	0.00
	L_{26}-U_{26}	-19.86	-197.53	3.70	-2.90	-15.24	-10.51	46.66	-36.63	-192.43	-132.68
	L_{27}-U_{27}	-277.47	-133.99	1.87	4.04	-16.71	-10.51	75.29	-3.36	-275.51	-132.68
	L_{28}-U_{28}	-747.52	-264.15	23.87	-12.96	-1.39	0.12	304.95	-165.58	-17.71	1.52
	L_{29}-U_{29}	-140.80	-80.21	3.75	-0.99	-16.51	-1.52	47.85	-12.61	-210.95	-19.41
	L_{30}-U_{30}	-267.47	-113.99	1.87	4.04	-16.71	-10.51	75.29	-3.36	-275.51	-132.68
	L_{31}-U_{31}	-150.40	-145.70	6.64	-10.51	-3.31	-5.81	84.61	-134.29	-42.29	-74.28
	L_{32}-U_{32}	-143.80	-313.89	2.31	1.18	-7.01	-4.33	30.53	72.10	-113.03	0.00
	L_{33}-U_{33}	-95.69	-212.39	5.32	-8.79	-8.66	-10.47	67.93	-112.24	-110.63	-133.77
	L_{34}-U_{34}	-95.69	-212.39	5.32	-8.79	-8.66	-10.47	67.93	-112.24	-110.63	-133.77
	L_{35}-U_{35}	-182.72	-415.40	5.14	2.80	-27.07	-15.44	65.70	-35.76	-349.79	-197.32
	L_{36}-U_{36}	-370.16	-165.14	3.49	0.85	-30.16	-17.93	44.60	10.82	-385.32	-229.07
	L_{37}-U_{37}	-224.09	-276.61	3.49	-2.74	-23.18	-6.42	21.07	39.41	-299.91	-110.24
	L_{38}-U_{38}	-304.14	-22.17	1.43	-0.32	-21.75	-6.52	15.74	11.12	-277.94	-83.26
	L_{39}-U_{39}	-222.88	-59.03	1.09	-0.88	-13.81	-5.06	13.88	-11.22	-176.38	-0.75
	L_{40}-U_{40}	-222.88	-59.03	1.09	-0.88	-13.81	-5.06	13.88	-11.22	-176.38	-0.75
	L_{41}-U_{41}	42.77	-120.03	5.39	0.30	-0.44	0.46	69.78	-120.29	-6.58	-4.68
	L_{42}-U_{42}	-192.98	-177.52	5.10	-8.54	-0.54	2.80	66.04	-110.43	-6.97	-36.19
	L_{43}-U_{43}	55.38	-320.81	3.68	-7.60	-6.88	-8.89	47.56	-88.28	-89.62	-127.86
	L_{44}-U_{44}	-64.00	-370.85	3.71	-27.21	-15.57	-16.66	28.01	-326.23	-201.50	-215.45
	L_{45}-U_{45}	-370.60	-82.40	3.71	-2.14	-23.18	-6.42	21.07	39.41	-299.91	-110.24
	L_{46}-U_{46}	-200.70	-149.84	2.32	3.24	-11.55	2.88	26.12	41.88	-149.46	37.29
	L_{47}-U_{47}	-131.75	-166.74	1.82	-0.29	-10.32	-0.98	49.39	-3.70	-133.49	-12.73
	L_{48}-U_{48}	-37.08	-247.47	2.02	-0.29	-10.32	-0.98	49.39	-3.70	-133.49	-12.73
	L_{49}-U_{49}	-361.79	-17.90	12.72	-4.12	-0.52	0.11	169.91	-55.08	-4.21	1.52
	L_{50}-U_{50}	-61.95	21.70	0.39	-6.63	-4.57	-0.44	85.42	-88.63	-87.73	-67.00
	L_{51}-U_{51}	-189.89	5.64	0.34	-9.47	-6.05	-8.34	57.97	-126.54	-80.09	-111.41
	L_{52}-U_{52}	-38.98	-56.51	3.15	-1.45	-14.07	-4.23	42.11	-19.37	-187.96	-83.22
	L_{53}-U_{53}	-66.65	-25.79	0.89	-0.87	-8.41	-3.79	11.82	-11.62	-112.39	-52.17

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (kip-in)	Max. Pos. Mom. End (kip-in)	Max. Neg. Mom. Start (kip-in)	Max. Neg. Mom. End (kip-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (kip-in)	Formula 1.8 Term * F_y/S_top	M_z (kip-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}
Structure 1	L_0-L_1	88.65	-343.10	-80.20	-101.60	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.258	0.50	0.50
	L_1-U_1	236.23	-428.45	-72.49	-293.70	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.554	0.38	0.38
	L_1-L_2	-38.83	-20.65	-447.87	-514.27	99.5	99.53	91.00	129.40	3409	1372.0	1.26	4141	0.99911881	3294.8	-0.112	0.49	0.49
	L_2-U_2	63.97	169.70	-430.22	-212.04	99.9	99.93	84.14	129.49	3409	1372.0	1.26	4141	0.99911881	3294.8	0.493	0.80	0.80
	L_2-L_3	-26.54	539.37	-52.91	-326.12	74.6	74.62	52.39	76.68	1747	700.7	1.17	2080	0.99912251	3052.4	-0.085	0.37	0.37
	L_3-U_3	99.09	470.25	-296.33	177.67	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	0.211	0.68	0.68
	L_3-L_4	39.98	203.19	-423.32	-37.64	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	-0.416	0.29	0.29
	L_4-U_4	95.44	203.19	-149.15	-161.19	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	0.211	0.68	0.68
	L_4-L_5	150.77	-16.47	-3.89	2.06	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	0.211	0.68	0.68
	L_5-U_5	435.68	-361.35	95.58	-143.08	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.99914916	4726.1	-0.929	0.27	0.27
	L_5-L_6	367.72	-83.64	103.29	-265.86	92.6	92.56	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.227	0.51	0.51
	L_6-U_6	427.75	-523.98	142.89	-413.76	92.6	92.56	76.68	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.670	0.27	0.27
	L_6-L_7	67.37	-122.68	263.79	-373.04	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99922283	4288.6	0.707	0.88	0.88
	L_7-U_7	292.11	-1154.24	-93.17	-928.60	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99910S	5370.6	-0.340	0.46	0.46
	L_8-U_8	237.29	-409.09	-723.81	-843.77	179.7	179.69	170.68	251.43	6743	3050.7	1.40	8297	0.99913252	5924.6	0.858	0.94	0.94
	L_9-U_9	409.65	100.45	-1012.14	-553.19	153.9	153.89	138.16	206.43	5707	2460.7	1.34	7647	0.99914911	5273.9	-0.016	0.93	0.93
	L_{10}-U_{10}	208.64	4.02	-568.03	-8.84	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904481	3891.8	0.017	0.61	0.61
	L_{11}-U_{11}	252.68	315.78	-563.26	439.98	83.6	83.58	74.62	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.615	0.27	0.27
	L_{12}-U_{12}	119.40	-53.60	-408.32	147.41	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{13}-U_{13}	113.79	-581.79	-8.41	-252.28	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.196	0.52	0.52
	L_{14}-U_{14}	352.53	-604.63	-335.75	-1025.16	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.554	0.38	0.38
	L_{15}-U_{15}	521.28	-105.07	-75.59	-91.50	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{16}-U_{16}	71.69	-1117.81	-1228.28	-1228.28	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{17}-U_{17}	19.96	-159.85	-271.81	-177.69	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{18}-U_{18}	326.67	-734.85	-660.82	-373.53	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.805	0.92	0.92
	L_{19}-U_{19}	125.34	-134.50	-62.72	-87.88	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{20}-U_{20}	57.24	-163.45	-108.48	-146.86	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{21}-U_{21}	37.81	33.67	-196.92	-266.06	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{22}-U_{22}	23.12	63.43	-243.60	-156.34	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{23}-U_{23}	30.31	70.15	-155.99	-64.12	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{24}-U_{24}	54.65	27.98	-198.00	-6.98	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{25}-U_{25}	30.53	72.10	-113.03	0.00	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{26}-U_{26}	75.29	-36.14	-442.75	-544.26	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898780	7449.1	0.813	0.93	0.93
	L_{27}-U_{27}	252.39	-3.36	-442.75	-544.26	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898780	7449.1	0.813	0.93	0.93
	L_{28}-U_{28}	1631.84	-702.16	832.76	-340.34	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900222	8221.8	-0.430	0.43	0.43
	L_{29}-U_{29}	-76.38	-131.60	-646.10	-146.32	220.7	220.67	209.53	302.62	7480	3191.4	1.36	9927	0.99897012	7214.4	0.229	0.69	0.69
	L_{30}-U_{30}	252.39	-3.36	-442.75	-544.26	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898780	7449.1	0.813	0.93	0.93
	L_{31}-U_{31}	84.61	-134.29	-42.29	-74.28	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{32}-U_{32}	30.53	72.10	-113.03	0.00	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{33}-U_{33}	67.93	-112.24	-110.63	-133.77	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.722	0.31	0.31
	L_{34}-U_{34}	67.93	-112.24	-110.63	-133.77	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.722	0.31	0.31
	L_{35}-U_{35}	65.70	-35.76	-349.79	-197.32	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{36}-U_{36}	44.60	10.82	-385.32	-229.07	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{37}-U_{37}	21.07	39.41	-299.91	-110.24	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{38}-U_{38}	15.74	11.12	-277.94	-83.26	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{39}-U_{39}	13.88	-11.22	-176.38	-0.75	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{40}-U_{40}	13.88	-11.22	-176.38	-0.75	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{41}-U_{41}	69.78	-120.29	-6.58	-4.68	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{42}-U_{42}	66.04	-110.43	-6.97	-36.19	83.6	83.58	74.62	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.722	0.31	0.31
	L_{43}-U_{43}	47.56	-88.28	-89.62	-127.86	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{44}-U_{44}	28.01	-326.23	-201.50	-215.45	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{45}-U_{45}	21.07	39.41	-299.91	-110.24	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{46}-U_{46}	26.12	41.88	-149.46	37.29	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{47}-U_{47}	49.39	-3.70	-133.49	-12.73	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{48}-U_{48}	49.39	-3.70	-133.49	-12.73	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{49}-U_{49}	169.91	-55.08	-4.21	1.52	83.6	83.58	74.62	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.722	0.31	0.31
	L_{50}-U_{50}	85.42	-88.63	-87.73	-67.00	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{51}-U_{51}	57.97	-126.54	-80.09	-111.41	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{52}-U_{52}	42.11	-19.37	-187.96	-83.22	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46
	L_{53}-U_{53}	11.82	-11.62	-112.39	-52.17	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99905637	2755.5	-0.361	0.46	0.46

M_y Information

YY Axis Moments from STAAD

Location	Member	Dead Load Start-In (kip-ft)	Dead Load End-In (kip-ft)	Live Load (Max) Start-In (kip-ft)	Live Load (Max) End-In (kip-ft)	Pedestrian Load (Max) Start-In (kip-ft)	Pedestrian Load (Max) End-In (kip-ft)	Lane Reduction & Impact Live Load Start-In (kip-ft)	Lane Reduction & Impact Live Load End-In (kip-ft)	Impact Pedestrian Load Max Start-In (kip-ft)	Impact Pedestrian Load Max End-In (kip-ft)
Structure 1	L_0-L_1	-14.35	-52.74	-1.00	-3.71	0.00	0.00	-33.98	-134.66	-5.06	-18.63
	L_1-U_1	-40.95	-30.29	-45.11	-15.83	0.00	0.00	-131.70	-67.69	-61.25	-36.37
	L_1-L_2	-3.45	-11.68	-39.64	-17.14	0.00	0.00	-26.46	-9.61	-176.78	-21.38
	L_2-U_2	20.41	2.50	37.11	17.74	0.00	0.00	36.61	66.36	72.75	99.39
	L_2-L_3	16.66	0.09	-54.57	77.63	0.00	0.00	22.14	-54.23	-122.29	106.33
	L_3-U_3	9.43	2.15	59.21	14.46	0.00	0.00	57.34	123.21	165.19	87.23
	L_3-L_4	37.58	-20.33	-42.32	37.64	0.00	0.00	57.00	-99.33	-95.04	52.12
	L_4-U_4	20.01	43.91	61.87	3.35	0.00	0.00	-21.10	19.87	69.39	-74.52
	L_4-L_5	-15.53	24.80	-10.48	-6.97	0.00	0.00	-155.21	-89.96	-144.28	-163.12
	L_5-U_5	-41.09	-82.28	56.23	19.25	0.00	0.00	-158.56	-113.64	24.30	71.69
	L_6-U_6	6.37	19.08	-12.45	2.05	0.00	0.00	124.84	3.24	84.08	-33.63
	L_6-L_7	-44.78	8.16	22.32	-2.89	0.00	0.00	-81.75	-29.43	12.68	-158.16
	L_7-U_7	-16.55	-5.15	-3.23	19.10	0.00	0.00	58.48	50.55	87.51	103.08
	L_8-U_8	-15.97	-31.08	15.29	18.84	0.00	0.00	-18.13	-88.31	178.39	63.18
	L_9-U_9	3.36	-0.79	-0.82	0.24	0.00	0.00	-122.90	-98.89	-44.32	-53.01
	L_{10}-U_{10}	3.89	8.67	39.91	-41.30	0.00	0.00	-100.66	-64.47	24.80	-172.74
	L_{11}-U_{11}	7.84	6.43	-68.16	50.76	0.00	0.00	-109.94	-43.25	274.61	78.19
	L_{12}-U_{12}	2.81	3.82	32.71	-33.86	0.00	0.00	-69.13	-6.39	-4.34	-88.02
	L_{13}-U_{13}	4.97

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spreadsheet
Loading: HS20 Truck
Condition: As Inspected
Location: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.33	DL Factor:	1.50
LL Factor:	2.17	LL Factor:	1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 w/o 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_1~L_1	-55.75	82.39	0.68	-0.90	4.52	5.32	0.00	0.00	0.00	0.00
	L_1~L_2	-14.37	23.26	0.92	-0.92	4.32	4.21	0.00	0.00	0.00	0.00
	L_2~L_3	8.51	5.57	-1.25	-3.26	3.71	-0.18	0.00	0.00	0.00	0.00
	L_3~L_4	36.81	-39.20	1.73	-1.61	-2.72	2.97	0.00	0.00	0.00	0.00
	L_4~L_5	59.44	-69.31	2.98	39.77	-10.90	-12.53	12.81	0.00	0.00	0.00
	L_5~U_5	57.83	-70.07	3.85	-4.23	-0.20	0.03	0.00	0.00	0.00	0.00
	U_5~U_4	61.62	-74.39	3.30	-4.23	-0.30	-0.10	0.00	0.00	0.00	0.00
	U_4~U_3	102.14	-112.44	5.61	-5.78	-0.16	0.14	0.00	0.00	0.00	0.00
	U_3~U_2	10.55	7.04	7.39	-8.72	-4.93	5.91	0.00	0.00	0.00	0.00
	U_2~U_1	-144.53	166.25	0.40	-0.38	-0.35	0.41	0.00	0.00	0.00	0.00
	U_1~L_1	-101.27	95.46	0.19	-0.38	-4.07	4.39	0.00	0.00	0.00	0.00
	U_1~L_2	-111.05	108.51	0.45	-0.79	-4.47	3.25	0.00	0.00	0.00	0.00
	U_2~L_3	-96.41	93.86	0.67	-0.40	-4.42	4.41	0.00	0.00	0.00	0.00
	U_3~L_4	-60.90	75.93	0.86	-0.78	-3.98	4.24	0.00	0.00	0.00	0.00
	U_4~L_4	-33.93	51.16	0.86	-0.78	-2.63	2.85	0.00	0.00	0.00	0.00
	U_4~L_5	8.32	-15.89	3.58	-3.80	-2.03	1.99	0.00	0.00	0.00	0.00
	U_5~L_5	47.73	-50.39	3.57	-4.31	-0.95	0.70	0.00	0.00	0.00	0.00
	L_5~L_4	61.54	-72.81	4.32	-4.41	-0.60	0.60	0.00	0.00	0.00	0.00
	L_4~L_3	133.07	-136.05	6.87	-7.02	-1.83	1.82	0.00	0.00	0.00	0.00
	L_3~L_2	158.01	-154.56	7.87	-7.75	-0.85	0.76	0.00	0.00	0.00	0.00
	L_2~L_1	131.45	-213.61	5.89	-7.23	-0.51	-0.67	0.00	0.00	0.00	0.00
	L_0~L_1	64.09	187.26	0.65	-0.84	-0.79	7.16	0.00	0.00	0.00	0.00
	L_1~L_2	-122.98	131.23	0.80	-0.82	-6.43	6.37	0.00	0.00	0.00	0.00
	L_2~L_3	117.72	-125.50	0.98	-0.98	-5.41	5.41	0.00	0.00	0.00	0.00
	L_3~L_4	-62.37	68.66	0.63	-0.64	-3.44	3.47	0.00	0.00	0.00	0.00
	L_4~L_5	37.86	-43.18	0.62	-0.62	-3.01	3.01	0.00	0.00	0.00	0.00
	L_5~U_5	-9.72	15.71	1.52	-1.38	-3.43	3.66	0.00	0.00	0.00	0.00
	U_5~U_4	14.83	-14.93	2.15	-2.12	-2.73	2.88	0.00	0.00	0.00	0.00
	U_4~U_3	39.68	-40.44	2.32	-2.34	-2.60	2.85	0.00	0.00	0.00	0.00
	U_3~U_2	88.70	-97.90	4.52	-5.08	-1.01	0.91	0.00	0.00	0.00	0.00
	U_2~U_1	133.02	-133.03	6.91	-7.21	-0.31	1.30	0.00	0.00	0.00	0.00
	U_1~L_1	140.07	-146.97	6.21	-6.44	-0.33	-0.19	0.00	0.00	0.00	0.00
	U_1~L_2	148.94	-153.41	6.11	-6.32	-0.16	0.24	0.00	0.00	0.00	0.00
	U_2~L_3	141.94	-139.51	5.61	-5.82	-0.17	0.13	0.00	0.00	0.00	0.00
	U_3~L_4	105.37	-102.48	7.28	-6.91	-0.71	0.70	0.00	0.00	0.00	0.00
	U_4~L_4	72.78	7.91	5.77	-5.72	-0.61	0.50	0.00	0.00	0.00	0.00
	U_4~L_5	-128.23	-129.95	0.72	-0.64	6.20	5.88	0.00	0.00	0.00	0.00
	L_5~L_4	82.87	-82.87	0.72	-0.64	4.00	4.00	0.00	0.00	0.00	0.00
	L_4~L_3	-125.93	122.62	0.73	-0.69	4.87	6.85	0.00	0.00	0.00	0.00
	L_3~L_2	-109.68	106.90	0.97	-0.95	4.62	6.80	0.00	0.00	0.00	0.00
	L_2~L_1	-133.02	133.03	0.31	-0.31	7.21	1.30	0.00	0.00	0.00	0.00
	L_0~L_1	-43.26	43.75	0.84	-0.65	-3.77	3.85	0.00	0.00	0.00	0.00
	L_1~L_2	29.76	-29.76	2.30	-2.30	-2.61	2.61	0.00	0.00	0.00	0.00
	L_2~L_3	-5.29	1.62	1.95	-2.07	-2.38	2.53	0.00	0.00	0.00	0.00
	L_3~L_4	28.80	-32.71	3.79	-4.04	-2.49	2.49	0.00	0.00	0.00	0.00
	L_4~L_5	51.04	-52.46	14.41	-14.16	7.14	0.99	0.00	0.00	0.00	0.00
	L_5~U_5	62.64	-61.32	5.06	-4.95	-0.97	0.94	0.00	0.00	0.00	0.00
	U_5~U_4	108.55	-105.78	8.32	-8.39	-1.04	1.00	0.00	0.00	0.00	0.00
	U_4~U_3	108.55	-105.78	8.32	-8.39	-1.04	1.00	0.00	0.00	0.00	0.00
	U_3~U_2	114.59	-114.85	8.03	-7.62	-0.60	0.42	0.00	0.00	0.00	0.00
	U_2~U_1	132.83	-132.83	6.86	-6.86	-0.40	-0.40	0.00	0.00	0.00	0.00
	U_1~L_1	-122.25	119.98	0.79	-0.74	-5.79	5.34	0.00	0.00	0.00	0.00
	L_1~L_2	-93.65	87.71	0.64	-0.67	-5.26	5.24	0.00	0.00	0.00	0.00
	L_2~L_3	102.68	92.24	0.35	-0.34	-4.48	4.63	0.00	0.00	0.00	0.00
	L_3~L_4	-96.77	103.24	0.21	-0.11	-5.50	5.52	0.00	0.00	0.00	0.00
	L_4~L_5	39.68	-45.41	2.32	-2.34	-2.61	2.85	0.00	0.00	0.00	0.00
	L_5~U_5	-43.45	70.58	0.09	-0.47	4.62	4.76	0.00	0.00	0.00	0.00
	U_5~U_4	-32.67	38.68	0.94	-1.00	-2.87	3.21	0.00	0.00	0.00	0.00
	U_4~U_3	39.68	-45.41	2.32	-2.34	-2.61	2.85	0.00	0.00	0.00	0.00
	U_3~U_2	4.43	-6.37	3.32	-3.55	-2.11	1.99	0.00	0.00	0.00	0.00
	U_2~U_1	-144.53	166.25	0.40	-0.38	-0.35	0.41	0.00	0.00	0.00	0.00
	U_1~L_1	47.21	-50.58	4.03	-4.19	-0.76	0.77	0.00	0.00	0.00	0.00
	L_1~L_2	91.75	-97.49	4.03	-4.19	-0.60	0.59	0.00	0.00	0.00	0.00
	L_2~L_3	104.42	-111.67	7.68	-7.77	-1.10	1.03	0.00	0.00	0.00	0.00
	L_3~L_4	108.14	-132.78	9.46	-7.64	-0.55	0.90	0.00	0.00	0.00	0.00
	L_4~L_5	-23.31	62.85	0.46	-0.64	4.61	4.76	0.00	0.00	0.00	0.00
	L_5~U_5	-109.30	117.29	0.56	-0.63	6.01	5.94	0.00	0.00	0.00	0.00
	U_5~U_4	-48.62	58.77	0.46	-0.47	3.53	3.65	0.00	0.00	0.00	0.00
	U_4~U_3	-23.31	62.85	0.46	-0.64	4.61	4.76	0.00	0.00	0.00	0.00
	U_3~U_2	-5.41	11.54	1.30	-1.22	-3.96	4.13	0.00	0.00	0.00	0.00
	U_2~U_1	27.84	30.65	2.42	-2.51	-2.00	2.16	0.00	0.00	0.00	0.00
	U_1~L_1	28.13	42.86	0.78	-0.78	-1.27	1.27	0.00	0.00	0.00	0.00
	L_1~L_2	85.72	83.00	4.36	-4.46	-0.53	0.74	0.00	0.00	0.00	0.00
	L_2~L_3	94.97	87.87	4.95	-5.50	-0.68	0.21	0.00	0.00	0.00	0.00
	L_3~L_4	139.42	154.57	8.30	-6.80	-0.22	0.20	0.00	0.00	0.00	0.00
	L_4~L_5	-42.86	69.52	0.35	-0.34	4.48	4.63	0.00	0.00	0.00	0.00
	L_5~U_5	-36.85	40.05	0.11	0.07	-3.19	3.61	0.00	0.00	0.00	0.00
	U_5~U_4	-36.85	40.05	0.11	0.07	-3.19	3.61	0.00	0.00	0.00	0.00
	U_4~U_3	-39.84	39.91	0.84	-0.65	-2.64	2.82	0.00	0.00	0.00	0.00
	U_3~U_2	-38.88	40.30	2.21	-2.48	-2.69	2.77	0.00	0.00	0.00	0.00
	U_2~U_1	-13.42	14.14	3.71	-4.34	-1.32	1.50	0.00	0.00	0.00	0.00
	U_1~L_1	5.87	-9.62	5.32	-4.99	-1.39	1.23	0.00	0.00	0.00	0.00
	U_2~L_2	20.18	-40.81	3.19	-5.39	-1.93	-0.62	0.00	0.00	0.00	0.00
Structure 2	U_6~L_6	99.06	-131.45	5.20	-6.39	-0.25	-0.15	0.00	0.00	0.00	0.00
	L_6~L_5	94.97	-87.87	4.95	-5.50	-0.08	0.21	0.00	0.00	0.00	0.00
	U_5~L_5	139.42	154.57	8.30	-6.80	-5.22	0.20	0.00	0.00	0.00	0.00
	U_5~L_6	52.79	-74.30	5.51	-7.04	-5.86	6.65	0.00	0.00	0.00	0.00
	U_6~L_6	-62.86	69.52	0.35	-0.34	-4.48	4.63	0.00	0.00	0.00	0.00
	U_6~L_5	-41.64	35.38	0.20	-0.35	-3.93	4.10	0.00	0.00	0.00	0.00
	U_5~L_5	-36.85	40.05	0.11	0.07	-3.19	3.61	0.00	0.00	0.00	0.00
	U_5~L_6	-39.84	39.91	0.84	-0.65	-2.64	2.82	0.00	0.00	0.00	0.00
	U_6~L_6	-38.88	40.30	2.21	-2.48	-2.69	2.77	0.00	0.00	0.00	0.00
	U_6~L_5	-13.42	14.14	3.71	-4.34	-1.32	1.50	0.00	0.00	0.00	0.00
	U_5~L_5	5.87	-9.62	5.32	-4.99	-1.39	1.23	0.00	0.00	0.00	0.00
	U_6~L_6	20.18	-40.81	3.19	-5.39	-1.93	-0.62	0.00	0.00	0.00	0.00
Structure 3	U_6~L_6	67.33	-82.70	-3.20	-1.98	0.00	0.00	0.00	0.00	0.00	0.00
	L_6~L_5	64.03	-71.21	-1.06	2.68	0.00	0.00	0.00	0.00	0.00	0.00
	U_5~L_5	81.52	-87.94	-2.86	2.52	0.00	0.00	0.00	0.00	0.00	0.00
	U_5~L_6	73.58	-94.05	-16.29	88.63	0.00	0.00	0.00	0.00	0.00	0.00
	U_6~L_6	67.33	-82.70	-3.20	-1.98	0.00	0.00	0.00	0.00	0.00	0.00
	L_6~L_5	64.03	-71.21	-1.06	2.68	0.00	0.00	0.00	0.00	0.00	0.00
	U_5~L_5	81.52	-87.94	-2.86	2.52	0.00	0.00	0.00	0.00	0.00	0.00
	U_5~L_6	73.58	-94.05	-16.29	88.63	0.00	0.00	0.00	0.00	0.00	0.00
	U_6~L_6	99.06	-131.45	5.20	-6.39	-0.25	-0.15	0.00	0.00	0.00	0.00
	L_6~L_5	94.97	-87.87	4.95	-5.50	-0.08	0.21	0.00	0.00	0.00	0.00
	U_5~L_5	139.42	154.57	8.30	-6.80	-5.22	0.20	0.00	0.00	0.00	0.00
	U_5~L_6	52.79	-74.30	5.51	-7.04	-5.86	6.65	0.00	0.00	0.00	0.00
	U_6~L_6	-62.86	69.52	0.35	-0.34	-4.48	4.63	0.00	0.00	0.00	0.00
	U_6~L_5	-41.64	35.38	0.20	-0.35	-3.93	4.10	0.00	0.00	0.00	0.00
	U_5~L_5	-36.85	40.05	0.11	0.07	-3.19	3.61	0.00	0.00	0.00	0.00
	U_5~L_6	-39.84	39.91	0.84	-0.65	-2.64	2.82	0.00	0.00	0.00	0.00
	U_6~L_6	-38.88	40.30	2.21	-2.48	-2.69	2.77	0.00	0.00	0.00	0.00
	U_6~L_5	-13.42	14.14	3.71	-4.34	-1.32	1.50	0.00	0.00	0.00	0.00
	U_5~L_5	5.87	-9.62	5.32	-4.99	-1.39	1.23	0.00	0.00	0.00	0.00
	U_6~L_6	20.18	-40.81	3.19	-5.39	-1.93	-0.62	0.00	0.00	0.00	0.00

ZZ Axis Moment Properties

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{top}$	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	$C_{m(x)}$
Structure 1	U_1~L_1	-52.67	81.18	-203.59	261.19	13.2	13.18	15.42	20.35	2	618.4	1.54	672	1.5
	L_1~L_2	8.01	3.55	-143.58	151.95	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_2~L_3	-40.16	-43.34	-65.95	100.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_3~L_4	97.93	-92.42	-30.85	40.15	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_4~L_5	-151.09	148.40	-43.11	43.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_5~U_5	-186.48	-213.41	-69.36	-90.10	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_5~U_4	-186.48	-213.41	-69.36	-90.10	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_4~U_3	-211.42	-222.18	-74.32	-93.12	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_3~U_2	295.19	-313.40	128.29	-142.27	16.2	16.18	18.36	27.38	3	928.7	1.69	954	1.5
	U_2~U_1	200.14	-243.31	-166.48	180.25	107.1	107.13	107.11	162.71	26	2058.9	1.52	5369	1.5
	U_1~L_1	-176.91	205.50	-326.69	359.25	31.4	31.42	32.91	52.07	14	1356.6	1.65	1718	1.5
	U_1~L_2	-126.39	113.09	-245.84	247.06	32.8	32.76	33.44	54.32	14	1238.0	1.66	1793	1.5
	L_2~L_3	-137.86	209.22	-249.61	352.39	32.8	32.76	42.74	63.30	14	1389.6	1.53	2155	1.5
	L_3~L_4	-106.52	110.94	-249.35	245.84	21.1	21.09	21.09	39.48	10	1137.6	1.68	1170	1.5
	L_4~L_5	-54.95	76.92	-160.80	217.43	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	L_5~U_5	-7.42	-1.40	-117.75	122.46	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_5~U_4	-111.09	-127.08	-45.98	35.17	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_4~U_3	-173.28	-180.36	33.33	-45.99	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_3~U_2	201.19	-218.17	63.32	-77.78	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
	U_2~U_1	165.62	-164.22	78.3	-78.42	19.4	19.37	30.09	30.09	3	1187.1	1.67	1766	1.5
	U_1~L_1	101.88	-102.30	10.97	9.87	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.0
	U_0~L_0	76.26	-93.56	-6.62	-6.62	42.0	41.97	42.74	63.05	8	1376.0	1.50	2080	1.5
	L_0~L_1	0.00	0.00	-170.13	220.30	32.8	32.76	42.74	63.05	14	1527.6	1.53	2316	1.5
	L_1~L_2	-13.87	147.96	-337.81	346.97	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	L_2~L_3	0.00	0.00	-170.13	220.30	32.8	32.76	38.83	59.39	13	1522.1	1.53	2313	1.5
	L_3~L_4	0.00	0.00	-63.64	71.85	-176.25	185.68	21.5	21.54	21.54	33.27	5	987.9	1.54	1098
	L_4~L_5	0.00	0.00	-63.64	71.85	-176.25	185.68	21.5	21.54	21.54	33.27	5	987.9	1.54	1098
	L_5~U_5	0.00	0.00	-30.17	-17.61	-166.86	122.18	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_5~U_4	0.00	0.00	-30.17	-17.61	-166.86	122.18	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_4~U_3	0.00	0.00	-78.91	-78.01	-56.38	60.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_3~U_2	0.00	0.00	-115.80	-124.01	-17.64	19.90	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_2~U_1	0.00	0.00	-115.80	-124.01	-17.64	19.90	30.09	30.09	30.09	46.37	3	1187.1	1.67	1766
	U_1~L_1	0.00	0.00	-25.60	-267.90	87.45	-101.97	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143
	U_0~L_0	0.00	0.00	-30.38	-303.14	13.67	-128.29	32.8	32.76	46.71	71.43	10	1712.1	1.53	2357
	L_0~L_1	0.00	0.00	-33.24	39.04	-159.23	163.37	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	L_1~L_2	0.00	0.00	-5.56	39.04	-159.23	163.37	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	L_2~L_3	0.00	0.00	-54.58	-66.70	71.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	L_3~L_4	0.00	0.00	-54.58	-66.70	71.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	L_4~L_5	0.00	0.00	-180.21	-29.31	-39.55	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	L_5~U_5	0.00	0.00	-180.21	-29.31	-39.55	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	U_5~U_4	0.00	0.00	-206.26	-215.12	54.87	-54.05	18.7	18.71	18.61	31.48	8	970.0	1.68	1339
	U_4~U_3	0.00	0.00	-206.26	-215.12	54.87	-54.05	18.7	18.71	18.61	31.48	8	970.0	1.68	1339
	U_3~U_2	0.00	0.00	-339.37	-355.63	76.25	-76.25	38.83	38.83	38.83	59.39	13	1522.1	1.53	2313
	U_2~U_1	0.00	0.00	-366.86	110.20	-115.03	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_1~L_1	0.00	0.00	-366.86	110.20	-115.03	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_1~L_2	0.00	0.00	-368.54	-302.77	136.21	-137.84	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	L_2~L_3	0.00	0.00	-368.54	-302.77	136.21	-137.84	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	L_3~L_4	0.00	0.00	-137.02	-134.54	-319.25	303.91	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	L_4~L_5	0.00	0.00	-137.02	-134.54	-319.25	303.91	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	L_5~U_5	0.00	0.00	-368.54	-302.77	136.21	-137.84	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	U_5~U_4	0.00	0.00	-368.54	-302.77	136.21	-137.84	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	U_4~U_3	0.00	0.00	-116.19	-115.61	-323.78	327.69	38.8	38.83	38.83	59.23	8	1264.6	1.53	1993
	U_3~U_2	0.00	0.00	-116.19	-115.61	-323.78	327.69	38.8	38.83	38.83	59.23	8	1264.6	1.53	1993
	U_2~U_1	0.00	0.00	-33.24	39.04	-159.23	163.37	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	U_1~L_1	0.00	0.00	-143.68	-140.53	-351.66	347.74	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155
	L_0~L_1	0.00	0.00	-143.68	-140.53	-351.66	347.74	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155
	L_1~L_2	0.00	0.00	-116.19	-115.61	-323.78	327.69	38.8	38.83	38.83	59.23	8	1264.6	1.53	1993
	L_2~L_3	0.00	0.00	-116.19	-115.61	-323.78	327.69	38.8	38.83	38.83	59.23	8	1264.6	1.53	1993
	L_3~L_4	0.00	0.00	-33.24	39.04	-159.23	163.37	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	L_4~L_5	0.00	0.00	-5.56	39.04	-159.23	163.37	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	L_5~U_5	0.00	0.00	-54.58	-66.70	71.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_5~U_4	0.00	0.00	-54.58	-66.70	71.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_4~U_3	0.00	0.00	-180.21	-29.31	-39.55	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	U_3~U_2	0.00	0.00	-180.21	-29.31	-39.55	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	U_2~U_1	0.00	0.00	-206.26	-215.12	54.87	-54.05	18.7	18.71	18.61	31.48	8	970.0	1.68	1339
	U_1~L_1	0.00	0.00	-206.26	-215.12	54.87	-54.05	18.7	18.71	18.61	31.48	8	970.0	1.68	1339
	L_1~L_2	0.00	0.00	-339.37

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1–L_1	-23.63	-7.60	3.09	-0.22	-2.07	1.18	3.74	-2.91	-27.59	15.62
	U_1–L_2	-3.36	-8.44	0.37	-0.15	-1.70	0.15	4.93	-1.95	-22.71	2.04
	U_1–U_2	-6.57	-6.57	-2.11	-2.11	-18.69	-1.16	0.00	0.00	-10.99	-10.99
	U_2–L_2	7.94	-13.41	0.42	0.10	-1.10	-0.90	5.60	1.39	-14.67	-12.00
	U_2–L_3	-14.57	-18.47	0.18	-0.03	-1.77	0.03	2.43	0.15	-23.63	-0.35
	U_2–U_3	-37.80	-7.38	1.03	-3.48	-2.42		5.68	14.40	-46.89	32.33
	U_3–L_3	-23.38	-7.38	0.41	-0.45	-3.21	-47.63	5.41	6.40	-25.21	-47.63
	U_3–L_4	-9.33	-102.64	0.88	0.75	-2.35	4.14	11.72	10.02	-31.44	50.26
	U_3–U_4	-5.01	-118.90	1.85	1.07	-1.40	3.06	23.96	13.84	-18.10	39.86
	U_4–L_4	-78.62	74.45	2.94	-0.15	-3.37	1.81	5.43	-11.86	-43.64	23.39
	U_4–L_5	-64.28	-73.58	0.50	1.08	-2.85	1.32	6.42	13.92	-36.93	17.10
	U_4–U_5	-39.98	-73.58	0.50	1.14	-3.45	1.32	6.42	14.54	-41.87	22.29
	U_5–L_5	-65.20	-48.77	0.17	-0.44	-2.71	1.83	2.13	-5.73	-26.01	23.68
	U_5–L_6	-24.89	6.62	0.30	-0.54	-1.56	0.41	3.82	-6.92	-20.12	5.25
	U_5–U_6	-24.89	-23.81	0.30	-0.54	-1.56	0.41	3.82	-6.92	-20.12	5.25
	U_6–L_6	-25.30	9.99	0.46	-0.86	-1.91	1.43	5.91	-11.14	-24.75	18.48
	U_6–L_7	-37.81	20.00	0.69	-1.30	-2.48	1.73	9.00	-17.05	-32.53	32.43
	U_6–U_7	-109.81	116.92	0.61	0.25	-5.64	3.97	7.82	3.25	-64.33	50.68
	U_7–L_7	-141.94	130.59	0.83	0.41	-6.27	5.11	10.58	-5.20	-80.07	63.26
	U_7–L_8	-40.31	139.38	0.49	1.06	-5.22	4.73	15.33	4.67	-40.00	49.23
	U_8–L_8	-11.95	79.18	1.21	0.37	-3.17	3.90	15.33	4.67	-40.00	49.23
	U_8–L_9	-77.25	79.18	0.29	-0.99	-1.48	0.49	8.77	-7.49	-61.90	17.52
	U_9–L_9	-66.17	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_9–L_{10}	-66.17	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{10}–L_{10}	-56.05	72.58	0.47	-0.33	-4.14	3.27	5.97	-6.65	-52.31	41.27
	U_{10}–L_{11}	-31.83	37.59	0.47	-0.48	-3.17	2.21	5.92	-6.00	-39.98	26.61
	U_{11}–L_{11}	-10.04	7.67	0.59	-1.21	-1.63	0.68	7.47	-15.25	-20.59	8.57
	U_{11}–L_{12}	-10.04	3.78	0.59	-1.21	-1.63	0.68	7.47	-15.25	-20.59	8.57
	U_{12}–L_{12}	-19.42	19.66	0.57	-0.88	-2.05	1.39	7.20	-11.08	-25.92	17.54
	U_{12}–L_{13}	-46.48	38.24	0.63	-0.71	-4.42	3.07	8.00	-6.94	-35.85	38.37
	U_{13}–L_{13}	-54.27	68.32	0.52	-0.65	-4.73	3.67	6.59	-8.14	-59.73	46.33
	U_{13}–L_{14}	-54.27	68.32	0.52	-0.65	-4.73	3.67	6.59	-8.14	-59.73	46.33
	U_{14}–L_{14}	-69.31	71.94	0.37	-0.23	-5.65	4.88	4.71	-2.88	-73.81	51.55
	U_{14}–L_{15}	-77.98	78.55	0.87	-0.26	-4.31	3.56	13.58	-13.62	-73.81	51.55
	U_{15}–L_{15}	-36.18	94.54	1.57	0.54	-3.39	4.29	20.00	6.95	-43.35	54.75
	U_{15}–L_{16}	-36.18	94.54	1.57	0.54	-3.39	4.29	20.00	6.95	-43.35	54.75
	U_{16}–L_{16}	-77.08	85.18	0.87	-0.26	-4.31	3.56	8.51	-3.35	-55.07	45.51
	U_{16}–L_{17}	-78.35	71.28	0.60	-0.03	-4.08	3.08	7.64	-0.40	-52.14	39.39
	U_{17}–L_{17}	-76.62	55.14	0.25	0.23	-4.33	2.52	3.17	2.87	-55.22	37.33
	U_{17}–L_{18}	-76.62	55.14	0.25	0.23	-4.33	2.52	3.17	2.87	-55.22	37.33
	U_{18}–L_{18}	-78.35	71.28	0.60	-0.03	-4.08	3.08	7.64	-0.40	-52.14	39.39
	U_{18}–L_{19}	-77.08	85.18	0.87	-0.26	-4.31	3.56	8.51	-3.35	-55.07	45.51
	U_{19}–L_{19}	-36.18	94.54	1.57	0.54	-3.39	4.29	20.00	6.95	-43.35	54.75
	U_{19}–L_{20}	-36.18	94.54	1.57	0.54	-3.39	4.29	20.00	6.95	-43.35	54.75
	U_{20}–L_{20}	-69.31	71.94	0.37	-0.23	-5.65	4.88	4.71	-2.88	-73.81	51.55
	U_{20}–L_{21}	-54.27	68.32	0.52	-0.65	-4.73	3.67	6.59	-8.14	-59.73	46.33
	U_{21}–L_{21}	-46.48	38.24	0.63	-0.71	-4.42	3.07	8.00	-6.94	-35.85	38.37
	U_{21}–L_{22}	-19.42	19.66	0.57	-0.88	-2.05	1.39	7.20	-11.08	-25.92	17.54
	U_{22}–L_{22}	-10.04	3.78	0.59	-1.21	-1.63	0.68	7.47	-15.25	-20.59	8.57
	U_{22}–L_{23}	-10.04	7.67	0.59	-1.21	-1.63	0.68	7.47	-15.25	-20.59	8.57
	U_{23}–L_{23}	-31.83	37.59	0.47	-0.48	-3.17	2.21	5.92	-6.00	-39.98	26.61
	U_{23}–L_{24}	-56.05	72.58	0.47	-0.33	-4.14	3.27	5.97	-6.65	-52.31	41.27
	U_{24}–L_{24}	-66.17	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{24}–L_{25}	-66.17	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{25}–L_{25}	-54.05	68.89	0.83	-0.54	-3.89	3.53	13.58	-13.62	-73.81	51.55
	U_{25}–L_{26}	-46.11	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{26}–L_{26}	-46.11	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{26}–L_{27}	-38.98	50.40	0.27	-0.48	-3.13	2.49	5.24	-5.78	-40.04	30.77
	U_{27}–L_{27}	-38.98	50.40	0.27	-0.48	-3.13	2.49	5.24	-5.78	-40.04	30.77
	U_{27}–L_{28}	-7.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{28}–L_{28}	-7.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{28}–L_{29}	-38.98	50.40	0.27	-0.48	-3.13	2.49	5.24	-5.78	-40.04	30.77
	U_{29}–L_{29}	-38.98	50.40	0.27	-0.48	-3.13	2.49	5.24	-5.78	-40.04	30.77
	U_{29}–L_{30}	-46.11	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{30}–L_{30}	-46.11	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
Structure 2	L_1–L_2	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_2–L_3	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_3–L_4	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_4–L_5	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_5–L_6	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_6–L_7	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_7–L_8	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_8–L_9	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_9–L_{10}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{10}–L_{11}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{11}–L_{12}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{12}–L_{13}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{13}–L_{14}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}–L_{15}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}–L_{16}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{16}–L_{17}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{17}–L_{18}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{18}–L_{19}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{19}–L_{20}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{20}–L_{21}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{21}–L_{22}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{22}–L_{23}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{23}–L_{24}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{24}–L_{25}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{25}–L_{26}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{26}–L_{27}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{27}–L_{28}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{28}–L_{29}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{29}–L_{30}	-49.63	-49.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Structure 3	U_1–L_1	-23.63	-7.60	3.09	-0.22	-2.07	1.18	3.74	-2.91	-27.59	15.62
	U_1–L_2	-3.36	-8.44	0.37	-0.15	-1.70	0.15	4.93	-1.95	-22.71	2.04
	U_1–U_2	-6.57	-6.57	-2.11	-2.11	-18.69	-1.16	0.00	0.00	-10.99	-10.99
	U_2–L_2	7.94	-13.41	0.42	0.10	-1.10	-0.90	5.60	1.39	-14.67	-12.00
	U_2–L_3	-14.57	-18.47	0.18	-0.03	-1.77	0.03	2.43	0.15	-23.63	-0.35
	U_2–U_3	-37.80	-7.38	1.03	-3.48	-2.42		5.68	14.40	-46.89	32.33
	U_3–L_3	-23.38	-7.38	0.41	-0.45	-3.21	-47.63	5.41	6.40	-25.21	-47.63
	U_3–L_4	-9.33	-102.64	0.88	0.75	-2.35	4.14	11.72	10.02	-31.44	50.26
	U_3–U_4	-5.01	-118.90	1.85	1.07	-1.40	3.06	23.96	13.84	-18.10	39.86
	U_4–L_4	-78.62	74.45	2.94	-0.15	-3.37	1.81	5.43	-11.86	-43.64	23.39
	U_4–L_5	-64.28	-73.58	0.50	1.08	-2.85	1.32	6.42	13.92	-36.93	17.10
	U_4–U_5	-39.98	-73.58	0.50	1.14	-3.45	1.32	6.42	14.54	-41.87	22.29
	U_5–L_5	-65.20	-48.77	0.17	-0.44	-2.71	1.83	2.13	-5.73	-26.01	23.68
	U_5–L_6	-24.89	6.62	0.30	-0.54	-1.56	0.41	3.82	-6.92	-20.12	5.25
	U_5–U_6	-24.89	-23.81	0.30	-0.54	-1.56	0.41	3.82	-6.92	-20.12	5.25
	U_6–L_6	-25.30	9.99	0.46	-0.86	-1.91	1.43	5.91	-11.14	-24.75	18.48
	U_6–L_7	-37.81	20.00	0.69	-1.30	-2.48	1.73	9.00	-17.05	-32.53	32.43
	U_6–U_7	-109.81	116.92	0.61	0.25	-5.64	3.97	7.82	3.25	-64.33	50.68
	U_7–L_7	-141.94	130.59	0.83	0.41	-6.27	5.11	10.58	-5.20	-80.07	63.26
	U_7–L_8	-40.31	139.38	0.49	1.06	-5.22	4.73	15.33	4.67	-40.00	49.23
	U_8–L_8	-11.95	79.18	1.21	0.37	-3.17	3.90	15.33	4.67	-40.00	49.23
	U_8–L_9	-77.25	79.18	0.29	-0.99	-1.48	0.49	8.77	-7.49	-61.90	17.52
	U_9–L_9	-66.17	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_9–L_{10}	-66.17	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{10}–L_{10}	-56.05	72.58	0.47	-0.33	-4.14	3.27	5.97	-6.65	-52.31	41.27
	U_{10}–L_{11}	-31.83	37.59	0.47	-0.48	-3.17	2.21	5.92	-6.00	-39.98	26.61
	U_{11}–L_{11}	-10.04	7.67	0.59	-1.21	-1.63	0.68	7.47	-15.25	-20.59	8.57
	U_{11}–L_{12}	-10.04	3.78	0.59	-1.21	-1.63	0.68	7.47	-15.25	-20.59	8.57
	U_{12}–L_{12}	-19.42	19.66	0.57	-0.88	-2.05	1.39	7.20	-11.08	-25.92	17.54
	U_{12}–L_{13}	-46.48	38.24	0.63	-0.71	-4.42	3.07	8.00	-6.94	-35.85	38.37
	U_{13}–L_{13}	-54.27	68.32	0.52	-0.65	-4.73	3.67	6.59	-8.14	-59.73	46.33
	U_{13}–L_{14}	-54.27	68.32	0.52	-0.65	-4.73	3.67	6.59	-8.14	-59.73	46.33
	U_{14}–L_{14}	-69.31	71.94	0.37	-0.23	-5.65	4.88	4.71	-2.88	-73.81	51.55
	U_{14}–L_{15}	-77.98	78.55	0.87	-0.26	-4.31	3.56	13.58	-13.62	-73.81	51.55
	U_{15}–L_{15}	-36.18	94.54	1.57	0.54	-3.39	4.29	20.00	6.95	-43.35	54.75
	U_{15}–L_{16}	-36.18	94.54	1.57	0.54	-3.39	4.29	20.00	6.95	-43.35	54.75
	U_{16}–L_{16}	-77.08	85.18	0.87	-0.26	-4.31	3.56	8.51	-3.35	-55.07	45.51
	U_{16}–L_{17}	-78.35	71.28	0.60	-0.03	-4.08	3.08	7.64	-0.40	-52.14	39.39
	U_{17}–L_{17}	-76.62	55.14	0.25	0.23	-4.33	2.52	3.17	2.87	-55.22	37.33
	U_{17}–L_{18}	-76.62	55.14	0.25	0.23	-4.33	2.52	3.17	2.87	-55.22	37.33
	U_{18}–L_{18}	-78.35	71.28	0.60	-0.03	-4.08	3.08	7.64	-0.40	-52.14	39.39
	U_{18}–L_{19}	-77.08	85.18	0.87	-0.26	-4.31	3.56	8.51	-3.35	-55.07	45.51
	U_{19}–L_{19}	-36.18	94.54	1.57	0.54	-3.39	4.29	20.00	6.95	-43.35	54.75
	U_{19}–L_{20}	-36.18	94.54	1.57	0.54	-3.39	4.29	20.00	6.95	-43.35	54.75
	U_{20}–L_{20}	-69.31	71.94	0.37	-0.23	-5.65	4.88	4.71	-2.88	-73.81	51.55
	U_{20}–L_{21}	-54.27	68.32	0.52	-0.65	-4.73	3.67	6.59	-8.14	-59.73	46.33
	U_{21}–L_{21}	-46.48	38.24	0.63	-0.71	-4.42	3.07	8.00	-6.94	-35.85	38.37
	U_{21}–L_{22}	-19.42	19.66	0.57	-0.88	-2.05	1.39	7.20	-11.08	-25.92	17.54
	U_{22}–L_{22}	-10.04	3.78	0.59	-1.21	-1.63	0.68	7.47	-15.25	-20.59	8.57
	U_{22}–L_{23}	-10.04	7.67	0.59	-1.21	-1.63	0.68	7.47	-15.25	-20.59	8.57
	U_{23}–L_{23}	-31.83	37.59	0.47	-0.48	-3.17	2.21	5.92	-6.00	-39.98	26.61
	U_{23}–L_{24}	-56.05	72.58	0.47	-0.33	-4.14	3.27	5.97	-6.65	-52.31	41.27
	U_{24}–L_{24}	-66.17	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{24}–L_{25}	-66.17	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{25}–L_{25}	-54.05	68.89	0.83	-0.54	-3.89	3.53	13.58	-13.62	-73.81	51.55
	U_{25}–L_{26}	-46.11	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{26}–L_{26}	-46.11	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{26}–L_{27}	-38.98	50.40	0.27	-0.48	-3.13	2.49	5.24	-5.78	-40.04	30.77
	U_{27}–L_{27}	-38.98	50.40	0.27	-0.48	-3.13	2.49	5.24	-5.78	-40.04	30.77
	U_{27}–L_{28}	-7.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{28}–L_{28}	-7.78	19.68	0.21	0.71	-1.84	-0.21	2.81	9.54	-24.53	-2.73
	U_{28}–L_{29}	-38.98	50.40	0.27	-0.48	-3.13	2.49	5.24	-5.78	-40.04	30.77
	U_{29}–L_{29}	-38.98	50.40	0.27	-0.48	-3.13	2.49	5.24	-5.78	-40.04	30.77
	U_{29}–L_{30}	-46.11	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35
	U_{30}–L_{30}	-46.11	89.96	0.52	-0.33	-4.79	4.31	6.59	-4.19	-60.44	54.35

ZZ Axis Moments from STAAD

Location	Member	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I (in^4)	I_{y-y} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/Sq.	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}
Structure 1	U_1–L_1	3.74	-2.91	-27.59	15.62	0.00	0.00	-22.61	3.57	-80.49	44.15	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7
	U_1–L_2	4.93	-1.95	-22.71	2.04	0.00	0.00	6.31	-15.20	-53.58	-6.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1–U_2	0.00	0.00	-10.99	-10.99	0.00	0.00	10.99	-10.99	-43.95	-15.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2–L_2	5.60	1.39	-14.67	-12.00	0.00	0.00	22.45	-14.43	-21.46	-43.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2–L_3	2.43	0.15	-23.63	-0.35	0.00	0.00	-13.67	14.40	-46.89	32.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2–U_3	5.68	14.40	-46.89	32.33	0.00	0.00	-36.84	131.80	-149.79	170.64	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_3–L_3	5.41	6.40	-25.21	-47.63	0.00	0.00	-83.67	115.96	-254.02	-26.62	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_3–L_4	11.72	10.02	-31.44	50.26	0.00	0.00	13.26	155.14	-89.23	253.15	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_3–U_4	23.96	13.84	-18.10	39.86	0.00	0.00	45.41	184.56	-45.73	249.54	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7
	U_4–L_4	5.43	-11.86	-43.64	23.39	0.00	0.00	-90.69	52.49	-197.02	147.46	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7
	U_4–L_5	6.42	13.92	-36.93	17.10	0.00	0.00	-69.66	125.82	-163.57	132.72	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6
	U_4–L_5	6.42	14.54	-41.87	22.29	0.00	0.00	-78.99	140.71	-181.84	205.16	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6
	U_5–L_5	2.13	-5.73	-26.01	23.68	0.00	0.00	-80.13	50.99	-182.62	114.71	20.8	20.80	20.67	34.66	1	1029.6	1.54	1585	1.5	1029.6
	U_5–L_6	3.82	-6.92	-20.12	5.25	0.00	0.00	-24.09	-3.79	-75.95	22.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_5–L_6	3.82	-6.92	-20.12	5.25	0.00	0.00	-24.09	-3.79	-75.95	22.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_6–L_6	5.91	-11.14	-24.75	18.48	0.00	0.00	-22.44	-55.56	-39.99	23.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_6–L_7	9.00	-17.05	-32.53	32.43	0.00	0.00	-20.09	-51.15	-86.52	53.02	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_7–L_7	7.82	3.25	-64.33	50.68	0.00	0.00	-37.14	16.13	-129.26	74.56	19.4	19.37	19.37	29.87	2	907.0	1.54	986	1.5	958.8
	U_7

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors: DL Factor: 1.33, LL Factor: 1.83
Pedestrian Load Factors: DL Factor: 1.30, LL Factor: 1.83

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-I-(k)	Dead Load End-J-(k)	Live Load (Max) Start-I-(k)	Live Load (Max) End-J-(k)	Pedestrian Load (Max) Start-I-(k)	Pedestrian Load (Max) End-J-(k)	Lane Reduction & Impact Live Load Start-I-(k)	Lane Reduction & Impact Live Load End-J-(k)	Impact Pedestrian Load Max Start-I-(k)	Impact Pedestrian Load Max End-J-(k)
Structure 1	U_0-U_1	-75.17	-0.72	9.52	-8.38	-14.32	-9.94	106.01	-104.43	-119.46	-110.63
	U_1-U_2	-45.82	-29.29	-3.36	-1.60	-11.11	-14.06	62.31	-72.29	-128.93	-130.41
	U_2-U_3	-112.29	66.52	1.44	3.55	-13.17	-1.95	15.08	39.49	-146.60	-21.69
	U_3-U_4	-75.71	66.12	2.33	3.20	-14.58	-2.14	25.51	39.75	-146.16	-23.39
	U_4-U_5	-9.25	61.62	2.34	3.37	-19.05	-1.87	26.08	37.55	-212.09	-20.85
	U_5-U_6	42.76	120.21	2.62	3.30	-15.57	-3.29	29.18	36.71	-173.34	-37.74
	U_6-U_7	93.19	93.19	4.03	4.03	-3.29	-3.29	29.75	24.33	-157.38	-2.88
	U_7-U_8	-47.38	526.15	1.35	3.94	-24.35	24.96	15.03	43.88	-271.06	277.62
	U_8-U_9	475.03	124.35	16.62	-17.69	-5.14	0.66	179.16	-190.69	-1.51	7.13
	U_9-U_{10}	46.82	20.59	3.17	-2.30	-5.93	-0.76	34.16	-24.79	-63.94	-8.21
	$U_{10}-U_{11}$	64.59	64.59	1.98	1.98	-4.84	-4.23	43.27	-41.48	-63.25	-27.43
	$U_{11}-U_{12}$	27.91	-140.51	3.60	-23.31	-8.49	-5.20	38.79	-34.77	-61.22	-56.07
	$U_{12}-U_{13}$	-106.12	-155.13	4.21	-2.28	-13.83	-2.97	45.39	-24.62	-149.08	-32.00
	$U_{13}-U_{14}$	-138.94	-202.95	3.98	-1.65	-13.98	-3.32	45.39	-24.62	-149.08	-32.00
	$U_{14}-U_{15}$	-245.82	-183.07	3.01	-16.59	-27.53	-16.40	32.42	-178.82	-296.87	-176.87
	$U_{15}-U_{16}$	-123.51	-337.01	4.23	-19.33	-26.26	-3.07	46.60	-208.44	-283.12	-33.14
	$U_{16}-U_{17}$	-269.97	-145.19	0.82	0.10	-27.79	-4.23	8.79	1.11	-299.67	-45.06
	$U_{17}-U_{18}$	-134.36	-67.49	0.85	-0.38	-20.17	-4.44	9.11	4.31	-187.38	-47.85
	$U_{18}-U_{19}$	-170.82	-20.32	0.66	-0.07	-17.11	1.86	7.11	-0.80	-184.47	-20.00
	$U_{19}-U_{20}$	-186.22	23.42	2.63	-17.97	-17.61	7.86	26.40	-193.77	-189.84	84.79
	$U_{20}-U_{21}$	114.62	-208.71	11.16	-14.25	-2.12	-0.58	406.17	-535.41	-337.79	-183.39
	$U_{21}-U_{22}$	-71.24	-180.99	1.99	-1.18	-7.39	-13.59	21.14	-76.47	-78.65	-144.76
	$U_{22}-U_{23}$	-327.34	-325.40	1.39	2.97	-23.65	-26.59	14.80	31.60	-251.77	-283.11
	$U_{23}-U_{24}$	-338.58	-347.11	2.33	3.03	-20.99	-26.00	14.80	31.60	-251.77	-283.11
	$U_{24}-U_{25}$	-396.14	-197.74	2.92	5.61	-34.19	-18.58	31.07	-99.77	-363.56	-167.79
	$U_{25}-U_{26}$	-344.18	-179.44	4.35	3.79	-24.44	-33.77	45.27	-40.39	-265.16	-359.53
	$U_{26}-U_{27}$	-226.16	-295.72	3.16	4.29	-22.09	-4.66	22.01	-207.01	-285.41	-264.95
	$U_{27}-U_{28}$	-350.21	-90.73	3.70	4.80	-22.99	-2.39	39.42	-51.07	-244.75	-25.29
	$U_{28}-U_{29}$	-237.22	31.15	4.34	4.34	-22.77	-2.39	39.42	-51.07	-244.75	-25.29
	$U_{29}-U_{30}$	-167.09	39.84	4.73	4.64	-21.18	-2.32	50.40	-49.42	-225.50	-24.74
	$U_{30}-U_{31}$	-109.78	170.74	4.23	3.76	-22.91	1.99	45.05	40.04	-243.97	21.13
	$U_{31}-U_{32}$	-8.79	79.50	3.47	3.47	-8.79	-29.12	42.23	42.23	-59.37	-59.37
	$U_{32}-U_{33}$	-261.01	1266.00	3.01	1.68	-31.69	34.41	32.03	17.92	-337.40	366.38
	$U_{33}-U_{34}$	1192.78	96.79	1.68	3.01	34.41	-31.69	366.23	32.03	366.23	-337.40
	$U_{34}-U_{35}$	-25.29	11.66	3.13	0.76	-17.82	-13.81	38.39	-10.48	-139.10	-42.15
	$U_{35}-U_{36}$	-241.12	0.66	3.13	0.76	-17.82	-13.81	34.18	-27.18	-139.10	-42.15
	$U_{36}-U_{37}$	-150.60	33.06	4.99	-3.77	-11.70	-1.40	52.45	-39.62	-123.14	-14.75
	$U_{37}-U_{38}$	-147.31	4.37	5.88	-3.95	-10.02	-3.81	61.83	-41.59	-105.37	-41.11
	$U_{38}-U_{39}$	-34.85	-1.51	3.99	-0.61	-3.95	-0.23	41.66	-39.62	-41.59	-39.23
	$U_{39}-U_{40}$	-31.69	-33.99	3.80	-4.31	-18.09	-1.52	39.99	-45.29	-190.29	-19.95
	$U_{40}-U_{41}$	-86.03	-71.72	3.80	-4.31	-18.09	-1.52	39.99	-45.29	-190.29	-19.95
	$U_{41}-U_{42}$	-60.96	-66.58	3.31	-18.19	-29.02	-7.21	34.80	-191.33	-305.33	-75.85
	$U_{42}-U_{43}$	-21.15	18.55	2.99	-17.14	-29.02	-7.21	34.80	-191.33	-305.33	-75.85
	$U_{43}-U_{44}$	-33.01	-28.69	3.13	4.00	-22.55	-14.86	32.91	42.11	-237.29	-156.35
	$U_{44}-U_{45}$	-15.13	113.78	3.09	4.05	-23.64	2.61	32.49	42.57	-248.75	27.47
	$U_{45}-U_{46}$	-2.74	209.64	2.54	3.19	-19.30	-6.58	26.75	33.59	-203.02	-69.24
	$U_{46}-U_{47}$	51.10	176.05	3.32	3.32	-19.30	-6.58	36.63	33.59	-203.02	-69.24
	$U_{47}-U_{48}$	-122.51	1157.56	2.03	3.85	-32.22	37.49	21.33	40.47	-339.00	394.42
	$U_{48}-U_{49}$	1154.91	-197.36	34.00	-29.49	-1.43	3.15	361.98	-313.99	-15.18	32.98
	$U_{49}-U_{50}$	-27.78	-27.78	3.68	4.05	-12.71	-6.17	54.05	43.14	-135.37	-65.72
	$U_{50}-U_{51}$	-68.66	-178.68	5.08	4.05	-12.71	-6.17	54.05	43.14	-135.37	-65.72
	$U_{51}-U_{52}$	-68.64	-178.66	3.35	5.08	-22.27	-3.32	43.14	54.05	-135.37	-65.72
	$U_{52}-U_{53}$	-236.51	-153.10	3.92	3.03	-17.72	-35.43	41.74	32.26	-189.64	-372.22
	$U_{53}-U_{54}$	-98.60	-313.21	4.44	-20.53	-43.67	-7.79	47.24	-218.59	-464.91	-82.69
	$U_{54}-U_{55}$	-144.36	-67.49	0.85	-0.38	-20.17	-4.44	9.11	4.31	-187.38	-47.85
	$U_{55}-U_{56}$	-170.82	-20.32	0.66	-0.07	-17.11	1.86	7.11	-0.80	-184.47	-20.00
	$U_{56}-U_{57}$	-186.22	23.42	2.63	-17.97	-17.61	7.86	26.40	-193.77	-189.84	84.79
	$U_{57}-U_{58}$	114.62	-208.71	11.16	-14.25	-2.12	-0.58	406.17	-535.41	-337.79	-183.39
	$U_{58}-U_{59}$	-71.24	-180.99	1.99	-1.18	-7.39	-13.59	21.14	-76.47	-78.65	-144.76
	$U_{59}-U_{60}$	-327.34	-325.40	1.39	2.97	-23.65	-26.59	14.80	31.60	-251.77	-283.11
	$U_{60}-U_{61}$	-338.58	-347.11	2.33	3.03	-20.99	-26.00	14.80	31.60	-251.77	-283.11
	$U_{61}-U_{62}$	-396.14	-197.74	2.92	5.61	-34.19	-18.58	31.07	-99.77	-363.56	-167.79
	$U_{62}-U_{63}$	-344.18	-179.44	4.35	3.79	-24.44	-33.77	45.27	-40.39	-265.16	-359.53
	$U_{63}-U_{64}$	-226.16	-295.72	3.16	4.29	-22.09	-4.66	22.01	-207.01	-285.41	-264.95
	$U_{64}-U_{65}$	-350.21	-90.73	3.70	4.80	-22.99	-2.39	39.42	-51.07	-244.75	-25.29
	$U_{65}-U_{66}$	-237.22	31.15	4.34	4.34	-22.77	-2.39	39.42	-51.07	-244.75	-25.29
	$U_{66}-U_{67}$	-167.09	39.84	4.73	4.64	-21.18	-2.32	50.40	-49.42	-225.50	-24.74
	$U_{67}-U_{68}$	-109.78	170.74	4.23	3.76	-22.91	1.99	45.05	40.04	-243.97	21.13
	$U_{68}-U_{69}$	-8.79	79.50	3.47	3.47	-8.79	-29.12	42.23	42.23	-59.37	-59.37
	$U_{69}-U_{70}$	-261.01	1266.00	3.01	1.68	-31.69	34.41	32.03	17.92	-337.40	366.38
	$U_{70}-U_{71}$	1192.78	96.79	1.68	3.01	34.41	-31.69	366.23	32.03	366.23	-337.40
	$U_{71}-U_{72}$	-25.29	11.66	3.13	0.76	-17.82	-13.81	38.39	-10.48	-139.10	-42.15
	$U_{72}-U_{73}$	-241.12	0.66	3.13	0.76	-17.82	-13.81	34.18	-27.18	-139.10	-42.15
	$U_{73}-U_{74}$	-150.60	33.06	4.99	-3.77	-11.70	-1.40	52.45	-39.62	-123.14	-14.75
	$U_{74}-U_{75}$	-147.31	4.37	5.88	-3.95	-10.02	-3.81	61.83	-41.59	-105.37	-41.11
	$U_{75}-U_{76}$	-34.85	-1.51	3.99	-0.61	-3.95	-0.23	41.66	-39.62	-41.59	-39.23
	$U_{76}-U_{77}$	-31.69	-33.99	3.80	-4.31	-18.09	-1.52	39.99	-45.29	-190.29	-19.95
	$U_{77}-U_{78}$	-86.03	-71.72	3.80	-4.31	-18.09	-1.52	39.99	-45.29	-190.29	-19.95
	$U_{78}-U_{79}$	-60.96	-66.58	3.31	-18.19	-29.02	-7.21	34.80	-191.33	-305.33	-75.85
	$U_{79}-U_{80}$	-21.15	18.55	2.99	-17.14	-29.02	-7.21	34.80	-191.33	-305.33	-75.85
	$U_{80}-U_{81}$	-33.01	-28.69	3.13	4.00	-22.55	-14.86	32.91	42.11	-237.29	-156.35
	$U_{81}-U_{82}$	-15.13	113.78	3.09	4.05	-23.64	2.61	32.49	42.57	-248.75	27.47
	$U_{82}-U_{83}$	-2.74	209.64	2.54	3.19	-19.30	-6.58	26.75	33.59	-203.02	-69.24
	$U_{83}-U_{84}$	51.10	176.05	3.32	3.32	-19.30	-6.58	36.63	33.59	-203.02	-69.24
	$U_{84}-U_{85}$	-122.51	1157.56	2.03	3.85	-32.22	37.49	21.33	40.47	-339.00	394.42
	$U_{85}-U_{86}$	1154.91	-197.36	34.00	-29.49	-1.43	3.15	361.98	-313.99	-15.18	32.98
	$U_{86}-U_{87}$	-27.78	-27.78	3.68	4.05	-12.71	-6.17	54.05	43.14	-135.37	-65.72
	$U_{87}-U_{88}$	-68.66	-178.68	5.08	4.05	-12.71	-6.17	54.05	43.14	-135.37	-65.72
	$U_{88}-U_{89}$	-68.64	-178.66	3.35	5.08	-22.27	-3.32	43.14	54.05	-135.37	-65.72
	$U_{89}-U_{90}$	-236.51	-153.10	3.92	3.03	-17.72	-35.43	41.74	32.26	-189.64	-372.22
	$U_{90}-U_{91}$	-98.60	-313.21	4.44	-20.53	-43.67	-7.79	47.24	-218.59	-464.91	-82.69
Structure 2	U_0-U_{10}	-145.52	22.75	1.95	3.03	-18.26	0.36	21.00	32.63	-196.83	3.88
	$U_{10}-U_{20}$	-141.64	56.96	2.19	2.60	-18.36	1.66	22.54	32.01	-197.95	17.89
	$U_{20}-U_{30}$	2.97	40.71	2.76	1.95	-11.11	0.01	29.78	21.12	-119.81	0.06
	$U_{30}-U_{40}$	-136.67	471.04	1.20	3.35	-19.09	16.76	12.95	36.08	-293.84	180.54
	$U_{40}-U_{50}$	497.26	-34.44	22.36	-18.20	-0.65	0.06	248.95	-202.56	-0.57	0.70
	$U_{50}-U_{60}$	41.03	109.94	2.53	-0.54	-8.39	-1.96	28.12	-5.96	-83.41	21.85
	$U_{60}-U_{70}$	113.04	44.48	4.97	-0.31	-5.35	-3.17	55.30	-59.07	-59.51	39.33
	$U_{70}-U_{80}$	59.35	15.11	3.46	2.19	-9.62	-3.29	38.53	24.33	-197.05	36.63
	$U_{80}-U_{90}$	86.09	-19.75	6.50	-14.29	-14.68	-5.79	72.34	-109.12	-163.43	64.49
	$U_{90}-U_{95}$	80.30	-119.56	3.45	0.72	-19.67	-3.07	38.38	7.96	-219.02	34.12
	$U_{95}-U_{96}$	-24.63	-27.07	3.90	-8.16	-20.76	-3.15	43.37	-90.83	-231.12	-35.05
	$U_{96}-U_{97}$	29.38	-160.68	1.53	-2.19	-13.81	2.94	17.03	-24.35	-176.05	32.75
Structure 3	U_0-U_{10}	-141.64	56.96	2.19	2.60	-18.36	1.66	23.54	28.01	-197.95	17.89
	$U_{10}-U_{20}$	-139.08	-187.97	10.20	-14.61	-19.05	-0.19	109.92	-157.58	-205.35	-2.01
	$U_{20}-U_{30}$	-47.38	-119.55	5.02	-2.71	-17.85	-0.04	61.07	-215.52	-85.51	-42.04
	$U_{30}-U_{40}$	-52.58	-52.58	5.66	-20.03	-7.53	-3.90	61.07	-215.52	-85.51	-42.04
	$U_{40}-U_{50}$	-277.84	-111.68	2.14	-2.55	-17.50	-3.21	23.03	-27.50	-188.72	34.58
	$U_{50}-U_{60}$	-166.98	-243.52	1.54	2.71	-20.29	-19.65	16.62	22.75	-219.51	-211.82
	$U_{60}-U_{70}$	-287.74	-127.82	3.54	-13.45	-29.75	-3.72	35.16	-144.59	-320.71	-40.12
	$U_{70}-U_{80}$	-141.43	-113.94	1.29	2.36	-18.50	-10.92	13.94	25.40	-199.42	-117.72
	$U_{80}-U_{90}$	-142.50	-142.50	2.79	1.95	-18.50	-10.92	13.94	25.40	-199.42	-117.72
	$U_{90}-U_{95}$	-141.64	56.96	2.18	2.60	-18.36	1.66	23.54	28.01	-197.95	17.89
	$U_{95}-U_{96}$	-139.08	-187.97	10.20	-14.61	-19.05	-0.19	109.92	-157.58	-205.35	-2.01
	$U_{96}-U_{97}$	-47.38	-119.55	5.02	-2.71	-17.85	-0.04	61.07	-215.52	-85.51	-42.04
	$U_{97}-U_{98}$	-52.58	-52.58	5.66	-20.03	-7.53	-3.90	61.07	-215.52	-85.51	-42.04
	$U_{98}-U_{99}$	-277.84	-111.68	2.14	-2.55	-17.50	-3.21	23.03	-27.50	-188.72	34.58
	$U_{99}-U_{100}$	-166.98	-243.52	1.54	2.71	-20.29	-19.65	16.62	22.75	-219.51	-211.82
	$U_{100}-U_{101}$	-287.74	-127.82	3.54	-13.45	-29.75	-3.72	35.16	-144.59	-320.71	-40.12
	$U_{101}-U_{102}$	-141.43	-113.94	1.29	2.36	-18.50	-10.92	13.94	25.40	-199.42	-117.72
	$U_{102}-U_{103}$	-142.50	-142.50	2.79	1.95	-18.50	-10.92	13.94	25.40	-199.42	-117.72

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start-I-(k-in)	Max. Pos. Mom. End-J-(k-in)	S_{top} (in^3)	S_b (in^3)	S_{bb} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula I & T Term = F_y/S_{bb}	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$
Structure 1	U_0-U_1	-32.22	17.37	-1.10	-4.99	4.37	-1.17	4206	0.99880042	2974.3	-0.141	0.52	0.82	-33.22	17.37	-1.10	-4.99
	U_1-U_2	-45.84	-68.79	-12.57	-8.96	-32.11	-1.81	4206	0.99880042	2974.3	-0.141	0.54	0.82	-68.79	-45.84	-12.57	-8.96
	U_2-U_3	-17.61	0.38	35.31	-16.34	0.00	0.00	4206	0.99880042	2974.3	-0.141	0.54	0.64	0.38	-48.69	35.31	-16.34
	U_3-U_4	-21.39	-5.74	19.16	5.38	0.00	0.00	4206	0.99880042	2974.3	-0.141	0.54	0.46	-5.74	-21.39	19.16	5.38
	U_4-U_5	-37.00	6.70	-0.33	-10.41	0.00	0.00	4206	0.99880042	2974.3	-0.074	0.57	0.57	6.70	-42.19	-0.33	-10.41
	U_5-U_6	-27.77	9.69	9.23	-42.76	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	9.69	-140.45	9.23	-42.76
	U_6-U_7	-11.37	21.19	-26.72	-23.57	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	21.19	-140.45	-26.72	-23.57
	U_7-U_8	12.89	43.44	-13.75	-6.41	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	43.44	-214.69	-13.75	-6.41
	U_8-U_9	4.38	19.16	-5.35	-6.37	0.00	0.00	4206	0.99880042	2974.3	-0.572	0.37	0.37	19.16	-24.49	-5.35	-6.37
	U_9-U_{10}	13.83	20.02	-0.51	16.15	0.00	0.00	4206	0.99873196	3184.1	-0.200	0.52	0.52	20.02	-121.28	-0.51	16.15
	$U_{10}-U_{11}$	17.71	17.71	-0.64	0.87	0.00	0.00	4206	0.99873196	3184.1	-0.200	0.52	0.52	17.71	-187.14	-0.64	0.87
	$U_{11}-U_{12}$	12.36	44.67	8.42	29.84	0.00	0.00	4206	0.99873196	3184.1	-0.200	0.52	0.52	44.67	-232.28	8.42	29.84
	$U_{12}-U_{13}$	-0.33	60.74	47.61	25.61	0.00	0.00	4206	0.99873196	3184.1	-0.200	0.52	0.52	60.74	-242.29	47.61	25.61
	$U_{13}-U_{14}$	-0.33	60.74	47.61	25.61	0.00	0.00	4206	0.99873196	3184.1	-0.200	0.52	0.52	60.74	-242.29	47.61	25.61
	$U_{14}-U_{15}$	-12.35	-32.36	-10.09	-10.11	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	-32.36	-130.45	-10.09	-10.11
	$U_{15}-U_{16}$	-36.10	66.19	-45.45	-9.15	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	66.19	-312.64	-45.45	-9.15
	$U_{16}-U_{17}$	-4.14	8.58	-30.80	-17.37	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	8.58	-312.64	-30.80	-17.37
	$U_{17}-U_{18}$	-15.97	-29.35	0.52	1.96	2.11	2.05	4206	0.99907136	4197.7	0.283	0.46	0.51	-29.35	-164.64	0.52	1.96
	$U_{18}-U_{19}$	21.90	10.43	34.77	13.28	0.00	0.00	4206	0.99880042	2974.3	-0.027	0.59	0.59	10.43	-223.64	34.77	13.28
	$U_{19}-U_{20}$	9.47	-84.99	75.31	2.94	0.00	0.00	4206	0.99880042	2974.3	-0.328	0.47	0.47	-84.99	-136.09	75.31	2.94
	$U_{20}-U_{21}$	0.27	-82.47	74.31	1.65	0.00	0.00	4206	0.99881137	3184.1	-0.200	0.52	0.52	-82.47	-97.19	74.31	1.65
	$U_{21}-U_{22}$	40.53	-133.84	-37.01	-63.13	0.00	0.00	4206	0.99881137	3184.1	-0.200	0.52	0.52	-133.84	-239.74	-37.01	-63.13
	$U_{22}-U_{23}$	13.05	-42.49	2.40	-2.85	0.00	0.00	4206	0.99881137	3184.1	-0.200	0.52	0.52	-42.49	-419.80	2.40	-2.85
	$U_{23}-U_{24}$	-10.86	-23.85	15.21	17.81	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	-23.85	-141.50	15.21	17.81
	$U_{24}-U_{25}$	-11.50	-12.66	52.02	31.72	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	-12.66	-37.42	52.02	31.72
	$U_{25}-U_{26}$	-3.68	-168.21	-2.34	-1.75	0.88	-1.87	1265	0.99891031	2598.1	-0.526	0.91	0.91	-3.68	-168.21	-2.34	-1.75
	$U_{26}-U_{27}$	-26.22	-13.35	-29.12	-20.94	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-13.35	-40.37	-29.12	-20.94
	$U_{27}-U_{28}$	-25.53	-26.29	-44.28	-28.84	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-26.29	-41.94	-44.28	-28.84
	$U_{28}-U_{29}$	-40.38	-7.86	1.58	-6.88	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-7.86	-142.18	1.58	-6.88
	$U_{29}-U_{30}$	-34.74	-5.55	-11.53	-16.29	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-5.55	-167.79	-11.53	-16.29
	$U_{30}-U_{31}$	-5.91	14.80	-1.97	-5.05	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	14.80	-105.63	-1.97	-5.05
	$U_{31}-U_{32}$	-0.01	15.27	12.70	-24.52	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	15.27	-220.10	12.70	-24.52
	$U_{32}-U_{33}$	-34.98	88.83	-517.08	-45.82	388.9	388.88	6245	0.99866226	4446.1	-0.541	0.82	0.82	-517.08	-384.99	-45.82	388.88
	$U_{33}-U_{34}$	-34.98	88.83	-517.08	-45.82	388.9	388.88	6245	0.99866226	4446.1	-0.541	0.82	0.82	88.83	-384.99	-517.08	-45.82
	$U_{34}-U_{35}$	-11.50	-12.66	52.02	31.72	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	-12.66	-37.42	52.02	31.72
	$U_{35}-U_{36}$	-24.88	-18.66	5.32	-19.90	0.00	0.00	4206	0.99880042	2974.3	-0.233	0.51	0.51	-18.66	-68.69	5.32	-19.90
	$U_{36}-U_{37}$	-26.22	-13.35	-29.12	-20.94	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-13.35	-40.37	-29.12	-20.94
	$U_{37}-U_{38}$	-25.53	-26.29	-44.28	-28.84	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-26.29	-41.94	-44.28	-28.84
	$U_{38}-U_{39}$	-40.38	-7.86	1.58	-6.88	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-7.86	-142.18	1.58	-6.88
	$U_{39}-U_{40}$	-34.74	-5.55	-11.53	-16.29	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-5.55	-167.79	-11.53	-16.29
	$U_{40}-U_{41}$	-5.91	14.80	-1.97	-5.05	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	14.80	-105.63	-1.97	-5.05
	$U_{41}-U_{42}$	-0.01	15.27	12.70	-24.52	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	15.27	-220.10	12.70	-24.52
	$U_{42}-U_{43}$	33.43	52.34	-27.53	-9.60	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	52.34	-384.99	-27.53	-9.60
	$U_{43}-U_{44}$	5.03	38.53	-12.99	-9.60	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	38.53	-388.99	-12.99	-9.60
	$U_{44}-U_{45}$	27.42	32.32	20.04	40.68	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	32.32	-272.25	20.04	40.68
	$U_{45}-U_{46}$	42.64	32.32	20.04	40.68	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	32.32	-272.25	20.04	40.68
	$U_{46}-U_{47}$	29.18	-6.03	37.05	3.07	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-6.03	-447.95	37.05	3.07
	$U_{47}-U_{48}$	5.29	-10.52	7.75	15.89	0.00	0.00	4206	0.99880042	2974.3	-0.225	0.51	0.51	-10.52	-131.49	7.75	15.89
	$U_{48}-U_{49}$	52.33

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
AASHTO Code Specification for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	L_0-L_1	-15.50	-73.38	5.74	-8.77	1.00	1.03	63.94	-97.64	-11.17	11.41
	L_1-L_2	39.75	-88.06	3.75	-12.50	-11.61	-5.45	41.73	-139.15	-129.23	-60.62
	L_2-L_3	73.00	-42.24	1.44	-5.29	-14.23	-7.11	16.00	-29.62	-158.40	-79.76
	L_3-L_4	-11.39	11.52	2.13	-14.55	-19.61	-3.91	23.72	-161.99	-218.33	-43.51
	L_4-L_5	-49.18	-208.14	2.99	-3.25	-35.13	-17.57	33.25	-35.13	-188.18	-26.46
	L_5-L_6	-6.43	-181.22	2.25	-5.07	-11.46	-3.62	25.03	-58.66	-127.61	-40.27
	L_6-L_7	43.38	-78.74	2.82	-5.01	-12.52	-4.80	25.61	-89.35	-85.37	-69.05
	L_7-L_8	-25.09	-448.92	1.03	-2.58	-10.31	-13.97	11.43	-28.71	-114.76	-156.54
	L_8-L_9	-426.08	-36.00	-13.50	-68.09	-5.09	0.34	145.57	-61.30	-3.99	3.69
	L_9-L_{10}	-150.12	-126.55	1.50	-7.81	-7.92	-6.45	32.94	-347.06	10.18	-313.22
	L_{10}-L_{11}	-120.53	-116.03	4.41	-1.66	-5.50	-4.51	47.52	-17.87	-59.31	-48.61
	L_{11}-L_{12}	-139.16	-139.16	3.74	-3.74	-6.49	-6.49	54.64	-85.42	-85.05	-85.05
	L_{12}-L_{13}	-45.20	-121.29	3.04	-3.30	-13.69	-7.63	32.80	-3.29	-115.22	-82.21
	L_{13}-L_{14}	-96.42	-269.16	8.39	-20.53	-15.25	-11.12	90.43	-221.30	-164.37	-119.85
	L_{14}-L_{15}	-352.17	-352.17	8.20	-8.20	-24.78	-12.80	212.85	-212.85	-535.19	-276.63
	L_{15}-L_{16}	-192.00	-318.69	8.89	0.40	-17.81	-16.34	9.56	4.36	-192.00	-176.15
	L_{16}-L_{17}	-33.89	-8.36	1.23	-3.76	-7.97	-3.84	8.26	-3.76	-197.84	-47.12
	L_{17}-L_{18}	-154.69	-31.48	0.40	-0.24	-11.76	-1.59	4.33	-2.63	-126.79	-17.09
	L_{18}-L_{19}	-216.17	-146.84	2.99	-0.38	-15.74	5.18	6.33	-2.24	-183.15	-131.94
	L_{19}-L_{20}	-384.56	-49.93	0.40	-0.25	-10.69	5.42	4.84	-2.72	-113.74	58.44
	L_{20}-L_{21}	2.99	-170.85	4.72	-11.73	-0.72	1.39	50.26	-124.86	-7.63	14.79
	L_{21}-L_{22}	162.59	-245.54	5.99	-16.47	-4.53	-0.76	59.68	-101.22	-89.21	-87.74
	L_{22}-L_{23}	-6.26	-180.81	5.61	-9.51	-8.38	-9.18	59.68	-101.22	-89.21	-87.74
	L_{23}-L_{24}	-103.16	-103.16	1.90	-1.90	-4.51	-4.51	53.20	-53.20	-53.20	-53.20
	L_{24}-L_{25}	-253.03	-206.08	5.48	-17.42	-24.47	-14.14	58.39	-189.51	-260.51	-192.59
	L_{25}-L_{26}	-81.36	-81.36	3.74	-3.74	-8.49	-8.49	58.39	-58.39	-189.51	-189.51
	L_{26}-L_{27}	-475.14	-252.78	3.78	3.77	-28.68	-14.73	40.22	-40.10	-305.37	-134.80
	L_{27}-L_{28}	-280.52	-644.48	3.08	5.44	-27.47	-10.70	32.64	-57.88	-292.44	-113.87
	L_{28}-L_{29}	-292.37	-219.77	3.87	3.13	-11.42	-7.34	41.18	-33.36	-187.49	-39.79
	L_{29}-L_{30}	-225.89	-141.33	-2.66	5.18	-15.00	-5.43	28.29	-55.16	-159.65	-57.81
	L_{30}-L_{31}	-203.56	-205.61	4.27	2.77	-14.08	-5.28	45.57	-55.16	-159.65	-57.81
	L_{31}-L_{32}	-160.00	-387.78	2.76	5.73	-13.70	6.01	29.34	-60.96	-145.82	-94.01
	L_{32}-L_{33}	-202.72	-204.41	4.47	0.99	-18.26	-13.63	47.61	0.93	-194.46	-145.07
	L_{33}-L_{34}	-25.76	-27.50	2.72	2.72	-2.72	-2.72	44.61	-44.61	-49.37	-49.37
	L_{34}-L_{35}	1072.48	-412.36	29.57	-17.21	-1.80	-5.13	311.15	-181.10	-18.97	-1.35
	L_{35}-L_{36}	373.48	-373.48	7.32	-7.32	-5.13	-5.13	311.15	-181.10	-18.97	-1.35
	L_{36}-L_{37}	470.61	-49.01	11.39	-11.64	-7.49	-8.19	119.79	-122.46	-78.76	-86.21
	L_{37}-L_{38}	226.53	-41.80	5.64	-11.16	-8.87	-7.06	69.84	-117.37	-103.80	-74.24
	L_{38}-L_{39}	214.46	-56.44	5.02	-10.94	-12.15	-10.30	52.86	-113.08	-107.61	-74.24
	L_{39}-L_{40}	49.26	-202.49	3.65	-24.20	-21.02	-15.23	38.38	-254.57	-221.19	-160.22
	L_{40}-L_{41}	179.74	-197.13	2.84	-24.19	-21.02	-15.23	31.18	-254.57	-221.19	-160.22
	L_{41}-L_{42}	-111.93	0.87	1.99	-4.33	-21.92	-11.28	20.94	-45.57	-230.57	-118.66
	L_{42}-L_{43}	-78.76	-78.76	3.71	-3.71	-4.56	-4.56	20.94	-20.94	-118.66	-118.66
	L_{43}-L_{44}	-80.79	179.83	2.13	4.94	-13.35	-6.24	22.37	51.97	-140.47	-65.66
	L_{44}-L_{45}	-81.88	265.66	3.66	2.14	-16.12	-2.67	38.45	22.91	-169.63	-28.04
	L_{45}-L_{46}	-100.08	-279.84	3.31	-1.42	-17.53	-15.54	34.86	-14.95	-184.40	-163.54
	L_{46}-L_{47}	-100.08	-279.84	3.31	-1.42	-17.53	-15.54	34.86	-14.95	-184.40	-163.54
	L_{47}-L_{48}	1027.57	-362.88	28.58	-20.99	-1.83	1.95	304.06	-223.49	-19.51	20.80
	L_{48}-L_{49}	-227.20	-125.85	2.08	-1.38	-20.83	-11.02	22.15	-14.68	-221.81	-117.35
	L_{49}-L_{50}	-276.76	-276.76	4.55	-4.55	-2.72	-2.72	22.15	-22.15	-117.35	-117.35
	L_{50}-L_{51}	-278.16	-133.13	6.77	-12.08	-5.99	-8.41	72.10	-128.63	-53.72	-89.54
	L_{51}-L_{52}	-179.74	-179.74	3.71	-3.71	-4.56	-4.56	61.94	-61.94	-53.72	-89.54
	L_{52}-L_{53}	-222.98	-243.33	5.61	-8.14	-12.41	-10.09	59.70	-86.62	-132.10	-107.00
	L_{53}-L_{54}	-170.70	-170.70	3.71	-3.71	-4.56	-4.56	59.70	-59.70	-107.00	-107.00
	L_{54}-L_{55}	-167.99	-470.88	4.49	-9.83	-31.18	-6.83	47.85	-104.69	-331.95	-72.73
	L_{55}-L_{56}	-445.18	-93.02	3.29	0.80	-29.92	-20.54	35.05	8.50	-318.60	-218.70
	L_{56}-L_{57}	-291.76	-319.65	3.29	-2.51	-20.54	-20.54	21.54	-25.16	-271.76	-271.76
	L_{57}-L_{58}	-392.42	-38.25	1.61	-0.44	-21.50	-8.08	19.60	-17.94	-231.87	-79.99
	L_{58}-L_{59}	-297.20	-199.08	1.26	-0.53	-14.06	-5.81	13.43	-5.61	-149.64	-54.61
	L_{59}-L_{60}	-297.20	-199.08	1.26	-0.53	-14.06	-5.81	11.39	-5.61	-149.64	-54.61
	L_{60}-L_{61}	24.89	-109.63	5.56	-9.22	-0.43	0.66	99.99	-99.39	-6.49	7.15
	L_{61}-L_{62}	-139.96	-178.06	5.69	-9.76	-1.52	-5.36	61.39	-105.23	-16.40	-67.74
	L_{62}-L_{63}	-111.70	-139.07	5.02	-8.70	-4.02	-5.00	61.39	-105.23	-16.40	-67.74
	L_{63}-L_{64}	47.96	-293.32	4.52	-8.24	-9.35	-10.68	48.31	-68.83	-223.60	-160.84
	L_{64}-L_{65}	-41.79	-343.26	3.99	-22.26	-19.21	-12.52	42.98	-240.03	-207.08	-135.02
	L_{65}-L_{66}	-341.10	-86.25	1.82	-1.66	-21.10	-7.38	19.60	-17.94	-231.87	-79.99
	L_{66}-L_{67}	-297.20	-199.08	1.26	-0.53	-14.06	-5.81	13.43	-5.61	-149.64	-54.61
	L_{67}-L_{68}	-225.98	-225.98	3.71	-3.71	-4.56	-4.56	11.39	-11.39	-54.61	-54.61
	L_{68}-L_{69}	-147.72	-149.48	2.77	-0.05	-11.47	-2.64	29.89	-0.58	-123.63	-28.46
	L_{69}-L_{70}	-225.98	-225.98	3.71	-3.71	-4.56	-4.56	29.89	-29.89	-123.63	-123.63
	L_{70}-L_{71}	-428.40	-26.47	-10.70	-0.01	-0.56	0.10	174.75	-66.99	-0.42	1.08
	L_{71}-L_{72}	-70.64	-27.53	6.68	-8.51	-8.70	-6.00	74.35	-94.77	-96.81	-67.04
	L_{72}-L_{73}	-70.64	-27.53	6.68	-8.51	-8.70	-6.00	74.35	-94.77	-96.81	-67.04
	L_{73}-L_{74}	-194.51	-25.06	5.54	-9.58	-8.54	-7.39	66.09	-106.76	-95.05	-82.27
	L_{74}-L_{75}	-25.96	-303.14	3.76	-1.65	-21.16	-7.01	19.60	-17.94	-231.87	-79.99
	L_{75}-L_{76}	-45.44	-80.85	2.04	-0.71	-14.87	-10.52	22.70	-7.85	-165.57	-116.90
	L_{76}-L_{77}	-74.43	-5.53	0.78	-0.73	-11.05	-5.62	8.72	-8.07	-123.01	-62.69

M_1 Information

ZZ Axis Moments from STAAD

Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mdns}	Equivalent Mom. Factor C_{mdls}
L_0-L_1	114.37	-306.93	-44.35	-70.66	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.386	0.45
L_1-L_2	142.08	-415.97	-228.33	-243.82	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.342	0.46
L_2-L_3	49.00	-225.24	-99.51	-440.89	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.374	0.80
L_3-L_4	-335.99	-467.89	-79.29	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99911881	3294.8	0.163	0.67
L_4-L_5	111.13	-335.19	-188.19	-26.46	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900094	3052.4	-0.452	0.42
L_5-L_6	53.66	-362.68	-277.04	-148.34	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99925462	3448.5	0.148	0.66
L_6-L_7	82.04	-362.68	-277.04	-148.34	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99925462	4776.0	0.043	0.62
L_7-L_8	16.52	97.27	-295.63	-1145.84	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99925462	4776.0	0.043	0.62
L_8-L_9	-281.26	920.59	-145.8	145.75	130.44	228.84	650	2932.4	1.57	7552	0.99925915	4806.3	-0.306	0.48
L_9-L_{10}	-191.61	551.76	-382.32	-145.8	145.75	130.44	228.84	650	2932.4	1.57	7552	0.99925915	4806.3	-0.306	0.48
L_{10}-L_{11}	-466.63	-475.76	-77.96	121.5	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904482	3891.8	0.164	0.67
L_{11}-L_{12}	-466.63	-475.76	-77.96	121.5	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904482	3891.8	0.164	0.67
L_{12}-L_{13}	183.15	-531.94	110.48	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900094	2755.5	-0.564	0.37
L_{13}-L_{14}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{14}-L_{15}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{15}-L_{16}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{16}-L_{17}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{17}-L_{18}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{18}-L_{19}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{19}-L_{20}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{20}-L_{21}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{21}-L_{22}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{22}-L_{23}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{23}-L_{24}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{24}-L_{25}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{25}-L_{26}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{26}-L_{27}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{27}-L_{28}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{28}-L_{29}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{29}-L_{30}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{30}-L_{31}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{31}-L_{32}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{32}-L_{33}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{33}-L_{34}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{34}-L_{35}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{35}-L_{36}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{36}-L_{37}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{37}-L_{38}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{38}-L_{39}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{39}-L_{40}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{40}-L_{41}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{41}-L_{42}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{42}-L_{43}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{43}-L_{44}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{44}-L_{45}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{45}-L_{46}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{46}-L_{47}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{47}-L_{48}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{48}-L_{49}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{49}-L_{50}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{50}-L_{51}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{51}-L_{52}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{52}-L_{53}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{53}-L_{54}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{54}-L_{55}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{55}-L_{56}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{56}-L_{57}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{57}-L_{58}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{58}-L_{59}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{59}-L_{60}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{60}-L_{61}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{61}-L_{62}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{62}-L_{63}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{63}-L_{64}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{64}-L_{65}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{65}-L_{66}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{66}-L_{67}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{67}-L_{68}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{68}-L_{69}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{69}-L_{70}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{70}-L_{71}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{71}-L_{72}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{72}-L_{73}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{73}-L_{74}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{74}-L_{75}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{75}-L_{76}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42
L_{76}-L_{77}	-1064.52	-1064.52	-424.94	52.08	41.79	41.79	62.8	1302	1098.2	1.21	3332	0.99900094	2755.5	-0.492	0.42

M_3 Information

YY Axis Moments from STAAD

| Member | Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) |

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected
Location: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_1~L_1	-29.87	-49.03	0.85	-9.92	-5.43	6.89	9.47	-10.29	-60.40	-63.30
	U_1~L_2	-9.08	15.18	17.3	-0.78	-4.50	4.05	8.08	-8.65	-50.13	-45.09
	U_2~L_2	10.00	30.70	17.3	-0.78	-3.62	3.57	8.08	-8.65	-50.13	-45.09
	U_2~L_3	33.45	-34.40	-2.44	-2.39	-3.36	3.55	27.15	-26.62	-37.35	-39.47
	U_3~L_3	41.64	-42.40	3.01	-3.37	-2.48	2.23	39.03	-37.30	-24.30	-26.00
	U_3~L_4	45.56	-51.10	3.86	-4.08	-5.76	6.61	42.96	-45.42	-49.85	-53.19
	U_4~L_4	50.00	-55.68	3.14	-4.45	-4.92	2.47	44.03	-48.90	-37.52	-39.85
	U_4~L_5	91.24	-101.87	5.81	-5.96	-0.02	0.02	64.72	-66.39	-0.22	0.24
	U_5~L_5	-20.57	21.23	20.88	-5.48	-5.79	6.96	89.01	-105.57	-64.45	77.49
	U_5~L_6	-91.16	104.85	3.28	-0.37	-3.90	5.25	69.30	-82.00	-37.81	47.42
	U_6~L_6	-88.47	88.21	0.23	0.33	-4.38	4.50	2.49	3.57	-47.23	48.48
	U_6~L_7	-91.16	104.85	3.63	-0.25	-4.67	5.32	69.30	-82.00	-37.81	47.42
	U_7~L_7	-79.57	78.39	1.20	-0.92	-4.63	4.53	12.97	-9.96	-49.89	-48.86
	U_7~L_8	-49.26	60.16	1.61	-1.48	-4.28	4.44	17.39	-15.91	-46.16	-47.84
	U_8~L_8	-29.77	34.66	3.46	-2.56	-4.26	4.39	15.37	-8.87	-14.79	-15.34
	U_8~L_9	-1.50	-2.65	3.65	-3.81	-2.88	2.86	39.32	-41.09	-31.10	-30.79
	U_9~L_9	34.13	-36.55	4.28	-4.25	-1.86	1.60	44.26	-44.13	-14.11	0.97
	U_9~L_{10}	46.23	-55.85	4.11	-4.12	-0.65	0.41	44.36	-44.43	-7.00	4.45
	U_{10}~L_{10}	110.44	-114.63	6.54	-6.57	-0.48	0.49	78.50	-78.98	5.24	0.00
	U_{10}~L_{11}	121.36	-131.26	7.33	-7.19	-0.58	-0.31	79.61	-77.56	-6.23	-3.34
	U_{11}~L_{11}	-134.59	-173.50	7.24	-7.87	-0.58	0.08	78.07	-84.90	-6.30	0.81
	U_{11}~L_{12}	-114.23	168.97	0.99	-0.51	-0.07	0.42	0.00	0.00	0.00	0.00
	U_{11}~L_{13}	-123.79	131.39	0.95	-1.01	-6.91	8.72	10.10	-10.73	-73.52	71.49
	U_{12}~L_{13}	-113.40	139.79	1.25	-1.11	-6.65	8.39	11.65	-12.38	-70.69	68.42
	U_{13}~L_{13}	-56.01	62.13	0.64	-0.67	-3.66	3.59	6.80	-7.18	-38.97	38.27
	U_{13}~L_{14}	-34.05	39.79	1.26	-0.94	-3.62	3.57	6.80	-7.18	-41.77	39.39
	U_{14}~L_{14}	-7.04	12.29	2.39	-2.12	-3.55	3.70	25.39	-22.55	-37.74	39.40
	U_{14}~L_{15}	15.85	-15.59	2.78	-2.76	-3.23	3.26	29.64	-29.41	-34.39	34.89
	U_{15}~L_{15}	38.66	-44.94	3.52	-3.52	-2.76	2.50	39.66	-39.67	-18.30	19.52
	U_{15}~L_{16}	86.91	-96.07	5.56	-5.49	-1.52	1.75	59.19	-58.49	-20.46	18.58
	U_{16}~L_{16}	156.08	-149.41	6.64	-6.39	-1.72	1.60	78.50	-78.98	5.24	0.00
	U_{16}~L_{17}	141.23	-149.41	5.86	-5.94	-1.19	0.72	62.40	-63.25	-12.65	8.24
	U_{17}~L_{17}	192.55	-192.83	5.90	-5.91	-0.67	0.42	62.66	-62.91	-7.15	4.49
	U_{17}~L_{18}	203.52	-203.17	7.16	-6.83	-0.52	0.55	76.22	-72.70	-5.49	5.86
	U_{18}~L_{18}	60.05	-59.53	0.92	-0.90	-0.71	0.76	0.00	0.00	0.00	0.00
	U_{18}~L_{19}	-109.89	162.81	0.84	-0.89	-7.61	7.36	8.68	-9.32	-80.08	77.68
	U_{19}~L_{19}	-113.84	139.79	1.25	-1.11	-6.65	8.39	11.65	-12.38	-70.69	68.42
	U_{19}~L_{20}	-130.37	-127.18	0.81	-0.79	-4.98	6.89	8.51	-8.31	-73.44	72.46
	U_{20}~L_{20}	-113.07	114.60	1.11	-0.44	-6.88	6.89	11.69	-4.61	-72.23	72.51
	U_{20}~L_{21}	-44.60	47.44	1.02	-0.72	-3.62	3.57	6.80	-7.18	-41.77	39.39
	U_{21}~L_{21}	-44.77	46.58	1.53	-1.24	-3.85	3.87	16.06	-13.05	-40.47	40.74
	U_{21}~L_{22}	-30.50	34.66	3.46	-2.56	-4.26	4.39	15.37	-8.87	-14.79	-15.34
	U_{22}~L_{22}	-3.69	4.33	2.26	-2.38	-2.67	2.81	23.81	-25.09	-28.13	29.61
	U_{22}~L_{23}	26.68	25.72	4.09	-4.02	-4.05	4.84	42.30	-42.65	-19.32	17.05
	U_{23}~L_{23}	88.57	-87.50	4.58	-4.43	-1.41	1.13	48.17	-46.63	-14.80	11.91
	U_{23}~L_{24}	138.29	-139.04	7.93	-7.93	-0.61	0.35	83.41	-83.38	-8.53	3.69
	U_{24}~L_{24}	124.54	-124.54	7.93	-7.93	-0.61	0.35	81.29	-83.38	-8.53	3.69
	U_{24}~L_{25}	137.79	-176.28	8.30	-7.84	-0.43	0.37	87.27	-82.43	-4.47	3.50
	U_{25}~L_{25}	-2.25	8.62	0.38	-0.36	-0.06	0.07	0.00	0.00	0.00	0.00
	U_{25}~L_{26}	-167.25	167.49	7.77	-7.85	-4.87	6.45	8.14	-9.04	-73.13	68.72
	U_{26}~L_{26}	-116.13	110.00	0.39	-0.67	-5.59	5.45	4.13	-7.29	-59.50	58.45
	U_{26}~L_{27}	-2.25	12.19	0.20	-0.36	-0.06	0.07	0.00	0.00	0.00	0.00
	U_{27}~L_{27}	-119.87	124.44	0.73	-0.19	-5.80	5.81	7.81	-2.02	-61.78	61.81
	U_{27}~L_{28}	-118.40	120.47	0.73	-0.19	-5.80	5.81	7.81	-2.02	-61.78	61.81
	U_{28}~L_{28}	-79.51	88.87	1.41	-1.15	-5.01	4.99	14.97	-12.29	-53.30	52.69
	U_{28}~L_{29}	-43.86	51.94	1.44	-1.55	-2.87	3.18	15.35	-16.48	-30.55	33.89
	U_{29}~L_{29}	-29.77	34.66	3.46	-2.56	-4.26	4.39	15.37	-8.87	-14.79	-15.34
	U_{29}~L_{30}	-5.58	1.82	3.59	-3.75	-2.78	2.66	38.19	-39.95	-29.59	28.27
	U_{30}~L_{30}	55.25	51.69	3.95	-3.95	-0.66	0.36	42.03	-42.00	-7.97	3.85
	U_{30}~L_{31}	137.10	-150.77	7.06	-6.99	-0.81	0.83	75.16	-74.40	-8.67	8.78
	U_{31}~L_{31}	165.74	-206.85	7.16	-7.67	-0.60	0.80	76.28	-81.61	-6.36	8.50
	U_{31}~L_{32}	82.31	-86.87	4.76	-5.10	-0.49	0.28	51.33	-54.98	-5.32	3.01
	U_{32}~L_{32}	142.75	166.20	6.22	-6.87	-0.09	0.12	67.23	-74.10	-0.98	1.29
	U_{33}~L_{33}	142.75	166.20	6.22	-6.87	-0.09	0.12	67.23	-74.10	-0.98	1.29
	U_{34}~L_{34}	37.53	-58.82	5.91	-7.56	-4.98	7.87	65.80	-84.13	-77.72	87.62
	U_{34}~L_{35}	-87.20	89.91	0.03	-0.03	-5.27	5.57	0.32	-0.35	-58.72	61.99
	U_{35}~L_{35}	-48.49	45.44	0.22	0.13	-3.98	4.16	2.40	1.46	-44.35	46.36
	U_{35}~L_{36}	-38.99	42.97	0.52	-0.16	-3.24	3.60	5.78	-1.79	-37.13	40.11
	U_{36}~L_{36}	-39.90	40.31	1.44	-1.19	-3.45	3.34	16.03	-13.29	-38.38	37.17
	U_{36}~L_{37}	-37.48	38.74	2.89	-3.17	-3.13	3.25	32.17	-35.33	-34.81	36.15
	U_{37}~L_{37}	-10.30	11.14	4.04	-4.48	-1.40	1.44	44.92	-49.88	-15.62	16.02
	U_{37}~L_{38}	3.52	-11.96	4.90	-4.54	-0.76	0.73	54.52	-50.57	-8.42	8.10
	U_{38}~L_{38}	44.79	-53.88	5.29	-6.42	-0.53	-0.20	58.94	-71.52	-5.86	-2.24

ZZ Axis Moment Properties

Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	J (in^4)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_y (k-in)
U_1~L_1	-18.31	-61.45	-169.69	200.90	15.4	15.42	15.42	23.71	2	751.9	1.54
U_1~L_2	5.70	1.00	-120.43	117.43	15.4	15.42	15.42	23.71	2	751.9	1.54
U_2~L_2	43.89	-61.29	-74.16	83.17	15.4	15.42	15.42	23.71	2	751.9	1.54
U_2~L_3	102.31	-102.39	-37.45	40.80	15.4	15.42	15.42	23.71	2	751.9	1.54
U_3~L_3	138.75	102.39	-18.37	15.4	15.4	15.42	15.42	23.71	2	751.9	1.54
U_3~L_4	152.31	-164.94	-40.82	-51.69	19.4	19.37	19.31	29.87	3	907.0	1.54
U_4~L_4	172.02	-178.20	-58.19	-68.24	20.80	20.67	34.66	38.85	9	1076.0	1.67
U_4~L_5	256.83	-276.27	118.13	-131.90	18.5	18.45	18.36	30.78	7	1020.9	1.67
U_5~L_5	166.11	-201.10	-168.38	195.48	107.1	107.13	107.11	162.71	26	2098.9	1.52
U_5~L_6	169.30	194.03	-313.67	348.72	15.4	15.42	54.51	54.51	14	1408.8	1.65
U_6~L_6	109.62	122.40	-217.33	219.70	35.5	35.52	32.91	54.51	14	1309.7	1.65
U_6~L_7	66.66	100.49	-227.44	206.31	15.4	15.42	42.74	65.30	8	1389.6	1.53
U_7~L_7	75.34	80.31	-211.54	207.77	21.1	21.09	21.09	39.40	10	1137.6	1.68
U_7~L_8	26.36	43.72	-164.05	181.86	17.2	17.24	17.24	26.54	2	824.7	1.54
U_8~L_8	15.37	8.87	-114.79	114.79	15.4	15.42	15.42	23.71	2	751.9	1.54
U_8~L_9	83.24	92.47	-69.33	63.28	15.4	15.42	15.42	23.71	2	751.9	1.54
U_9~L_9	144.26	147.11	0.97	-10.23	15.4	15.42	15.42	23.71	2	751.9	1.54
U_9~L_{10}	156.20	-168.87	44.94	-62.95	19.4	19.37	19.37	29.87	3	907.0	1.54
U_{10}~L_{10}	266.33	-302.62	132.41	-137.68	33.1	33.09	33.09	53.51	14	1167.1	1.67
U_{10}~L_{11}	326.96	-338.67	144.26	-177.88	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{11}~L_{11}	344.13	-409.49	161.33	-223.79	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{11}~L_{12}	-125.59	193.64	-3.39	-3.39	15.4	15.42	46.71	71.43	10	1711.0	1.53
U_{11}~L_{13}	-139.03	147.55	-320.20	325.71	46.7	46.71	46.71	71.43	10	1711.0	1.53
U_{12}~L_{13}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{13}~L_{13}	-68.07	65.22	-157.24	163.68	21.5	21.54	21.54	33.27	5	987.9	1.54
U_{13}~L_{14}	-68.07	65.22	-157.24	163.68	21.5	21.54	21.54	33.27	5	987.9	1.54
U_{14}~L_{14}	45.86	32.68	-86.94	101.36	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{14}~L_{15}	45.86	32.68	-93.56	55.33	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{15}~L_{15}	84.83	-83.66	-53.90	55.33	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{15}~L_{16}	108.67	-122.72	13.86	-15.47	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{16}~L_{16}	241.23	-251.56	68.65	-84.63	20.8	20.80	20.67	34.64	9	1037.5	1.67
U_{16}~L_{17}	304.67	-359.37	18.51	-32.23	15.4	15.42	46.71	71.43	10	1711.0	1.53
U_{17}~L_{17}	314.80	-331.29	156.19	-176.38	43.0	43.01	42.96	68.66	14	1479.6	1.60
U_{17}~L_{18}	314.80	-331.29	156.19	-176.38	43.0	43.01	42.96	68.66	14	1479.6	1.60
U_{18}~L_{18}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{18}~L_{19}	-331.91	-332.39	180.21	-180.34	43.0	43.01	43.24	43.76	15.66	1516.6	1.63
U_{19}~L_{19}	-188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{19}~L_{20}	-188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{20}~L_{20}	-131.04	-147.32	-328.59	322.33	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{20}~L_{21}	-131.04	-147.32	-328.59	322.33	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{21}~L_{21}	11.69	-4.61	-72.23	72.51	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{21}~L_{22}	11.69	-4.61	-72.23	72.51	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{22}~L_{22}	16.06	-13.05	-60.47	60.74	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{22}~L_{23}	16.06	-13.05	-60.47	60.74	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{23}~L_{23}	3.36	-3.36	-53.51	53.51	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{23}~L_{24}	23.81	-25.09	-28.13	29.61	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{24}~L_{24}	23.81	-25.09	-28.13	29.61	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{24}~L_{25}	42.30	-42.65	-19.32	17.05	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{25}~L_{25}	88.17	-86.63	-14.80	11.91	15.4	15.42	18.71	18.61	31.48	8	970.0	1.68
U_{26}~L_{26}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{26}~L_{27}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{27}~L_{27}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{27}~L_{28}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{28}~L_{28}	279.04	-289.51	-12.14	12.14	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{28}~L_{29}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{29}~L_{29}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{29}~L_{30}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{30}~L_{30}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{30}~L_{31}	66.79	-68.54	-65.75	69.77	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{31}~L_{31}	66.79	-68.54	-65.75	69.77	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{31}~L_{32}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{32}~L_{32}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{33}~L_{33}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{34}~L_{34}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{34}~L_{35}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{35}~L_{35}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{35}~L_{36}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{36}~L_{36}	279.04	-289.51	-12.14	12.14	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{36}~L_{37}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{37}~L_{37}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{38}~L_{38}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{38}~L_{39}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{39}~L_{39}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{40}~L_{40}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{40}~L_{41}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{41}~L_{41}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{41}~L_{42}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{42}~L_{42}	279.04	-289.51	-12.14	12.14	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{42}~L_{43}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{43}~L_{43}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{44}~L_{44}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{44}~L_{45}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{45}~L_{45}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{46}~L_{46}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{46}~L_{47}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{47}~L_{47}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{47}~L_{48}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{48}~L_{48}	279.04	-289.51	-12.14	12.14	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{48}~L_{49}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{49}~L_{49}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{50}~L_{50}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{50}~L_{51}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{51}~L_{51}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{52}~L_{52}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{52}~L_{53}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{53}~L_{53}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{53}~L_{54}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{54}~L_{54}	279.04	-289.51	-12.14	12.14	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{54}~L_{55}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{55}~L_{55}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{56}~L_{56}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{56}~L_{57}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{57}~L_{57}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{58}~L_{58}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{58}~L_{59}	190.90	-188.71	54.47	-81.95	18.7	18.71	18.61	31.48	8	970.0	1.68
U_{59}~L_{59}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{59}~L_{60}	360.49	-361.40	161.28	-172.75	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{60}~L_{60}	279.04	-289.51	-12.14	12.14	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{60}~L_{61}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{61}~L_{61}	188.58	-191.46	-381.32	379.95	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{62}~L_{62}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.0	0.00
U_{62}~L_{63}	143.47	-147.19	9.96	-16.33	17.2	17.24	17.24	26.54	2	824.7	1.54
U_{63}~$L_{63

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
AASHTO Guidelines for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	ZZ Axis Moment Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{bb} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_bb	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$	Pass
Structure 1	U_0-L_1	-12.57	-3.38	0.42	-0.24	-2.66	1.24					-6.25	-1.27	89.25	34.18	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_1-L_1	-1.68	-7.06	0.28	-0.07	-1.75	-0.04					3.16	-0.79	-19.43	-0.40	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	L_1-L_2	-9.78	-11.76	0.35	-0.72	-1.21	-0.72					3.87	-7.96	-13.47	-8.03	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_2-U_2	-10.33	-17.60	0.22	-0.47	2.46	-2.26					-9.09	-8.09	-13.92	-13.92	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.421	0.43	0.43
	U_2-L_3	-26.83	-58.49	0.58	-0.47	-3.14	2.18					6.42	-5.18	-34.52	24.28	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	L_3-L_4	-28.64	-39.79	0.12	-0.30	-3.37	2.31					9.32	-7.98	-20.35	20.40	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_3-L_3	-9.82	-14.73	-29.29	-48.63							9.82	14.73	-29.29	-48.63	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_3-U_4	-9.60	-109.55	1.93	1.36	-1.73	3.87					20.62	14.43	-110.71	-62.99	232.77	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2114.7	-0.726	0.31	0.31
	U_4-L_4	-74.80	-111.68	2.94	0.23	-4.09	1.89					23.43	-2.49	-44.04	-20.40	232.77	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2114.7	-0.669	0.33	0.33
	U_4-L_5	-58.84	-54.78	0.42	0.71	-2.57	1.43					4.51	7.63	-32.07	13.40	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_4-L_5	-58.84	-54.78	0.42	0.71	-2.57	1.43					4.51	7.63	-32.07	13.40	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	L_5-U_6	-55.25	-39.07	0.43	0.93	-2.73	1.80					2.87	8.52	-31.52	8.63	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_5-L_5	-55.25	-39.07	0.43	0.93	-2.73	1.80					4.67	-10.06	-29.47	19.39	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_5-L_6	-20.99	-7.38	0.59	-1.01	-1.69	0.62					6.37	-10.90	-16.26	6.73	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	L_6-U_6	-20.99	-7.38	0.59	-1.01	-1.69	0.62					6.37	-10.90	-16.26	6.73	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_6-L_7	-19.00	-4.09	0.90	-1.18	-1.98	1.23					3.43	-7.30	-12.05	5.00	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_6-L_7	-19.00	-4.09	0.90	-1.18	-1.98	1.23					-3.77	-22.27	-10.88	34.10	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	-0.401	0.44	0.44
	L_7-U_8	-28.64	-12.99	0.49	-0.61	-2.68	1.69					4.93	-6.59	-28.18	17.65	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	U_7-L_7	-89.35	-58.15	0.37	-0.32	-4.66	3.43					4.03	-3.47	-50.25	36.98	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_7-L_8	-89.35	-58.15	0.37	-0.32	-4.66	3.43					4.03	-3.47	-50.25	36.98	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_8-L_9	-39.07	-61.38	0.63	-0.13	-3.13	3.99					8.44	-5.26	-52.75	0.00	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_8-U_8	-105.39	-89.05	0.44	-0.01	-5.87	4.25					4.70	-8.19	-63.04	-37.31	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	L_8-L_9	-82.31	-86.26	0.81	-0.74	-6.55	4.82					8.63	-7.84	-69.77	51.32	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_9-L_9	-82.31	-86.26	0.81	-0.74	-6.55	4.82					3.24	-6.56	-56.78	42.62	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_9-U_{10}	-81.24	-62.98	0.85	-0.89	-4.73	3.62					9.04	-7.34	-50.40	38.54	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	U_{10}-L_{10}	-81.24	-62.98	0.85	-0.89	-4.73	3.62					5.98	-5.48	-51.67	37.20	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{10}-U_{10}	-17.36	-7.00	0.72	-0.96	-2.21	1.56					7.69	-10.19	-23.51	16.63	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{10}-L_{11}	-6.87	-1.46	0.30	-0.15	-1.08	0.35					7.43	-10.30	-15.82	12.35	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	L_{10}-L_{11}	-7.43	-23.92	1.36	1.70	-1.51	0.55					14.44	-18.13	-16.12	5.83	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{11}-L_{11}	-44.32	-35.88	0.88	-1.38	-2.70	1.21					9.36	-14.74	-28.71	12.86	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_{11}-U_{12}	-56.39	-58.66	0.30	-0.29	-3.44	2.30					9.75	-15.39	-45.43	27.94	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	U_{12}-L_{12}	-88.55	-73.83	0.51	-0.94	-3.51	2.36					5.43	-10.00	-45.65	25.14	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{12}-U_{12}	-88.55	-73.83	0.51	-0.94	-3.51	2.36					5.43	-10.00	-45.65	25.14	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{13}-L_{13}	-108.38	-116.68	0.63	-0.29	-4.88	3.71					6.72	-3.07	-51.96	39.69	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	L_{13}-U_{14}	-154.28	-139.71	0.52	-0.19	-6.16	4.93					5.94	-2.71	-65.53	52.50	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{14}-L_{14}	-24.73	-100.38	1.08	0.82	-3.90	4.83					7.40	-9.45	-42.29	33.79	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_{14}-U_{14}	-24.73	-100.38	1.08	0.82	-3.90	4.83					11.33	8.66	-41.01	50.81	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	U_{15}-L_{15}	-98.38	-74.00	0.29	0.74	-7.40	5.29					7.40	8.46	-62.29	53.79	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{15}-U_{16}	-74.14	-95.51	0.47	-0.53	-5.25	4.60					4.90	-5.62	-55.27	48.34	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{16}-L_{16}	-85.43	-83.61	0.65	-0.59	-5.45	4.77					6.19	-11.10	-49.22	34.19	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{16}-U_{16}	-55.49	-68.85	0.59	-1.06	-4.30	3.25					6.19	-11.10	-49.22	34.19	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{17}-L_{17}	-32.97	-39.97	0.53	-1.00	-3.15	2.21					5.57	-10.47	-33.10	23.29	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{17}-U_{18}	-10.32	-16.86	0.86	-1.27	-1.74	0.77					9.07	-13.40	-18.32	16.84	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
Structure 2	U_{18}-L_{18}	-10.32	-4.39	0.86	-1.27	-1.74	0.77					9.07	-13.40	-18.32	8.11	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{18}-U_{18}	-6.87	-2.97	0.30	-0.15	-1.08	0.35					10.73	-13.27	-12.57	5.53	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{19}-L_{19}	-17.08	-16.16	0.90	-1.09	-2.03	1.36					9.51	-11.51	-21.37	14.30	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{19}-U_{20}	-28.64	-25.81	0.77	-0.61	-2.68	1.69					9.51	-11.51	-21.44	0.00	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{20}-L_{20}	-55.69	-55.14	0.70	-0.78	-4.47	3.05					7.41	-8.76	-47.96	32.12	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{20}-U_{20}	-69.22	-80.41	0.64	-0.69	-4.71	3.56					6.77	-7.24	-49.92	-37.49	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{21}-L_{21}	-105.11	-102.57	0.34	-0.38	-6.10	5.05					3.55	-3.97	-64.14	53.08	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{21}-U_{22}	-105.11	-102.57	0.34	-0.38	-6.10	5.05					3.55	-3.97	-64.14	53.08	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{22}-L_{22}	-47.67	-128.15	1.60	0.86	-4.84	5.39					16.99	9.12	-46.15	57.41	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{22}-U_{22}	-47.67	-128.15	1.60	0.86	-4.84	5.39					16.99	9.12	-46.15	57.41	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{23}-L_{23}	-89.53	-99.33	0.54	0.05	-4.64	3.74					5.78	-0.53	-49.38	39.77	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{23}-U_{24}	-86.54	-82.57	0.51	-0.38	-4.31	3.00					5.39	-4.02	-49.90	31.90	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{24}-L_{24}	-60.17	-67.66	0.66	-1.39	-4.20	2.52					3.45	-4.71	-39.29	29.29	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{24}-U_{24}	-60.17	-67.66	0.66	-1.39	-4.20	2.52					5.96	-14.82	-44.71	31.04	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{25}-L_{25}	-12.59	-26.40	1.51	1.72	-1.52	0.33					7.75	-10.29	-32.88	21.52	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{25}-U_{26}	-12.59	-26.40	1.51	1.72	-1.52	0.33					16.08	-18.33	-16.17	3.48	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{26}-L_{26}	-6.51	-17.79	1.44	-1.53	-1.75	1.02					15.29	-16.31	-18.64	10.98	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{26}-U_{26}	-17.08	-8.87	1.44	-1.53	-1.75	1.02					15.29	-16.31	-18.64	10.98	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{27}-L_{27}	-38.92	-20.55	0.47	-0.39	-2.76	1.84					5.01	-4.17	-29.36	19.97	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{27}-U_{28}	-38.92	-20.55	0.47	-0.39	-2.76	1.84					7.51	-7.22	-29.36	20.40	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{28}-L_{28}	-88.53	-71.19	0.63	-0.63	-5.15	3.85					6.65	-5.63	-54.84	40.96	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{28}-U_{28}	-88.53	-71.19	0.63	-0.63	-5.15	3.85					13.65	-13.34	-54.84	40.96	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{29}-L_{29}	-73.02	-111.68	2.94	0.23	-4.09	1.89					5.13	-4.72	-74.53	49.62	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{29}-U_{30}	-73.02	-111.68	2.94	0.23	-4.09	1.89					20.40	-2.49	-74.53	49.62	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{30}-L_{30}	-86.92	-56.40	0.44	-0.33	-5.08	3.65					4.74	-3.57	-54.77	39.31	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{30}-U_{30}	-86.92	-56.40	0.44	-0.33	-5.08	3.65					5.38	-4.35	-51.10	39.72	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{31}-L_{31}	-28.11	-12.70	0.33	-0.66	-2.54	1.79					3.51	-7.08	-27.34	19.17	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{31}-U_{32}	-28.11	-12.70	0.33	-0.66	-2.54	1.79					8.96	-8.53	-27.34	19.27	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{32}-L_{32}	-8.07	-18.30	0.83	-1.26	-1.64	0.44					8.96	-13.52	-19.63	17.65	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{32}-U_{32}	-8.07	-18.30	0.83	-1.26	-1.64	0.44					10.30	-13.11	-19.63	17.65	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{33}-L_{33}	-50.49	-35.10	0.62	-1.00	-2.54	1.68					5.01	-6.15	-36.11	22.17	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{33}-U_{34}	-50.49	-35.10	0.62	-1.00	-2.54	1.68					4.20	-5.87	-37.75	11.16	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{34}-L_{34}	-39.60	-20.61	0.39	-0.54	-3.55	1.54					4.27	-11.53	-27.34	19.27	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{34}-U_{34}	-39.60	-20.61	0.39	-0.54	-3.55	1.54					4.27	-11.53	-27.34	19.27	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{35}-L_{35}	-77.34	-67.11	0.18	0.42	-4.04	2.32					3.78	-3.18	-43.18	34.08	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{35}-U_{36}	-77.34	-67.11	0.18	0.42	-4.04	2.32					18.77	-18.78	-43.18	34.08	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{36}-L_{36}	-2.84	-82.10	0.78	-1.49	-2.39	4.16					8.73	-16.55	-26.56	-6.28	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{36}-U_{36}	-54.59	-58.66	0.29	0.41	-5.27	3.12					3.00	-4.51	-58.67	54.71	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_{37}-L_{37}	-8.15	-17.58	0.09	-1.13	-1.81	0.14					1.02	-1.39	-20.15	1.56	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{37}-U_{38}	-8.15	-17.58	0.09	-1.13	-1.81	0.14					1.02	-1.39	-20.15	1.56	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_{38}-L_{38}	-9.13	-17.71	0.09	-1.13	-1.81	0.14					0.33	-0.77	-20.15	1.56	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_{38}-U_{38}	-23.22	-7.61	0.61	-0.09	-2.40	1.34					6.76	-10.92	-27.31	14.96	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80

M_1 Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	ZZ Axis Moment Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{bb} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_bb	M_1 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$	Pass
Structure 1	U_0-L_1	-12.57	-3.38	0.42	-0.24	-2.66	1.24					-6.25	-1.27	89.25	34.18	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	U_1-L_1	-1.68	-7.06	0.28	-0.07	-1.75	-0.04					3.16	-0.79	-19.43	-0.40	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	L_1-L_2	-9.78	-11.76	0.35	-0.72	-1.21	-0.72					3.87	-7.96	-13.47	-8.03	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	L_2-U_2	-10.33	-17.60	0.22	-0.47	2.46	-2.26					-9.09	-8.09	-13.92	-13.92	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.421	0.43	0.43
	U_2-L_3	-26.83	-58.49	0.58	-0.47	-3.14	2.18					6.42	-5.18	-34.52	24.28	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.227	0.69	0.69
	L_3-L_4	-28.64	-39.79	0.12	-0.30	-3.37	2.31					9.32	-7.98	-20.35	20.40	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	763.3	0.504	0.80	0.80
	U_3-L_3	-9.82	-14.73	-29.29	-48.63							9.82	14.73	-29.29	-48.63	0.00	0.00	0.00	0.00	0	0.0	1.66	857	1.5	773.7	-0.401	0.44	0.44
	L_3-U_4	-9.60	-109.55	1.93	1.36	-1.73	3.87					20.62	14.43	-110.71	-62.99	232.77	40.7	40.70

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

M_1 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | ZZ Axis Moment Properties: Max. Pos. Mom. Start k-in | Max. Pos. Mom. End k-in | Max. Neg. Mom. Start k-in | Max. Neg. Mom. End k-in | S_{top} (in^3) | S_b (in^3) | S_{bp} (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term / F_y/S_xx | M_y (k-in) | Equivalent Mom. Factor a | $C_{m(a)}$ | $C_{m(b)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | YY Axis Moment Properties: Max. Pos. Mom. Start k-in | Max. Pos. Mom. End k-in | Max. Neg. Mom. Start k-in | Max. Neg. Mom. End k-in | S_{top} (in^3) | S_b (in^3) | S_{bp} (in^3) | Z_Y (in^3) | I_{YY} (in^4) | Shape Factor f | M_p (k-in) | P_{cr} (kip) | Formula 1.8 Term / F_y/S_yy | M_y (k-in) | Equivalent Mom. Factor a | $C_{m(a)}$ | $C_{m(b)}$ | Yield: Axial Action | Yield: Moment Portion | Yield: Total | Pass | Tension: Axial Action | Tension: Moment Portion | Tension: Total | Pass | Fracture: Axial Action | Fracture: Moment Portion | Fracture: Total | Pass | Buckle: Axial Action | Buckle: Moment Portion | Buckle: Total | Pass | Compression: Axial Action | Compression: Moment Portion | Compression: Total | Pass | Yield: Axial Action | Yield: Moment Portion | Yield: Total | Pass |
|---|---|---|---

Moment (Start) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Mxx, Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) (k-in)	Lane Reduction & Impact Live Load Mz Start (k-in)	Lane Reduction & Impact Live Load Mz End (k-in)	Impact Pedestrian Load Mz Start (k-in)	Impact Pedestrian Load Mz End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{xx} (in^3)	S_{tc} (in^3)	Z_z (in^3)	I_z (in^4)	$I_{t/c}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_n	Equivalent Mom. Factor a	Equivalent Mom. Factor C_m	C_{bb}
Structure 1	L_0-L_1	-19.48	-91.69	3.77	-4.95	-0.70	0.73	0.30	-0.64	-0.11	0.13	50.42	-66.06	-9.33	9.77	3.54	-7.69	-1.37	1.50	83.92	-282.33	-42.70	-7.01	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000094	2755.4	-0.320	0.47	0.47	0.00
	L_1-L_2	30.30	-116.56	1.97	-8.15	-3.69	-3.81	0.00	0.00	-0.22	-0.91	26.32	-108.84	-49.26	-77.55	0.00	0.00	-2.66	-10.86	56.41	-387.35	-67.73	-31.59	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000094	2755.4	-0.249	0.50	0.50	0.00
	L_2-L_3	30.07	-78.01	2.24	-7.51	-9.65	-5.48	-3.21	-1.24	-0.75	-0.44	73.20	-97.54	-14.56	-12.47	-15.23	6.17	-2.13	2.34	141.98	-413.75	-260.21	99.5	99.53	91.00	124.65	100.97	2577	1026.3	1.21	3332	0.99000094	2755.4	-0.384	0.44	0.44	0.00
	L_3-L_4	-65.02	14.74	1.32	-4.17	-8.24	-4.49	0.23	0.86	-1.19	-1.34	17.65	-55.70	-110.14	-59.97	2.75	10.34	-14.24	-16.13	-46.29	139.98	-323.16	-110.78	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99991189	3294.8	0.343	0.74	0.74	0.00
	L_4-L_5	-60.69	-24.13	1.29	-3.93	-0.72	-1.48	0.00	0.00	-0.42	-0.30	12.92	-52.39	-117.62	-61.19	7.75	8.68	-13.28	-16.78	-19.23	139.98	-256.37	-52.6	99.9	99.93	76.68	125.49	3409	1372.0	1.26	4141	0.99991189	3294.8	0.343	0.74	0.74	0.00
	L_5-L_6	-2.17	269.23	2.47	4.65	-4.41	1.32	0.53	1.12	-0.84	0.05	32.98	62.14	-58.86	17.61	6.36	13.39	-10.07	0.55	68.65	484.63	-130.35	388.15	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	3448.5	0.142	0.66	0.66	0.00
	L_6-L_7	-2.27	54.79	3.00	-4.37	-0.64	-0.90	-0.34	-0.09	-0.15	-0.34	17.61	-5.81	-15.16	-1.42	0.92	1.90	-1.85	-0.25	4.81	-10.26	4.12	83.92	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	4776.0	-0.413	0.43	0.43	0.00
	L_7-L_8	-38.81	571.46	0.76	-1.97	-3.00	5.17	0.00	0.00	-0.35	3.66	10.10	-36.26	-40.11	69.11	0.00	0.00	-4.19	43.86	-28.57	685.99	-122.43	133.12	145.8	145.75	130.44	228.84	6500	2932.4	1.37	7552	0.99952915	4806.3	-0.042	0.58	0.58	0.00
	L_8-L_9	555.91	-39.94	8.02	-1.41	0.38	3.41	-0.27	0.00	0.00	103.82	-7.97	-18.23	6.86	40.87	-3.26	0.00	0.00	54.72	62.42	-89.13	693.06	-730.55	145.8	145.75	136.74	228.84	6500	2932.4	1.37	7552	0.99952915	4806.3	-0.042	0.58	0.58	0.00
	L_9-L_{10}	185.62	-153.59	4.10	-4.30	-2.28	-0.81	0.70	-0.95	-0.37	0.65	33.09	-43.45	-29.45	12.47	8.35	-17.12	-4.38	5.52	341.40	-327.33	177.76	-222.34	144.9	144.85	129.09	192.84	5210	2376.8	1.33	6364	0.99949164	4776.1	-0.041	0.62	0.62	0.00
	L_{10}-L_{11}	164.49	-164.37	2.94	-1.65	-2.22	-3.85	1.00	-0.73	0.00	0.00	38.02	21.37	-30.27	-49.80	11.99	-8.74	0.00	0.00	296.17	-167.37	148.68	-321.58	92.6	92.6	82.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.462	0.42	0.42	0.00
	L_{11}-L_{12}	78.56	-201.71	2.38	-2.28	-0.78	2.07	0.00	0.00	0.00	25.47	-33.76	-26.40	64.19	5.67	-12.02	22.05	0.00	0.00	207.56	-408.48	104.31	-465.02	92.6	92.6	82.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.608	0.36	0.36	0.00
	L_{12}-L_{13}	-57.21	-170.41	2.14	1.67	-5.95	-4.69	0.43	0.20	-0.57	27.69	-13.87	-76.94	-60.72	5.16	2.41	-6.79	-11.64	-4.38	-141.44	-348.18	-241.08	-353.09	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99952915	4288.6	0.683	0.87	0.87	0.00
	L_{13}-L_{14}	70.10	-469.56	2.93	-12.10	-5.35	-7.91	0.35	0.23	-0.43	-2.28	37.91	-156.54	-69.19	-102.29	4.18	2.75	-5.44	-27.34	173.27	-649.63	-58.79	-832.09	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99951006	5310.6	-0.182	0.53	0.53	0.00
	L_{14}-L_{15}	-488.53	-137.76	2.39	-3.20	-3.30	-0.02	-2.54	-0.01	-0.01	-0.02	-2.54	-0.01	-0.01	-0.02	-2.54	-0.01	-0.01	-0.02	-373.97	-158.14	-47.82	-13.58	147.8	147.82	133.15	194.28	5523	2373.9	1.34	6596	0.99951006	4824.9	-0.506	0.49	0.49	0.00
	L_{15}-L_{16}	-272.75	-354.04	0.80	0.24	-9.62	-8.41	0.13	-0.03	1.43	-1.04	10.32	3.05	-116.70	-108.75	1.55	-0.35	-17.14	-12.53	-325.61	-484.63	-430.34	-498.47	147.8	147.82	133.15	194.28	5523	2373.9	1.34	6596	0.99951006	4824.9	-0.506	0.49	0.49	0.00
	L_{16}-L_{17}	389.62	47.38	3.99	-0.08	8.07	-1.01	-1.17	-0.07	-1.26	0.11	-117.23	-13.11	0.61	-0.48	7.16	-1.62	-15.16	1.42	-153.89	138.16	-298.43	153.89	138.16	138.16	123.43	183.32	5210	2376.8	1.33	6364	0.99949164	4776.1	-0.041	0.62	0.62	0.00
	L_{17}-L_{18}	-202.39	-201.51	0.35	-0.39	-4.62	-5.19	0.06	-0.07	-0.96	0.47	4.46	-5.06	-89.60	-3.48	0.66	-0.88	-11.52	3.26	-253.31	15.71	-392.56	21.28	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904482	3891.8	-0.054	0.56	0.56	0.00
	L_{18}-L_{19}	-240.66	180.28	2.53	-3.05	-5.19	2.44	0.06	-0.06	-1.10	0.57	3.44	-4.47	-9.31	-87.58	0.57	-0.77	-13.22	8.84	-296.06	233.04	-468.46	302.73	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000094	2755.5	-0.662	0.34	0.34	0.00
	L_{19}-L_{20}	-192.40	90.95	0.37	-0.27	3.90	2.30	0.06	-0.06	-1.23	0.66	4.81	-3.47	-50.40	-29.73	0.76	-0.87	-14.80	10.28	239.69	110.72	356.13	-185.09	74.2	74.23	67.49	92.84	2740	972.0	1.25	3064	0.99981189	2447.4	0.520	0.24	0.24	0.00
	L_{20}-L_{21}	26.60	-260.09	2.76	-3.73	-0.42	0.90	0.35	-1.08	-0.06	0.13	35.26	-398.81	-5.33	11.45	4.18	-12.92	-0.70	1.56	-110.98	-552.21	24.78	155.71	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.201	0.52	0.52	0.00
	L_{21}-L_{22}	201.56	-347.07	3.39	-5.06	-1.98	-4.73	-0.12	-0.17	-0.12	-0.17	50.42	-66.06	-9.33	9.77	3.54	-7.69	-1.37	1.50	83.92	-282.33	-42.70	-7.01	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000094	2755.4	-0.320	0.47	0.47	0.00
	L_{22}-L_{23}	7.16	-277.32	1.97	-4.17	-5.89	0.23	-1.18	-0.13	0.17	25.16	-53.23	-96.23	-79.82	2.75	2.78	-14.17	-1.60	2.04	6.83	-475.90	-154.71	-523.65	162.3	162.31	151.98	208.67	4946	2152.2	1.29	6919	0.99904436	5307.2	0.200	0.68	0.68	0.00
	L_{23}-L_{24}	7.16	-479.24	1.97	-4.17	-5.89	0.23	-1.18	-0.13	0.17	25.16	-53.23	-96.23	-79.82	2.75	2.78	-14.17	-1.60	2.04	6.83	-475.90	-154.71	-523.65	162.3	162.31	151.98	208.67	4946	2152.2	1.29	6919	0.99904436	5307.2	0.200	0.68	0.68	0.00
	L_{24}-L_{25}	-367.51	-421.35	0.63	-1.68	-13.86	-8.57	0.04	0.32	-1.24	-1.22	8.04	20.15	-177.08	-108.47	3.43	3.78	-14.87	-20.62	-460.39	-504.10	-861.44	-784.93	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.911	0.96	0.96	0.00
	L_{25}-L_{26}	-215.99	-581.01	3.44	-5.14	-2.24	-5.00	-0.14	-0.19	-0.14	-0.19	50.42	-66.06	-9.33	9.77	3.54	-7.69	-1.37	1.50	83.92	-282.33	-42.70	-7.01	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000094	2755.4	-0.320	0.47	0.47	0.00
	L_{26}-L_{27}	-619.43	-397.04	3.40	-3.89	-20.87	-8.53	0.47	0.59	2.41	-2.01	43.48	-47.09	-264.08	-106.46	5.63	7.08	-28.90	-24.11	-1114.31	-1006.16	-1377.42	-701.31	216.9	216.94	203.74	268.74	7625	3425.8	1.99	11778	0.99951006	7132.6	0.509	0.80	0.80	0.00
	L_{27}-L_{28}	-294.52	-7.37	2.99	5.56	-14.23	-8.16	0.46	0.90	-1.94	-0.96	38.20	71.00	-181.86	-104.20	5.50	10.76	-23.32	-11.46	-430.16	144.25	-906.90	-239.35	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.265	0.70	0.70	0.00
	L_{28}-L_{29}	-324.29	260.70	3.89	0.15	-12.09	-7.15	0.47	0.61	1.75	-1.49	69.33	38.37	-131.51	-56.74	5.24	7.09	-21.32	-7.84	-373.97	513.56	-1124.39	-373.97	216.9	216.94	203.74	268.74	7625	3425.8	1.99	11778	0.99951006	7132.6	0.509	0.80	0.80	0.00
	L_{29}-L_{30}	-295.59	262.58	2.71	-5.17	-8.44	0.26	0.41	0.52	1.43	-2.05	33.65	66.53	-107.88	3.32	4.53	10.58	-17.12	-0.62	-309.16	684.42	-618.01	348.56	149.0	148.97	137.62	189.42	4753	1908.4	1.27	6251	0.99951006	5024.6	0.277	0.73	0.73	0.00
	L_{30}-L_{31}	-139.98	246.51	4.09	1.39	-4.02	-1.73	0.72	-0.47	-0.26	0.14	22.08	2.06	5.06	4.39	-14.89	1.96	-13.21	8.23	82.06	-47.04	83.54	138.21	149.0	148.97	137.62	189.42	4753	1908.4	1.27	6251	0.99951006	5024.6	0.277	0.73	0.73	0.00
	L_{31}-L_{32}	-188.97	686.21	2.76	5.36	-5.65	-0.01	0.44	1.14	-1.12	0.56	35.20	68.53	-72.19	-0.15	5.28	13.68	-13.49	6.67	-169.39	910.56	462.06	761.74	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916215	5468.6	-0.186	0.53	0.53	0.00
	L_{32}-L_{33}	-139.46	-276.11	3.83	-5.44	-6.17	-2.64	0.55	1.24	-0.97	0.64	48.50	-43.90	-76.86	-33.70	6.64	5.46	-14.69	0.47	-76.76	-454.47	-337.86	-431.56	263.6	263.58	249.42	338.81	9241	4144.7	1.41	14652	0.99916215	8707.2	0.611	0.91	0.91	0.00
	L_{33}-L_{34}	472.20	1361.48	2.42	-0.30	-0.37	0.63	-0.04	0.00	0.00	71.85	-33.63	-31.40	-45.85	24.30	-4.63	0.00	0.00	0.00	1356.12	-488.32	15.62	-3.44	147.8	147.82	133.15	194.28	5523	2373.9	1.34	6596	0.99951006	4824.9	-0.506	0.49	0.49	0.00
	L_{34}-L_{35}	1356.12	-488.32	15.62	-3.44	-4.47	2.94	5.06	-1.63	0.00	0.00	197.24	-43.39	-56.41	37.05	60.66	-21.96	0.00	0.00	2190.32	-728.84	1671.29	1823.17	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8222.0	-0.333	0.47	0.47	0.00
	L_{35}-L_{36}	306.66	0.00	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8222.0	-0.333	0.47	0.47	0.00
	L_{36}-L_{37}	579.83	-109.25	5.69	-2.66	-2.49	-3.63	2.03	-0.54	0.00	0.00	71.85	-33.63	-31.40	-45.85	24.30	-4.63	0.00	0.00	1356.12	-488.32	15.62	-3.44	147.8	147.82	133.15	194.28	5523	2373.9	1.34	6596	0.99951006	4824.9	-0.506	0.49	0.49	0.00
	L_{37}-L_{38}	275.68	-101.76	4.55	2.11	-6.46	-5.51	1.05	-0.58	0.11	-0.89	57.50	-85.59	-65.91	-12.58	6.84	-1.28	-10.63	4.60	482.96	-74.49	181.78	-282.99	127.4	127.41	116.62	167.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.154	0.54	0.54	0.00
	L_{38}-L_{39}	275.68	-101.76	4.55	2.11	-6.46	-5.51	1.05	-0.58	0.11	-0.89	57.50	-85.59	-65.91	-12.58	6.84	-1.28	-10.63	4.60	482.96	-74.49	181.78	-282.99	127.4	127.41	116.62	167.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.154	0.54	0.54	0.00
	L_{39}-L_{40}	209.89	-114.91	2.65	3.10	-4.73	-7.20	0.42	0.64	-0.29	-1.04	33.47	39.16	-90.69	-51.93	5.08	7.72	-3.53	-12.42	345.37	-44.52	143.52	344.79	127.4	127.41	108.77	157.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.413	0.43	0.43	0.00
	L_{40}-L_{41}	-33.73	318.64	2.23	1.81	-11.13	-12.04	0.43	0.76	-0.99	-2.03	28.18	-22.83	-140.46	-102.01	5.11	9.08	-11.90	-24.31	-17.21	-364.78	-348.17	-143.98	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905257	5313.3	0.468	0.75	0.75	0.00
	L_{41}-L_{42}	-328.90	1.64	4.64	0.19	-7.33	-3.23	0.88	-0.93	-0.11	-2.08	1.89	0.00	-163.52	-70.86	-23.70	-9.56	-20.72	-3.29	-1.64	-1.64	-1.64	-1.64	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905257	5313.3	0.468	0.75	0.75	0.00
	L_{42}-L_{43}	-183.23	53.46	1.83	3.97	-10.04	-7.62	0.42	0.44	-1.14	-0.36	23.13	-50.11	-126.72	-56.15	4.99	5.29	-13.72	-4.37	-188.08	118.06	-612.75	-108.64	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852	0.99905257	5313.3	0.271	0.71	0.71	0.00
	L_{43}-L_{44}	-100.74	311.77	2.05	2.11	-6.15	-4.80	-2.34	0.38	-0.87	0.56	25.97	52.43	-85.79	-29.48	4.60	4.94	-10.44	6.72	-74.92	517.51	-316.84	340.24	127.4	127.41	116.62	157.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.145	0.54	0.54	0.00
	L_{44}-L_{45}	-69.72	308.73	1.51	-1.22	-8.35	1.54	0.46	0.11	-0.75	0.35	44.35	15.36	-105.47	13.14	5.46	1.26	-8.96	4.25	17.16	434.64	337.46	429.93	149.0	149.01	130.61	189.42	4753	1908.4	1.27	6251	0.99905257	4912.7	0.039	0.62	0.62	0.00
	L_{45}-L_{46}	-2.76	643.54	1.77	0.34	-3.70	-1.35	0.36	-0.03	-0.01	-0.01	17.61	-5.81	-15.16	-1.42	0.92	1.90	-1.85	-0.25	4.81	-10.26	4.12	83.92	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	4776.0	-0.413	0.43	0.43	0.00
	L_{46}-L_{47}	-18.47	438.87	4.12	0.70	-6.01	-4.64	0.03	-1.50	0.34	-0.15	51.57	87.77	-75.85	-58.52	0.40	-17.96	-4.13	-1.81	61.08	-585.47	-153.99	-122.04	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898786	7449.1	-0.104	0.56	0.56	0.00
	L_{47}-L_{48}	-18.47	438.87	4.12	0.70	-6.01	-4.64	0.03	-1.50	0.34	-0.15	51.57	87.77	-75.85	-58.52	0.40	-17.96	-4.13	-1.81	61.08	-585.47	-153.99	-122.04	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898786	7449.1	-0.104	0.56	0.56	0.00
	L_{48}-L_{49}	1437.37	-471.51	15.04	-4.93	-2.92	-3.45	2.42	-1.88	0.00	0.00	182.18	-63.04	-49.57	30.86	63.50	-22.56	0.00	0.00	2284.97	-749.54	1768.02	1918.72	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8221.8	-0.328	0.47	0.47	0.00
	L_{49}-L_{50}	-253.75	-181.16	2.86	-0.95	-7.13	-4.31	0.00	0.00	-1.21	-0.40	36.54	-12.16	-91.15	-55.05	0.00	0.00	-14.52	-4.84	-250.71	-261.86	-501.58	-427.20	226.0	225.96	205.94	291.45	7480	3191.4	1.35	10060	0.99898786	7449.1	0.652	0.94	0.94	0.00
	L_{50}-L_{51}	54.71	-199.29	2.85	-0.98	-7.13	-4.31	0.00	0.00	-1.21	-0.40	36.54	-12.16	-91.15	-55.05	0.00	0.00	-14.52	-4.84	-250.71	-261.86	-501.58	-427.20	226.0	225.96	205.94	291.45	7480	3191.4	1.35	10060	0.99898786	7449.1	0.652	0.94	0.94	0.00
	L_{51}-L_{52}	350.20	-203.85	3.34	-6.89	-1.88	-6.23	0.84	-0.46	0.00	0.00	50.31	-28.05	-23.98	-79.64	10.24	-10.64	-5.56	0.00	0.00	0.00	584.27	-355.99	176.8	176.79	167.04	238.61	6087	2613.8	1.35	7258	0.99951006	5310.6	-0.182	0.53	0.53	0.00
	L_{52}-L_{53}	350.20	-203.85	3.34	-6.89	-1.88	-6.23	0.84	-0.46	0.00	0.00	50.31	-28.05	-23.98	-79.64	10.24	-10.64	-5.56	0.00	0.00	0.00	584.27	-355.99	176.8	176.79	167.04	238.61	6087	2613.8	1.35	7258	0.99951006	5310.6	-0.182	0.53	0.53	0.00
	L_{53}-L_{54}	-365.08	644.79	3.33	3.35	-15.00	-13.62	0.68	0.27	-2.07	2.23	50.22	30.02	-171.92	-112.98	8.17	3.28	-24.83	-26.75	-365.79	-773.18	-889.79	-1215.18	218.3	216.33	205.74	344.78	7625	3425.8	1.99	11378	0.99951006	7132.6	0.732	0.85	0.85	0.00
	L_{54}-L_{55}	-620.48	-212.54	2.84	0.56	-17.39	-10.33	0.38	0.07	-2.14	-1.36	36.25	7.18	-222.12	-131.99	6.98	2.13	-29.69	-16.29	-728.09	-260.75	-1287.88	-562.29	197.7	197.72	179.89	341.80	7583	3368.5	1.73	11279	0.99917361	6519.3	0.437	0.77	0.77	0.00
	L_{55}-L_{56}	-434.57	-328.96	2.82	-0.61	-15.50	-10.63	0.38	0.27	-2.07	-2.23	50.22	30.02	-171.92	-112.98	8.17	3.28	-24.83	-26.75	-365.79	-773.18	-889.79	-1215.18	218.3	216.33	205.74	344.78	7625	3425.8	1.99	11378	0.99951006	7132.6	0.732	0.85	0.85	0.00
	L_{56}-L_{57}	-620.48	-212.54	2.84	0.56	-17.39	-10.33	0.38	0.07	-2.14	-1.36	36.25	7.18	-222.12	-131.99	6.98	2.13	-29.69	-16.29	-728.09	-260.75	-1287.88	-562.29	197.7	197.72	179.89	341.80	7583	3368.5	1.73	11279	0.99917361	6519.3	0.437	0.77	0.77	0.00
	L_{57}-L_{58}	-476.75	95.76	3.31	1.64	-13.93	-7.76	0.10	0.38	-2.32	-0.38	24.01	21.26	-179.27	-82.80	2.24	4.50	-27.78	-4.55	-567.74	115.52	-1068.08	-173.08	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99951006	5310.6	-0.182	0.53	0.53	0.00
	L_{58}-L_{59}	-241.27	199.23	1.73	2.06	-5.84	1.96	0.23	0.47	-1.20	0.19	22.40	28.65	-75.50	25.27	2.74	5.63	-14.39	2.27	-265.13	316.49	-477.23	313.49	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.657	0.34	0.34	0.00
	L_{59}-L_{60}	-127.13	162.45	2.37	-1.62	-4.07	0.85	0.45	-0.43	-0.85	0.67	30.61	-20.99	-52.61	8.94	5.40	-4.09	-10.16	8.03	-106.74	170.43	-279.25	230.55	144.9	144.85	129.09	192.84	5210	2376.8	1.33	6364	0.99949164	4776.1	-0.826	0.22	0.22	0.00
	L_{60}-L_{61}	-192.76	-240.13	3.40	-5.69	-1.04	2.97	0.65	-1.12	-4.10	0.04	43.98	-73.62	-13.40	-38.45	7.85	-13.45	-1.14	0.49	340.87	-471.68	221.54	-355.69	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332	0.99000094	2755.5	-0.733	0.31	0.31	0.00
	L_{61}-L_{62}	24.74	-188.47	2.33	-3.16	-0.91	-2.12	0.00	0.00	-0.01	-0.01	17.61	-5.81	-15.16	-1.42	0.92	1.90	-1.85	-0.25	4.81	-10.26	4.12	83.92	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	4776.0	-0.413	0.43	0.43	0.00
	L_{62}-L_{63}	40.28	-374.07	2.32	-6.24	-3.44	-8.58	0.00	0.00	-0.12	-1.30	25.49	-35.55	-30.85	-23.98	-9.64	-14.43	-0.66	-2.79	-14.43	-1.64	-14.43	-14.43	147.8	147.82	133.15	194.28	5523	2373.9	1.34	6596	0.99951006	4824.9	-0.506	0.49	0.49	0.00
	L_{63}-L_{64}	-121.39	-479.27	1.98	-7.26	-8.11	-5.00	0.00	0.00	-0.02	-0.04	2.50	-3.61	-

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected
Location: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information | M_y Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | ZZ Axis Moment Properties: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{bot} (in^3) | S_{top} (in^3) | Z_z (in^3) | I_z (in^4) | I_{xx} (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term * F_y/S_bot | M_z (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(a)}$ | Equivalent Mom. Factor $C_{b(min)}$ | YY Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) (k-in) | Live Load (Min) (k-in) | Pedestrian Load (Max) (k-in) | Pedestrian Load (Min) (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | YY Axis Moment Properties: Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bot} (in^3) | S_{top} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | r_{min} (in) | Formula 1.8 Term * F_y/S_bot | M_n (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(a)}$ | Equivalent Mom. Factor $C_{b(min)}$ | Yield: Axial Axial+ | Yield: Moment Positive | Yield: Total | Yield: Pass | Tension: Axial Axial+ | Tension: Moment Positive | Tension: Total | Tension: Pass | Buckle: Axial Axial+ | Buckle: Moment Positive | Buckle: Total | Buckle: Pass | Yield: Axial Axial- | Yield: Moment Positive | Yield: Total | Yield: Pass |
|---|---|---|---

Moment (Start) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

	Vehicle Load Factors	Pedestrian Load Factors
DL Factor:	1.30	DL Factor: 1.30
LL Factor:	2.17	LL Factor: 1.83

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) Start (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	YY Axis Moments from STAAD: Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_x (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bot}	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{m2}	Equivalent Mom. Factor C_{m3}
Structure 1	U_0-L_1	3.62	-1.41	23	5.11	-1.72	0.87	0.15	0.01	-0.03	-0.02	3.09	-1.48	-23.03	11.56	1.75	0.12	-0.35	-0.23	11.30	1.38	33.29	23.11	15.6	15.63	15.58	25.66	5	804.0	1.66	857	1.5	773.7	-0.694	0.32	0.32
	U_1-L_1	-11.46	-3.33	39	-0.16	-1.09	0.10	0.08	-0.04	-0.25	0.07	5.24	2.15	-14.52	1.38	0.26	0.08	-0.47	-2.95	0.84	-3.55	-8.99	-46.36	-1.35	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.029	0.61	0.61
	L_1-U_2	-10.01	-11.79	40	-0.03	-0.83	-0.24	0.09	-0.03	-0.13	-0.03	5.85	-1.58	-11.05	3.21	-1.36	-0.12	-0.35	-0.37	12.17	-18.88	-24.59	-22.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.526	0.97	0.97
	U_2-L_2	9.82	-15.00	34	0.10	-0.57	-0.60	0.08	0.01	-0.08	-0.12	4.58	1.28	-7.55	4.00	0.90	0.13	-0.94	-1.40	22.69	-16.72	-3.99	-36.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.099	0.64	0.64
	L_2-U_3	-16.21	25.07	39	-0.30	-0.98	0.08	0.12	-0.01	-0.17	-0.01	7.68	4.63	-13.09	5.60	0.36	0.14	-1.43	-1.20	-15.49	-43.69	-41.07	-34.57	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.032	0.49	0.49
	U_3-L_3	-34.06	79.11	38	0.46	-1.74	1.23	0.26	-0.21	-0.33	0.22	9.58	6.23	-25.29	-15.31	0.26	0.15	-2.66	-2.96	-40.69	-2.69	-33.31	116.10	-88.55	-13.28	15.61	15.58	25.66	5	804.0	1.66	857	1.5	773.7	-0.694	0.32	0.32
	L_3-U_4	-31.75	67.71	37	-0.21	-1.66	0.02	0.11	-0.07	-0.41	-0.03	9.21	5.43	-25.35	-14.77	-0.37	-0.13	-2.57	-2.84	-37.96	-2.51	-31.07	99.37	-76.01	-11.40	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.084	0.61	0.61
	U_4-L_4	-1.45	103.74	0.65	0.51	-0.93	1.70	0.15	0.18	-0.24	0.24	0.47	8.71	6.85	-12.42	22.68	1.76	2.16	-2.84	5.62	16.99	149.71	-28.81	184.21	35.1	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.157	0.54	0.54
	L_4-U_5	-12.32	139.19	0.74	0.16	-1.04	2.26	0.21	0.13	-0.18	0.58	9.56	4.68	-13.49	29.27	2.47	1.56	-2.33	6.96	4.70	191.09	-45.26	244.15	64.3	40.70	40.44	67.52	25	1661.0	1.67	2241	1.5	2014.7	-0.185	0.53	0.53
	U_5-L_5	-100.86	90.26	2.1	0.30	-3.36	2.44	1.55	0.03	-0.08	-0.54	4.33	1.82	4.33	-37.54	20.11	0.20	0.98	-6.43	5.10	-122.85	-128.73	-159.48	160.90	40.7	40.70	40.44	67.52	25	1661.0	1.67	2241	1.5	2014.7	-0.607	0.26	0.26
	L_5-U_6	-73.41	69.80	0.37	0.58	-2.01	1.00	0.06	0.14	-0.38	0.21	4.81	7.47	-26.06	12.93	0.77	1.68	-4.54	2.57	-65.00	106.91	-151.89	118.74	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.782	0.29	0.29
	U_6-L_6	-49.89	47.84	0.09	0.00	-1.40	0.00	0.00	0.00	0.00	0.00	3.29	2.56	-17.73	8.80	0.00	0.00	-3.09	0.00	-44.21	72.75	-103.34	80.79	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.782	0.29	0.29
	L_6-U_7	-69.88	47.84	0.09	0.00	-1.82	0.00	0.00	0.00	0.00	0.00	-3.79	2.56	-28.21	12.14	-1.82	0.00	-4.55	0.00	-58.25	72.75	-136.37	88.49	20.8	20.80	20.67	34.66	1	1076.0	1.67	1444	1.5	1315.4	-0.649	0.34	0.34
	U_7-L_7	-27.39	6.37	0.08	0.00	-0.86	0.20	0.00	0.00	0.00	0.00	0.00	0.00	-1.73	0.34	-33.41	-5.60	-59.57	13.94	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.234	0.51	0.51
	L_7-U_8	-5.38	-2.10	0.01	0.00	-0.03	-0.10	0.00	0.00	0.00	0.00	1.69	0.84	-2.39	-1.85	0.00	0.00	0.00	0.00	-5.38	-2.10	-5.38	-2.10	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.234	0.51	0.51
	U_8-L_8	-31.03	12.71	0.25	-0.22	-1.18	0.79	0.05	-0.04	-0.19	0.11	3.29	-2.79	-15.31	10.26	0.56	-0.52	-2.29	1.32	-33.22	10.46	-71.50	38.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.039	0.54	0.54
	L_8-U_9	-46.63	27.25	0.25	-0.22	-1.47	1.03	0.04	-0.04	-0.24	0.09	3.29	2.72	-15.29	15.69	13.26	0.00	-2.86	0.00	-43.44	29.36	-53.64	72.21	9.9	9.92	9.92	15.81	1	507.0	1.54	780	1.5	763.3	-0.234	0.51	0.51
	U_9-L_9	-118.88	85.28	0.35	-0.33	-2.61	1.95	0.06	-0.05	-0.55	0.42	4.58	-4.24	-33.80	25.29	0.67	-0.62	-6.59	5.04	-144.38	101.67	-227.00	165.64	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.728	0.31	0.31
	L_9-U_{10}	-117.64	97.67	0.30	-0.30	-2.47	1.91	0.04	-0.04	-0.57	0.41	3.83	-3.91	-31.98	28.67	0.62	-0.60	-6.48	5.70	-144.43	106.69	-222.22	160.33	35.4	35.83	35.83	59.33	3	1264.6	1.53	1955	1.5	1922.1	-0.732	0.31	0.31
	U_{10}-L_{10}	-148.08	120.85	0.20	-0.20	-2.96	1.91	0.04	-0.04	-0.79	0.63	2.52	-2.63	-30.48	25.42	0.50	-0.46	-6.46	6.47	-7.56	187.02	151.42	298.53	22.8	22.80	38.83	59.33	3	1264.6	1.53	1955	1.5	1922.1	-0.821	0.21	0.27
	L_{10}-U_{11}	-86.91	116.74	0.44	-0.30	-3.66	2.98	0.01	-0.06	-0.13	-0.38	5.63	-3.78	-46.79	38.05	0.14	-0.70	-1.51	4.57	-100.78	143.57	-191.47	-43.73	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.228	0.69	0.69
	U_{11}-L_{11}	-13.74	114.46	0.72	0.12	-1.10	-0.69	0.53	0.16	-0.12	-0.10	7.72	3.53	-8.21	6.45	-34.70	1.24	-0.10	-0.69	5.33	-160.66	11.29	-38.35	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.715	0.31	0.31
	L_{11}-U_{12}	-118.23	92.26	0.73	-0.65	-3.25	2.54	0.11	-0.10	-0.52	0.43	9.38	-8.28	-41.56	32.46	1.37	-1.25	-6.28	5.11	-133.39	102.03	-243.79	190.28	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.781	0.29	0.29
	U_{12}-L_{12}	-54.33	81.61	0.44	-0.36	-1.27	0.90	0.07	-0.06	-0.18	-0.51	5.63	-4.63	-16.16	11.47	0.86	-0.72	-2.14	1.27	-19.42	1.17	-68.64	36.05	15.4	15.42	15.42	23.71	2	967.9	1.54	1496	1.5	1470.1	-0.234	0.51	0.51
	L_{12}-U_{13}	-54.33	8.61	0.44	-0.36	-1.27	0.90	0.07	-0.06	-0.18	-0.51	5.63	-4.63	-16.16	11.47	0.86	-0.72	-2.14	1.27	-19.42	1.17	-68.64	36.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	U_{13}-L_{13}	-1.47	13.42	0.07	-0.05	-0.13	-0.07	0.05	0.01	-0.02	-0.05	0.56	-0.46	-1.61	1.15	0.09	-0.07	-0.21	0.13	-1.92	0.12	-6.79	3.57	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	L_{13}-U_{14}	13.33	-37.03	0.56	0.94	-0.66	-0.91	0.06	-0.04	-0.03	-0.09	7.18	-12.05	-0.41	-0.18	0.71	-0.44	-0.34	-1.03	32.88	74.24	-8.99	-48.52	17.2	17.24	17.24	26.54	1	824.7	1.54	876	1.5	853.4	-0.443	0.42	0.42
	U_{14}-L_{14}	-66.01	54.01	0.10	-0.46	-1.59	0.93	0.00	0.00	-0.23	0.17	-1.21	-5.90	-20.29	11.89	0.00	0.00	-2.80	2.04	-83.19	57.43	-129.78	96.99	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.740	0.30	0.30
	L_{14}-U_{15}	-116.17	105.67	0.41	0.25	-2.52	1.53	0.04	0.11	-0.41	0.24	5.25	-3.25	-39.55	19.55	0.48	1.30	-4.96	2.84	-139.64	144.40	-212.48	-114.64	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	0.542	0.82	0.82
	U_{15}-L_{15}	-139.08	104.34	0.57	0.30	-3.20	1.93	0.07	0.14	-0.57	0.30	7.40	-4.11	-34.33	22.88	0.76	1.18	-5.00	4.06	-151.72	178.97	-241.93	195.19	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.781	0.29	0.29
	L_{15}-U_{16}	-131.97	151.07	0.63	-0.33	-2.89	2.26	0.05	0.08	-0.49	0.43	8.09	-4.25	-33.07	28.81	0.58	0.94	-5.99	5.20	-154.03	187.17	-243.20	258.81	46.7	46.71	46.71	75.43	10	1711.0	1.53	2357	1.5	2312.1	-0.940	0.22	0.22
	U_{16}-L_{16}	-175.19	162.79	1.03	-0.74	-2.77	2.46	0.04	-0.02	-0.64	0.56	13.15	-9.45	-35.44	31.38	0.42	-0.22	-7.64	6.66	-199.35	197.21	-304.54	279.61	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	0.918	0.23	0.23
	L_{16}-U_{17}	-84.39	68.67	0.22	-0.14	-1.78	1.03	0.00	0.00	-0.29	0.23	2.63	-1.68	-22.61	13.25	0.00	0.00	-3.61	2.72	-107.82	73.42	-167.32	125.12	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.740	0.30	0.30
	U_{17}-L_{17}	-45.28	-135.71	0.69	-0.15	-2.52	2.54	0.18	-0.02	-0.36	0.49	8.67	-1.56	-29.23	39.87	2.17	-0.28	-4.34	5.62	-40.08	172.21	-122.20	254.14	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.481	0.41	0.41
	L_{17}-U_{18}	-143.90	91.99	0.73	-0.65	-3.25	2.54	0.11	-0.10	-0.52	0.43	9.38	-8.28	-41.56	32.46	1.37	-1.25	-6.28	5.11	-133.39	102.03	-243.79	190.28	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.781	0.29	0.29
	U_{18}-L_{18}	-112.48	136.83	0.33	-0.40	-3.24	3.01	0.07	0.00	-0.50	0.49	4.18	-5.04	-40.94	37.99	0.83	0.01	-6.04	5.89	-137.14	165.66	-234.91	258.88	38.8	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.907	0.24	0.24
	L_{18}-U_{19}	-83.86	94.66	0.44	-0.40	-2.44	2.85	0.07	0.00	-0.37	0.37	2.61	-3.72	-30.53	35.93	0.55	0.01	-4.47	5.57	-103.67	117.62	-180.60	176.89	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.988	0.22	0.22
	L_{19}-U_{20}	-51.74	54.21	0.40	-0.37	-1.84	1.25	0.03	0.05	-0.27	0.25	5.08	-4.72	-23.27	15.83	0.34	0.56	-3.26	3.01	-56.27	92.24	-117.68	104.78	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.890	0.24	0.24
	U_{20}-L_{20}	-14.00	1.02	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	L_{20}-U_{21}	18.17	8.29	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	U_{21}-L_{21}	-32.82	30.91	0.38	-0.35	-1.29	0.99	0.03	0.00	-0.20	0.17	4.76	-4.42	-16.25	12.50	0.40	0.04	-2.36	2.08	-32.36	30.61	-77.88	67.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	L_{21}-U_{22}	-54.33	54.01	0.44	-0.36	-1.27	0.90	0.07	-0.06	-0.18	-0.51	5.63	-4.63	-16.16	11.47	0.86	-0.72	-2.14	1.27	-19.42	1.17	-68.64	36.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	U_{22}-L_{22}	-83.86	94.66	0.44	-0.40	-2.44	2.85	0.07	0.00	-0.37	0.37	2.61	-3.72	-30.53	35.93	0.55	0.01	-4.47	5.57	-103.67	117.62	-180.60	176.89	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.988	0.22	0.22
	L_{22}-U_{23}	-51.74	54.21	0.40	-0.37	-1.84	1.25	0.03	0.05	-0.27	0.25	5.08	-4.72	-23.27	15.83	0.34	0.56	-3.26	3.01	-56.27	92.24	-117.68	104.78	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.890	0.24	0.24
	U_{23}-L_{23}	-14.00	1.02	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	L_{23}-U_{24}	18.17	8.29	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	U_{24}-L_{24}	-32.82	30.91	0.38	-0.35	-1.29	0.99	0.03	0.00	-0.20	0.17	4.76	-4.42	-16.25	12.50	0.40	0.04	-2.36	2.08	-32.36	30.61	-77.88	67.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	L_{24}-U_{25}	-54.33	54.01	0.44	-0.36	-1.27	0.90	0.07	-0.06	-0.18	-0.51	5.63	-4.63	-16.16	11.47	0.86	-0.72	-2.14	1.27	-19.42	1.17	-68.64	36.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	U_{25}-L_{25}	-83.86	94.66	0.44	-0.40	-2.44	2.85	0.07	0.00	-0.37	0.37	2.61	-3.72	-30.53	35.93	0.55	0.01	-4.47	5.57	-103.67	117.62	-180.60	176.89	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.988	0.22	0.22
	L_{25}-U_{26}	-51.74	54.21	0.40	-0.37	-1.84	1.25	0.03	0.05	-0.27	0.25	5.08	-4.72	-23.27	15.83	0.34	0.56	-3.26	3.01	-56.27	92.24	-117.68	104.78	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.890	0.24	0.24
	U_{26}-L_{26}	-14.00	1.02	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	L_{26}-U_{27}	18.17	8.29	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	U_{27}-L_{27}	-32.82	30.91	0.38	-0.35	-1.29	0.99	0.03	0.00	-0.20	0.17	4.76	-4.42	-16.25	12.50	0.40	0.04	-2.36	2.08	-32.36	30.61	-77.88	67.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	L_{27}-U_{28}	-54.33	54.01	0.44	-0.36	-1.27	0.90	0.07	-0.06	-0.18	-0.51	5.63	-4.63	-16.16	11.47	0.86	-0.72	-2.14	1.27	-19.42	1.17	-68.64	36.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	U_{28}-L_{28}	-83.86	94.66	0.44	-0.40	-2.44	2.85	0.07	0.00	-0.37	0.37	2.61	-3.72	-30.53	35.93	0.55	0.01	-4.47	5.57	-103.67	117.62	-180.60	176.89	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.988	0.22	0.22
	L_{28}-U_{29}	-51.74	54.21	0.40	-0.37	-1.84	1.25	0.03	0.05	-0.27	0.25	5.08	-4.72	-23.27	15.83	0.34	0.56	-3.26	3.01	-56.27	92.24	-117.68	104.78	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.890	0.24	0.24
	U_{29}-L_{29}	-14.00	1.02	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	L_{29}-U_{30}	18.17	8.29	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	U_{30}-L_{30}	-32.82	30.91	0.38	-0.35	-1.29	0.99	0.03	0.00	-0.20	0.17	4.76	-4.42	-16.25	12.50	0.40	0.04	-2.36	2.08	-32.36	30.61	-77.88	67.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	L_{30}-U_{31}	-54.33	54.01	0.44	-0.36	-1.27	0.90	0.07	-0.06	-0.18	-0.51	5.63	-4.63	-16.16	11.47	0.86	-0.72	-2.14	1.27	-19.42	1.17	-68.64	36.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	U_{31}-L_{31}	-83.86	94.66	0.44	-0.40	-2.44	2.85	0.07	0.00	-0.37	0.37	2.61	-3.72	-30.53	35.93	0.55	0.01	-4.47	5.57	-103.67	117.62	-180.60	176.89	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.988	0.22	0.22
	L_{31}-U_{32}	-51.74	54.21	0.40	-0.37	-1.84	1.25	0.03	0.05	-0.27	0.25	5.08	-4.72	-23.27	15.83	0.34	0.56	-3.26	3.01	-56.27	92.24	-117.68	104.78	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.890	0.24	0.24
	U_{32}-L_{32}	-14.00	1.02	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	L_{32}-U_{33}	18.17	8.29	0.34	-0.75	-0.92	0.15	0.00	0.04	-0.11	0.03	4.27	-9.42	-11.60	1.94	0.02	0.53	-1.36	0.41	-8.95	-19.08	-43.34	5.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.128	0.55	0.55
	U_{33}-L_{33}	-32.82	30.91	0.38	-0.35	-1.29	0.99	0.03	0.00	-0.20	0.17	4.76	-4.42	-16.25	12.50	0.40	0.04	-2.36	2.08	-32.36	30.61	-77.88	67.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	L_{33}-U_{34}	-54.33	54.01	0.44	-0.36	-1.27	0.90	0.07	-0.06	-0.18	-0.51	5.63	-4.63	-16.16	11.47	0.86	-0.72	-2.14	1.27	-19.42	1.17	-68.64	36.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.541	0.38	0.38
	U_{34}-L_{34}	-83.86	94.66	0.44	-0.40	-2.44	2.85	0.07	0.00	-0.37	0.37

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-569.37	55	-805	-822	-270	-54	73	428	-434	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.224	1.00	Yes	0.768	0.195	0.97	Yes	1.00	**2.00**
		U_1 - U_2	-----	-573.39	-47	-76	-386	-605	-118	-34	-218	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.216	1.00	Yes	0.773	0.144	0.92	Yes	1.00	**1.34**
		U_2 - U_3	88.13	-580.24	-137	212	-633	-408	6	27	-33	210	0.101	0.186	0.29	Yes	0.068	0.121	0.19	Yes	0.790	0.206	1.00	Yes	0.782	0.150	0.94	Yes	1.00	**1.19**
		U_3 - U_4	376.63	-582.53	90	332	-774	-157	-4	31	209	39	0.432	0.219	0.66	Yes	0.296	0.150	0.45	Yes	0.793	0.201	1.00	Yes	0.786	0.184	0.97	Yes	1.00	**1.97**
		U_4 - U_5	301.32	-583.85	101	257	-866	-84	22	-28	70	-18	0.345	0.218	0.57	Yes	0.237	0.149	0.39	Yes	0.794	0.193	0.99	Yes	0.787	0.206	1.00	Yes	1.00	**1.54**
		U_5 - U_6	639.43	-487.98	240	452	-878	-32	-139	-59	343	-52	0.733	0.267	1.00	Yes	0.494	0.174	0.67	Yes	0.664	0.186	0.85	Yes	0.658	0.209	0.87	Yes	1.00	**2.25**
		U_6 - U_7	839.52	-57.88	367	221	-616	-48	-286	-108	410	-107	0.803	0.187	1.00	Yes	0.561	0.129	0.69	Yes	0.066	0.213	0.28	Yes	0.065	0.131	0.20	Yes	1.00	**2.18**
		U_7 - U_8	922.35	-----	42	1031	-1200	2053	-422	-2	164	-254	0.639	0.354	1.00	Yes	0.446	0.241	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.94**
		U_8 - U_9	435.17	-----	3158	-2570	606	-26	-556	376	-879	-141	0.357	0.638	1.00	Yes	0.244	0.434	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		U_9 - U_{10}	-----	-561.04	969	-731	-894	-527	-2	1148	-929	1264	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.268	1.00	Yes	0.716	0.217	0.94	Yes	1.00	**10.30**
		U_{10} - U_{11}	683.14	-659.87	537	95	-252	-571	-80	105	145	205	0.741	0.161	0.91	Yes	0.494	0.103	0.60	Yes	0.850	0.142	1.00	Yes	0.842	0.128	0.97	Yes	1.00	**3.76**
		U_{11} - U_{12}	105.87	-872.80	353	-38	-379	-551	52	388	194	663	0.084	0.171	0.26	Yes	0.057	0.114	0.18	Yes	0.826	0.169	1.00	Yes	0.819	0.091	0.92	Yes	1.00	**2.38**
		U_{12} - U_{13}	-----	-1217.34	50	-224	-642	-605	316	210	595	391	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.176	1.00	Yes	0.813	0.089	0.91	Yes	1.00	**1.83**
		U_{13} - U_{14}	-----	-1383.52	-117	-359	-949	-872	206	164	375	561	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1.00	Yes	0.793	0.105	0.90	Yes	1.00	**1.72**
		U_{14} - U_{15}	-----	-1342.09	-272	-250	-1282	-877	213	31	580	151	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.221	1.00	Yes	0.769	0.141	0.92	Yes	1.00	**1.23**
		U_{15} - U_{16}	-----	-1420.76	-149	-433	-892	-729	85	38	470	185	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.171	1.00	Yes	0.814	0.098	0.92	Yes	1.00	**1.31**
		U_{16} - U_{17}	-----	-1372.56	-335	-191	-1403	-382	156	-49	616	104	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1.00	Yes	0.787	0.155	0.95	Yes	1.00	**1.41**
		U_{17} - U_{18}	-----	-1032.74	-207	-76	-911	-192	-7	-60	420	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.179	1.00	Yes	0.808	0.148	0.96	Yes	1.00	**1.48**
		U_{18} - U_{19}	-----	-725.11	-200	-69	-786	-61	26	-120	386	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.175	1.00	Yes	0.816	0.158	0.98	Yes	1.00	**1.42**
		U_{19} - U_{20}	-----	-560.11	-254	156	-1818	1387	-109	-43	377	-537	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.189	0.83	Yes	0.630	0.366	1.00	Yes	1.00	**3.06**
	Structure 2	U_0 - U_1	-----	-625.79	652	-1505	-619	-839	-37	61	508	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.213	0.96	Yes	0.739	0.256	1.00	Yes	1.00	**3.35**
		U_1 - U_2	-----	-882.82	75	-786	-382	-481	-115	-334	-327	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.136	1.00	Yes	0.852	0.119	0.98	Yes	1.00	**2.16**
		U_2 - U_3	-----	-1222.98	181	-814	-703	-816	-33	8	-321	426	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.120	1.00	Yes	0.868	0.083	0.96	Yes	1.00	**2.24**
		U_3 - U_4	-----	-1312.13	-413	-408	-1254	-1592	341	515	393	619	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.239	1.00	Yes	0.747	0.142	0.89	Yes	1.00	**1.45**
		U_4 - U_5	-----	-1512.62	-419	-408	-1664	-1211	411	139	454	223	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.214	1.00	Yes	0.777	0.138	0.92	Yes	1.00	**1.86**
		U_5 - U_6	-----	-1517.88	-428	-11	-1761	-981	186	-209	249	441	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.208	1.00	Yes	0.779	0.146	0.93	Yes	1.00	**1.43**
		U_6 - U_7	-----	-1357.85	-286	-105	-1334	-1501	-134	-185	300	157	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.214	1.00	Yes	0.773	0.134	0.91	Yes	1.00	**1.34**
		U_7 - U_8	-----	-1403.06	-192	-173	-1642	-791	-107	-185	249	98	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.195	1.00	Yes	0.799	0.146	0.95	Yes	1.00	**1.42**
		U_8 - U_9	-----	-1180.58	-276	115	-1461	-670	-94	-198	360	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.192	1.00	Yes	0.801	0.155	0.96	Yes	1.00	**1.46**
		U_9 - U_{10}	149.46	-964.37	-76	344	-1358	-77	-140	-153	262	-29	0.110	0.194	0.31	Yes	0.074	0.131	0.21	Yes	0.837	0.156	1.00	Yes	0.832	0.165	1.00	Yes	1.00	**1.65**
		U_{10} - U_{11}	498.68	-797.48	175	373	-1393	-159	-178	-163	440	-3	0.421	0.250	0.68	Yes	0.287	0.162	0.45	Yes	0.797	0.201	1.00	Yes	0.792	0.197	0.99	Yes	1.00	**2.14**
		U_{11} - U_{12}	830.19	-419.70	242	539	-1623	322	-349	-126	518	86	0.701	0.292	1.00	Yes	0.471	0.195	0.67	Yes	0.420	0.201	0.63	Yes	0.417	0.229	0.65	Yes	1.00	**2.62**
		U_{12} - U_{13}	1161.13	-----	480	154	-1265	-450	-438	-386	538	-251	0.784	0.211	1.00	Yes	0.559	0.143	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		U_{13} - U_{14}	1199.12	-----	53	1807	-2190	3851	-784	-417	-2	-775	0.590	0.410	1.00	Yes	0.417	0.269	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		U_{14} - U_{15}	577.85	-----	6570	-4176	1090	191	-1158	41	-1466	-554	0.284	0.708	1.00	Yes	0.201	0.465	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		U_{15} - U_{16}	1158.88	-----	525	276	-1712	-1587	-477	369	-318	1145	0.701	0.291	1.00	Yes	0.498	0.198	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		U_{16} - U_{17}	-----	-746.31	2600	-2195	-1197	-1329	684	247	1070	771	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.343	1.00	Yes	0.647	0.327	0.98	Yes	1.00	**10.78**
		U_{17} - U_{18}	-----	-637.56	894	-786	-1096	-467	90	831	99	963	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.241	1.00	Yes	0.753	0.186	0.94	Yes	1.00	**5.51**
		U_{18} - U_{19}	-----	-709.34	771	-682	-569	-677	312	236	534	379	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.151	1.00	Yes	0.838	0.131	0.97	Yes	1.00	**3.88**
		U_{19} - U_{20}	383.46	-702.86	369	261	-743	-554	3	-4	181	445	0.360	0.179	0.54	Yes	0.238	0.117	0.36	Yes	0.780	0.213	1.00	Yes	0.775	0.119	0.90	Yes	1.00	**2.20**
	Structure 3	U_{20} - U_{21}	264.87	-869.09	243	-16	-1039	-280	-54	-72	360	253	0.205	0.190	0.40	Yes	0.144	0.123	0.27	Yes	0.799	0.198	1.00	Yes	0.793	0.150	0.95	Yes	1.00	**2.26**
		U_{21} - U_{22}	68.33	-807.76	-38	4	-809	-1132	-3	66	152	393	0.053	0.207	0.26	Yes	0.038	0.139	0.18	Yes	0.743	0.254	1.00	Yes	0.737	0.164	0.91	Yes	1.00	**1.46**
		U_{22} - U_{23}	72.17	-822.15	68	-39	-1162	-547	58	-2	464	145	0.056	0.219	0.28	Yes	0.040	0.147	0.19	Yes	0.756	0.241	1.00	Yes	0.750	0.168	0.92	Yes	1.00	**1.49**
		U_{23} - U_{24}	59.59	-874.83	111	-63	-1089	-217	-41	6	379	94	0.046	0.199	0.25	Yes	0.032	0.129	0.17	Yes	0.804	0.192	1.00	Yes	0.798	0.158	0.96	Yes	1.00	**1.70**
		U_{24} - U_{25}	268.30	-710.02	175	268	-959	-537	-57	-86	391	-126	0.252	0.206	0.46	Yes	0.167	0.135	0.31	Yes	0.788	0.203	1.00	Yes	0.783	0.154	0.94	Yes	1.00	**1.64**
		U_{25} - U_{26}	502.22	-690.02	200	456	-1079	210	-160	-75	318	-24	0.504	0.230	0.74	Yes	0.331	0.146	0.48	Yes	0.820	0.162	0.99	Yes	0.815	0.183	1.00	Yes	1.00	**2.14**
		U_{26} - U_{27}	713.59	-454.63	343	396	-1277	322	-235	-70	425	-77	0.716	0.279	1.00	Yes	0.477	0.185	0.67	Yes	0.540	0.185	0.73	Yes	0.537	0.217	0.76	Yes	1.00	**2.43**
		U_{27} - U_{28}	1044.54	-207.80	324	566	-1422	616	-367	-10	414	-17	0.770	0.222	1.00	Yes	0.512	0.146	0.66	Yes	0.181	0.089	0.28	Yes	0.180	0.179	0.36	Yes	1.00	**3.31**
		U_{28} - U_{29}	1232.79	-----	491	180	-1741	-396	-379	-254	574	-146	0.745	0.246	1.00	Yes	0.530	0.166	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		U_{29} - U_{30}	1183.58	-----	196	1597	-2229	3937	-662	-337	111	-496	0.582	0.410	1.00	Yes	0.412	0.269	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		U_{30} - U_{31}	575.24	-93.81	6794	-4371	720	-266	-1221	149	-83	90	0.283	0.712	1.00	Yes	0.200	0.467	0.67	Yes	0.055	0.494	0.55	Yes	0.054	0.629	0.69	Yes	1.00	**7.93**
		U_{31} - U_{32}	1019.84	-----	412	89	-1800	-89	-313	481	-455	829	0.689	0.306	1.00	Yes	0.491	0.208	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		U_{32} - U_{33}	-----	-694.96	1007	-1179	-500	-1839	543	329	620	790	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.304	1.00	Yes	0.691	0.259	0.96	Yes	1.00	**5.29**
		U_{33} - U_{34}	710.17	-702.40	385	266	-541	-1247	17	255	351	1056	0.600	0.305	0.91	Yes	0.408	0.201	0.61	Yes	0.702	0.295	1.00	Yes	0.698	0.176	0.88	Yes	1.00	**2.69**
		U_{34} - U_{35}	535.99	-925.79	463	162	-659	-860	141	133	598	563	0.393	0.170	0.57	Yes	0.266	0.114	0.39	Yes	0.804	0.187	1.00	Yes	0.799	0.105	0.91	Yes	1.00	**2.76**
		U_{35} - U_{36}	272.84	-1158.89	249	-86	-1018	-763	73	78	333	528	0.157	0.152	0.31	Yes	0.110	0.101	0.22	Yes	0.792	0.206	1.00	Yes	0.786	0.108	0.90	Yes	1.00	**2.44**
		U_{36} - U_{37}	-----	-1330.00	-66	29	-1071	-1761	89	-1	382	343	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.232	1.00	Yes	0.757	0.157	0.92	Yes	1.00	**1.71**
		U_{37} - U_{38}	-----	-1339.20	119	-153	-1683	-1028	45	17	411	326	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.230	1.00	Yes	0.763	0.150	0.92	Yes	1.00	**1.72**
		U_{38} - U_{39}	-----	-1512.43	108	-295	-1534	-1134	132	-34	708	249	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1.00	Yes	0.777	0.127	0.91	Yes	1.00	**1.77**
		U_{39} - U_{40}	-----	-1442.60	-207	-336	-1901	-1668	31	-28	482	193	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.249	1.00	Yes	0.741	0.158	0.90	Yes	1.00	**1.69**
		U_{40} - U_{41}	-----	-1349.89	-246	-336	-1747	-860	47	-115	566	61	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1.00	Yes	0.769	0.156	0.93	Yes	1.00	**1.65**
		U_{41} - U_{42}	-----	-1097.18	-134	-139	-1840	-607	-69	-96	443	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.215	1.00	Yes	0.779	0.187	0.97	Yes	1.00	**2.09**
		U_{42} - U_{43}	-----	-837.95	-129	-62	-1144	-172	-40	-93	376	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1.00	Yes	0.809	0.174	0.99	Yes	1.00	**1.99**
		U_{43} - U_{44}	-----	-564.04	-12	-220	-1929	1039	-69	37	292	-411	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.232	0.91	Yes	0.666	0.328	1.00	Yes	1.00	**3.24**
	Structure 3	U_0 - U_1	-----	-648.20	765	-1320	-1000	-863	-70	-93	1120	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.259	1.00	Yes	0.729	0.266	1.00	Yes	1.00	**3.91**
		U_1 - U_2	-----	-733.03	123	-777	-81	-293	-65	-344	61	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.167	1.00	Yes	0.825	0.156	0.99	Yes	1.00	**1.61**
		U_2 - U_3	-----	-1063.73	135	-994	-292	-397	9	391	-298	405	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.155	1.00	Yes	0.832	0.162	1.00	Yes	1.00	**1.53**
		U_3 - U_4	-----	-1366.58	-161	-438	-792	-1113	285	385	327	615	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.783	0.123	0.91	Yes	1.00	**1.62**
		U_4 - U_5	-----	-1400.74	-373	-136	-967	-896	518	156	471	287	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1.00	Yes	0.803	0.107	0.91	Yes	1.00	**1.42**
		U_5 - U_6	-----	-1363.61	-182	-274	-854	-1225	139	-153	227	362	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.207	1.00	Yes	0.782	0.135	0.92	Yes	1.00	**1.35**
		U_6 - U_7	-----	-1343.51	-376	-100	-1539	-648	-91	-188	378	49	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.215	1.00	Yes	0.770	0.170	0.95	Yes	1.00	**1.35**
		U_7 - U_8	-----	-1230.28	-163	6	-832	-600	-62	-177	299	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.165	1.00	Yes	0.822	0.115	0.94	Yes	1.00	**1.43**
		U_8 - U_9	-----	-909.04	-101	178	-835	-2	-31	-154	294	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.139	1.00	Yes	0.853	0.139	1.00	Yes	1.00	**1.22**
		U_9 - U_{10}	152.98	-618.95	-76	228	-897	131	-99	-104	221	-51	0.166	0.237	0.41	Yes	0.111	0.152	0.27	Yes	0.797	0.172	0.97	Yes	0.790	0.201	1.00	Yes	1.00	**1.44**
		U_{10} - U_{11}	685.72	-397.87	315	231	-792	153	-240	-137	432	-223	0.744	0.247	1.00	Yes	0.504	0.166	0.67	Yes	0.512	0.140	0.66	Yes	0.508	0.177	0.69	Yes	1.00	**2.79**
		U_{11} - U_{12}	826.21	-----	-24	908	-1237	1575	-414	-105	183	-370	0.677	0.315	1.00	Yes	0.463	0.214	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		U_{12} - U_{13}	561.63	-----	3487	-2059	448	136	-755	93	-649	-265	0.389	0.605	1.00	Yes	0.271	0.413	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		U_{13} - U_{14}	873.27	-39.70	237	441	-302	-404	-343	-227	-173	496	0.835	0.162	1.00	Yes	0.584	0.111	0.70	Yes	0.045	0.168	0.22	Yes	0.045	0.094	0.14	Yes	1.00	**2.37**
		U_{14} - U_{15}	748.64	-221.98	482	345	-102	-226	-161	-41	128	19	0.858	0.142	1.00	Yes	0.579	0.093	0.68	Yes	0.302	0.155	0.46	Yes	0.299	0.115	0.42	Yes	1.00	**2.54**
		U_{15} - U_{16}	422.70	-559.40	331	231	-377	-610	-66	132	6	476	0.485	0.225	0.71	Yes	0.333	0.154	0.49	Yes	0.761	0.229	1.00	Yes	0.754	0.145	0.90	Yes	1.00	**1.80**
		U_{16} - U_{17}	480.65	-578.52	445	159	-569	-377	61	71	449	215	0.551	0.211	0.77	Yes	0.378	0.144	0.53	Yes	0.787	0.207	1.00	Yes	0.780	0.135	0.92	Yes	1.00	**2.12**
		U_{17} - U_{18}	191.73	-563.31	300	-74	-570	-377	-43	71	279	209	0.220	0.183	0.41	Yes	0.148	0.120	0.27	Yes	0.766	0.231	1.00	Yes	0.760	0.135	0.90	Yes	1.00	**1.35**
		U_{18} - U_{19}	75.55	-543.67	148	-42	-764	-266	-23	28	449	16	0.087	0.257	0.35	Yes	0.059	0.176	0.24	Yes	0.740	0.252	1.00	Yes	0.733	0.182	0.92	Yes	1.00	**1.32**
		U_{19} - U_{20}	39.62	-539.82	179	-311	-1132	714	-120	115	371	-359	0.045	0.332	0.38	Yes	0.031	0.227	0.26	Yes	0.735	0.163	0.90	Yes	0.728	0.269	1.00	Yes	1.00	**2.31**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.133	0.769	0.91	Yes	0.132	0.859	1.00	Yes	1.00	**12.91**
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-73.11	1903	-2863	-405	256	-404	-1485	-31	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.133	0.769	0.91	Yes	0.132	0.859	1.00	Yes	1.00	**12.91**
		L_1 - L_2	464.90	-----	318	-773	-227	-476	-241	-149	190	-79	0.712	0.284	1.00	Yes	0.434	0.190	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		L_2 - L_3	692.72	-27.93	-20	22	-632	-727	-32	23	-151	41	0.797	0.200	1.00	Yes	0.461	0.120	0.59	Yes	0.038	0.222	0.27	Yes	0.038	0.175	0.22	Yes	1.00	**1.52**
		L_3 - L_4	702.17	-142.62	86	252	-681	-341	61	69	117	121	0.808	0.184	1.00	Yes	0.480	0.119	0.60	Yes	0.195	0.185	0.39	Yes	0.193	0.165	0.36	Yes	1.00	**1.55**
		L_4 - L_5	317.22	-498.72	98	592	-882	301	53	35	-196	304	0.411	0.288	0.70	Yes	0.246	0.188	0.44	Yes	0.767	0.130	0.90	Yes	0.760	0.233	1.00	Yes	1.00	**1.61**
		L_5 - L_6	-----	-718.97	160	587	-503	97	71	126	252	66	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.152	1.00	Yes	0.830	0.130	0.96	Yes	1.00	**1.68**
		L_6 - L_7	-----	-1065.28	200	176	-875	114	118	-111	-23	471	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.118	0.99	Yes	0.857	0.138	1.00	Yes	1.00	**2.32**
		L_7 - L_8	-----	-1253.70	105	976	-574	1513	58	194	314	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.175	0.98	Yes	0.794	0.200	1.00	Yes	1.00	**2.83**
		L_8 - L_9	-----	-1180.51	1757	-160	541	-14	-244	51	-204	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.237	1.00	Yes	0.748	0.233	0.99	Yes	1.00	**3.63**
		L_9 - L_{10}	-----	-937.72	1368	-1516	-845	-95	-677	-905	696	302	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.171	0.94	Yes	0.755	0.238	1.00	Yes	1.00	**6.51**
		L_{10} - L_{11}	104.78	-560.09	530	-7	-23	-388	140	48	55	-29	0.136	0.165	0.31	Yes	0.079	0.099	0.18	Yes	0.861	0.108	0.97	Yes	0.853	0.140	1.00	Yes	1.00	**2.09**
		L_{11} - L_{12}	565.78	-----	584	-832	27	-581	-215	-183	115	45	0.733	0.258	1.00	Yes	0.440	0.169	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		L_{12} - L_{13}	1100.26	-----	184	-65	-565	-633	11	36	82	155	0.868	0.130	1.00	Yes	0.555	0.078	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.26**
		L_{13} - L_{14}	1271.98	-----	518	-1618	-341	-1219	-46	-174	304	95	0.748	0.248	1.00	Yes	0.485	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.77**
		L_{14} - L_{15}	1544.92	-----	-371	-27	-1838	-646	-118	-66	-169	218	0.755	0.237	1.00	Yes	0.490	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		L_{15} - L_{16}	1639.11	-----	-191	-402	-1327	-1418	-89	-39	88	-292	0.801	0.191	1.00	Yes	0.514	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		L_{16} - L_{17}	1154.79	-----	-426	90	-1544	-97	-89	-57	-453	212	0.730	0.267	1.00	Yes	0.474	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		L_{17} - L_{18}	881.58	-----	-183	-38	-1036	-74	-58	9	127	-224	0.768	0.228	1.00	Yes	0.491	0.137	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		L_{18} - L_{19}	242.10	-----	-197	284	-1496	887	-23	-37	-841	81	0.371	0.623	1.00	Yes	0.251	0.395	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		L_{19} - L_{20}	131.71	-364.25	-80	-50	-1146	536	-24	-5	293	66	0.202	0.405	0.61	Yes	0.123	0.271	0.40	Yes	0.662	0.241	0.91	Yes	0.656	0.344	1.00	Yes	1.00	**3.64**
	Structure 2	L_0 - L_1	42.93	-183.46	1188	-3579	-141	64	-345	-1198	-21	-73	0.052	0.925	0.98	Yes	0.031	0.590	0.63	Yes	0.264	0.623	0.89	Yes	0.262	0.728	1.00	Yes	1.00	**11.06**
		L_1 - L_2	540.64	-----	692	-1449	19	-595	-244	-231	-124	145	0.657	0.335	1.00	Yes	0.391	0.215	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		L_2 - L_3	1005.05	-----	390	-1046	-572	-943	-126	-178	273	327	0.803	0.189	1.00	Yes	0.528	0.110	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		L_3 - L_4	1333.64	-----	297	-1290	-531	-1534	-247	-123	260	103	0.791	0.203	1.00	Yes	0.534	0.131	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		L_4 - L_5	1702.74	-----	-266	-1234	-1809	-1328	139	-382	-33	75	0.794	0.197	1.00	Yes	0.526	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		L_5 - L_6	1891.57	-----	-141	-360	-1671	-1929	118	-16	217	52	0.812	0.185	1.00	Yes	0.545	0.112	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		L_6 - L_7	1826.39	-----	-432	-95	-2276	-1442	-164	45	-129	359	0.773	0.222	1.00	Yes	0.514	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**
		L_7 - L_8	1374.34	-----	-210	297	-1779	-748	-131	8	132	-88	0.788	0.207	1.00	Yes	0.518	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		L_8 - L_9	1094.38	-268.73	-92	534	-1449	35	-26	16	-227	409	0.765	0.234	1.00	Yes	0.516	0.147	0.67	Yes	0.223	0.150	0.38	Yes	0.221	0.195	0.42	Yes	1.00	**2.16**
		L_9 - L_{10}	828.22	-617.95	-104	730	-1412	-215	17	93	281	-190	0.739	0.260	1.00	Yes	0.430	0.161	0.60	Yes	0.653	0.173	0.83	Yes	0.649	0.226	0.88	Yes	1.00	**2.64**
		L_{10} - L_{11}	71.23	-688.16	94	531	-1073	623	57	1	-414	96	0.071	0.243	0.32	Yes	0.042	0.152	0.20	Yes	0.814	0.101	0.92	Yes	0.808	0.188	1.00	Yes	1.00	**2.04**
		L_{11} - L_{12}	-----	-1030.09	98	992	-1106	844	83	238	156	76	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.135	0.99	Yes	0.845	0.151	1.00	Yes	1.00	**2.61**
		L_{12} - L_{13}	-----	-1314.86	301	-290	-1636	-1043	177	-140	-194	182	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.201	1.00	Yes	0.787	0.163	0.95	Yes	1.00	**3.16**
		L_{13} - L_{14}	-----	-1356.28	-224	1290	-2259	3555	-92	-62	326	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.205	0.90	Yes	0.682	0.310	1.00	Yes	1.00	**3.96**
		L_{14} - L_{15}	-----	-1240.76	4270	-2251	1056	-446	-50	286	-307	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.244	0.88	Yes	0.624	0.373	1.00	Yes	1.00	**4.88**
		L_{15} - L_{16}	-----	-1340.51	18	254	-1803	-531	-411	-285	249	195	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.188	1.00	Yes	0.802	0.179	0.99	Yes	1.00	**3.19**
		L_{16} - L_{17}	-----	-918.37	2614	-2131	-302	-1408	-684	-688	-81	61	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.241	0.92	Yes	0.669	0.322	1.00	Yes	1.00	**7.16**
		L_{17} - L_{18}	603.24	-545.74	2033	-2111	-939	-1717	-960	-525	655	292	0.538	0.453	1.00	Yes	0.314	0.279	0.60	Yes	0.577	0.278	0.86	Yes	0.573	0.338	0.92	Yes	1.00	**8.03**
		L_{18} - L_{19}	110.84	-650.81	674	119	-83	-370	-6	33	126	129	0.126	0.150	0.28	Yes	0.072	0.089	0.17	Yes	0.873	0.125	1.00	Yes	0.867	0.130	1.00	Yes	1.00	**2.02**
		L_{19} - L_{20}	637.54	-----	645	-1046	-355	-946	-27	-235	456	-5	0.722	0.272	1.00	Yes	0.427	0.171	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_{20} - L_{21}	979.17	-491.07	585	59	-1201	-1057	-102	-105	-14	211	0.791	0.202	1.00	Yes	0.520	0.117	0.64	Yes	0.470	0.234	0.71	Yes	0.467	0.179	0.65	Yes	1.00	**3.08**
		L_{21} - L_{22}	915.03	-228.84	243	-73	-909	-1543	-92	-32	274	10	0.739	0.260	1.00	Yes	0.496	0.158	0.66	Yes	0.219	0.258	0.48	Yes	0.218	0.230	0.45	Yes	1.00	**2.26**
		L_{22} - L_{23}	802.30	-68.26	25	51	-2186	-194	5	-25	-235	136	0.648	0.351	1.00	Yes	0.435	0.212	0.65	Yes	0.065	0.276	0.35	Yes	0.065	0.325	0.40	Yes	1.00	**2.44**
		L_{23} - L_{24}	903.81	-298.89	4	371	-1610	-959	10	77	251	-193	0.730	0.267	1.00	Yes	0.480	0.154	0.64	Yes	0.286	0.267	0.56	Yes	0.284	0.240	0.53	Yes	1.00	**2.79**
		L_{24} - L_{25}	563.43	-436.92	241	360	-1430	-258	62	0	-324	523	0.638	0.356	1.00	Yes	0.378	0.225	0.61	Yes	0.586	0.243	0.83	Yes	0.582	0.276	0.86	Yes	1.00	**2.82**
		L_{25} - L_{26}	216.45	-597.33	100	653	-1036	-166	36	120	235	-167	0.245	0.236	0.49	Yes	0.141	0.140	0.29	Yes	0.801	0.147	0.95	Yes	0.796	0.200	1.00	Yes	1.00	**2.81**
		L_{26} - L_{27}	-----	-742.87	319	380	-1341	150	165	56	-363	300	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.136	0.93	Yes	0.780	0.214	1.00	Yes	1.00	**3.03**
		L_{27} - L_{28}	-----	-1067.58	205	1071	-1716	268	261	537	343	-469	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.215	1.00	Yes	0.778	0.212	0.99	Yes	1.00	**4.34**
		L_{28} - L_{29}	-----	-1189.28	469	-645	-2066	-1663	463	-163	-469	425	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.281	1.00	Yes	0.711	0.205	0.92	Yes	1.00	**4.89**
		L_{29} - L_{30}	-----	-1012.13	-211	1360	-4587	5532	-510	-1082	1030	565	-----	-----	-----	-----	-----	-----	-----	-----	0.514	0.309	0.83	Yes	0.509	0.483	1.00	Yes	1.00	**7.71**
		L_{30} - L_{31}	-----	-1077.51	5197	-2638	726	-322	553	623	-85	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.547	0.315	0.87	Yes	0.542	0.454	1.00	Yes	1.00	**6.40**
		L_{31} - L_{32}	-----	-1293.18	230	-213	-2005	-272	-320	144	367	133	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.209	1.00	Yes	0.780	0.202	0.99	Yes	1.00	**3.99**
		L_{32} - L_{33}	32.17	-937.22	1680	-1253	-471	-1070	699	-555	263	350	0.022	0.294	0.32	Yes	0.015	0.178	0.20	Yes	0.775	0.144	0.92	Yes	0.769	0.229	1.00	Yes	1.00	**6.26**
		L_{33} - L_{34}	553.20	-----	1394	-2088	-402	-1239	-452	-436	573	172	0.552	0.442	1.00	Yes	0.324	0.277	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		L_{34} - L_{35}	873.72	-690.08	698	71	-647	-1060	-46	62	244	414	0.780	0.219	1.00	Yes	0.454	0.135	0.59	Yes	0.730	0.198	0.93	Yes	0.725	0.170	0.90	Yes	1.00	**3.74**
		L_{35} - L_{36}	1114.77	-----	550	-979	-568	-1113	-7	-191	664	158	0.780	0.213	1.00	Yes	0.525	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.89**
		L_{36} - L_{37}	1437.74	-147.33	338	72	-1187	-1414	-114	1	-127	221	0.824	0.174	1.00	Yes	0.542	0.102	0.65	Yes	0.100	0.193	0.30	Yes	0.099	0.156	0.26	Yes	1.00	**2.83**
		L_{37} - L_{38}	1836.14	-----	162	-323	-2339	-1739	7	-46	220	-130	0.777	0.219	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		L_{38} - L_{39}	1780.96	-----	-257	-160	-2421	-1368	-56	5	-157	248	0.764	0.230	1.00	Yes	0.513	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		L_{39} - L_{40}	1710.55	-----	-141	-382	-1842	-1609	-25	-40	112	-353	0.797	0.198	1.00	Yes	0.528	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		L_{40} - L_{41}	1291.79	-----	-305	-49	-1766	-439	-58	-11	-374	367	0.759	0.237	1.00	Yes	0.511	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**
		L_{41} - L_{42}	994.07	-----	-123	-127	-1311	-327	-31	-34	179	-201	0.783	0.211	1.00	Yes	0.514	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.77**
		L_{42} - L_{43}	486.75	-----	-206	9	-1351	72	-63	-67	-387	458	0.622	0.374	1.00	Yes	0.372	0.216	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_{43} - L_{44}	245.91	-198.38	-38	-29	-2709	866	-173	-51	892	261	0.299	0.698	1.00	Yes	0.178	0.445	0.63	Yes	0.285	0.435	0.73	Yes	0.283	0.551	0.84	Yes	1.00	**7.36**
	Structure 3	L_0 - L_1	187.33	-256.58	955	-1707	-18	-80	-138	-626	-9	-42	0.298	0.654	0.96	Yes	0.183	0.429	0.62	Yes	0.484	0.362	0.85	Yes	0.480	0.515	1.00	Yes	1.00	**5.95**
		L_1 - L_2	332.05	-----	912	-1428	121	-623	-172	-63	-287	183	0.508	0.488	1.00	Yes	0.344	0.305	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_2 - L_3	875.34	-----	409	-982	-332	-768	-36	67	330	347	0.762	0.234	1.00	Yes	0.488	0.141	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		L_3 - L_4	1236.76	-----	375	-1043	-495	-1232	-245	-113	417	240	0.782	0.218	1.00	Yes	0.507	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		L_4 - L_5	1661.04	-----	-326	-213	-1469	-1044	78	113	-48	97	0.812	0.185	1.00	Yes	0.521	0.108	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.65**
		L_5 - L_6	1540.76	-----	35	-1861	-935	-1393	-186	-163	280	138	0.753	0.244	1.00	Yes	0.489	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		L_6 - L_7	1274.15	-----	-404	236	-1576	-149	-183	17	-98	346	0.749	0.246	1.00	Yes	0.485	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.68**
		L_7 - L_8	1058.61	-----	-87	110	-785	-492	-30	38	200	19	0.835	0.163	1.00	Yes	0.534	0.097	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**
		L_8 - L_9	552.40	-185.33	-150	372	-894	353	-9	46	-270	244	0.715	0.284	1.00	Yes	0.429	0.186	0.62	Yes	0.285	0.134	0.42	Yes	0.282	0.237	0.52	Yes	1.00	**1.95**
		L_9 - L_{10}	67.14	-514.61	-3	481	-810	257	69	135	224	127	0.087	0.254	0.35	Yes	0.051	0.153	0.21	Yes	0.791	0.149	0.95	Yes	0.784	0.214	1.00	Yes	1.00	**2.40**
		L_{10} - L_{11}	-----	-1000.10	222	187	-1236	115	136	-215	-153	686	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.149	0.97	Yes	0.805	0.194	1.00	Yes	1.00	**3.68**
		L_{11} - L_{12}	-----	-1198.09	115	1061	-650	1767	-97	-28	160	-313	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.212	0.99	Yes	0.759	0.234	1.00	Yes	1.00	**3.77**
		L_{12} - L_{13}	-----	-1134.17	2072	-543	431	-9	-204	6	-211	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.259	0.99	Yes	0.718	0.274	1.00	Yes	1.00	**4.35**
		L_{13} - L_{14}	-----	-985.55	1283	-1219	-1154	-55	-728	-651	331	206	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.158	0.97	Yes	0.793	0.202	1.00	Yes	1.00	**6.50**
		L_{14} - L_{15}	-----	-738.84	564	164	20	-215	147	-8	46	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.129	1.00	Yes	0.852	0.125	0.98	Yes	1.00	**1.62**
		L_{15} - L_{16}	547.06	-----	631	-832	-284	-731	-358	-348	140	72	0.708	0.284	1.00	Yes	0.425	0.185	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		L_{16} - L_{17}	692.33	-316.26	409	51	-734	-468	90	-45	47	149	0.797	0.201	1.00	Yes	0.473	0.130	0.61	Yes	0.432	0.219	0.66	Yes	0.428	0.177	0.61	Yes	1.00	**2.02**
		L_{17} - L_{18}	661.79	-160.43	126	8	-841	-424	5	8	169	-18	0.761	0.230	1.00	Yes	0.440	0.138	0.58	Yes	0.219	0.229	0.45	Yes	0.217	0.203	0.43	Yes	1.00	**1.94**
		L_{18} - L_{19}	424.05	-32.09	65	-6	-844	-129	25	-111	-153	455	0.649	0.351	1.00	Yes	0.396	0.232	0.63	Yes	0.058	0.245	0.31	Yes	0.058	0.253	0.32	Yes	1.00	**1.79**
		L_{19} - L_{20}	57.91	-45.12	110	-226	-1952	799	-7	-2	1508	410	0.089	0.909	1.00	Yes	0.052	0.548	0.61	Yes	0.082	0.615	0.70	Yes	0.081	0.586	0.67	Yes	1.00	**7.66**

Moment (Start) AI Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

				Inventory Loads - HS20 Truck																													
				Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
						Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:		Vehicle 1.300	Pedestrian 1.300	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
LL Factor:		2.167	1.625	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$		-----	-284.61	-58	88	-171	223	-30	-10	-387	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.262	0.97	Yes	0.665	0.332	1.00	Yes	1.00	**0.75**
		$U_1 - L_1$		20.25	-325.02	27	-15	-231	237	0	-2	-47	23	0.036	0.317	0.36	Yes	0.020	0.174	0.20	Yes	0.710	0.083	0.80	Yes	0.688	0.303	1.00	Yes	1.00	**1.70**
		$U_2 - L_2$		120.97	-279.94	104	-116	-276	316	98	39	-433	-84	0.218	0.529	0.75	Yes	0.120	0.291	0.42	Yes	0.612	0.218	0.83	Yes	0.592	0.404	1.00	Yes	1.00	**3.01**
		$U_3 - L_3$		218.47	-263.26	274	-256	-307	342	160	153	-333	-56	0.393	0.534	0.93	Yes	0.216	0.294	0.51	Yes	0.577	0.188	0.77	Yes	0.557	0.437	1.00	Yes	1.00	**4.51**
		$U_4 - L_4$		-----	-203.93	442	-433	-54	38	-518	-133	-7	140	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.267	0.72	Yes	0.432	0.566	1.00	Yes	1.00	**4.38**
		$U_5 - L_5$		-----	-420.99	238	-270	67	-90	-145	-171	20	21	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.133	0.90	Yes	0.726	0.274	1.00	Yes	1.00	**1.46**
		$U_6 - L_6$		-----	-489.29	249	-264	80	-89	60	-57	74	91	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.101	0.89	Yes	0.739	0.256	1.00	Yes	1.00	**1.30**
		$U_7 - L_7$		-----	-412.37	275	-292	129	-143	165	29	-145	20	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.146	0.88	Yes	0.673	0.324	1.00	Yes	1.00	**0.87**
		$U_8 - L_8$		-----	-1206.32	488	-584	-349	411	921	289	-118	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.125	1.00	Yes	0.836	0.109	0.95	Yes	1.00	**2.35**
		$U_9 - L_9$		-----	-638.98	-170	199	-412	447	-358	-147	-687	-379	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.210	1.00	Yes	0.739	0.260	1.00	Yes	1.00	**1.61**
		$U_{10} - L_{10}$		-----	-689.17	-122	105	-334	342	-706	-400	-929	-620	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.246	1.00	Yes	0.708	0.191	0.90	Yes	1.00	**1.77**
		$U_{11} - L_{11}$		-----	-652.57	-119	214	-395	500	-551	-281	-761	-546	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1.00	Yes	0.760	0.232	1.00	Yes	1.00	**2.00**
		$U_{12} - L_{12}$		-----	-511.37	-93	103	-339	335	-254	-162	-347	-258	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.161	0.90	Yes	0.702	0.289	1.00	Yes	1.00	**1.72**
		$U_{13} - L_{13}$		-----	-363.02	-46	69	-231	260	-96	16	-41	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.107	0.85	Yes	0.695	0.297	1.00	Yes	1.00	**1.36**
		$U_{14} - L_{14}$		-----	-158.91	257	-258	-475	519	-37	118	37	199	-----	-----	-----	-----	-----	-----	-----	-----	0.355	0.214	0.57	Yes	0.336	0.663	1.00	Yes	1.00	**5.85**
		$U_{15} - L_{15}$		167.48	-305.23	249	-274	-124	112	130	-117	59	111	0.301	0.387	0.69	Yes	0.166	0.213	0.38	Yes	0.684	0.131	0.82	Yes	0.646	0.350	1.00	Yes	1.00	**2.38**
		$U_{16} - L_{16}$		-----	-320.36	239	-248	20	-35	236	-150	147	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.106	0.83	Yes	0.678	0.317	1.00	Yes	1.00	**1.59**
		$U_{17} - L_{17}$		-----	-432.21	229	-246	60	-74	61	-177	-120	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.111	0.92	Yes	0.746	0.250	1.00	Yes	1.00	**1.23**
		$U_{18} - L_{18}$		-----	-534.14	432	-444	142	-148	123	-221	-134	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.090	0.88	Yes	0.743	0.251	1.00	Yes	1.00	**1.34**
		$U_{19} - L_{19}$		-----	-638.11	533	-524	170	-169	181	-100	-118	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.097	0.90	Yes	0.743	0.247	1.00	Yes	1.00	**1.49**
		$U_{20} - L_{20}$		-----	-544.04	338	-484	156	-297	691	91	-196	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.240	1.00	Yes	0.666	0.232	0.90	Yes	1.00	**1.01**
	Structure 2	$U_0 - L_0$		-----	-645.42	-162	210	-422	532	-41	-7	-492	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.723	0.240	0.97	Yes	1.00	**1.46**
		$U_1 - L_1$		-----	-717.10	-114	123	-532	539	-107	-7	-187	31	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.081	0.91	Yes	0.769	0.229	1.00	Yes	1.00	**2.09**
		$U_2 - L_2$		-----	-588.26	-104	115	-470	479	-107	-38	-154	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.086	0.88	Yes	0.750	0.245	1.00	Yes	1.00	**1.79**
		$U_3 - L_3$		-----	-486.78	-52	60	-240	250	83	-46	-195	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.124	0.96	Yes	0.763	0.228	1.00	Yes	1.00	**1.67**
		$U_4 - L_4$		-----	-334.87	-13	21	-223	221	248	76	-179	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.148	0.91	Yes	0.709	0.285	1.00	Yes	1.00	**1.62**
		$U_5 - L_5$		76.70	-328.20	77	-61	-214	236	-4	97	12	-31	0.138	0.330	0.47	Yes	0.076	0.182	0.26	Yes	0.741	0.130	0.88	Yes	0.694	0.302	1.00	Yes	1.00	**2.12**
		$U_6 - L_6$		345.74	-239.55	217	-214	-232	245	120	203	-62	-25	0.622	0.373	1.00	Yes	0.342	0.205	0.55	Yes	0.539	0.147	0.69	Yes	0.507	0.314	0.83	Yes	1.00	**3.32**
		$U_7 - L_7$		-----	-210.54	381	-427	-145	154	279	64	-127	234	-----	-----	-----	-----	-----	-----	-----	-----	0.476	0.227	0.71	Yes	0.445	0.545	1.00	Yes	1.00	**5.13**
		$U_8 - L_8$		-----	-463.93	353	-373	67	-83	100	-143	-5	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.100	0.78	Yes	0.668	0.326	1.00	Yes	1.00	**1.75**
		$U_9 - L_9$		-----	-689.33	601	-607	152	-176	121	-174	-8	12	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.078	0.85	Yes	0.739	0.258	1.00	Yes	1.00	**2.10**
		$U_{10} - L_{10}$		-----	-792.61	557	-580	162	-200	228	-199	12	8	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.091	0.88	Yes	0.741	0.256	1.00	Yes	1.00	**2.18**
		$U_{11} - L_{11}$		-----	-814.42	519	-536	185	-187	151	-142	-174	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.098	0.92	Yes	0.761	0.237	1.00	Yes	1.00	**1.92**
		$U_{12} - L_{12}$		-----	-879.10	533	-540	156	-134	171	-52	-153	7	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.098	0.95	Yes	0.762	0.232	1.00	Yes	1.00	**1.96**
		$U_{13} - L_{13}$		-----	-742.68	580	-559	208	-205	277	40	-169	20	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.162	0.99	Yes	0.716	0.277	1.00	Yes	1.00	**1.68**
		$U_{14} - L_{14}$		-----	-1155.55	675	-644	-450	418	744	305	258	266	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.151	1.00	Yes	0.766	0.120	0.89	Yes	1.00	**2.74**
		$U_{15} - L_{15}$		-----	-734.49	-115	123	-607	587	-307	9	-191	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.161	0.98	Yes	0.708	0.291	1.00	Yes	1.00	**2.60**
		$U_{16} - L_{16}$		-----	-653.53	-89	63	-515	484	-806	-260	-1162	-469	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.237	1.00	Yes	0.700	0.218	0.92	Yes	1.00	**2.10**
		$U_{17} - L_{17}$		-----	-640.36	-123	122	-541	537	-275	-184	-534	-427	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.169	0.96	Yes	0.745	0.251	1.00	Yes	1.00	**2.01**
		$U_{18} - L_{18}$		-----	-577.73	-90	90	-505	513	-114	-126	-439	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.157	0.93	Yes	0.736	0.263	1.00	Yes	1.00	**2.00**
		$U_{19} - L_{19}$		-----	-469.42	-54	58	-307	300	-66	-32	-234	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.125	0.84	Yes	0.701	0.295	1.00	Yes	1.00	**1.68**
		$U_{20} - L_{20}$		-----	-382.23	-18	27	-227	233	-69	-11	-29	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.094	0.88	Yes	0.732	0.266	1.00	Yes	1.00	**1.66**
	Structure 3	$U_{21} - L_{21}$		30.40	-316.83	28	-12	-236	253	2	120	-99	-52	0.055	0.358	0.42	Yes	0.030	0.197	0.23	Yes	0.716	0.127	0.85	Yes	0.670	0.324	1.00	Yes	1.00	**2.00**
		$U_{22} - L_{22}$		-----	-215.27	320	-340	-394	420	415	148	-12	265	-----	-----	-----	-----	-----	-----	-----	-----	0.484	0.199	0.69	Yes	0.455	0.536	1.00	Yes	1.00	**6.03**
		$U_{23} - L_{23}$		59.61	-312.81	242	-259	-49	39	148	-57	173	117	0.107	0.381	0.49	Yes	0.059	0.209	0.27	Yes	0.707	0.152	0.86	Yes	0.662	0.331	1.00	Yes	1.00	**1.97**
		$U_{24} - L_{24}$		-----	-370.25	241	-252	10	-22	197	-63	75	27	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.109	0.87	Yes	0.709	0.288	1.00	Yes	1.00	**1.63**
		$U_{25} - L_{25}$		-----	-469.50	309	-302	38	-38	241	-75	-89	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.097	0.81	Yes	0.701	0.297	1.00	Yes	1.00	**1.64**
		$U_{26} - L_{26}$		-----	-565.68	508	-535	67	-70	326	-44	-123	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.105	0.86	Yes	0.721	0.274	1.00	Yes	1.00	**1.80**
		$U_{27} - L_{27}$		-----	-628.96	572	-574	85	-85	267	-55	-136	3	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.101	0.88	Yes	0.732	0.266	1.00	Yes	1.00	**1.90**
		$U_{28} - L_{28}$		-----	-704.41	554	-546	75	-72	354	-21	-156	16	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.103	0.92	Yes	0.755	0.235	1.00	Yes	1.00	**2.03**
		$U_{29} - L_{29}$		-----	-713.75	641	-617	118	-124	419	42	-119	27	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.197	1.00	Yes	0.688	0.307	1.00	Yes	1.00	**2.24**
		$U_{30} - L_{30}$		-----	-1151.00	734	-719	-613	552	806	48	-74	295	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.140	1.00	Yes	0.778	0.132	0.91	Yes	1.00	**3.20**
		$U_{31} - L_{31}$		-----	-700.60	-107	108	-537	505	-311	-33	-592	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.215	1.00	Yes	0.675	0.257	0.94	Yes	1.00	**2.36**
		$U_{32} - L_{32}$		-----	-806.44	-81	58	-462	454	-698	-278	-845	-428	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.217	1.00	Yes	0.699	0.198	0.90	Yes	1.00	**2.34**
		$U_{33} - L_{33}$		-----	-792.37	-116	105	-482	476	-462	-348	-681	-516	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.195	1.00	Yes	0.747	0.216	0.97	Yes	1.00	**2.40**
		$U_{34} - L_{34}$		-----	-801.40	-111	126	-547	557	-236	-197	-443	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.148	0.94	Yes	0.749	0.246	1.00	Yes	1.00	**2.58**
		$U_{35} - L_{35}$		-----	-706.44	-110	125	-549	563	-157	-15	-50	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.067	0.86	Yes	0.757	0.239	1.00	Yes	1.00	**2.29**
		$U_{36} - L_{36}$		-----	-477.01	-51	66	-330	347	12	70	-68	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.092	0.79	Yes	0.687	0.304	1.00	Yes	1.00	**1.93**
		$U_{37} - L_{37}$		-----	-186.55	81	-81	-420	473	81	102	-166	194	-----	-----	-----	-----	-----	-----	-----	-----	0.421	0.233	0.66	Yes	0.395	0.605	1.00	Yes	1.00	**4.76**
		$U_{38} - L_{38}$		338.77	-177.13	168	-173	-241	248	178	-73	236	116	0.609	0.385	1.00	Yes	0.335	0.212	0.55	Yes	0.399	0.134	0.54	Yes	0.375	0.317	0.70	Yes	1.00	**2.79**
		$U_{39} - L_{39}$		152.82	-321.23	224	-244	-133	119	161	-101	50	71	0.275	0.358	0.64	Yes	0.151	0.197	0.35	Yes	0.726	0.110	0.84	Yes	0.680	0.312	1.00	Yes	1.00	**2.37**
		$U_{40} - L_{40}$		23.07	-339.19	217	-216	-19	1	165	-123	23	3	0.041	0.325	0.37	Yes	0.023	0.179	0.21	Yes	0.769	0.087	0.86	Yes	0.718	0.277	1.00	Yes	1.00	**1.74**
		$U_{41} - L_{41}$		-----	-487.93	246	-258	26	-30	143	-131	8	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.084	0.92	Yes	0.765	0.235	1.00	Yes	1.00	**1.66**
		$U_{42} - L_{42}$		-----	-583.28	493	-498	59	-68	165	-170	11	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.075	0.86	Yes	0.743	0.255	1.00	Yes	1.00	**1.77**
		$U_{43} - L_{43}$		-----	-707.65	566	-565	77	-90	260	-41	-50	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.086	0.90	Yes	0.758	0.240	1.00	Yes	1.00	**1.95**
		$U_{44} - L_{44}$		-----	-634.08	376	-502	117	-134	959	163	-132	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.233	1.00	Yes	0.680	0.213	0.90	Yes	1.00	**1.56**
	Structure 4	$U_0 - L_0$		-----	-562.64	-145	194	-396	456	-57	-7	-779	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.227	1.00	Yes	0.676	0.219	0.90	Yes	1.00	**1.18**
		$U_1 - L_1$		-----	-656.06	-110	122	-490	496	-125	-4	-135	109	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.076	0.90	Yes	0.764	0.230	1.00	Yes	1.00	**2.07**
		$U_2 - L_2$		-----	-534.96	-108	114	-439	443	-148	-45	-306	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.112	0.90	Yes	0.744	0.251	1.00	Yes	1.00	**1.70**
		$U_3 - L_3$		-----	-445.59	-45	58	-204	221	45	-64	-38	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.080	0.92	Yes	0.769	0.225	1.00	Yes	1.00	**1.42**
		$U_4 - L_4$		-----	-320.16	-12	30	-242	247	-49	90	-207	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.159	0.89	Yes	0.677	0.316	1.00	Yes	1.00	**1.80**
		$U_5 - L_5$		79.75	-305.55	74	-62	-256	275	-21	125	-158	-30	0.143	0.397	0.55	Yes	0.079	0.218	0.30	Yes	0.685	0.153	0.84	Yes	0.647	0.351	1.00	Yes	1.00	**2.24**
		$U_6 - L_6$		-----	-200.84	428	-446	-287	309	-161	51	252	106	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.216	0.67	Yes	0.425	0.570	1.00	Yes	1.00	**5.76**
		$U_7 - L_7$		-----	-359.89	244	-266	12	-26	-2	-154	-11	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.120	0.85	Yes	0.689	0.304	1.00	Yes	1.00	**1.56**
		$U_8 - L_8$		-----	-514.17	339	-340	63	-69	90	-177	-15	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.102	0.85	Yes	0.705	0.291	1.00	Yes	1.00	**1.86**
		$U_9 - L_9$		-----	-653.65	408	-514	116	-179	42	-202	-248	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.123	0.91	Yes	0.761	0.239	1.00	Yes	1.00	**1.92**
		$U_{10} - L_{10}$		-----	-778.47	405	-440	119	-115	200	-53	-215	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.106	0.92	Yes	0.768	0.228	1.00	Yes	1.00	**2.03**
		$U_{11} - L_{11}$		-----	-648.04	430	-474	167	-192	297	57	-166	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.125	0.90	Yes	0.732	0.264	1.00	Yes	1.00	**1.44**
		$U_{12} - L_{12}$		-----	-1179.74	491	-636	-381	413	983	376	459	182	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.144	1.00	Yes	0.818	0.119	0.94	Yes	1.00	**2.65**
		$U_{13} - L_{13}$		-----	-458.43	-67	76	-273	288	-297	-42	-215	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.154	0.93	Yes	0.707	0.284	1.00	Yes	1.00	**1.47**
		$U_{14} - L_{14}$		-----	-472.27	-44	28	-253	254	-671	-325	-1007	-534	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.283	1.00	Yes	0.677	0.222	0.90	Yes	1.00	**1.75**
		$U_{15} - L_{15}$		-----	-438.05	-42	56	-210	235	-372	-206	-472	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.204	1.00	Yes	0.756	0.238	1.00	Yes	1.00	**1.75**
		$U_{16} - L_{16}$		-----	-158.36	86	-54	-516	513	-932	-412	-517	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.348	0.415	0.77	Yes	0.335	0.660	1.00	Yes	1.00	**5.65**
		$U_{17} - L_{17}$		283.50	-183.68	156	-179	-302	312	-294	-196	-121	100	0.510	0.483	1.00	Yes	0.280	0.266	0.55	Yes	0.402	0.175	0.58	Yes	0.389	0.398	0.79	Yes	1.00	**3.23**
		$U_{18} - L_{18}$		122.11	-291.17	252	-297	-114	127	51	-121	-111	18	0.220	0.415	0.64	Yes	0.121	0.228	0.35	Yes	0.636	0.141	0.78	Yes	0.616	0.380	1.00	Yes	1.00	**2.51**
		$U_{19} - L_{19}$		48.20	-309.14	263	-244	-57	45	56	-65	-84	-3	0.087	0.361	0.45	Yes	0.048	0.199	0.25	Yes	0.675	0.105	0.79	Yes	0.654	0.337	1.00	Yes	1.00	**1.60**
		$U_{20} - L_{20}$		-----	-324.99	97	-172	-16	-67	532	171	-589	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.266	1.00	Yes	0.688	0.220	0.91	Yes	1.00	**0.77**

Moment (Start) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Yield			Pass	Fracture			Pass	Buckle			Pass	Yield			Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total			
North Truss - Diagonals	Structure 1	$U_0 - L_1$	515.95	-----	-16	-2	-140	73	-6	12	-616	-127	0.677	0.319	1.00	Yes	0.409	0.176	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.83**
		$U_1 - L_2$	390.22	-91.95	18	-20	-106	-2	-8	-17	-556	-324	0.702	0.297	1.00	Yes	0.386	0.163	0.55	Yes	0.211	0.266	0.48	Yes	0.195	0.136	0.34	Yes	1.00	**2.07**
		$U_2 - L_3$	394.47	-269.21	52	-30	-159	-22	38	28	-276	-108	0.709	0.283	1.00	Yes	0.390	0.156	0.55	Yes	0.620	0.275	0.90	Yes	0.570	0.203	0.78	Yes	1.00	**3.84**
		$U_3 - L_4$	-----	-320.51	54	-7	-105	-111	118	122	28	-407	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.261	1.00	Yes	0.678	0.142	0.83	Yes	1.00	**3.61**
		$U_4 - L_4$	561.55	-----	-11	54	-97	23	24	-20	-198	-287	0.831	0.165	1.00	Yes	0.457	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.52**
		$U_5 - L_5$	681.24	-----	-29	152	-215	216	200	75	-346	-336	0.805	0.186	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.65**
		$U_1 - L_6$	638.35	-----	-80	120	-307	240	349	162	-282	-227	0.755	0.238	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.33**
		$U_6 - L_7$	654.84	-----	23	164	-107	300	286	163	-119	-190	0.774	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.39**
		$U_5 - L_8$	989.27	-----	115	225	-99	357	358	54	329	375	0.791	0.207	1.00	Yes	0.490	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		$U_9 - L_{10}$	928.79	-----	-71	85	-357	233	137	134	739	550	0.742	0.253	1.00	Yes	0.460	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.69**
		$U_{10} - L_{11}$	986.39	-----	-54	161	-256	176	135	192	-10	350	0.833	0.164	1.00	Yes	0.516	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_{11} - L_{12}$	832.76	-----	-67	55	-288	96	23	130	141	249	0.824	0.171	1.00	Yes	0.453	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
		$U_{12} - L_{13}$	650.03	-----	-77	44	-204	144	-118	-92	-68	119	0.792	0.202	1.00	Yes	0.499	0.113	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.58**
		$U_{13} - L_{14}$	453.74	-----	-20	-11	-98	28	-181	-180	-40	-16	0.816	0.178	1.00	Yes	0.449	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.51**
		$U_{15} - L_{14}$	263.54	-311.71	55	-115	-92	-16	-268	-124	-402	-321	0.474	0.263	0.74	Yes	0.261	0.145	0.41	Yes	0.730	0.269	1.00	Yes	0.660	0.147	0.81	Yes	1.00	**2.37**
		$U_{16} - L_{15}$	384.57	-82.22	-9	-32	-134	88	-375	-146	-443	-305	0.692	0.299	1.00	Yes	0.380	0.165	0.55	Yes	0.195	0.214	0.41	Yes	0.174	0.171	0.35	Yes	1.00	**1.88**
		$U_{17} - L_{16}$	508.78	-----	-34	14	-143	87	-110	-130	-451	-409	0.746	0.250	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.26**
		$U_{18} - L_{17}$	600.85	-----	-111	76	-319	243	-111	-118	-575	-492	0.710	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.39**
		$U_{19} - L_{18}$	664.39	-----	-131	86	-353	245	-64	-105	-562	-481	0.720	0.273	1.00	Yes	0.396	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.37**
		$U_{20} - L_{19}$	639.58	-----	-73	105	-283	255	85	-85	-935	-230	0.693	0.299	1.00	Yes	0.381	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.47**
	Structure 2	$U_0 - L_1$	760.07	-----	-114	100	-394	367	-59	-47	-428	-58	0.752	0.247	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		$U_1 - L_2$	791.38	-----	-95	71	-395	303	-100	-29	-221	38	0.783	0.216	1.00	Yes	0.431	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		$U_2 - L_3$	658.84	-----	-81	62	-349	269	-22	92	-128	113	0.779	0.221	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		$U_3 - L_4$	596.79	-----	-37	16	-183	130	105	61	-160	11	0.796	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_4 - L_5$	422.78	-22.53	-2	-9	-135	91	73	-91	-226	75	0.760	0.238	1.00	Yes	0.418	0.131	0.55	Yes	0.056	0.109	0.17	Yes	0.048	0.172	0.23	Yes	1.00	**1.76**
		$U_5 - L_6$	431.01	-259.17	60	-108	-135	59	-175	-165	-111	96	0.775	0.224	1.00	Yes	0.426	0.123	0.55	Yes	0.612	0.183	0.80	Yes	0.548	0.173	0.73	Yes	1.00	**2.71**
		$U_6 - L_7$	78.35	-382.56	57	-104	-53	-12	-97	-297	-159	-83	0.128	0.196	0.33	Yes	0.070	0.108	0.18	Yes	0.819	0.173	1.00	Yes	0.733	0.119	0.86	Yes	1.00	**1.69**
		$U_8 - L_7$	555.88	-----	-34	-13	-205	101	-235	-196	-365	-503	0.709	0.286	1.00	Yes	0.446	0.163	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_8 - L_8$	688.91	-----	-117	42	-334	212	-281	-212	-485	-473	0.746	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.70**
		$U_{10} - L_9$	777.72	-----	-93	124	-319	214	0	-63	-509	-489	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		$U_{11} - L_{10}$	844.83	-----	-99	147	-352	256	166	29	-559	-542	0.770	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.77**
		$U_{12} - L_{11}$	853.76	-----	-109	163	-372	336	290	121	-386	-438	0.778	0.218	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.68**
		$U_{13} - L_{12}$	748.55	-----	-151	153	-438	376	344	133	-252	-213	0.741	0.255	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.46**
		$U_{14} - L_{13}$	749.57	-----	-4	181	-279	428	362	137	-314	-162	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.86**
		$U_{14} - L_{15}$	633.83	-----	64	127	-223	358	127	-77	235	162	0.749	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		$U_{15} - L_{16}$	623.02	-----	-57	65	-406	358	-48	14	130	164	0.737	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**
		$U_{16} - L_{17}$	711.76	-----	-60	100	-327	334	-166	116	-296	315	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_{17} - L_{18}$	648.23	-----	-66	79	-303	275	-26	102	3	321	0.766	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**
		$U_{18} - L_{19}$	670.67	-----	-49	68	-282	259	33	20	68	256	0.793	0.206	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.85**
		$U_{19} - L_{20}$	604.32	-----	-19	26	-196	157	-31	-29	25	230	0.771	0.222	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**
		$U_{20} - L_{21}$	441.59	-----	-6	8	-131	106	-68	-48	36	116	0.794	0.202	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**
		$U_{21} - L_{22}$	442.18	-198.68	25	-73	-118	49	-41	-179	-32	98	0.795	0.203	1.00	Yes	0.437	0.112	0.55	Yes	0.469	0.143	0.62	Yes	0.420	0.151	0.58	Yes	1.00	**2.36**
		$U_{23} - L_{22}$	362.85	-290.18	43	-91	-126	20	-305	-22	-397	-349	0.653	0.277	0.93	Yes	0.359	0.152	0.52	Yes	0.691	0.306	1.00	Yes	0.614	0.162	0.78	Yes	1.00	**2.70**
		$U_{24} - L_{23}$	414.42	-32.98	3	-18	-126	93	-155	-58	-308	-281	0.745	0.250	1.00	Yes	0.410	0.137	0.55	Yes	0.079	0.156	0.24	Yes	0.070	0.161	0.24	Yes	1.00	**1.79**
		$U_{25} - L_{24}$	562.78	-----	-13	27	-198	163	71	8	-467	-376	0.718	0.272	1.00	Yes	0.395	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.87**
		$U_{26} - L_{25}$	630.73	-----	-27	38	-296	239	119	46	-434	-415	0.746	0.246	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		$U_{27} - L_{26}$	645.65	-----	-45	58	-299	266	177	69	-333	-353	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.77**
		$U_{28} - L_{27}$	703.74	-----	-47	65	-352	352	204	114	-329	-308	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_{29} - L_{28}$	622.83	-----	-72	82	-379	335	269	133	-240	-213	0.736	0.263	1.00	Yes	0.405	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**
		$U_{30} - L_{29}$	637.05	-----	39	108	-229	352	215	139	-176	-231	0.753	0.241	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		$U_{30} - L_{31}$	749.19	-----	64	161	-288	427	399	9	150	185	0.741	0.258	1.00	Yes	0.408	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		$U_{31} - L_{32}$	724.11	-----	-74	78	-411	359	-29	41	-179	236	0.752	0.241	1.00	Yes	0.414	0.124	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{32} - L_{33}$	872.71	-----	-58	94	-375	337	-146	134	-220	336	0.795	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_{33} - L_{34}$	878.60	-----	-66	91	-346	277	24	203	-43	367	0.800	0.197	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
		$U_{34} - L_{35}$	816.37	-----	-64	79	-311	222	79	86	15	264	0.808	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{35} - L_{36}$	734.71	-----	-86	84	-344	236	-15	0	72	145	0.796	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{36} - L_{37}$	611.40	-----	-33	9	-195	144	-195	-209	-111	76	0.780	0.217	1.00	Yes	0.491	0.122	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{38} - L_{37}$	-----	-387.81	60	-96	-40	-27	-249	-69	-241	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.153	1.00	Yes	0.743	0.110	0.86	Yes	1.00	**1.56**
		$U_{39} - L_{38}$	363.91	-302.64	88	-120	-118	40	-215	-107	-425	-396	0.655	0.276	0.94	Yes	0.360	0.152	0.52	Yes	0.721	0.273	1.00	Yes	0.640	0.153	0.80	Yes	1.00	**2.82**
		$U_{40} - L_{39}$	390.73	-117.14	19	-44	-140	92	-243	-132	-407	-343	0.703	0.297	1.00	Yes	0.387	0.163	0.55	Yes	0.280	0.222	0.51	Yes	0.248	0.179	0.43	Yes	1.00	**2.18**
		$U_{41} - L_{40}$	542.16	-----	-17	1	-179	112	-92	-77	-513	-433	0.723	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.77**
		$U_{42} - L_{41}$	607.54	-----	-49	32	-328	248	-67	-64	-475	-487	0.718	0.274	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.70**
		$U_{43} - L_{42}$	733.97	-----	-65	44	-394	294	-4	-45	-558	-498	0.726	0.266	1.00	Yes	0.399	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_{44} - L_{43}$	671.45	-----	-88	82	-339	326	-10	-10	-1171	-182	0.664	0.332	1.00	Yes	0.365	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
	Structure 3	$U_0 - L_1$	569.95	-----	-113	95	-425	316	-63	-53	-997	64	0.617	0.382	1.00	Yes	0.340	0.210	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.72**
		$U_1 - L_2$	674.22	-----	-99	67	-346	251	-124	-44	-542	-187	0.730	0.266	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**
		$U_2 - L_3$	645.62	-----	-97	63	-331	242	-49	78	-254	126	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.63**
		$U_3 - L_4$	558.24	-----	-28	9	-161	105	75	49	-69	5	0.819	0.181	1.00	Yes	0.450	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.69**
		$U_4 - L_5$	424.24	-75.72	-8	-29	-133	90	-102	-165	-212	25	0.763	0.231	1.00	Yes	0.420	0.127	0.55	Yes	0.179	0.121	0.31	Yes	0.160	0.169	0.33	Yes	1.00	**1.86**
		$U_5 - L_6$	418.89	-295.56	36	-103	-113	-5	-221	-331	-241	-11	0.753	0.240	1.00	Yes	0.414	0.132	0.55	Yes	0.692	0.218	0.92	Yes	0.625	0.144	0.77	Yes	1.00	**2.53**
		$U_7 - L_6$	428.18	-9.21	-4	-35	-98	19	-213	-190	-299	-360	0.770	0.230	1.00	Yes	0.424	0.126	0.55	Yes	0.021	0.182	0.21	Yes	0.019	0.126	0.15	Yes	1.00	**1.78**
		$U_8 - L_7$	590.66	-----	-59	8	-204	134	-348	-224	-491	-437	0.720	0.274	1.00	Yes	0.453	0.156	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_8 - L_8$	777.53	-----	-63	79	-272	67	-93	-141	-637	-629	0.769	0.221	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{10} - L_9$	933.82	-----	-45	127	-268	148	88	-10	-590	-646	0.789	0.209	1.00	Yes	0.488	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		$U_{11} - L_{10}$	970.35	-----	-74	125	-319	236	353	187	-598	-503	0.776	0.218	1.00	Yes	0.481	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.01**
		$U_{12} - L_{11}$	990.19	-----	75	179	-117	349	376	219	-415	-383	0.792	0.208	1.00	Yes	0.490	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{12} - L_{13}$	658.01	-----	66	146	-113	293	-3	-116	274	182	0.778	0.217	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		$U_{13} - L_{14}$	645.22	-----	-21	57	-340	255	-23	53	232	235	0.763	0.236	1.00	Yes	0.420	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$U_{14} - L_{15}$	707.13	-----	-1	130	-196	192	-23	107	-204	243	0.836	0.156	1.00	Yes	0.460	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.88**
		$U_{15} - L_{16}$	506.62	-----	7	85	-164	8	173	235	351	245	0.743	0.248	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		$U_{17} - L_{16}$	-----	-322.02	50	-2	-67	-93	163	157	-507	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1.00	Yes	0.681	0.118	0.80	Yes	1.00	**2.74**
		$U_{18} - L_{17}$	386.98	-274.83	59	-31	-131	-30	277	184	-464	-393	0.696	0.302	1.00	Yes	0.383	0.166	0.55	Yes	0.633	0.346	0.98	Yes	0.582	0.168	0.75	Yes	1.00	**3.38**
		$U_{19} - L_{18}$	409.17	-123.69	24	-19	-100	12	152	117	-443	-372	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	0.284	0.236	0.52	Yes	0.262	0.128	0.39	Yes	1.00	**1.73**
		$U_{20} - L_{19}$	390.50	-----	165	-14	-165	78	1141	37	-1115	-558	0.512	0.480	1.00	Yes	0.309	0.265	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
	Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-500.38	505	-589	-989	-624	-25	-290	317	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.316	1	Yes	0.675	0.235	0.91	Yes	1.00	**2.60**
		$U_1 - U_2$	9.77	-567.49	-46	41	-533	-624	-5	-114	29	-13	0.011	0.168	0.18	Yes	0.008	0.115	0.13	Yes	0.772	0.225	1	Yes	0.765	0.148	0.92	Yes	1.00	**1.76**
		$U_2 - U_3$	227.88	-565.80	-54	338	-983	-11	-40	-88	262	-184	0.261	0.278	0.54	Yes	0.176	0.181	0.36	Yes	0.770	0.197	0.97	Yes	0.763	0.234	1.00	Yes	1.00	**2.63**
		$U_3 - U_4$	440.25	-539.40	152	337	-1128	242	-139	-93	131	-19	0.505	0.292	0.80	Yes	0.346	0.200	0.55	Yes	0.734	0.201	0.94	Yes	0.727	0.268	1.00	Yes	1.00	**3.08**
		$U_4 - U_5$	322.10	-563.51	109	254	-992	-16	-180	-19	-79	-98	0.369	0.266	0.64	Yes	0.253	0.183	0.44	Yes	0.767	0.221	0.99	Yes	0.760	0.236	1.00	Yes	1.00	**2.13**
		$U_5 - U_6$	600.76	-507.48	238	386	-1031	-80	-357	-20	-131	-349	0.689	0.305	1.00	Yes	0.464	0.199	0.67	Yes	0.691	0.229	0.92	Yes	0.684	0.245	0.93	Yes	1.00	**2.89**
		$U_6 - U_7$	787.02	-119.88	299	202	-821	39	-319	102	-471	-166	0.753	0.239	1.00	Yes	0.526	0.164	0.70	Yes	0.136	0.182	0.32	Yes	0.135	0.174	0.31	Yes	1.00	**2.76**
		$U_7 - U_8$	861.39	-----	29	948	-1695	2358	-165	436	-325	147	0.597	0.402	1.00	Yes	0.416	0.274	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		$U_8 - U_9$	460.49	-----	3320	-3038	595	-54	98	482	-49	93	0.377	0.616	1.00	Yes	0.258	0.419	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.96**
		$U_9 - U_{10}$	-----	-510.13	803	-512	-1329	-152	458	737	147	653	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.335	1	Yes	0.651	0.298	0.95	Yes	1.00	**10.03**
		$U_{10} - U_{11}$	-----	-632.27	457	-857	-376	-434	421	-4	324	159	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.162	0.98	Yes	0.807	0.192	1.00	Yes	1.00	**3.98**
		$U_{11} - U_{12}$	-----	-865.50	262	-385	-496	-509	277	-196	686	238	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.172	1	Yes	0.812	0.084	0.90	Yes	1.00	**2.69**
		$U_{12} - U_{13}$	-----	-1182.94	115	-339	-968	-380	241	-359	508	66	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.196	1	Yes	0.790	0.133	0.93	Yes	1.00	**2.57**
		$U_{13} - U_{14}$	-----	-1360.59	-79	-333	-1270	-578	146	90	309	41	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.209	1	Yes	0.780	0.140	0.93	Yes	1.00	**2.61**
		$U_{14} - U_{15}$	-----	-1341.52	-189	-959	-1517	-951	126	-210	135	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.222	1	Yes	0.769	0.167	0.94	Yes	1.00	**1.86**
		$U_{15} - U_{16}$	-----	-1430.22	31	-1300	-1349	-564	-111	-459	231	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.166	1	Yes	0.820	0.149	0.97	Yes	1.00	**1.94**
		$U_{16} - U_{17}$	-----	-1364.39	-315	-184	-1590	-377	53	-173	-57	-280	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.203	1	Yes	0.782	0.175	0.96	Yes	1.00	**1.91**
		$U_{17} - U_{18}$	-----	-993.25	-166	-103	-1036	-271	-155	-226	-87	-223	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.205	1	Yes	0.777	0.169	0.95	Yes	1.00	**1.77**
		$U_{18} - U_{19}$	-----	-718.68	-197	-29	-868	44	-194	-173	-44	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.183	1	Yes	0.809	0.175	0.99	Yes	1.00	**1.62**
		$U_{19} - U_{20}$	-----	-591.02	-34	-1386	-1630	650	-108	-631	374	12	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.325	1	Yes	0.665	0.328	1.00	Yes	1.00	**3.37**
	Structure 2	$U_0 - U_1$	-----	-603.55	1313	-1468	-1650	-332	99	-76	691	120	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.221	0.94	Yes	0.713	0.280	1.00	Yes	1.00	**4.53**
		$U_1 - U_2$	-----	-809.09	10	-607	-475	-939	130	-97	324	247	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.206	1	Yes	0.781	0.142	0.93	Yes	1.00	**2.24**
		$U_2 - U_3$	-----	-1166.11	321	-565	-917	-772	636	-13	378	84	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.162	1	Yes	0.828	0.093	0.93	Yes	1.00	**2.76**
		$U_3 - U_4$	-----	-1348.94	-362	-286	-1515	-1648	118	-303	231	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.223	1	Yes	0.768	0.147	0.92	Yes	1.00	**2.00**
		$U_4 - U_5$	-----	-1454.33	-307	-1096	-2068	-940	-23	-608	310	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.240	1	Yes	0.747	0.171	0.92	Yes	1.00	**2.44**
		$U_5 - U_6$	-----	-1498.45	-384	-5	-2049	-1091	-110	-297	34	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1	Yes	0.769	0.170	0.94	Yes	1.00	**1.95**
		$U_6 - U_7$	-----	-1316.10	-264	-73	-1480	-1660	-88	-264	-99	-294	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.237	1	Yes	0.749	0.148	0.90	Yes	1.00	**1.83**
		$U_7 - U_8$	-----	-1338.87	-156	-199	-2116	-586	-184	-217	-88	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.762	0.189	0.96	Yes	1.00	**1.88**
		$U_8 - U_9$	-----	-1194.10	-284	104	-1518	-228	-230	-187	-48	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.180	1	Yes	0.810	0.161	0.98	Yes	1.00	**2.00**
		$U_9 - U_{10}$	138.91	-908.04	-81	294	-1501	-521	-281	-128	-173	-240	0.102	0.213	0.32	Yes	0.069	0.144	0.22	Yes	0.788	0.209	1	Yes	0.784	0.183	0.97	Yes	1.00	**2.15**
		$U_{10} - U_{11}$	488.97	-771.51	101	364	-1640	-104	-137	-57	-102	-182	0.413	0.254	0.67	Yes	0.281	0.163	0.45	Yes	0.771	0.216	0.99	Yes	0.767	0.231	1.00	Yes	1.00	**2.91**
		$U_{11} - U_{12}$	799.93	-415.43	184	512	-1912	375	-329	-151	-201	-439	0.676	0.323	1.00	Yes	0.454	0.216	0.67	Yes	0.415	0.222	0.64	Yes	0.413	0.270	0.69	Yes	1.00	**3.35**
		$U_{12} - U_{13}$	1110.89	-----	341	84	-1338	-553	-434	-44	-759	-520	0.750	0.241	1.00	Yes	0.535	0.165	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{13} - U_{14}$	1097.56	-----	-96	1782	-2902	4429	-203	374	-667	-98	0.540	0.456	1.00	Yes	0.382	0.299	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_{14} - U_{15}$	729.21	-----	6305	-3350	1231	-90	-55	739	-288	117	0.359	0.634	1.00	Yes	0.254	0.415	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		$U_{15} - U_{16}$	1089.08	-----	345	185	-2189	-1577	669	883	411	979	0.658	0.332	1.00	Yes	0.468	0.224	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{16} - U_{17}$	-----	-753.25	2558	-2005	-2350	-732	1063	24	1134	611	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.337	1	Yes	0.653	0.321	0.98	Yes	1.00	**12.16**
		$U_{17} - U_{18}$	-----	-619.89	929	-511	-1525	-163	194	-77	228	293	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.245	0.99	Yes	0.732	0.259	1.00	Yes	1.00	**6.45**
		$U_{18} - U_{19}$	-----	-682.33	769	-383	-792	-565	100	-327	864	132	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.183	1	Yes	0.806	0.134	0.95	Yes	1.00	**4.31**
		$U_{19} - U_{20}$	331.55	-689.46	358	201	-1169	-341	-16	161	243	121	0.311	0.220	0.54	Yes	0.206	0.144	0.36	Yes	0.765	0.229	1	Yes	0.761	0.187	0.95	Yes	1.00	**3.12**
		$U_{20} - U_{21}$	-----	-853.76	237	-359	-1363	-155	157	-348	235	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.208	1	Yes	0.779	0.197	0.98	Yes	1.00	**3.21**
		$U_{21} - U_{22}$	55.66	-818.19	-10	18	-1068	-1154	-18	-52	7	-90	0.043	0.177	0.23	Yes	0.031	0.118	0.15	Yes	0.752	0.247	1	Yes	0.747	0.167	0.92	Yes	1.00	**2.12**
		$U_{22} - U_{23}$	-----	-805.69	78	-976	-1456	-455	-40	-265	91	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.254	1	Yes	0.735	0.211	0.95	Yes	1.00	**2.08**
		$U_{23} - U_{24}$	18.89	-852.34	128	-92	-1384	-135	-108	-39	25	-155	0.015	0.217	0.24	Yes	0.010	0.139	0.15	Yes	0.784	0.213	1	Yes	0.778	0.200	0.98	Yes	1.00	**2.27**
		$U_{24} - U_{25}$	194.68	-680.07	108	230	-1128	-678	-231	-34	-170	-177	0.183	0.212	0.40	Yes	0.121	0.139	0.27	Yes	0.755	0.237	1	Yes	0.750	0.181	0.94	Yes	1.00	**2.11**
		$U_{25} - U_{26}$	389.58	-637.34	167	392	-1446	305	-269	36	-117	-50	0.391	0.285	0.68	Yes	0.257	0.181	0.44	Yes	0.757	0.184	0.95	Yes	0.753	0.246	1.00	Yes	1.00	**2.65**
		$U_{26} - U_{27}$	667.29	-537.11	250	438	-1746	344	-178	41	-170	-133	0.670	0.322	1.00	Yes	0.446	0.214	0.66	Yes	0.638	0.200	0.84	Yes	0.634	0.296	0.94	Yes	1.00	**3.53**
		$U_{27} - U_{28}$	949.41	-325.25	246	586	-1896	-373	-287	12	-280	-534	0.700	0.294	1.00	Yes	0.465	0.194	0.66	Yes	0.284	0.212	0.5	Yes	0.282	0.238	0.53	Yes	1.00	**4.30**
		$U_{28} - U_{29}$	663.49	-193.57	670	-2059	-4234	-603	-1371	305	-1225	-699	0.401	0.597	1.00	Yes	0.285	0.402	0.69	Yes	0.139	0.565	0.71	Yes	0.138	0.481	0.62	Yes	1.00	**8.29**
		$U_{29} - U_{30}$	1039.17	-----	16	1837	-2938	4738	14	623	-467	146	0.511	0.481	1.00	Yes	0.362	0.315	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**
		$U_{30} - U_{31}$	949.63	-----	5166	-3435	1348	77	230	656	-439	-175	0.467	0.523	1.00	Yes	0.331	0.343	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{31} - U_{32}$	1022.71	-----	170	505	-1792	132	-103	159	323	798	0.691	0.302	1.00	Yes	0.492	0.206	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{32} - U_{33}$	-----	-753.87	1505	-1717	-1254	-701	951	92	795	463	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.208	0.97	Yes	0.749	0.242	1.00	Yes	1.00	**9.85**
		$U_{33} - U_{34}$	645.30	-789.46	430	229	-722	-1299	123	199	190	114	0.545	0.207	0.76	Yes	0.371	0.134	0.51	Yes	0.789	0.211	1	Yes	0.785	0.183	0.97	Yes	1.00	**3.39**
		$U_{34} - U_{35}$	422.17	-972.18	494	90	-923	-724	87	23	359	13	0.310	0.151	0.47	Yes	0.210	0.102	0.32	Yes	0.844	0.150	1	Yes	0.839	0.112	0.96	Yes	1.00	**3.45**
		$U_{35} - U_{36}$	119.60	-1159.04	240	-195	-1241	-549	88	131	312	64	0.069	0.158	0.23	Yes	0.048	0.103	0.16	Yes	0.792	0.206	1	Yes	0.786	0.132	0.92	Yes	1.00	**2.93**
		$U_{36} - U_{37}$	-----	-1340.17	-120	-54	-1156	-1896	134	-79	196	17	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.231	1	Yes	0.763	0.169	0.94	Yes	1.00	**2.08**
		$U_{37} - U_{38}$	-----	-1316.69	76	-1352	-2138	-766	-34	-218	241	9	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.242	1	Yes	0.750	0.191	0.95	Yes	1.00	**2.00**
		$U_{38} - U_{39}$	-----	-1639.28	185	-1765	-1799	-1187	50	-404	264	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.152	1	Yes	0.842	0.149	1.00	Yes	1.00	**2.41**
		$U_{39} - U_{40}$	-----	-1404.79	-324	-467	-2146	-1633	-116	-139	-164	-386	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.267	1	Yes	0.721	0.178	0.90	Yes	1.00	**1.89**
		$U_{40} - U_{41}$	-----	-1344.55	-396	-429	-1927	-797	-89	-130	-93	-253	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.223	1	Yes	0.766	0.172	0.94	Yes	1.00	**1.88**
		$U_{41} - U_{42}$	-----	-1141.65	-272	-177	-1780	-130	-96	38	-72	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.176	1	Yes	0.810	0.181	1.00	Yes	1.00	**1.93**
		$U_{42} - U_{43}$	-----	-790.44	-259	-56	-1375	-395	131	-46	246	-236	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.763	0.209	0.98	Yes	1.00	**2.36**
		$U_{43} - U_{44}$	-----	-572.47	-27	-1176	-1751	428	-134	-529	291	7	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.319	1	Yes	0.676	0.297	0.98	Yes	1.00	**3.26**
	Structure 3	$U_0 - U_1$	-----	-605.22	1105	-1569	-1546	-261	47	-322	723	79	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.246	0.94	Yes	0.681	0.316	1.00	Yes	1.00	**3.88**
		$U_1 - U_2$	-----	-691.59	37	-777	-247	-573	198	287	475	122	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.210	1	Yes	0.778	0.156	0.94	Yes	1.00	**1.64**
		$U_2 - U_3$	-----	-1020.15	182	-1052	-418	-340	614	-14	445	29	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1	Yes	0.798	0.171	0.97	Yes	1.00	**1.89**
		$U_3 - U_4$	-----	-1361.15	-88	-265	-889	-1363	226	-324	247	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.202	1	Yes	0.780	0.150	0.94	Yes	1.00	**2.09**
		$U_4 - U_5$	-----	-1392.39	-243	-287	-1331	-323	-25	-687	351	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.192	1	Yes	0.798	0.147	0.95	Yes	1.00	**2.37**
		$U_5 - U_6$	-----	-1360.33	-145	-219	-1163	-1229	-54	-211	-21	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1	Yes	0.780	0.136	0.92	Yes	1.00	**1.99**
		$U_6 - U_7$	-----	-1334.78	-213	-779	-1731	-336	-50	-367	25	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.219	1	Yes	0.765	0.191	0.96	Yes	1.00	**1.95**
		$U_7 - U_8$	-----	-1160.80	-124	-40	-1036	-651	-216	-208	-141	-356	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.775	0.143	0.92	Yes	1.00	**1.97**
		$U_8 - U_9$	-----	-888.96	-107	156	-955	45	-194	-121	-50	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.154	1	Yes	0.834	0.158	1.00	Yes	1.00	**1.80**
		$U_9 - U_{10}$	115.47	-601.48	-83	195	-1035	151	-265	-130	-141	-195	0.125	0.275	0.40	Yes	0.083	0.176	0.26	Yes	0.774	0.219	1	Yes	0.768	0.232	1.00	Yes	1.00	**1.99**
		$U_{10} - U_{11}$	659.51	-458.55	249	227	-981	53	-321	-51	-392	-168	0.715	0.283	1.00	Yes	0.484	0.190	0.68	Yes	0.590	0.221	0.82	Yes	0.585	0.220	0.81	Yes	1.00	**3.80**
		$U_{11} - U_{12}$	746.58	-----	-81	880	-1707	1956	-226	176	-424	3	0.612	0.380	1.00	Yes	0.418	0.259	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_{12} - U_{13}$	424.34	-----	4284	-3005	638	-35	-46	540	-143	55	0.294	0.704	1.00	Yes	0.205	0.480	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		$U_{13} - U_{14}$	126.62	-510.73	669	7	-1991	-341	473	536	244	803	0.121	0.534	0.66	Yes	0.085	0.366	0.46	Yes	0.581	0.309	0.89	Yes	0.575	0.423	1.00	Yes	1.00	**10.10**
		$U_{14} - U_{15}$	-----	-574.64	779	-617	-533	-346	503	-300	553	160	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.775	0.185	0.97	Yes	1.00	**5.27**
		$U_{15} - U_{16}$	465.08	-563.17	361	199	-712	-251	-46	177	201	216	0.533	0.206	0.74	Yes	0.366	0.141	0.51	Yes	0.766	0.232	1	Yes	0.759	0.169	0.93	Yes	1.00	**3.40**
		$U_{16} - U_{17}$	-----	-595.70	461	-794	-677	-337	24	-96	262	0	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.116	0.93	Yes	0.803	0.189	1.00	Yes	1.00	**2.23**
		$U_{17} - U_{18}$	119.75	-573.32	244	-127	-691	-279	-69	156	31	-115	0.137	0.191	0.33	Yes	0.093	0.124	0.22	Yes	0.780	0.214	1	Yes	0.773	0.164	0.94	Yes	1.00	**1.68**
		$U_{18} - U_{19}$	-----	-565.16	117	-347	-826	-156	22	232	124	24	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.227	1	Yes	0.762	0.196	0.96	Yes	1.00	**1.58**
		$U_{19} - U_{20}$	-----	-529.20	128	-339	-902	-34	-57	24	321	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.273	1	Yes	0.714	0.215	0.93	Yes	1.00	**2.46**

Moment (Start) AI Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

			Inventory Loads - HS20 Truck																													
			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
	Vehicle	Pedestrian	Max.	Max.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:	1.300	1.300	Tension	Comp.	Start	End	Start	End	Start	End	Start	End																				
LL Factor:	2.167	1.625	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass				
Center Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-78.64	1783	-2850	-335	227	-373	-1369	52	190	-----	-----	-----	-----	-----	-----	-----	-----	0.143	0.694	0.84	Yes	0.142	0.855	1.00	Yes	1.00	**13.02**
		L_1 - L_2	440.70	-----	300	-943	-718	-475	8	-90	-185	54	0.674	0.323	1.00	Yes	0.411	0.217	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**
		L_2 - L_3	653.27	-79.67	-26	72	-857	-432	8	-8	226	-47	0.752	0.243	1.00	Yes	0.435	0.146	0.59	Yes	0.109	0.231	0.35	Yes	0.108	0.207	0.32	Yes	1.00	**2.20**
		L_3 - L_4	628.20	-----	89	-695	-972	-176	-138	-9	-78	221	0.723	0.270	1.00	Yes	0.429	0.174	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		L_4 - L_5	297.25	-482.25	98	446	-979	142	133	-126	-154	-38	0.385	0.287	0.68	Yes	0.231	0.189	0.42	Yes	0.741	0.147	0.89	Yes	0.735	0.259	1.00	Yes	1.00	**2.24**
		L_5 - L_6	34.60	-725.44	136	557	-699	15	10	67	21	70	0.034	0.164	0.20	Yes	0.022	0.099	0.13	Yes	0.846	0.145	1	Yes	0.837	0.155	1.00	Yes	1.00	**2.53**
		L_6 - L_7	-----	-1037.57	168	86	-1037	-270	168	11	65	75	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.149	1	Yes	0.835	0.163	1.00	Yes	1.00	**3.16**
		L_7 - L_8	-----	-1047.43	107	934	-1433	2482	-180	-81	35	76	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.268	0.94	Yes	0.663	0.329	1.00	Yes	1.00	**5.63**
		L_8 - L_9	-----	-1209.39	1725	-540	546	-17	3	-39	60	6	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.196	0.98	Yes	0.766	0.228	1.00	Yes	1.00	**3.71**
		L_9 - L_{10}	-----	-912.10	1343	-1685	-1346	-1420	-19	-422	22	9	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.098	0.85	Yes	0.734	0.265	1.00	Yes	1.00	**8.33**
		L_{10} - L_{11}	344.77	-563.12	517	-16	-293	-519	79	14	3	74	0.446	0.151	0.60	Yes	0.260	0.092	0.36	Yes	0.866	0.086	0.96	Yes	0.858	0.137	1.00	Yes	1.00	**3.50**
		L_{11} - L_{12}	588.51	-----	507	-788	-153	-522	-110	-1	52	152	0.762	0.235	1.00	Yes	0.457	0.155	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		L_{12} - L_{13}	1083.93	-----	121	-140	-690	-608	-176	-125	32	70	0.855	0.143	1.00	Yes	0.547	0.085	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		L_{13} - L_{14}	1291.07	-----	576	-1563	-693	-1058	-290	-11	6	261	0.759	0.240	1.00	Yes	0.492	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		L_{14} - L_{15}	1567.26	-----	-352	-81	-1817	-789	-66	-49	-209	116	0.766	0.234	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.35**
		L_{15} - L_{16}	1668.43	-----	-192	-388	-1410	-1479	-76	14	-57	-17	0.815	0.184	1.00	Yes	0.523	0.107	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_{16} - L_{17}	1200.03	-----	-398	38	-1488	-191	-34	-64	-160	-26	0.759	0.233	1.00	Yes	0.492	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		L_{17} - L_{18}	916.24	-----	-176	-56	-943	-141	-75	-14	-15	-135	0.798	0.199	1.00	Yes	0.511	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.70**
		L_{18} - L_{19}	423.88	-----	-239	170	-1056	563	-2	-30	-141	8	0.649	0.346	1.00	Yes	0.439	0.215	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		L_{19} - L_{20}	77.45	-196.25	-94	18	-2137	1072	-37	-8	649	145	0.119	0.776	0.90	Yes	0.072	0.519	0.60	Yes	0.356	0.433	0.79	Yes	0.353	0.641	1.00	Yes	1.00	**7.95**
	Structure 2	L_0 - L_1	133.80	-----	723	-2008	-105	-11	-416	-1445	9	30	0.202	0.791	1.00	Yes	0.123	0.389	0.52	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_1 - L_2	512.29	-----	725	-1341	-167	-942	68	69	-619	321	0.622	0.375	1.00	Yes	0.370	0.238	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		L_2 - L_3	1043.14	-----	376	-886	-582	-863	23	51	387	-21	0.822	0.169	1.00	Yes	0.539	0.102	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		L_3 - L_4	1359.79	-----	419	-1331	-817	-1527	-60	96	-45	274	0.799	0.201	1.00	Yes	0.538	0.124	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		L_4 - L_5	1691.49	-----	50	-1589	-2021	-1362	-185	-97	203	152	0.789	0.205	1.00	Yes	0.522	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_5 - L_6	1868.92	-----	-22	-305	-2072	-1879	-93	57	36	228	0.802	0.198	1.00	Yes	0.538	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		L_6 - L_7	1813.39	-----	-376	-87	-2454	-1271	52	-15	84	191	0.767	0.227	1.00	Yes	0.510	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_7 - L_8	1327.73	-----	-186	231	-1955	-703	-69	78	-252	27	0.761	0.236	1.00	Yes	0.500	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		L_8 - L_9	1102.34	-249.41	-125	492	-1540	-84	43	-124	-99	29	0.771	0.219	1.00	Yes	0.519	0.136	0.66	Yes	0.207	0.152	0.36	Yes	0.205	0.208	0.42	Yes	1.00	**2.86**
		L_9 - L_{10}	842.21	-583.21	-80	599	-1497	-252	-37	32	10	-50	0.752	0.246	1.00	Yes	0.438	0.154	0.60	Yes	0.617	0.176	0.8	Yes	0.612	0.239	0.86	Yes	1.00	**3.48**
		L_{10} - L_{11}	70.06	-676.12	9	560	-1155	719	122	-57	-3	-14	0.070	0.219	0.29	Yes	0.041	0.138	0.18	Yes	0.799	0.071	0.88	Yes	0.794	0.202	1.00	Yes	1.00	**2.75**
		L_{11} - L_{12}	-----	-1002.93	3	942	-1258	964	13	53	83	176	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.077	0.91	Yes	0.822	0.171	1.00	Yes	1.00	**3.32**
		L_{12} - L_{13}	-----	-1227.77	150	-258	-1951	-1525	92	44	-105	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.255	1	Yes	0.734	0.194	0.93	Yes	1.00	**4.01**
		L_{13} - L_{14}	-----	-1130.92	-235	1419	-3684	4898	-531	-501	-128	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.274	0.85	Yes	0.569	0.428	1.00	Yes	1.00	**5.56**
		L_{14} - L_{15}	-----	-1217.01	4345	-2253	1214	-549	-255	-144	-275	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.245	0.87	Yes	0.612	0.379	1.00	Yes	1.00	**4.38**
		L_{15} - L_{16}	-----	-1221.81	-143	201	-2508	-975	187	176	78	55	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.259	1	Yes	0.731	0.249	0.99	Yes	1.00	**4.24**
		L_{16} - L_{17}	66.46	-907.65	2703	-2202	-763	-1569	-410	-123	309	151	0.041	0.368	0.41	Yes	0.027	0.218	0.25	Yes	0.667	0.236	0.91	Yes	0.661	0.333	1.00	Yes	1.00	**8.06**
		L_{17} - L_{18}	685.02	-407.71	1994	-2113	-1461	-1616	-266	-111	410	409	0.611	0.387	1.00	Yes	0.356	0.241	0.60	Yes	0.431	0.219	0.66	Yes	0.428	0.338	0.77	Yes	1.00	**8.84**
		L_{18} - L_{19}	619.25	-----	981	-1208	-726	-784	-148	-113	377	-65	0.702	0.291	1.00	Yes	0.405	0.173	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
		L_{19} - L_{20}	685.70	-----	671	-929	-669	-879	-256	-84	-74	219	0.777	0.218	1.00	Yes	0.460	0.139	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		L_{20} - L_{21}	977.45	-----	446	-938	-1320	-1057	-180	-136	52	149	0.779	0.212	1.00	Yes	0.511	0.126	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		L_{21} - L_{22}	896.03	-----	282	-1707	-1190	-1172	-216	6	-71	247	0.715	0.276	1.00	Yes	0.478	0.173	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		L_{22} - L_{23}	825.76	-75.65	-48	50	-2230	16	1	-48	1	120	0.659	0.338	1.00	Yes	0.440	0.211	0.66	Yes	0.071	0.257	0.33	Yes	0.071	0.325	0.40	Yes	1.00	**3.08**
		L_{23} - L_{24}	926.46	-328.12	-3	311	-1716	-807	-5	68	-82	72	0.739	0.259	1.00	Yes	0.484	0.153	0.64	Yes	0.310	0.250	0.56	Yes	0.308	0.250	0.56	Yes	1.00	**3.14**
		L_{24} - L_{25}	625.73	-456.35	105	453	-1381	-167	96	-91	-109	97	0.709	0.283	1.00	Yes	0.419	0.182	0.61	Yes	0.612	0.176	0.79	Yes	0.608	0.267	0.88	Yes	1.00	**3.03**
		L_{25} - L_{26}	302.05	-603.11	65	568	-982	-188	11	78	39	35	0.342	0.201	0.55	Yes	0.197	0.120	0.32	Yes	0.809	0.128	0.94	Yes	0.804	0.189	1.00	Yes	1.00	**2.97**
		L_{26} - L_{27}	-----	-766.57	146	493	-1218	162	131	-21	-53	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.100	0.92	Yes	0.805	0.195	1.00	Yes	1.00	**3.02**
		L_{27} - L_{28}	-----	-1093.27	76	1041	-1600	433	80	145	46	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.167	0.97	Yes	0.796	0.197	1.00	Yes	1.00	**4.12**
		L_{28} - L_{29}	-----	-1234.36	203	-507	-1894	-1928	207	181	-139	24	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.250	1	Yes	0.738	0.192	0.94	Yes	1.00	**4.41**
		L_{29} - L_{30}	-----	-1088.54	-169	1184	-4174	5120	-424	-525	-52	32	-----	-----	-----	-----	-----	-----	-----	-----	0.553	0.271	0.83	Yes	0.548	0.447	1.00	Yes	1.00	**6.22**
		L_{30} - L_{31}	-----	-1217.06	4350	-2687	1142	-266	58	136	-362	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.245	0.87	Yes	0.612	0.380	1.00	Yes	1.00	**4.57**
		L_{31} - L_{32}	-----	-1147.83	-68	-314	-2571	-1368	140	84	99	226	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.302	1	Yes	0.687	0.256	0.95	Yes	1.00	**4.74**
		L_{32} - L_{33}	209.66	-816.84	2373	-2327	-981	-1606	-183	-84	505	518	0.146	0.372	0.52	Yes	0.097	0.222	0.32	Yes	0.675	0.225	0.91	Yes	0.670	0.323	1.00	Yes	1.00	**9.65**
		L_{33} - L_{34}	612.88	-----	1319	-1882	-485	-1362	-103	87	82	375	0.612	0.380	1.00	Yes	0.359	0.239	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		L_{34} - L_{35}	826.72	-----	760	-1445	-680	-946	-145	-6	178	118	0.738	0.253	1.00	Yes	0.430	0.157	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_{35} - L_{36}	1163.05	-----	746	-979	-720	-1135	-273	-24	87	270	0.813	0.179	1.00	Yes	0.548	0.112	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		L_{36} - L_{37}	1369.27	-----	443	-1675	-1076	-1246	-118	31	322	113	0.785	0.211	1.00	Yes	0.516	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		L_{37} - L_{38}	1737.73	-----	140	-1396	-2705	-1157	-350	-141	-90	268	0.735	0.259	1.00	Yes	0.489	0.152	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		L_{38} - L_{39}	1782.82	-----	-365	-70	-2524	-1457	-2	-57	-45	91	0.765	0.229	1.00	Yes	0.513	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		L_{39} - L_{40}	1703.91	-----	-246	-382	-2063	-1445	-64	1	-43	-75	0.794	0.200	1.00	Yes	0.526	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		L_{40} - L_{41}	1306.94	-----	-408	22	-1874	-463	-6	-12	-155	5	0.768	0.232	1.00	Yes	0.517	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**
		L_{41} - L_{42}	1009.18	-----	-178	-98	-1364	-325	16	68	-9	-11	0.795	0.204	1.00	Yes	0.522	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_{42} - L_{43}	526.32	-----	-299	170	-1359	151	49	10	-128	495	0.639	0.358	1.00	Yes	0.380	0.228	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_{43} - L_{44}	23.69	-126.26	8	-91	-3914	1126	-66	-19	1024	299	0.029	0.964	1.00	Yes	0.017	0.617	0.64	Yes	0.182	0.636	0.82	Yes	0.180	0.796	0.98	Yes	1.00	**11.98**
	Structure 3	L_0 - L_1	144.95	-----	985	-1722	-41	-29	-270	-1223	-1	-3	0.222	0.770	1.00	Yes	0.135	0.508	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.33**
		L_1 - L_2	405.72	-----	609	-972	61	-638	70	166	-380	296	0.621	0.371	1.00	Yes	0.420	0.233	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		L_2 - L_3	889.97	-----	391	-819	-389	-703	9	118	492	268	0.775	0.221	1.00	Yes	0.496	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		L_3 - L_4	1252.79	-----	407	-1010	-652	-1197	-75	92	130	296	0.792	0.202	1.00	Yes	0.514	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		L_4 - L_5	1627.97	-----	-222	-278	-1572	-951	-167	-148	203	184	0.795	0.204	1.00	Yes	0.511	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		L_5 - L_6	1550.26	-----	178	-1746	-1176	-1177	-290	56	-31	367	0.757	0.236	1.00	Yes	0.492	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		L_6 - L_7	1298.21	-----	-347	200	-1586	-280	0	-29	-104	71	0.764	0.227	1.00	Yes	0.495	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		L_7 - L_8	1047.46	-----	-91	51	-898	-482	-23	67	18	106	0.827	0.172	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		L_8 - L_9	562.04	-175.54	-164	347	-926	442	65	-119	54	10	0.728	0.266	1.00	Yes	0.437	0.175	0.62	Yes	0.270	0.124	0.4	Yes	0.267	0.245	0.52	Yes	1.00	**2.77**
		L_9 - L_{10}	98.15	-504.47	-36	464	-851	313	-27	17	103	164	0.127	0.254	0.39	Yes	0.074	0.154	0.23	Yes	0.776	0.137	0.92	Yes	0.769	0.225	1.00	Yes	1.00	**3.11**
		L_{10} - L_{11}	-----	-963.85	88	189	-1349	-72	88	-118	68	35	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.149	0.94	Yes	0.780	0.214	1.00	Yes	1.00	**4.32**
		L_{11} - L_{12}	-----	-1192.18	73	1071	-932	1802	52	95	-61	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.194	0.96	Yes	0.755	0.239	1.00	Yes	1.00	**4.50**
		L_{12} - L_{13}	-----	-1122.95	2114	-631	553	-25	-196	-87	-120	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.255	0.98	Yes	0.711	0.280	1.00	Yes	1.00	**4.11**
		L_{13} - L_{14}	-----	-924.01	1327	-1609	-1516	-1150	12	-122	214	14	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.099	0.86	Yes	0.744	0.253	1.00	Yes	1.00	**7.67**
		L_{14} - L_{15}	665.29	-329.50	1238	-1345	-984	-959	-310	45	121	141	0.652	0.339	1.00	Yes	0.422	0.206	0.63	Yes	0.384	0.195	0.58	Yes	0.380	0.298	0.68	Yes	1.00	**7.30**
		L_{15} - L_{16}	545.96	-----	766	-861	-485	-672	-191	52	157	346	0.707	0.290	1.00	Yes	0.424	0.188	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		L_{16} - L_{17}	643.86	-212.23	318	21	-1005	-263	41	-81	22	63	0.741	0.256	1.00	Yes	0.440	0.166	0.61	Yes	0.290	0.233	0.53	Yes	0.287	0.243	0.54	Yes	1.00	**2.83**
		L_{17} - L_{18}	661.69	-47.94	51	-67	-862	-672	20	105	-19	139	0.761	0.231	1.00	Yes	0.440	0.139	0.58	Yes	0.065	0.260	0.33	Yes	0.065	0.208	0.28	Yes	1.00	**2.24**
		L_{18} - L_{19}	438.01	-----	-18	29	-848	-210	51	-75	-10	307	0.670	0.321	1.00	Yes	0.409	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**
		L_{19} - L_{20}	54.17	-0.74	53	-146	-2214	1072	-139	-38	1146	312	0.083	0.910	1.00	Yes	0.049	0.552	0.61	Yes	0.001	0.561	0.57	Yes	0.001	0.664	0.67	Yes	1.00	**7.94**

Moment (Start) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-312.45	-20	43	-161	192	-93	-30	-795	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.301	1	Yes	0.661	0.245	0.91	Yes	1.00	**0.93**
		$U_1 - L_1$			32.56	-312.84	28	-23	-262	245	52	22	256	162	0.059	0.409	0.47	Yes	0.032	0.225	0.26	Yes	0.684	0.157	0.85	Yes	0.662	0.335	1.00	Yes	1.00	**2.30**
		$U_2 - L_2$			79.87	-265.68	125	-117	-305	336	-130	-24	111	117	0.144	0.467	0.62	Yes	0.079	0.257	0.34	Yes	0.581	0.143	0.73	Yes	0.562	0.429	1.00	Yes	1.00	**3.64**
		$U_3 - L_3$			262.25	-222.02	282	-279	-285	302	-465	-189	69	235	0.472	0.521	1.00	Yes	0.259	0.287	0.55	Yes	0.487	0.199	0.69	Yes	0.470	0.386	0.86	Yes	1.00	**4.06**
		$U_4 - L_4$			35.27	-57.07	677	-650	-253	217	-163	-171	162	234	0.063	0.933	1.00	Yes	0.035	0.513	0.55	Yes	0.125	0.252	0.38	Yes	0.121	0.865	0.99	Yes	1.00	**7.36**
		$U_5 - L_5$			-----	-421.04	251	-269	21	-36	-75	-86	-119	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.103	0.87	Yes	0.726	0.273	1.00	Yes	1.00	**2.06**
		$U_6 - L_6$			-----	-515.59	281	-294	43	-61	12	43	-67	42	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.082	0.87	Yes	0.739	0.257	1.00	Yes	1.00	**2.09**
		$U_7 - L_7$			-----	-436.42	305	-323	118	-132	-122	61	-129	46	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.120	0.85	Yes	0.673	0.318	1.00	Yes	1.00	**1.33**
		$U_8 - L_8$			-----	-1268.04	499	-595	-407	485	-141	-46	-212	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.916	0.055	0.98	Yes	0.879	0.111	1.00	Yes	1.00	**2.72**
		$U_9 - L_9$			-----	-655.24	-164	188	-417	458	-220	-156	-256	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.129	0.92	Yes	0.740	0.255	1.00	Yes	1.00	**1.75**
		$U_{10} - L_{10}$			-----	-793.25	-100	136	-404	411	-316	-222	-162	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.118	0.94	Yes	0.783	0.213	1.00	Yes	1.00	**2.82**
		$U_{11} - L_{11}$			-----	-661.23	-61	146	-408	492	-123	19	-82	37	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.087	0.89	Yes	0.770	0.228	1.00	Yes	1.00	**2.66**
		$U_{12} - L_{12}$			-----	-513.62	-40	54	-346	339	-93	57	-56	104	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.093	0.84	Yes	0.705	0.295	1.00	Yes	1.00	**2.24**
		$U_{13} - L_{13}$			-----	-362.51	2	18	-240	261	-85	84	-15	138	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.104	0.84	Yes	0.694	0.298	1.00	Yes	1.00	**1.76**
		$U_{14} - L_{14}$			105.80	-60.79	342	-342	-575	615	59	79	20	54	0.190	0.809	1.00	Yes	0.105	0.445	0.55	Yes	0.136	0.214	0.35	Yes	0.129	0.786	0.92	Yes	1.00	**7.05**
		$U_{15} - L_{15}$			245.90	-308.58	250	-266	-201	194	-31	-177	-110	-135	0.442	0.392	0.84	Yes	0.243	0.215	0.46	Yes	0.692	0.163	0.86	Yes	0.653	0.340	1.00	Yes	1.00	**2.95**
		$U_{16} - L_{16}$			93.64	-310.90	260	-263	-49	33	-128	-192	-59	-78	0.168	0.391	0.56	Yes	0.093	0.215	0.31	Yes	0.701	0.160	0.87	Yes	0.658	0.336	1.00	Yes	1.00	**2.16**
		$U_{17} - L_{17}$			-----	-433.33	231	-244	33	-55	-77	-104	-89	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.108	0.92	Yes	0.748	0.247	1.00	Yes	1.00	**1.78**
		$U_{18} - L_{18}$			-----	-530.49	448	-455	121	-126	68	-63	-161	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.094	0.88	Yes	0.738	0.258	1.00	Yes	1.00	**1.99**
		$U_{19} - L_{19}$			-----	-647.49	524	-531	129	-186	55	-32	55	331	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.111	0.92	Yes	0.754	0.246	1.00	Yes	1.00	**2.14**
		$U_{20} - L_{20}$			-----	-577.13	421	-494	155	-223	795	104	198	26	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.233	1	Yes	0.672	0.229	0.91	Yes	1.00	**1.46**
	Structure 2	$U_0 - L_0$			-----	-600.33	-115	181	-417	494	-266	-45	-1333	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.275	1	Yes	0.643	0.210	0.86	Yes	1.00	**1.47**
		$U_1 - L_1$			-----	-713.57	-109	115	-542	541	43	-65	-6	5	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.068	0.89	Yes	0.765	0.230	1.00	Yes	1.00	**2.39**
		$U_2 - L_2$			-----	-581.36	-79	88	-491	489	99	44	1	84	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.080	0.86	Yes	0.741	0.251	1.00	Yes	1.00	**2.31**
		$U_3 - L_3$			-----	-486.70	-41	47	-254	258	20	130	-12	133	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.094	0.93	Yes	0.763	0.235	1.00	Yes	1.00	**2.14**
		$U_4 - L_4$			3.78	-335.01	14	8	-227	224	-56	100	-59	126	0.007	0.327	0.34	Yes	0.004	0.180	0.19	Yes	0.760	0.094	0.86	Yes	0.709	0.290	1.00	Yes	1.00	**2.02**
		$U_5 - L_5$			155.73	-323.73	137	-114	-227	243	-127	78	-44	150	0.280	0.355	0.64	Yes	0.154	0.195	0.35	Yes	0.731	0.115	0.85	Yes	0.685	0.311	1.00	Yes	1.00	**2.66**
		$U_6 - L_6$			362.01	-203.59	232	-230	-224	228	-52	157	-88	125	0.651	0.342	1.00	Yes	0.358	0.188	0.55	Yes	0.458	0.090	0.55	Yes	0.431	0.296	0.73	Yes	1.00	**3.29**
		$U_7 - L_7$			15.49	-193.16	412	-458	-196	209	25	-27	-93	88	0.028	0.613	0.65	Yes	0.015	0.337	0.36	Yes	0.436	0.187	0.63	Yes	0.409	0.586	1.00	Yes	1.00	**6.22**
		$U_8 - L_8$			-----	-458.91	378	-387	21	-42	-202	-182	-103	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.128	0.8	Yes	0.661	0.338	1.00	Yes	1.00	**2.07**
		$U_9 - L_9$			-----	-687.73	611	-613	80	-115	-101	-144	-129	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.082	0.85	Yes	0.737	0.260	1.00	Yes	1.00	**2.67**
		$U_{10} - L_{10}$			-----	-790.95	562	-578	107	-144	-53	-77	-53	10	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.083	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**2.80**
		$U_{11} - L_{11}$			-----	-814.04	531	-532	158	-172	-118	-38	-47	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.084	0.91	Yes	0.761	0.235	1.00	Yes	1.00	**2.46**
		$U_{12} - L_{12}$			-----	-876.26	544	-545	153	-170	81	101	16	95	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.086	0.93	Yes	0.760	0.234	1.00	Yes	1.00	**2.46**
		$U_{13} - L_{13}$			-----	-743.99	584	-569	242	-240	35	87	-88	42	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.117	0.95	Yes	0.717	0.279	1.00	Yes	1.00	**1.93**
		$U_{14} - L_{14}$			-----	-1296.36	635	-605	-504	468	-93	-5	-41	147	-----	-----	-----	-----	-----	-----	-----	-----	0.948	0.047	1	Yes	0.860	0.112	0.98	Yes	1.00	**2.90**
		$U_{15} - L_{15}$			-----	-735.65	-165	166	-598	590	-80	-45	-152	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.139	0.96	Yes	0.709	0.286	1.00	Yes	1.00	**2.25**
		$U_{16} - L_{16}$			-----	-710.33	-112	101	-552	527	-154	-89	-248	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.111	0.94	Yes	0.761	0.234	1.00	Yes	1.00	**2.40**
		$U_{17} - L_{17}$			-----	-634.01	-126	123	-544	535	-97	-33	-69	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.080	0.87	Yes	0.738	0.253	1.00	Yes	1.00	**2.36**
		$U_{18} - L_{18}$			-----	-572.53	-87	125	-520	523	-129	9	-99	3	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.082	0.85	Yes	0.730	0.267	1.00	Yes	1.00	**2.38**
		$U_{19} - L_{19}$			-----	-474.82	-40	57	-301	290	-111	29	-116	33	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.087	0.81	Yes	0.709	0.290	1.00	Yes	1.00	**2.05**
		$U_{20} - L_{20}$			-----	-376.54	13	3	-237	240	-171	5	-71	67	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.112	0.89	Yes	0.721	0.275	1.00	Yes	1.00	**2.04**
		$U_{21} - L_{21}$			65.39	-314.55	63	-50	-246	257	-141	32	-103	68	0.118	0.369	0.49	Yes	0.065	0.203	0.27	Yes	0.711	0.122	0.84	Yes	0.666	0.328	1.00	Yes	1.00	**2.40**
		$U_{22} - L_{22}$			89.30	-162.08	403	-422	-487	513	20	25	17	150	0.161	0.699	0.86	Yes	0.088	0.384	0.48	Yes	0.365	0.200	0.57	Yes	0.343	0.655	1.00	Yes	1.00	**7.90**
		$U_{23} - L_{23}$			129.33	-311.61	254	-264	-102	93	-125	-119	-65	-45	0.233	0.373	0.61	Yes	0.128	0.205	0.34	Yes	0.704	0.135	0.84	Yes	0.659	0.337	1.00	Yes	1.00	**2.41**
		$U_{24} - L_{24}$			66.66	-368.64	250	-255	-39	28	-55	-71	-72	-62	0.109	0.310	0.42	Yes	0.060	0.170	0.23	Yes	0.756	0.099	0.86	Yes	0.706	0.291	1.00	Yes	1.00	**2.16**
		$U_{25} - L_{25}$			-----	-468.32	305	-299	20	-34	-44	-39	-79	2	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.082	0.79	Yes	0.699	0.293	1.00	Yes	1.00	**2.09**
		$U_{26} - L_{26}$			-----	-559.88	529	-547	88	-123	-141	-47	-38	36	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.092	0.84	Yes	0.713	0.280	1.00	Yes	1.00	**2.18**
		$U_{27} - L_{27}$			-----	-627.26	573	-574	140	-163	-48	29	-70	44	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.073	0.85	Yes	0.730	0.266	1.00	Yes	1.00	**2.18**
		$U_{28} - L_{28}$			-----	-705.61	565	-557	132	-129	54	91	-33	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.075	0.89	Yes	0.756	0.240	1.00	Yes	1.00	**2.25**
		$U_{29} - L_{29}$			-----	-701.47	658	-637	204	-210	-68	58	-116	25	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.127	0.91	Yes	0.676	0.315	1.00	Yes	1.00	**2.28**
		$U_{30} - L_{30}$			-----	-1294.50	665	-657	-614	548	-22	-83	-163	68	-----	-----	-----	-----	-----	-----	-----	-----	0.947	0.052	1	Yes	0.858	0.118	0.98	Yes	1.00	**3.09**
		$U_{31} - L_{31}$			-----	-745.10	-178	174	-572	551	-115	-57	-185	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.147	0.98	Yes	0.718	0.274	1.00	Yes	1.00	**2.24**
		$U_{32} - L_{32}$			-----	-888.32	-125	99	-522	507	-186	-97	-210	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.115	0.97	Yes	0.770	0.224	1.00	Yes	1.00	**2.88**
		$U_{33} - L_{33}$			-----	-816.42	-149	180	-515	503	-146	6	-108	6	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.084	0.91	Yes	0.763	0.228	1.00	Yes	1.00	**2.81**
		$U_{34} - L_{34}$			-----	-799.86	-106	149	-550	556	-117	48	-91	79	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.076	0.87	Yes	0.748	0.245	1.00	Yes	1.00	**2.94**
		$U_{35} - L_{35}$			-----	-701.95	-90	149	-576	580	-215	29	10	170	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.077	0.86	Yes	0.752	0.246	1.00	Yes	1.00	**2.80**
		$U_{36} - L_{36}$			-----	-467.70	-31	56	-360	369	-143	76	-50	126	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.094	0.78	Yes	0.674	0.323	1.00	Yes	1.00	**2.22**
		$U_{37} - L_{37}$			-----	-172.07	138	-141	-444	497	2	28	-58	143	-----	-----	-----	-----	-----	-----	-----	-----	0.389	0.208	0.6	Yes	0.364	0.636	1.00	Yes	1.00	**5.85**
		$U_{38} - L_{38}$			351.05	-139.11	165	-164	-240	247	-139	-169	-71	-104	0.631	0.364	1.00	Yes	0.347	0.200	0.55	Yes	0.313	0.134	0.45	Yes	0.294	0.316	0.61	Yes	1.00	**2.57**
		$U_{39} - L_{39}$			254.11	-315.84	237	-253	-196	183	-29	-141	-110	-107	0.457	0.364	0.83	Yes	0.251	0.200	0.46	Yes	0.713	0.146	0.86	Yes	0.668	0.323	1.00	Yes	1.00	**2.95**
		$U_{40} - L_{40}$			84.25	-332.50	229	-227	-54	30	-60	-108	-87	-75	0.152	0.324	0.48	Yes	0.083	0.178	0.27	Yes	0.754	0.117	0.88	Yes	0.704	0.293	1.00	Yes	1.00	**2.22**
		$U_{41} - L_{41}$			-----	-477.55	257	-265	41	-62	-111	-90	6	39	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.103	0.92	Yes	0.749	0.241	1.00	Yes	1.00	**2.04**
		$U_{42} - L_{42}$			-----	-572.46	518	-516	102	-112	96	-32	-84	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.081	0.85	Yes	0.729	0.265	1.00	Yes	1.00	**2.16**
		$U_{43} - L_{43}$			-----	-706.91	549	-563	136	-153	250	17	-40	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.098	0.91	Yes	0.758	0.239	1.00	Yes	1.00	**2.28**
		$U_{44} - L_{44}$			-----	-623.24	465	-536	195	-241	1135	192	-27	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.252	1	Yes	0.668	0.228	0.90	Yes	1.00	**1.51**
	Structure 3	$U_0 - L_0$			-----	-551.65	-103	167	-392	453	-251	-33	-1033	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.265	1	Yes	0.642	0.210	0.86	Yes	1.00	**1.52**
		$U_1 - L_1$			-----	-648.88	-108	116	-514	508	6	-75	55	19	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.074	0.89	Yes	0.755	0.238	1.00	Yes	1.00	**2.38**
		$U_2 - L_2$			-----	-538.24	-90	95	-427	434	87	33	-79	60	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.078	0.87	Yes	0.749	0.246	1.00	Yes	1.00	**2.12**
		$U_3 - L_3$			-----	-442.28	-31	62	-213	226	-130	42	38	184	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.116	0.95	Yes	0.763	0.230	1.00	Yes	1.00	**1.94**
		$U_4 - L_4$			57.96	-315.29	36	-16	-259	259	-128	126	-103	173	0.104	0.381	0.49	Yes	0.057	0.210	0.27	Yes	0.711	0.105	0.82	Yes	0.667	0.331	1.00	Yes	1.00	**2.34**
		$U_5 - L_5$			155.42	-300.14	138	-125	-266	281	-85	118	-88	164	0.280	0.406	0.69	Yes	0.154	0.223	0.38	Yes	0.673	0.117	0.79	Yes	0.635	0.359	1.00	Yes	1.00	**2.94**
		$U_6 - L_6$			-----	-73.23	634	-661	-429	450	-301	-122	56	121	-----	-----	-----	-----	-----	-----	-----	-----	0.163	0.275	0.44	Yes	0.155	0.845	1.00	Yes	1.00	**8.04**
		$U_7 - L_7$			26.14	-359.64	252	-271	-32	20	-154	-168	-175	-141	0.043	0.355	0.40	Yes	0.023	0.195	0.22	Yes	0.727	0.143	0.88	Yes	0.689	0.309	1.00	Yes	1.00	**1.92**
		$U_8 - L_8$			-----	-512.11	340	-340	16	-20	-238	-213	-136	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.133	0.88	Yes	0.703	0.291	1.00	Yes	1.00	**2.32**
		$U_9 - L_9$			-----	-650.29	415	-507	65	-136	-197	-130	-47	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.106	0.89	Yes	0.757	0.235	1.00	Yes	1.00	**2.48**
		$U_{10} - L_{10}$			-----	-778.97	412	-437	90	-108	27	96	3	82	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.071	0.88	Yes	0.769	0.227	1.00	Yes	1.00	**2.62**
		$U_{11} - L_{11}$			-----	-647.96	426	-482	182	-211	-32	94	-52	61	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.095	0.87	Yes	0.732	0.268	1.00	Yes	1.00	**1.65**
		$U_{12} - L_{12}$			-----	-1277.75	433	-568	-404	435	-127	-10	52	75	-----	-----	-----	-----	-----	-----	-----	-----	0.923	0.048	0.98	Yes	0.886	0.106	1.00	Yes	1.00	**2.69**
		$U_{13} - L_{13}$			-----	-460.54	-105	116	-269	289	-141	-96	-160	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.138	0.91	Yes	0.710	0.284	1.00	Yes	1.00	**1.28**
		$U_{14} - L_{14}$			-----	-523.59	-52	66	-272	277	-174	-140	-231	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.121	0.92	Yes	0.751	0.242	1.00	Yes	1.00	**2.17**
		$U_{15} - L_{15}$			-----	-432.22	-24	47	-225	244	-176	-56	-73	39	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.111	0.9	Yes	0.746	0.248	1.00	Yes	1.00	**2.17**
		$U_{16} - L_{16}$			103.87	-75.25	177	-138	-601	584	-151	-76	-106	57	0.187	0.811	1.00	Yes	0.103	0.446	0.55	Yes	0.165	0.208	0.38	Yes	0.159	0.768	0.93	Yes	1.00	**6.60**
		$U_{17} - L_{17}$			289.38	-175.92	173	-194	-289	300	-310	-252	-112	-24	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.385	0.180	0.57	Yes	0.372	0.384	0.76	Yes	1.00	**3.19**
		$U_{18} - L_{18}$			80.29	-271.77	294	-327	-120	124	-212	-162	112	10	0.144	0.479	0.63	Yes	0.079	0.264	0.35	Yes	0.594	0.174	0.77	Yes	0.575	0.418	1.00	Yes	1.00	**3.16**
		$U_{19} - L_{19}$			21.64	-315.63	259	-252	-35	23	-140	-113	-167	-90	0.039	0.380	0.42	Yes	0.021	0.209	0.24	Yes	0.690	0.125	0.82	Yes	0.668	0.332	1.00	Yes	1.00	**2.16**
		$U_{20} - L_{20}$			-----	-351.70	162	-196	48	-74	379	122	-110	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.192	0.98	Yes	0.744	0.251	1.00	Yes	1.00	**0.82**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	490.93	-31.62	8	-9	-184	77	-45	-15	-532	-207	0.644	0.349	1.00	Yes	0.389	0.192	0.59	Yes	0.054	0.237	0.3	Yes	0.049	0.215	0.27	Yes	1.00	**2.43**
		$U_1 - L_2$	327.97	-134.33	23	-16	-158	-12	47	38	-720	-323	0.590	0.410	1.00	Yes	0.324	0.226	0.55	Yes	0.308	0.372	0.69	Yes	0.284	0.201	0.49	Yes	1.00	**3.69**
		$U_2 - L_3$	26.07	-260.43	55	-26	-173	-85	121	90	-310	-376	0.047	0.330	0.38	Yes	0.026	0.182	0.21	Yes	0.599	0.393	1	Yes	0.551	0.222	0.78	Yes	1.00	**5.60**
		$U_3 - L_4$	-----	-354.95	32	-55	-54	-55	-161	-120	-286	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.185	1	Yes	0.751	0.071	0.83	Yes	1.00	**2.30**
		$U_4 - L_4$	582.22	-----	-2	-1	-97	22	57	-32	-70	-181	0.854	0.140	1.00	Yes	0.470	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_4 - L_5$	706.15	-----	-2	49	-214	201	186	103	44	-103	0.835	0.156	1.00	Yes	0.459	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_5 - L_6$	575.57	-----	-70	105	-435	253	344	223	120	119	0.680	0.310	1.00	Yes	0.374	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_6 - L_7$	655.92	-----	27	169	-110	291	299	234	303	155	0.775	0.221	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_8 - L_9$	1001.75	-----	94	217	-108	355	294	257	257	211	0.801	0.196	1.00	Yes	0.496	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		$U_9 - L_{10}$	966.74	-----	-65	103	-432	240	88	110	221	154	0.773	0.221	1.00	Yes	0.479	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_{10} - L_{11}$	1018.35	-----	-47	116	-262	162	8	0	-122	-118	0.860	0.137	1.00	Yes	0.532	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_{11} - L_{12}$	799.30	-----	-59	69	-321	88	-113	-79	-343	-347	0.791	0.201	1.00	Yes	0.435	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{12} - L_{13}$	620.01	-----	-53	10	-191	129	-274	-250	-347	-316	0.756	0.235	1.00	Yes	0.476	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.87**
		$U_{13} - L_{14}$	440.77	-6.46	-5	-29	-91	33	-276	-297	-292	-296	0.793	0.203	1.00	Yes	0.436	0.111	0.55	Yes	0.015	0.155	0.17	Yes	0.014	0.117	0.14	Yes	1.00	**1.62**
		$U_{15} - L_{14}$	232.21	-331.35	65	-104	-78	-9	-196	-299	-269	-359	0.418	0.237	0.66	Yes	0.230	0.130	0.37	Yes	0.776	0.220	1	Yes	0.701	0.133	0.84	Yes	1.00	**2.36**
		$U_{16} - L_{15}$	416.51	-172.83	25	-60	-135	74	-188	-176	-245	-257	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	0.410	0.183	0.6	Yes	0.366	0.172	0.54	Yes	1.00	**2.38**
		$U_{17} - L_{16}$	539.34	-----	-17	-10	-153	89	-96	-124	-153	-231	0.791	0.209	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.89**
		$U_{18} - L_{17}$	644.68	-----	-98	60	-348	247	6	-45	-199	-185	0.762	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		$U_{19} - L_{18}$	724.42	-----	-91	65	-365	247	-137	-16	-152	-140	0.785	0.212	1.00	Yes	0.432	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{20} - L_{19}$	616.82	-----	-117	115	-407	311	-62	177	-715	-113	0.668	0.326	1.00	Yes	0.367	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
	Structure 2	$U_0 - L_1$	644.44	-----	-65	74	-450	364	-121	53	-1006	-176	0.638	0.359	1.00	Yes	0.351	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		$U_1 - L_2$	787.80	-----	-86	58	-413	307	43	11	-113	-167	0.779	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_2 - L_3$	651.69	-----	-65	49	-332	255	-76	-178	-207	-199	0.770	0.225	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**
		$U_3 - L_4$	576.50	-----	-33	16	-177	124	-235	-213	-313	-283	0.768	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**
		$U_4 - L_5$	411.41	-96.28	12	-37	-129	84	-234	-201	-309	-266	0.740	0.254	1.00	Yes	0.407	0.140	0.55	Yes	0.238	0.182	0.42	Yes	0.204	0.164	0.37	Yes	1.00	**2.09**
		$U_5 - L_6$	399.90	-314.16	86	-117	-120	59	-365	-246	-436	-267	0.719	0.280	1.00	Yes	0.396	0.154	0.55	Yes	0.742	0.257	1	Yes	0.665	0.154	0.82	Yes	1.00	**2.79**
		$U_6 - L_7$	109.11	-372.21	66	-102	-54	-8	-273	-258	-329	-280	0.178	0.203	0.39	Yes	0.098	0.111	0.21	Yes	0.797	0.201	1	Yes	0.713	0.117	0.83	Yes	1.00	**1.81**
		$U_8 - L_7$	597.45	-21.83	-10	-28	-203	112	-170	-234	-140	-261	0.762	0.235	1.00	Yes	0.480	0.132	0.62	Yes	0.036	0.122	0.16	Yes	0.033	0.182	0.22	Yes	1.00	**2.34**
		$U_8 - L_9$	722.63	-----	-78	15	-345	224	-89	-139	-140	-226	0.783	0.214	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		$U_{10} - L_9$	822.29	-----	-87	43	-335	228	-20	-55	-62	-170	0.814	0.181	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{11} - L_{10}$	892.67	-----	-103	96	-370	272	202	86	56	-50	0.813	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_{12} - L_{11}$	879.33	-----	-110	136	-378	332	243	154	161	24	0.801	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_{13} - L_{12}$	751.50	-----	-180	174	-445	377	271	153	267	124	0.743	0.247	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.72**
		$U_{14} - L_{13}$	757.36	-----	-14	221	-279	430	293	192	272	156	0.749	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		$U_{14} - L_{15}$	639.53	-----	20	171	-221	365	150	108	157	134	0.756	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		$U_{15} - L_{16}$	641.01	-----	-99	104	-373	334	50	67	121	89	0.758	0.233	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{16} - L_{17}$	747.88	-----	-73	98	-358	353	9	5	9	-7	0.810	0.185	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		$U_{17} - L_{18}$	678.12	-----	-64	81	-310	284	-58	-32	-101	-58	0.802	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{18} - L_{19}$	682.18	-----	-43	38	-282	248	-109	-98	-150	-148	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{19} - L_{20}$	605.58	-----	-16	1	-203	165	-167	-130	-222	-188	0.772	0.227	1.00	Yes	0.425	0.127	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		$U_{20} - L_{21}$	432.45	-44.19	7	-20	-121	98	-207	-147	-224	-145	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	0.105	0.113	0.22	Yes	0.094	0.154	0.25	Yes	1.00	**1.91**
		$U_{21} - L_{22}$	432.61	-207.68	35	-66	-112	49	-217	-214	-266	-242	0.778	0.220	1.00	Yes	0.428	0.121	0.55	Yes	0.491	0.180	0.68	Yes	0.439	0.143	0.59	Yes	1.00	**2.48**
		$U_{23} - L_{22}$	422.02	-324.10	64	-92	-134	37	-153	-226	-135	-232	0.759	0.238	1.00	Yes	0.417	0.131	0.55	Yes	0.772	0.206	0.98	Yes	0.686	0.171	0.86	Yes	1.00	**3.09**
		$U_{24} - L_{23}$	438.18	-86.65	24	-35	-127	91	-50	-79	-66	-154	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	0.207	0.090	0.3	Yes	0.183	0.162	0.35	Yes	1.00	**2.26**
		$U_{25} - L_{24}$	606.56	-1.28	8	-21	-216	167	-15	-57	-16	-119	0.773	0.217	1.00	Yes	0.425	0.121	0.55	Yes	0.002	0.070	0.08	Yes	0.002	0.193	0.20	Yes	1.00	**2.62**
		$U_{26} - L_{25}$	672.69	-----	-36	44	-303	242	135	47	60	-24	0.795	0.196	1.00	Yes	0.437	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		$U_{27} - L_{26}$	668.37	-----	-60	73	-309	270	160	82	147	8	0.790	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{28} - L_{27}$	716.73	-----	-77	115	-356	351	205	142	174	70	0.776	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{29} - L_{28}$	622.07	-----	-125	119	-370	325	217	111	250	118	0.735	0.255	1.00	Yes	0.404	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_{30} - L_{29}$	638.22	-----	12	161	-220	357	227	150	216	76	0.755	0.243	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.94**
		$U_{30} - L_{31}$	767.79	-----	19	210	-282	441	196	117	121	68	0.760	0.234	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		$U_{31} - L_{32}$	781.78	-----	-129	130	-459	388	36	47	56	40	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{32} - L_{33}$	897.17	-----	-86	132	-374	336	-25	0	-146	-60	0.817	0.179	1.00	Yes	0.449	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{33} - L_{34}$	895.71	-----	-85	128	-348	271	-76	-40	-248	-220	0.816	0.182	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_{34} - L_{35}$	815.50	-----	-84	113	-307	218	-106	-81	-292	-291	0.807	0.186	1.00	Yes	0.444	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{35} - L_{36}$	705.33	-----	-90	20	-321	230	-376	-268	-387	-277	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_{36} - L_{37}$	598.49	-----	-25	-8	-185	130	-281	-301	-306	-334	0.763	0.233	1.00	Yes	0.480	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**
		$U_{38} - L_{37}$	24.11	-391.36	75	-101	-43	-22	-157	-229	-161	-235	0.039	0.177	0.22	Yes	0.022	0.097	0.12	Yes	0.846	0.153	1	Yes	0.750	0.115	0.87	Yes	1.00	**1.68**
		$U_{39} - L_{38}$	319.97	-339.31	105	-126	-109	46	-142	-188	-225	-251	0.575	0.233	0.81	Yes	0.317	0.128	0.45	Yes	0.808	0.184	1	Yes	0.718	0.161	0.88	Yes	1.00	**2.90**
		$U_{40} - L_{39}$	417.02	-188.29	43	-69	-141	88	-88	-112	-147	-225	0.750	0.246	1.00	Yes	0.413	0.135	0.55	Yes	0.451	0.165	0.62	Yes	0.398	0.180	0.58	Yes	1.00	**2.70**
		$U_{41} - L_{40}$	591.92	-----	-26	6	-193	122	18	-20	-101	-144	0.789	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{42} - L_{41}$	655.20	-----	-74	50	-351	253	-1	-4	-129	-128	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{43} - L_{42}$	782.03	-----	-94	64	-407	301	-6	-30	-223	-172	0.774	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{44} - L_{43}$	629.79	-----	-135	118	-475	379	36	1	-1014	-96	0.623	0.372	1.00	Yes	0.343	0.205	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
	Structure 3	$U_0 - L_1$	588.84	-----	-68	71	-431	317	-133	50	-834	-200	0.638	0.357	1.00	Yes	0.351	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		$U_1 - L_2$	721.31	-----	-91	57	-363	253	37	13	-62	-148	0.781	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_2 - L_3$	640.00	-----	-78	48	-333	242	-72	-168	-254	-267	0.757	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		$U_3 - L_4$	523.79	-----	-19	-13	-148	97	-302	-219	-329	-298	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.93**
		$U_4 - L_5$	405.79	-120.32	10	-42	-120	79	-293	-226	-376	-298	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	0.285	0.196	0.49	Yes	0.255	0.154	0.41	Yes	1.00	**2.01**
		$U_5 - L_6$	348.50	-310.77	47	-95	-87	1	-326	-316	-448	-343	0.627	0.251	0.88	Yes	0.345	0.138	0.49	Yes	0.728	0.265	1	Yes	0.658	0.121	0.78	Yes	1.00	**2.42**
		$U_7 - L_6$	438.10	-52.21	11	-36	-96	26	-97	-240	-128	-302	0.788	0.211	1.00	Yes	0.433	0.116	0.55	Yes	0.121	0.144	0.27	Yes	0.110	0.123	0.24	Yes	1.00	**2.01**
		$U_8 - L_7$	627.18	-----	-31	-10	-206	139	-141	-158	-186	-263	0.765	0.232	1.00	Yes	0.481	0.130	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_8 - L_9$	844.56	-----	-54	-6	-288	89	112	11	-53	-191	0.836	0.162	1.00	Yes	0.460	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		$U_{10} - L_9$	974.72	-----	-50	74	-272	147	358	223	114	-53	0.823	0.173	1.00	Yes	0.510	0.097	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.66**
		$U_{11} - L_{10}$	982.48	-----	-90	113	-344	227	327	219	416	242	0.785	0.206	1.00	Yes	0.487	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		$U_{12} - L_{11}$	983.71	-----	78	206	-111	350	377	310	395	280	0.786	0.206	1.00	Yes	0.487	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.33**
		$U_{12} - L_{13}$	666.37	-----	32	175	-114	299	176	156	201	168	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		$U_{13} - L_{14}$	633.35	-----	-55	100	-376	256	133	168	131	92	0.749	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		$U_{14} - L_{15}$	655.40	-----	-11	137	-315	187	193	192	-202	-217	0.775	0.219	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		$U_{15} - L_{16}$	509.53	-----	-3	11	-185	9	-39	-14	-185	-281	0.747	0.253	1.00	Yes	0.411	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_{17} - L_{16}$	-----	-369.17	51	-60	-55	-65	-65	-116	-134	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.152	1	Yes	0.781	0.084	0.87	Yes	1.00	**2.54**
		$U_{18} - L_{17}$	429.97	-194.08	34	-25	-110	-18	83	131	-183	-285	0.773	0.223	1.00	Yes	0.425	0.123	0.55	Yes	0.447	0.211	0.66	Yes	0.411	0.141	0.56	Yes	1.00	**3.57**
		$U_{19} - L_{18}$	444.35	-12.22	21	-31	-92	1	284	6	-96	-192	0.799	0.199	1.00	Yes	0.440	0.110	0.55	Yes	0.028	0.136	0.17	Yes	0.026	0.117	0.15	Yes	1.00	**2.35**
		$U_{20} - L_{19}$	472.22	-----	6	4	-176	90	-34	46	-670	-137	0.620	0.374	1.00	Yes	0.374	0.206	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.46**

Moment (Start) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----										
South Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-588.85	848	-754	-856	-785	501	-634	769	-1100	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.111	0.92	Yes	0.794	0.204	1.00	Yes	1.00	**4.27**
		U_1 - U_2			-----	-551.24	-78	-128	-387	-633	-8	39	121	-446	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.248	1	Yes	0.743	0.150	0.90	Yes	1.00	**1.93**
		U_2 - U_3			245.48	-573.22	-65	368	-862	-121	-128	167	483	-569	0.281	0.301	0.59	Yes	0.190	0.198	0.39	Yes	0.780	0.220	1	Yes	0.773	0.205	0.98	Yes	1.00	**2.74**
		U_3 - U_4			485.54	-568.01	145	408	-678	-435	-223	-10	263	-371	0.557	0.224	0.79	Yes	0.382	0.153	0.54	Yes	0.773	0.221	1	Yes	0.766	0.161	0.93	Yes	1.00	**2.99**
		U_4 - U_5			494.25	-567.90	204	398	-778	-267	-98	-22	-405	99	0.567	0.253	0.82	Yes	0.389	0.173	0.57	Yes	0.773	0.224	1	Yes	0.766	0.185	0.96	Yes	1.00	**3.08**
		U_5 - U_6			676.00	-186.23	272	489	-616	354	97	131	-295	-420	0.775	0.217	1.00	Yes	0.523	0.143	0.67	Yes	0.253	0.217	0.48	Yes	0.251	0.146	0.40	Yes	1.00	**2.88**
		U_6 - U_7			902.23	-----	421	224	-229	98	321	288	-198	4	0.863	0.133	1.00	Yes	0.603	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		U_7 - U_8			814.61	-----	217	709	-1030	2073	1160	1038	-197	506	0.564	0.432	1.00	Yes	0.394	0.295	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		U_8 - U_9			652.79	-----	2144	-1148	649	-226	625	-213	457	799	0.535	0.458	1.00	Yes	0.366	0.311	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		U_9 - U_{10}			-----	-445.89	749	-970	-435	-720	664	-683	2569	-1118	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.422	1	Yes	0.569	0.217	0.79	Yes	1.00	**12.12**
		U_{10} - U_{11}			203.02	-647.16	315	-111	-25	-731	33	143	551	-585	0.220	0.258	0.48	Yes	0.147	0.167	0.32	Yes	0.833	0.160	1	Yes	0.826	0.164	0.99	Yes	1.00	**3.05**
		U_{11} - U_{12}			-----	-888.36	190	-181	-235	-604	9	117	683	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.150	1	Yes	0.833	0.100	0.94	Yes	1.00	**2.00**
		U_{12} - U_{13}			-----	-1269.99	-11	-254	-610	-602	83	19	602	-424	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.137	1	Yes	0.848	0.084	0.94	Yes	1.00	**2.33**
		U_{13} - U_{14}			-----	-1406.34	-190	-500	-653	-1286	-42	-6	170	-215	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.178	1	Yes	0.806	0.142	0.95	Yes	1.00	**1.75**
		U_{14} - U_{15}			-----	-1374.87	-406	-291	-1342	-606	42	-276	-123	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.788	0.148	0.94	Yes	1.00	**1.62**
		U_{15} - U_{16}			-----	-1436.46	-197	-467	-849	-723	-112	-428	-317	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.165	1	Yes	0.823	0.094	0.92	Yes	1.00	**1.87**
		U_{16} - U_{17}			-----	-1401.15	-381	-194	-1232	-625	-35	-242	-215	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.182	1	Yes	0.803	0.136	0.94	Yes	1.00	**2.30**
		U_{17} - U_{18}			-----	-1065.83	-251	-62	-894	48	-115	71	-214	-253	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.154	1	Yes	0.834	0.146	0.98	Yes	1.00	**2.23**
		U_{18} - U_{19}			-----	-741.57	-240	13	-768	105	363	-142	79	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.154	1	Yes	0.834	0.154	0.99	Yes	1.00	**2.41**
		U_{19} - U_{20}			-----	-656.37	-164	-118	-1283	528	-65	-110	-188	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.227	0.98	Yes	0.738	0.258	1.00	Yes	1.00	**7.04**
	Structure 2	U_0 - U_1			-----	-560.82	1982	-1690	-1165	-553	950	-322	1658	-498	-----	-----	-----	-----	-----	-----	-----	-----	0.666	0.274	0.95	Yes	0.662	0.336	1.00	Yes	1.00	**6.02**
		U_1 - U_2			-----	-823.96	-71	-453	-391	-1055	138	130	474	-378	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.194	1	Yes	0.795	0.160	0.96	Yes	1.00	**2.30**
		U_2 - U_3			-----	-1195.76	25	-1020	-511	-1109	-38	-572	519	-603	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.141	1	Yes	0.849	0.113	0.97	Yes	1.00	**2.55**
		U_3 - U_4			-----	-1395.48	-520	-507	-1357	-1297	-126	-30	409	-365	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.191	1	Yes	0.795	0.121	0.92	Yes	1.00	**2.26**
		U_4 - U_5			-----	-1511.23	-579	-548	-1470	-1523	-124	-83	137	-613	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.209	1	Yes	0.776	0.126	0.91	Yes	1.00	**1.84**
		U_5 - U_6			-----	-1560.95	-570	0	-1580	-1015	-196	-48	-80	-531	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.191	1	Yes	0.801	0.131	0.94	Yes	1.00	**1.94**
		U_6 - U_7			-----	-1398.24	-309	-200	-1401	-1167	-172	-92	28	-401	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.195	1	Yes	0.796	0.125	0.93	Yes	1.00	**1.99**
		U_7 - U_8			-----	-1375.92	-340	-193	-1502	-986	-81	-180	-327	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.203	1	Yes	0.783	0.134	0.92	Yes	1.00	**1.98**
		U_8 - U_9			-----	-1190.84	-349	215	-1382	-303	-19	-196	-449	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.186	1	Yes	0.808	0.147	0.96	Yes	1.00	**2.21**
		U_9 - U_{10}			291.48	-900.34	-85	533	-1514	16	-124	-240	-599	-619	0.214	0.252	0.47	Yes	0.145	0.170	0.32	Yes	0.782	0.211	1	Yes	0.777	0.184	0.97	Yes	1.00	**2.74**
		U_{10} - U_{11}			832.73	-617.94	349	612	-1343	5	-191	-101	-828	-487	0.703	0.290	1.00	Yes	0.479	0.190	0.67	Yes	0.618	0.242	0.87	Yes	0.614	0.189	0.81	Yes	1.00	**4.04**
		U_{11} - U_{12}			942.63	-----	201	655	-967	445	35	39	-496	-484	0.796	0.197	1.00	Yes	0.535	0.131	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		U_{12} - U_{13}			1248.29	-----	453	59	-622	-212	293	414	-736	-88	0.843	0.148	1.00	Yes	0.601	0.103	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		U_{13} - U_{14}			1010.87	-----	141	1629	-1843	4086	1417	1755	149	864	0.497	0.498	1.00	Yes	0.352	0.328	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.35**
		U_{14} - U_{15}			1028.11	-----	4264	-1587	1487	-115	702	-78	641	1450	0.506	0.494	1.00	Yes	0.358	0.325	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		U_{15} - U_{16}			1199.32	-----	256	0	-1345	-493	469	169	1401	-35	0.725	0.271	1.00	Yes	0.516	0.186	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.57**
		U_{16} - U_{17}			629.22	-754.32	1621	-1165	-665	-2389	146	-559	1851	-2231	0.464	0.534	1.00	Yes	0.308	0.351	0.66	Yes	0.658	0.314	0.98	Yes	0.654	0.300	0.96	Yes	1.00	**11.36**
		U_{17} - U_{18}			808.96	-246.04	515	292	-104	-639	-62	302	521	-261	0.812	0.185	1.00	Yes	0.541	0.122	0.67	Yes	0.292	0.148	0.45	Yes	0.291	0.108	0.40	Yes	1.00	**3.38**
		U_{18} - U_{19}			694.01	-699.62	672	221	-516	-668	1	184	972	-603	0.697	0.256	0.96	Yes	0.457	0.165	0.63	Yes	0.831	0.163	1	Yes	0.826	0.114	0.95	Yes	1.00	**4.11**
		U_{19} - U_{20}			252.75	-741.59	281	114	-505	-864	-55	137	382	-358	0.237	0.190	0.43	Yes	0.157	0.125	0.29	Yes	0.823	0.167	1	Yes	0.818	0.138	0.96	Yes	1.00	**2.45**
		U_{20} - U_{21}			132.42	-881.81	144	-126	-840	-477	-5	23	333	-505	0.103	0.177	0.28	Yes	0.072	0.116	0.19	Yes	0.811	0.185	1	Yes	0.805	0.122	0.93	Yes	1.00	**2.63**
		U_{21} - U_{22}			7.03	-839.99	-109	-75	-822	-988	-182	-101	113	-246	0.005	0.170	0.18	Yes	0.004	0.114	0.12	Yes	0.772	0.226	1	Yes	0.767	0.143	0.91	Yes	1.00	**2.13**
		U_{22} - U_{23}			-----	-831.39	-76	-122	-1139	-729	-54	-166	-176	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.232	1	Yes	0.759	0.165	0.93	Yes	1.00	**2.13**
		U_{23} - U_{24}			24.60	-862.47	-9	-62	-905	-343	-2	-94	-474	-201	0.019	0.183	0.21	Yes	0.013	0.120	0.14	Yes	0.793	0.198	1	Yes	0.787	0.131	0.92	Yes	1.00	**2.53**
		U_{24} - U_{25}			310.46	-718.46	186	328	-1019	-122	-11	-80	-406	-246	0.291	0.218	0.51	Yes	0.193	0.143	0.34	Yes	0.798	0.199	1	Yes	0.793	0.163	0.96	Yes	1.00	**2.75**
		U_{25} - U_{26}			674.04	-599.33	216	653	-1178	-37	17	-47	-772	-204	0.677	0.313	0.99	Yes	0.444	0.201	0.65	Yes	0.712	0.286	1	Yes	0.708	0.200	0.91	Yes	1.00	**4.04**
		U_{26} - U_{27}			760.58	-97.30	293	473	-817	277	-48	12	-650	-179	0.763	0.234	1.00	Yes	0.508	0.154	0.67	Yes	0.116	0.225	0.35	Yes	0.115	0.139	0.26	Yes	1.00	**3.17**
		U_{27} - U_{28}			1076.55	-----	218	696	-1140	762	237	254	-542	-515	0.793	0.200	1.00	Yes	0.528	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		U_{28} - U_{29}			1057.33	-----	1111	321	-1913	-140	488	1651	-1176	167	0.639	0.357	1.00	Yes	0.455	0.244	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.61**
		U_{29} - U_{30}			899.24	-----	347	1253	-2012	4503	1658	1999	-184	1002	0.442	0.553	1.00	Yes	0.313	0.365	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
		U_{30} - U_{31}			987.01	-----	4331	-1592	1617	-442	1011	10	1115	1571	0.485	0.508	1.00	Yes	0.344	0.335	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		U_{31} - U_{32}			1231.07	-----	113	375	-775	-840	185	386	611	-601	0.831	0.164	1.00	Yes	0.593	0.113	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		U_{32} - U_{33}			-----	-793.14	1155	-1319	-270	-1475	355	-901	1716	-1625	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.179	0.98	Yes	0.788	0.208	1.00	Yes	1.00	**9.35**
		U_{33} - U_{34}			795.45	-786.32	575	273	-466	-927	-37	256	1118	-262	0.672	0.267	0.94	Yes	0.457	0.177	0.64	Yes	0.786	0.205	1	Yes	0.781	0.131	0.92	Yes	1.00	**4.30**
		U_{34} - U_{35}			116.97	-982.00	402	-180	-300	-1160	43	47	511	-500	0.086	0.197	0.29	Yes	0.058	0.133	0.20	Yes	0.852	0.139	1	Yes	0.847	0.141	0.99	Yes	1.00	**2.36**
		U_{35} - U_{36}			-----	-1238.07	127	-445	-578	-1111	-18	100	456	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.148	1	Yes	0.840	0.118	0.96	Yes	1.00	**2.11**
		U_{36} - U_{37}			-----	-1446.13	-262	-288	-1192	-999	-20	-114	544	-307	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.162	1	Yes	0.823	0.106	0.93	Yes	1.00	**2.06**
		U_{37} - U_{38}			-----	-1422.90	-200	-424	-1233	-1235	-94	-198	-235	-209	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.177	1	Yes	0.810	0.110	0.93	Yes	1.00	**1.77**
		U_{38} - U_{39}			-----	-1589.97	-162	-632	-1165	-1288	8	-210	-404	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.172	1	Yes	0.816	0.107	0.93	Yes	1.00	**1.84**
		U_{39} - U_{40}			-----	-1526.08	-610	-565	-1793	-926	13	-85	-300	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.204	1	Yes	0.784	0.149	0.94	Yes	1.00	**1.82**
		U_{40} - U_{41}			-----	-1385.02	-511	-490	-1612	-1112	86	-161	12	12	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.200	1	Yes	0.789	0.144	0.94	Yes	1.00	**2.10**
		U_{41} - U_{42}			-----	-1183.42	-414	-132	-1358	-124	64	-30	-157	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.146	1	Yes	0.840	0.138	0.98	Yes	1.00	**2.59**
		U_{42} - U_{43}			-----	-840.04	-276	-27	-1173	24	209	-195	-20	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.181	1	Yes	0.811	0.178	0.99	Yes	1.00	**2.96**
		U_{43} - U_{44}			-----	-639.96	-169	-229	-1391	554	-123	-129	-219	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.217	0.98	Yes	0.756	0.236	1.00	Yes	1.00	**6.02**
	Structure 3	U_0 - U_1			-----	-576.62	1740	-1410	-1002	-588	898	-558	1609	-668	-----	-----	-----	-----	-----	-----	-----	-----	0.655	0.299	0.96	Yes	0.649	0.350	1.00	Yes	1.00	**6.03**
		U_1 - U_2			-----	-727.16	-1	-589	-202	-699	68	-228	448	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.167	1	Yes	0.818	0.141	0.96	Yes	1.00	**2.07**
		U_2 - U_3			-----	-1081.54	126	-543	-234	-545	-23	-645	503	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.142	1	Yes	0.846	0.089	0.94	Yes	1.00	**2.38**
		U_3 - U_4			-----	-1427.19	-204	-379	-745	-1079	-183	-176	374	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.168	1	Yes	0.818	0.119	0.94	Yes	1.00	**2.56**
		U_4 - U_5			-----	-1426.78	-426	-153	-1176	-388	-106	-51	421	-567	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.168	1	Yes	0.818	0.130	0.95	Yes	1.00	**2.18**
		U_5 - U_6			-----	-1390.15	-250	-369	-846	-1205	-186	-147	116	-333	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.194	1	Yes	0.797	0.133	0.93	Yes	1.00	**1.89**
		U_6 - U_7			-----	-1371.71	-494	-155	-1439	-475	-121	-301	-263	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.205	1	Yes	0.786	0.159	0.95	Yes	1.00	**1.83**
		U_7 - U_8			-----	-1218.91	-234	35	-855	-181	-108	-317	-523	-529	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.171	1	Yes	0.814	0.118	0.94	Yes	1.00	**2.05**
		U_8 - U_9			-----	-884.11	-124	265	-802	76	-215	-185	-427	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.158	1	Yes	0.829	0.133	0.97	Yes	1.00	**2.16**
		U_9 - U_{10}			314.43	-605.21	-48	387	-1007	221	5	5	-311	-407	0.341	0.291	0.64	Yes	0.227	0.187	0.42	Yes	0.779	0.209	0.99	Yes	0.772	0.226	1.00	Yes	1.00	**3.35**
		U_{10} - U_{11}			716.99	-122.09	330	250	-527	161	100	175	-631	-191	0.778	0.219	1.00	Yes	0.527	0.147	0.68	Yes	0.157	0.243	0.41	Yes	0.156	0.118	0.28	Yes	1.00	**4.14**
		U_{11} - U_{12}			628.79	-----	87	728	-1302	2021	1176	1114	-93	409	0.515	0.483	1.00	Yes	0.352	0.329	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		U_{12} - U_{13}			656.93	-----	2919	-1580	745	-133	83	-919	730	838	0.455	0.536	1.00	Yes	0.317	0.366	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		U_{13} - U_{14}			839.50	-----	223	362	-252	-73	-107	377	838	-111	0.803	0.192	1.00	Yes	0.561	0.133	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.11**
		U_{14} - U_{15}			631.79	-438.40	456	224	3	-612	-60	258	641	-762	0.724	0.274	1.00	Yes	0.488	0.181	0.67	Yes	0.597	0.175	0.78	Yes	0.591	0.145	0.74	Yes	1.00	**3.24**
		U_{15} - U_{16}			340.09	-573.78	294	141	-356	-525	-76	205	526	-21	0.390	0.214	0.61	Yes	0.268	0.146	0.42	Yes	0.781	0.212	1	Yes	0.774	0.125	0.90	Yes	1.00	**2.71**
		U_{16} - U_{17}			289.56	-582.86	313	31	-587	-391	175	-72	156	-79	0.332	0.169	0.51	Yes	0.228	0.116	0.35	Yes	0.793	0.203	1	Yes	0.786	0.139	0.93	Yes	1.00	**2.36**
		U_{17} - U_{18}			82.53	-614.34	218	-174	-462	-425	70	35	22	-214	0.095	0.146	0.25	Yes	0.064	0.095	0.16	Yes	0.836	0.157	1	Yes	0.828	0.110	0.94	Yes	1.00	**2.07**
		U_{18} - U_{19}			-----	-586.43	22	-70	-764	-144	206	-197	-41	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.197	1	Yes	0.791	0.182	0.98	Yes	1.00	**2.37**
		U_{19} - U_{20}			6.99	-509.77	87	-293	-624	-347	-147	-110	555	-54	0.008	0.242	0.26	Yes	0.006	0.165	0.18	Yes	0.694	0.298	1	Yes	0.687	0.148	0.84	Yes	1.00	**4.06**

Moment (Start) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression												Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield									
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass								
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																						
South Truss - Lower Chord	Structure 1	L_0 - L_1	19.85	-20.14	688	-1054	-139	0	-824	-3029	54	199	0.030	0.966	1.00	Yes	0.018	0.571	0.59	Yes	0.037	0.690	0.73	Yes	0.036	0.316	0.36	Yes	1.00	**6.53**
		L_1 - L_2	349.16	-----	168	-685	-202	-532	-198	313	-1202	342	0.534	0.464	1.00	Yes	0.326	0.298	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.26**
		L_2 - L_3	639.72	-108.75	-37	66	-777	-468	-188	130	462	-225	0.736	0.262	1.00	Yes	0.426	0.156	0.59	Yes	0.149	0.231	0.38	Yes	0.147	0.188	0.34	Yes	1.00	**2.31**
		L_3 - L_4	609.64	-241.85	3	297	-634	-280	297	-239	-865	-11	0.701	0.292	1.00	Yes	0.417	0.183	0.60	Yes	0.330	0.262	0.6	Yes	0.327	0.153	0.49	Yes	1.00	**2.30**
		L_4 - L_5	77.84	-556.96	102	465	-549	288	-73	202	180	-177	0.101	0.181	0.29	Yes	0.060	0.118	0.18	Yes	0.856	0.133	0.99	Yes	0.849	0.145	1.00	Yes	1.00	**1.84**
		L_5 - L_6	-----	-744.21	123	588	-228	417	163	-236	-23	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.126	1	Yes	0.859	0.130	0.99	Yes	1.00	**1.77**
		L_6 - L_7	-----	-1158.88	234	-19	-344	21	-198	405	43	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.943	0.053	1	Yes	0.933	0.054	0.99	Yes	1.00	**2.73**
		L_7 - L_8	-----	-1152.26	47	490	-371	1560	801	275	-530	33	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.255	1	Yes	0.730	0.207	0.94	Yes	1.00	**4.45**
		L_8 - L_9	-----	-1236.18	1227	-91	656	-34	535	425	199	388	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.199	1	Yes	0.783	0.163	0.95	Yes	1.00	**2.24**
		L_9 - L_{10}	-----	-1048.80	869	-964	-159	-342	497	760	-594	51	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.099	0.96	Yes	0.844	0.151	1.00	Yes	1.00	**6.28**
		L_{10} - L_{11}	189.66	-550.21	503	-51	-15	-593	-285	44	197	-526	0.246	0.249	0.50	Yes	0.143	0.148	0.30	Yes	0.846	0.130	0.98	Yes	0.838	0.157	1.00	Yes	1.00	**3.51**
		L_{11} - L_{12}	494.83	-----	361	-649	76	-604	-133	272	-1034	221	0.641	0.353	1.00	Yes	0.384	0.223	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.99**
		L_{12} - L_{13}	1078.66	-----	81	-144	-506	-562	-165	118	387	-146	0.851	0.145	1.00	Yes	0.544	0.088	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		L_{13} - L_{14}	1284.40	-----	291	-1436	-274	-1150	-78	290	-533	251	0.755	0.242	1.00	Yes	0.489	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		L_{14} - L_{15}	1542.39	-----	-488	-170	-1821	-258	-184	93	319	102	0.754	0.242	1.00	Yes	0.490	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		L_{15} - L_{16}	1602.13	-----	-281	-438	-1191	-1240	-3	-185	-887	37	0.783	0.212	1.00	Yes	0.502	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.31**
		L_{16} - L_{17}	1221.68	-----	-420	54	-1296	-27	-127	170	184	-386	0.772	0.225	1.00	Yes	0.501	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		L_{17} - L_{18}	873.64	-----	-225	-16	-773	6	82	-116	-671	-181	0.761	0.235	1.00	Yes	0.487	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_{18} - L_{19}	410.48	-----	-245	228	-982	548	-161	111	333	233	0.628	0.364	1.00	Yes	0.425	0.229	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		L_{19} - L_{20}	50.38	-288.50	-162	55	-1142	665	131	30	121	27	0.085	0.403	0.49	Yes	0.053	0.242	0.30	Yes	0.579	0.419	1	Yes	0.574	0.373	0.95	Yes	1.00	**8.42**
	Structure 2	L_0 - L_1	54.60	-109.24	702	-2207	-51	-154	-838	-2911	36	125	0.066	0.927	1.00	Yes	0.039	0.576	0.62	Yes	0.157	0.664	0.83	Yes	0.156	0.449	0.61	Yes	1.00	**8.73**
		L_1 - L_2	435.10	-----	621	-1306	93	-953	-104	618	-1195	411	0.528	0.462	1.00	Yes	0.314	0.289	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		L_2 - L_3	1020.99	-----	193	-749	-374	-909	-51	124	543	-264	0.805	0.189	1.00	Yes	0.528	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		L_3 - L_4	1274.80	-----	127	-1208	-383	-1406	0	501	-1045	294	0.749	0.248	1.00	Yes	0.504	0.157	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
		L_4 - L_5	1702.66	-----	-429	-425	-1553	-1213	-58	176	795	5	0.794	0.200	1.00	Yes	0.526	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		L_5 - L_6	1807.20	-----	-219	-494	-1170	-1814	193	-93	-936	96	0.775	0.219	1.00	Yes	0.520	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		L_6 - L_7	1834.22	-----	-570	-209	-2235	-1057	-161	219	283	-313	0.776	0.216	1.00	Yes	0.516	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		L_7 - L_8	1325.65	-11.51	-302	382	-1517	-585	217	-143	-848	136	0.760	0.237	1.00	Yes	0.499	0.143	0.65	Yes	0.008	0.209	0.22	Yes	0.008	0.167	0.18	Yes	1.00	**2.55**
		L_8 - L_9	1067.89	-384.05	-93	592	-1292	242	-88	184	195	-834	0.747	0.253	1.00	Yes	0.503	0.160	0.67	Yes	0.318	0.156	0.48	Yes	0.316	0.174	0.50	Yes	1.00	**3.05**
		L_9 - L_{10}	554.86	-762.44	-125	835	-1191	366	145	-154	-711	29	0.495	0.276	0.78	Yes	0.288	0.169	0.46	Yes	0.806	0.134	0.94	Yes	0.801	0.191	1.00	Yes	1.00	**3.45**
		L_{10} - L_{11}	-----	-741.67	16	564	-720	549	-83	83	259	31	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.090	0.97	Yes	0.871	0.126	1.00	Yes	1.00	**2.11**
		L_{11} - L_{12}	-----	-1036.06	-70	1103	-605	761	64	-366	-172	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.127	0.99	Yes	0.850	0.150	1.00	Yes	1.00	**2.30**
		L_{12} - L_{13}	-----	-1514.33	141	-685	-751	-608	-332	156	292	72	-----	-----	-----	-----	-----	-----	-----	-----	0.921	0.079	1	Yes	0.913	0.076	0.99	Yes	1.00	**3.42**
		L_{13} - L_{14}	-----	-1393.62	-264	1010	-1824	3364	1155	899	-952	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.272	0.98	Yes	0.701	0.294	1.00	Yes	1.00	**5.22**
		L_{14} - L_{15}	-----	-1458.88	2956	-897	1507	-467	345	272	417	376	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.201	0.95	Yes	0.734	0.258	1.00	Yes	1.00	**2.79**
		L_{15} - L_{16}	-----	-1197.96	225	-18	-1795	-1025	815	-407	-1410	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.269	1	Yes	0.717	0.178	0.90	Yes	1.00	**7.43**
		L_{16} - L_{17}	-----	-1141.20	1324	-409	567	-415	-392	-88	279	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.144	0.99	Yes	0.831	0.163	1.00	Yes	1.00	**3.67**
		L_{17} - L_{18}	214.98	-621.72	1521	-2161	73	-879	-150	1807	-1037	416	0.192	0.563	0.76	Yes	0.112	0.343	0.46	Yes	0.657	0.278	0.94	Yes	0.653	0.346	1.00	Yes	1.00	**8.01**
		L_{18} - L_{19}	230.21	-641.56	718	35	-152	-568	-212	60	354	-315	0.261	0.193	0.46	Yes	0.150	0.114	0.27	Yes	0.860	0.117	0.98	Yes	0.855	0.139	1.00	Yes	1.00	**2.89**
		L_{19} - L_{20}	622.31	-508.58	533	155	-190	-860	151	-182	-833	390	0.705	0.293	1.00	Yes	0.417	0.182	0.60	Yes	0.682	0.125	0.81	Yes	0.678	0.166	0.85	Yes	1.00	**3.58**
		L_{20} - L_{21}	993.45	-294.15	412	-76	-988	-1020	-186	69	500	-383	0.792	0.203	1.00	Yes	0.520	0.123	0.65	Yes	0.278	0.185	0.47	Yes	0.276	0.149	0.43	Yes	1.00	**3.43**
		L_{21} - L_{22}	884.11	-50.33	110	-290	-811	-1244	136	-103	-987	107	0.705	0.288	1.00	Yes	0.472	0.184	0.66	Yes	0.048	0.256	0.31	Yes	0.047	0.182	0.23	Yes	1.00	**2.52**
		L_{22} - L_{23}	920.00	-----	-196	-42	-1571	-479	-118	158	0	-279	0.734	0.259	1.00	Yes	0.491	0.163	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.87**
		L_{23} - L_{24}	891.03	-340.59	-55	466	-1240	-691	164	-139	-943	-3	0.711	0.282	1.00	Yes	0.466	0.173	0.64	Yes	0.322	0.257	0.58	Yes	0.320	0.181	0.51	Yes	1.00	**3.65**
		L_{24} - L_{25}	549.73	-560.75	206	530	-1161	67	-105	150	278	-953	0.623	0.370	1.00	Yes	0.368	0.230	0.60	Yes	0.752	0.206	0.96	Yes	0.747	0.224	0.98	Yes	1.00	**3.87**
		L_{25} - L_{26}	45.46	-642.09	29	729	-662	221	102	-167	-487	40	0.051	0.215	0.27	Yes	0.030	0.127	0.16	Yes	0.861	0.131	1	Yes	0.856	0.141	1.00	Yes	1.00	**2.86**
		L_{26} - L_{27}	-----	-833.82	193	496	-726	482	-50	223	256	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.109	1	Yes	0.876	0.116	1.00	Yes	1.00	**2.83**
		L_{27} - L_{28}	-----	-1153.32	29	1225	-746	1039	227	-51	-294	131	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.129	0.98	Yes	0.840	0.151	1.00	Yes	1.00	**3.84**
		L_{28} - L_{29}	-----	-1447.90	454	-654	-754	-1121	-79	837	117	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.121	1	Yes	0.866	0.111	0.98	Yes	1.00	**5.61**
		L_{29} - L_{30}	-----	-1397.12	-460	1143	-1831	3296	1106	1144	-568	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.259	0.97	Yes	0.703	0.288	1.00	Yes	1.00	**4.79**
		L_{30} - L_{31}	-----	-1498.74	2808	-921	1687	-500	255	201	567	498	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.203	0.97	Yes	0.754	0.245	1.00	Yes	1.00	**2.26**
		L_{31} - L_{32}	-----	-1252.95	249	-428	-1585	-947	993	-477	-854	14	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.238	1	Yes	0.749	0.158	0.91	Yes	1.00	**7.31**
		L_{32} - L_{33}	-----	-1031.84	1116	-575	519	-574	-121	61	216	-315	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.112	0.97	Yes	0.846	0.152	1.00	Yes	1.00	**3.13**
		L_{33} - L_{34}	395.68	-567.64	1283	-1713	160	-1247	-163	1603	-2225	660	0.395	0.599	1.00	Yes	0.232	0.365	0.60	Yes	0.671	0.185	0.86	Yes	0.667	0.300	0.97	Yes	1.00	**7.59**
		L_{34} - L_{35}	621.38	-754.21	838	-100	-240	-943	-217	96	931	-50	0.555	0.263	0.82	Yes	0.323	0.160	0.49	Yes	0.797	0.202	1	Yes	0.792	0.151	0.95	Yes	1.00	**4.22**
		L_{35} - L_{36}	968.16	-----	575	-1210	-62	-1203	-137	654	-1657	319	0.677	0.319	1.00	Yes	0.456	0.205	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		L_{36} - L_{37}	1392.93	-----	317	-248	-960	-1385	-207	150	551	-234	0.799	0.198	1.00	Yes	0.525	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		L_{37} - L_{38}	1789.31	-----	-138	-637	-1759	-2004	66	-197	-936	475	0.757	0.234	1.00	Yes	0.503	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		L_{38} - L_{39}	1749.63	-----	-585	-232	-2163	-1083	-117	181	39	-765	0.751	0.240	1.00	Yes	0.504	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		L_{39} - L_{40}	1725.38	-----	-402	-427	-1627	-1156	116	-163	-479	318	0.804	0.186	1.00	Yes	0.533	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		L_{40} - L_{41}	1288.54	-----	-462	32	-1647	-139	-46	270	260	-370	0.764	0.226	1.00	Yes	0.516	0.145	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
		L_{41} - L_{42}	947.10	-----	-250	-58	-1101	-86	139	-74	-683	-29	0.756	0.236	1.00	Yes	0.497	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		L_{42} - L_{43}	513.32	-----	-276	214	-1304	554	124	344	632	336	0.623	0.369	1.00	Yes	0.371	0.234	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_{43} - L_{44}	-----	-328.25	-83	-26	-2048	773	623	182	123	36	-----	-----	-----	-----	-----	-----	-----	-----	0.472	0.526	1	Yes	0.469	0.417	0.89	Yes	1.00	**13.20**
	Structure 3	L_0 - L_1	13.65	-303.40	644	-1273	22	-150	-338	-1534	26	118	0.021	0.700	0.73	Yes	0.013	0.456	0.47	Yes	0.551	0.448	1	Yes	0.546	0.382	0.93	Yes	1.00	**6.05**
		L_1 - L_2	315.30	-----	662	-1001	125	-672	-16	748	-1020	470	0.483	0.512	1.00	Yes	0.326	0.329	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		L_2 - L_3	875.18	-----	258	-724	-218	-648	165	-252	715	-110	0.762	0.231	1.00	Yes	0.488	0.141	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		L_3 - L_4	1147.52	-----	238	-1145	-223	-1172	17	704	-1045	423	0.726	0.265	1.00	Yes	0.471	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		L_4 - L_5	1609.79	-----	-371	-258	-1389	-873	-32	231	603	-195	0.786	0.210	1.00	Yes	0.505	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		L_5 - L_6	1613.45	-----	-135	-462	-757	-1364	264	-69	-536	342	0.788	0.202	1.00	Yes	0.512	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		L_6 - L_7	1268.23	-----	-485	244	-1627	253	-53	272	351	-147	0.746	0.253	1.00	Yes	0.483	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		L_7 - L_8	983.79	-39.60	-97	173	-735	-350	143	-169	-744	24	0.776	0.217	1.00	Yes	0.497	0.132	0.63	Yes	0.037	0.208	0.25	Yes	0.037	0.130	0.17	Yes	1.00	**3.07**
		L_8 - L_9	528.30	-345.16	-151	453	-863	443	-109	163	477	222	0.684	0.312	1.00	Yes	0.410	0.202	0.62	Yes	0.531	0.166	0.7	Yes	0.526	0.229	0.76	Yes	1.00	**3.36**
		L_9 - L_{10}	-----	-561.40	-65	517	-529	310	145	-153	-25	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.083	0.95	Yes	0.855	0.140	1.00	Yes	1.00	**2.73**
		L_{10} - L_{11}	-----	-1105.73	97	28	-676	298	-274	-20	553	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.053	0.96	Yes	0.890	0.106	1.00	Yes	1.00	**4.48**
		L_{11} - L_{12}	-----	-1158.20	41	695	-465	1519	868	269	-1116	-289	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.255	1	Yes	0.734	0.201	0.94	Yes	1.00	**5.89**
		L_{12} - L_{13}	-----	-1227.36	1646	-276	677	-7	285	-365	0	338	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.209	1	Yes	0.777	0.218	1.00	Yes	1.00	**3.29**
		L_{13} - L_{14}	-----	-1064.63	759	-850	-301	-455	-59	832	-1487	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.104	0.98	Yes	0.857	0.134	1.00	Yes	1.00	**6.18**
		L_{14} - L_{15}	-----	-722.78	567	106	98	-336	-260	86	187	-451	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.140	1	Yes	0.848	0.128	0.98	Yes	1.00	**2.33**
		L_{15} - L_{16}	270.95	-494.25	450	100	67	-598	252	-204	-1168	378	0.351	0.366	0.72	Yes	0.211	0.230	0.45	Yes	0.760	0.236	1	Yes	0.753	0.158	0.92	Yes	1.00	**2.28**
		L_{16} - L_{17}	660.39	-155.95	282	-62	-739	-335	-173	190	365	188	0.760	0.237	1.00	Yes	0.451	0.152	0.61	Yes	0.213	0.219	0.44	Yes	0.211	0.178	0.39	Yes	1.00	**2.56**
		L_{17} - L_{18}	650.84	-33.61	11	-110	-717	-591	113	-113	-434	285	0.749	0.243	1.00	Yes	0.433	0.144	0.58	Yes	0.046	0.228	0.28	Yes	0.045	0.173	0.22	Yes	1.00	**2.63**
		L_{18} - L_{19}	433.10	-2.37	-30	-20	-779	85	-105	207	450	138	0.663	0.330	1.00	Yes	0.404	0.218	0.63	Yes	0.004	0.200	0.21	Yes	0.004	0.234	0.24	Yes	1.00	**3.18**
		L_{19} - L_{20}	87.30	-82.26	298	-411	-2041	1575	109	30	-1162	-316	0.134	0.862	1.00	Yes	0.079	0.522	0.61	Yes	0.149	0.752	0.91	Yes	0.148	0.612	0.77	Yes	1.00	**22.43**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.363	1	Yes	0.603	0.211	0.82	Yes	1.00	**0.88**
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-284.84	-11	60	-108	165	168	54	-1011	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.363	1	Yes	0.603	0.211	0.82	Yes	1.00	**0.88**
		$U_1 - L_1$			33.95	-317.72	39	-30	-252	237	586	205	-298	-54	0.061	0.492	0.56	Yes	0.034	0.270	0.31	Yes	0.694	0.238	0.94	Yes	0.672	0.322	1.00	Yes	1.00	**2.62**
		$U_2 - L_2$			143.09	-263.05	127	-142	-222	271	853	228	-972	-307	0.257	0.628	0.89	Yes	0.142	0.345	0.49	Yes	0.619	0.374	1	Yes	0.599	0.346	0.95	Yes	1.00	**4.39**
		$U_3 - L_3$			185.20	-131.74	225	-217	-76	103	-1180	-738	-1278	-283	0.333	0.658	1.00	Yes	0.183	0.362	0.55	Yes	0.289	0.329	0.62	Yes	0.279	0.288	0.57	Yes	1.00	**4.66**
		$U_4 - L_4$			-----	-158.94	328	-326	29	-37	-1633	-830	910	239	-----	-----	-----	-----	-----	-----	-----	-----	0.349	0.642	1	Yes	0.336	0.420	0.76	Yes	1.00	**5.32**
		$U_5 - L_5$			-----	-396.30	198	-225	73	-88	17	195	863	288	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.277	1	Yes	0.684	0.228	0.92	Yes	1.00	**2.16**
		$U_6 - L_6$			-----	-418.60	218	-225	75	-64	905	440	1474	733	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.365	1	Yes	0.600	0.196	0.80	Yes	1.00	**2.01**
		$U_7 - L_7$			-----	-381.84	261	-280	102	-115	622	195	1229	306	-----	-----	-----	-----	-----	-----	-----	-----	0.638	0.352	1	Yes	0.589	0.275	0.87	Yes	1.00	**1.73**
		$U_8 - L_8$			-----	-1193.62	220	-269	-399	475	-45	-94	-1271	-581	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.127	1	Yes	0.831	0.088	0.92	Yes	1.00	**3.32**
		$U_9 - L_9$			-----	-658.74	-228	259	-404	449	623	238	-608	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.180	0.97	Yes	0.744	0.249	1.00	Yes	1.00	**1.63**
		$U_{10} - L_{10}$			-----	-795.20	-157	154	-377	404	630	287	-295	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.171	1	Yes	0.785	0.209	1.00	Yes	1.00	**2.68**
		$U_{11} - L_{11}$			-----	-663.65	-165	220	-378	487	613	381	-301	126	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.176	0.98	Yes	0.772	0.226	1.00	Yes	1.00	**2.46**
		$U_{12} - L_{12}$			-----	-522.73	-127	140	-314	322	-2	140	-71	155	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.111	0.87	Yes	0.717	0.275	1.00	Yes	1.00	**2.68**
		$U_{13} - L_{13}$			-----	-368.73	-63	87	-225	253	-118	-29	45	187	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.148	0.9	Yes	0.706	0.289	1.00	Yes	1.00	**2.34**
		$U_{14} - L_{14}$			-----	-146.40	122	-127	-237	258	-1274	-505	475	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.327	0.672	1	Yes	0.310	0.330	0.65	Yes	1.00	**6.30**
		$U_{15} - L_{15}$			64.87	-308.45	250	-270	-54	46	-766	-181	396	-188	0.117	0.567	0.69	Yes	0.064	0.312	0.38	Yes	0.691	0.284	0.98	Yes	0.653	0.345	1.00	Yes	1.00	**3.70**
		$U_{16} - L_{16}$			-----	-318.09	245	-252	44	-49	-32	-22	474	107	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.218	0.94	Yes	0.673	0.323	1.00	Yes	1.00	**2.55**
		$U_{17} - L_{17}$			-----	-418.84	205	-223	78	-92	199	110	505	200	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.210	1	Yes	0.723	0.226	0.95	Yes	1.00	**1.79**
		$U_{18} - L_{18}$			-----	-530.69	449	-458	171	-177	215	-4	678	171	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.184	0.97	Yes	0.738	0.259	1.00	Yes	1.00	**2.48**
		$U_{19} - L_{19}$			-----	-648.49	495	-512	177	-191	211	44	586	117	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.157	0.97	Yes	0.755	0.238	1.00	Yes	1.00	**2.95**
		$U_{20} - L_{20}$			-----	-541.01	398	-473	229	-274	198	26	433	57	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.202	1	Yes	0.692	0.250	0.95	Yes	1.00	**2.00**
	Structure 2	$U_0 - L_0$			-----	-608.22	-161	280	-317	452	-12	-2	-1213	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.265	1	Yes	0.652	0.192	0.85	Yes	1.00	**1.15**
		$U_1 - L_1$			-----	-714.32	-204	212	-550	551	630	161	-31	52	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.147	0.97	Yes	0.766	0.234	1.00	Yes	1.00	**2.26**
		$U_2 - L_2$			-----	-592.37	-152	168	-454	471	624	284	43	240	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.176	0.97	Yes	0.755	0.241	1.00	Yes	1.00	**2.03**
		$U_3 - L_3$			-----	-459.82	-75	86	-215	232	546	265	-44	213	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.721	0.211	0.94	Yes	1.00	**1.67**
		$U_4 - L_4$			-----	-323.32	-16	26	-198	206	568	234	-32	169	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.259	1	Yes	0.684	0.263	0.95	Yes	1.00	**2.35**
		$U_5 - L_5$			75.06	-318.49	94	-68	-207	234	-484	-284	-452	66	0.135	0.439	0.58	Yes	0.074	0.241	0.32	Yes	0.719	0.272	1	Yes	0.674	0.299	0.98	Yes	1.00	**4.01**
		$U_6 - L_6$			308.89	-89.77	183	-187	-107	116	-507	-234	-700	-65	0.556	0.442	1.00	Yes	0.306	0.243	0.55	Yes	0.202	0.237	0.44	Yes	0.190	0.239	0.43	Yes	1.00	**4.05**
		$U_7 - L_7$			-----	-188.56	381	-427	-12	10	-1740	-927	-294	-478	-----	-----	-----	-----	-----	-----	-----	-----	0.426	0.569	1	Yes	0.399	0.546	0.95	Yes	1.00	**7.15**
		$U_8 - L_8$			-----	-472.08	335	-360	149	-170	-11	-2	417	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.149	0.84	Yes	0.680	0.315	1.00	Yes	1.00	**2.10**
		$U_9 - L_9$			-----	-690.98	584	-593	267	-281	-56	114	673	187	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.148	0.92	Yes	0.741	0.252	1.00	Yes	1.00	**2.69**
		$U_{10} - L_{10}$			-----	-747.44	511	-533	233	-233	-12	215	1182	695	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.257	1	Yes	0.699	0.235	0.94	Yes	1.00	**2.65**
		$U_{11} - L_{11}$			-----	-733.69	459	-462	226	-219	526	493	1187	668	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.260	1	Yes	0.686	0.204	0.90	Yes	1.00	**2.19**
		$U_{12} - L_{12}$			-----	-720.78	417	-410	186	-168	1012	506	1490	652	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.305	1	Yes	0.625	0.179	0.81	Yes	1.00	**2.15**
		$U_{13} - L_{13}$			-----	-624.73	498	-485	223	-221	515	178	1160	318	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.301	1	Yes	0.602	0.238	0.85	Yes	1.00	**2.27**
		$U_{14} - L_{14}$			-----	-1223.04	430	-413	-591	548	722	-67	-730	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.096	1	Yes	0.811	0.105	0.92	Yes	1.00	**4.15**
		$U_{15} - L_{15}$			-----	-674.58	-268	264	-595	573	783	95	-362	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.244	1	Yes	0.650	0.285	0.94	Yes	1.00	**2.38**
		$U_{16} - L_{16}$			-----	-718.45	-185	173	-522	506	671	192	8	61	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.160	0.99	Yes	0.770	0.221	1.00	Yes	1.00	**2.43**
		$U_{17} - L_{17}$			-----	-643.18	-195	196	-537	537	594	193	-52	144	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.156	0.96	Yes	0.749	0.249	1.00	Yes	1.00	**2.29**
		$U_{18} - L_{18}$			-----	-579.05	-159	164	-470	496	622	214	-302	60	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.94	Yes	0.738	0.254	1.00	Yes	1.00	**2.19**
		$U_{19} - L_{19}$			-----	-480.39	-85	86	-290	288	521	194	-87	145	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.169	0.9	Yes	0.717	0.279	1.00	Yes	1.00	**2.24**
		$U_{20} - L_{20}$			-----	-378.01	-36	41	-219	230	517	179	-93	66	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.220	1	Yes	0.724	0.263	0.99	Yes	1.00	**2.45**
	Structure 3	$U_{21} - L_{21}$			15.30	-323.42	22	-10	-225	245	-248	-168	-471	44	0.028	0.450	0.48	Yes	0.015	0.247	0.27	Yes	0.731	0.229	0.96	Yes	0.684	0.313	1.00	Yes	1.00	**3.20**
		$U_{22} - L_{22}$			-----	-257.41	298	-317	-275	303	-1187	-939	-1048	-933	-----	-----	-----	-----	-----	-----	-----	-----	0.579	0.417	1	Yes	0.545	0.405	0.95	Yes	1.00	**10.40**
		$U_{23} - L_{23}$			-----	-320.60	230	-249	11	-14	-99	33	524	166	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.247	0.98	Yes	0.678	0.318	1.00	Yes	1.00	**2.63**
		$U_{24} - L_{24}$			-----	-370.88	227	-235	51	-56	133	108	584	204	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.236	1	Yes	0.711	0.269	0.98	Yes	1.00	**2.12**
		$U_{25} - L_{25}$			-----	-471.70	302	-300	99	-100	-34	118	589	223	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.184	0.9	Yes	0.704	0.291	1.00	Yes	1.00	**2.08**
		$U_{26} - L_{26}$			-----	-572.84	500	-524	167	-175	225	273	708	301	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.190	0.96	Yes	0.730	0.268	1.00	Yes	1.00	**2.36**
		$U_{27} - L_{27}$			-----	-632.84	556	-560	199	-203	505	437	771	314	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.193	0.98	Yes	0.737	0.260	1.00	Yes	1.00	**2.61**
		$U_{28} - L_{28}$			-----	-611.19	465	-448	156	-129	902	389	1650	557	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.289	1	Yes	0.655	0.197	0.86	Yes	1.00	**2.38**
		$U_{29} - L_{29}$			-----	-619.04	579	-564	150	-155	462	137	1192	199	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.304	1	Yes	0.597	0.277	0.88	Yes	1.00	**3.29**
		$U_{30} - L_{30}$			-----	-1164.87	244	-258	-524	463	419	-151	-842	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.110	1	Yes	0.802	0.097	0.90	Yes	1.00	**3.37**
		$U_{31} - L_{31}$			-----	-712.41	-306	300	-532	516	509	96	-567	13	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.206	1	Yes	0.687	0.255	0.95	Yes	1.00	**1.82**
		$U_{32} - L_{32}$			-----	-855.28	-218	190	-476	468	623	192	-133	60	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.174	1	Yes	0.741	0.204	0.95	Yes	1.00	**2.28**
		$U_{33} - L_{33}$			-----	-826.52	-247	234	-499	500	444	204	-468	102	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.142	0.98	Yes	0.773	0.221	1.00	Yes	1.00	**2.41**
		$U_{34} - L_{34}$			-----	-807.08	-236	251	-529	549	552	338	-369	76	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.158	0.96	Yes	0.755	0.242	1.00	Yes	1.00	**2.88**
		$U_{35} - L_{35}$			-----	-695.33	-254	269	-571	587	630	377	-314	109	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.152	0.93	Yes	0.745	0.249	1.00	Yes	1.00	**2.73**
		$U_{36} - L_{36}$			-----	-479.71	-135	157	-323	349	222	173	-328	64	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.146	0.85	Yes	0.691	0.305	1.00	Yes	1.00	**2.25**
		$U_{37} - L_{37}$			-----	-138.29	27	-25	-278	322	-970	-334	182	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.312	0.682	1	Yes	0.293	0.412	0.71	Yes	1.00	**6.56**
		$U_{38} - L_{38}$			289.46	-146.90	153	-164	-181	184	-823	-259	-175	-500	0.521	0.474	1.00	Yes	0.286	0.261	0.55	Yes	0.331	0.220	0.56	Yes	0.311	0.236	0.55	Yes	1.00	**4.29**
		$U_{39} - L_{39}$			42.82	-322.55	222	-244	-59	41	-399	-38	-20	-348	0.077	0.427	0.51	Yes	0.042	0.235	0.28	Yes	0.729	0.194	0.93	Yes	0.682	0.311	1.00	Yes	1.00	**3.58**
		$U_{40} - L_{40}$			-----	-327.19	221	-224	34	-42	-60	-19	598	172	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.256	1	Yes	0.692	0.287	0.98	Yes	1.00	**2.26**
		$U_{41} - L_{41}$			-----	-462.14	236	-248	86	-95	216	112	579	192	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1	Yes	0.725	0.226	0.96	Yes	1.00	**1.88**
		$U_{42} - L_{42}$			-----	-577.89	496	-502	168	-178	323	135	668	171	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.172	0.95	Yes	0.736	0.257	1.00	Yes	1.00	**2.47**
		$U_{43} - L_{43}$			-----	-705.28	536	-555	187	-205	483	224	620	186	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.152	0.96	Yes	0.756	0.235	1.00	Yes	1.00	**2.97**
		$U_{44} - L_{44}$			-----	-652.81	474	-591	246	-314	253	43	733	124	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.212	1	Yes	0.700	0.251	0.96	Yes	1.00	**2.44**
	Structure 4	$U_0 - L_0$			-----	-531.07	-133	231	-268	380	106	14	-680	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.665	0.195	0.87	Yes	1.00	**1.03**
		$U_1 - L_1$			-----	-652.53	-206	206	-507	503	621	143	-360	72	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.161	0.98	Yes	0.759	0.236	1.00	Yes	1.00	**2.09**
		$U_2 - L_2$			-----	-544.61	-155	166	-402	420	663	304	21	242	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.194	1	Yes	0.757	0.238	1.00	Yes	1.00	**2.01**
		$U_3 - L_3$			-----	-408.82	-68	83	-191	210	566	269	46	229	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.705	0.213	0.92	Yes	1.00	**1.56**
		$U_4 - L_4$			-----	-322.57	-30	36	-217	229	613	223	-566	89	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1	Yes	0.683	0.292	0.98	Yes	1.00	**2.47**
		$U_5 - L_5$			46.42	-253.30	50	-34	-165	190	-423	-264	-1292	-54	0.083	0.617	0.71	Yes	0.046	0.339	0.39	Yes	0.568	0.424	1	Yes	0.536	0.243	0.78	Yes	1.00	**3.07**
		$U_6 - L_6$			-----	-148.78	341	-367	-79	81	-1552	-720	-223	-466	-----	-----	-----	-----	-----	-----	-----	-----	0.332	0.663	1	Yes	0.315	0.470	0.79	Yes	1.00	**6.83**
		$U_7 - L_7$			-----	-367.15	233	-258	79	-98	-385	-84	156	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.177	0.92	Yes	0.703	0.295	1.00	Yes	1.00	**2.03**
		$U_8 - L_8$			-----	-507.44	333	-334	133	-134	-51	47	897	373	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.258	1	Yes	0.696	0.285	0.99	Yes	1.00	**2.41**
		$U_9 - L_9$			-----	-622.96	380	-477	160	-220	451	424	1159	420	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.725	0.221	0.95	Yes	1.00	**2.52**
		$U_{10} - L_{10}$			-----	-629.25	319	-332	151	-139	1089	680	1710	948	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.346	1	Yes	0.621	0.172	0.80	Yes	1.00	**2.26**
		$U_{11} - L_{11}$			-----	-563.23	373	-420	190	-220	746	423	1496	670	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.319	1	Yes	0.636	0.234	0.87	Yes	1.00	**1.84**
		$U_{12} - L_{12}$			-----	-1174.76	275	-374	-407	435	717	211	-1257	-526	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.148	1	Yes	0.814	0.081	0.90	Yes	1.00	**3.47**
		$U_{13} - L_{13}$			-----	-452.21	-154	168	-288	304	672	120	-266	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.241	1	Yes	0.698	0.300	1.00	Yes	1.00	**1.37**
		$U_{14} - L_{14}$			-----	-500.32	-97	90	-221	239	725	230	-863	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.718	0.209	0.93	Yes	1.00	**1.85**
		$U_{15} - L_{15}$			-----	-435.98	-78	87	-218	243	535	241	66	149	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.207	1	Yes	0.752	0.246	1.00	Yes	1.00	**2.75**
		$U_{16} - L_{16}$			-----	-167.64	-19	31	-279	280	-1019	-460	-2036	-951	-----	-----	-----	-----	-----	-----	-----	-----	0.369	0.630	1	Yes	0.355	0.358	0.72	Yes	1.00	**5.06**
		$U_{17} - L_{17}$			106.75	-243.42	155	-181	-202	190	-261	-150	-1527	-733	0.192	0.700	0.90	Yes	0.106	0.385	0.50	Yes	0.533	0.461	1	Yes	0.515	0.258	0.78	Yes	1.00	**6.36**
		$U_{18} - L_{18}$			107.52	-290.12	256	-297	-113	122	-186	-185	461	147	0.193	0.513	0.71	Yes	0.106	0.282	0.39	Yes	0.634	0.233	0.87	Yes	0.614	0.379	1.00	Yes	1.00	**4.48**
		$U_{19} - L_{19}$			-----	-327.94	231	-238	-30	14	224	125	424	219	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.204	0.93	Yes	0.694	0.304	1.00	Yes	1.00	**3.05**
		$U_{20} - L_{20}$			-----	-320.71	200	-249	78	-90	272	87	604	194	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.277	1	Yes	0.679	0.318	1.00	Yes	1.00	**1.73**

Moment (Start) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
South Truss - Diagonals	Structure 1	$U_0 - L_1$	508.61	-----	23	7	-101	49	-199	-46	-847	-386	0.667	0.331	1.00	Yes	0.403	0.182	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.78**
		$U_1 - L_2$	313.55	-107.21	13	-16	-93	3	381	207	-1092	-534	0.564	0.436	1.00	Yes	0.310	0.240	0.55	Yes	0.246	0.411	0.66	Yes	0.227	0.119	0.35	Yes					1.00	**2.50**
		$U_2 - L_3$	11.27	-213.48	40	-27	-78	-38	448	229	-1313	-452	0.020	0.479	0.50	Yes	0.011	0.264	0.28	Yes	0.491	0.506	1	Yes	0.452	0.099	0.56	Yes					1.00	**3.23**
		$U_3 - L_4$	-----	-253.06	39	-12	-30	-65	455	249	-1106	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.579	0.421	1	Yes	0.535	0.084	0.62	Yes					1.00	**2.64**
		$U_4 - L_4$	573.11	-----	-4	77	-108	37	-139	118	186	144	0.840	0.153	1.00	Yes	0.462	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.06**
		$U_5 - L_5$	684.90	-----	-11	144	-180	198	-247	64	-392	242	0.810	0.184	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.07**
		$U_7 - L_6$	588.97	-----	-39	85	-263	232	-799	-110	-262	142	0.696	0.295	1.00	Yes	0.383	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.59**
		$U_8 - L_7$	628.86	-----	62	185	-92	300	464	-83	45	200	0.743	0.255	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.36**
		$U_9 - L_9$	951.78	-----	40	208	-95	352	556	287	-204	-615	0.761	0.235	1.00	Yes	0.471	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.70**
		$U_9 - L_{10}$	935.03	-----	-110	141	-305	228	649	296	-899	-628	0.747	0.250	1.00	Yes	0.463	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.55**
		$U_{10} - L_{11}$	920.14	-----	-69	132	-240	163	310	44	-377	-817	0.777	0.219	1.00	Yes	0.481	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.57**
		$U_{11} - L_{12}$	766.19	-----	-90	78	-253	75	204	-21	-613	-779	0.758	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.27**
		$U_{12} - L_{13}$	550.73	-----	-84	62	-201	126	112	-27	-760	-710	0.671	0.324	1.00	Yes	0.422	0.186	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.42**
		$U_{13} - L_{14}$	406.68	-----	-31	-23	-89	21	-454	-259	-161	-515	0.731	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.25**
		$U_{15} - L_{14}$	388.87	-259.25	35	-104	-135	-33	-246	-270	142	436	0.699	0.298	1.00	Yes	0.385	0.164	0.55	Yes	0.607	0.305	0.92	Yes	0.549	0.172	0.73	Yes					1.00	**5.30**
		$U_{16} - L_{15}$	405.68	-1.12	-18	-3	-146	87	-289	-128	-257	155	0.730	0.270	1.00	Yes	0.401	0.149	0.55	Yes	0.003	0.154	0.16	Yes	0.002	0.187	0.19	Yes					1.00	**3.19**
		$U_{17} - L_{16}$	526.41	-----	-46	23	-148	96	-306	-105	-249	-45	0.772	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.12**
		$U_{18} - L_{17}$	618.19	-----	-130	88	-337	247	-402	-113	-299	141	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.49**
		$U_{19} - L_{18}$	691.35	-----	-131	95	-334	253	-458	-204	-377	-132	0.749	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.61**
		$U_{20} - L_{19}$	691.36	-----	-176	140	-393	325	-273	-139	-166	21	0.749	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.04**
	Structure 2	$U_0 - L_1$	678.32	-----	-86	134	-285	303	-333	-95	-1234	-363	0.671	0.325	1.00	Yes	0.369	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.19**
		$U_1 - L_2$	733.54	-----	-163	116	-388	293	145	-29	-381	-602	0.726	0.270	1.00	Yes	0.399	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.92**
		$U_2 - L_3$	591.68	-----	-118	88	-314	245	126	-27	-288	-663	0.700	0.298	1.00	Yes	0.385	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.78**
		$U_3 - L_4$	534.03	-----	-52	25	-173	110	169	9	-450	-582	0.712	0.280	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.90**
		$U_4 - L_5$	363.20	-42.06	3	-17	-130	81	238	37	-271	-595	0.653	0.338	1.00	Yes	0.359	0.186	0.55	Yes	0.104	0.210	0.32	Yes	0.089	0.166	0.26	Yes					1.00	**2.80**
		$U_5 - L_6$	340.69	-253.26	60	-114	-106	26	-777	-184	-447	-799	0.613	0.377	1.00	Yes	0.337	0.208	0.55	Yes	0.598	0.291	0.89	Yes	0.536	0.146	0.69	Yes					1.00	**4.18**
		$U_6 - L_7$	-----	-384.38	50	-103	-21	-49	-275	-37	-92	-428	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1	Yes	0.736	0.118	0.86	Yes					1.00	**2.10**
		$U_8 - L_7$	606.15	-----	-79	36	-204	139	-58	-143	-172	202	0.773	0.224	1.00	Yes	0.487	0.125	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.69**
		$U_9 - L_8$	711.29	-----	-162	154	-335	243	-303	-91	-67	54	0.770	0.221	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.10**
		$U_{10} - L_9$	828.31	-----	-122	155	-303	229	-188	23	-131	231	0.819	0.175	1.00	Yes	0.451	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.52**
		$U_{11} - L_{10}$	880.17	-----	-129	193	-348	295	-253	59	-111	353	0.802	0.196	1.00	Yes	0.441	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.43**
		$U_{12} - L_{11}$	846.59	-----	-130	175	-341	344	-586	63	-412	308	0.771	0.226	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.36**
		$U_{13} - L_{12}$	731.69	-----	-157	161	-418	380	-541	0	-355	120	0.724	0.275	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.48**
		$U_{14} - L_{13}$	736.92	-----	38	212	-251	430	423	-66	-22	54	0.729	0.263	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.60**
		$U_{14} - L_{15}$	595.59	-----	-19	167	-195	343	524	237	155	-389	0.704	0.289	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.15**
		$U_{15} - L_{16}$	586.38	-----	-171	168	-350	316	590	179	76	-264	0.693	0.305	1.00	Yes	0.381	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.59**
		$U_{16} - L_{17}$	690.82	-----	-127	154	-332	349	373	110	43	-415	0.748	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.09**
		$U_{17} - L_{18}$	641.16	-----	-111	127	-286	273	358	88	-43	-432	0.758	0.240	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.91**
		$U_{18} - L_{19}$	615.53	-----	-82	96	-282	243	290	77	-250	-623	0.728	0.272	1.00	Yes	0.400	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.22**
		$U_{19} - L_{20}$	567.48	-----	-40	46	-190	154	294	83	-265	-482	0.724	0.268	1.00	Yes	0.398	0.153	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.44**
		$U_{20} - L_{21}$	384.33	-----	-16	14	-120	92	234	66	-90	-516	0.691	0.303	1.00	Yes	0.380	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.41**
		$U_{21} - L_{22}$	352.24	-206.66	18	-78	-116	18	-575	-59	-469	-730	0.634	0.360	1.00	Yes	0.348	0.198	0.55	Yes	0.488	0.253	0.75	Yes	0.437	0.149	0.59	Yes					1.00	**3.90**
		$U_{23} - L_{22}$	415.55	-80.50	11	-17	-128	44	-293	-105	2	125	0.747	0.248	1.00	Yes	0.411	0.137	0.55	Yes	0.192	0.165	0.36	Yes	0.170	0.163	0.34	Yes					1.00	**3.65**
		$U_{24} - L_{23}$	420.85	-----	-18	17	-126	104	-256	-63	-79	130	0.757	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.37**
		$U_{25} - L_{24}$	593.27	-----	-40	48	-200	164	-301	-82	56	259	0.756	0.240	1.00	Yes	0.416	0.135	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.54**
		$U_{26} - L_{25}$	657.89	-----	-79	97	-289	265	-253	-57	-10	320	0.778	0.222	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.47**
		$U_{27} - L_{26}$	642.62	-----	-101	143	-287	287	-396	116	-162	250	0.760	0.234	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.19**
		$U_{28} - L_{27}$	674.58	-----	-93	147	-313	337	-550	42	-378	376	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.43**
		$U_{29} - L_{28}$	587.33	-----	-92	105	-347	324	-549	-42	-262	187	0.694	0.296	1.00	Yes	0.382	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.56**
		$U_{30} - L_{29}$	622.48	-----	51	164	-198	365	268	-115	77	214	0.736	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.90**
		$U_{30} - L_{31}$	725.96	-----	-56	233	-261	433	475	205	-109	-507	0.718	0.277	1.00	Yes	0.395	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.28**
		$U_{31} - L_{32}$	732.44	-----	-232	218	-420	370	504	141	16	-296	0.725	0.270	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.61**
		$U_{32} - L_{33}$	838.85	-----	-158	199	-344	332	423	116	-182	-652	0.764	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.97**
		$U_{33} - L_{34}$	835.58	-----	-145	176	-327	264	344	78	-561	-707	0.761	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.04**
		$U_{34} - L_{35}$	740.79	-----	-132	139	-300	218	141	-10	-824	-704	0.733	0.262	1.00	Yes	0.403	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.18**
		$U_{35} - L_{36}$	678.56	-----	-157	134	-314	215	152	14	-360	-612	0.735	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.97**
		$U_{36} - L_{37}$	520.00	-----	-78	33	-184	116	-252	-200	-301	-818	0.663	0.332	1.00	Yes	0.417	0.191	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.39**
		$U_{38} - L_{37}$	-----	-384.49	54	-104	-40	-37	-32	-229	-187	13	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1	Yes	0.737	0.119	0.86	Yes					1.00	**2.66**
		$U_{39} - L_{38}$	424.98	-231.77	56	-106	-139	56	195	-94	88	93	0.764	0.234	1.00	Yes	0.420	0.129	0.55	Yes	0.552	0.184	0.74	Yes	0.490	0.178	0.67	Yes					1.00	**4.82**
		$U_{40} - L_{39}$	393.45	-15.07	-5	-10	-139	86	-381	-103	-165	253	0.708	0.288	1.00	Yes	0.389	0.159	0.55	Yes	0.036	0.166	0.21	Yes	0.032	0.178	0.21	Yes					1.00	**2.96**
		$U_{41} - L_{40}$	558.33	-----	-56	30	-179	121	-413	-179	-262	21	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.12**
		$U_{42} - L_{41}$	624.14	-----	-120	89	-329	261	-403	-171	-315	36	0.738	0.259	1.00	Yes	0.406	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.24**
		$U_{43} - L_{42}$	769.73	-----	-134	101	-382	307	-375	-195	-262	7	0.761	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.82**
		$U_{44} - L_{43}$	786.70	-----	-157	150	-402	379	-168	18	-111	187	0.778	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.40**
	Structure 3	$U_0 - L_1$	604.24	-----	-72	107	-297	269	-232	-58	-1143	-433	0.654	0.340	1.00	Yes	0.360	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.86**
		$U_1 - L_2$	658.37	-----	-158	107	-348	243	166	-39	-552	-633	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.83**
		$U_2 - L_3$	556.85	-----	-123	84	-314	234	136	-24	-883	-719	0.658	0.338	1.00	Yes	0.362	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.01**
		$U_3 - L_4$	494.16	-----	-42	19	-138	86	155	-25	-342	-564	0.725	0.272	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.80**
		$U_4 - L_5$	349.93	-17.16	-12	-6	-134	78	202	12	-578	-689	0.629	0.370	1.00	Yes	0.346	0.204	0.55	Yes	0.041	0.265	0.31	Yes	0.036	0.171	0.21	Yes					1.00	**2.98**
		$U_5 - L_6$	122.38	-230.62	22	-100	-65	-38	-666	-224	-912	-476	0.220	0.391	0.62	Yes	0.121	0.215	0.34	Yes	0.540	0.451	1	Yes	0.488	0.127	0.62	Yes					1.00	**3.00**
		$U_7 - L_6$	445.94	-----	-29	-7	-97	34	-236	-172	-104	-94	0.802	0.193	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.37**
		$U_8 - L_7$	621.01	-----	-83	73	-209	143	-304	-107	-111	241	0.757	0.242	1.00	Yes	0.476	0.136	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.53**
		$U_9 - L_8$	839.52	-----	-73	95	-254	102	-215	8	-288	74	0.831	0.161	1.00	Yes	0.457	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.91**
		$U_{10} - L_9$	1000.04	-----	-46	159	-237	183	-98	86	-337	264	0.845	0.154	1.00	Yes	0.523	0.086	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.52**
		$U_{11} - L_{10}$	926.48	-----	-65	101	-294	239	-940	-234	19	424	0.741	0.251	1.00	Yes	0.459	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.45**
		$U_{12} - L_{11}$	933.83	-----	124	231	-84	350	695	70	243	476	0.747	0.245	1.00	Yes	0.462	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.06**
		$U_{13} - L_{12}$	605.02	-----	15	166	-88	284	635	317	109	-383	0.715	0.277	1.00	Yes	0.393	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.84**
		$U_{13} - L_{14}$	600.72	-----	-98	131	-276	223	700	287	-258	-278	0.710	0.284	1.00	Yes	0.391	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**1.76**
		$U_{14} - L_{15}$	588.28	-----	-31	147	-200	179	567	244	-1031	-646	0.695	0.301	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.50**
		$U_{15} - L_{16}$	444.53	-----	-14	63	-94	15	423	196	-1048	-676	0.652	0.340	1.00	Yes	0.359	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.44**
		$U_{17} - L_{16}$	-----	-331.54	53	-9	-77	-100	-238	1	405	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.241	1	Yes	0.702	0.128	0.83	Yes					1.00	**4.86**
		$U_{18} - L_{17}$	375.48	-282.48	52	-36	-133	-10	-195	-72	-525	-136	0.675	0.322	1.00	Yes	0.371	0.177	0.55	Yes	0.650	0.332	0.99	Yes	0.598	0.170	0.77	Yes					1.00	**5.42**
		$U_{19} - L_{18}$	450.14	-106.11	19	-21	-92	12	-204	-116	-225	-224	0.810	0.183	1.00	Yes	0.445	0.101	0.55	Yes	0.243	0.155	0.4	Yes	0.225	0.117	0.35	Yes					1.00	**3.48**
		$U_{20} - L_{19}$	578.41	-----	-16	4	-126	70	269	45	-367	-69	0.759	0.240	1.00	Yes	0.458	0.132	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.86**

Moment (Start) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression													
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.224	1.00	Yes	0.768	0.195	0.97	Yes	1.00	**3.34**
North Truss - Upper Chord	Structure 1	U_0 - U_1			-569.79		55	-806	-822	-270	-54	73	429	-434																		
		U_1 - U_2	-----		-572.79		-47	-76	-386	-605	-117	-34	-218	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.216	1.00	Yes	0.772	0.144	0.92	Yes	1.00	**2.24**
		U_2 - U_3	87.81		-579.31		-137	212	-632	-407	6	27	-33	210	0.101	0.186	0.29	Yes	0.068	0.121	0.19	Yes	0.788	0.205	1.00	Yes	0.781	0.150	0.94	Yes	1.00	**1.98**
		U_3 - U_4	378.79		-586.08		91	333	-778	-159	-4	31	210	39	0.434	0.221	0.66	Yes	0.298	0.151	0.45	Yes	0.797	0.202	1.00	Yes	0.790	0.185	0.98	Yes	1.00	**3.30**
		U_4 - U_5	301.42		-584.07		101	257	-866	-84	22	-28	70	-18	0.345	0.218	0.57	Yes	0.237	0.150	0.39	Yes	0.795	0.193	0.99	Yes	0.788	0.206	1.00	Yes	1.00	**2.56**
		U_5 - U_6	638.40		-486.60		239	451	-877	-31	-139	-59	342	-52	0.732	0.266	1.00	Yes	0.494	0.174	0.67	Yes	0.662	0.185	0.85	Yes	0.656	0.208	0.87	Yes	1.00	**3.74**
		U_6 - U_7	840.78		-58.81		367	222	-618	-49	-287	-108	412	-107	0.804	0.188	1.00	Yes	0.562	0.129	0.70	Yes	0.067	0.214	0.29	Yes	0.066	0.131	0.20	Yes	1.00	**3.64**
		U_7 - U_8	922.86		-----		42	1031	-1201	2054	-422	-2	164	-254	0.639	0.354	1.00	Yes	0.446	0.241	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		U_8 - U_9	435.15		-----		3155	-2567	606	-26	-555	375	-878	-141	0.357	0.637	1.00	Yes	0.244	0.433	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.41**
		U_9 - U_{10}	-----		-560.98		969	-731	-894	-527	-2	1148	-929	1264	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.268	1.00	Yes	0.716	0.217	0.94	Yes	1.00	**17.17**
		U_{10} - U_{11}	690.26		-665.08		541	98	-256	-574	-82	105	146	206	0.749	0.162	0.92	Yes	0.499	0.104	0.61	Yes	0.856	0.143	1.00	Yes	0.849	0.129	0.98	Yes	1.00	**6.32**
		U_{11} - U_{12}	105.53		-872.38		352	-38	-379	-551	52	388	194	663	0.084	0.171	0.26	Yes	0.057	0.114	0.18	Yes	0.826	0.169	1.00	Yes	0.818	0.091	0.91	Yes	1.00	**3.96**
		U_{12} - U_{13}	-----		-1210.36		49	-224	-637	-602	316	210	593	390	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.175	1.00	Yes	0.808	0.088	0.90	Yes	1.00	**3.02**
		U_{13} - U_{14}	-----		-1382.68		-118	-359	-949	-871	206	164	375	561	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.196	1.00	Yes	0.793	0.105	0.90	Yes	1.00	**2.87**
		U_{14} - U_{15}	-----		-1339.00		-272	-250	-1278	-875	213	31	579	150	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.220	1.00	Yes	0.768	0.141	0.91	Yes	1.00	**2.04**
		U_{15} - U_{16}	-----		-1419.88		-149	-433	-892	-729	85	38	470	185	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.171	1.00	Yes	0.814	0.098	0.92	Yes	1.00	**2.18**
		U_{16} - U_{17}	-----		-1372.89		-335	-191	-1404	-383	156	-49	616	104	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.201	1.00	Yes	0.787	0.155	0.95	Yes	1.00	**2.35**
		U_{17} - U_{18}	-----		-1029.30		-208	-75	-907	-191	-6	-60	418	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1.00	Yes	0.805	0.148	0.96	Yes	1.00	**2.45**
		U_{18} - U_{19}	-----		-721.54		-200	-69	-781	-61	26	-120	383	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1.00	Yes	0.812	0.157	0.97	Yes	1.00	**2.34**
		U_{19} - U_{20}	-----		-559.12		-254	157	-1815	1384	-109	-43	376	-536	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.189	0.83	Yes	0.629	0.365	1.00	Yes	1.00	**5.08**
	Structure 2	U_0 - U_1	-----		-626.57		653	-1507	-620	-840	-37	62	509	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.213	0.96	Yes	0.740	0.256	1.00	Yes	1.00	**5.60**
		U_1 - U_2	-----		-883.29		75	-786	-382	-482	-115	-335	-328	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.136	1.00	Yes	0.853	0.119	0.98	Yes	1.00	**3.60**
		U_2 - U_3	-----		-1230.93		184	-819	-710	-821	-33	4	-324	427	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.121	1.00	Yes	0.874	0.084	0.96	Yes	1.00	**3.77**
		U_3 - U_4	-----		-1313.76		-413	-407	-1255	-1594	341	515	393	619	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.239	1.00	Yes	0.748	0.142	0.90	Yes	1.00	**2.42**
		U_4 - U_5	-----		-1515.41		-419	-408	-1668	-1213	411	139	453	223	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.214	1.00	Yes	0.778	0.138	0.92	Yes	1.00	**3.11**
		U_5 - U_6	-----		-1527.35		-427	-8	-1774	-988	186	-210	249	447	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.209	1.00	Yes	0.784	0.147	0.94	Yes	1.00	**2.40**
		U_6 - U_7	-----		-1363.66		-285	-104	-1341	-1510	-135	-185	303	159	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1.00	Yes	0.776	0.135	0.92	Yes	1.00	**2.24**
		U_7 - U_8	-----		-1393.31		-193	-176	-1627	-787	-106	-185	246	95	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1.00	Yes	0.793	0.145	0.94	Yes	1.00	**2.33**
		U_8 - U_9	-----		-1179.93		-276	114	-1460	-669	-94	-198	360	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.192	1.00	Yes	0.800	0.155	0.96	Yes	1.00	**2.43**
		U_9 - U_{10}	147.79		-961.51		-77	343	-1353	-77	-139	-153	261	-29	0.108	0.193	0.31	Yes	0.073	0.131	0.21	Yes	0.835	0.155	0.99	Yes	0.830	0.165	1.00	Yes	1.00	**2.73**
		U_{10} - U_{11}	496.00		-794.03		173	371	-1387	-158	-178	-163	438	-4	0.419	0.249	0.67	Yes	0.285	0.162	0.45	Yes	0.794	0.200	1.00	Yes	0.789	0.196	0.99	Yes	1.00	**3.56**
		U_{11} - U_{12}	829.93		-419.48		242	539	-1622	322	-349	-126	518	86	0.701	0.292	1.00	Yes	0.471	0.195	0.67	Yes	0.419	0.200	0.62	Yes	0.417	0.229	0.65	Yes	1.00	**4.37**
		U_{12} - U_{13}	1158.58		-----		479	153	-1261	-448	-437	-386	536	-251	0.782	0.210	1.00	Yes	0.558	0.143	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		U_{13} - U_{14}	1194.52		-----		51	1804	-2177	3835	-782	-417	-5	-773	0.587	0.408	1.00	Yes	0.416	0.268	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		U_{14} - U_{15}	577.84		-----		6560	-4168	1090	191	-1157	40	-1464	-554	0.284	0.707	1.00	Yes	0.201	0.464	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.00**
		U_{15} - U_{16}	1158.03		-----		525	276	-1710	-1585	-477	368	-318	1143	0.700	0.291	1.00	Yes	0.498	0.198	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.42**
		U_{16} - U_{17}	-----		-745.87		2599	-2195	-1196	-1329	683	247	1070	771	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.343	1.00	Yes	0.647	0.327	0.98	Yes	1.00	**17.95**
		U_{17} - U_{18}	-----		-637.56		894	-786	-1096	-467	90	831	99	963	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.241	1.00	Yes	0.753	0.186	0.94	Yes	1.00	**9.19**
		U_{18} - U_{19}	-----		-711.07		772	-684	-570	-679	312	236	534	379	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.151	1.00	Yes	0.840	0.131	0.98	Yes	1.00	**6.48**
		U_{19} - U_{20}	383.55		-703.03		369	261	-743	-554	3	-4	181	445	0.360	0.179	0.54	Yes	0.238	0.117	0.36	Yes	0.781	0.214	1.00	Yes	0.776	0.119	0.90	Yes	1.00	**3.66**
	Structure 3	U_{20} - U_{21}	263.08		-864.96		241	-16	-1034	-279	-53	-72	359	251	0.204	0.189	0.40	Yes	0.143	0.123	0.27	Yes	0.795	0.197	1.00	Yes	0.789	0.150	0.94	Yes	1.00	**3.75**
		U_{21} - U_{22}	68.57		-808.72		-38	4	-810	-1134	-3	66	152	393	0.053	0.207	0.27	Yes	0.038	0.139	0.18	Yes	0.743	0.255	1.00	Yes	0.738	0.164	0.91	Yes	1.00	**2.44**
		U_{22} - U_{23}	71.65		-820.10		67	-39	-1159	-546	58	-2	463	144	0.056	0.218	0.28	Yes	0.039	0.147	0.19	Yes	0.754	0.240	1.00	Yes	0.748	0.168	0.92	Yes	1.00	**2.48**
		U_{23} - U_{24}	59.25		-872.98		111	-63	-1086	-216	-41	6	378	94	0.046	0.199	0.25	Yes	0.032	0.129	0.17	Yes	0.803	0.192	1.00	Yes	0.797	0.157	0.96	Yes	1.00	**2.83**
		U_{24} - U_{25}	268.20		-709.78		175	268	-959	-537	-57	-86	391	-126	0.252	0.206	0.46	Yes	0.167	0.135	0.31	Yes	0.788	0.203	1.00	Yes	0.783	0.154	0.94	Yes	1.00	**2.74**
		U_{25} - U_{26}	502.30		-690.15		200	456	-1079	210	-160	-75	318	-24	0.504	0.230	0.74	Yes	0.331	0.146	0.48	Yes	0.820	0.162	0.99	Yes	0.815	0.183	1.00	Yes	1.00	**3.57**
		U_{26} - U_{27}	715.20		-456.52		344	396	-1281	322	-235	-70	427	-77	0.718	0.280	1.00	Yes	0.478	0.185	0.67	Yes	0.542	0.186	0.73	Yes	0.539	0.217	0.76	Yes	1.00	**4.06**
		U_{27} - U_{28}	1046.29		-208.92		325	567	-1425	617	-368	-10	416	-17	0.771	0.223	1.00	Yes	0.513	0.147	0.66	Yes	0.182	0.089	0.28	Yes	0.181	0.179	0.37	Yes	1.00	**5.53**
		U_{28} - U_{29}	1235.54		-----		493	181	-1747	-397	-380	-255	576	-146	0.747	0.247	1.00	Yes	0.531	0.166	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		U_{29} - U_{30}	1184.95		-----		196	1598	-2234	3942	-663	-338	112	-496	0.583	0.410	1.00	Yes	0.413	0.269	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		U_{30} - U_{31}	575.20		-93.65		6792	-4369	720	-266	-1221	149	-83	89	0.283	0.712	1.00	Yes	0.200	0.467	0.67	Yes	0.055	0.493	0.55	Yes	0.054	0.629	0.69	Yes	1.00	**13.22**
		U_{31} - U_{32}	1020.37		-----		413	89	-1802	-89	-313	482	-456	829	0.689	0.306	1.00	Yes	0.491	0.208	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.64**
		U_{32} - U_{33}	-----		-694.11		1007	-1178	-499	-1837	542	329	620	789	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.303	1.00	Yes	0.690	0.259	0.95	Yes	1.00	**8.81**
		U_{33} - U_{34}	710.06		-702.28		385	266	-541	-1247	17	255	351	1056	0.600	0.305	0.91	Yes	0.408	0.201	0.61	Yes	0.702	0.295	1.00	Yes	0.698	0.176	0.88	Yes	1.00	**4.48**
		U_{34} - U_{35}	544.11		-935.28		468	166	-667	-868	138	132	601	567	0.399	0.171	0.57	Yes	0.270	0.115	0.39	Yes	0.812	0.188	1.00	Yes	0.807	0.106	0.92	Yes	1.00	**4.66**
		U_{35} - U_{36}	273.51		-1159.94		249	-86	-1019	-764	73	78	334	529	0.158	0.152	0.31	Yes	0.111	0.101	0.22	Yes	0.792	0.206	1.00	Yes	0.787	0.108	0.90	Yes	1.00	**4.08**
		U_{36} - U_{37}	-----		-1329.03		-66	28	-1070	-1760	89	-1	382	343	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.232	1.00	Yes	0.757	0.157	0.92	Yes	1.00	**2.85**
		U_{37} - U_{38}	-----		-1336.10		118	-153	-1678	-1026	45	17	410	325	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.229	1.00	Yes	0.761	0.150	0.92	Yes	1.00	**2.86**
		U_{38} - U_{39}	-----		-1511.43		108	-295	-1533	-1133	132	-34	707	249	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.214	1.00	Yes	0.776	0.127	0.91	Yes	1.00	**2.95**
		U_{39} - U_{40}	-----		-1444.97		-206	-336	-1905	-1671	31	-28	484	194	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.249	1.00	Yes	0.742	0.158	0.90	Yes	1.00	**2.83**
		U_{40} - U_{41}	-----		-1358.60		-245	-336	-1760	-864	47	-115	571	63	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.220	1.00	Yes	0.774	0.157	0.94	Yes	1.00	**2.77**
		U_{41} - U_{42}	-----		-1098.42		-134	-139	-1842	-608	-69	-95	444	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.216	1.00	Yes	0.780	0.188	0.97	Yes	1.00	**3.49**
		U_{42} - U_{43}	-----		-833.49		-130	-62	-1137	-171	-40	-93	373	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.181	1.00	Yes	0.804	0.172	0.98	Yes	1.00	**3.30**
		U_{43} - U_{44}	-----		-563.60		-12	-220	-1928	1038	-69	37	292	-410	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.232	0.91	Yes	0.666	0.327	1.00	Yes	1.00	**5.40**
	Structure 4	U_0 - U_1	-----		-647.18		763	-1318	-998	-862	-70	-93	1117	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1.00	Yes	0.728	0.265	1.00	Yes	1.00	**6.51**
		U_1 - U_2	-----		-732.13		123	-776	-81	-293	-65	-344	61	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.167	1.00	Yes	0.824	0.156	0.98	Yes	1.00	**2.68**
		U_2 - U_3	-----		-1063.68		135	-994	-292	-397	9	391	-298	405	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.155	1.00	Yes	0.832	0.162	1.00	Yes	1.00	**2.54**
		U_3 - U_4	-----		-1369.84		-161	-438	-795	-1116	285	384	326	614	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.204	1.00	Yes	0.785	0.123	0.91	Yes	1.00	**2.71**
		U_4 - U_5	-----		-1404.13		-373	-136	-969	-899	517	156	470	287	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.183	1.00	Yes	0.805	0.107	0.92	Yes	1.00	**2.38**
		U_5 - U_6	-----		-1356.86		-183	-275	-849	-1218	139	-152	227	358	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.206	1.00	Yes	0.778	0.134	0.92	Yes	1.00	**2.23**
		U_6 - U_7	-----		-1347.92		-376	-100	-1545	-650	-91	-188	381	50	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1.00	Yes	0.773	0.170	0.95	Yes	1.00	**2.27**
		U_7 - U_8	-----		-1230.62		-163	6	-833	-600	-62	-177	299	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.165	1.00	Yes	0.822	0.115	0.94	Yes	1.00	**2.39**
		U_8 - U_9	-----		-905.08		-101	177	-831	-2	-31	-154	292	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.138	1.00	Yes	0.849	0.138	0.99	Yes	1.00	**2.01**
		U_9 - U_{10}	155.29		-622.80		-75	229	-903	132	-99	-104	224	-51	0.168	0.238	0.41	Yes	0.112	0.153	0.27	Yes	0.802	0.173	0.98	Yes	0.795	0.202	1.00	Yes	1.00	**2.41**
		U_{10} - U_{11}	689.68		-400.89		316	232	-797	154	-242	-138	435	-224	0.748	0.249	1.00	Yes	0.507	0.167	0.68	Yes	0.516	0.141	0.66	Yes	0.512	0.179	0.70	Yes	1.00	**4.67**
		U_{11} - U_{12}	825.18		-----		-24	907	-1235	1573	-413	-105	182	-370	0.676	0.315	1.00	Yes	0.463	0.214	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		U_{12} - U_{13}	561.68		-----		3488	-2060	448	136	-755	93	-649	-265	0.389	0.605	1.00	Yes	0.271	0.413	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.45**
		U_{13} - U_{14}	871.42		-38.61		237	440	-300	-402	-342	-226	-173	494	0.833	0.161	1.00	Yes	0.582	0.111	0.70	Yes	0.044	0.167	0.22	Yes	0.043	0.094	0.14	Yes	1.00	**3.94**
		U_{14} - U_{15}	745.23		-219.54		480	344	-100	-224	-160	-41	127	19	0.854	0.141	1.00	Yes	0.576	0.092	0.67	Yes	0.299	0.154	0.46	Yes	0.296	0.114	0.42	Yes	1.00	**4.21**
		U_{15} - U_{16}	422.73		-559.45		331	231	-377	-610	-66	132	6	476	0.485	0.225	0.71	Yes	0.333	0.154	0.49	Yes	0.761	0.229	1.00	Yes	0.754	0.145	0.90	Yes	1.00	**2.99**
		U_{16} - U_{17}	482.15		-580.97		446	159	-572	-378	61	70	450	215	0.553	0.212	0.77	Yes	0.379	0.145	0.53	Yes	0.791	0.208	1.00	Yes	0.783	0.136	0.92	Yes	1.00	**3.55**
		U_{17} - U_{18}	191.45		-562.52		299	-74	-569	-376	-43	71	279	209	0.219	0.182	0.41	Yes	0.148	0.119	0.27	Yes	0.765	0.231	1.00	Yes	0.759	0.135	0.90	Yes	1.00	**2.25**
		U_{18} - U_{19}	76.40		-547.10		149	-42	-769	-267	-23	28	451	16	0.088	0.259	0.35	Yes	0.060	0.177	0.24	Yes	0.744	0.254	1.00	Yes	0.738	0.183	0.93	Yes	1.00	**2.21**
		U_{19} - U_{20}	39.25		-537.67		178	-310	-1128	710	-119	115	369	-358	0.045	0.330	0.38	Yes	0.031	0.226	0.26	Yes	0.732	0.162	0.90	Yes	0.725	0.268	1.00	Yes	1.00	**3.83**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-73.35	1909	-2871	-406	257	-405	-1490	-31	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.133	0.771	0.91	Yes	0.132	0.862	1.00	Yes	1.00	**21.57**
		L_1 - L_2	464.25	-----	318	-772	-227	-475	-241	-149	190	-79	0.711	0.283	1.00	Yes	0.433	0.190	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		L_2 - L_3	693.34	-28.10	-20	22	-632	-727	-32	23	-151	41	0.798	0.200	1.00	Yes	0.461	0.120	0.59	Yes	0.038	0.223	0.27	Yes	0.038	0.176	0.22	Yes	1.00	**2.53**
		L_3 - L_4	701.75	-142.46	86	252	-681	-340	61	69	117	121	0.807	0.184	1.00	Yes	0.480	0.119	0.60	Yes	0.195	0.185	0.38	Yes	0.193	0.164	0.36	Yes	1.00	**2.59**
		L_4 - L_5	318.47	-499.69	98	592	-884	301	53	35	-196	305	0.412	0.288	0.71	Yes	0.247	0.188	0.44	Yes	0.768	0.131	0.90	Yes	0.761	0.234	1.00	Yes	1.00	**2.69**
		L_5 - L_6	-----	-723.14	161	590	-508	95	71	126	254	66	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.153	1.00	Yes	0.834	0.131	0.97	Yes	1.00	**2.82**
		L_6 - L_7	-----	-1064.88	199	176	-875	114	118	-111	-23	471	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.118	0.99	Yes	0.857	0.137	1.00	Yes	1.00	**3.87**
		L_7 - L_8	-----	-1257.13	106	978	-577	1518	59	195	316	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.176	0.99	Yes	0.796	0.201	1.00	Yes	1.00	**4.73**
		L_8 - L_9	-----	-1176.94	1750	-159	541	-14	-243	50	-203	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.236	1.00	Yes	0.745	0.232	0.98	Yes	1.00	**6.01**
		L_9 - L_{10}	-----	-942.25	1378	-1527	-855	-95	-682	-913	702	304	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.173	0.94	Yes	0.758	0.240	1.00	Yes	1.00	**10.94**
		L_{10} - L_{11}	106.79	-563.62	533	-6	-25	-390	140	49	54	-29	0.138	0.165	0.31	Yes	0.081	0.100	0.19	Yes	0.866	0.109	0.98	Yes	0.859	0.141	1.00	Yes	1.00	**3.51**
		L_{11} - L_{12}	568.92	-----	586	-836	25	-583	-217	-185	116	45	0.737	0.259	1.00	Yes	0.442	0.170	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		L_{12} - L_{13}	1095.87	-----	183	-66	-561	-630	12	37	82	155	0.865	0.130	1.00	Yes	0.553	0.078	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		L_{13} - L_{14}	1273.01	-----	519	-1620	-342	-1220	-46	-174	305	95	0.749	0.249	1.00	Yes	0.485	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		L_{14} - L_{15}	1547.99	-----	-371	-27	-1842	-648	-118	-66	-169	219	0.756	0.237	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		L_{15} - L_{16}	1644.89	-----	-190	-402	-1333	-1423	-89	-39	89	-293	0.804	0.192	1.00	Yes	0.516	0.113	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		L_{16} - L_{17}	1151.50	-----	-427	90	-1539	-96	-90	-57	-452	210	0.728	0.266	1.00	Yes	0.472	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_{17} - L_{18}	880.56	-----	-183	-38	-1034	-74	-58	9	126	-223	0.767	0.228	1.00	Yes	0.491	0.137	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		L_{18} - L_{19}	242.62	-----	-196	283	-1503	890	-23	-37	-845	81	0.371	0.626	1.00	Yes	0.251	0.397	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.01**
		L_{19} - L_{20}	131.41	-363.56	-80	-50	-1144	535	-24	-6	292	66	0.201	0.404	0.61	Yes	0.123	0.271	0.40	Yes	0.660	0.241	0.91	Yes	0.655	0.343	1.00	Yes	1.00	**6.05**
	Structure 2	L_0 - L_1	43.01	-184.15	1192	-3590	-141	65	-346	-1202	-21	-73	0.052	0.928	0.99	Yes	0.031	0.592	0.63	Yes	0.265	0.625	0.90	Yes	0.263	0.731	1.00	Yes	1.00	**18.49**
		L_1 - L_2	540.96	-----	692	-1450	18	-596	-245	-231	-124	145	0.657	0.335	1.00	Yes	0.391	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		L_2 - L_3	1007.08	-----	391	-1048	-573	-945	-127	-179	273	328	0.804	0.190	1.00	Yes	0.529	0.111	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_3 - L_4	1334.90	-----	297	-1291	-532	-1536	-247	-123	261	103	0.792	0.204	1.00	Yes	0.534	0.131	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		L_4 - L_5	1708.66	-----	-266	-1238	-1817	-1333	139	-385	-33	75	0.797	0.198	1.00	Yes	0.527	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		L_5 - L_6	1884.19	-----	-141	-361	-1663	-1922	117	-16	216	52	0.808	0.184	1.00	Yes	0.543	0.112	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		L_6 - L_7	1821.28	-----	-433	-96	-2269	-1437	-164	45	-129	358	0.771	0.222	1.00	Yes	0.512	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		L_7 - L_8	1373.03	-----	-211	296	-1777	-747	-131	8	132	-88	0.787	0.207	1.00	Yes	0.517	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		L_8 - L_9	1089.64	-265.86	-94	533	-1443	36	-27	16	-226	406	0.762	0.233	1.00	Yes	0.513	0.146	0.66	Yes	0.220	0.149	0.37	Yes	0.219	0.195	0.42	Yes	1.00	**3.58**
		L_9 - L_{10}	822.09	-612.66	-106	727	-1404	-211	16	92	278	-189	0.734	0.258	1.00	Yes	0.427	0.160	0.59	Yes	0.648	0.171	0.82	Yes	0.643	0.225	0.87	Yes	1.00	**4.36**
		L_{10} - L_{11}	70.80	-687.22	94	531	-1071	623	57	1	-413	96	0.071	0.243	0.32	Yes	0.041	0.152	0.20	Yes	0.813	0.101	0.92	Yes	0.807	0.187	1.00	Yes	1.00	**3.39**
		L_{11} - L_{12}	-----	-1031.14	98	992	-1108	845	83	238	156	76	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.135	0.99	Yes	0.846	0.151	1.00	Yes	1.00	**4.35**
		L_{12} - L_{13}	-----	-1319.38	304	-290	-1645	-1048	177	-140	-196	183	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.202	1.00	Yes	0.789	0.164	0.96	Yes	1.00	**5.30**
		L_{13} - L_{14}	-----	-1364.95	-222	1290	-2284	3585	-91	-58	333	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.207	0.90	Yes	0.687	0.313	1.00	Yes	1.00	**6.69**
		L_{14} - L_{15}	-----	-1242.14	4277	-2256	1056	-446	-49	287	-306	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.244	0.88	Yes	0.625	0.374	1.00	Yes	1.00	**8.15**
		L_{15} - L_{16}	-----	-1342.02	19	255	-1806	-532	-411	-286	249	195	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.188	1.00	Yes	0.803	0.180	0.99	Yes	1.00	**5.33**
		L_{16} - L_{17}	-----	-919.75	2620	-2138	-305	-1413	-687	-690	-82	62	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.242	0.92	Yes	0.670	0.323	1.00	Yes	1.00	**11.97**
		L_{17} - L_{18}	604.23	-545.93	2035	-2114	-940	-1719	-961	-526	656	293	0.539	0.454	1.00	Yes	0.314	0.279	0.60	Yes	0.577	0.278	0.86	Yes	0.573	0.338	0.92	Yes	1.00	**13.40**
		L_{18} - L_{19}	111.11	-651.15	674	119	-84	-370	-6	33	126	130	0.126	0.150	0.28	Yes	0.073	0.089	0.17	Yes	0.873	0.125	1.00	Yes	0.868	0.130	1.00	Yes	1.00	**3.37**
		L_{19} - L_{20}	635.67	-----	644	-1044	-353	-944	-27	-235	455	-5	0.720	0.271	1.00	Yes	0.426	0.171	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_{20} - L_{21}	984.49	-493.78	588	60	-1209	-1062	-102	-105	-14	212	0.796	0.203	1.00	Yes	0.523	0.117	0.65	Yes	0.473	0.236	0.71	Yes	0.469	0.180	0.65	Yes	1.00	**5.16**
		L_{21} - L_{22}	911.55	-227.60	242	-74	-905	-1538	-92	-32	273	10	0.737	0.259	1.00	Yes	0.494	0.157	0.66	Yes	0.218	0.257	0.48	Yes	0.216	0.229	0.45	Yes	1.00	**3.76**
		L_{22} - L_{23}	800.78	-67.95	24	51	-2182	-194	5	-25	-235	136	0.647	0.350	1.00	Yes	0.434	0.212	0.65	Yes	0.065	0.276	0.35	Yes	0.065	0.325	0.39	Yes	1.00	**4.05**
		L_{23} - L_{24}	898.35	-296.92	3	369	-1601	-953	10	77	249	-191	0.726	0.265	1.00	Yes	0.477	0.153	0.64	Yes	0.284	0.266	0.56	Yes	0.282	0.238	0.53	Yes	1.00	**4.63**
		L_{24} - L_{25}	562.44	-436.35	241	359	-1427	-257	62	0	-324	522	0.637	0.355	1.00	Yes	0.377	0.225	0.61	Yes	0.585	0.243	0.83	Yes	0.582	0.275	0.86	Yes	1.00	**4.69**
		L_{25} - L_{26}	216.14	-597.00	100	653	-1035	-165	36	120	235	-166	0.245	0.236	0.49	Yes	0.141	0.140	0.29	Yes	0.801	0.147	0.95	Yes	0.796	0.200	1.00	Yes	1.00	**4.69**
		L_{26} - L_{27}	-----	-742.29	318	380	-1339	151	164	56	-362	300	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.136	0.93	Yes	0.779	0.214	1.00	Yes	1.00	**5.05**
		L_{27} - L_{28}	-----	-1066.70	205	1070	-1714	268	261	536	342	-468	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.215	1.00	Yes	0.777	0.211	0.99	Yes	1.00	**7.23**
		L_{28} - L_{29}	-----	-1189.86	469	-645	-2067	-1664	464	-163	-470	425	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.281	1.00	Yes	0.712	0.205	0.92	Yes	1.00	**8.16**
		L_{29} - L_{30}	-----	-1010.80	-211	1359	-4575	5519	-508	-1079	1027	563	-----	-----	-----	-----	-----	-----	-----	-----	0.513	0.308	0.83	Yes	0.509	0.482	1.00	Yes	1.00	**12.81**
		L_{30} - L_{31}	-----	-1078.11	5201	-2640	725	-322	554	624	-85	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.547	0.315	0.87	Yes	0.542	0.454	1.00	Yes	1.00	**10.67**
		L_{31} - L_{32}	-----	-1286.20	227	-212	-1991	-271	-319	144	363	132	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1.00	Yes	0.776	0.201	0.98	Yes	1.00	**6.59**
		L_{32} - L_{33}	31.49	-935.41	1677	-1250	-469	-1067	698	-553	262	349	0.022	0.294	0.32	Yes	0.015	0.178	0.20	Yes	0.773	0.144	0.92	Yes	0.767	0.228	1.00	Yes	1.00	**10.41**
		L_{33} - L_{34}	554.57	-----	1397	-2092	-404	-1242	-453	-437	574	172	0.554	0.443	1.00	Yes	0.325	0.278	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.90**
		L_{34} - L_{35}	872.94	-689.33	697	71	-647	-1059	-46	62	243	413	0.779	0.219	1.00	Yes	0.454	0.135	0.59	Yes	0.729	0.198	0.93	Yes	0.724	0.169	0.90	Yes	1.00	**6.22**
		L_{35} - L_{36}	1117.35	-----	551	-981	-570	-1116	-7	-191	666	159	0.782	0.213	1.00	Yes	0.526	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		L_{36} - L_{37}	1429.31	-143.40	335	70	-1178	-1405	-114	1	-126	220	0.820	0.173	1.00	Yes	0.538	0.102	0.65	Yes	0.097	0.192	0.29	Yes	0.097	0.155	0.26	Yes	1.00	**4.68**
		L_{37} - L_{38}	1834.93	-----	161	-323	-2337	-1738	7	-46	220	-130	0.777	0.219	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		L_{38} - L_{39}	1783.59	-----	-256	-160	-2425	-1370	-56	5	-158	248	0.765	0.231	1.00	Yes	0.514	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		L_{39} - L_{40}	1718.32	-----	-140	-382	-1851	-1616	-25	-40	113	-355	0.801	0.199	1.00	Yes	0.530	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		L_{40} - L_{41}	1290.77	-----	-305	-49	-1765	-439	-58	-11	-373	366	0.758	0.236	1.00	Yes	0.511	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		L_{41} - L_{42}	993.08	-----	-123	-126	-1309	-327	-31	-34	178	-201	0.783	0.211	1.00	Yes	0.513	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{42} - L_{43}	487.05	-----	-206	9	-1352	72	-63	-67	-387	459	0.623	0.374	1.00	Yes	0.372	0.216	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_{43} - L_{44}	245.52	-197.94	-39	-29	-2704	864	-173	-50	890	260	0.298	0.696	1.00	Yes	0.177	0.444	0.63	Yes	0.285	0.434	0.72	Yes	0.283	0.550	0.84	Yes	1.00	**12.24**
	Structure 3	L_0 - L_1	187.25	-256.42	955	-1706	-18	-80	-138	-626	-9	-42	0.298	0.654	0.96	Yes	0.183	0.429	0.62	Yes	0.484	0.362	0.85	Yes	0.480	0.515	1.00	Yes	1.00	**9.91**
		L_1 - L_2	332.68	-----	915	-1433	120	-625	-172	-63	-288	184	0.509	0.490	1.00	Yes	0.344	0.306	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.38**
		L_2 - L_3	875.24	-----	409	-982	-332	-768	-36	67	330	347	0.762	0.234	1.00	Yes	0.488	0.141	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_3 - L_4	1229.64	-----	372	-1038	-490	-1224	-242	-112	414	239	0.778	0.217	1.00	Yes	0.504	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		L_4 - L_5	1656.28	-----	-326	-214	-1464	-1041	78	113	-48	97	0.809	0.184	1.00	Yes	0.519	0.107	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		L_5 - L_6	1541.63	-----	35	-1862	-936	-1394	-186	-164	280	138	0.753	0.244	1.00	Yes	0.489	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		L_6 - L_7	1270.79	-----	-405	236	-1571	-148	-183	17	-99	344	0.747	0.245	1.00	Yes	0.484	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_7 - L_8	1055.37	-----	-88	109	-782	-490	-30	38	199	19	0.833	0.162	1.00	Yes	0.533	0.097	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		L_8 - L_9	552.34	-185.29	-150	372	-893	353	-9	46	-270	244	0.715	0.284	1.00	Yes	0.429	0.186	0.62	Yes	0.285	0.134	0.42	Yes	0.282	0.237	0.52	Yes	1.00	**3.26**
		L_9 - L_{10}	67.22	-514.85	-3	481	-810	257	69	135	224	127	0.087	0.254	0.35	Yes	0.051	0.153	0.21	Yes	0.791	0.149	0.95	Yes	0.784	0.214	1.00	Yes	1.00	**4.00**
		L_{10} - L_{11}	-----	-998.13	221	187	-1233	116	135	-214	-152	683	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.149	0.97	Yes	0.803	0.194	1.00	Yes	1.00	**6.12**
		L_{11} - L_{12}	-----	-1202.90	116	1065	-654	1775	-97	-27	162	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.213	0.99	Yes	0.762	0.235	1.00	Yes	1.00	**6.33**
		L_{12} - L_{13}	-----	-1135.75	2076	-544	431	-9	-204	7	-211	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.260	0.99	Yes	0.719	0.275	1.00	Yes	1.00	**7.27**
		L_{13} - L_{14}	-----	-988.98	1290	-1227	-1162	-55	-731	-655	335	207	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.159	0.97	Yes	0.796	0.203	1.00	Yes	1.00	**10.89**
		L_{14} - L_{15}	-----	-739.90	565	164	20	-216	148	-8	46	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.129	1.00	Yes	0.854	0.125	0.98	Yes	1.00	**2.70**
		L_{15} - L_{16}	548.94	-----	632	-834	-286	-733	-359	-349	141	72	0.711	0.285	1.00	Yes	0.427	0.185	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_{16} - L_{17}	690.67	-315.47	408	51	-732	-467	90	-45	47	149	0.795	0.201	1.00	Yes	0.472	0.130	0.61	Yes	0.431	0.218	0.65	Yes	0.427	0.177	0.61	Yes	1.00	**3.36**
		L_{17} - L_{18}	664.89	-161.53	127	8	-845	-425	5	8	170	-18	0.765	0.231	1.00	Yes	0.443	0.139	0.59	Yes	0.221	0.230	0.46	Yes	0.219	0.204	0.43	Yes	1.00	**3.25**
		L_{18} - L_{19}	423.36	-31.92	64	-6	-843	-129	25	-110	-153	454	0.648	0.350	1.00	Yes	0.395	0.232	0.63	Yes	0.058	0.244	0.31	Yes	0.057	0.253	0.32	Yes	1.00	**2.97**
		L_{19} - L_{20}	57.66	-44.79	108	-225	-1941	794	-7	-2	1499	408	0.088	0.904	1.00	Yes	0.052	0.545	0.60	Yes	0.081	0.612	0.70	Yes	0.081	0.583	0.67	Yes	1.00	**12.69**

Moment (Start) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	U_0 - L_0			-----	-284.73	-58	88	-171	223	-30	-10	-387	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.262	0.97	Yes	0.665	0.332	1.00	Yes	1.00	**1.25**
		U_1 - L_1			20.40	-325.68	27	-15	-231	237	0	-2	-47	23	0.037	0.317	0.36	Yes	0.020	0.174	0.20	Yes	0.712	0.083	0.80	Yes	0.689	0.304	1.00	Yes	1.00	**2.84**
		U_2 - L_2			120.85	-279.62	104	-116	-275	315	98	39	-433	-83	0.217	0.529	0.75	Yes	0.120	0.291	0.42	Yes	0.611	0.218	0.83	Yes	0.592	0.403	1.00	Yes	1.00	**5.01**
		U_3 - L_3			218.53	-263.38	274	-256	-308	342	160	153	-333	-56	0.393	0.534	0.93	Yes	0.216	0.294	0.51	Yes	0.577	0.188	0.77	Yes	0.557	0.437	1.00	Yes	1.00	**7.53**
		U_4 - L_4			-----	-204.17	443	-434	-54	39	-518	-133	-7	140	-----	-----	-----	-----	-----	-----	-----	-----	0.449	0.267	0.72	Yes	0.432	0.566	1.00	Yes	1.00	**7.31**
		U_5 - L_5			-----	-420.92	238	-270	67	-90	-145	-171	19	21	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.133	0.90	Yes	0.726	0.273	1.00	Yes	1.00	**2.43**
		U_6 - L_6			-----	-489.61	249	-264	80	-89	60	-57	74	91	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.101	0.89	Yes	0.739	0.256	1.00	Yes	1.00	**2.17**
		U_7 - L_7			-----	-413.18	275	-293	129	-143	166	29	-145	21	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.147	0.89	Yes	0.674	0.324	1.00	Yes	1.00	**1.46**
		U_8 - L_8			-----	-1206.19	488	-584	-349	411	921	289	-118	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.124	1.00	Yes	0.836	0.109	0.95	Yes	1.00	**3.91**
		U_9 - L_9			-----	-635.72	-170	199	-409	445	-358	-147	-684	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.208	0.99	Yes	0.736	0.259	1.00	Yes	1.00	**2.66**
		U_{10} - L_{10}			-----	-689.58	-122	105	-334	342	-706	-400	-930	-621	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.246	1.00	Yes	0.709	0.191	0.90	Yes	1.00	**2.96**
		U_{11} - L_{11}			-----	-653.02	-119	214	-395	501	-551	-281	-761	-546	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1.00	Yes	0.760	0.232	1.00	Yes	1.00	**3.33**
		U_{12} - L_{12}			-----	-512.83	-93	103	-340	336	-255	-162	-348	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.161	0.91	Yes	0.704	0.290	1.00	Yes	1.00	**2.88**
		U_{13} - L_{13}			-----	-364.80	-46	69	-232	261	-96	16	-41	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.108	0.85	Yes	0.699	0.298	1.00	Yes	1.00	**2.28**
		U_{14} - L_{14}			-----	-158.50	256	-257	-473	517	-37	118	37	199	-----	-----	-----	-----	-----	-----	-----	-----	0.354	0.213	0.57	Yes	0.335	0.661	1.00	Yes	1.00	**9.72**
		U_{15} - L_{15}			167.53	-305.32	249	-274	-124	112	130	-117	59	111	0.301	0.388	0.69	Yes	0.166	0.213	0.38	Yes	0.684	0.131	0.82	Yes	0.646	0.350	1.00	Yes	1.00	**3.96**
		U_{16} - L_{16}			-----	-321.72	240	-249	19	-34	237	-150	148	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.107	0.84	Yes	0.681	0.318	1.00	Yes	1.00	**2.66**
		U_{17} - L_{17}			-----	-432.70	229	-246	60	-74	61	-177	-120	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.111	0.93	Yes	0.746	0.250	1.00	Yes	1.00	**2.05**
		U_{18} - L_{18}			-----	-533.93	432	-444	142	-148	123	-221	-134	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.090	0.88	Yes	0.743	0.251	1.00	Yes	1.00	**2.24**
		U_{19} - L_{19}			-----	-638.23	533	-524	170	-169	181	-100	-118	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.097	0.90	Yes	0.743	0.248	1.00	Yes	1.00	**2.48**
		U_{20} - L_{20}			-----	-543.78	338	-483	156	-297	690	90	-196	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.240	1.00	Yes	0.665	0.232	0.90	Yes	1.00	**1.69**
	Structure 2	U_0 - L_0			-----	-646.76	-162	210	-423	533	-41	-7	-494	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.188	1.00	Yes	0.725	0.240	0.97	Yes	1.00	**2.44**
		U_1 - L_1			-----	-716.75	-114	123	-531	539	-107	-7	-187	31	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.081	0.91	Yes	0.768	0.229	1.00	Yes	1.00	**3.48**
		U_2 - L_2			-----	-590.35	-104	115	-472	481	-107	-38	-154	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.086	0.88	Yes	0.752	0.246	1.00	Yes	1.00	**3.00**
		U_3 - L_3			-----	-488.56	-52	60	-241	251	83	-46	-196	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.124	0.96	Yes	0.766	0.228	1.00	Yes	1.00	**2.80**
		U_4 - L_4			-----	-333.83	-13	21	-222	221	248	75	-178	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.148	0.91	Yes	0.706	0.284	1.00	Yes	1.00	**2.69**
		U_5 - L_5			76.99	-329.05	78	-61	-214	237	-4	97	12	-32	0.138	0.331	0.47	Yes	0.076	0.182	0.26	Yes	0.743	0.130	0.88	Yes	0.696	0.303	1.00	Yes	1.00	**3.55**
		U_6 - L_6			347.23	-241.04	218	-215	-233	247	120	204	-63	-26	0.625	0.374	1.00	Yes	0.343	0.206	0.55	Yes	0.542	0.148	0.70	Yes	0.510	0.315	0.83	Yes	1.00	**5.57**
		U_7 - L_7			-----	-210.70	381	-427	-145	155	279	64	-127	234	-----	-----	-----	-----	-----	-----	-----	-----	0.476	0.227	0.71	Yes	0.446	0.546	1.00	Yes	1.00	**8.56**
		U_8 - L_8			-----	-465.23	354	-374	66	-83	101	-143	-5	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.101	0.78	Yes	0.670	0.327	1.00	Yes	1.00	**2.92**
		U_9 - L_9			-----	-689.88	602	-608	152	-176	121	-174	-8	12	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.078	0.85	Yes	0.739	0.258	1.00	Yes	1.00	**3.51**
		U_{10} - L_{10}			-----	-792.63	557	-580	162	-200	228	-199	12	8	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.091	0.88	Yes	0.741	0.256	1.00	Yes	1.00	**3.63**
		U_{11} - L_{11}			-----	-809.40	516	-533	185	-187	149	-142	-173	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.097	0.92	Yes	0.757	0.235	1.00	Yes	1.00	**3.18**
		U_{12} - L_{12}			-----	-881.97	535	-542	155	-134	173	-52	-154	7	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.099	0.95	Yes	0.764	0.232	1.00	Yes	1.00	**3.28**
		U_{13} - L_{13}			-----	-742.20	579	-558	208	-205	277	40	-169	20	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.162	0.99	Yes	0.716	0.277	1.00	Yes	1.00	**2.80**
		U_{14} - L_{14}			-----	-1155.08	675	-644	-449	418	743	305	258	266	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.151	1.00	Yes	0.766	0.119	0.89	Yes	1.00	**4.57**
		U_{15} - L_{15}			-----	-734.90	-115	123	-607	587	-307	9	-191	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.161	0.99	Yes	0.709	0.291	1.00	Yes	1.00	**4.34**
		U_{16} - L_{16}			-----	-653.01	-89	63	-514	484	-806	-260	-1162	-468	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.237	1.00	Yes	0.700	0.218	0.92	Yes	1.00	**3.50**
		U_{17} - L_{17}			-----	-640.04	-124	122	-540	537	-275	-184	-534	-427	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.169	0.96	Yes	0.745	0.251	1.00	Yes	1.00	**3.34**
		U_{18} - L_{18}			-----	-578.13	-90	90	-505	514	-114	-126	-440	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.157	0.93	Yes	0.737	0.263	1.00	Yes	1.00	**3.33**
		U_{19} - L_{19}			-----	-469.35	-54	58	-307	300	-66	-32	-234	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.125	0.84	Yes	0.701	0.295	1.00	Yes	1.00	**2.80**
		U_{20} - L_{20}			-----	-380.92	-18	27	-226	233	-69	-11	-29	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.094	0.88	Yes	0.730	0.266	1.00	Yes	1.00	**2.75**
	Structure 3	U_{21} - L_{21}			30.42	-316.88	28	-12	-236	253	2	120	-99	-52	0.055	0.358	0.42	Yes	0.030	0.197	0.23	Yes	0.716	0.128	0.85	Yes	0.670	0.324	1.00	Yes	1.00	**3.33**
		U_{22} - L_{22}			-----	-215.58	321	-340	-394	420	416	149	-12	265	-----	-----	-----	-----	-----	-----	-----	-----	0.485	0.200	0.69	Yes	0.456	0.537	1.00	Yes	1.00	**10.07**
		U_{23} - L_{23}			59.73	-313.11	242	-259	-50	39	148	-57	173	117	0.107	0.381	0.49	Yes	0.059	0.210	0.27	Yes	0.707	0.152	0.86	Yes	0.663	0.331	1.00	Yes	1.00	**3.29**
		U_{24} - L_{24}			-----	-369.55	241	-252	10	-23	196	-63	75	26	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.109	0.87	Yes	0.708	0.287	1.00	Yes	1.00	**2.71**
		U_{25} - L_{25}			-----	-469.09	308	-301	38	-38	240	-75	-89	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.097	0.81	Yes	0.700	0.297	1.00	Yes	1.00	**2.73**
		U_{26} - L_{26}			-----	-567.12	510	-537	67	-70	328	-44	-123	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.106	0.87	Yes	0.723	0.275	1.00	Yes	1.00	**3.01**
		U_{27} - L_{27}			-----	-626.34	569	-572	85	-86	265	-55	-136	2	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.100	0.88	Yes	0.729	0.265	1.00	Yes	1.00	**3.15**
		U_{28} - L_{28}			-----	-710.64	559	-552	74	-71	359	-21	-157	16	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.105	0.93	Yes	0.762	0.237	1.00	Yes	1.00	**3.42**
		U_{29} - L_{29}			-----	-717.19	644	-620	118	-123	422	42	-119	27	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1.00	Yes	0.691	0.308	1.00	Yes	1.00	**3.76**
		U_{30} - L_{30}			-----	-1148.87	732	-717	-612	551	804	48	-74	294	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.140	1.00	Yes	0.776	0.132	0.91	Yes	1.00	**5.31**
		U_{31} - L_{31}			-----	-700.29	-107	108	-537	505	-311	-33	-592	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1.00	Yes	0.675	0.257	0.94	Yes	1.00	**3.93**
		U_{32} - L_{32}			-----	-806.97	-81	58	-463	454	-699	-278	-846	-428	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.217	1.00	Yes	0.699	0.198	0.90	Yes	1.00	**3.90**
		U_{33} - L_{33}			-----	-790.17	-116	105	-480	474	-461	-347	-679	-515	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.194	1.00	Yes	0.745	0.215	0.97	Yes	1.00	**3.99**
		U_{34} - L_{34}			-----	-801.68	-111	126	-547	557	-236	-197	-443	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.148	0.94	Yes	0.750	0.246	1.00	Yes	1.00	**4.30**
		U_{35} - L_{35}			-----	-706.21	-110	125	-549	562	-157	-15	-50	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.067	0.86	Yes	0.757	0.239	1.00	Yes	1.00	**3.82**
		U_{36} - L_{36}			-----	-477.22	-51	66	-330	348	12	70	-68	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.092	0.79	Yes	0.687	0.304	1.00	Yes	1.00	**3.22**
		U_{37} - L_{37}			-----	-185.04	80	-80	-416	469	81	101	-164	192	-----	-----	-----	-----	-----	-----	-----	-----	0.418	0.231	0.65	Yes	0.392	0.599	1.00	Yes	1.00	**7.85**
		U_{38} - L_{38}			338.63	-177.03	168	-173	-241	248	178	-73	236	115	0.609	0.385	1.00	Yes	0.335	0.212	0.55	Yes	0.398	0.134	0.54	Yes	0.375	0.317	0.70	Yes	1.00	**4.66**
		U_{39} - L_{39}			153.05	-321.63	224	-244	-133	120	161	-102	50	71	0.275	0.359	0.64	Yes	0.151	0.197	0.35	Yes	0.727	0.110	0.84	Yes	0.681	0.312	1.00	Yes	1.00	**3.96**
		U_{40} - L_{40}			23.06	-339.13	217	-216	-19	1	165	-123	23	3	0.041	0.325	0.37	Yes	0.023	0.179	0.21	Yes	0.769	0.087	0.86	Yes	0.718	0.277	1.00	Yes	1.00	**2.90**
		U_{41} - L_{41}			-----	-487.46	246	-257	26	-30	143	-131	8	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.084	0.92	Yes	0.764	0.235	1.00	Yes	1.00	**2.76**
		U_{42} - L_{42}			-----	-583.76	493	-498	59	-68	165	-170	11	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.075	0.86	Yes	0.744	0.255	1.00	Yes	1.00	**2.95**
		U_{43} - L_{43}			-----	-704.45	564	-562	77	-90	258	-41	-50	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.085	0.90	Yes	0.755	0.239	1.00	Yes	1.00	**3.23**
		U_{44} - L_{44}			-----	-634.51	376	-502	117	-134	960	163	-133	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.234	1.00	Yes	0.680	0.213	0.90	Yes	1.00	**2.60**
	Structure 4	U_0 - L_0			-----	-561.92	-145	194	-396	456	-57	-7	-777	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.226	1.00	Yes	0.675	0.218	0.90	Yes	1.00	**1.97**
		U_1 - L_1			-----	-659.76	-109	122	-493	499	-125	-4	-135	110	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.076	0.90	Yes	0.768	0.232	1.00	Yes	1.00	**3.47**
		U_2 - L_2			-----	-536.60	-108	114	-441	445	-148	-45	-306	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.112	0.90	Yes	0.746	0.252	1.00	Yes	1.00	**2.85**
		U_3 - L_3			-----	-445.99	-45	58	-204	222	45	-64	-38	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.080	0.92	Yes	0.769	0.225	1.00	Yes	1.00	**2.36**
		U_4 - L_4			-----	-319.99	-12	30	-242	247	-49	90	-207	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.158	0.88	Yes	0.677	0.316	1.00	Yes	1.00	**2.99**
		U_5 - L_5			79.46	-304.72	74	-61	-255	274	-20	125	-157	-29	0.143	0.396	0.54	Yes	0.079	0.218	0.30	Yes	0.683	0.152	0.84	Yes	0.645	0.350	1.00	Yes	1.00	**3.73**
		U_6 - L_6			-----	-200.63	427	-445	-287	308	-160	51	252	106	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.215	0.67	Yes	0.425	0.569	1.00	Yes	1.00	**9.60**
		U_7 - L_7			-----	-359.01	243	-265	12	-26	-2	-153	-11	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.120	0.85	Yes	0.688	0.303	1.00	Yes	1.00	**2.60**
		U_8 - L_8			-----	-513.92	339	-340	63	-69	90	-177	-15	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.102	0.85	Yes	0.705	0.291	1.00	Yes	1.00	**3.10**
		U_9 - L_9			-----	-652.99	408	-514	116	-179	42	-202	-248	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.123	0.91	Yes	0.760	0.238	1.00	Yes	1.00	**3.19**
		U_{10} - L_{10}			-----	-777.33	404	-439	119	-116	199	-53	-214	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.106	0.92	Yes	0.767	0.228	1.00	Yes	1.00	**3.37**
		U_{11} - L_{11}			-----	-647.84	430	-474	167	-192	296	57	-166	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.125	0.90	Yes	0.732	0.264	1.00	Yes	1.00	**2.39**
		U_{12} - L_{12}			-----	-1176.23	489	-634	-379	411	979	375	457	182	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.143	1.00	Yes	0.815	0.118	0.94	Yes	1.00	**4.39**
		U_{13} - L_{13}			-----	-459.65	-67	76	-273	289	-298	-42	-215	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.154	0.93	Yes	0.709	0.284	1.00	Yes	1.00	**2.47**
		U_{14} - L_{14}			-----	-471.92	-44	28	-253	253	-670	-325	-1007	-534	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.283	1.00	Yes	0.677	0.221	0.90	Yes	1.00	**2.92**
		U_{15} - L_{15}			-----	-438.08	-42	56	-210	235	-372	-206	-472	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.204	1.00	Yes	0.756	0.238	1.00	Yes	1.00	**2.92**
		U_{16} - L_{16}			-----	-157.94	86	-54	-515	512	-930	-411	-515	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.347	0.413	0.77	Yes	0.334	0.658	1.00	Yes	1.00	**9.38**
		U_{17} - L_{17}			283.21	-183.40	156	-179	-301	311	-294	-196	-121	100	0.509	0.483	1.00	Yes	0.280	0.266	0.55	Yes	0.402	0.174	0.58	Yes	0.388	0.398	0.79	Yes	1.00	**5.37**
		U_{18} - L_{18}			122.18	-291.36	253	-297	-114	127	51	-121	-111	18	0.220	0.415	0.64	Yes	0.121	0.228	0.35	Yes	0.637	0.141	0.78	Yes	0.616	0.380	1.00	Yes	1.00	**4.19**
		U_{19} - L_{19}			48.33	-309.69	264	-244	-57	45	56	-65	-84	-3	0.087	0.362	0.45	Yes	0.048	0.199	0.25	Yes	0.677	0.106	0.79	Yes	0.655	0.337	1.00	Yes	1.00	**2.67**
		U_{20} - L_{20}			-----	-326.23	97	-173	-17	-67	535	171	-591	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.267	1.00	Yes	0.690	0.221	0.92	Yes	1.00	**1.28**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																	
North Truss - Diagonals	Structure 1	$U_0 - L_1$	515.92	-----	-16	-2	-140	73	-6	12	-616	-127	0.677	0.319	1.00	Yes	0.409	0.176	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_1 - L_2$	390.52	-92.05	18	-20	-106	-2	-8	-17	-556	-325	0.702	0.297	1.00	Yes	0.386	0.163	0.55	Yes	0.211	0.266	0.48	Yes	0.195	0.136	0.34	Yes	1.00	**3.46**
		$U_2 - L_3$	395.26	-269.60	52	-30	-159	-22	39	28	-277	-108	0.711	0.283	1.00	Yes	0.391	0.156	0.55	Yes	0.621	0.276	0.90	Yes	0.570	0.203	0.78	Yes	1.00	**6.40**
		$U_3 - L_4$	-----	-319.70	54	-7	-104	-111	118	121	28	-406	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.260	1.00	Yes	0.676	0.142	0.82	Yes	1.00	**6.00**
		$U_4 - L_4$	559.93	-----	-11	54	-96	23	24	-21	-198	-287	0.828	0.165	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**
		$U_4 - L_5$	685.32	-----	-29	152	-216	217	202	76	-349	-339	0.810	0.187	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.77**
		$U_5 - L_6$	637.55	-----	-80	120	-306	240	349	162	-281	-227	0.754	0.238	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$U_6 - L_7$	651.63	-----	23	163	-106	299	286	162	-117	-188	0.770	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		$U_5 - L_8$	987.49	-----	115	225	-98	357	358	54	328	374	0.789	0.207	1.00	Yes	0.489	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_9 - L_{10}$	928.51	-----	-71	85	-356	233	137	134	739	550	0.742	0.253	1.00	Yes	0.460	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{10} - L_{11}$	987.01	-----	-54	161	-256	176	135	192	-10	350	0.834	0.165	1.00	Yes	0.516	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		$U_{11} - L_{12}$	834.71	-----	-67	55	-289	97	23	130	141	249	0.826	0.171	1.00	Yes	0.454	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{12} - L_{13}$	650.89	-----	-77	44	-205	144	-118	-92	-68	119	0.793	0.202	1.00	Yes	0.499	0.113	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.63**
		$U_{13} - L_{14}$	453.49	-----	-20	-11	-98	28	-181	-180	-40	-16	0.816	0.178	1.00	Yes	0.449	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		$U_{15} - L_{14}$	261.29	-309.58	54	-114	-92	-16	-267	-124	-400	-320	0.470	0.262	0.74	Yes	0.258	0.144	0.41	Yes	0.725	0.267	1.00	Yes	0.655	0.146	0.81	Yes	1.00	**3.92**
		$U_{16} - L_{15}$	385.99	-82.86	-9	-33	-134	89	-376	-146	-445	-306	0.694	0.300	1.00	Yes	0.382	0.165	0.55	Yes	0.196	0.215	0.42	Yes	0.175	0.171	0.35	Yes	1.00	**3.15**
		$U_{17} - L_{16}$	509.66	-----	-34	14	-143	87	-110	-130	-452	-409	0.747	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		$U_{18} - L_{17}$	602.00	-----	-111	76	-319	244	-111	-117	-576	-493	0.712	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		$U_{19} - L_{18}$	663.50	-----	-131	86	-353	244	-64	-105	-561	-480	0.719	0.273	1.00	Yes	0.395	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**
		$U_{20} - L_{19}$	643.95	-----	-73	105	-285	257	88	-85	-946	-232	0.697	0.301	1.00	Yes	0.384	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
	Structure 2	$U_0 - L_1$	757.86	-----	-115	100	-393	366	-59	-47	-426	-58	0.750	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_1 - L_2$	790.35	-----	-95	71	-394	302	-100	-29	-221	38	0.782	0.216	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		$U_2 - L_3$	657.24	-----	-82	62	-348	268	-22	91	-128	113	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.98**
		$U_3 - L_4$	598.82	-----	-37	15	-184	131	105	61	-161	10	0.798	0.201	1.00	Yes	0.439	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_4 - L_5$	420.73	-22.04	-2	-9	-134	91	73	-91	-224	74	0.757	0.237	1.00	Yes	0.416	0.130	0.55	Yes	0.054	0.108	0.17	Yes	0.047	0.172	0.22	Yes	1.00	**2.92**
		$U_5 - L_6$	431.03	-259.18	60	-108	-135	59	-175	-165	-111	96	0.775	0.224	1.00	Yes	0.426	0.123	0.55	Yes	0.612	0.183	0.80	Yes	0.548	0.173	0.73	Yes	1.00	**4.51**
		$U_6 - L_7$	78.49	-382.76	57	-104	-53	-11	-97	-297	-159	-83	0.128	0.196	0.33	Yes	0.070	0.108	0.18	Yes	0.819	0.173	1.00	Yes	0.733	0.119	0.86	Yes	1.00	**2.82**
		$U_8 - L_7$	556.89	-----	-34	-14	-205	102	-235	-196	-366	-504	0.710	0.287	1.00	Yes	0.447	0.163	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_8 - L_8$	688.84	-----	-117	42	-334	212	-281	-212	-485	-473	0.746	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
		$U_{10} - L_9$	781.05	-----	-93	124	-321	215	1	-63	-512	-491	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{11} - L_{10}$	840.39	-----	-99	147	-350	255	164	28	-555	-538	0.766	0.224	1.00	Yes	0.421	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**
		$U_{12} - L_{11}$	851.31	-----	-109	163	-371	335	289	120	-384	-436	0.775	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_{13} - L_{12}$	747.29	-----	-151	153	-437	376	343	132	-251	-212	0.739	0.254	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{14} - L_{13}$	750.83	-----	-4	182	-280	429	363	137	-315	-163	0.743	0.253	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.11**
		$U_{14} - L_{15}$	636.66	-----	64	127	-224	360	128	-77	237	163	0.753	0.247	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		$U_{15} - L_{16}$	619.28	-----	-57	65	-404	356	-48	14	128	162	0.732	0.258	1.00	Yes	0.403	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		$U_{16} - L_{17}$	712.08	-----	-60	100	-327	334	-166	116	-296	315	0.771	0.223	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_{17} - L_{18}$	648.82	-----	-66	79	-303	276	-26	102	3	322	0.767	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.98**
		$U_{18} - L_{19}$	668.62	-----	-49	68	-281	259	34	20	68	255	0.790	0.205	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_{19} - L_{20}$	607.97	-----	-18	25	-197	158	-31	-29	25	232	0.775	0.224	1.00	Yes	0.426	0.126	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{20} - L_{21}$	441.72	-----	-6	8	-131	106	-68	-48	36	116	0.794	0.202	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{21} - L_{22}$	441.57	-198.31	25	-73	-118	49	-41	-178	-32	98	0.794	0.203	1.00	Yes	0.437	0.111	0.55	Yes	0.468	0.142	0.62	Yes	0.420	0.151	0.58	Yes	1.00	**3.93**
		$U_{23} - L_{22}$	361.80	-289.15	42	-91	-126	20	-304	-22	-396	-348	0.651	0.276	0.93	Yes	0.358	0.152	0.51	Yes	0.689	0.305	1.00	Yes	0.612	0.161	0.78	Yes	1.00	**4.48**
		$U_{24} - L_{23}$	414.50	-33.01	3	-18	-126	93	-155	-58	-309	-281	0.745	0.250	1.00	Yes	0.410	0.138	0.55	Yes	0.079	0.156	0.24	Yes	0.070	0.161	0.24	Yes	1.00	**2.98**
		$U_{25} - L_{24}$	564.74	-----	-13	27	-199	164	72	8	-469	-377	0.720	0.273	1.00	Yes	0.396	0.155	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{26} - L_{25}$	632.42	-----	-26	38	-297	240	120	46	-435	-416	0.748	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		$U_{27} - L_{26}$	643.30	-----	-45	58	-298	265	177	68	-331	-352	0.761	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{28} - L_{27}$	702.04	-----	-47	66	-351	351	204	113	-328	-307	0.760	0.234	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_{29} - L_{28}$	622.76	-----	-72	82	-379	334	269	133	-240	-213	0.736	0.263	1.00	Yes	0.405	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.01**
		$U_{30} - L_{29}$	638.11	-----	39	108	-230	352	215	139	-176	-232	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{30} - L_{31}$	743.69	-----	63	161	-285	424	396	9	150	183	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{31} - L_{32}$	725.71	-----	-74	78	-412	360	-29	41	-180	237	0.754	0.242	1.00	Yes	0.414	0.124	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_{32} - L_{33}$	872.02	-----	-58	94	-374	337	-146	134	-220	336	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_{33} - L_{34}$	877.18	-----	-66	91	-345	277	24	203	-43	366	0.799	0.197	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_{34} - L_{35}$	822.56	-----	-63	80	-313	224	79	87	14	267	0.814	0.185	1.00	Yes	0.448	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{35} - L_{36}$	734.31	-----	-86	84	-343	236	-15	0	72	145	0.795	0.199	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_{36} - L_{37}$	607.79	-----	-33	10	-194	143	-194	-208	-111	74	0.775	0.216	1.00	Yes	0.488	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		$U_{38} - L_{37}$	-----	-388.44	60	-96	-40	-27	-249	-69	-241	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.153	1.00	Yes	0.744	0.110	0.86	Yes	1.00	**2.60**
		$U_{39} - L_{38}$	365.27	-303.73	88	-120	-119	40	-215	-107	-426	-397	0.657	0.277	0.94	Yes	0.361	0.152	0.52	Yes	0.724	0.274	1.00	Yes	0.643	0.154	0.80	Yes	1.00	**4.71**
		$U_{40} - L_{39}$	389.12	-116.44	19	-44	-140	91	-243	-132	-406	-342	0.700	0.296	1.00	Yes	0.385	0.163	0.55	Yes	0.279	0.221	0.50	Yes	0.246	0.179	0.43	Yes	1.00	**3.61**
		$U_{41} - L_{40}$	541.55	-----	-17	1	-179	112	-92	-78	-512	-432	0.722	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		$U_{42} - L_{41}$	608.74	-----	-49	32	-329	248	-67	-64	-476	-488	0.720	0.275	1.00	Yes	0.396	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_{43} - L_{42}$	735.40	-----	-65	44	-395	294	-4	-45	-559	-499	0.728	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_{44} - L_{43}$	673.10	-----	-88	82	-340	326	-10	-10	-1175	-183	0.666	0.333	1.00	Yes	0.366	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
	Structure 3	$U_0 - L_1$	568.23	-----	-113	95	-424	315	-63	-53	-992	64	0.615	0.380	1.00	Yes	0.338	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_1 - L_2$	674.10	-----	-99	67	-346	251	-124	-44	-542	-187	0.730	0.266	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_2 - L_3$	645.95	-----	-97	63	-331	243	-49	78	-254	126	0.764	0.234	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		$U_3 - L_4$	553.02	-----	-28	9	-159	104	75	49	-68	6	0.811	0.179	1.00	Yes	0.446	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		$U_4 - L_5$	424.11	-75.67	-8	-29	-132	90	-102	-165	-212	25	0.763	0.231	1.00	Yes	0.420	0.127	0.55	Yes	0.179	0.121	0.31	Yes	0.160	0.169	0.33	Yes	1.00	**3.09**
		$U_5 - L_6$	417.67	-294.79	36	-103	-112	-5	-221	-330	-240	-11	0.751	0.239	1.00	Yes	0.413	0.132	0.55	Yes	0.691	0.218	0.91	Yes	0.624	0.144	0.77	Yes	1.00	**4.20**
		$U_7 - L_6$	426.35	-8.36	-4	-35	-98	19	-213	-190	-298	-359	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	0.019	0.181	0.21	Yes	0.018	0.125	0.15	Yes	1.00	**2.94**
		$U_8 - L_7$	592.26	-----	-59	8	-205	135	-349	-224	-492	-438	0.722	0.275	1.00	Yes	0.454	0.156	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_8 - L_8$	778.25	-----	-62	79	-272	67	-93	-141	-637	-629	0.770	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{10} - L_9$	927.56	-----	-46	127	-266	147	86	-12	-585	-640	0.783	0.207	1.00	Yes	0.485	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{11} - L_{10}$	968.91	-----	-74	125	-318	235	353	187	-597	-502	0.775	0.218	1.00	Yes	0.480	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		$U_{12} - L_{11}$	986.98	-----	75	179	-117	348	375	219	-413	-381	0.789	0.207	1.00	Yes	0.489	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{12} - L_{13}$	660.53	-----	66	147	-114	294	-3	-116	275	183	0.781	0.218	1.00	Yes	0.430	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{13} - L_{14}$	643.34	-----	-21	57	-338	254	-23	53	231	234	0.761	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{14} - L_{15}$	707.51	-----	-1	130	-196	192	-23	107	-204	243	0.836	0.156	1.00	Yes	0.460	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{15} - L_{16}$	508.66	-----	8	86	-165	8	174	236	353	246	0.746	0.249	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{17} - L_{16}$	-----	-321.98	50	-2	-67	-93	163	157	-506	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1.00	Yes	0.681	0.118	0.80	Yes	1.00	**4.56**
		$U_{18} - L_{17}$	386.24	-274.47	58	-31	-131	-30	277	183	-463	-393	0.695	0.301	1.00	Yes	0.382	0.166	0.55	Yes	0.632	0.345	0.98	Yes	0.581	0.167	0.75	Yes	1.00	**5.62**
		$U_{19} - L_{18}$	411.44	-124.39	24	-19	-101	12	153	117	-445	-374	0.740	0.258	1.00	Yes	0.407	0.142	0.55	Yes	0.285	0.237	0.53	Yes	0.263	0.129	0.40	Yes	1.00	**2.90**
		$U_{20} - L_{19}$	389.74	-----	165	-14	-164	78	1138	37	-1112	-557	0.511	0.479	1.00	Yes	0.309	0.264	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.90**

Moment (Start) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

| | | | Vehicle | Pedestrian | Axial Force | | ZZ Axis Bending | | | | YY Axis Bending | | | | Tension | | | | | | | | Compression | | | | | | | |

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-78.77	1786	-2854	-336	227	-373	-1371	52	191	-----	-----	-----	-----	-----	-----	-----	-----	0.143	0.695	0.84	Yes	0.142	0.856	1.00	Yes	1.00	**21.73**
		L_1 - L_2	439.65	-----	299	-941	-716	-474	8	-90	-185	54	0.673	0.322	1.00	Yes	0.411	0.217	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_2 - L_3	650.86	-79.00	-27	71	-854	-430	8	-8	225	-47	0.749	0.242	1.00	Yes	0.433	0.145	0.58	Yes	0.108	0.230	0.34	Yes	0.107	0.206	0.32	Yes	1.00	**3.65**
		L_3 - L_4	630.57	-----	90	-698	-976	-176	-138	-9	-78	221	0.725	0.271	1.00	Yes	0.431	0.175	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		L_4 - L_5	299.48	-483.87	99	447	-983	141	134	-126	-155	-38	0.388	0.288	0.68	Yes	0.233	0.189	0.43	Yes	0.744	0.148	0.9	Yes	0.737	0.260	1.00	Yes	1.00	**3.76**
		L_5 - L_6	35.23	-726.32	137	557	-700	15	10	67	21	70	0.035	0.164	0.20	Yes	0.022	0.099	0.13	Yes	0.847	0.145	1	Yes	0.838	0.155	1.00	Yes	1.00	**4.22**
		L_6 - L_7	-----	-1036.05	168	86	-1034	-269	168	11	65	74	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.148	1	Yes	0.834	0.163	1.00	Yes	1.00	**5.25**
		L_7 - L_8	-----	-1048.61	107	935	-1436	2486	-180	-81	35	76	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.269	0.95	Yes	0.664	0.329	1.00	Yes	1.00	**9.41**
		L_8 - L_9	-----	-1205.22	1718	-537	546	-17	3	-39	60	6	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.195	0.97	Yes	0.763	0.227	1.00	Yes	1.00	**6.15**
		L_9 - L_{10}	-----	-911.59	1342	-1684	-1344	-1419	-19	-421	22	9	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.098	0.84	Yes	0.734	0.265	1.00	Yes	1.00	**13.87**
		L_{10} - L_{11}	345.91	-564.39	518	-15	-294	-520	80	14	3	74	0.448	0.152	0.60	Yes	0.261	0.092	0.36	Yes	0.868	0.086	0.96	Yes	0.860	0.138	1.00	Yes	1.00	**5.84**
		L_{11} - L_{12}	588.38	-----	507	-788	-153	-522	-110	0	52	152	0.762	0.235	1.00	Yes	0.457	0.154	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		L_{12} - L_{13}	1079.71	-----	120	-140	-687	-606	-175	-124	32	70	0.852	0.142	1.00	Yes	0.545	0.085	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		L_{13} - L_{14}	1283.22	-----	571	-1553	-685	-1053	-288	-10	5	259	0.755	0.238	1.00	Yes	0.489	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		L_{14} - L_{15}	1561.88	-----	-352	-81	-1809	-785	-66	-48	-208	115	0.763	0.233	1.00	Yes	0.496	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		L_{15} - L_{16}	1661.43	-----	-192	-388	-1403	-1472	-76	14	-57	-17	0.812	0.183	1.00	Yes	0.521	0.106	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{16} - L_{17}	1202.34	-----	-398	38	-1491	-192	-34	-64	-161	-26	0.760	0.233	1.00	Yes	0.493	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		L_{17} - L_{18}	914.40	-----	-176	-56	-941	-141	-76	-14	-15	-135	0.796	0.199	1.00	Yes	0.510	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		L_{18} - L_{19}	425.21	-----	-238	170	-1061	566	-2	-30	-142	9	0.651	0.348	1.00	Yes	0.440	0.216	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		L_{19} - L_{20}	77.44	-196.44	-94	18	-2138	1072	-37	-8	649	146	0.119	0.776	0.90	Yes	0.072	0.520	0.60	Yes	0.357	0.433	0.79	Yes	0.354	0.642	1.00	Yes	1.00	**13.26**
	Structure 2	L_0 - L_1	134.54	-----	728	-2021	-106	-9	-419	-1455	9	30	0.203	0.796	1.00	Yes	0.123	0.392	0.52	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.08**
		L_1 - L_2	512.57	-----	726	-1342	-167	-942	68	69	-620	321	0.623	0.375	1.00	Yes	0.370	0.238	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		L_2 - L_3	1047.47	-----	378	-890	-585	-867	22	50	388	-22	0.826	0.170	1.00	Yes	0.541	0.103	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		L_3 - L_4	1347.45	-----	414	-1319	-805	-1512	-59	97	-44	272	0.792	0.199	1.00	Yes	0.533	0.123	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		L_4 - L_5	1693.89	-----	51	-1591	-2025	-1364	-186	-98	203	153	0.790	0.205	1.00	Yes	0.523	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_5 - L_6	1869.03	-----	-22	-305	-2072	-1879	-93	57	36	228	0.802	0.198	1.00	Yes	0.538	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		L_6 - L_7	1814.04	-----	-376	-87	-2455	-1271	52	-15	84	192	0.768	0.228	1.00	Yes	0.510	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_7 - L_8	1325.60	-----	-187	230	-1951	-702	-69	78	-251	27	0.760	0.236	1.00	Yes	0.499	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_8 - L_9	1102.76	-249.66	-125	492	-1541	-84	43	-124	-99	29	0.771	0.220	1.00	Yes	0.520	0.136	0.66	Yes	0.207	0.152	0.36	Yes	0.205	0.208	0.42	Yes	1.00	**4.76**
		L_9 - L_{10}	839.43	-580.92	-81	598	-1493	-250	-37	32	10	-50	0.749	0.245	1.00	Yes	0.436	0.153	0.59	Yes	0.614	0.176	0.79	Yes	0.610	0.239	0.85	Yes	1.00	**5.78**
		L_{10} - L_{11}	69.81	-675.57	9	560	-1154	719	122	-57	-3	-14	0.070	0.218	0.29	Yes	0.041	0.138	0.18	Yes	0.799	0.071	0.87	Yes	0.794	0.202	1.00	Yes	1.00	**4.58**
		L_{11} - L_{12}	-----	-1004.77	4	944	-1261	966	14	53	83	176	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.077	0.91	Yes	0.824	0.172	1.00	Yes	1.00	**5.56**
		L_{12} - L_{13}	-----	-1224.67	148	-258	-1943	-1519	92	43	-104	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.254	1	Yes	0.733	0.193	0.93	Yes	1.00	**6.64**
		L_{13} - L_{14}	-----	-1129.39	-236	1419	-3672	4885	-530	-499	-128	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.274	0.85	Yes	0.568	0.427	1.00	Yes	1.00	**9.23**
		L_{14} - L_{15}	-----	-1221.17	4371	-2269	1213	-549	-256	-145	-276	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.620	0.246	0.87	Yes	0.614	0.382	1.00	Yes	1.00	**7.36**
		L_{15} - L_{16}	-----	-1218.28	-145	200	-2496	-969	185	175	77	54	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.258	1	Yes	0.729	0.248	0.98	Yes	1.00	**7.03**
		L_{16} - L_{17}	64.35	-906.22	2696	-2194	-758	-1563	-408	-122	308	150	0.040	0.367	0.41	Yes	0.026	0.217	0.25	Yes	0.666	0.236	0.91	Yes	0.660	0.333	1.00	Yes	1.00	**13.38**
		L_{17} - L_{18}	684.05	-407.68	1993	-2111	-1460	-1614	-266	-111	410	409	0.611	0.387	1.00	Yes	0.355	0.241	0.60	Yes	0.431	0.219	0.65	Yes	0.428	0.338	0.77	Yes	1.00	**14.73**
		L_{18} - L_{19}	621.74	-----	983	-1212	-729	-786	-149	-113	378	-65	0.704	0.292	1.00	Yes	0.406	0.173	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.58**
		L_{19} - L_{20}	687.65	-----	672	-931	-671	-881	-256	-84	-74	219	0.779	0.219	1.00	Yes	0.461	0.139	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_{20} - L_{21}	980.86	-----	448	-941	-1325	-1060	-180	-137	52	149	0.782	0.213	1.00	Yes	0.513	0.126	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		L_{21} - L_{22}	901.20	-----	283	-1716	-1198	-1178	-217	5	-71	248	0.719	0.277	1.00	Yes	0.481	0.174	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		L_{22} - L_{23}	823.54	-75.14	-49	50	-2224	16	1	-48	1	120	0.657	0.337	1.00	Yes	0.439	0.211	0.65	Yes	0.071	0.256	0.33	Yes	0.070	0.325	0.40	Yes	1.00	**5.11**
		L_{23} - L_{24}	922.17	-326.31	-4	310	-1708	-803	-5	68	-82	72	0.735	0.258	1.00	Yes	0.482	0.152	0.64	Yes	0.308	0.249	0.56	Yes	0.306	0.249	0.56	Yes	1.00	**5.21**
		L_{24} - L_{25}	630.30	-459.01	106	454	-1390	-169	97	-91	-110	98	0.714	0.285	1.00	Yes	0.422	0.183	0.61	Yes	0.616	0.178	0.8	Yes	0.612	0.268	0.88	Yes	1.00	**5.08**
		L_{25} - L_{26}	305.45	-606.16	66	570	-988	-191	11	79	39	35	0.346	0.203	0.55	Yes	0.200	0.121	0.33	Yes	0.813	0.129	0.95	Yes	0.808	0.191	1.00	Yes	1.00	**4.98**
		L_{26} - L_{27}	-----	-762.74	143	492	-1208	163	130	-22	-52	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.099	0.91	Yes	0.801	0.193	1.00	Yes	1.00	**5.00**
		L_{27} - L_{28}	-----	-1091.89	76	1040	-1596	434	80	145	46	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.166	0.97	Yes	0.795	0.197	1.00	Yes	1.00	**6.85**
		L_{28} - L_{29}	-----	-1235.91	204	-507	-1898	-1932	207	182	-140	24	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.251	1	Yes	0.739	0.192	0.94	Yes	1.00	**7.38**
		L_{29} - L_{30}	-----	-1090.51	-167	1183	-4193	5140	-426	-527	-52	32	-----	-----	-----	-----	-----	-----	-----	-----	0.554	0.272	0.83	Yes	0.549	0.449	1.00	Yes	1.00	**10.43**
		L_{30} - L_{31}	-----	-1217.42	4352	-2688	1142	-265	58	137	-363	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.245	0.87	Yes	0.613	0.380	1.00	Yes	1.00	**7.63**
		L_{31} - L_{32}	-----	-1149.93	-67	-315	-2579	-1372	141	84	100	227	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.303	1	Yes	0.688	0.256	0.95	Yes	1.00	**7.92**
		L_{32} - L_{33}	214.83	-820.76	2390	-2347	-995	-1619	-185	-85	509	523	0.150	0.375	0.53	Yes	0.099	0.224	0.33	Yes	0.678	0.227	0.91	Yes	0.673	0.326	1.00	Yes	1.00	**16.22**
		L_{33} - L_{34}	615.08	-----	1322	-1886	-487	-1366	-103	87	83	376	0.614	0.381	1.00	Yes	0.360	0.239	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.24**
		L_{34} - L_{35}	833.37	-----	764	-1455	-687	-952	-147	-6	179	119	0.744	0.254	1.00	Yes	0.433	0.159	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_{35} - L_{36}	1166.47	-----	748	-981	-724	-1138	-274	-24	87	271	0.816	0.179	1.00	Yes	0.550	0.112	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{36} - L_{37}	1366.72	-----	442	-1671	-1073	-1243	-117	31	321	113	0.784	0.211	1.00	Yes	0.515	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		L_{37} - L_{38}	1745.69	-----	143	-1402	-2723	-1161	-352	-143	-90	269	0.739	0.261	1.00	Yes	0.491	0.153	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		L_{38} - L_{39}	1779.75	-----	-365	-70	-2519	-1453	-2	-57	-44	91	0.764	0.229	1.00	Yes	0.513	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		L_{39} - L_{40}	1707.64	-----	-245	-382	-2069	-1449	-64	1	-43	-76	0.796	0.201	1.00	Yes	0.527	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_{40} - L_{41}	1301.98	-----	-409	22	-1866	-460	-7	-12	-154	4	0.765	0.231	1.00	Yes	0.515	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_{41} - L_{42}	1007.65	-----	-178	-98	-1361	-325	15	68	-9	-10	0.794	0.204	1.00	Yes	0.521	0.120	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_{42} - L_{43}	523.47	-----	-300	171	-1350	151	48	10	-126	491	0.636	0.355	1.00	Yes	0.378	0.226	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		L_{43} - L_{44}	23.58	-127.18	9	-91	-3933	1132	-67	-19	1029	301	0.029	0.969	1.00	Yes	0.017	0.620	0.64	Yes	0.183	0.639	0.83	Yes	0.182	0.800	0.99	Yes	1.00	**20.07**
	Structure 3	L_0 - L_1	144.77	-----	983	-1718	-41	-29	-269	-1221	-1	-3	0.222	0.769	1.00	Yes	0.135	0.507	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.19**
		L_1 - L_2	406.65	-----	611	-976	61	-640	71	167	-382	297	0.622	0.372	1.00	Yes	0.421	0.234	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_2 - L_3	890.11	-----	391	-819	-389	-703	9	118	492	268	0.775	0.221	1.00	Yes	0.496	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		L_3 - L_4	1255.39	-----	408	-1012	-654	-1199	-76	92	130	296	0.794	0.202	1.00	Yes	0.515	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		L_4 - L_5	1614.15	-----	-224	-277	-1557	-942	-164	-146	201	182	0.789	0.202	1.00	Yes	0.506	0.118	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		L_5 - L_6	1547.98	-----	178	-1743	-1173	-1176	-289	56	-32	367	0.756	0.236	1.00	Yes	0.491	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		L_6 - L_7	1310.03	-----	-346	202	-1602	-285	0	-29	-105	72	0.770	0.229	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		L_7 - L_8	1047.69	-----	-91	51	-898	-482	-23	67	18	106	0.827	0.172	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		L_8 - L_9	561.98	-175.49	-164	347	-926	442	65	-119	54	10	0.728	0.266	1.00	Yes	0.437	0.175	0.62	Yes	0.270	0.124	0.4	Yes	0.267	0.245	0.52	Yes	1.00	**4.61**
		L_9 - L_{10}	98.55	-505.56	-35	465	-853	313	-27	17	103	165	0.128	0.255	0.39	Yes	0.074	0.154	0.23	Yes	0.777	0.137	0.92	Yes	0.770	0.226	1.00	Yes	1.00	**5.20**
		L_{10} - L_{11}	-----	-963.91	88	189	-1349	-72	88	-118	68	35	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.149	0.94	Yes	0.780	0.214	1.00	Yes	1.00	**7.20**
		L_{11} - L_{12}	-----	-1188.43	73	1068	-927	1795	51	94	-61	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.193	0.96	Yes	0.753	0.238	1.00	Yes	1.00	**7.46**
		L_{12} - L_{13}	-----	-1127.57	2126	-636	553	-25	-196	-86	-120	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.257	0.98	Yes	0.714	0.282	1.00	Yes	1.00	**6.91**
		L_{13} - L_{14}	-----	-923.08	1325	-1606	-1514	-1148	12	-122	213	13	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.099	0.86	Yes	0.743	0.252	1.00	Yes	1.00	**12.76**
		L_{14} - L_{15}	667.75	-329.64	1241	-1349	-987	-961	-311	45	121	141	0.655	0.340	1.00	Yes	0.424	0.206	0.64	Yes	0.384	0.195	0.58	Yes	0.380	0.298	0.68	Yes	1.00	**12.20**
		L_{15} - L_{16}	544.98	-----	765	-860	-484	-671	-191	52	156	345	0.706	0.289	1.00	Yes	0.423	0.188	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		L_{16} - L_{17}	640.61	-210.90	317	20	-1000	-262	41	-80	22	62	0.737	0.254	1.00	Yes	0.438	0.165	0.61	Yes	0.288	0.232	0.53	Yes	0.285	0.241	0.53	Yes	1.00	**4.70**
		L_{17} - L_{18}	662.38	-48.10	51	-67	-863	-673	20	105	-19	139	0.762	0.231	1.00	Yes	0.441	0.139	0.58	Yes	0.066	0.261	0.33	Yes	0.065	0.208	0.28	Yes	1.00	**3.74**
		L_{18} - L_{19}	439.86	-----	-18	29	-852	-211	51	-75	-10	309	0.673	0.322	1.00	Yes	0.411	0.215	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		L_{19} - L_{20}	54.07	-0.66	53	-146	-2207	1068	-139	-38	1142	311	0.083	0.908	1.00	Yes	0.049	0.550	0.60	Yes	0.001	0.559	0.56	Yes	0.001	0.662	0.67	Yes	1.00	**13.19**

Moment (Start) AI Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$			0.00	-311.52	-20	43	-161	191	-93	-30	-792	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.300	1	Yes	0.659	0.244	0.91	Yes	1.00	**1.55**
		$U_1 - L_1$			32.29	-311.68	28	-23	-261	244	52	21	255	161	0.058	0.407	0.47	Yes	0.032	0.224	0.26	Yes	0.681	0.156	0.84	Yes	0.659	0.333	1.00	Yes	1.00	**3.82**
		$U_2 - L_2$			80.11	-266.76	125	-117	-306	337	-131	-24	111	118	0.144	0.469	0.62	Yes	0.079	0.258	0.34	Yes	0.583	0.144	0.73	Yes	0.564	0.431	1.00	Yes	1.00	**6.09**
		$U_3 - L_3$			262.57	-222.42	283	-279	-285	303	-466	-190	69	236	0.472	0.522	1.00	Yes	0.260	0.287	0.55	Yes	0.487	0.200	0.69	Yes	0.471	0.387	0.86	Yes	1.00	**6.77**
		$U_4 - L_4$			34.97	-56.87	673	-647	-251	216	-163	-171	160	232	0.063	0.928	1.00	Yes	0.035	0.510	0.55	Yes	0.125	0.251	0.38	Yes	0.120	0.861	0.99	Yes	1.00	**12.20**
		$U_5 - L_5$			-----	-418.66	249	-267	22	-36	-76	-86	-120	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.102	0.86	Yes	0.722	0.271	1.00	Yes	1.00	**3.40**
		$U_6 - L_6$			-----	-513.96	280	-293	43	-61	11	42	-67	42	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.082	0.86	Yes	0.737	0.256	1.00	Yes	1.00	**3.47**
		$U_7 - L_7$			-----	-438.36	306	-324	118	-132	-122	62	-129	46	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.120	0.86	Yes	0.676	0.319	1.00	Yes	1.00	**2.23**
		$U_8 - L_8$			-----	-1269.81	500	-597	-408	486	-140	-46	-212	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.917	0.055	0.98	Yes	0.880	0.111	1.00	Yes	1.00	**4.55**
		$U_9 - L_9$			-----	-654.87	-164	188	-416	458	-220	-156	-256	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.129	0.92	Yes	0.740	0.254	1.00	Yes	1.00	**2.91**
		$U_{10} - L_{10}$			-----	-789.22	-100	136	-402	409	-316	-221	-162	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.118	0.94	Yes	0.779	0.212	1.00	Yes	1.00	**4.67**
		$U_{11} - L_{11}$			-----	-658.49	-61	146	-407	490	-123	19	-82	37	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.087	0.88	Yes	0.766	0.227	1.00	Yes	1.00	**4.41**
		$U_{12} - L_{12}$			-----	-510.59	-41	54	-343	337	-93	56	-57	103	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.093	0.84	Yes	0.701	0.293	1.00	Yes	1.00	**3.70**
		$U_{13} - L_{13}$			-----	-363.94	3	17	-241	262	-84	84	-14	139	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.105	0.85	Yes	0.697	0.299	1.00	Yes	1.00	**2.95**
		$U_{14} - L_{14}$			105.71	-60.76	342	-342	-574	614	59	79	19	54	0.190	0.808	1.00	Yes	0.105	0.444	0.55	Yes	0.136	0.214	0.35	Yes	0.129	0.785	0.92	Yes	1.00	**11.74**
		$U_{15} - L_{15}$			246.32	-309.10	250	-267	-201	194	-31	-177	-110	-135	0.443	0.392	0.84	Yes	0.244	0.216	0.46	Yes	0.693	0.163	0.86	Yes	0.654	0.341	1.00	Yes	1.00	**4.93**
		$U_{16} - L_{16}$			93.91	-311.44	261	-263	-50	33	-128	-192	-58	-78	0.169	0.392	0.57	Yes	0.093	0.216	0.31	Yes	0.702	0.161	0.87	Yes	0.659	0.336	1.00	Yes	1.00	**3.61**
		$U_{17} - L_{17}$			-----	-434.47	232	-244	33	-55	-77	-104	-89	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.108	0.93	Yes	0.750	0.248	1.00	Yes	1.00	**2.97**
		$U_{18} - L_{18}$			-----	-530.87	448	-455	121	-126	69	-63	-161	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.094	0.88	Yes	0.738	0.258	1.00	Yes	1.00	**3.32**
		$U_{19} - L_{19}$			-----	-644.11	522	-528	129	-186	54	-31	54	328	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.110	0.92	Yes	0.750	0.245	1.00	Yes	1.00	**3.54**
		$U_{20} - L_{20}$			-----	-578.02	422	-494	155	-223	797	105	198	26	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.673	0.229	0.91	Yes	1.00	**2.44**
	Structure 2	$U_0 - L_0$			-----	-601.10	-115	181	-417	495	-266	-45	-1335	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.276	1	Yes	0.644	0.210	0.86	Yes	1.00	**2.45**
		$U_1 - L_1$			-----	-712.29	-109	115	-541	540	43	-65	-6	5	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.068	0.89	Yes	0.763	0.229	1.00	Yes	1.00	**3.97**
		$U_2 - L_2$			-----	-581.85	-79	88	-491	490	99	44	1	84	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.080	0.86	Yes	0.741	0.251	1.00	Yes	1.00	**3.85**
		$U_3 - L_3$			-----	-485.64	-41	48	-253	258	20	130	-12	133	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.093	0.92	Yes	0.762	0.235	1.00	Yes	1.00	**3.56**
		$U_4 - L_4$			3.29	-333.13	14	8	-226	223	-56	100	-60	125	0.006	0.325	0.34	Yes	0.003	0.179	0.19	Yes	0.756	0.093	0.85	Yes	0.705	0.289	1.00	Yes	1.00	**3.34**
		$U_5 - L_5$			154.80	-322.08	137	-113	-226	242	-127	78	-44	149	0.278	0.353	0.64	Yes	0.153	0.194	0.35	Yes	0.728	0.114	0.85	Yes	0.682	0.310	1.00	Yes	1.00	**4.42**
		$U_6 - L_6$			362.31	-203.85	232	-230	-225	229	-52	157	-88	125	0.652	0.342	1.00	Yes	0.358	0.188	0.55	Yes	0.459	0.090	0.55	Yes	0.431	0.297	0.73	Yes	1.00	**5.49**
		$U_7 - L_7$			15.56	-193.41	413	-459	-196	209	25	-27	-93	88	0.028	0.613	0.65	Yes	0.015	0.337	0.36	Yes	0.437	0.187	0.63	Yes	0.409	0.586	1.00	Yes	1.00	**10.38**
		$U_8 - L_8$			-----	-458.73	378	-387	21	-42	-202	-182	-103	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.128	0.8	Yes	0.661	0.338	1.00	Yes	1.00	**3.44**
		$U_9 - L_9$			-----	-687.05	610	-613	80	-115	-101	-144	-129	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.082	0.85	Yes	0.736	0.260	1.00	Yes	1.00	**4.44**
		$U_{10} - L_{10}$			-----	-787.71	559	-575	107	-145	-54	-77	-53	10	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.082	0.87	Yes	0.736	0.254	1.00	Yes	1.00	**4.63**
		$U_{11} - L_{11}$			-----	-816.25	533	-533	157	-172	-118	-38	-46	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.084	0.91	Yes	0.763	0.235	1.00	Yes	1.00	**4.12**
		$U_{12} - L_{12}$			-----	-882.07	547	-549	152	-170	83	102	17	96	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.087	0.94	Yes	0.765	0.235	1.00	Yes	1.00	**4.14**
		$U_{13} - L_{13}$			-----	-743.86	584	-569	242	-240	35	87	-88	42	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.117	0.95	Yes	0.717	0.279	1.00	Yes	1.00	**3.22**
		$U_{14} - L_{14}$			-----	-1300.51	638	-608	-507	471	-93	-5	-40	147	-----	-----	-----	-----	-----	-----	-----	-----	0.951	0.047	1	Yes	0.862	0.113	0.98	Yes	1.00	**4.86**
		$U_{15} - L_{15}$			-----	-738.65	-164	166	-600	592	-80	-44	-152	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.140	0.97	Yes	0.712	0.287	1.00	Yes	1.00	**3.77**
		$U_{16} - L_{16}$			-----	-707.08	-112	101	-549	524	-154	-90	-247	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.110	0.93	Yes	0.758	0.233	1.00	Yes	1.00	**3.98**
		$U_{17} - L_{17}$			-----	-637.02	-126	123	-547	538	-97	-33	-68	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.081	0.87	Yes	0.741	0.254	1.00	Yes	1.00	**3.95**
		$U_{18} - L_{18}$			-----	-571.87	-87	125	-519	522	-129	9	-99	3	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.082	0.85	Yes	0.729	0.267	1.00	Yes	1.00	**3.96**
		$U_{19} - L_{19}$			-----	-473.17	-41	57	-300	289	-111	29	-116	32	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.087	0.8	Yes	0.707	0.289	1.00	Yes	1.00	**3.40**
		$U_{20} - L_{20}$			-----	-376.53	13	3	-237	240	-171	5	-71	67	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.112	0.89	Yes	0.721	0.275	1.00	Yes	1.00	**3.40**
		$U_{21} - L_{21}$			65.12	-313.99	63	-50	-246	256	-141	32	-103	68	0.117	0.368	0.49	Yes	0.064	0.203	0.27	Yes	0.709	0.122	0.84	Yes	0.664	0.328	1.00	Yes	1.00	**3.99**
		$U_{22} - L_{22}$			88.40	-160.97	400	-419	-483	509	19	24	16	148	0.159	0.693	0.86	Yes	0.087	0.381	0.47	Yes	0.362	0.198	0.57	Yes	0.341	0.650	1.00	Yes	1.00	**13.07**
		$U_{23} - L_{23}$			129.54	-311.94	255	-264	-102	93	-125	-119	-65	-45	0.233	0.374	0.61	Yes	0.128	0.206	0.34	Yes	0.705	0.135	0.84	Yes	0.660	0.338	1.00	Yes	1.00	**4.03**
		$U_{24} - L_{24}$			66.50	-368.32	250	-255	-39	28	-55	-71	-72	-62	0.108	0.309	0.42	Yes	0.060	0.170	0.23	Yes	0.755	0.099	0.86	Yes	0.706	0.291	1.00	Yes	1.00	**3.60**
		$U_{25} - L_{25}$			-----	-469.74	306	-300	19	-34	-43	-39	-79	2	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.083	0.79	Yes	0.701	0.294	1.00	Yes	1.00	**3.50**
		$U_{26} - L_{26}$			-----	-561.55	530	-548	88	-123	-141	-47	-38	36	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.092	0.85	Yes	0.716	0.280	1.00	Yes	1.00	**3.66**
		$U_{27} - L_{27}$			-----	-625.45	571	-572	140	-163	-48	29	-70	43	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.073	0.85	Yes	0.728	0.266	1.00	Yes	1.00	**3.61**
		$U_{28} - L_{28}$			-----	-705.16	565	-556	132	-129	54	91	-33	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.075	0.89	Yes	0.756	0.239	1.00	Yes	1.00	**3.75**
		$U_{29} - L_{29}$			-----	-702.82	659	-638	204	-210	-67	58	-116	25	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.127	0.92	Yes	0.678	0.315	1.00	Yes	1.00	**3.81**
		$U_{30} - L_{30}$			-----	-1288.38	660	-652	-609	544	-22	-83	-163	67	-----	-----	-----	-----	-----	-----	-----	-----	0.942	0.052	1	Yes	0.854	0.117	0.98	Yes	1.00	**5.10**
		$U_{31} - L_{31}$			-----	-745.43	-178	174	-572	551	-115	-57	-185	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.147	0.98	Yes	0.719	0.274	1.00	Yes	1.00	**3.73**
		$U_{32} - L_{32}$			-----	-888.08	-125	99	-522	507	-186	-97	-210	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.115	0.97	Yes	0.770	0.224	1.00	Yes	1.00	**4.79**
		$U_{33} - L_{33}$			-----	-819.22	-149	181	-517	505	-146	7	-108	6	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.085	0.91	Yes	0.766	0.228	1.00	Yes	1.00	**4.70**
		$U_{34} - L_{34}$			-----	-799.70	-106	149	-550	556	-117	48	-91	79	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.076	0.87	Yes	0.748	0.245	1.00	Yes	1.00	**4.90**
		$U_{35} - L_{35}$			-----	-702.17	-90	149	-576	580	-215	29	10	170	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.077	0.86	Yes	0.753	0.246	1.00	Yes	1.00	**4.67**
		$U_{36} - L_{36}$			-----	-468.65	-31	56	-360	370	-143	76	-50	127	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.094	0.78	Yes	0.675	0.323	1.00	Yes	1.00	**3.71**
		$U_{37} - L_{37}$			-----	-171.32	137	-140	-442	495	1	28	-58	142	-----	-----	-----	-----	-----	-----	-----	-----	0.387	0.207	0.6	Yes	0.362	0.633	1.00	Yes	1.00	**9.70**
		$U_{38} - L_{38}$			350.00	-138.27	164	-163	-239	246	-139	-169	-71	-104	0.629	0.363	1.00	Yes	0.346	0.200	0.55	Yes	0.311	0.134	0.45	Yes	0.293	0.315	0.61	Yes	1.00	**4.27**
		$U_{39} - L_{39}$			254.97	-316.97	238	-254	-197	184	-29	-141	-110	-107	0.459	0.365	0.83	Yes	0.252	0.201	0.46	Yes	0.716	0.146	0.87	Yes	0.671	0.325	1.00	Yes	1.00	**4.94**
		$U_{40} - L_{40}$			84.58	-333.25	230	-228	-54	30	-60	-108	-87	-75	0.152	0.325	0.48	Yes	0.084	0.179	0.27	Yes	0.756	0.118	0.88	Yes	0.705	0.294	1.00	Yes	1.00	**3.71**
		$U_{41} - L_{41}$			-----	-482.01	260	-267	40	-62	-111	-91	8	40	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.104	0.93	Yes	0.756	0.244	1.00	Yes	1.00	**3.44**
		$U_{42} - L_{42}$			-----	-572.52	518	-516	102	-112	96	-32	-84	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.081	0.85	Yes	0.730	0.265	1.00	Yes	1.00	**3.61**
		$U_{43} - L_{43}$			-----	-704.47	547	-561	136	-153	249	17	-40	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.098	0.91	Yes	0.755	0.238	1.00	Yes	1.00	**3.77**
		$U_{44} - L_{44}$			-----	-622.68	465	-536	195	-241	1133	192	-27	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.251	1	Yes	0.667	0.227	0.90	Yes	1.00	**2.52**
	Structure 3	$U_0 - L_0$			-----	-554.57	-103	167	-395	456	-251	-33	-1040	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.267	1	Yes	0.645	0.211	0.86	Yes	1.00	**2.56**
		$U_1 - L_1$			-----	-650.94	-108	116	-515	509	7	-74	55	19	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.074	0.89	Yes	0.758	0.239	1.00	Yes	1.00	**3.99**
		$U_2 - L_2$			-----	-541.08	-90	95	-429	436	87	33	-80	60	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.078	0.88	Yes	0.753	0.247	1.00	Yes	1.00	**3.57**
		$U_3 - L_3$			-----	-442.37	-31	62	-213	226	-130	42	38	184	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.116	0.95	Yes	0.763	0.230	1.00	Yes	1.00	**3.24**
		$U_4 - L_4$			57.60	-314.32	36	-16	-258	258	-128	126	-103	173	0.104	0.380	0.49	Yes	0.057	0.209	0.27	Yes	0.708	0.105	0.82	Yes	0.665	0.330	1.00	Yes	1.00	**3.89**
		$U_5 - L_5$			155.94	-301.05	138	-126	-267	281	-85	118	-88	165	0.280	0.407	0.69	Yes	0.154	0.224	0.38	Yes	0.675	0.117	0.8	Yes	0.637	0.360	1.00	Yes	1.00	**4.92**
		$U_6 - L_6$			-----	-72.77	629	-656	-426	446	-300	-122	55	120	-----	-----	-----	-----	-----	-----	-----	-----	0.162	0.273	0.44	Yes	0.154	0.839	1.00	Yes	1.00	**13.29**
		$U_7 - L_7$			25.25	-357.96	251	-270	-31	19	-154	-167	-175	-140	0.041	0.353	0.40	Yes	0.023	0.194	0.22	Yes	0.724	0.143	0.87	Yes	0.686	0.308	1.00	Yes	1.00	**3.17**
		$U_8 - L_8$			-----	-514.79	341	-342	16	-19	-238	-213	-136	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.134	0.88	Yes	0.706	0.292	1.00	Yes	1.00	**3.90**
		$U_9 - L_9$			-----	-649.54	415	-506	65	-136	-197	-130	-47	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.105	0.89	Yes	0.756	0.235	1.00	Yes	1.00	**4.12**
		$U_{10} - L_{10}$			-----	-779.92	412	-438	90	-107	28	97	3	82	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.071	0.88	Yes	0.770	0.227	1.00	Yes	1.00	**4.38**
		$U_{11} - L_{11}$			-----	-646.67	425	-481	182	-211	-32	94	-52	61	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.095	0.87	Yes	0.730	0.267	1.00	Yes	1.00	**2.75**
		$U_{12} - L_{12}$			-----	-1283.20	436	-571	-407	438	-127	-11	53	76	-----	-----	-----	-----	-----	-----	-----	-----	0.926	0.048	0.98	Yes	0.890	0.106	1.00	Yes	1.00	**4.52**
		$U_{13} - L_{13}$			-----	-459.07	-105	116	-268	288	-141	-96	-159	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.138	0.91	Yes	0.708	0.284	1.00	Yes	1.00	**2.12**
		$U_{14} - L_{14}$			-----	-525.85	-52	66	-273	278	-174	-140	-231	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.121	0.92	Yes	0.754	0.243	1.00	Yes	1.00	**3.64**
		$U_{15} - L_{15}$			-----	-433.59	-24	47	-226	245	-177	-56	-73	40	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.112	0.9	Yes	0.748	0.248	1.00	Yes	1.00	**3.62**
		$U_{16} - L_{16}$			103.70	-75.18	177	-137	-600	583	-151	-76	-106	56	0.187	0.811	1.00	Yes	0.103	0.446	0.55	Yes	0.165	0.207	0.38	Yes	0.159	0.767	0.93	Yes	1.00	**10.98**
		$U_{17} - L_{17}$			289.33	-175.87	173	-194	-289	300	-310	-252	-112	-24	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.385	0.180	0.57	Yes	0.372	0.383	0.76	Yes	1.00	**5.31**
		$U_{18} - L_{18}$			80.23	-271.50	294	-327	-120	124	-212	-162	112	10	0.144	0.479	0.63	Yes	0.079	0.263	0.35	Yes	0.593	0.174	0.77	Yes	0.574	0.417	1.00	Yes	1.00	**5.26**
		$U_{19} - L_{19}$			21.34	-313.89	258	-250	-35	22	-140	-113	-167	-90	0.038	0.378	0.42	Yes	0.021	0.208	0.23	Yes	0.686	0.125	0.82	Yes	0.664	0.330	1.00	Yes	1.00	**3.57**
		$U_{20} - L_{20}$			-----	-351.95	162	-196	48	-74	380	122	-110	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.192	0.98	Yes	0.745	0.251	1.00	Yes	1.00	**1.36**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	490.48	-31.51	8	-9	-184	77	-45	-15	-532	-207	0.643	0.349	1.00	Yes	0.389	0.192	0.59	Yes	0.054	0.237	0.3	Yes	0.049	0.215	0.27	Yes	1.00	**4.05**
		$U_1 - L_2$	327.47	-134.09	23	-15	-157	-12	47	38	-719	-322	0.589	0.409	1.00	Yes	0.324	0.225	0.55	Yes	0.308	0.372	0.68	Yes	0.284	0.201	0.49	Yes	1.00	**6.14**
		$U_2 - L_3$	26.28	-260.95	56	-26	-174	-85	122	91	-310	-376	0.047	0.331	0.38	Yes	0.026	0.182	0.21	Yes	0.601	0.394	1	Yes	0.552	0.222	0.78	Yes	1.00	**9.36**
		$U_3 - L_4$	-----	-353.63	32	-55	-54	-55	-161	-119	-285	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.184	1	Yes	0.748	0.070	0.82	Yes	1.00	**3.81**
		$U_4 - L_4$	582.57	-----	-2	-1	-97	22	57	-32	-70	-181	0.854	0.141	1.00	Yes	0.470	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_5 - L_5$	706.89	-----	-2	49	-215	201	186	103	44	-104	0.836	0.156	1.00	Yes	0.460	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		$U_7 - L_6$	575.73	-----	-70	105	-435	254	344	223	120	119	0.681	0.310	1.00	Yes	0.374	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		$U_6 - L_7$	657.04	-----	27	169	-111	292	299	234	303	154	0.777	0.221	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		$U_8 - L_9$	1002.50	-----	94	217	-108	356	295	258	257	211	0.801	0.196	1.00	Yes	0.496	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_9 - L_{10}$	970.30	-----	-65	104	-434	241	88	110	221	154	0.776	0.222	1.00	Yes	0.480	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{10} - L_{11}$	1017.72	-----	-47	116	-262	162	8	0	-122	-118	0.860	0.137	1.00	Yes	0.532	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_{11} - L_{12}$	802.08	-----	-59	69	-322	88	-112	-79	-344	-348	0.794	0.201	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		$U_{12} - L_{13}$	623.08	-----	-53	10	-192	130	-274	-250	-348	-317	0.760	0.236	1.00	Yes	0.478	0.133	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_{13} - L_{14}$	440.21	-6.19	-5	-28	-91	33	-276	-297	-291	-295	0.792	0.202	1.00	Yes	0.435	0.111	0.55	Yes	0.014	0.155	0.17	Yes	0.013	0.116	0.13	Yes	1.00	**2.69**
		$U_{15} - L_{14}$	232.27	-331.42	65	-104	-78	-9	-196	-299	-269	-359	0.418	0.237	0.66	Yes	0.230	0.130	0.37	Yes	0.776	0.220	1	Yes	0.701	0.133	0.84	Yes	1.00	**3.94**
		$U_{16} - L_{15}$	416.66	-172.91	25	-60	-135	74	-188	-176	-246	-257	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	0.410	0.184	0.6	Yes	0.366	0.172	0.54	Yes	1.00	**3.97**
		$U_{17} - L_{16}$	539.09	-----	-17	-10	-153	89	-95	-124	-153	-231	0.791	0.209	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_{18} - L_{17}$	645.29	-----	-97	60	-349	247	6	-45	-199	-185	0.763	0.234	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{19} - L_{18}$	722.74	-----	-91	65	-365	246	-136	-16	-151	-140	0.783	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_{20} - L_{19}$	617.63	-----	-117	115	-408	312	-62	177	-717	-113	0.669	0.327	1.00	Yes	0.368	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
	Structure 2	$U_0 - L_1$	642.32	-----	-65	74	-448	363	-121	53	-1001	-175	0.635	0.357	1.00	Yes	0.350	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		$U_1 - L_2$	787.48	-----	-86	58	-412	307	43	11	-113	-166	0.779	0.216	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_2 - L_3$	648.80	-----	-65	49	-330	254	-76	-178	-206	-199	0.767	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_3 - L_4$	573.22	-----	-33	16	-176	123	-235	-213	-313	-282	0.764	0.226	1.00	Yes	0.420	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_4 - L_5$	411.36	-96.25	12	-37	-129	84	-234	-201	-309	-266	0.740	0.254	1.00	Yes	0.407	0.140	0.55	Yes	0.238	0.182	0.42	Yes	0.204	0.164	0.37	Yes	1.00	**3.47**
		$U_5 - L_6$	398.63	-313.14	85	-117	-120	59	-365	-246	-436	-266	0.717	0.279	1.00	Yes	0.394	0.154	0.55	Yes	0.739	0.256	1	Yes	0.663	0.153	0.82	Yes	1.00	**4.63**
		$U_6 - L_7$	107.59	-370.39	66	-102	-53	-8	-273	-257	-328	-279	0.175	0.202	0.38	Yes	0.096	0.111	0.21	Yes	0.793	0.200	1	Yes	0.710	0.116	0.83	Yes	1.00	**3.00**
		$U_8 - L_7$	596.23	-21.24	-10	-28	-203	112	-170	-234	-140	-261	0.760	0.235	1.00	Yes	0.479	0.132	0.62	Yes	0.035	0.122	0.16	Yes	0.032	0.181	0.22	Yes	1.00	**3.89**
		$U_9 - L_8$	725.10	-----	-78	15	-346	225	-90	-139	-141	-227	0.785	0.214	1.00	Yes	0.432	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{10} - L_9$	824.76	-----	-86	43	-336	229	-21	-55	-63	-171	0.816	0.181	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_{11} - L_{10}$	891.07	-----	-103	96	-369	272	202	86	56	-50	0.812	0.184	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_{12} - L_{11}$	883.29	-----	-110	136	-380	333	243	155	160	23	0.805	0.194	1.00	Yes	0.443	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{13} - L_{12}$	753.76	-----	-180	174	-446	378	271	153	267	124	0.746	0.248	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.88**
		$U_{14} - L_{13}$	755.75	-----	-15	221	-278	429	293	192	272	156	0.748	0.243	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_{14} - L_{15}$	639.70	-----	20	171	-222	365	150	108	157	134	0.756	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{15} - L_{16}$	641.93	-----	-99	104	-374	335	50	67	121	89	0.759	0.234	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{16} - L_{17}$	745.47	-----	-73	98	-357	352	9	5	9	-7	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_{17} - L_{18}$	679.14	-----	-64	80	-311	284	-58	-32	-101	-58	0.803	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{18} - L_{19}$	683.20	-----	-43	38	-282	248	-109	-98	-150	-148	0.808	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{19} - L_{20}$	605.61	-----	-16	1	-203	165	-167	-130	-222	-188	0.772	0.227	1.00	Yes	0.425	0.127	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		$U_{20} - L_{21}$	432.65	-44.28	7	-20	-121	98	-208	-147	-224	-145	0.778	0.219	1.00	Yes	0.428	0.120	0.55	Yes	0.105	0.113	0.22	Yes	0.094	0.154	0.25	Yes	1.00	**3.19**
		$U_{21} - L_{22}$	431.99	-207.26	35	-66	-112	49	-217	-214	-266	-242	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	0.490	0.180	0.67	Yes	0.439	0.143	0.59	Yes	1.00	**4.13**
		$U_{23} - L_{22}$	423.02	-324.96	64	-92	-134	37	-154	-227	-136	-233	0.761	0.238	1.00	Yes	0.418	0.131	0.55	Yes	0.774	0.207	0.99	Yes	0.688	0.171	0.86	Yes	1.00	**5.16**
		$U_{24} - L_{23}$	440.37	-87.63	25	-36	-128	91	-51	-80	-67	-155	0.792	0.208	1.00	Yes	0.436	0.114	0.55	Yes	0.210	0.091	0.31	Yes	0.185	0.163	0.35	Yes	1.00	**3.79**
		$U_{25} - L_{24}$	607.56	-1.61	8	-21	-216	167	-16	-57	-16	-119	0.775	0.218	1.00	Yes	0.426	0.122	0.55	Yes	0.003	0.071	0.08	Yes	0.002	0.194	0.20	Yes	1.00	**4.38**
		$U_{26} - L_{25}$	674.03	-----	-36	44	-304	243	135	47	60	-24	0.797	0.197	1.00	Yes	0.438	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		$U_{27} - L_{26}$	665.59	-----	-60	73	-308	269	160	82	147	9	0.787	0.203	1.00	Yes	0.433	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{28} - L_{27}$	717.24	-----	-77	115	-356	351	205	142	174	70	0.777	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		$U_{29} - L_{28}$	624.89	-----	-125	119	-372	327	217	111	250	118	0.739	0.256	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		$U_{30} - L_{29}$	638.27	-----	12	161	-220	357	227	150	216	76	0.755	0.243	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		$U_{31} - L_{31}$	769.60	-----	19	210	-283	442	196	118	121	68	0.761	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{31} - L_{32}$	781.22	-----	-129	130	-459	387	36	47	56	40	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{32} - L_{33}$	899.25	-----	-86	132	-375	337	-25	0	-146	-60	0.819	0.179	1.00	Yes	0.451	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		$U_{33} - L_{34}$	893.51	-----	-85	128	-347	270	-76	-40	-248	-220	0.814	0.181	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{34} - L_{35}$	813.92	-----	-84	113	-306	218	-106	-81	-292	-291	0.805	0.186	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{35} - L_{36}$	705.80	-----	-90	20	-322	230	-376	-269	-387	-277	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$U_{36} - L_{37}$	600.00	-----	-25	-9	-185	131	-281	-301	-306	-334	0.765	0.234	1.00	Yes	0.482	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{38} - L_{37}$	23.99	-391.17	75	-101	-43	-22	-157	-229	-161	-235	0.039	0.177	0.22	Yes	0.021	0.097	0.12	Yes	0.845	0.152	1	Yes	0.749	0.115	0.87	Yes	1.00	**2.80**
		$U_{39} - L_{38}$	321.12	-340.34	105	-126	-109	46	-142	-188	-226	-251	0.578	0.234	0.82	Yes	0.318	0.129	0.45	Yes	0.811	0.185	1	Yes	0.720	0.161	0.89	Yes	1.00	**4.86**
		$U_{40} - L_{39}$	418.84	-189.32	43	-69	-142	88	-88	-112	-147	-226	0.753	0.247	1.00	Yes	0.414	0.136	0.55	Yes	0.453	0.166	0.62	Yes	0.401	0.181	0.59	Yes	1.00	**4.53**
		$U_{41} - L_{40}$	590.67	-----	-26	7	-193	121	18	-20	-100	-144	0.787	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		$U_{42} - L_{41}$	650.94	-----	-75	50	-349	252	-1	-4	-127	-127	0.770	0.221	1.00	Yes	0.423	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		$U_{43} - L_{42}$	778.51	-----	-95	64	-405	299	-6	-30	-221	-170	0.770	0.221	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_{44} - L_{43}$	628.21	-----	-135	118	-473	378	36	2	-1009	-96	0.621	0.371	1.00	Yes	0.342	0.204	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
	Structure 3	$U_0 - L_1$	589.33	-----	-68	71	-431	317	-133	50	-835	-200	0.638	0.358	1.00	Yes	0.351	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		$U_1 - L_2$	725.01	-----	-91	57	-365	254	37	13	-63	-150	0.785	0.211	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_2 - L_3$	642.82	-----	-78	48	-334	243	-72	-168	-255	-268	0.760	0.238	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		$U_3 - L_4$	523.73	-----	-19	-13	-148	97	-302	-219	-329	-298	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_4 - L_5$	408.03	-121.30	10	-42	-121	79	-294	-226	-377	-299	0.734	0.263	1.00	Yes	0.404	0.145	0.55	Yes	0.288	0.197	0.49	Yes	0.257	0.154	0.42	Yes	1.00	**3.38**
		$U_5 - L_6$	350.59	-312.43	47	-95	-88	1	-326	-317	-449	-343	0.631	0.252	0.89	Yes	0.347	0.138	0.49	Yes	0.732	0.266	1	Yes	0.661	0.121	0.79	Yes	1.00	**4.05**
		$U_7 - L_6$	438.14	-52.23	11	-36	-96	26	-97	-240	-128	-302	0.788	0.211	1.00	Yes	0.433	0.116	0.55	Yes	0.121	0.144	0.27	Yes	0.111	0.123	0.24	Yes	1.00	**3.35**
		$U_8 - L_7$	625.69	-----	-31	-10	-206	139	-141	-158	-185	-263	0.763	0.231	1.00	Yes	0.480	0.130	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_8 - L_9$	843.25	-----	-54	-6	-288	89	112	10	-53	-191	0.834	0.162	1.00	Yes	0.459	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{10} - L_9$	975.98	-----	-50	74	-272	148	358	223	114	-53	0.824	0.173	1.00	Yes	0.510	0.097	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{11} - L_{10}$	983.21	-----	-90	113	-344	227	327	219	416	242	0.786	0.206	1.00	Yes	0.487	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{12} - L_{11}$	984.13	-----	78	206	-111	350	377	310	396	280	0.787	0.206	1.00	Yes	0.487	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_{12} - L_{13}$	667.54	-----	33	176	-114	299	176	156	201	168	0.789	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{13} - L_{14}$	637.32	-----	-55	100	-378	258	134	169	132	92	0.753	0.246	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		$U_{14} - L_{15}$	653.94	-----	-11	137	-315	187	192	191	-201	-216	0.773	0.219	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		$U_{15} - L_{16}$	506.65	-----	-3	11	-183	10	-39	-14	-184	-279	0.743	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_{17} - L_{16}$	-----	-370.10	52	-60	-55	-66	-66	-116	-134	-215	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.152	1	Yes	0.783	0.084	0.87	Yes	1.00	**4.24**
		$U_{18} - L_{17}$	427.68	-193.44	34	-25	-109	-18	82	130	-182	-284	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	0.445	0.210	0.66	Yes	0.409	0.140	0.55	Yes	1.00	**5.92**
		$U_{19} - L_{18}$	444.52	-12.23	21	-31	-92	1	284	6	-96	-192	0.799	0.200	1.00	Yes	0.440	0.110	0.55	Yes	0.028	0.136	0.17	Yes	0.026	0.117	0.15	Yes	1.00	**3.91**
		$U_{20} - L_{19}$	473.10	-----	6	4	-176	90	-34	46	-671	-138	0.621	0.375	1.00	Yes	0.375	0.206	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**

Moment (Start) AI Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-588.41	847	-753	-855	-784	501	-633	768	-1099	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.111	0.92	Yes	0.793	0.203	1.00	Yes	1.00	**7.12**
		U_1 - U_2			-----	-549.66	-78	-128	-386	-631	-8	39	121	-444	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1	Yes	0.741	0.150	0.90	Yes	1.00	**3.21**
		U_2 - U_3			244.85	-572.17	-65	368	-860	-121	-128	167	482	-568	0.281	0.301	0.59	Yes	0.189	0.197	0.39	Yes	0.779	0.219	1	Yes	0.772	0.205	0.98	Yes	1.00	**4.56**
		U_3 - U_4			486.19	-568.93	145	408	-679	-436	-223	-10	264	-371	0.557	0.224	0.79	Yes	0.382	0.153	0.54	Yes	0.774	0.221	1	Yes	0.767	0.161	0.93	Yes	1.00	**4.99**
		U_4 - U_5			493.03	-566.20	203	397	-776	-266	-98	-22	-404	98	0.565	0.253	0.82	Yes	0.388	0.173	0.57	Yes	0.770	0.224	1	Yes	0.764	0.184	0.95	Yes	1.00	**5.12**
		U_5 - U_6			676.23	-186.42	272	489	-616	354	97	131	-295	-420	0.775	0.218	1.00	Yes	0.523	0.143	0.67	Yes	0.254	0.217	0.48	Yes	0.251	0.147	0.40	Yes	1.00	**4.80**
		U_6 - U_7			902.47	-----	421	224	-229	98	321	288	-198	4	0.863	0.134	1.00	Yes	0.603	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		U_7 - U_8			814.95	-----	217	709	-1031	2074	1161	1038	-197	506	0.565	0.432	1.00	Yes	0.394	0.296	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		U_8 - U_9			664.13	-----	2205	-1188	684	-232	640	-235	423	684	0.544	0.454	1.00	Yes	0.372	0.309	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		U_9 - U_{10}			-----	-444.73	747	-968	-434	-718	663	-681	2563	-1115	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.421	1	Yes	0.568	0.217	0.79	Yes	1.00	**20.16**
		U_{10} - U_{11}			202.58	-646.64	315	-112	-25	-731	33	143	550	-585	0.220	0.258	0.48	Yes	0.146	0.167	0.32	Yes	0.833	0.160	1	Yes	0.825	0.164	0.99	Yes	1.00	**5.08**
		U_{11} - U_{12}			-----	-891.40	191	-180	-237	-606	9	117	688	-215	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.151	1	Yes	0.836	0.101	0.94	Yes	1.00	**3.35**
		U_{12} - U_{13}			-----	-1266.34	-12	-254	-608	-600	83	19	599	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.136	1	Yes	0.846	0.084	0.93	Yes	1.00	**3.87**
		U_{13} - U_{14}			-----	-1408.69	-190	-500	-655	-1288	-42	-6	170	-216	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1	Yes	0.808	0.142	0.95	Yes	1.00	**2.93**
		U_{14} - U_{15}			-----	-1369.85	-407	-292	-1335	-604	42	-277	-122	-375	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.198	1	Yes	0.785	0.147	0.94	Yes	1.00	**2.67**
		U_{15} - U_{16}			-----	-1437.38	-197	-467	-850	-724	-112	-428	-318	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.165	1	Yes	0.824	0.094	0.92	Yes	1.00	**3.12**
		U_{16} - U_{17}			-----	-1400.15	-381	-194	-1230	-624	-35	-242	-215	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.181	1	Yes	0.803	0.136	0.94	Yes	1.00	**3.83**
		U_{17} - U_{18}			-----	-1059.45	-252	-61	-887	47	-116	71	-213	-249	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.153	1	Yes	0.829	0.144	0.98	Yes	1.00	**3.67**
		U_{18} - U_{19}			-----	-741.73	-240	13	-768	105	363	-142	78	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.154	1	Yes	0.835	0.154	0.99	Yes	1.00	**4.01**
		U_{19} - U_{20}			-----	-655.79	-164	-118	-1282	528	-65	-110	-187	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.227	0.98	Yes	0.738	0.258	1.00	Yes	1.00	**11.72**
	Structure 2	U_0 - U_1			-----	-557.18	1968	-1679	-1148	-553	943	-318	1644	-492	-----	-----	-----	-----	-----	-----	-----	-----	0.662	0.272	0.94	Yes	0.658	0.334	1.00	Yes	1.00	**9.93**
		U_1 - U_2			-----	-820.11	-72	-453	-389	-1049	137	128	470	-375	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.193	1	Yes	0.792	0.159	0.96	Yes	1.00	**3.79**
		U_2 - U_3			-----	-1189.98	24	-1016	-507	-1104	-38	-567	513	-598	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.141	1	Yes	0.845	0.112	0.96	Yes	1.00	**4.22**
		U_3 - U_4			-----	-1401.14	-520	-505	-1364	-1303	-126	-29	413	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1	Yes	0.798	0.121	0.92	Yes	1.00	**3.80**
		U_4 - U_5			-----	-1512.93	-579	-548	-1472	-1525	-125	-83	138	-614	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1	Yes	0.777	0.126	0.91	Yes	1.00	**3.08**
		U_5 - U_6			-----	-1550.56	-572	-4	-1568	-1005	-196	-49	-82	-526	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.189	1	Yes	0.796	0.130	0.93	Yes	1.00	**3.20**
		U_6 - U_7			-----	-1396.54	-309	-200	-1399	-1165	-172	-92	27	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1	Yes	0.795	0.125	0.92	Yes	1.00	**3.31**
		U_7 - U_8			-----	-1384.08	-338	-191	-1514	-992	-80	-179	-330	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.205	1	Yes	0.788	0.135	0.93	Yes	1.00	**3.35**
		U_8 - U_9			-----	-1189.62	-350	214	-1381	-303	-19	-196	-448	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.186	1	Yes	0.807	0.147	0.96	Yes	1.00	**3.68**
		U_9 - U_{10}			294.20	-903.77	-83	535	-1520	15	-124	-239	-601	-621	0.216	0.252	0.47	Yes	0.146	0.171	0.32	Yes	0.785	0.212	1	Yes	0.780	0.185	0.97	Yes	1.00	**4.60**
		U_{10} - U_{11}			831.06	-616.58	348	611	-1341	6	-191	-101	-827	-486	0.702	0.290	1.00	Yes	0.478	0.190	0.67	Yes	0.616	0.242	0.86	Yes	0.613	0.189	0.81	Yes	1.00	**6.71**
		U_{11} - U_{12}			943.42	-----	202	655	-968	445	35	39	-497	-484	0.797	0.197	1.00	Yes	0.535	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		U_{12} - U_{13}			1253.13	-----	456	60	-627	-213	295	416	-741	-90	0.846	0.150	1.00	Yes	0.603	0.103	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.10**
		U_{13} - U_{14}			1009.59	-----	138	1631	-1835	4075	1411	1749	150	862	0.496	0.497	1.00	Yes	0.351	0.327	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.90**
		U_{14} - U_{15}			1038.92	-----	4371	-1651	1597	-141	711	-102	611	1231	0.511	0.489	1.00	Yes	0.362	0.321	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		U_{15} - U_{16}			1261.05	-----	287	-3	-1125	-405	505	165	1188	7	0.762	0.228	1.00	Yes	0.542	0.156	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.11**
		U_{16} - U_{17}			675.94	-678.06	1926	-1441	-598	-2240	180	-729	1733	-2081	0.498	0.500	1.00	Yes	0.331	0.329	0.66	Yes	0.592	0.293	0.89	Yes	0.588	0.281	0.87	Yes	1.00	**17.72**
		U_{17} - U_{18}			808.41	-245.55	515	292	-104	-638	-62	302	520	-261	0.812	0.185	1.00	Yes	0.540	0.122	0.67	Yes	0.292	0.148	0.44	Yes	0.290	0.108	0.40	Yes	1.00	**5.62**
		U_{18} - U_{19}			693.71	-699.25	672	220	-515	-668	1	184	972	-602	0.696	0.256	0.96	Yes	0.457	0.165	0.63	Yes	0.831	0.163	1	Yes	0.826	0.114	0.94	Yes	1.00	**6.85**
		U_{19} - U_{20}			253.72	-743.54	282	115	-506	-866	-55	137	383	-359	0.238	0.190	0.43	Yes	0.158	0.125	0.29	Yes	0.826	0.168	1	Yes	0.820	0.139	0.96	Yes	1.00	**4.09**
		U_{20} - U_{21}			133.89	-885.39	146	-126	-843	-478	-4	24	334	-507	0.104	0.178	0.29	Yes	0.073	0.117	0.19	Yes	0.814	0.186	1	Yes	0.808	0.122	0.94	Yes	1.00	**4.41**
		U_{21} - U_{22}			72.37	-838.57	-77	-31	-821	-987	-189	-101	113	-245	0.056	0.170	0.23	Yes	0.040	0.114	0.16	Yes	0.771	0.225	1	Yes	0.765	0.143	0.91	Yes	1.00	**3.54**
		U_{22} - U_{23}			61.81	-833.98	-30	-91	-1142	-731	-42	-159	-176	-80	0.048	0.185	0.24	Yes	0.034	0.123	0.16	Yes	0.767	0.232	1	Yes	0.761	0.165	0.93	Yes	1.00	**3.57**
		U_{23} - U_{24}			81.25	-861.47	48	-65	-904	-343	1	-86	-473	-201	0.063	0.183	0.25	Yes	0.044	0.119	0.17	Yes	0.792	0.198	1	Yes	0.786	0.131	0.92	Yes	1.00	**4.21**
		U_{24} - U_{25}			311.53	-720.45	187	328	-1022	-123	-11	-80	-407	-246	0.292	0.218	0.52	Yes	0.194	0.143	0.34	Yes	0.800	0.199	1	Yes	0.795	0.164	0.96	Yes	1.00	**4.59**
		U_{25} - U_{26}			672.81	-597.80	215	652	-1176	-36	17	-48	-771	-204	0.675	0.312	0.99	Yes	0.443	0.200	0.65	Yes	0.710	0.285	1	Yes	0.706	0.200	0.91	Yes	1.00	**6.71**
		U_{26} - U_{27}			759.52	-96.44	292	472	-815	277	-48	11	-649	-178	0.762	0.233	1.00	Yes	0.508	0.154	0.67	Yes	0.115	0.225	0.34	Yes	0.114	0.138	0.26	Yes	1.00	**5.28**
		U_{27} - U_{28}			1078.14	-----	219	697	-1143	762	237	255	-544	-516	0.794	0.201	1.00	Yes	0.529	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		U_{28} - U_{29}			1097.52	-----	1210	356	-1557	-120	524	1794	-949	177	0.664	0.329	1.00	Yes	0.472	0.225	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.97**
		U_{29} - U_{30}			918.45	-----	453	1109	-1825	4246	1892	2256	-117	971	0.452	0.547	1.00	Yes	0.320	0.361	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.12**
		U_{30} - U_{31}			998.70	-----	4432	-1644	1721	-442	1029	-8	1008	1318	0.491	0.500	1.00	Yes	0.348	0.329	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		U_{31} - U_{32}			1227.50	-----	112	373	-772	-836	185	385	609	-598	0.829	0.163	1.00	Yes	0.591	0.112	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		U_{32} - U_{33}			-----	-790.08	1153	-1316	-268	-1471	354	-898	1711	-1620	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.179	0.97	Yes	0.785	0.208	1.00	Yes	1.00	**15.53**
		U_{33} - U_{34}			796.91	-787.55	576	274	-467	-928	-37	256	1120	-263	0.673	0.267	0.95	Yes	0.458	0.178	0.64	Yes	0.787	0.206	1	Yes	0.783	0.131	0.92	Yes	1.00	**7.19**
		U_{34} - U_{35}			122.29	-989.77	405	-177	-305	-1169	43	49	517	-505	0.090	0.198	0.29	Yes	0.061	0.134	0.20	Yes	0.859	0.140	1	Yes	0.854	0.142	1.00	Yes	1.00	**3.99**
		U_{35} - U_{36}			-----	-1237.21	127	-445	-577	-1111	-18	100	456	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.148	1	Yes	0.839	0.118	0.96	Yes	1.00	**3.52**
		U_{36} - U_{37}			-----	-1451.74	-260	-286	-1198	-1004	-20	-114	549	-308	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.163	1	Yes	0.827	0.107	0.94	Yes	1.00	**3.47**
		U_{37} - U_{38}			-----	-1422.14	-200	-424	-1232	-1234	-94	-198	-235	-209	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.177	1	Yes	0.810	0.110	0.92	Yes	1.00	**2.94**
		U_{38} - U_{39}			-----	-1591.17	-162	-632	-1167	-1289	8	-210	-404	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.172	1	Yes	0.817	0.107	0.93	Yes	1.00	**3.07**
		U_{39} - U_{40}			-----	-1528.44	-609	-565	-1796	-928	14	-84	-301	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.205	1	Yes	0.785	0.149	0.94	Yes	1.00	**3.05**
		U_{40} - U_{41}			-----	-1384.68	-511	-490	-1611	-1112	86	-161	12	12	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.200	1	Yes	0.788	0.144	0.94	Yes	1.00	**3.49**
		U_{41} - U_{42}			-----	-1185.54	-414	-132	-1361	-124	64	-30	-158	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.147	1	Yes	0.841	0.139	0.98	Yes	1.00	**4.34**
		U_{42} - U_{43}			-----	-836.54	-276	-27	-1166	23	209	-195	-18	-415	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.180	1	Yes	0.807	0.177	0.99	Yes	1.00	**4.90**
		U_{43} - U_{44}			-----	-642.54	-167	-231	-1398	558	-124	-129	-219	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.218	0.99	Yes	0.759	0.237	1.00	Yes	1.00	**10.09**
	Structure 3	U_0 - U_1			-----	-577.24	1742	-1412	-1005	-588	899	-559	1612	-669	-----	-----	-----	-----	-----	-----	-----	-----	0.655	0.299	0.96	Yes	0.649	0.350	1.00	Yes	1.00	**10.07**
		U_1 - U_2			-----	-728.11	0	-589	-202	-700	68	-229	449	-365	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.167	1	Yes	0.819	0.141	0.97	Yes	1.00	**3.46**
		U_2 - U_3			-----	-1080.52	126	-542	-233	-544	-23	-644	502	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.142	1	Yes	0.845	0.089	0.94	Yes	1.00	**3.96**
		U_3 - U_4			-----	-1429.19	-204	-379	-747	-1081	-183	-177	376	-422	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.168	1	Yes	0.819	0.119	0.94	Yes	1.00	**4.27**
		U_4 - U_5			-----	-1423.18	-427	-153	-1172	-387	-106	-51	418	-565	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.167	1	Yes	0.816	0.129	0.95	Yes	1.00	**3.61**
		U_5 - U_6			-----	-1379.10	-252	-371	-838	-1194	-186	-147	111	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.192	1	Yes	0.791	0.132	0.93	Yes	1.00	**3.10**
		U_6 - U_7			-----	-1365.50	-495	-156	-1431	-473	-121	-302	-262	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1	Yes	0.783	0.158	0.95	Yes	1.00	**3.03**
		U_7 - U_8			-----	-1219.46	-234	36	-856	-181	-108	-317	-523	-530	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.171	1	Yes	0.815	0.118	0.94	Yes	1.00	**3.42**
		U_8 - U_9			-----	-885.78	-123	266	-803	76	-215	-185	-428	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.159	1	Yes	0.831	0.133	0.97	Yes	1.00	**3.61**
		U_9 - U_{10}			311.65	-602.03	-50	386	-1002	221	5	4	-309	-405	0.338	0.290	0.63	Yes	0.225	0.186	0.42	Yes	0.775	0.208	0.99	Yes	0.768	0.224	1.00	Yes	1.00	**5.56**
		U_{10} - U_{11}			714.47	-120.74	328	249	-524	161	99	174	-628	-190	0.775	0.218	1.00	Yes	0.525	0.146	0.68	Yes	0.155	0.242	0.4	Yes	0.154	0.117	0.28	Yes	1.00	**6.87**
		U_{11} - U_{12}			626.57	-----	83	730	-1289	2006	1163	1103	-90	407	0.513	0.479	1.00	Yes	0.351	0.326	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.44**
		U_{12} - U_{13}			657.79	-----	2932	-1590	787	-135	82	-927	594	694	0.456	0.538	1.00	Yes	0.318	0.368	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		U_{13} - U_{14}			839.52	-----	223	362	-252	-73	-107	377	838	-111	0.803	0.192	1.00	Yes	0.561	0.133	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		U_{14} - U_{15}			631.17	-437.65	456	223	4	-611	-60	257	640	-761	0.723	0.274	1.00	Yes	0.488	0.181	0.67	Yes	0.595	0.175	0.78	Yes	0.590	0.145	0.74	Yes	1.00	**5.40**
		U_{15} - U_{16}			341.40	-575.83	294	142	-358	-527	-76	206	529	-21	0.391	0.215	0.61	Yes	0.269	0.147	0.42	Yes	0.784	0.212	1	Yes	0.776	0.125	0.91	Yes	1.00	**4.53**
		U_{16} - U_{17}			288.60	-581.11	313	30	-585	-390	175	-72	156	-80	0.331	0.168	0.50	Yes	0.227	0.115	0.35	Yes	0.791	0.203	1	Yes	0.784	0.139	0.93	Yes	1.00	**3.92**
		U_{17} - U_{18}			83.77	-617.24	219	-174	-464	-426	70	35	22	-215	0.096	0.147	0.25	Yes	0.065	0.096	0.17	Yes	0.840	0.158	1	Yes	0.832	0.110	0.95	Yes	1.00	**3.47**
		U_{18} - U_{19}			-----	-585.09	22	-70	-762	-144	206	-197	-40	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.197	1	Yes	0.789	0.181	0.98	Yes	1.00	**3.93**
		U_{19} - U_{20}			7.72	-511.78	88	-293	-627	-348	-147	-110	558	-54	0.009	0.243	0.26	Yes	0.006	0.166	0.18	Yes	0.696	0.300	1	Yes	0.690	0.149	0.84	Yes	1.00	**6.80**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1	19.89	-26.06	690	-1056	-177	41	-826	-3035	57	210	0.030	0.968	1.00	Yes	0.018	0.572	0.60	Yes	0.047	0.691	0.74	Yes	0.047	0.317	0.37	Yes	1.00	**10.91**
		L_1 - L_2	349.33	-----	169	-686	-202	-532	-198	314	-1203	342	0.535	0.464	1.00	Yes	0.326	0.299	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**
		L_2 - L_3	635.75	-107.19	-38	65	-772	-465	-188	130	457	-223	0.731	0.260	1.00	Yes	0.423	0.155	0.58	Yes	0.146	0.230	0.38	Yes	0.145	0.187	0.34	Yes	1.00	**3.82**
		L_3 - L_4	611.05	-242.59	4	298	-635	-281	297	-239	-868	-11	0.703	0.293	1.00	Yes	0.418	0.183	0.61	Yes	0.331	0.262	0.6	Yes	0.328	0.153	0.49	Yes	1.00	**3.85**
		L_4 - L_5	78.83	-558.09	102	466	-551	288	-73	201	181	-178	0.102	0.182	0.29	Yes	0.061	0.118	0.18	Yes	0.858	0.134	1	Yes	0.850	0.146	1.00	Yes	1.00	**3.08**
		L_5 - L_6	-----	-743.59	123	587	-228	417	163	-236	-22	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.126	1	Yes	0.858	0.130	0.99	Yes	1.00	**2.94**
		L_6 - L_7	-----	-1159.13	234	-19	-344	21	-198	405	43	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.944	0.053	1	Yes	0.933	0.054	0.99	Yes	1.00	**4.55**
		L_7 - L_8	-----	-1164.81	25	547	-380	1583	683	261	-553	28	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.250	1	Yes	0.738	0.210	0.95	Yes	1.00	**5.72**
		L_8 - L_9	-----	-1266.29	1124	-83	652	-33	470	396	198	394	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.802	0.149	0.96	Yes	1.00	**2.98**
		L_9 - L_{10}	-----	-1011.90	1025	-1154	-134	-333	560	979	-541	41	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.123	0.95	Yes	0.815	0.181	1.00	Yes	1.00	**9.81**
		L_{10} - L_{11}	188.72	-549.14	502	-51	-14	-592	-284	44	196	-524	0.244	0.248	0.50	Yes	0.142	0.148	0.30	Yes	0.844	0.130	0.98	Yes	0.837	0.157	1.00	Yes	1.00	**5.84**
		L_{11} - L_{12}	496.56	-----	361	-651	75	-605	-134	273	-1039	223	0.643	0.354	1.00	Yes	0.386	0.224	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		L_{12} - L_{13}	1075.27	-----	80	-144	-504	-561	-165	118	384	-144	0.849	0.144	1.00	Yes	0.543	0.087	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		L_{13} - L_{14}	1286.01	-----	292	-1438	-275	-1151	-78	291	-534	251	0.756	0.243	1.00	Yes	0.490	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		L_{14} - L_{15}	1542.24	-----	-489	-170	-1821	-258	-184	93	319	102	0.753	0.242	1.00	Yes	0.490	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		L_{15} - L_{16}	1604.22	-----	-280	-438	-1193	-1242	-3	-185	-889	37	0.784	0.212	1.00	Yes	0.503	0.127	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		L_{16} - L_{17}	1220.79	-----	-420	54	-1295	-26	-127	170	184	-385	0.772	0.224	1.00	Yes	0.501	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		L_{17} - L_{18}	875.72	-----	-225	-17	-775	5	82	-116	-674	-181	0.763	0.236	1.00	Yes	0.488	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.58**
		L_{18} - L_{19}	410.02	-----	-245	228	-980	548	-161	111	332	233	0.628	0.363	1.00	Yes	0.424	0.228	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		L_{19} - L_{20}	30.03	-287.65	-185	71	-1139	664	135	30	121	27	0.051	0.403	0.46	Yes	0.031	0.242	0.28	Yes	0.577	0.419	1	Yes	0.572	0.372	0.95	Yes	1.00	**10.48**
	Structure 2	L_0 - L_1	55.13	-130.52	705	-2217	-80	-91	-843	-2926	38	133	0.067	0.932	1.00	Yes	0.040	0.579	0.62	Yes	0.188	0.668	0.86	Yes	0.186	0.451	0.64	Yes	1.00	**14.63**
		L_1 - L_2	434.97	-----	620	-1305	93	-952	-104	617	-1194	411	0.528	0.462	1.00	Yes	0.314	0.289	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		L_2 - L_3	1020.28	-----	192	-748	-374	-909	-51	124	543	-263	0.804	0.189	1.00	Yes	0.527	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		L_3 - L_4	1271.62	-----	127	-1205	-381	-1403	1	499	-1039	293	0.747	0.247	1.00	Yes	0.503	0.156	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_4 - L_5	1698.87	-----	-429	-426	-1549	-1210	-58	176	792	5	0.792	0.200	1.00	Yes	0.524	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		L_5 - L_6	1806.24	-----	-219	-494	-1169	-1813	193	-93	-935	96	0.775	0.219	1.00	Yes	0.520	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		L_6 - L_7	1834.72	-----	-570	-209	-2236	-1057	-161	219	283	-313	0.777	0.216	1.00	Yes	0.516	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_7 - L_8	1324.44	-10.79	-302	382	-1515	-584	217	-143	-847	135	0.759	0.237	1.00	Yes	0.499	0.143	0.65	Yes	0.007	0.209	0.22	Yes	0.007	0.167	0.18	Yes	1.00	**4.24**
		L_8 - L_9	1058.18	-376.44	-97	589	-1282	243	-88	184	192	-822	0.740	0.250	1.00	Yes	0.499	0.159	0.66	Yes	0.312	0.154	0.47	Yes	0.310	0.173	0.49	Yes	1.00	**5.02**
		L_9 - L_{10}	560.22	-769.42	-123	840	-1199	366	146	-153	-718	31	0.500	0.278	0.78	Yes	0.291	0.170	0.47	Yes	0.813	0.135	0.95	Yes	0.808	0.192	1.00	Yes	1.00	**5.81**
		L_{10} - L_{11}	-----	-740.68	15	564	-719	549	-83	83	258	32	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.090	0.97	Yes	0.870	0.126	1.00	Yes	1.00	**3.51**
		L_{11} - L_{12}	-----	-1033.04	-71	1101	-603	761	65	-365	-170	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.127	0.99	Yes	0.847	0.150	1.00	Yes	1.00	**3.81**
		L_{12} - L_{13}	-----	-1499.71	236	-785	-739	-603	-388	152	283	74	-----	-----	-----	-----	-----	-----	-----	-----	0.912	0.083	1	Yes	0.905	0.079	0.99	Yes	1.00	**5.58**
		L_{13} - L_{14}	-----	-1392.78	-352	1198	-1821	3361	924	732	-950	-453	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.258	0.97	Yes	0.701	0.293	1.00	Yes	1.00	**6.51**
		L_{14} - L_{15}	-----	-1503.65	2740	-850	1484	-451	324	261	434	391	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.190	0.96	Yes	0.757	0.239	1.00	Yes	1.00	**3.81**
		L_{15} - L_{16}	-----	-1199.35	55	-35	-1800	-1029	651	-348	-1416	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.270	1	Yes	0.717	0.179	0.90	Yes	1.00	**9.32**
		L_{16} - L_{17}	-----	-1167.63	1204	-353	557	-429	-364	-60	307	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.131	0.99	Yes	0.850	0.149	1.00	Yes	1.00	**4.82**
		L_{17} - L_{18}	143.03	-655.96	1397	-1934	12	-1025	-122	1597	-1250	511	0.128	0.502	0.63	Yes	0.074	0.306	0.38	Yes	0.694	0.247	0.95	Yes	0.689	0.309	1.00	Yes	1.00	**11.88**
		L_{18} - L_{19}	229.15	-640.65	718	34	-151	-567	-211	60	353	-314	0.260	0.192	0.46	Yes	0.150	0.114	0.27	Yes	0.859	0.117	0.98	Yes	0.854	0.138	1.00	Yes	1.00	**4.81**
		L_{19} - L_{20}	621.26	-507.89	532	154	-190	-859	151	-182	-832	389	0.704	0.293	1.00	Yes	0.416	0.182	0.60	Yes	0.681	0.125	0.81	Yes	0.677	0.166	0.85	Yes	1.00	**5.96**
		L_{20} - L_{21}	996.12	-295.28	413	-75	-991	-1023	-186	69	502	-384	0.794	0.203	1.00	Yes	0.521	0.123	0.65	Yes	0.279	0.185	0.47	Yes	0.277	0.149	0.43	Yes	1.00	**5.74**
		L_{21} - L_{22}	883.24	-50.06	110	-290	-810	-1243	136	-103	-986	107	0.704	0.287	1.00	Yes	0.471	0.183	0.66	Yes	0.047	0.256	0.31	Yes	0.047	0.181	0.23	Yes	1.00	**4.19**
		L_{22} - L_{23}	862.58	-----	-214	-41	-1838	-581	-116	160	21	-386	0.688	0.310	1.00	Yes	0.460	0.195	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		L_{23} - L_{24}	890.79	-340.47	-55	466	-1240	-691	164	-139	-942	-3	0.710	0.282	1.00	Yes	0.466	0.173	0.64	Yes	0.322	0.257	0.58	Yes	0.319	0.181	0.51	Yes	1.00	**6.08**
		L_{24} - L_{25}	549.11	-560.29	206	530	-1160	67	-105	150	277	-952	0.622	0.369	1.00	Yes	0.368	0.230	0.60	Yes	0.751	0.206	0.96	Yes	0.747	0.224	0.98	Yes	1.00	**6.45**
		L_{25} - L_{26}	45.28	-641.89	29	729	-662	221	102	-167	-487	40	0.051	0.215	0.27	Yes	0.030	0.127	0.16	Yes	0.861	0.131	1	Yes	0.855	0.141	1.00	Yes	1.00	**4.76**
		L_{26} - L_{27}	-----	-834.61	194	496	-728	482	-50	223	257	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.109	1	Yes	0.876	0.116	1.00	Yes	1.00	**4.73**
		L_{27} - L_{28}	-----	-1137.27	75	1338	-727	1033	240	-20	-279	122	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.139	0.98	Yes	0.828	0.165	1.00	Yes	1.00	**6.19**
		L_{28} - L_{29}	-----	-1445.95	452	-654	-752	-1119	-79	835	116	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.121	1	Yes	0.865	0.111	0.98	Yes	1.00	**7.00**
		L_{29} - L_{30}	-----	-1405.86	-520	1287	-1852	3325	904	932	-583	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.246	0.96	Yes	0.707	0.290	1.00	Yes	1.00	**6.09**
		L_{30} - L_{31}	-----	-1526.38	2623	-860	1674	-492	252	207	590	517	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.194	0.97	Yes	0.768	0.229	1.00	Yes	1.00	**3.02**
		L_{31} - L_{32}	-----	-1258.20	111	-382	-1603	-957	796	-383	-870	15	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.236	1	Yes	0.753	0.159	0.92	Yes	1.00	**9.27**
		L_{32} - L_{33}	-----	-1044.96	1024	-504	512	-584	-134	69	228	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.106	0.97	Yes	0.857	0.139	1.00	Yes	1.00	**4.04**
		L_{33} - L_{34}	325.83	-612.99	1205	-1577	98	-1452	-139	1450	-2709	803	0.325	0.640	0.97	Yes	0.191	0.388	0.58	Yes	0.725	0.195	0.92	Yes	0.720	0.276	1.00	Yes	1.00	**11.46**
		L_{34} - L_{35}	618.91	-751.60	836	-101	-238	-941	-217	96	927	-50	0.552	0.262	0.82	Yes	0.322	0.159	0.49	Yes	0.795	0.201	1	Yes	0.789	0.151	0.94	Yes	1.00	**7.01**
		L_{35} - L_{36}	966.22	-----	574	-1208	-61	-1201	-136	652	-1653	318	0.676	0.319	1.00	Yes	0.455	0.205	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_{36} - L_{37}	1387.58	-----	315	-250	-955	-1379	-207	150	547	-232	0.796	0.197	1.00	Yes	0.523	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		L_{37} - L_{38}	1790.17	-----	-138	-637	-1760	-2005	66	-197	-937	475	0.758	0.234	1.00	Yes	0.504	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		L_{38} - L_{39}	1753.81	-----	-584	-232	-2169	-1086	-117	181	39	-769	0.753	0.240	1.00	Yes	0.505	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		L_{39} - L_{40}	1727.11	-----	-401	-427	-1629	-1157	116	-163	-480	319	0.805	0.186	1.00	Yes	0.533	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_{40} - L_{41}	1295.28	-----	-461	32	-1656	-140	-46	271	264	-375	0.768	0.227	1.00	Yes	0.519	0.146	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		L_{41} - L_{42}	949.74	-----	-250	-58	-1105	-87	139	-74	-686	-29	0.758	0.237	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		L_{42} - L_{43}	515.75	-----	-275	214	-1310	556	126	345	638	337	0.626	0.371	1.00	Yes	0.373	0.235	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.42**
		L_{43} - L_{44}	-----	-331.41	-157	1	-2065	780	521	152	122	36	-----	-----	-----	-----	-----	-----	-----	-----	0.477	0.516	1	Yes	0.474	0.420	0.90	Yes	1.00	**16.67**
	Structure 3	L_0 - L_1	-----	-334.00	566	-1129	14	-141	-289	-1309	26	117	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.390	1	Yes	0.601	0.339	0.95	Yes	1.00	**8.72**
		L_1 - L_2	316.45	-----	664	-1004	125	-674	-17	751	-1026	472	0.484	0.514	1.00	Yes	0.328	0.331	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		L_2 - L_3	873.59	-----	257	-722	-217	-647	164	-250	713	-109	0.761	0.231	1.00	Yes	0.487	0.141	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_3 - L_4	1153.08	-----	239	-1150	-225	-1178	16	709	-1055	426	0.729	0.267	1.00	Yes	0.473	0.166	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		L_4 - L_5	1607.48	-----	-371	-258	-1387	-872	-32	231	602	-194	0.785	0.209	1.00	Yes	0.504	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_5 - L_6	1617.80	-----	-135	-461	-759	-1367	264	-70	-539	343	0.790	0.203	1.00	Yes	0.514	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		L_6 - L_7	1258.18	-----	-487	242	-1613	251	-53	271	345	-142	0.740	0.251	1.00	Yes	0.479	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		L_7 - L_8	981.61	-38.29	-97	173	-733	-349	143	-169	-742	23	0.775	0.217	1.00	Yes	0.495	0.132	0.63	Yes	0.036	0.207	0.25	Yes	0.036	0.130	0.17	Yes	1.00	**5.09**
		L_8 - L_9	527.65	-344.47	-151	452	-862	442	-109	163	476	222	0.683	0.312	1.00	Yes	0.410	0.202	0.62	Yes	0.530	0.166	0.7	Yes	0.525	0.228	0.76	Yes	1.00	**5.59**
		L_9 - L_{10}	-----	-560.35	-65	516	-528	310	145	-153	-24	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.083	0.95	Yes	0.854	0.140	1.00	Yes	1.00	**4.55**
		L_{10} - L_{11}	-----	-1105.35	184	-32	-676	298	-330	-88	553	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.053	0.96	Yes	0.890	0.106	1.00	Yes	1.00	**7.47**
		L_{11} - L_{12}	-----	-1159.41	41	695	-466	1521	870	269	-1119	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.255	1	Yes	0.734	0.201	0.94	Yes	1.00	**7.38**
		L_{12} - L_{13}	-----	-1260.73	1475	-230	669	-5	214	-278	4	356	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.189	1	Yes	0.798	0.195	1.00	Yes	1.00	**4.38**
		L_{13} - L_{14}	-----	-1104.82	636	-699	-333	-485	-17	644	-1615	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.100	1	Yes	0.889	0.110	1.00	Yes	1.00	**8.33**
		L_{14} - L_{15}	-----	-722.29	566	106	98	-335	-259	86	186	-451	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.140	1	Yes	0.847	0.128	0.98	Yes	1.00	**3.88**
		L_{15} - L_{16}	269.55	-493.13	449	100	67	-597	252	-204	-1164	376	0.349	0.365	0.72	Yes	0.209	0.229	0.44	Yes	0.758	0.235	1	Yes	0.751	0.158	0.91	Yes	1.00	**3.79**
		L_{16} - L_{17}	657.04	-154.34	280	-63	-734	-334	-173	191	362	189	0.756	0.236	1.00	Yes	0.449	0.151	0.60	Yes	0.211	0.218	0.43	Yes	0.209	0.177	0.39	Yes	1.00	**4.24**
		L_{17} - L_{18}	651.67	-33.92	11	-110	-718	-592	113	-113	-435	286	0.750	0.243	1.00	Yes	0.434	0.145	0.58	Yes	0.046	0.228	0.28	Yes	0.046	0.173	0.22	Yes	1.00	**4.39**
		L_{18} - L_{19}	433.72	-2.59	-29	-20	-780	85	-105	207	451	138	0.664	0.331	1.00	Yes	0.405	0.219	0.63	Yes	0.005	0.200	0.21	Yes	0.005	0.234	0.24	Yes	1.00	**5.31**
		L_{19} - L_{20}	66.57	-84.68	195	-306	-2099	1623	134	37	-1205	-327	0.102	0.889	1.00	Yes	0.060	0.538	0.60	Yes	0.154	0.776	0.93	Yes	0.152	0.630	0.79	Yes	1.00	**28.90**

Moment (Start) AI Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.360	1	Yes	0.600	0.210	0.81	Yes	1.00	**1.46**
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-283.49	-8	56	-107	164	170	55	-1001	-321																		
		$U_1 - L_1$			34.05	-318.00	39	-30	-252	238	586	205	-299	-55	0.061	0.492	0.56	Yes	0.034	0.271	0.31	Yes	0.695	0.239	0.94	Yes	0.673	0.322	1.00	Yes	1.00	**4.37**
		$U_2 - L_2$			143.15	-283.18	127	-142	-222	271	853	228	-973	-307	0.257	0.628	0.89	Yes	0.142	0.345	0.49	Yes	0.619	0.375	1	Yes	0.599	0.346	0.95	Yes	1.00	**7.33**
		$U_3 - L_3$			186.15	-133.05	227	-218	-77	104	-1193	-745	-1291	-287	0.335	0.664	1.00	Yes	0.184	0.365	0.55	Yes	0.292	0.332	0.63	Yes	0.282	0.290	0.58	Yes	1.00	**7.83**
		$U_4 - L_4$			-----	-186.50	309	-306	18	-28	-1454	-740	961	217	-----	-----	-----	-----	-----	-----	-----	-----	0.410	0.581	1	Yes	0.395	0.394	0.79	Yes	1.00	**8.18**
		$U_5 - L_5$			-----	-395.51	198	-225	73	-88	20	196	862	289	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.277	1	Yes	0.682	0.228	0.92	Yes	1.00	**3.60**
		$U_6 - L_6$			-----	-414.96	216	-222	76	-65	905	440	1464	728	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.362	1	Yes	0.595	0.194	0.79	Yes	1.00	**3.30**
		$U_7 - L_7$			-----	-384.41	263	-281	101	-115	621	195	1237	309	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.355	1	Yes	0.593	0.277	0.88	Yes	1.00	**2.93**
		$U_8 - L_8$			-----	-1200.49	223	-272	-403	479	-51	-96	-1291	-588	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.129	1	Yes	0.835	0.089	0.93	Yes	1.00	**5.60**
		$U_9 - L_9$			-----	-660.97	-228	259	-405	450	624	238	-617	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.181	0.97	Yes	0.747	0.250	1.00	Yes	1.00	**2.74**
		$U_{10} - L_{10}$			-----	-797.50	-157	154	-378	405	630	287	-299	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.171	1	Yes	0.787	0.210	1.00	Yes	1.00	**4.50**
		$U_{11} - L_{11}$			-----	-664.29	-165	220	-378	487	613	381	-303	126	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.176	0.98	Yes	0.773	0.226	1.00	Yes	1.00	**4.11**
		$U_{12} - L_{12}$			-----	-523.80	-127	140	-315	323	-4	139	-73	154	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.111	0.87	Yes	0.719	0.276	1.00	Yes	1.00	**4.48**
		$U_{13} - L_{13}$			-----	-367.88	-63	87	-225	252	-116	-28	47	187	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.148	0.9	Yes	0.705	0.288	1.00	Yes	1.00	**3.88**
		$U_{14} - L_{14}$			-----	-164.03	102	-105	-269	293	-1045	-421	465	-232	-----	-----	-----	-----	-----	-----	-----	-----	0.366	0.629	1	Yes	0.347	0.375	0.73	Yes	1.00	**9.17**
		$U_{15} - L_{15}$			64.87	-308.46	250	-270	-54	46	-766	-181	396	-188	0.117	0.567	0.69	Yes	0.064	0.312	0.38	Yes	0.691	0.284	0.98	Yes	0.653	0.345	1.00	Yes	1.00	**6.17**
		$U_{16} - L_{16}$			-----	-318.45	245	-253	44	-49	-33	-22	474	107	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.218	0.94	Yes	0.674	0.323	1.00	Yes	1.00	**4.25**
		$U_{17} - L_{17}$			-----	-418.70	205	-223	78	-92	200	110	505	200	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.210	1	Yes	0.722	0.226	0.95	Yes	1.00	**2.97**
		$U_{18} - L_{18}$			-----	-529.05	448	-456	171	-177	217	-3	678	171	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.183	0.96	Yes	0.736	0.258	1.00	Yes	1.00	**4.12**
		$U_{19} - L_{19}$			-----	-649.09	495	-513	177	-191	210	44	586	117	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.157	0.97	Yes	0.755	0.238	1.00	Yes	1.00	**4.92**
		$U_{20} - L_{20}$			-----	-541.27	399	-473	229	-274	197	26	433	57	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.202	1	Yes	0.693	0.250	0.95	Yes	1.00	**3.34**
	Structure 2	$U_0 - L_0$			-----	-606.67	-157	276	-316	451	-14	-2	-1204	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.264	1	Yes	0.650	0.191	0.85	Yes	1.00	**1.90**
		$U_1 - L_1$			-----	-711.52	-205	212	-548	548	630	161	-26	52	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.146	0.97	Yes	0.763	0.233	1.00	Yes	1.00	**3.74**
		$U_2 - L_2$			-----	-593.68	-152	167	-455	472	624	284	41	240	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.176	0.98	Yes	0.756	0.241	1.00	Yes	1.00	**3.40**
		$U_3 - L_3$			-----	-460.63	-75	86	-215	232	546	265	-46	213	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1	Yes	0.722	0.211	0.94	Yes	1.00	**2.79**
		$U_4 - L_4$			-----	-323.67	-15	26	-198	206	568	234	-33	168	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.259	1	Yes	0.685	0.263	0.95	Yes	1.00	**3.92**
		$U_5 - L_5$			75.27	-319.10	94	-68	-208	234	-486	-285	-454	66	0.135	0.440	0.58	Yes	0.074	0.242	0.32	Yes	0.721	0.273	1	Yes	0.675	0.299	0.98	Yes	1.00	**6.70**
		$U_6 - L_6$			307.56	-88.80	183	-186	-106	115	-501	-231	-693	-63	0.553	0.439	1.00	Yes	0.304	0.241	0.55	Yes	0.200	0.235	0.44	Yes	0.188	0.238	0.43	Yes	1.00	**6.72**
		$U_7 - L_7$			-----	-188.25	381	-426	-12	10	-1735	-924	-292	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.425	0.568	1	Yes	0.398	0.545	0.95	Yes	1.00	**11.89**
		$U_8 - L_8$			-----	-469.96	334	-358	149	-170	-6	0	419	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.149	0.84	Yes	0.677	0.313	1.00	Yes	1.00	**3.47**
		$U_9 - L_9$			-----	-693.87	586	-596	267	-281	-62	113	673	186	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.149	0.93	Yes	0.744	0.253	1.00	Yes	1.00	**4.53**
		$U_{10} - L_{10}$			-----	-745.78	509	-531	233	-233	-9	216	1180	694	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.256	1	Yes	0.697	0.235	0.94	Yes	1.00	**4.39**
		$U_{11} - L_{11}$			-----	-733.69	459	-462	226	-219	526	493	1187	668	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.260	1	Yes	0.686	0.204	0.90	Yes	1.00	**3.64**
		$U_{12} - L_{12}$			-----	-720.41	417	-409	186	-168	1012	506	1489	652	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.305	1	Yes	0.624	0.179	0.81	Yes	1.00	**3.57**
		$U_{13} - L_{13}$			-----	-623.42	497	-484	223	-221	516	178	1158	317	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.300	1	Yes	0.601	0.238	0.84	Yes	1.00	**3.77**
		$U_{14} - L_{14}$			-----	-1224.50	431	-414	-592	550	723	-67	-733	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.895	0.096	1	Yes	0.812	0.105	0.92	Yes	1.00	**6.93**
		$U_{15} - L_{15}$			-----	-663.36	-262	258	-585	565	862	102	-336	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.255	1	Yes	0.640	0.280	0.92	Yes	1.00	**3.84**
		$U_{16} - L_{16}$			-----	-719.79	-185	173	-523	507	671	192	6	61	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.160	1	Yes	0.771	0.222	1.00	Yes	1.00	**4.07**
		$U_{17} - L_{17}$			-----	-641.57	-196	196	-535	536	594	193	-49	144	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.156	0.95	Yes	0.747	0.249	1.00	Yes	1.00	**3.81**
		$U_{18} - L_{18}$			-----	-579.01	-159	164	-470	496	622	214	-302	60	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.94	Yes	0.738	0.253	1.00	Yes	1.00	**3.64**
		$U_{19} - L_{19}$			-----	-479.76	-85	87	-289	287	521	194	-86	145	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.168	0.9	Yes	0.716	0.278	1.00	Yes	1.00	**3.73**
		$U_{20} - L_{20}$			-----	-376.54	-36	41	-219	229	517	179	-89	67	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.220	1	Yes	0.721	0.262	0.99	Yes	1.00	**4.06**
		$U_{21} - L_{21}$			15.36	-323.58	22	-10	-225	245	-249	-168	-472	43	0.028	0.450	0.48	Yes	0.015	0.247	0.27	Yes	0.731	0.229	0.96	Yes	0.685	0.313	1.00	Yes	1.00	**5.34**
		$U_{22} - L_{22}$			-----	-227.01	338	-359	-234	257	-1434	-1095	-804	-768	-----	-----	-----	-----	-----	-----	-----	-----	0.511	0.487	1	Yes	0.480	0.459	0.94	Yes	1.00	**14.78**
		$U_{23} - L_{23}$			-----	-319.79	230	-248	11	-14	-96	34	525	166	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.246	0.97	Yes	0.677	0.317	1.00	Yes	1.00	**4.36**
		$U_{24} - L_{24}$			-----	-370.23	227	-235	52	-56	134	108	584	204	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.236	1	Yes	0.709	0.268	0.98	Yes	1.00	**3.52**
		$U_{25} - L_{25}$			-----	-471.84	302	-300	99	-100	-34	118	589	223	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.184	0.9	Yes	0.705	0.291	1.00	Yes	1.00	**3.46**
		$U_{26} - L_{26}$			-----	-571.77	499	-523	168	-175	227	273	708	301	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.190	0.96	Yes	0.729	0.267	1.00	Yes	1.00	**3.91**
		$U_{27} - L_{27}$			-----	-632.02	555	-559	200	-203	506	437	771	314	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.193	0.98	Yes	0.736	0.259	1.00	Yes	1.00	**4.34**
		$U_{28} - L_{28}$			-----	-613.19	466	-449	155	-129	902	389	1654	559	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.290	1	Yes	0.657	0.198	0.86	Yes	1.00	**3.99**
		$U_{29} - L_{29}$			-----	-617.65	578	-563	151	-156	463	137	1190	198	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.303	1	Yes	0.595	0.276	0.88	Yes	1.00	**5.47**
		$U_{30} - L_{30}$			-----	-1164.92	244	-258	-524	463	419	-151	-842	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.110	1	Yes	0.802	0.097	0.90	Yes	1.00	**5.62**
		$U_{31} - L_{31}$			-----	-710.11	-306	300	-531	515	509	96	-559	14	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1	Yes	0.685	0.254	0.94	Yes	1.00	**3.00**
		$U_{32} - L_{32}$			-----	-852.48	-218	191	-474	466	622	192	-129	61	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.173	1	Yes	0.739	0.203	0.95	Yes	1.00	**3.78**
		$U_{33} - L_{33}$			-----	-830.49	-247	234	-502	502	443	203	-477	100	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.144	0.98	Yes	0.776	0.222	1.00	Yes	1.00	**4.05**
		$U_{34} - L_{34}$			-----	-806.25	-236	251	-528	548	552	338	-367	77	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.158	0.96	Yes	0.754	0.242	1.00	Yes	1.00	**4.79**
		$U_{35} - L_{35}$			-----	-695.75	-254	269	-571	588	630	377	-315	108	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.152	0.93	Yes	0.746	0.249	1.00	Yes	1.00	**4.56**
		$U_{36} - L_{36}$			-----	-479.86	-135	157	-323	349	222	173	-329	64	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.147	0.85	Yes	0.691	0.305	1.00	Yes	1.00	**3.76**
		$U_{37} - L_{37}$			-----	-150.40	14	-10	-310	358	-773	-270	139	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.340	0.653	1	Yes	0.318	0.458	0.78	Yes	1.00	**9.44**
		$U_{38} - L_{38}$			288.68	-146.21	153	-164	-180	184	-819	-258	-173	-498	0.519	0.472	1.00	Yes	0.286	0.260	0.55	Yes	0.329	0.219	0.55	Yes	0.309	0.235	0.55	Yes	1.00	**7.12**
		$U_{39} - L_{39}$			43.14	-323.57	223	-244	-60	41	-403	-38	-22	-350	0.078	0.429	0.51	Yes	0.043	0.236	0.28	Yes	0.731	0.196	0.93	Yes	0.685	0.312	1.00	Yes	1.00	**5.98**
		$U_{40} - L_{40}$			-----	-326.69	221	-224	34	-42	-59	-19	598	172	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.255	1	Yes	0.691	0.286	0.98	Yes	1.00	**3.76**
		$U_{41} - L_{41}$			-----	-462.89	237	-249	86	-95	214	112	579	192	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.210	1	Yes	0.726	0.227	0.96	Yes	1.00	**3.15**
		$U_{42} - L_{42}$			-----	-577.16	495	-502	169	-178	324	135	668	171	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.171	0.95	Yes	0.735	0.257	1.00	Yes	1.00	**4.10**
		$U_{43} - L_{43}$			-----	-707.58	538	-557	187	-205	482	224	619	185	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.152	0.97	Yes	0.758	0.236	1.00	Yes	1.00	**4.99**
		$U_{44} - L_{44}$			-----	-655.29	476	-593	246	-313	250	42	735	125	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.213	1	Yes	0.702	0.251	0.96	Yes	1.00	**4.10**
	Structure 3	$U_0 - L_0$			-----	-531.77	-133	231	-268	380	106	14	-682	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.238	1	Yes	0.666	0.195	0.87	Yes	1.00	**1.72**
		$U_1 - L_1$			-----	-652.06	-206	206	-507	503	621	143	-359	72	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.161	0.98	Yes	0.759	0.235	1.00	Yes	1.00	**3.48**
		$U_2 - L_2$			-----	-545.82	-155	166	-403	421	664	304	18	242	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.194	1	Yes	0.759	0.238	1.00	Yes	1.00	**3.36**
		$U_3 - L_3$			-----	-409.10	-68	83	-191	210	566	269	45	229	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.706	0.213	0.92	Yes	1.00	**2.61**
		$U_4 - L_4$			-----	-322.57	-30	36	-217	229	613	223	-566	89	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1	Yes	0.683	0.292	0.98	Yes	1.00	**4.12**
		$U_5 - L_5$			46.77	-254.36	50	-34	-166	191	-427	-266	-1300	-55	0.084	0.621	0.71	Yes	0.046	0.341	0.39	Yes	0.570	0.427	1	Yes	0.538	0.244	0.79	Yes	1.00	**5.14**
		$U_6 - L_6$			-----	-174.10	318	-343	-108	112	-1382	-649	-415	-616	-----	-----	-----	-----	-----	-----	-----	-----	0.388	0.603	1	Yes	0.368	0.439	0.81	Yes	1.00	**10.49**
		$U_7 - L_7$			-----	-367.41	233	-258	79	-98	-386	-84	155	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.178	0.93	Yes	0.704	0.295	1.00	Yes	1.00	**3.39**
		$U_8 - L_8$			-----	-509.45	334	-335	133	-134	-57	45	898	374	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.259	1	Yes	0.699	0.286	0.99	Yes	1.00	**4.05**
		$U_9 - L_9$			-----	-622.85	380	-477	160	-220	451	424	1159	420	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.725	0.221	0.95	Yes	1.00	**4.19**
		$U_{10} - L_{10}$			-----	-629.42	319	-332	151	-139	1089	680	1711	948	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.346	1	Yes	0.621	0.172	0.80	Yes	1.00	**3.77**
		$U_{11} - L_{11}$			-----	-565.77	375	-422	189	-220	744	423	1503	673	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.321	1	Yes	0.639	0.235	0.88	Yes	1.00	**3.10**
		$U_{12} - L_{12}$			-----	-1175.98	275	-374	-408	436	717	211	-1261	-528	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.148	1	Yes	0.815	0.081	0.90	Yes	1.00	**5.80**
		$U_{13} - L_{13}$			-----	-450.36	-154	168	-286	303	671	120	-259	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.241	1	Yes	0.695	0.298	1.00	Yes	1.00	**2.26**
		$U_{14} - L_{14}$			-----	-500.04	-97	90	-220	239	725	230	-861	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.237	1	Yes	0.717	0.209	0.93	Yes	1.00	**3.08**
		$U_{15} - L_{15}$			-----	-436.11	-78	87	-218	243	535	241	66	149	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.207	1	Yes	0.752	0.247	1.00	Yes	1.00	**4.59**
		$U_{16} - L_{16}$			-----	-167.00	-19	32	-278	279	-1011	-456	-2022	-944	-----	-----	-----	-----	-----	-----	-----	-----	0.367	0.626	1	Yes	0.353	0.357	0.71	Yes	1.00	**8.39**
		$U_{17} - L_{17}$			126.48	-239.94	222	-255	-200	189	-502	-257	-1502	-722	0.227	0.761	0.99	Yes	0.125	0.419	0.55	Yes	0.526	0.470	1	Yes	0.508	0.326	0.84	Yes	1.00	**10.47**
		$U_{18} - L_{18}$			108.03	-291.39	257	-298	-114	123	-189	-186	460	147	0.194	0.514	0.71	Yes	0.107	0.283	0.39	Yes	0.637	0.233	0.88	Yes	0.617	0.381	1.00	Yes	1.00	**7.50**
		$U_{19} - L_{19}$			-----	-327.95	231	-238	-30	14	224	125	424	219	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.204	0.93	Yes	0.694	0.304	1.00	Yes	1.00	**5.08**
		$U_{20} - L_{20}$			-----	-319.57	199	-248	78	-90	274	88	604	194	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.276	0.99	Yes	0.676	0.317	1.00	Yes	1.00	**2.87**

Moment (Start) AI Operating

Operating Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 | LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$			462.69	-----	21	6	-120	58	-189	-45	-978	-449	0.607	0.386	1.00	Yes	0.367	0.213	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_1 - L_2$			312.88	-106.88	13	-16	-93	3	380	206	-1089	-533	0.563	0.435	1.00	Yes	0.309	0.239	0.55	Yes	0.245	0.410	0.66	Yes	0.226	0.119	0.35	Yes	1.00	**4.15**
		$U_2 - L_3$			10.86	-212.67	39	-27	-77	-38	446	228	-1305	-449	0.020	0.476	0.50	Yes	0.011	0.262	0.28	Yes	0.490	0.502	1	Yes	0.450	0.099	0.55	Yes	1.00	**5.36**
		$U_3 - L_4$			-----	-252.31	39	-12	-30	-65	454	248	-1097	-350	-----	-----	-----	-----	-----	-----	-----	-----	0.577	0.418	1	Yes	0.534	0.083	0.62	Yes	1.00	**4.38**
		$U_4 - L_4$			575.02	-----	-4	77	-108	37	-139	119	188	144	0.843	0.154	1.00	Yes	0.464	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		$U_5 - L_5$			666.86	-----	-12	142	-218	225	-247	63	-432	301	0.788	0.206	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_7 - L_6$			591.99	-----	-38	84	-264	233	-803	-111	-261	144	0.700	0.296	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_8 - L_7$			627.52	-----	61	185	-92	300	462	-83	44	199	0.742	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		$U_8 - L_9$			948.48	-----	40	208	-95	351	554	286	-200	-610	0.758	0.234	1.00	Yes	0.470	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_9 - L_{10}$			936.19	-----	-110	141	-306	229	650	297	-901	-630	0.748	0.251	1.00	Yes	0.464	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{10} - L_{11}$			921.23	-----	-69	132	-241	163	311	44	-378	-819	0.778	0.219	1.00	Yes	0.482	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{11} - L_{12}$			767.73	-----	-90	78	-253	75	204	-21	-615	-782	0.760	0.234	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		$U_{12} - L_{13}$			548.33	-----	-85	62	-200	125	111	-28	-754	-705	0.668	0.322	1.00	Yes	0.421	0.185	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		$U_{13} - L_{14}$			408.24	-----	-31	-23	-90	21	-457	-260	-162	-518	0.734	0.265	1.00	Yes	0.404	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{15} - L_{14}$			387.89	-258.68	35	-104	-134	-33	-246	-270	141	434	0.698	0.297	1.00	Yes	0.384	0.163	0.55	Yes	0.606	0.304	0.91	Yes	0.547	0.172	0.72	Yes	1.00	**8.81**
		$U_{16} - L_{15}$			401.85	-0.21	-18	-3	-145	86	-288	-128	-257	152	0.723	0.269	1.00	Yes	0.398	0.148	0.55	Yes	0.000	0.153	0.16	Yes	0.000	0.185	0.19	Yes	1.00	**5.25**
		$U_{17} - L_{16}$			525.70	-----	-46	23	-148	96	-305	-105	-249	-45	0.771	0.221	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		$U_{18} - L_{17}$			617.45	-----	-130	88	-336	247	-402	-113	-299	140	0.730	0.263	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{19} - L_{18}$			689.04	-----	-131	95	-333	253	-458	-204	-378	-133	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{20} - L_{19}$			694.03	-----	-176	140	-395	326	-273	-139	-165	23	0.752	0.247	1.00	Yes	0.413	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
	Structure 2	$U_0 - L_1$			641.38	-----	-90	136	-313	328	-322	-88	-1395	-416	0.635	0.361	1.00	Yes	0.349	0.198	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_1 - L_2$			731.75	-----	-163	116	-387	292	145	-30	-379	-600	0.724	0.269	1.00	Yes	0.398	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_2 - L_3$			590.63	-----	-118	88	-313	244	126	-27	-287	-661	0.698	0.297	1.00	Yes	0.384	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		$U_3 - L_4$			535.66	-----	-52	25	-173	111	170	10	-453	-585	0.714	0.281	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_4 - L_5$			365.51	-42.94	3	-17	-130	81	239	38	-274	-599	0.657	0.340	1.00	Yes	0.362	0.187	0.55	Yes	0.106	0.211	0.32	Yes	0.091	0.167	0.26	Yes	1.00	**4.70**
		$U_5 - L_6$			342.70	-254.55	60	-115	-106	26	-782	-185	-450	-803	0.616	0.379	1.00	Yes	0.339	0.209	0.55	Yes	0.601	0.293	0.9	Yes	0.539	0.147	0.69	Yes	1.00	**7.00**
		$U_6 - L_7$			-----	-385.07	50	-103	-21	-49	-277	-38	-93	-429	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.174	1	Yes	0.738	0.118	0.86	Yes	1.00	**3.52**
		$U_8 - L_7$			604.27	-----	-79	36	-203	139	-60	-143	-173	200	0.770	0.223	1.00	Yes	0.485	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_8 - L_9$			714.69	-----	-162	155	-337	244	-303	-90	-64	56	0.774	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		$U_{10} - L_9$			801.41	-----	-124	154	-340	251	-189	20	-114	294	0.793	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_{11} - L_{10}$			876.51	-----	-129	192	-347	294	-254	59	-112	350	0.798	0.195	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		$U_{12} - L_{11}$			847.72	-----	-130	175	-341	344	-587	63	-412	309	0.772	0.226	1.00	Yes	0.425	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_{13} - L_{12}$			731.80	-----	-157	161	-418	380	-541	0	-355	120	0.724	0.275	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{14} - L_{13}$			736.72	-----	38	212	-251	430	423	-66	-22	54	0.729	0.263	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		$U_{14} - L_{15}$			598.55	-----	-18	167	-196	345	526	238	153	-394	0.708	0.291	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{15} - L_{16}$			586.06	-----	-171	168	-349	316	590	179	77	-263	0.693	0.305	1.00	Yes	0.381	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.65**
		$U_{16} - L_{17}$			688.57	-----	-127	154	-330	348	373	110	45	-411	0.746	0.245	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$U_{17} - L_{18}$			638.46	-----	-111	127	-285	272	358	88	-40	-428	0.755	0.239	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_{18} - L_{19}$			615.49	-----	-82	96	-282	243	290	77	-250	-623	0.728	0.272	1.00	Yes	0.400	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_{19} - L_{20}$			567.28	-----	-41	46	-190	154	294	83	-265	-482	0.723	0.268	1.00	Yes	0.398	0.153	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{20} - L_{21}$			385.25	-----	-15	14	-120	92	234	66	-91	-518	0.693	0.304	1.00	Yes	0.381	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		$U_{21} - L_{22}$			352.18	-206.61	18	-78	-116	18	-575	-59	-469	-729	0.633	0.360	1.00	Yes	0.348	0.198	0.55	Yes	0.488	0.253	0.75	Yes	0.437	0.149	0.59	Yes	1.00	**6.50**
		$U_{23} - L_{22}$			417.40	-81.26	11	-17	-128	44	-293	-105	3	126	0.751	0.249	1.00	Yes	0.413	0.137	0.55	Yes	0.194	0.166	0.36	Yes	0.172	0.164	0.34	Yes	1.00	**6.12**
		$U_{24} - L_{23}$			420.76	-----	-18	17	-126	104	-256	-63	-79	130	0.757	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		$U_{25} - L_{24}$			592.95	-----	-40	49	-200	164	-301	-82	56	259	0.756	0.240	1.00	Yes	0.416	0.135	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{26} - L_{25}$			657.22	-----	-79	97	-288	265	-253	-57	-10	320	0.777	0.221	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{27} - L_{26}$			643.86	-----	-101	143	-288	288	-396	116	-161	251	0.761	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_{28} - L_{27}$			675.68	-----	-93	147	-313	338	-551	43	-378	377	0.732	0.263	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_{29} - L_{28}$			591.99	-----	-91	105	-350	327	-552	-42	-261	191	0.700	0.298	1.00	Yes	0.385	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{30} - L_{29}$			625.10	-----	52	164	-199	367	271	-115	78	216	0.739	0.257	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_{30} - L_{31}$			723.42	-----	-57	233	-260	432	474	204	-106	-502	0.716	0.275	1.00	Yes	0.394	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**
		$U_{31} - L_{32}$			729.07	-----	-232	218	-418	368	502	140	19	-292	0.721	0.269	1.00	Yes	0.397	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.66**
		$U_{32} - L_{33}$			836.39	-----	-158	199	-342	331	422	115	-179	-648	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		$U_{33} - L_{34}$			835.07	-----	-145	176	-327	264	344	78	-560	-707	0.761	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{34} - L_{35}$			741.55	-----	-132	139	-300	218	141	-10	-826	-706	0.734	0.263	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{35} - L_{36}$			674.72	-----	-158	134	-312	214	150	13	-355	-606	0.731	0.259	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		$U_{36} - L_{37}$			520.49	-----	-78	33	-185	116	-253	-200	-302	-820	0.664	0.332	1.00	Yes	0.418	0.191	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_{38} - L_{37}$			-----	-385.93	54	-105	-41	-37	-30	-229	-187	15	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.164	1	Yes	0.739	0.119	0.86	Yes	1.00	**4.47**
		$U_{39} - L_{38}$			424.58	-231.54	56	-106	-139	56	194	-94	88	93	0.764	0.234	1.00	Yes	0.420	0.128	0.55	Yes	0.552	0.184	0.74	Yes	0.490	0.177	0.67	Yes	1.00	**8.02**
		$U_{40} - L_{39}$			394.68	-15.53	-5	-10	-139	86	-382	-103	-164	254	0.710	0.289	1.00	Yes	0.390	0.159	0.55	Yes	0.037	0.166	0.21	Yes	0.033	0.178	0.22	Yes	1.00	**4.96**
		$U_{41} - L_{40}$			557.04	-----	-56	30	-178	121	-413	-179	-262	21	0.743	0.249	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		$U_{42} - L_{41}$			621.53	-----	-120	90	-328	260	-403	-171	-316	35	0.735	0.259	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_{43} - L_{42}$			767.59	-----	-134	102	-381	306	-375	-195	-263	6	0.759	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{44} - L_{43}$			784.92	-----	-157	150	-401	378	-168	18	-112	186	0.777	0.214	1.00	Yes	0.427	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
	Structure 3	$U_0 - L_1$			603.68	-----	-72	107	-297	269	-232	-58	-1142	-432	0.654	0.340	1.00	Yes	0.360	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		$U_1 - L_2$			656.16	-----	-158	107	-347	243	165	-39	-548	-629	0.711	0.281	1.00	Yes	0.391	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_2 - L_3$			558.39	-----	-122	84	-315	234	137	-24	-888	-722	0.660	0.339	1.00	Yes	0.363	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_3 - L_4$			494.44	-----	-42	19	-139	86	155	-25	-343	-564	0.725	0.272	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_4 - L_5$			349.91	-17.15	-12	-6	-134	78	202	12	-578	-689	0.629	0.370	1.00	Yes	0.346	0.204	0.55	Yes	0.041	0.265	0.31	Yes	0.036	0.171	0.21	Yes	1.00	**4.97**
		$U_5 - L_6$			122.35	-230.60	22	-100	-65	-38	-666	-224	-912	-475	0.220	0.391	0.62	Yes	0.121	0.215	0.34	Yes	0.540	0.451	1	Yes	0.488	0.127	0.62	Yes	1.00	**4.99**
		$U_7 - L_6$			445.31	-----	-29	-7	-97	34	-236	-172	-105	-94	0.801	0.193	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_8 - L_7$			619.11	-----	-83	73	-208	143	-303	-107	-111	239	0.755	0.241	1.00	Yes	0.475	0.136	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_8 - L_9$			819.83	-----	-75	93	-296	115	-217	6	-294	105	0.811	0.181	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_{10} - L_9$			972.41	-----	-48	157	-276	206	-103	84	-373	322	0.821	0.176	1.00	Yes	0.508	0.099	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{11} - L_{10}$			929.56	-----	-64	100	-295	240	-944	-235	21	427	0.743	0.252	1.00	Yes	0.460	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		$U_{12} - L_{11}$			939.58	-----	126	232	-85	352	705	71	248	482	0.751	0.247	1.00	Yes	0.465	0.139	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		$U_{13} - L_{12}$			604.15	-----	15	166	-88	284	634	316	109	-382	0.714	0.277	1.00	Yes	0.393	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_{13} - L_{14}$			601.57	-----	-98	131	-276	223	701	287	-260	-279	0.711	0.284	1.00	Yes	0.391	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{14} - L_{15}$			587.09	-----	-31	147	-200	179	566	243	-1026	-644	0.694	0.300	1.00	Yes	0.382	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_{15} - L_{16}$			444.19	-----	-14	63	-94	15	423	195	-1047	-675	0.651	0.339	1.00	Yes	0.358	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{17} - L_{16}$			-----	-330.46	53	-9	-76	-100	-238	1	401	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.239	1	Yes	0.699	0.128	0.83	Yes	1.00	**8.05**
		$U_{18} - L_{17}$			374.02	-281.71	52	-36	-132	-10	-195	-72	-524	-136	0.673	0.321	1.00	Yes	0.370	0.177	0.55	Yes	0.648	0.331	0.98	Yes	0.596	0.169	0.77	Yes	1.00	**9.00**
		$U_{19} - L_{18}$			449.87	-106.00	19	-21	-92	12	-204	-116	-226	-224	0.809	0.183	1.00	Yes	0.445	0.100	0.55	Yes	0.243	0.154	0.4	Yes	0.224	0.117	0.35	Yes	1.00	**5.80**
		$U_{20} - L_{19}$			546.48	-----	-18	5	-145	82	244	41	-437	-83	0.717	0.279	1.00	Yes	0.433	0.154	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

North Truss - Upper Chord

Location	Member	Member Forces from STAAD D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_1 - U_1	-71.60	19.47	-97.43			0.90	1.24	21.68	-108.47	0.00	0.00	Vehicle	Vehicle	-----	-328.10	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.73	4.55
	U_1 - U_2	-90.76	39.29	-162.79			0.90	1.24	43.74	-181.23	0.00	0.00	Vehicle	Vehicle	-----	-510.65	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	41.01	Pass	42.67	48.57	Pass	9.33	12.00	Pass	-----	-----	1.57	2.62
	U_1 - U_3	-61.05	58.33	-160.25			0.90	1.24	64.93	-178.41	0.00	0.00	Vehicle	Vehicle	61.33	-465.91	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	42.94	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.77	11.28	1.70	2.83
	U_1 - U_4	10.82	76.44	-154.24			0.90	1.24	85.10	-171.71	0.00	0.00	Vehicle	Vehicle	198.44	-357.98	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.66	7.76	2.01	3.36
	U_1 - U_5	12.98	76.79	-111.91			0.90	1.24	85.49	-124.59	0.00	0.00	Vehicle	Vehicle	202.10	-253.07	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	4.62	7.70	2.79	4.64
	U_1 - U_6	121.44	88.76	-119.04			0.90	1.24	98.81	-132.53	0.00	0.00	Vehicle	Vehicle	371.97	-129.27	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	3.34	5.56	3.11	5.18
	U_2 - U_2	249.52	98.09	-68.70			0.90	1.24	109.20	-76.48	0.00	0.00	Vehicle	Vehicle	560.98	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.05	5.08	-----	-----
	U_2 - U_3	376.85	-13.31	5.10			0.90	1.24	5.68	-14.82	0.00	0.00	Vehicle	Vehicle	502.20	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	77.49	129.16	-----	-----
	U_3 - U_3	319.70	5.78	-2.76			0.90	1.20	6.23	-2.97	0.00	0.00	Vehicle	Vehicle	429.11	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	59.59	99.31	-----	-----
	U_3 - U_4	128.80	98.06	-64.65			0.90	1.20	105.73	-69.70	0.00	0.00	Vehicle	Vehicle	396.51	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	3.29	5.49	-----	-----
	U_3 - U_{11}	-70.81	86.93	-124.16			0.90	1.20	93.72	-133.87	0.00	0.00	Vehicle	Vehicle	111.01	-382.11	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	4.99	8.32	2.36	3.93
	U_3 - U_{12}	-252.85	76.71	-167.11			0.90	1.20	82.71	-180.18	0.00	0.00	Vehicle	Vehicle	-----	-719.08	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	41.44	Pass	28.44	49.07	Pass	8.00	12.00	Pass	-----	-----	1.86	3.11
	U_3 - U_{13}	-391.81	66.35	-219.88			0.90	1.20	71.54	-237.07	0.00	0.00	Vehicle	Vehicle	-----	-1023.00	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	41.17	Pass	28.44	48.76	Pass	8.00	12.00	Pass	-----	-----	1.89	3.15
	U_4 - U_{14}	-482.83	55.81	-248.11			0.90	1.20	60.17	-267.51	0.00	0.00	Vehicle	Vehicle	-----	-1207.28	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.91	Pass	25.60	48.45	Pass	6.40	12.00	Pass	-----	-----	1.89	3.16
	U_4 - U_{15}	-484.28	55.61	-248.69			0.90	1.20	59.96	-268.14	0.00	0.00	Vehicle	Vehicle	-----	-1210.54	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	40.85	Pass	25.60	48.38	Pass	6.40	12.00	Pass	-----	-----	1.89	3.14
	U_4 - U_{16}	-501.86	24.80	-179.25			0.90	1.20	26.74	-193.26	0.00	0.00	Vehicle	Vehicle	-----	-1071.15	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	43.43	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.56	4.27
	U_5 - U_{17}	-467.82	-105.80	-157.54			0.90	1.20	-114.07	-169.86	0.00	0.00	Vehicle	Vehicle	-----	-976.18	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.04	5.06
	U_{17} - U_{18}	-368.70	-158.61	-69.29			0.90	1.20	-74.71	-171.01	0.00	0.00	Vehicle	Vehicle	-----	-849.83	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	41.74	Pass	32.00	49.42	Pass	10.67	12.00	Pass	-----	-----	2.11	3.52
	U_{18} - U_{19}	-251.42	-105.48	-101.58			0.90	1.20	-109.52	-113.73	0.00	0.00	Vehicle	Vehicle	-----	-573.26	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	42.38	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	2.25	3.75
	U_{19} - U_{20}	-117.77	-44.35	-8.38			0.90	1.20	-9.03	-47.81	0.00	0.00	Vehicle	Vehicle	-----	-256.69	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	7.02	11.71
Structure 2	U_1 - U_1	-118.16	7.61	-58.54			0.90	1.18	8.11	-62.33	0.00	0.00	Vehicle	Vehicle	-----	-288.65	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.09	8.49
	U_1 - U_2	-239.45	17.34	-128.08			0.90	1.18	18.46	-136.37	0.00	0.00	Vehicle	Vehicle	-----	-606.75	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.47	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.43	4.05
	U_1 - U_5	-350.29	28.91	-182.19			0.90	1.18	30.78	-193.98	0.00	0.00	Vehicle	Vehicle	-----	-875.66	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	43.17	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.25	3.75
	U_2 - U_4	-448.96	26.64	-218.20			0.90	1.18	28.36	-232.31	0.00	0.00	Vehicle	Vehicle	-----	-1086.99	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	43.26	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.39	3.84
	U_2 - U_5	-483.05	57.50	-253.21			0.90	1.18	61.56	-269.59	0.00	0.00	Vehicle	Vehicle	-----	-1212.07	15.10	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.14	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.23	3.72
	U_2 - U_6	-485.65	73.15	-267.29			0.90	1.18	77.89	-284.59	0.00	0.00	Vehicle	Vehicle	-----	-1247.95	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	42.52	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.11	3.52
	U_2 - U_7	-428.66	86.68	-259.78			0.90	1.18	92.29	-276.59	0.00	0.00	Vehicle	Vehicle	-----	-1156.54	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	41.94	Pass	23.27	49.66	Pass	5.82	12.00	Pass	-----	-----	1.98	3.30
	U_2 - U_8	-428.18	86.89	-194.52			0.90	1.18	92.51	-207.11	0.00	0.00	Vehicle	Vehicle	-----	-1005.36	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.98	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.65	4.41
	U_3 - U_9	-335.25	99.65	-179.75			0.90	1.18	106.10	-191.38	0.00	0.00	Vehicle	Vehicle	-----	-850.49	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	44.81	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.48	4.13
	U_9 - U_{10}	-200.15	107.83	-183.78			0.90	1.18	114.81	-195.67	0.00	0.00	Vehicle	Vehicle	-----	-684.14	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	44.29	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.10	3.51
	U_{10} - U_{11}	-52.03	114.47	-87.10			0.90	1.18	121.88	-92.74	0.00	0.00	Vehicle	Vehicle	196.43	-268.57	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	4.74	7.90	4.64	7.74
	U_{11} - U_{12}	107.09	-36.02	-54.87			0.90	1.18	-38.35	-58.42	0.00	0.00	Vehicle	Vehicle	56.11	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{12} - U_{13}	259.37	110.01	-45.46			0.90	1.18	117.13	-48.40	0.00	0.00	Vehicle	Vehicle	590.96	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	4.51	7.51	-----	-----
	U_{13} - U_{14}	391.99	25.04	-21.55			0.90	1.18	26.66	-22.95	0.00	0.00	Vehicle	Vehicle	567.35	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	26.38	43.97	-----	-----
	U_{14} - U_{15}	439.40	15.18	-2.67			0.90	1.17	15.98	-2.81	0.00	0.00	Vehicle	Vehicle	605.83	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	42.25	70.42	-----	-----
	U_{15} - U_{16}	369.68	104.48	-16.64			0.90	1.17	109.92	-17.51	0.00	0.00	Vehicle	Vehicle	718.75	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	9.34	8.21	-----	-----
	U_{16} - U_{17}	271.42	101.72	-58.68			0.90	1.17	107.02	-61.74	0.00	0.00	Vehicle	Vehicle	584.72	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	4.33	7.22	-----	-----
	U_{17} - U_{18}	171.80	95.68	-98.82			0.90	1.17	100.67	-103.97	0.00	0.00	Vehicle	Vehicle	441.44	-1.94	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	3.54	5.91	4.73	7.88
	U_{18} - U_{19}	72.84	88.32	-138.86			0.90	1.17	92.93	-146.10	0.00	0.00	Vehicle	Vehicle	296.03	-221.85	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	4.48	7.46	2.96	4.93
	U_{19} - U_{20}	-8.04	78.67	-171.68			0.90	1.17	82.77	-180.62	0.00	0.00	Vehicle	Vehicle	168.88	-401.80	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.00	10.01	2.27	3.79
	U_{20} - U_{21}	-60.07	36.70	-197.44			0.90	1.17	38.61	-207.73	0.00	0.00	Vehicle	Vehicle	5.57	-528.17	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	16.34	27.24	2.24	3.74
	U_{21} - U_{22}	-82.15	50.99	-210.34			0.90	1.17	53.65	-221.30	0.00	0.00	Vehicle	Vehicle	9.44	-586.28	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	12.01	20.01	2.05	3.41
	U_{22} - U_{23}	-82.37	52.65	-208.19			0.90	1.17	55.40	-219.04	0.00	0.00	Vehicle	Vehicle	12.94	-581.67	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	11.63	19.39	2.07	3.44
	U_{23} - U_{24}	-65.94	65.23	-162.61			0.90	1.17	68.63	-171.08	0.00	0.00	Vehicle	Vehicle	62.97	-456.39	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.25	15.41	2.70	4.51
	U_{24} - U_{25}	-11.98	71.07	-183.11			0.90	1.17	81.84	-192.65	0.00	0.00	Vehicle	Vehicle	153.94	-440.79	5.25	32.31	26.8125	1066.31	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.15	10.24	2.10	3.50
	U_{25} - U_{26}	54.95	-85.61	-103.85			0.90	1.17	-90.07	-109.26	0.00	0.00	Vehicle	Vehicle	-----	-165.29	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.86	6.43
	U_{26} - U_{27}	135.89	-43.95	-82.56			0.90	1.17	-46.24	-86.86	0.00	0.00	Vehicle	Vehicle	76.46	-11.54	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.41	9.02
	U_{27} - U_{28}	216.69	-19.63	-76.34			0.90	1.17	-20.65	-80.32	0.00	0.00	Vehicle	Vehicle	236.95	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{28} - U_{29}	293.53	59.76	-7.14			0.90	1.17	62.87	-7.51	0.00	0.00	Vehicle	Vehicle	517.81	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	9.34	15.57	-----	-----
	U_{29} - U_{30}	357.86	-1.11	-25.60			0.90	1.17	-1.17	-26.94	0.00	0.00	Vehicle	Vehicle	462.68	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{30} - U_{31}	339.12	22.69	7.34			0.90	1.18	24.15	7.82	0.00	0.00	Vehicle	Vehicle	493.20	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	30.43	50.72	-----	-----
	U_{31} - U_{32}	251.34	114.13	-29.35			0.90	1.18	121.52	-31.25	0.00	0.00	Vehicle	Vehicle	590.02	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck — Fy = 33.0 ksi — DL Factor: 1.30 — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 2.17 — LL Factor: 1.63

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

North Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0 - L_1	4.73	-2.55	-4.61			0.90	1.24	-2.83	-5.14	0.00	0.00	Vehicle	Vehicle	0.00	-4.98	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	**50.05**	**83.41**
	L_1 - L_2	74.19	-22.41	83.21			0.90	1.24	92.64	-24.94	0.00	0.00	Vehicle	Vehicle	297.17	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**2.77**	**4.62**	-----	-----
	L_2 - L_3	97.64	-42.31	154.60			0.90	1.24	172.12	-47.11	0.00	0.00	Vehicle	Vehicle	499.84	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**1.99**	**3.32**	-----	-----
	L_3 - L_4	66.79	-61.25	116.92			0.90	1.24	130.17	-68.19	0.00	0.00	Vehicle	Vehicle	368.85	-60.93	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**2.77**	**4.62**	**5.54**	**9.24**
	L_4 - L_5	-108.59	79.75	114.22			0.90	1.24	127.16	88.79	0.00	0.00	Vehicle	Vehicle	134.35	-----	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.32**	**5.53**	-----	-----
	L_5 - L_6	-237.42	-100.82	65.26			0.90	1.24	72.66	-112.24	0.00	0.00	Vehicle	Vehicle	-----	-551.84	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	42.65	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.26**	**3.76**
	L_6 - L_7	-362.38	-54.37	4.21			0.90	1.24	4.68	-60.52	0.00	0.00	Vehicle	Vehicle	-----	-602.23	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.77**	**9.62**
	L_7 - L_8	478.62	-94.92	-0.68			0.90	1.24	-0.76	-105.67	0.00	0.00	Vehicle	Vehicle	-----	-851.16	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.09**	**6.82**
	L_8 - L_9	-476.97	-97.42	-38.32			0.90	1.20	-41.32	-105.04	0.00	0.00	Vehicle	Vehicle	-----	-847.64	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.13**	**6.88**
	L_9 - L_{10}	-301.47	-98.29	5.87			0.90	1.20	6.33	-105.98	0.00	0.00	Vehicle	Vehicle	-----	-621.52	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**3.65**	**6.08**
	L_{10} - L_{11}	-104.56	-86.88	16.83			0.90	1.20	18.14	-93.68	0.00	0.00	Vehicle	Vehicle	-----	-338.89	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.54**	**4.23**
	L_{11} - L_{12}	96.98	-76.33	103.21			0.90	1.20	111.28	-82.30	0.00	0.00	Vehicle	Vehicle	367.18	-52.23	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**2.68**	**4.47**	**4.36**	**7.26**
	L_{12} - L_{13}	268.60	-66.46	147.79			0.90	1.20	159.35	-71.66	0.00	0.00	Vehicle	Vehicle	694.43	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.66**	**4.43**	-----	-----
	L_{13} - L_{14}	405.49	-56.03	186.78			0.90	1.20	201.38	-60.41	0.00	0.00	Vehicle	Vehicle	963.47	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.69**	**4.48**	-----	-----
	L_{14} - L_{15}	502.59	78.03	202.85			0.90	1.20	218.71	84.13	0.00	0.00	Vehicle	Vehicle	1127.24	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**2.94**	**4.90**	-----	-----
	L_{15} - L_{16}	469.06	-25.35	169.22			0.90	1.20	182.45	-27.33	0.00	0.00	Vehicle	Vehicle	1005.09	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.64**	**6.06**	-----	-----
	L_{16} - L_{17}	365.26	61.10	122.95			0.90	1.20	132.56	65.88	0.00	0.00	Vehicle	Vehicle	762.06	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**3.85**	**6.42**	-----	-----
	L_{17} - L_{18}	248.52	36.00	55.74			0.90	1.20	60.09	38.81	0.00	0.00	Vehicle	Vehicle	453.28	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**6.34**	**10.56**	-----	-----
	L_{18} - L_{19}	112.87	-18.55	24.41			0.90	1.20	26.32	-20.00	0.00	0.00	Vehicle	Vehicle	203.75	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.89**	**14.81**	-----	-----
	L_{19} - L_{20}	-14.36	-40.65	17.98			0.90	1.20	19.38	-43.82	0.00	0.00	Vehicle	Vehicle	23.33	-113.62	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**16.00**	**26.67**	**5.60**	**9.34**
Structure 2	L_0 - L_1	15.25	0.53	-7.97			0.90	1.18	0.56	-8.49	0.00	0.00	Vehicle	Vehicle	21.04	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**658.45**	**1097.42**	-----	-----
	L_1 - L_2	136.09	-7.32	46.56			0.90	1.18	49.57	-7.79	0.00	0.00	Vehicle	Vehicle	284.32	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.02**	**10.03**	-----	-----
	L_2 - L_3	262.77	-14.96	110.65			0.90	1.18	117.81	-15.93	0.00	0.00	Vehicle	Vehicle	596.86	-----	6.20	37.95	31.7500	1252.35	131.71	10.7370	6.1375	15.74	32.76	-1056.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.57**	**5.95**	-----	-----
	L_3 - L_4	373.14	-19.71	163.34			0.90	1.18	173.91	-20.98	0.00	0.00	Vehicle	Vehicle	861.89	-----	9.45	51.08	41.6250	1685.48	131.71	10.7370	5.7282	16.87	32.73	-1420.90	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.19**	**5.31**	-----	-----
	L_4 - L_5	456.57	-40.35	205.77			0.90	1.18	219.09	-42.96	0.00	0.00	Vehicle	Vehicle	1068.23	-----	11.08	65.00	54.1000	2145.00	131.71	10.6406	5.6658	16.93	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.27**	**5.45**	-----	-----
	L_5 - L_6	489.37	-54.83	232.80			0.90	1.18	247.86	-58.38	0.00	0.00	Vehicle	Vehicle	1173.21	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5772	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.16**	**5.26**	-----	-----
	L_6 - L_7	479.01	-69.61	245.47			0.90	1.18	261.36	-74.12	0.00	0.00	Vehicle	Vehicle	1188.98	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**3.07**	**5.12**	-----	-----
	L_7 - L_8	330.07	-95.56	201.80			0.90	1.18	214.85	-101.74	0.00	0.00	Vehicle	Vehicle	894.61	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**2.82**	**4.71**	-----	-----
	L_8 - L_9	188.98	91.42	163.10			0.90	1.18	173.66	97.34	0.00	0.00	Vehicle	Vehicle	621.93	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**3.15**	**5.24**	-----	-----
	L_9 - L_{10}	39.77	-110.13	106.45			0.90	1.18	113.33	-117.26	0.00	0.00	Vehicle	Vehicle	297.26	-202.35	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**4.35**	**7.25**	**3.93**	**6.54**
	L_{10} - L_{11}	-127.39	11.28	71.80			0.90	1.18	76.45	12.01	0.00	0.00	Vehicle	Vehicle	0.04	-139.58	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**7.05**	**11.74**	-----	-----
	L_{11} - L_{12}	-282.64	-39.40	36.63			0.90	1.18	38.99	-41.95	0.00	0.00	Vehicle	Vehicle	-----	-458.32	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.27**	**15.45**
	L_{12} - L_{13}	-426.73	-101.22	-6.61			0.90	1.18	-7.04	-107.76	0.00	0.00	Vehicle	Vehicle	-----	-788.24	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.73**	**7.88**
	L_{13} - L_{14}	-536.42	-98.94	13.59			0.90	1.18	14.47	-105.34	0.00	0.00	Vehicle	Vehicle	-----	-925.59	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.58**	**9.29**
	L_{14} - L_{15}	-537.75	-95.37	-28.30			0.90	1.17	-29.78	-100.34	0.00	0.00	Vehicle	Vehicle	-----	-916.47	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.85**	**9.74**
	L_{15} - L_{16}	-475.65	-113.64	-5.11			0.90	1.17	-5.37	-119.56	0.00	0.00	Vehicle	Vehicle	-----	-877.38	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**4.01**	**6.69**
	L_{16} - L_{17}	-384.35	-104.78	17.62			0.90	1.17	18.54	-110.24	0.00	0.00	Vehicle	Vehicle	-----	-738.51	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.61**	**6.01**
	L_{17} - L_{18}	-281.86	-100.61	42.85			0.90	1.17	45.09	-105.85	0.00	0.00	Vehicle	Vehicle	-----	-595.76	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.03	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**2.53**	**4.21**
	L_{18} - L_{19}	-175.17	-91.78	76.82			0.90	1.17	80.82	-96.56	0.00	0.00	Vehicle	Vehicle	-----	-436.92	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	44.60	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**2.48**	**4.13**
	L_{19} - L_{20}	-76.53	-83.09	113.69			0.90	1.17	119.62	-87.42	0.00	0.00	Vehicle	Vehicle	159.68	-288.91	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.79**	**6.32**	**3.41**	**5.69**
	L_{20} - L_{21}	4.38	-70.69	137.34			0.90	1.17	144.49	-74.38	0.00	0.00	Vehicle	Vehicle	318.76	-155.46	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.93**	**6.56**	**6.52**	**10.86**
	L_{21} - L_{22}	55.94	-14.07	161.58			0.90	1.17	169.99	-14.80	0.00	0.00	Vehicle	Vehicle	441.04	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.16**	**5.27**	-----	-----
	L_{22} - L_{23}	62.99	-37.59	148.63			0.90	1.17	156.38	-39.55	0.00	0.00	Vehicle	Vehicle	420.70	-3.80	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.41**	**5.68**	**13.15**	**21.91**
	L_{23} - L_{24}	15.54	-50.11	134.09			0.90	1.17	141.08	-52.72	0.00	0.00	Vehicle	Vehicle	325.87	-94.02	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**3.98**	**6.64**	**9.32**	**15.54**
	L_{24} - L_{25}	-56.00	11.32	87.46			0.90	1.17	92.01	11.91	0.00	0.00	Vehicle	Vehicle	126.56	-47.00	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.79**	**7.99**	-----	-----
	L_{25} - L_{26}	-136.37	-28.86	71.81			0.90	1.17	75.55	-30.36	0.00	0.00	Vehicle	Vehicle	-----	-243.06	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.64**	**14.40**
	L_{26} - L_{27}	-217.73	-65.60	39.98			0.90	1.17	42.06	-69.01	0.00	0.00	Vehicle	Vehicle	-----	-432.58	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**4.43**	**7.39**
	L_{27} - L_{28}	-296.25	-107.50	16.95			0.90	1.17	17.84	-113.10	0.00	0.00	Vehicle	Vehicle	-----	-630.19	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.99**	**6.64**
	L_{28} - L_{29}	-364.18	-167.39	-0.59			0.90	1.17	-0.62	-176.11	0.00	0.00	Vehicle	Vehicle	-----	-855.01	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.10**	**5.17**
	L_{29} - L_{30}	-418.23	-113.47	48.97			0.90	1.17	51.52	-119.39	0.00	0.00	Vehicle	Vehicle	-----	-802.37	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.51**	**9.19**
	L_{30} - L_{31}	-350.38	-89.28	-36.11			0.90	1.18	-38.44	-95.05	0.00	0.00	Vehicle	Vehicle	-----	-661.43	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.35**	**12.25**
	L_{31} - L_{32}	-275.46	-50.86	-14.71			0.90	1.18	-15.66	-54.15	0.00	0.00	Vehicle	Vehicle	-----	-475.41	9.73	59.10	49.3700	1950.30	131.71	11.1432	5.8186	17.24	32.72	-1643.56	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 2.17 — LL Factor: 1.63

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals	Structure 1																																														
	U_0 - L_0	-77.19	-101.74	17.49			0.90	1.24	19.47	-113.26	0.00	0.00	Vehicle	Vehicle	------	-345.75	1.63	15.26	13.6300	503.58	131.71	9.3438	1.9120	43.98	31.16	-404.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	38.00	Fail	6.56	12.00	Pass	------	------	------	------	------	------	1.24	2.06
	U_1 - L_1	-33.88	-68.57	15.69			0.90	1.24	17.47	-76.34	0.00	0.00	Vehicle	Vehicle	------	-209.44	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	2.50	4.17
	U_2 - L_2	10.43	-52.69	14.79			0.90	1.24	16.46	-58.66	0.00	0.00	Vehicle	Vehicle	49.23	-113.54	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	15.21	25.35	3.71	6.18
	U_3 - L_3	44.39	-29.48	14.76			0.90	1.24	16.44	-32.82	0.00	0.00	Vehicle	Vehicle	93.32	-13.40	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	13.99	23.32	7.23	12.05
	U_4 - L_4	-16.67	-8.13	17.25			0.90	1.24	-9.05	-19.20	0.00	0.00	Vehicle	Vehicle	------	-63.27	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	10.41	17.35
	U_5 - L_5	-109.51	3.48	-79.14			0.90	1.24	3.88	-88.11	0.00	0.00	Vehicle	Vehicle	------	-333.26	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	44.88	Pass	5.37	12.00	Pass	------	------	------	------	------	2.15	3.58
	U_6 - L_6	-143.60	-0.17	-96.61			0.90	1.24	-0.19	-107.56	0.00	0.00	Vehicle	Vehicle	------	-419.73	3.13	23.61	20.4794	779.11	131.71	9.9479	2.0237	44.24	31.14	-624.88	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	42.75	Pass	8.89	12.00	Pass	------	------	------	------	------	1.88	3.13
	U_7 - L_7	-142.61	3.04	-107.65			0.90	1.24	3.39	-119.85	0.00	0.00	Vehicle	Vehicle	------	-445.07	2.88	21.86	18.9794	721.36	131.71	11.7292	1.9657	53.70	30.26	-562.19	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	39.95	Pass	10.00	12.00	Pass	------	------	------	------	------	1.45	2.42
	U_8 - L_8	-391.97	-97.03	-123.00			0.90	1.24	-108.03	-136.94	0.00	0.00	Vehicle	Vehicle	------	-806.26	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	2.95	4.92
	U_9 - L_9	-223.13	-106.42	10.35			0.90	1.20	11.16	-114.75	0.00	0.00	Vehicle	Vehicle	------	-538.69	3.50	30.81	27.3125	1016.81	131.71	12.1563	2.5246	43.34	31.21	-817.50	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	43.11	Pass	9.60	12.00	Pass	------	------	------	------	------	2.12	3.54
	U_{10} - L_{10}	-225.77	-95.58	-6.75			0.90	1.20	-7.27	-103.05	0.00	0.00	Vehicle	Vehicle	------	-516.79	2.76	34.69	31.9300	1144.77	131.71	10.7083	2.3304	41.36	31.37	-925.09	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	2.83	4.71
	U_{11} - L_{11}	-198.79	-95.14	5.30			0.90	1.20	5.72	-102.58	0.00	0.00	Vehicle	Vehicle	------	-480.67	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.59	4.31
	U_{12} - L_{12}	-154.77	-77.20	9.37			0.90	1.20	10.10	-83.24	0.00	0.00	Vehicle	Vehicle	------	-381.54	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	2.72	4.54
	U_{13} - L_{13}	-109.04	-69.65	16.49			0.90	1.20	17.78	-75.10	0.00	0.00	Vehicle	Vehicle	------	-304.46	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	44.56	Pass	5.94	12.00	Pass	------	------	------	------	------	2.17	3.61
	U_{14} - L_{14}	-12.30	0.61	-10.46			0.90	1.20	0.66	-11.28	0.00	0.00	Vehicle	Vehicle	------	-40.44	0.00	16.85	16.8486	556.00	131.71	9.2805	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	17.68	29.47
	U_{15} - L_{15}	-5.62	31.48	-53.66			0.90	1.20	33.94	-57.86	0.00	0.00	Vehicle	Vehicle	66.24	-132.67	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	7.66	12.77	3.50	5.83
	U_{16} - L_{16}	-51.74	12.40	-68.23			0.90	1.20	13.36	-73.56	0.00	0.00	Vehicle	Vehicle	------	-226.65	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.36	3.94
	U_{17} - L_{17}	-127.31	12.79	-93.10			0.90	1.20	13.79	-100.38	0.00	0.00	Vehicle	Vehicle	------	-382.99	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	41.87	Pass	5.37	12.00	Pass	------	------	------	------	------	1.70	2.83
	U_{18} - L_{18}	-159.89	11.83	-103.88			0.90	1.20	12.75	-112.01	0.00	0.00	Vehicle	Vehicle	------	-450.54	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	42.99	Pass	7.23	12.00	Pass	------	------	------	------	------	1.96	3.26
	U_{19} - L_{19}	-191.17	10.03	-112.28			0.90	1.20	10.81	-121.05	0.00	0.00	Vehicle	Vehicle	------	-510.80	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	44.14	Pass	6.06	12.00	Pass	------	------	------	------	------	2.11	3.51
	U_{20} - L_{20}	-211.94	10.02	-118.29			0.90	1.20	10.81	-127.54	0.00	0.00	Vehicle	Vehicle	------	-551.87	0.00	29.13	29.1305	961.31	131.71	20.3229	2.8884	63.32	29.19	-722.67	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	41.41	Pass	6.06	12.00	Pass	------	------	------	------	------	1.62	2.70
	Structure 2																																														
	U_0 - L_0	-206.53	-111.93	12.94			0.90	1.18	13.78	-119.17	0.00	0.00	Vehicle	Vehicle	------	-526.69	0.00	31.81	31.8100	1049.73	131.71	19.1510	2.8323	60.85	29.48	-797.03	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	44.30	Pass	5.62	12.00	Pass	------	------	------	------	------	2.05	3.41
	U_1 - L_1	-188.72	-97.89	13.29			0.90	1.18	14.15	-104.22	0.00	0.00	Vehicle	Vehicle	------	-471.15	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	2.78	4.64
	U_2 - L_2	-155.84	-93.49	14.02			0.90	1.18	14.93	-99.54	0.00	0.00	Vehicle	Vehicle	------	-418.26	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.52	4.20
	U_3 - L_3	-134.53	-92.09	15.89			0.90	1.18	16.92	-97.95	0.00	0.00	Vehicle	Vehicle	------	-387.12	0.00	22.73	22.7330	750.17	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	43.68	Pass	4.91	12.00	Pass	------	------	------	------	------	1.94	3.24
	U_4 - L_4	-64.47	-67.15	15.18			0.90	1.18	16.16	-71.50	0.00	0.00	Vehicle	Vehicle	------	-238.72	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.31	3.84
	U_5 - L_5	-19.94	-61.74	20.96			0.90	1.18	22.31	-65.73	0.00	0.00	Vehicle	Vehicle	22.43	-168.33	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	12.04	20.06	2.93	4.88
	U_6 - L_6	40.07	-38.06	38.32			0.90	1.18	40.80	-40.52	0.00	0.00	Vehicle	Vehicle	140.48	-35.69	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	5.70	9.50	5.66	9.43
	U_7 - L_7	-26.03	-2.15	-14.93			0.90	1.18	-2.29	-15.89	0.00	0.00	Vehicle	Vehicle	------	-68.27	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	11.87	19.79
	U_8 - L_8	-125.22	19.71	-74.81			0.90	1.18	20.98	-79.64	0.00	0.00	Vehicle	Vehicle	------	-335.35	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	3.05	5.09
	U_9 - L_9	-174.50	8.65	-95.34			0.90	1.18	9.21	-101.51	0.00	0.00	Vehicle	Vehicle	------	-446.78	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	3.05	5.09
	U_{10} - L_{10}	-202.62	-0.89	-105.23			0.90	1.18	-0.95	-112.04	0.00	0.00	Vehicle	Vehicle	------	-506.15	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	3.08	5.14
	U_{11} - L_{11}	-229.48	3.08	-116.25			0.90	1.18	3.28	-123.77	0.00	0.00	Vehicle	Vehicle	------	-566.50	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.60	4.33
	U_{12} - L_{12}	-250.80	2.22	-122.33			0.90	1.18	2.37	-130.24	0.00	0.00	Vehicle	Vehicle	------	-608.24	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.54	4.23
	U_{13} - L_{13}	-223.27	12.67	-116.62			0.90	1.18	13.49	-124.17	0.00	0.00	Vehicle	Vehicle	------	-559.28	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.26	3.76
	U_{14} - L_{14}	-343.24	-93.00	-112.14			0.90	1.18	-99.01	-119.39	0.00	0.00	Vehicle	Vehicle	------	-704.90	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0516	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	3.56	5.93
	U_{15} - L_{15}	-123.12	-96.95	12.91			0.90	1.17	13.58	-102.00	0.00	0.00	Vehicle	Vehicle	------	-381.06	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	3.34	5.56
	U_{16} - L_{16}	-156.68	-93.81	9.95			0.90	1.17	10.47	-98.69	0.00	0.00	Vehicle	Vehicle	------	-417.52	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	3.10	5.16
	U_{17} - L_{17}	-147.89	-98.00	9.69			0.90	1.17	10.19	-103.10	0.00	0.00	Vehicle	Vehicle	------	-415.65	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.77	4.61
	U_{18} - L_{18}	-142.21	-96.83	12.16			0.90	1.17	12.79	-101.88	0.00	0.00	Vehicle	Vehicle	------	-405.61	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.56	4.27
	U_{19} - L_{19}	-111.47	-84.87	13.59			0.90	1.17	14.30	-89.29	0.00	0.00	Vehicle	Vehicle	------	-338.37	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	2.69	4.48
	U_{20} - L_{20}	-76.56	-74.81	14.41			0.90	1.17	15.16	-78.70	0.00	0.00	Vehicle	Vehicle	------	-270.05	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	2.28	3.79
	U_{21} - L_{21}	-44.33	-66.38	21.85			0.90	1.17	22.99	-69.84	0.00	0.00	Vehicle	Vehicle	------	-208.95	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.54	4.24
	U_{22} - L_{22}	-21.25	-0.78	-13.65			0.90	1.17	-0.82	-14.36	0.00	0.00	Vehicle	Vehicle	------	-58.74	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	13.39	22.32
	U_{23} - L_{23}	-39.04	29.66	-58.25			0.90	1.17	31.20	-61.28	0.00	0.00	Vehicle	Vehicle	16.86	-183.53	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	8.97	14.96	2.95	4.92
	U_{24} - L_{24}	-74.80	22.56	-73.34			0.90	1.17	23.74	-77.16	0.00	0.00	Vehicle	Vehicle	------	-264.43	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	2.34	3.89
	U_{25} - L_{25}	-103.21	16.61	-89.74			0.90	1.17	16.49	-104.90	0.00	0.00	Vehicle	Vehicle	------	-383.48	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.61	4.36
	U_{26} - L_{26}	-120.15	15.67	-99.71			0.90	1.17	13.61	-113.48	0.00	0.00	Vehicle	Vehicle	------	-406.90	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	2.64	4.40
	U_{27} - L_{27}	-123.87	12.94	-107.86			0.90	1.17	12.38	-120.36	0.00	0.00	Vehicle	Vehicle	------	-436.92	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	2.64	4.41
	U_{28} - L_{28}	-135.49	11.77	-114.40			0.90	1.17	12.38	-120.36	0.00	0.00	Vehicle	Vehicle	------	-436.92	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	2.64	4.41
	U_{29} - L_{29}	-116.90	6.88	-109.92			0.90	1.17	7.24	-115.65	0.00	0.00	Vehicle	Vehicle	------	-402.53	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.97	4.96
	U_{30} - L_{30}	-261.40	-88.28	-110.05			0.90	1.18	-93.99	-117.17	0.00	0.00	Vehicle	Vehicle	------	-593.69	11.02	52.76	41.7400	1741.08	131.71	25.6094	4.0676	56.66	29.95	-1342.96	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	3.95	6.59
	U_{31} - L_{31}	-156.06	-104.75	16.18			0.90	1.18	17.23	-111.53	0.00	0.00	Vehicle	Vehicle	------	-444.52	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	2.87	4.79
	U_{32} - L_{32}	-185.16	-104.84	11.22			0.90	1.18	11.95	-111.63	0.00	0.00	Vehicle	Vehicle	------	-482.57	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals																																														
Structure 1	U_1 - L_1	87.39	91.10	-24.54			0.90	1.24	101.42	-27.32	0.00	0.00	Vehicle	Vehicle	333.35	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	2.95	4.92	-----	-----
	U_1 - L_2	23.29	67.70	5.51			0.90	1.24	75.37	6.14	0.00	0.00	Vehicle	Vehicle	193.59	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	3.22	5.37	-----	-----
	U_3 - L_3	-37.87	49.59	-11.44			0.90	1.24	55.20	-12.74	0.00	0.00	Vehicle	Vehicle	70.38	-76.83	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	5.06	8.43	13.96	23.26
	U_3 - L_4	-92.23	-23.05	-20.26			0.90	1.24	-22.56	-25.66	0.00	0.00	Vehicle	Vehicle	-----	-175.49	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.71	9.52
	U_5 - L_4	143.29	16.01	41.55			0.90	1.24	46.25	17.82	0.00	0.00	Vehicle	Vehicle	286.49	-----	0.00	20.48	20.4800	675.84	131.71	11.6953	2.0102	52.36	30.39	-529.06	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	4.89	8.14	-----	-----
	U_5 - L_5	177.89	106.94	0.28			0.90	1.24	119.05	0.31	0.00	0.00	Vehicle	Vehicle	489.20	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.38	3.97	-----	-----
	U_5 - L_6	184.40	124.26	0.10			0.90	1.24	138.33	0.11	0.00	0.00	Vehicle	Vehicle	539.45	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.02	3.37	-----	-----
	U_6 - L_7	179.98	119.91	-1.30			0.90	1.24	133.49	-1.45	0.00	0.00	Vehicle	Vehicle	523.21	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.12	3.53	-----	-----
	U_8 - L_9	268.90	116.71	-11.99			0.90	1.20	125.84	-12.93	0.00	0.00	Vehicle	Vehicle	622.22	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	3.31	5.51	-----	-----
	U_9 - L_{10}	278.76	111.36	-11.19			0.90	1.20	120.07	-12.07	0.00	0.00	Vehicle	Vehicle	622.53	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	3.42	5.69	-----	-----
	U_{10} - L_{11}	284.98	107.61	2.53			0.90	1.20	116.03	2.72	0.00	0.00	Vehicle	Vehicle	621.87	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	3.24	5.39	-----	-----
	U_{11} - L_{12}	250.55	105.64	-3.17			0.90	1.20	113.90	-3.42	0.00	0.00	Vehicle	Vehicle	572.51	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.78	4.63	-----	-----
	U_{12} - L_{13}	189.62	98.21	-22.69			0.90	1.20	105.88	-24.46	0.00	0.00	Vehicle	Vehicle	475.92	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	2.50	4.17	-----	-----
	U_{13} - L_{14}	123.30	71.36	-31.45			0.90	1.20	76.94	-33.91	0.00	0.00	Vehicle	Vehicle	326.98	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	2.37	3.96	-----	-----
	U_{14} - L_{15}	-24.40	47.90	-50.53			0.90	1.20	51.65	-54.49	0.00	0.00	Vehicle	Vehicle	80.18	-149.78	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	5.25	8.75	3.35	5.58
	U_{15} - L_{15}	48.54	73.90	-33.08			0.90	1.20	79.68	-35.67	0.00	0.00	Vehicle	Vehicle	235.73	-14.19	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	2.86	4.76	6.28	10.46
	U_{16} - L_{16}	146.57	102.63	-9.81			0.90	1.20	110.65	-10.58	0.00	0.00	Vehicle	Vehicle	430.29	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	2.05	3.42	-----	-----
	U_{17} - L_{17}	182.43	111.22	-15.09			0.90	1.20	119.91	-16.27	0.00	0.00	Vehicle	Vehicle	496.98	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.34	3.90	-----	-----
	U_{18} - L_{18}	223.79	119.83	-12.66			0.90	1.20	129.20	-13.65	0.00	0.00	Vehicle	Vehicle	570.86	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.26	3.76	-----	-----
	U_{20} - L_{19}	232.63	113.23	-10.59			0.90	1.20	122.08	-11.41	0.00	0.00	Vehicle	Vehicle	566.94	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.35	3.91	-----	-----
Structure 2	U_1 - L_1	213.47	104.41	-13.81			0.90	1.18	111.16	-14.70	0.00	0.00	Vehicle	Vehicle	518.36	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	3.04	5.07	-----	-----
	U_1 - L_2	200.39	113.51	-16.22			0.90	1.18	120.86	-17.27	0.00	0.00	Vehicle	Vehicle	522.37	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.87	4.78	-----	-----
	U_3 - L_3	172.76	105.60	-18.15			0.90	1.18	112.43	-19.32	0.00	0.00	Vehicle	Vehicle	468.19	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.55	4.25	-----	-----
	U_3 - L_4	147.11	95.82	-21.35			0.90	1.18	102.02	-22.73	0.00	0.00	Vehicle	Vehicle	412.29	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	2.53	4.21	-----	-----
	U_5 - L_5	49.07	80.45	-28.11			0.90	1.18	85.66	-29.92	0.00	0.00	Vehicle	Vehicle	249.39	-1.04	0.00	16.85	16.8486	556.00	131.71	13.3993	1.9682	61.01	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	2.65	4.42	7.23	12.05
	U_5 - L_6	2.97	72.17	-42.12			0.90	1.18	76.84	-44.84	0.00	0.00	Vehicle	Vehicle	170.35	-93.31	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	3.32	5.53	4.40	7.33
	U_5 - L_7	-85.72	45.60	-69.52			0.90	1.18	48.55	-74.02	0.00	0.00	Vehicle	Vehicle	-----	-271.81	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	2.22	3.70
	U_6 - L_7	140.27	86.11	-35.33			0.90	1.18	91.68	-37.62	0.00	0.00	Vehicle	Vehicle	381.00	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	3.03	5.05	-----	-----
	U_8 - L_8	204.17	108.02	-16.78			0.90	1.18	115.00	-17.86	0.00	0.00	Vehicle	Vehicle	514.60	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.64	4.40	-----	-----
	U_{10} - L_9	234.82	116.76	-7.48			0.90	1.18	124.32	-7.97	0.00	0.00	Vehicle	Vehicle	574.63	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.62	4.37	-----	-----
	U_{11} - L_{10}	263.04	127.66	1.94			0.90	1.18	135.92	2.06	0.00	0.00	Vehicle	Vehicle	636.44	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	2.57	4.28	-----	-----
	U_{12} - L_{11}	273.97	127.54	0.08			0.90	1.18	135.80	0.08	0.00	0.00	Vehicle	Vehicle	650.38	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	2.52	4.20	-----	-----
	U_{13} - L_{12}	254.88	124.96	-13.87			0.90	1.18	133.04	-14.77	0.00	0.00	Vehicle	Vehicle	619.59	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.36	3.93	-----	-----
	U_{13} - L_{13}	217.66	110.42	-14.65			0.90	1.18	117.57	-15.60	0.00	0.00	Vehicle	Vehicle	537.69	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.86	4.76	-----	-----
	U_{14} - L_{15}	110.03	89.88	-13.53			0.90	1.17	94.57	-14.24	0.00	0.00	Vehicle	Vehicle	347.93	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	3.43	5.72	-----	-----
	U_{15} - L_{16}	132.26	99.89	-14.40			0.90	1.17	105.10	-15.15	0.00	0.00	Vehicle	Vehicle	399.65	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.96	4.93	-----	-----
	U_{16} - L_{17}	172.87	116.11	-10.17			0.90	1.17	122.16	-10.70	0.00	0.00	Vehicle	Vehicle	489.40	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.64	4.40	-----	-----
	U_{17} - L_{18}	160.16	108.25	-12.11			0.90	1.17	113.89	-12.74	0.00	0.00	Vehicle	Vehicle	454.97	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.58	4.31	-----	-----
	U_{18} - L_{19}	152.33	101.00	-10.17			0.90	1.17	106.26	-10.70	0.00	0.00	Vehicle	Vehicle	428.26	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.81	4.69	-----	-----
	U_{20} - L_{20}	120.67	98.83	-19.22			0.90	1.17	103.98	-20.22	0.00	0.00	Vehicle	Vehicle	382.15	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	2.78	4.64	-----	-----
	U_{20} - L_{21}	76.10	86.28	-27.04			0.90	1.17	90.78	-28.45	0.00	0.00	Vehicle	Vehicle	295.61	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	2.32	3.87	-----	-----
	U_{21} - L_{22}	31.50	67.29	-44.56			0.90	1.17	70.80	-46.88	0.00	0.00	Vehicle	Vehicle	194.34	-60.62	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.36	5.60	4.57	7.62
	U_{23} - L_{22}	24.27	53.44	-52.36			0.90	1.17	56.22	-55.08	0.00	0.00	Vehicle	Vehicle	153.36	-87.80	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	4.31	7.18	3.78	6.30
	U_{23} - L_{23}	72.21	79.50	-31.11			0.90	1.17	83.64	-32.73	0.00	0.00	Vehicle	Vehicle	275.09	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	2.55	4.25	-----	-----
	U_{24} - L_{24}	112.05	100.58	-19.73			0.90	1.17	105.82	-20.76	0.00	0.00	Vehicle	Vehicle	374.95	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	2.79	4.64	-----	-----
	U_{25} - L_{25}	127.76	109.12	-20.00			0.90	1.17	114.80	-21.04	0.00	0.00	Vehicle	Vehicle	414.83	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.73	4.55	-----	-----
	U_{26} - L_{26}	132.58	115.20	-16.19			0.90	1.17	121.20	-17.04	0.00	0.00	Vehicle	Vehicle	434.95	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.56	4.27	-----	-----
	U_{27} - L_{27}	137.86	118.44	-13.95			0.90	1.17	124.61	-14.68	0.00	0.00	Vehicle	Vehicle	449.20	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	2.76	4.59	-----	-----
	U_{28} - L_{28}	122.74	113.69	-8.22			0.90	1.17	119.61	-8.65	0.00	0.00	Vehicle	Vehicle	418.73	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	2.65	4.41	-----	-----
	U_{29} - L_{29}	102.60	103.08	-6.46			0.90	1.17	108.45	-6.79	0.00	0.00	Vehicle	Vehicle	368.35	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	3.03	5.05	-----	-----
	U_{30} - L_{31}	139.84	96.06	-16.69			0.90	1.18	102.28	-17.77	0.00	0.00	Vehicle	Vehicle	403.39	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	3.74	6.24	-----	-----
	U_{31} - L_{32}	166.63	109.01	-18.41			0.90	1.18	116.06	-19.60	0.00	0.00	Vehicle	Vehicle	468.08	-----	0.00	29.18	29.1800	962.94	131.71	17.8750	2.8156	57.14	29.89	-741.48	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	2.97	4.95	-----	-----
	U_{32} - L_{33}	202.12	116.76	-10.80			0.90	1.18	124.31	-11.49	0.00	0.00	Vehicle	Vehicle	532.11	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	3.10	5.17	-----	-----
	U_{33} - L_{34}	201.72	112.62	-3.41			0.90	1.18	119.90	-3.63	0.00	0.00	Vehicle	Vehicle	522.02	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	3.22	5.36	-----	-----
	U_{35} - L_{35}	180.72	114.67	-9.57			0.90	1.18	122.09	-10.19	0.00	0.00	Vehicle	Vehicle	499.46	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.70	14.61	-102.04			0.75	1.24	13.55	-94.66	0.00	0.00	Vehicle	Vehicle	-----	-273.62	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.25	5.42
		U_1 - U_2	-61.66	36.75	-147.87			0.75	1.24	34.09	-137.19	0.00	0.00	Vehicle	Vehicle	-----	-377.39	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.20	3.67
		U_2 - U_3	-27.05	50.76	-145.95			0.75	1.24	47.09	-135.40	0.00	0.00	Vehicle	Vehicle	66.86	-328.54	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	8.90	14.83	2.39	3.98
		U_3 - U_4	32.90	65.04	-138.41			0.75	1.24	60.34	-128.41	0.00	0.00	Vehicle	Vehicle	173.51	-235.44	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.35	10.58	2.80	4.66
		U_4 - U_5	34.76	61.78	-84.85			0.75	1.24	57.31	-78.72	0.00	0.00	Vehicle	Vehicle	169.36	-125.37	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.66	11.10	4.57	7.62
		U_5 - U_6	124.19	-58.71	-44.30			0.75	1.24	-41.10	-54.46	0.00	0.00	Vehicle	Vehicle	72.39	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_6 - U_7	223.31	-11.42	-72.29			0.75	1.24	-10.60	-67.07	0.00	0.00	Vehicle	Vehicle	267.34	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_7 - U_8	331.92	-25.34	1.10			0.75	1.24	1.02	-23.51	0.00	0.00	Vehicle	Vehicle	433.71	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	455.91	759.85	-----	-----
		U_8 - U_9	267.71	48.43	-8.02			0.75	1.20	43.51	-7.20	0.00	0.00	Vehicle	Vehicle	442.30	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	9.25	15.42	-----	-----
		U_9 - U_{10}	89.12	65.76	-72.14			0.75	1.20	59.09	-64.82	0.00	0.00	Vehicle	Vehicle	243.88	-24.58	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.30	10.49	6.35	10.59
		U_{10} - U_{11}	-76.89	58.84	-119.83			0.75	1.20	52.87	-107.66	0.00	0.00	Vehicle	Vehicle	14.59	-333.22	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.92	14.87	2.90	4.83
		U_{11} - U_{12}	-230.86	49.29	-164.93			0.75	1.20	44.29	-148.19	0.00	0.00	Vehicle	Vehicle	-----	-621.19	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	44.58	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.36	3.93
		U_{12} - U_{13}	-342.15	47.23	-196.08			0.75	1.20	42.44	-176.18	0.00	0.00	Vehicle	Vehicle	-----	-826.51	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	2.71	4.51
		U_{13} - U_{14}	-421.98	-77.41	-217.87			0.75	1.20	-69.55	-195.75	0.00	0.00	Vehicle	Vehicle	-----	-972.71	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.78	4.63
		U_{14} - U_{15}	-422.87	39.28	-218.04			0.75	1.20	35.29	-195.91	0.00	0.00	Vehicle	Vehicle	-----	-974.19	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.77	4.62
		U_{15} - U_{16}	-440.39	-146.97	-224.85			0.75	1.20	-132.05	-202.03	0.00	0.00	Vehicle	Vehicle	-----	-1010.24	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	44.72	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.63	4.39
		U_{16} - U_{17}	-422.93	-98.23	-138.38			0.75	1.20	-88.26	-124.33	0.00	0.00	Vehicle	Vehicle	-----	-819.20	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.37	7.28
		U_{17} - U_{18}	-341.45	-138.01	-68.34			0.75	1.20	-61.40	-124.01	0.00	0.00	Vehicle	Vehicle	-----	-712.56	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	3.05	5.08
		U_{18} - U_{19}	-247.63	-8.14	-101.61			0.75	1.20	-7.31	-91.30	0.00	0.00	Vehicle	Vehicle	-----	-519.72	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	44.51	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	2.83	4.71
		U_{19} - U_{20}	-132.06	-35.95	-7.25			0.75	1.20	-6.52	-32.30	0.00	0.00	Vehicle	Vehicle	-----	-241.65	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	10.13	16.89
	Structure 2	U_0 - U_1	-131.63	10.54	-65.79			0.75	1.18	9.36	-58.37	0.00	0.00	Vehicle	Vehicle	-----	-297.59	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.30	8.84
		U_1 - U_2	-247.12	22.57	-131.48			0.75	1.18	20.02	-116.65	0.00	0.00	Vehicle	Vehicle	-----	-574.00	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.80	4.67
		U_2 - U_3	-347.28	34.97	-173.50			0.75	1.18	31.03	-153.94	0.00	0.00	Vehicle	Vehicle	-----	-784.99	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.85	4.74
		U_3 - U_4	-437.20	-155.35	-208.79			0.75	1.18	-137.83	-185.25	0.00	0.00	Vehicle	Vehicle	-----	-969.73	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.93	4.88
		U_4 - U_5	-468.83	59.98	-231.04			0.75	1.18	53.22	-204.99	0.00	0.00	Vehicle	Vehicle	-----	-1053.62	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.98	4.97
		U_5 - U_6	-471.14	71.02	-226.83			0.75	1.18	63.02	-201.26	0.00	0.00	Vehicle	Vehicle	-----	-1048.54	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.03	5.05
		U_6 - U_7	-414.50	79.18	-222.93			0.75	1.18	70.26	-197.79	0.00	0.00	Vehicle	Vehicle	-----	-967.40	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.81	4.69
		U_7 - U_8	-413.54	79.30	-213.88			0.75	1.18	70.35	-189.77	0.00	0.00	Vehicle	Vehicle	-----	-948.77	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.93	4.89
		U_8 - U_9	-322.06	82.52	-139.70			0.75	1.18	73.22	-123.95	0.00	0.00	Vehicle	Vehicle	-----	-687.23	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.89	6.49
		U_9 - U_{10}	-182.16	89.09	-160.59			0.75	1.18	79.05	-142.48	0.00	0.00	Vehicle	Vehicle	-----	-545.52	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	2.96	4.94
		U_{10} - U_{11}	-32.61	96.66	-125.78			0.75	1.18	85.76	-111.60	0.00	0.00	Vehicle	Vehicle	143.42	-284.20	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.60	11.00	3.96	6.60
		U_{11} - U_{12}	133.57	-34.41	-49.28			0.75	1.18	-30.53	-43.72	0.00	0.00	Vehicle	Vehicle	107.48	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{12} - U_{13}	289.98	34.74	-48.37			0.75	1.18	30.82	-42.91	0.00	0.00	Vehicle	Vehicle	443.75	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	16.53	27.55	-----	-----
		U_{13} - U_{14}	434.77	-13.76	-26.95			0.75	1.18	-12.21	-23.91	0.00	0.00	Vehicle	Vehicle	538.75	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{14} - U_{15}	474.48	60.28	-6.10			0.75	1.17	52.85	-5.35	0.00	0.00	Vehicle	Vehicle	731.32	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	12.37	20.62	-----	-----
		U_{15} - U_{16}	383.31	66.99	-28.66			0.75	1.17	58.73	-25.13	0.00	0.00	Vehicle	Vehicle	625.56	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	9.08	15.14	-----	-----
		U_{16} - U_{17}	279.61	72.21	-67.47			0.75	1.17	63.31	-59.16	0.00	0.00	Vehicle	Vehicle	500.65	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	7.24	-----	-----	7.24	12.07	-----	-----
		U_{17} - U_{18}	172.67	69.81	-93.28			0.75	1.17	61.20	-81.78	0.00	0.00	Vehicle	Vehicle	357.07	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	5.82	9.70	-----	-----
		U_{18} - U_{19}	74.40	66.68	-134.95			0.75	1.17	58.46	-118.32	0.00	0.00	Vehicle	Vehicle	223.38	-159.63	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	7.10	11.83	3.66	6.10
		U_{19} - U_{20}	-9.98	58.44	-152.63			0.75	1.17	51.24	-133.81	0.00	0.00	Vehicle	Vehicle	98.04	-302.90	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.72	16.20	3.06	5.10
	Structure 3	U_0 - U_1	-62.02	30.98	-166.73			0.75	1.17	27.16	-146.18	0.00	0.00	Vehicle	Vehicle	-----	-397.34	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.18	5.30
		U_1 - U_{22}	-88.69	42.42	-175.20			0.75	1.17	37.19	-153.60	0.00	0.00	Vehicle	Vehicle	-----	-448.10	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.92	4.87
		U_{22} - U_{23}	-88.87	42.60	-171.36			0.75	1.17	37.35	-150.24	0.00	0.00	Vehicle	Vehicle	-----	-441.04	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.99	4.98
		U_{23} - U_{24}	-76.60	52.17	-125.80			0.75	1.17	45.74	-110.30	0.00	0.00	Vehicle	Vehicle	-----	-338.55	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.14	6.89
		U_{24} - U_{25}	-37.55	60.72	-155.06			0.75	1.17	53.23	-135.95	0.00	0.00	Vehicle	Vehicle	66.52	-343.37	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	9.67	16.11	2.89	4.82
		U_{25} - U_{26}	37.36	-76.98	-83.07			0.75	1.17	-67.50	-72.83	0.00	0.00	Vehicle	Vehicle	-----	-109.24	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.64	9.40
		U_{26} - U_{27}	128.18	-49.81	-69.66			0.75	1.17	-43.67	-61.08	0.00	0.00	Vehicle	Vehicle	72.02	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	233.91	-27.93	-31.87			0.75	1.17	-24.49	-27.94	0.00	0.00	Vehicle	Vehicle	251.03	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{28} - U_{29}	337.95	48.79	-42.38			0.75	1.17	42.78	-37.16	0.00	0.00	Vehicle	Vehicle	532.02	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.11	21.84	-----	-----
		U_{29} - U_{30}	437.48	-6.56	-19.89			0.75	1.17	-5.75	-17.44	0.00	0.00	Vehicle	Vehicle	556.26	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{30} - U_{31}	420.86	69.06	-6.07			0.75	1.18	61.27	-5.39	0.00	0.00	Vehicle	Vehicle	679.88	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	11.20	18.66	-----	-----
		U_{31} - U_{32}	300.88	85.40	-47.16			0.75	1.18	75.77	-41.84	0.00	0.00	Vehicle	Vehicle	555.30	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	-3.81	-3.43			0.75	1.24	-3.18	-3.54	0.00	0.00	Vehicle	Vehicle	4.13	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	50.83	-21.42	92.93			0.75	1.24	86.22	-19.87	0.00	0.00	Vehicle	Vehicle	252.89	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	3.14	5.24	-----	-----
		L$_2$ - L$_3$	61.27	-36.51	133.78			0.75	1.24	124.11	-33.88	0.00	0.00	Vehicle	Vehicle	348.56	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	2.94	4.89	-----	-----
		L$_3$ - L$_4$	25.72	-49.50	84.31			0.75	1.24	78.22	-45.93	0.00	0.00	Vehicle	Vehicle	202.91	-66.07	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	4.93	8.22	7.69	12.82
		L$_4$ - L$_5$	-118.55	55.32	102.96			0.75	1.24	95.52	51.32	0.00	0.00	Vehicle	Vehicle	52.85	-42.92	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	4.48	7.46	-----	-----
		L$_5$ - L$_6$	-217.97	-88.21	52.31			0.75	1.24	48.53	-81.83	0.00	0.00	Vehicle	Vehicle	-----	-460.66	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	3.24	5.40
		L$_6$ - L$_7$	-320.57	-17.77	12.75			0.75	1.24	11.83	-16.48	0.00	0.00	Vehicle	Vehicle	-----	-452.45	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	22.73	37.88
		L$_7$ - L$_8$	-417.42	-67.83	0.00			0.75	1.24	0.00	-62.92	0.00	0.00	Vehicle	Vehicle	-----	-678.98	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	7.46	12.43
		L$_8$ - L$_9$	-411.08	-58.69	-45.83			0.75	1.20	-41.17	-52.73	0.00	0.00	Vehicle	Vehicle	-----	-648.66	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	8.97	14.95
		L$_9$ - L$_{10}$	-247.97	-69.27	10.69			0.75	1.20	9.61	-62.24	0.00	0.00	Vehicle	Vehicle	-----	-457.21	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	6.72	11.20
		L$_{10}$ - L$_{11}$	-65.37	-67.51	59.88			0.75	1.20	53.80	-60.66	0.00	0.00	Vehicle	Vehicle	31.59	-216.41	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	7.35	12.26	4.30	7.17
		L$_{11}$ - L$_{12}$	101.81	-59.10	109.72			0.75	1.20	98.58	-53.10	0.00	0.00	Vehicle	Vehicle	345.95	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	3.00	4.99	-----	-----
		L$_{12}$ - L$_{13}$	264.06	-52.37	146.25			0.75	1.20	131.40	-47.06	0.00	0.00	Vehicle	Vehicle	627.99	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	3.25	5.41	-----	-----
		L$_{13}$ - L$_{14}$	373.80	-44.66	187.74			0.75	1.20	168.68	-40.13	0.00	0.00	Vehicle	Vehicle	851.42	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	3.32	5.54	-----	-----
		L$_{14}$ - L$_{15}$	476.54	94.19	184.65			0.75	1.20	165.91	84.63	0.00	0.00	Vehicle	Vehicle	978.98	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	3.97	6.62	-----	-----
		L$_{15}$ - L$_{16}$	460.23	57.87	176.05			0.75	1.20	158.18	52.00	0.00	0.00	Vehicle	Vehicle	941.03	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	4.23	7.04	-----	-----
		L$_{16}$ - L$_{17}$	381.61	126.52	138.72			0.75	1.20	124.64	113.68	0.00	0.00	Vehicle	Vehicle	766.14	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	4.02	6.70	-----	-----
		L$_{17}$ - L$_{18}$	289.18	53.21	68.93			0.75	1.20	61.93	47.81	0.00	0.00	Vehicle	Vehicle	510.13	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	5.76	9.59	-----	-----
		L$_{18}$ - L$_{19}$	176.31	32.37	30.81			0.75	1.20	29.09	27.69	0.00	0.00	Vehicle	Vehicle	292.22	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	6.73	11.22	-----	-----
		L$_{19}$ - L$_{20}$	69.72	-13.38	16.51			0.75	1.20	14.83	-12.03	0.00	0.00	Vehicle	Vehicle	122.77	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	17.51	29.19	-----	-----
		L$_0$' - L$_1$'	24.42	-1.57	-7.47			0.75	1.18	-1.39	-6.63	0.00	0.00	Vehicle	Vehicle	28.73	-----	1.88	20.08	18.2000	662.64	131.71	10.8828	6.9064	14.18	32.81	-559.98	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	-----	-----	-----	-----
		L$_1$' - L$_2$'	138.42	-11.70	70.99			0.75	1.18	62.98	-10.38	0.00	0.00	Vehicle	Vehicle	316.41	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	4.71	7.86	-----	-----
		L$_2$' - L$_3$'	252.76	-24.46	119.09			0.75	1.18	105.66	-21.70	0.00	0.00	Vehicle	Vehicle	557.52	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	4.11	6.85	-----	-----
		L$_3$' - L$_4$'	352.26	-36.89	163.38			0.75	1.18	144.96	-32.73	0.00	0.00	Vehicle	Vehicle	772.02	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	3.96	6.60	-----	-----
		L$_4$' - L$_5$'	447.15	-51.01	189.83			0.75	1.18	168.43	-45.26	0.00	0.00	Vehicle	Vehicle	946.23	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	4.28	7.14	-----	-----
		L$_5$' - L$_6$'	477.91	-61.99	215.61			0.75	1.18	191.30	-55.00	0.00	0.00	Vehicle	Vehicle	1035.77	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	4.12	6.87	-----	-----
		L$_6$' - L$_7$'	482.67	-72.73	217.48			0.75	1.18	192.96	-64.53	0.00	0.00	Vehicle	Vehicle	1045.55	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	4.15	6.92	-----	-----
		L$_7$' - L$_8$'	336.57	-88.11	170.82			0.75	1.18	151.56	-78.17	0.00	0.00	Vehicle	Vehicle	765.91	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	3.98	6.63	-----	-----
		L$_8$' - L$_9$'	196.00	70.27	146.63			0.75	1.18	130.09	62.35	0.00	0.00	Vehicle	Vehicle	536.67	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	4.17	6.95	-----	-----
		L$_9$ - L$_{10}$	45.53	-94.87	100.70			0.75	1.18	89.35	-84.17	0.00	0.00	Vehicle	Vehicle	252.78	-123.19	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	5.48	9.14	5.51	9.19
		L$_{10}$ - L$_{11}$	-126.32	13.69	73.02			0.75	1.18	64.78	12.15	0.00	0.00	Vehicle	Vehicle	-----	-137.90	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L$_{11}$ - L$_{12}$	-284.95	-34.06	42.53			0.75	1.18	37.73	-30.22	0.00	0.00	Vehicle	Vehicle	-----	-435.92	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.82	21.37
		L$_{12}$ - L$_{13}$	-433.89	-45.10	-1.44			0.75	1.18	-1.27	-40.02	0.00	0.00	Vehicle	Vehicle	-----	-650.77	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.62	21.03
		L$_{13}$ - L$_{14}$	-552.76	-48.57	28.02			0.75	1.18	24.86	-43.09	0.00	0.00	Vehicle	Vehicle	-----	-811.95	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	13.40	22.34
		L$_{14}$ - L$_{15}$	-573.53	-55.76	-34.75			0.75	1.17	-30.47	-48.88	0.00	0.00	Vehicle	Vehicle	-----	-851.50	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.56	19.26
		L$_{15}$ - L$_{16}$	-493.00	-62.86	-2.18			0.75	1.17	-1.91	-55.11	0.00	0.00	Vehicle	Vehicle	-----	-760.31	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	8.52	14.20
		L$_{16}$ - L$_{17}$	-395.34	-77.56	23.39			0.75	1.17	20.50	-68.00	0.00	0.00	Vehicle	Vehicle	-----	-661.27	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	5.75	9.59
		L$_{17}$ - L$_{18}$	-288.08	-76.64	55.23			0.75	1.17	48.42	-67.19	0.00	0.00	Vehicle	Vehicle	-----	-520.09	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	3.92	6.54
		L$_{18}$ - L$_{19}$	-175.85	-73.54	84.29			0.75	1.17	73.90	-64.48	0.00	0.00	Vehicle	Vehicle	-----	-368.31	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	3.70	6.17
		L$_{19}$ - L$_{20}$	-78.08	-67.69	114.47			0.75	1.17	100.36	-59.35	0.00	0.00	Vehicle	Vehicle	115.95	-230.08	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.53	7.54	5.01	8.35
	Structure 2	L$_{20}$ - L$_{21}$	7.59	-59.63	144.86			0.75	1.17	127.01	-52.28	0.00	0.00	Vehicle	Vehicle	285.06	-103.41	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	4.52	7.54	9.43	15.72
		L$_{21}$ - L$_{22}$	59.10	-32.49	162.06			0.75	1.17	142.09	-28.48	0.00	0.00	Vehicle	Vehicle	384.69	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	3.82	6.37	-----	-----
		L$_{22}$ - L$_{23}$	72.03	-53.68	158.25			0.75	1.17	138.75	-47.06	0.00	0.00	Vehicle	Vehicle	394.25	-8.34	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	3.86	6.43	11.30	18.83
		L$_{23}$ - L$_{24}$	33.57	48.06	141.76			0.75	1.17	124.29	42.14	0.00	0.00	Vehicle	Vehicle	312.93	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	4.49	7.49	-----	-----
		L$_{24}$ - L$_{25}$	-45.06	47.41	104.52			0.75	1.17	91.64	41.56	0.00	0.00	Vehicle	Vehicle	139.97	-----	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	-----	-----	6.40	-----	-----	6.40	-----	-----	4.74	7.90	-----	-----
		L$_{25}$ - L$_{26}$	-134.95	11.20	84.48			0.75	1.17	74.07	9.82	0.00	0.00	Vehicle	Vehicle	-----	-154.16	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{26}$ - L$_{27}$	-245.92	-21.43	58.02			0.75	1.17	50.87	-18.79	0.00	0.00	Vehicle	Vehicle	-----	-360.41	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	15.38	25.64
		L$_{27}$ - L$_{28}$	-351.86	-52.77	25.72			0.75	1.17	22.55	-46.27	0.00	0.00	Vehicle	Vehicle	-----	-557.67	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	9.02	15.04
		L$_{28}$ - L$_{29}$	-458.41	-48.87	0.59			0.75	1.17	0.51	-42.85	0.00	0.00	Vehicle	Vehicle	-----	-688.77	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.44	19.07
		L$_{29}$ - L$_{30}$	-542.36	-65.97	22.39			0.75	1.17	19.63	-57.84	0.00	0.00	Vehicle	Vehicle	-----	-830.40	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.09	16.82
		L$_{30}$ - L$_{31}$	-514.21	-68.96	-36.14			0.75	1.18	-32.07	-61.19	0.00	0.00	Vehicle	Vehicle	-----	-801.05	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	9.81	16.35
		L$_{31}$ - L$_{32}$	-411.27	-85.30	-7.12			0.75	1.18	-6.31	-75.68	0.00	0.00	Vehicle	Vehicle	-----	-698.63	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Center Truss - Verticals

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_0 - L_0	-67.68	-151.18	14.46			0.75	1.24	13.42	-140.25	0.00	0.00	Vehicle	Vehicle	-----	-391.87	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	38.00	Fail	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	1.18	1.97
	U_1 - L_1	-24.09	-86.25	13.98			0.75	1.24	12.97	-80.02	0.00	0.00	Vehicle	Vehicle	-----	-204.69	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	2.46	4.10
	U_2 - L_2	12.87	-38.61	8.63			0.75	1.24	8.01	-35.82	0.00	0.00	Vehicle	Vehicle	34.08	-60.87	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	31.08	51.80	6.11	10.19
	U_3 - L_3	37.37	-33.18	26.20			0.75	1.24	24.31	-30.78	0.00	0.00	Vehicle	Vehicle	101.25	-18.11	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	9.64	16.06	7.57	12.62
	U_4 - L_4	-15.55	3.75	-2.49			0.75	1.24	3.48	-2.31	0.00	0.00	Vehicle	Vehicle	-----	-25.22	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	86.79	144.65
	U_5 - L_5	-92.59	17.18	-72.76			0.75	1.24	15.94	-67.50	0.00	0.00	Vehicle	Vehicle	-----	-266.61	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.96	4.93
	U_6 - L_6	-117.07	0.89	-91.59			0.75	1.24	0.83	-84.97	0.00	0.00	Vehicle	Vehicle	-----	-336.29	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.76	4.60
	U_7 - L_7	-127.52	0.26	-126.64			0.75	1.24	0.24	-117.49	0.00	0.00	Vehicle	Vehicle	-----	-420.32	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	42.26	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	1.70	2.83
	U_8 - L_8	-368.71	-136.03	-144.06			0.75	1.24	-126.20	-133.65	0.00	0.00	Vehicle	Vehicle	-----	-768.90	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.13	5.21
	U_9 - L_9	-214.56	-135.74	6.39			0.75	1.20	5.74	-121.96	0.00	0.00	Vehicle	Vehicle	-----	-543.17	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.45	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.12	3.53
	U_{10} - L_{10}	-198.68	-122.84	-4.99			0.75	1.20	-4.48	-110.37	0.00	0.00	Vehicle	Vehicle	-----	-497.42	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.96	4.93
	U_{11} - L_{11}	-171.40	-103.06	5.89			0.75	1.20	5.29	-92.60	0.00	0.00	Vehicle	Vehicle	-----	-423.45	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.05	5.08
	U_{12} - L_{12}	-128.37	-79.52	13.22			0.75	1.20	11.87	-71.44	0.00	0.00	Vehicle	Vehicle	-----	-321.67	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.39	5.66
	U_{13} - L_{13}	-96.65	-69.14	24.36			0.75	1.20	21.89	-62.12	0.00	0.00	Vehicle	Vehicle	-----	-260.23	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.74	4.57
	U_{14} - L_{14}	-11.04	8.76	-3.39			0.75	1.20	7.87	-3.04	0.00	0.00	Vehicle	Vehicle	2.69	-20.95	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	33.45	55.75	65.83	109.72
	U_{15} - L_{15}	-2.47	43.33	-53.12			0.75	1.20	38.93	-47.73	0.00	0.00	Vehicle	Vehicle	81.14	-106.62	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	6.63	11.05	4.28	7.14
	U_{16} - L_{16}	-31.27	31.95	-64.29			0.75	1.20	28.70	-57.76	0.00	0.00	Vehicle	Vehicle	21.54	-165.80	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	9.59	15.99	3.22	5.37
	U_{17} - L_{17}	-105.05	13.61	-85.78			0.75	1.20	12.23	-77.07	0.00	0.00	Vehicle	Vehicle	-----	-303.56	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.38	3.97
	U_{18} - L_{18}	-126.74	6.62	-94.34			0.75	1.20	5.95	-84.76	0.00	0.00	Vehicle	Vehicle	-----	-348.41	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.82	4.70
	U_{19} - L_{19}	-166.77	6.19	-103.28			0.75	1.20	5.56	-92.79	0.00	0.00	Vehicle	Vehicle	-----	-417.85	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.91	4.84
	U_{20} - L_{20}	-184.59	5.76	-118.54			0.75	1.20	5.17	-106.51	0.00	0.00	Vehicle	Vehicle	-----	-470.73	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.24	3.73
Structure 2	U_0 - L_0	-203.59	-119.04	15.76			0.75	1.18	13.98	-105.61	0.00	0.00	Vehicle	Vehicle	-----	-493.50	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.49	4.16
	U_1 - L_1	-176.11	-105.47	17.02			0.75	1.18	15.10	-93.58	0.00	0.00	Vehicle	Vehicle	-----	-431.70	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.18	5.30
	U_2 - L_2	-137.55	-90.78	16.11			0.75	1.18	14.30	-80.54	0.00	0.00	Vehicle	Vehicle	-----	-353.33	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.25	5.42
	U_3 - L_3	-117.62	-81.05	16.74			0.75	1.18	14.85	-71.91	0.00	0.00	Vehicle	Vehicle	-----	-308.70	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.79	4.65
	U_4 - L_4	-50.97	-69.21	18.04			0.75	1.18	16.00	-61.40	0.00	0.00	Vehicle	Vehicle	-----	-199.31	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.82	4.69
	U_5 - L_5	-13.78	-59.71	33.90			0.75	1.18	30.08	-52.98	0.00	0.00	Vehicle	Vehicle	47.26	-132.69	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	8.81	14.68	3.70	6.17
	U_6 - L_6	45.47	-41.56	45.95			0.75	1.18	40.77	-36.87	0.00	0.00	Vehicle	Vehicle	147.45	-20.78	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	5.63	9.38	6.30	10.50
	U_7 - L_7	-22.33	3.73	-9.58			0.75	1.18	3.31	-8.50	0.00	0.00	Vehicle	Vehicle	-----	-47.45	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	22.47	37.44
	U_8 - L_8	-120.08	30.25	-76.22			0.75	1.18	26.84	-67.62	0.00	0.00	Vehicle	Vehicle	-----	-302.62	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.64	6.07
	U_9 - L_9	-177.03	25.84	-89.15			0.75	1.18	22.93	-79.10	0.00	0.00	Vehicle	Vehicle	-----	-401.52	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.90	6.50
	U_{10} - L_{10}	-205.88	19.27	-97.33			0.75	1.18	17.10	-86.35	0.00	0.00	Vehicle	Vehicle	-----	-454.74	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.98	6.63
	U_{11} - L_{11}	-239.23	12.40	-106.20			0.75	1.18	11.00	-94.22	0.00	0.00	Vehicle	Vehicle	-----	-515.16	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.35	5.58
	U_{12} - L_{12}	-257.95	2.85	-114.42			0.75	1.18	2.53	-101.52	0.00	0.00	Vehicle	Vehicle	-----	-555.30	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.21	5.36
	U_{13} - L_{13}	-243.82	7.98	-120.35			0.75	1.18	7.08	-106.78	0.00	0.00	Vehicle	Vehicle	-----	-548.33	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.51	4.18
	U_{14} - L_{14}	-420.85	-120.50	-134.43			0.75	1.18	-106.92	-119.27	0.00	0.00	Vehicle	Vehicle	-----	-805.53	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.17	5.29
	U_{15} - L_{15}	-158.83	-123.99	13.14			0.75	1.17	11.52	-108.71	0.00	0.00	Vehicle	Vehicle	-----	-442.01	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.93	4.89
	U_{16} - L_{16}	-174.02	-126.71	4.15			0.75	1.17	3.64	-111.10	0.00	0.00	Vehicle	Vehicle	-----	-466.94	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.66	4.43
	U_{17} - L_{17}	-156.46	-105.60	11.91			0.75	1.17	10.44	-92.58	0.00	0.00	Vehicle	Vehicle	-----	-403.99	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.03	5.04
	U_{18} - L_{18}	-142.21	-85.78	12.61			0.75	1.17	11.05	-75.20	0.00	0.00	Vehicle	Vehicle	-----	-347.81	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.47	5.78
	U_{19} - L_{19}	-113.66	-84.05	19.87			0.75	1.17	17.42	-73.69	0.00	0.00	Vehicle	Vehicle	-----	-307.42	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.24	5.40
	U_{20} - L_{20}	-76.51	-71.55	24.73			0.75	1.17	21.68	-62.73	0.00	0.00	Vehicle	Vehicle	-----	-235.39	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	2.86	4.76
	U_{21} - L_{21}	-45.77	-55.98	31.33			0.75	1.17	27.47	-49.08	0.00	0.00	Vehicle	Vehicle	0.01	-165.84	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	10.34	17.24	3.60	6.01
	U_{22} - L_{22}	-17.72	7.48	-9.26			0.75	1.17	6.56	-8.12	0.00	0.00	Vehicle	Vehicle	-----	-40.63	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	23.95	39.92
	U_{23} - L_{23}	-30.69	36.93	-59.30			0.75	1.17	32.38	-51.99	0.00	0.00	Vehicle	Vehicle	30.26	-152.54	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	8.49	14.16	3.58	5.96
	U_{24} - L_{24}	-62.06	35.84	-70.04			0.75	1.17	31.42	-61.41	0.00	0.00	Vehicle	Vehicle	-----	-213.74	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.06	5.10
	U_{25} - L_{25}	-103.15	25.70	-84.22			0.75	1.17	22.54	-73.84	0.00	0.00	Vehicle	Vehicle	-----	-294.07	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.32	5.53
	U_{26} - L_{26}	-134.38	17.17	-92.83			0.75	1.17	15.06	-81.39	0.00	0.00	Vehicle	Vehicle	-----	-351.03	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.26	5.44
	U_{27} - L_{27}	-156.03	10.36	-102.64			0.75	1.17	9.09	-89.99	0.00	0.00	Vehicle	Vehicle	-----	-397.82	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.12	5.19
	U_{28} - L_{28}	-179.40	2.62	-110.45			0.75	1.17	2.29	-96.84	0.00	0.00	Vehicle	Vehicle	-----	-443.04	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.02	5.03
	U_{29} - L_{29}	-171.60	6.17	-115.35			0.75	1.17	5.41	-101.14	0.00	0.00	Vehicle	Vehicle	-----	-442.21	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	3.08	5.13
	U_{30} - L_{30}	-393.29	-120.33	-131.98			0.75	1.18	-106.77	-117.10	0.00	0.00	Vehicle	Vehicle	-----	-764.99	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1																																															
		U_0 - L_1	53.29	26.87	-21.77			0.75	1.24	24.93	-20.19	0.00	0.00	Vehicle	Vehicle	123.29	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**12.83**	**21.38**	-----	-----
		U_1 - L_2	10.80	59.42	7.62			0.75	1.24	55.13	7.07	0.00	0.00	Vehicle	Vehicle	133.49	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.54**	**7.56**	-----	-----
		U_2 - L_3	-44.05	55.55	-32.72			0.75	1.24	51.54	-30.35	0.00	0.00	Vehicle	Vehicle	54.40	-123.03	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**5.49**	**9.15**	**5.74**	**9.56**
		U_3 - L_4	-76.77	11.91	-69.63			0.75	1.24	11.05	-64.60	0.00	0.00	Vehicle	Vehicle	-----	-239.78	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**2.41**	**4.02**
		U_4 - L_4	118.48	83.66	20.46			0.75	1.24	77.61	18.98	0.00	0.00	Vehicle	Vehicle	322.19	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.14**	**5.23**	-----	-----
		U_5 - L_5	137.62	98.62	1.79			0.75	1.24	91.49	1.66	0.00	0.00	Vehicle	Vehicle	377.13	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.36**	**5.61**	-----	-----
		U_6 - L_6	157.39	112.00	-0.06			0.75	1.24	103.91	-0.06	0.00	0.00	Vehicle	Vehicle	429.74	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.85**	**4.75**	-----	-----
		U_7 - L_7	149.33	137.86	-0.25			0.75	1.24	127.90	-0.23	0.00	0.00	Vehicle	Vehicle	471.24	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.35**	**3.92**	-----	-----
		U_8 - L_9	249.21	147.79	-5.99			0.75	1.20	132.79	-5.38	0.00	0.00	Vehicle	Vehicle	611.69	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**3.22**	**5.37**	-----	-----
		U_9 - L_{10}	260.39	111.44	0.00			0.75	1.20	100.13	0.00	0.00	0.00	Vehicle	Vehicle	555.45	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.21**	**7.01**	-----	-----
		U_{10} - L_{11}	236.43	108.11	-7.66			0.75	1.20	97.14	-6.88	0.00	0.00	Vehicle	Vehicle	517.82	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**4.16**	**6.94**	-----	-----
		U_{11} - L_{12}	212.05	103.75	-18.09			0.75	1.20	93.21	-16.25	0.00	0.00	Vehicle	Vehicle	477.63	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.64**	**6.07**	-----	-----
		U_{12} - L_{13}	151.78	98.15	-30.35			0.75	1.20	88.18	-27.27	0.00	0.00	Vehicle	Vehicle	388.38	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**3.26**	**5.43**	-----	-----
		U_{13} - L_{14}	108.73	76.43	-47.00			0.75	1.20	68.67	-42.23	0.00	0.00	Vehicle	Vehicle	290.14	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.79**	**4.64**	-----	-----
		U_{14} - L_{14}	-24.56	62.38	-65.11			0.75	1.20	56.04	-58.50	0.00	0.00	Vehicle	Vehicle	89.50	-158.68	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.84**	**8.07**	**3.12**	**5.19**
		U_{15} - L_{15}	23.90	75.25	-44.00			0.75	1.20	67.61	-39.54	0.00	0.00	Vehicle	Vehicle	177.56	-54.59	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.58**	**5.97**	**5.29**	**8.81**
		U_{17} - L_{16}	120.04	92.19	-24.27			0.75	1.20	82.83	-21.81	0.00	0.00	Vehicle	Vehicle	335.51	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**2.93**	**4.88**	-----	-----
		U_{18} - L_{17}	144.84	102.89	-6.19			0.75	1.20	92.45	-5.56	0.00	0.00	Vehicle	Vehicle	388.61	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.28**	**5.47**	-----	-----
		U_{19} - L_{18}	193.27	109.45	1.87			0.75	1.20	98.34	1.68	0.00	0.00	Vehicle	Vehicle	464.32	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.15**	**5.26**	-----	-----
		U_{20} - L_{19}	193.75	95.10	-6.54			0.75	1.20	85.45	-5.88	0.00	0.00	Vehicle	Vehicle	437.01	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.63**	**6.04**	-----	-----
		U_0 - L_1	202.60	87.49	-17.75			0.75	1.18	77.62	-15.75	0.00	0.00	Vehicle	Vehicle	431.56	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.44**	**7.41**	-----	-----
		U_1 - L_2	190.84	121.56	-19.87			0.75	1.18	107.86	-17.63	0.00	0.00	Vehicle	Vehicle	481.77	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.26**	**5.44**	-----	-----
		U_2 - L_3	155.90	112.70	-19.31			0.75	1.18	99.99	-17.14	0.00	0.00	Vehicle	Vehicle	419.31	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.97**	**4.95**	-----	-----
		U_3 - L_4	134.06	94.21	-21.04			0.75	1.18	83.59	-18.67	0.00	0.00	Vehicle	Vehicle	355.39	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**3.18**	**5.30**	-----	-----
		U_4 - L_5	46.01	77.93	-39.58			0.75	1.18	69.14	-35.11	0.00	0.00	Vehicle	Vehicle	209.61	-16.27	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.31**	**5.52**	**6.11**	**10.18**
		U_5 - L_6	3.43	71.01	-59.47			0.75	1.18	63.00	-52.77	0.00	0.00	Vehicle	Vehicle	140.96	-109.87	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.04**	**6.73**	**3.74**	**6.24**
		U_6 - L_7	-84.31	52.86	-75.31			0.75	1.18	46.90	-66.81	0.00	0.00	Vehicle	Vehicle	-----	-254.37	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.47**	**4.12**
		U_7 - L_7	137.33	88.91	-44.51			0.75	1.18	78.89	-39.49	0.00	0.00	Vehicle	Vehicle	349.44	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.54**	**5.91**	-----	-----
		U_8 - L_8	210.92	102.37	-36.04			0.75	1.18	90.83	-31.98	0.00	0.00	Vehicle	Vehicle	470.99	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.30**	**5.50**	-----	-----
		U_{10} - L_9	236.39	109.14	-22.31			0.75	1.18	96.83	-19.79	0.00	0.00	Vehicle	Vehicle	517.11	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.35**	**5.59**	-----	-----
		U_{11} - L_{10}	274.65	112.77	-12.99			0.75	1.18	100.06	-11.52	0.00	0.00	Vehicle	Vehicle	573.83	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.42**	**5.69**	-----	-----
		U_{12} - L_{11}	281.09	116.66	-4.54			0.75	1.18	103.51	-4.02	0.00	0.00	Vehicle	Vehicle	589.69	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.27**	**5.44**	-----	-----
		U_{13} - L_{12}	278.14	118.00	1.27			0.75	1.18	104.70	1.12	0.00	0.00	Vehicle	Vehicle	588.43	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
		U_{14} - L_{13}	235.47	117.33	-8.09			0.75	1.18	104.10	-7.17	0.00	0.00	Vehicle	Vehicle	531.67	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{15} - L_{14}	143.01	112.25	-13.07			0.75	1.17	98.42	-11.46	0.00	0.00	Vehicle	Vehicle	399.15	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.09**	**5.16**	-----	-----
		U_{16} - L_{15}	171.90	120.77	-8.86			0.75	1.17	105.89	-7.77	0.00	0.00	Vehicle	Vehicle	452.89	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.71**	**4.52**	-----	-----
		U_{16} - L_{16}	181.04	123.55	-12.61			0.75	1.17	108.32	-11.06	0.00	0.00	Vehicle	Vehicle	470.04	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**2.93**	**4.89**	-----	-----
		U_{17} - L_{18}	171.16	111.48	-12.82			0.75	1.17	97.74	-11.24	0.00	0.00	Vehicle	Vehicle	434.27	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.94**	**4.91**	-----	-----
		U_{18} - L_{19}	150.64	119.59	-20.18			0.75	1.17	104.85	-17.69	0.00	0.00	Vehicle	Vehicle	423.02	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.86**	**4.77**	-----	-----
	Structure 2	U_{19} - L_{20}	125.86	89.75	-33.87			0.75	1.17	78.69	-29.70	0.00	0.00	Vehicle	Vehicle	334.12	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.64**	**6.07**	-----	-----
		U_{20} - L_{21}	76.04	85.73	-39.43			0.75	1.17	75.17	-34.57	0.00	0.00	Vehicle	Vehicle	261.72	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**2.81**	**4.68**	-----	-----
		U_{21} - L_{22}	38.33	69.41	-54.60			0.75	1.17	60.85	-47.87	0.00	0.00	Vehicle	Vehicle	181.68	-53.90	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**3.84**	**6.40**	**4.56**	**7.60**
		U_{23} - L_{22}	18.05	63.57	-59.21			0.75	1.17	55.73	-51.91	0.00	0.00	Vehicle	Vehicle	144.23	-89.00	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.41**	**7.35**	**3.94**	**6.57**
		U_{24} - L_{23}	58.57	81.31	-37.91			0.75	1.17	71.29	-33.23	0.00	0.00	Vehicle	Vehicle	230.60	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.11**	**5.18**	-----	-----
		U_{25} - L_{24}	114.98	91.57	-34.39			0.75	1.17	80.28	-30.15	0.00	0.00	Vehicle	Vehicle	323.42	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.65**	**6.08**	-----	-----
		U_{26} - L_{25}	143.00	103.47	-21.60			0.75	1.17	90.72	-18.94	0.00	0.00	Vehicle	Vehicle	382.46	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.36**	**5.60**	-----	-----
		U_{27} - L_{26}	173.82	103.55	-12.02			0.75	1.17	90.79	-10.54	0.00	0.00	Vehicle	Vehicle	422.67	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.15**	**5.25**	-----	-----
		U_{28} - L_{27}	186.60	112.88	-11.29			0.75	1.17	98.97	-9.89	0.00	0.00	Vehicle	Vehicle	457.01	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.17**	**5.29**	-----	-----
		U_{29} - L_{28}	190.75	118.03	-7.62			0.75	1.17	103.48	-6.68	0.00	0.00	Vehicle	Vehicle	472.18	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.67**	**4.44**	-----	-----
		U_{30} - L_{29}	161.86	116.04	-6.01			0.75	1.17	101.74	-5.27	0.00	0.00	Vehicle	Vehicle	430.85	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**2.88**	**4.80**	-----	-----
		U_{30} - L_{31}	191.72	122.46	-12.94			0.75	1.18	108.65	-11.48	0.00	0.00	Vehicle	Vehicle	484.65	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.24**	**5.39**	-----	-----
		U_{31} - L_{32}	226.45	124.27	-14.48			0.75	1.18	110.26	-12.84	0.00	0.00	Vehicle	Vehicle	533.28	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.00**	**5.00**	-----	-----
		U_{32} - L_{33}	243.42	126.27	-1.65			0.75	1.18	112.03	-1.47	0.00	0.00	Vehicle	Vehicle	559.19	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.22**	**5.36**	-----	-----
		U_{33} - L_{34}	239.13	109.12	-11.85			0.75	1.18	96.82	-10.51	0.00	0.00	Vehicle	Vehicle	520.64	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.75**	**6.25**	-----	-----
		U_{34} - L_{35}	222.16	105.35	-20.77			0.75	1.18	93.47	-18.43	0.00

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U$_0$ - U$_1$	-66.70	13.30	-55.78	2.21	-8.83	0.90	1.24	14.80	-62.10	2.21	-8.83	Vehicle	Vehicle	-----	-221.26	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.82	8.03
		U$_1$ - U$_2$	-86.55	31.72	-91.11	6.01	-16.34	0.90	1.24	35.31	-101.43	6.01	-16.34	Vehicle	Vehicle	-----	-332.29	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	2.83	4.72
		U$_2$ - U$_3$	-48.14	47.11	-94.37	9.46	-19.05	0.90	1.24	52.45	-105.06	9.46	-19.05	Vehicle	Vehicle	51.05	-290.21	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	8.23	13.71	2.95	4.92
		U$_3$ - U$_4$	36.58	60.74	-83.65	12.74	-17.47	0.90	1.24	67.62	-93.12	12.74	-17.47	Vehicle	Vehicle	194.07	-154.21	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.63	9.38	3.88	6.46
		U$_4$ - U$_5$	38.93	60.94	-76.41	12.80	-17.38	0.90	1.24	67.84	-85.07	12.80	-17.38	Vehicle	Vehicle	197.60	-133.71	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	5.59	9.32	4.26	7.10
		U$_5$ - U$_6$	154.60	67.88	-15.93	3.13	0.00	0.90	1.24	75.58	-17.74	3.13	0.00	Vehicle	Vehicle	364.72	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	4.10	6.83	-----	-----
		U$_6$ - U$_7$	288.38	74.17	-6.05	17.14	-4.31	0.90	1.24	82.57	-6.73	17.14	-4.31	Vehicle	Pedestrian	553.79	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	3.75	6.25	-----	-----
		U$_7$ - U$_8$	410.94	6.13	8.75	22.63	0.00	0.90	1.24	9.74	6.83	22.63	0.00	Pedestrian	Vehicle	586.82	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	17.28	21.60	-----	-----
		U$_8$ - U$_9$	311.57	54.04	-3.26	12.90	6.19	0.90	1.20	58.26	-3.52	12.90	6.19	Vehicle	Vehicle	531.28	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	6.46	10.77	-----	-----
		U$_9$ - U$_{10}$	78.52	57.58	-46.12	12.28	-6.79	0.90	1.20	62.09	-49.72	12.28	-6.79	Vehicle	Vehicle	236.60	-5.65	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	6.09	10.16	8.16	13.59
		U$_{10}$ - U$_{11}$	-141.43	54.28	-87.70	11.10	-18.41	0.90	1.20	58.52	-94.56	11.10	-18.41	Vehicle	Vehicle	-----	-388.74	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.89	4.82
		U$_{11}$ - U$_{12}$	-338.03	49.99	-130.79	9.77	-27.93	0.90	1.20	53.90	-141.01	9.77	-27.93	Vehicle	Vehicle	-----	-744.98	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	40.71	Pass	28.44	48.21	Pass	8.00	12.00	Pass	-----	-----	2.02	3.37
		U$_{12}$ - U$_{13}$	-480.08	43.76	-153.73	8.23	-34.32	0.90	1.20	47.18	-165.75	8.23	-34.32	Vehicle	Vehicle	-----	-983.22	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	42.00	Pass	28.44	49.73	Pass	8.00	12.00	Pass	-----	-----	2.38	3.97
		U$_{13}$ - U$_{14}$	-570.65	37.16	-167.81	6.68	-37.21	0.90	1.20	40.06	-180.93	6.68	-37.21	Vehicle	Vehicle	-----	-1133.85	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.21	Pass	25.60	49.99	Pass	6.40	12.00	Pass	-----	-----	2.51	4.18
		U$_{14}$ - U$_{15}$	-571.07	36.98	-163.31	6.65	-37.22	0.90	1.20	39.87	-176.08	6.65	-37.22	Vehicle	Vehicle	-----	-1123.90	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	42.40	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.58	4.30
		U$_{15}$ - U$_{16}$	-581.88	14.09	-128.06	0.00	-31.14	0.90	1.20	15.19	-138.07	0.00	-31.14	Vehicle	Vehicle	-----	-1055.60	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	43.75	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.24	5.40
		U$_{16}$ - U$_{17}$	-539.46	12.63	-118.51	0.00	-28.33	0.90	1.20	13.62	-127.78	0.00	-28.33	Vehicle	Vehicle	-----	-978.15	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.70	6.17
		U$_{17}$ - U$_{18}$	-422.33	-94.68	-32.98	-25.05	2.26	0.90	1.20	-35.56	-102.08	2.26	-25.05	Vehicle	Vehicle	-----	-770.19	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	43.84	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	3.22	5.37
		U$_{18}$ - U$_{19}$	-286.19	-59.97	-16.92	-16.96	1.28	0.90	1.20	-18.25	-64.66	1.28	-16.96	Vehicle	Vehicle	-----	-512.15	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	44.84	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	3.63	6.05
		U$_{19}$ - U$_{20}$	-140.84	-26.79	-5.12	0.00	-8.13	0.90	1.20	-5.52	-28.89	0.00	-8.13	Vehicle	Vehicle	-----	-245.68	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	11.15	18.58
	Structure 2	U$_0$ - U$_1$	-147.44	4.29	-42.90	0.36	-4.88	0.90	1.18	4.57	-45.68	0.36	-4.88	Vehicle	Vehicle	-----	-290.65	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.57	10.94
		U$_1$ - U$_2$	-319.06	14.40	-85.47	1.96	-13.36	0.90	1.18	15.33	-90.99	1.96	-13.36	Vehicle	Vehicle	-----	-611.93	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	44.29	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.11	5.19
		U$_2$ - U$_3$	-460.91	25.84	-114.71	3.77	-20.95	0.90	1.18	27.51	-122.13	3.77	-20.95	Vehicle	Vehicle	-----	-863.81	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	43.47	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.03	5.05
		U$_3$ - U$_4$	-580.03	39.31	-157.83	5.92	-27.68	0.90	1.18	41.86	-168.04	5.92	-27.68	Vehicle	Vehicle	-----	-1118.13	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	42.65	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	2.72	4.53
		U$_4$ - U$_5$	-616.49	51.02	-173.31	7.86	-31.35	0.90	1.18	54.33	-184.52	7.86	-31.35	Vehicle	Vehicle	-----	-1201.23	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.34	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	2.83	4.72
		U$_5$ - U$_6$	-604.71	62.83	-165.28	9.87	-32.88	0.90	1.18	66.90	-175.97	9.87	-32.88	Vehicle	Vehicle	-----	-1167.40	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	43.96	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.01	5.01
		U$_6$ - U$_7$	-514.78	71.78	-155.08	11.56	-31.23	0.90	1.18	76.43	-165.12	11.56	-31.23	Vehicle	Vehicle	-----	-1026.96	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.51	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.00	5.01
		U$_7$ - U$_8$	-512.83	71.85	-150.32	11.57	-31.18	0.90	1.18	76.50	-160.05	11.57	-31.18	Vehicle	Vehicle	-----	-1013.44	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	44.80	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	3.11	5.18
		U$_8$ - U$_9$	-373.51	79.89	-129.54	13.16	-27.41	0.90	1.18	85.06	-137.92	13.16	-27.41	Vehicle	Vehicle	-----	-784.39	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.27	5.46
		U$_9$ - U$_{10}$	-181.05	83.80	-72.89	14.25	-21.42	0.90	1.18	89.22	-77.60	14.25	-21.42	Vehicle	Vehicle	-----	-403.51	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.45	9.09
		U$_{10}$ - U$_{11}$	26.18	86.84	-60.11	15.21	-14.40	0.90	1.18	92.46	-64.00	15.21	-14.40	Vehicle	Vehicle	234.35	-104.62	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	5.74	9.57	7.46	12.43
		U$_{11}$ - U$_{12}$	237.39	-7.13	-32.58	10.86	0.00	0.90	1.18	-7.59	-34.68	10.86	0.00	Vehicle	Vehicle	292.16	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{12}$ - U$_{13}$	435.89	15.95	1.09	15.82	0.56	0.90	1.18	16.98	1.16	15.82	0.56	Pedestrian	Pedestrian	619.95	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	17.16	21.45	-----	-----
		U$_{13}$ - U$_{14}$	595.84	6.71	8.98	24.32	0.00	0.90	1.18	9.56	7.14	24.32	0.00	Pedestrian	Vehicle	829.64	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	22.87	28.59	-----	-----
		U$_{14}$ - U$_{15}$	615.53	70.51	6.02	13.42	8.77	0.90	1.17	74.18	6.33	13.42	8.77	Vehicle	Pedestrian	960.92	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	7.67	12.79	-----	-----
		U$_{15}$ - U$_{16}$	486.15	74.72	-20.29	14.17	3.08	0.90	1.17	78.62	-21.34	14.17	3.08	Vehicle	Vehicle	802.33	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	6.00	10.00	-----	-----
		U$_{16}$ - U$_{17}$	339.27	74.31	-37.20	14.66	-2.95	0.90	1.17	78.18	-39.13	14.66	-2.95	Vehicle	Vehicle	610.45	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	5.41	9.01	-----	-----
		U$_{17}$ - U$_{18}$	192.13	72.68	-71.52	15.12	-9.49	0.90	1.17	76.46	-75.25	15.12	-9.49	Vehicle	Vehicle	415.44	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	4.51	7.51	-----	-----
		U$_{18}$ - U$_{19}$	53.83	66.59	-99.82	15.12	-15.34	0.90	1.17	70.06	-105.02	15.12	-15.34	Vehicle	Vehicle	221.78	-157.57	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.10	10.17	4.01	6.68
		U$_{19}$ - U$_{20}$	-58.94	59.06	-124.44	15.07	-19.84	0.90	1.17	62.13	-130.92	15.07	-19.84	Vehicle	Vehicle	58.00	-360.28	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.49	14.15	2.91	4.84
	Structure 3	U$_0$ - U$_{21}$	-125.32	30.27	-125.21	14.77	-22.39	0.90	1.17	31.85	-131.73	14.77	-22.39	Pedestrian	Vehicle	-----	-448.34	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.24	5.40
		U$_{21}$ - U$_{22}$	-146.72	40.74	-131.82	14.37	-22.74	0.90	1.17	42.86	-138.68	14.37	-22.74	Pedestrian	Vehicle	-----	-491.22	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	2.99	4.98
		U$_{22}$ - U$_{23}$	-146.49	38.01	-129.46	14.36	-22.72	0.90	1.17	39.99	-136.20	14.36	-22.72	Pedestrian	Vehicle	-----	-485.54	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	3.04	5.07
		U$_{23}$ - U$_{24}$	-112.53	49.61	-84.29	13.88	-16.65	0.90	1.17	52.20	-88.68	13.88	-16.65	Vehicle	Vehicle	-----	-338.44	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.90	8.17
		U$_{24}$ - U$_{25}$	-36.03	57.08	-81.18	13.40	-15.01	0.90	1.17	60.05	-85.40	13.40	-15.01	Vehicle	Vehicle	83.27	-231.88	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	8.56	14.26	4.61	7.69
		U$_{25}$ - U$_{26}$	80.94	62.58	-63.02	0.38	0.00	0.90	1.17	65.84	-66.30	0.38	0.00	Vehicle	Vehicle	247.88	-38.44	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.25	10.41	6.59	10.98
		U$_{26}$ - U$_{27}$	220.82	-12.21	-24.11	7.92	0.00	0.90	1.17	-12.85	-25.37	7.92	0.00	Vehicle	Vehicle	259.22	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{27}$ - U$_{28}$	363.48	6.70	-15.28	14.90	0.00	0.90	1.17	7.05	-16.08	14.90	0.00	Pedestrian	Vehicle	508.19	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	24.80	31.00	-----	-----
		U$_{28}$ - U$_{29}$	503.92	44.69	-11.10	21.74	3.11	0.90	1.17	47.02	-11.68	21.74	3.11	Pedestrian	Vehicle	766.83	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	8.94	11.18	-----	-----
		U$_{29}$ - U$_{30}$	616.62	24.37	-4.09	27.08	0.00	0.90	1.17	25.64	-4.30	27.08	0.00	Pedestrian	Vehicle	887.28	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-1.94	1.42	0.36	0.37	-2.06	0.90	1.24	1.58	0.40	0.37	-2.06	Vehicle	Pedestrian	0.90	-5.22	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**191.50**	**319.16**	-----	-----
		L_1 - L_2	67.93	-17.48	57.44	-3.35	9.23	0.90	1.24	63.95	-19.46	9.23	-3.35	Vehicle	Vehicle	226.87	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.08**	**6.80**	-----	-----
		L_2 - L_3	78.83	-37.80	97.28	-7.39	15.48	0.90	1.24	108.30	-42.08	15.48	-7.39	Vehicle	Vehicle	337.13	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**3.27**	**5.45**	-----	-----
		L_3 - L_4	39.11	-53.06	84.28	-10.83	18.09	0.90	1.24	93.83	-59.07	18.09	-10.83	Vehicle	Vehicle	254.13	-77.15	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**4.03**	**6.71**	**6.12**	**10.19**
		L_4 - L_5	-166.44	-76.14	39.11	-16.91	10.96	0.90	1.24	43.55	-84.77	10.96	-16.91	Vehicle	Vehicle	-----	-400.03	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	43.59	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.36**	**3.94**
		L_5 - L_6	-301.30	-82.77	15.74	-15.71	0.00	0.90	1.24	17.53	-92.15	0.00	-15.71	Vehicle	Vehicle	-----	-591.34	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	41.20	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**2.33**	**3.89**
		L_6 - L_7	-439.01	-18.09	-22.89	-4.99	-21.52	0.90	1.24	-20.14	-25.49	-4.99	-21.52	Vehicle	Pedestrian	-----	-647.10	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.61**	**10.76**
		L_7 - L_8	-551.71	-74.67	2.74	-35.56	0.00	0.90	1.24	3.05	-83.13	0.00	-35.56	Vehicle	Pedestrian	-----	-910.09	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	44.83	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.37**	**5.46**
		L_8 - L_9	-570.55	-41.98	-40.49	-11.71	-25.77	0.90	1.20	-43.66	-45.26	-11.71	-25.77	Vehicle	Pedestrian	-----	-857.14	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**7.08**	**8.85**
		L_9 - L_{10}	-355.55	-46.80	-7.25	-11.67	-13.03	0.90	1.20	-7.81	-50.46	-11.67	-13.03	Pedestrian	Vehicle	-----	-571.54	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**7.01**	**11.69**
		L_{10} - L_{11}	-118.56	-48.25	38.93	-10.69	-1.73	0.90	1.20	41.97	-52.02	-1.73	-10.69	Vehicle	Vehicle	-----	-266.84	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.40**	**7.34**
		L_{11} - L_{12}	103.33	-44.79	58.16	-9.47	9.97	0.90	1.20	62.70	-48.30	9.97	-9.47	Vehicle	Vehicle	270.19	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**4.70**	**7.83**	-----	-----
		L_{12} - L_{13}	300.47	-41.57	121.88	-8.15	17.86	0.90	1.20	131.41	-44.82	17.86	-8.15	Vehicle	Vehicle	675.32	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.08**	**5.13**	-----	-----
		L_{13} - L_{14}	441.01	-35.40	142.14	-6.62	24.18	0.90	1.20	153.25	-38.16	24.18	-6.62	Vehicle	Vehicle	905.37	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**3.39**	**5.66**	-----	-----
		L_{14} - L_{15}	546.80	-22.61	130.67	0.00	21.12	0.90	1.20	140.89	-24.38	21.12	0.00	Vehicle	Vehicle	1016.09	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**4.38**	**7.29**	-----	-----
		L_{15} - L_{16}	505.90	-21.21	119.83	0.00	18.34	0.90	1.20	129.20	-22.87	18.34	0.00	Vehicle	Vehicle	937.59	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**4.96**	**8.27**	-----	-----
		L_{16} - L_{17}	398.64	81.38	49.64	0.00	11.94	0.90	1.20	87.74	53.52	11.94	0.00	Vehicle	Vehicle	708.34	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**5.59**	**9.32**	-----	-----
		L_{17} - L_{18}	263.76	52.12	24.47	4.73	0.15	0.90	1.20	56.19	26.38	4.73	0.15	Vehicle	Vehicle	464.64	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**6.62**	**11.03**	-----	-----
		L_{18} - L_{19}	118.86	23.85	1.27	-3.28	0.70	0.90	1.20	25.71	1.37	0.70	-3.28	Vehicle	Pedestrian	210.23	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.95**	**14.92**	-----	-----
		L_{19} - L_{20}	-23.25	-6.03	4.10	-12.00	1.27	0.90	1.20	4.42	-6.50	1.27	-12.00	Vehicle	Pedestrian	-----	-60.29	1.95	17.93	15.9750	591.53	131.71	10.8073	5.7170	17.13	32.72	-498.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	**15.58**	**19.47**
		L_0' L_1	-35.95	5.03	0.68	1.19	-5.13	0.90	1.18	5.36	0.73	1.19	-5.13	Vehicle	Pedestrian	-----	-53.89	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	132.83	-3.00	40.42	-0.07	2.94	0.90	1.18	43.03	-3.19	2.94	-0.07	Vehicle	Vehicle	265.91	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.98**	**11.63**	-----	-----
		L_2 - L_3	304.11	-14.53	87.26	-1.80	10.53	0.90	1.18	92.91	-15.47	10.53	-1.80	Vehicle	Vehicle	596.64	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**4.34**	**7.23**	-----	-----
		L_3 - L_4	445.92	-26.08	122.23	-3.63	18.16	0.90	1.18	130.14	-27.77	18.16	-3.63	Vehicle	Vehicle	861.67	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**3.98**	**6.63**	-----	-----
		L_4 - L_5	567.84	-41.81	160.92	-6.10	24.82	0.90	1.18	171.33	-44.52	24.82	-6.10	Vehicle	Vehicle	1109.40	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.79**	**6.32**	-----	-----
		L_5 - L_6	603.64	-53.60	171.87	-8.06	28.47	0.90	1.18	182.99	-57.06	28.47	-8.06	Vehicle	Vehicle	1181.21	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**3.90**	**6.50**	-----	-----
		L_6 - L_7	599.48	-67.88	155.11	-10.41	30.26	0.90	1.18	165.14	-72.27	30.26	-10.41	Vehicle	Vehicle	1137.14	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**4.43**	**7.38**	-----	-----
		L_7 - L_8	373.94	-84.65	132.23	-13.66	24.93	0.90	1.18	140.78	-90.13	24.93	-13.66	Vehicle	Vehicle	791.15	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**4.12**	**6.87**	-----	-----
		L_8 - L_9	195.71	-91.14	90.33	-15.12	19.52	0.90	1.18	96.17	-97.04	19.52	-15.12	Vehicle	Vehicle	462.80	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**5.64**	**9.40**	-----	-----
		L_9 - L_{10}	-13.21	-94.34	61.60	-7.60	12.45	0.90	1.18	65.59	-100.45	12.45	-7.60	Vehicle	Vehicle	124.93	-234.81	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**8.00**	**13.34**	**4.27**	**7.11**
		L_{10} - L_{11}	-217.32	20.13	21.21	-15.65	0.00	0.90	1.18	22.58	21.43	0.00	-15.65	Vehicle	Vehicle	-----	-236.07	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L_{11} - L_{12}	-419.93	-92.60	5.03	-23.34	0.00	0.90	1.18	5.35	-98.59	0.00	-23.34	Vehicle	Vehicle	-----	-759.52	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	43.12	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**3.11**	**5.18**
		L_{12} - L_{13}	-591.41	-37.47	-22.30	-7.09	-18.75	0.90	1.18	-23.74	-39.89	-7.09	-18.75	Vehicle	Pedestrian	-----	-864.11	9.73	59.10	49.3700	1950.30	131.71	10.9531	5.8186	16.94	32.73	-1644.04	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.19**	**11.48**
		L_{13} - L_{14}	-724.23	-48.88	0.60	-35.12	0.00	0.90	1.18	0.64	-52.04	0.00	-35.12	Vehicle	Pedestrian	-----	-1083.13	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.26**	**9.08**
		L_{14} - L_{15}	-747.05	16.72	-20.54	0.00	-36.29	0.90	1.17	17.59	-21.60	0.00	-36.29	Vehicle	Pedestrian	-----	-1065.24	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.61**	**13.27**
		L_{15} - L_{16}	-632.15	-57.91	-17.03	-9.38	-12.11	0.90	1.17	-17.92	-60.93	-9.38	-12.11	Pedestrian	Vehicle	-----	-953.81	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.33**	**10.56**
		L_{16} - L_{17}	-488.62	-62.65	12.59	-9.25	-11.44	0.90	1.17	13.24	-65.91	-9.25	-11.44	Vehicle	Vehicle	-----	-778.02	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.09**	**8.48**
		L_{17} - L_{18}	-336.98	-62.12	34.38	-9.73	-4.53	0.90	1.17	36.17	-65.35	-4.53	-9.73	Vehicle	Vehicle	-----	-579.67	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	43.62	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**3.58**	**5.97**
		L_{18} - L_{19}	-183.61	-61.14	59.53	-9.59	1.37	0.90	1.17	62.63	-64.33	1.37	-9.59	Vehicle	Vehicle	-----	-378.07	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.64**	**6.06**
		L_{19} - L_{20}	-45.77	-55.00	84.63	-9.58	7.21	0.90	1.17	89.04	-57.86	7.21	-9.58	Vehicle	Vehicle	133.42	-184.87	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.88**	**8.14**	**5.47**	**9.12**
	Structure 2	L_{20} - L_{21}	68.00	-48.87	112.81	-9.12	11.07	0.90	1.17	118.69	-51.42	11.07	-9.12	Vehicle	Vehicle	345.55	-23.01	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**4.53**	**7.55**	**10.30**	**17.16**
		L_{21} - L_{22}	133.90	-20.97	113.23	-8.82	13.61	0.90	1.17	119.13	-22.06	13.61	-8.82	Vehicle	Pedestrian	432.19	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.18**	**6.97**	-----	-----
		L_{22} - L_{23}	122.50	-40.69	111.11	-7.58	8.54	0.90	1.17	116.89	-42.81	8.54	-7.58	Vehicle	Vehicle	412.52	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**4.32**	**7.20**	-----	-----
		L_{23} - L_{24}	46.70	-48.24	83.12	-7.09	6.92	0.90	1.17	87.45	-50.75	6.92	-7.09	Vehicle	Vehicle	250.17	-49.26	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**6.30**	**10.50**	**10.18**	**16.96**
		L_{24} - L_{25}	-66.76	-52.56	65.12	-4.28	3.32	0.90	1.17	68.52	-55.30	3.32	-4.28	Vehicle	Vehicle	61.67	-206.60	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**6.53**	**10.88**	**5.50**	**9.17**
		L_{25} - L_{26}	-205.83	-57.46	47.52	-11.78	0.00	0.90	1.17	50.00	-60.45	0.00	-11.78	Vehicle	Vehicle	-----	-398.56	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**3.65**	**6.08**
		L_{26} - L_{27}	-350.61	-5.19	15.07	-18.88	0.00	0.90	1.17	15.86	-5.46	0.00	-18.88	Vehicle	Pedestrian	-----	-495.34	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**12.39**	**15.49**
		L_{27} - L_{28}	-494.76	-33.32	0.64	-25.89	0.00	0.90	1.17	0.67	-35.05	0.00	-25.89	Vehicle	Pedestrian	-----	-742.23	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.26**	**9.07**
		L_{28} - L_{29}	-620.88	-64.68	-17.93	-21.97	-5.04	0.90	1.17	-18.86	-68.05	-5.04	-21.97	Vehicle	Vehicle	-----	-954.58	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.77**	**9.62**
		L_{29} - L_{30}	-716.82	-33.60	-22.70	-36.30	0.00	0.90	1.17	-23.88	-35.35	0.00	-36.30	Vehicle	Pedestrian	-----	-1048.29	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.91**	**11.14**
		L_{30} - L_{31}	-850.86	39.51	-14.99	0.00	-35.98	0.90	1.18	42.07	-15.96	0.00	-35.98	Vehicle	Pedestrian	-----

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 2.17
Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.63	-76.68	17.34	-12.32	3.44	0.90	1.24	19.30	-85.36	3.44	-12.32	Vehicle	Vehicle	-----	-306.67	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	42.25	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.76	2.94
		U_1 - L_1	-46.50	-49.90	14.94	-9.05	2.93	0.90	1.24	16.63	-55.55	2.93	-9.05	Vehicle	Vehicle	-----	-180.81	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.30	5.50
		U_2 - L_2	-0.07	-26.70	13.51	-5.68	2.84	0.90	1.24	15.04	-29.72	2.84	-5.68	Vehicle	Vehicle	32.49	-64.48	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	17.07	28.44	7.10	11.84
		U_3 - L_3	39.61	-16.29	11.89	-2.12	2.70	0.90	1.24	13.23	-18.13	2.70	-2.12	Vehicle	Vehicle	80.17	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	17.60	29.33	-----	-----
		U_4 - L_4	-30.21	0.24	-9.33	0.00	-3.47	0.90	1.24	0.27	-10.39	0.00	-3.47	Vehicle	Pedestrian	-----	-61.78	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	18.46	23.08
		U_5 - L_5	-130.50	2.83	-44.59	0.00	-10.24	0.90	1.24	3.15	-49.64	0.00	-10.24	Vehicle	Vehicle	-----	-277.20	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	3.56	5.94
		U_6 - L_6	-158.19	7.66	-45.80	0.00	-13.06	0.90	1.24	8.53	-50.98	0.00	-13.06	Vehicle	Vehicle	-----	-316.11	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	4.12	6.86
		U_7 - L_7	-152.33	14.54	-43.94	0.00	-13.25	0.90	1.24	16.19	-48.92	0.00	-13.25	Vehicle	Vehicle	-----	-304.01	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	3.78	6.29
		U_8 - L_8	-455.44	-75.11	-45.41	-18.98	-12.74	0.90	1.24	-50.55	-83.62	-12.74	-18.98	Vehicle	Vehicle	-----	-773.24	3.28	51.23	47.9548	1690.75	131.71	16.6563	4.0434	37.07	31.69	-1380.20	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	4.35	7.25
		U_9 - L_9	-287.50	-74.85	-0.46	-18.21	0.00	0.90	1.20	-0.49	-80.70	0.00	-18.21	Vehicle	Vehicle	-----	-548.60	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	43.23	Pass	9.60	12.00	Pass	-----	-----	2.66	4.43
		U_{10} - L_{10}	-276.27	-69.53	-2.77	-16.18	-1.37	0.90	1.20	-2.99	-74.97	-1.37	-16.18	Pedestrian	Vehicle	-----	-521.58	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	3.73	6.22
		U_{11} - L_{11}	-232.54	-62.79	1.95	-14.42	0.00	0.90	1.20	2.10	-67.70	0.00	-14.42	Vehicle	Vehicle	-----	-448.99	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.62	6.04
		U_{12} - L_{12}	-178.38	-52.27	0.40	-11.20	0.00	0.90	1.20	0.43	-56.36	0.00	-11.20	Vehicle	Vehicle	-----	-354.00	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	3.77	6.28
		U_{13} - L_{13}	-127.70	-37.11	3.94	-7.88	0.00	0.90	1.20	4.25	-40.01	0.00	-7.88	Vehicle	Vehicle	-----	-252.70	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.79	6.32
		U_{14} - L_{14}	-30.38	-4.64	-6.88	-3.03	0.00	0.90	1.20	-5.01	-7.42	0.00	-3.03	Vehicle	Pedestrian	-----	-56.47	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	24.07	30.09
		U_{15} - L_{15}	-28.93	11.85	-31.31	1.55	-4.53	0.90	1.20	12.77	-33.76	1.55	-4.53	Vehicle	Vehicle	-----	-110.75	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	5.59	9.31
		U_{16} - L_{16}	-75.99	7.45	-36.83	1.39	-7.07	0.90	1.20	8.03	-39.71	1.39	-7.07	Vehicle	Vehicle	-----	-184.84	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.01	6.68
		U_{17} - L_{17}	-161.81	8.00	-50.00	1.30	-10.66	0.90	1.20	8.63	-53.91	1.30	-10.66	Vehicle	Vehicle	-----	-327.15	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	2.78	4.63
		U_{18} - L_{18}	-190.09	6.86	-51.83	1.12	-12.69	0.90	1.20	7.40	-55.89	1.12	-12.69	Vehicle	Vehicle	-----	-368.21	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	3.60	6.00
		U_{19} - L_{19}	-228.09	5.88	-51.08	0.97	-14.99	0.90	1.20	6.34	-55.08	0.97	-14.99	Vehicle	Vehicle	-----	-415.86	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	4.23	7.05
		U_{20} - L_{20}	-242.54	5.33	-49.98	0.95	-15.62	0.90	1.20	5.74	-53.88	0.95	-15.62	Vehicle	Vehicle	-----	-432.04	0.00	27.86	27.8600	919.38	131.71	20.3229	2.7881	65.60	28.91	-684.53	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.16	5.27
		U_0 - L_0	-302.99	-81.02	13.31	-15.08	2.22	0.90	1.18	14.17	-86.26	2.22	-15.08	Vehicle	Vehicle	-----	-580.78	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	43.14	Pass	5.62	12.00	Pass	-----	-----	2.36	3.94
		U_1 - L_1	-268.80	-74.71	13.54	-13.67	2.12	0.90	1.18	14.41	-79.55	2.12	-13.67	Vehicle	Vehicle	-----	-521.79	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.04	5.07
		U_2 - L_2	-220.88	-65.20	14.58	-12.32	2.34	0.90	1.18	15.52	-69.42	2.34	-12.32	Vehicle	Vehicle	-----	-437.56	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.05	5.09
		U_3 - L_3	-175.24	-60.23	15.62	-10.35	2.49	0.90	1.18	16.63	-64.13	2.49	-10.35	Vehicle	Vehicle	-----	-366.76	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	44.88	Pass	4.91	12.00	Pass	-----	-----	2.59	4.31
		U_4 - L_4	-82.09	-44.23	13.52	-6.62	2.21	0.90	1.18	14.39	-47.09	2.21	-6.62	Vehicle	Vehicle	-----	-208.74	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	3.28	5.46
		U_5 - L_5	-19.91	-31.63	13.36	-4.16	2.23	0.90	1.18	14.22	-33.68	2.23	-4.16	Vehicle	Vehicle	4.94	-98.84	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	18.88	31.47	5.71	9.52
		U_6 - L_6	60.32	-17.99	24.65	-0.47	1.75	0.90	1.18	26.25	-19.15	1.75	-0.47	Vehicle	Vehicle	135.28	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	8.40	14.00	-----	-----
		U_7 - L_7	-41.78	-2.09	-8.21	0.00	-2.49	0.90	1.18	-2.22	-8.74	0.00	-2.49	Vehicle	Vehicle	-----	-73.24	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	20.51	34.19
		U_8 - L_8	-189.01	6.02	-46.73	0.00	-8.38	0.90	1.18	6.41	-49.76	0.00	-8.38	Vehicle	Vehicle	-----	-353.51	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	4.12	6.86
		U_9 - L_9	-254.00	2.03	-58.06	0.00	-10.55	0.90	1.18	2.16	-61.81	0.00	-10.55	Vehicle	Vehicle	-----	-464.12	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	4.24	7.07
		U_{10} - L_{10}	-290.02	4.61	-60.69	0.00	-12.18	0.90	1.18	4.91	-64.61	0.00	-12.18	Vehicle	Vehicle	-----	-517.01	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	4.54	7.56
		U_{11} - L_{11}	-312.19	10.00	-65.01	0.00	-12.59	0.90	1.18	10.64	-69.21	0.00	-12.59	Vehicle	Vehicle	-----	-555.81	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	3.92	6.54
		U_{12} - L_{12}	-327.27	14.45	-59.65	-0.93	-13.01	0.90	1.18	15.38	-63.51	-0.93	-13.01	Vehicle	Vehicle	-----	-563.04	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	4.48	7.47
		U_{13} - L_{13}	-277.23	19.24	-50.44	0.00	-11.39	0.90	1.18	20.48	-53.70	0.00	-11.39	Vehicle	Vehicle	-----	-476.76	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	4.61	7.69
		U_{14} - L_{14}	-505.47	-59.13	-37.23	-11.35	-9.95	0.90	1.18	-39.64	-62.96	-9.95	-11.35	Vehicle	Vehicle	-----	-793.52	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	5.21	8.68
		U_{15} - L_{15}	-232.92	-68.59	3.26	-11.17	0.00	0.90	1.17	3.42	-72.17	0.00	-11.17	Vehicle	Vehicle	-----	-459.16	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.80	6.34
		U_{16} - L_{16}	-260.09	-73.04	0.50	-12.63	0.83	0.90	1.17	0.53	-76.84	0.83	-12.63	Pedestrian	Vehicle	-----	-504.60	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	3.17	5.28
		U_{17} - L_{17}	-228.20	-66.25	8.99	-11.76	0.66	0.90	1.17	9.46	-69.71	0.66	-11.76	Vehicle	Vehicle	-----	-447.69	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.40	5.67
		U_{18} - L_{18}	-209.23	-61.59	10.81	-11.28	-0.02	0.90	1.17	11.37	-64.80	-0.02	-11.28	Vehicle	Vehicle	-----	-412.40	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.41	5.68
		U_{19} - L_{19}	-166.51	-56.49	11.57	-9.53	-0.07	0.90	1.17	12.17	-59.44	-0.07	-9.53	Vehicle	Vehicle	-----	-345.24	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	3.48	5.80
	Structure 2	U_{20} - L_{20}	-113.91	-41.16	11.57	-7.50	-0.43	0.90	1.17	12.17	-43.30	-0.43	-7.50	Vehicle	Vehicle	-----	-241.90	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.62	6.03
		U_{21} - L_{21}	-62.73	-33.13	15.02	-5.22	-0.44	0.90	1.17	15.80	-34.86	-0.44	-5.22	Vehicle	Vehicle	-----	-157.06	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.78	7.97
		U_{22} - L_{22}	-38.93	-3.12	-8.31	-2.15	-2.04	0.90	1.17	-3.29	-8.74	-2.04	-2.15	Pedestrian	Vehicle	-----	-69.56	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	20.79	34.64
		U_{23} - L_{23}	-74.45	12.27	-37.36	0.48	-6.10	0.90	1.17	12.91	-39.30	0.48	-6.10	Vehicle	Vehicle	-----	-181.94	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	4.06	6.77
		U_{24} - L_{24}	-121.37	12.03	-44.13	0.37	-8.17	0.90	1.17	12.65	-46.43	0.37	-8.17	Vehicle	Vehicle	-----	-258.38	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	3.28	5.47
		U_{25} - L_{25}	-169.10	11.57	-53.19	0.43	-9.94	0.90	1.17	12.17	-55.96	0.43	-9.94	Vehicle	Vehicle	-----	-341.09	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	3.67	6.12
		U_{26} - L_{26}	-207.93	10.46	-56.32	0.14	-11.42	0.90	1.17	11.00	-59.26	0.14	-11.42	Vehicle	Vehicle	-----	-398.70	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	3.74	6.23
		U_{27} - L_{27}	-219.90	8.60	-58.28	0.16	-11.49	0.90	1.17	9.05	-61.31	0.16	-11.49	Vehicle	Vehicle	-----	-418.71	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	3.95	6.58
		U_{28} - L_{28}	-240.66	12.43	-55.03	-0.25	-11.17	0.90	1.17	13.07	-57.89	-0.25	-11.17	Vehicle	Vehicle	-----	-438.29	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	4.41	7.35
		U_{29} - L_{29}	-202.76	18.92	-47.37	0.00	-10.35	0.90	1.17	19.91	-49.83	0.00	-10.35	Vehicle	Vehicle	-----	-371.55	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	5.87	9.78
		U_{30} - L_{30}	-516.45	-63.45	-36.45	-13.75	-8.21	0.90	1.18	-38.81	-67.56	-8.21	-13.75	Vehicle	Vehicle	-----	-817.75	11.02	51.81	40.7900	1709.73	131.71	25.6094	4.0330	57.15	29.89	-1316.46	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	4.41	7.35
		U_{31} - L_{31}	-318.62	-71.19	8.73	-12.96	0.00	0.90	1.18	9.29	-75.80	0.00	-12.96	Vehicle	Vehicle	-----	-578.42	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	2.94	4.90
		U_{32} - L_{32}	-358.52	-73.88	2.49	-14.65	-0.25	0.90	1.18	2.66	-78.65	-0.25	-14.65	Vehicle	Vehicle	-----	-636.49	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	3.38	5.64
		U_{33} - L_{33}	-325.85	-72.59	2.73	-13.02	-0.46	0.90	1.18	2.91	-77.28	-0.46	-13.02	Vehicle	Vehicle	-----	-591.05	2.42	38.13	35.7

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30; LL Factor: 2.17
Pedestrian Load Factors: DL Factor: 1.30; LL Factor: 1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.61	58.88	-19.13	14.00	-4.60	0.90	1.24	65.55	-21.30	14.00	-4.60	Vehicle	Vehicle	255.91	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**4.57**	**7.61**	-----	-----
		U_1 - L_2	23.84	46.55	17.03	9.20	-4.72	0.90	1.24	51.82	18.96	9.20	-4.72	Vehicle	Vehicle	143.27	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.68**	**7.79**	-----	-----
		U_2 - L_3	-49.05	18.51	-18.22	0.00	-1.00	0.90	1.24	20.61	-20.28	0.00	-1.00	Vehicle	Vehicle	-----	-107.71	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.44**	**14.06**
		U_3 - L_4	-108.90	-5.17	-24.51	-4.21	-2.10	0.90	1.24	-5.75	-27.29	-2.10	-4.21	Pedestrian	Vehicle	-----	-200.69	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**5.00**	**8.34**
		U_4 - L_5	153.14	9.93	12.32	3.12	7.00	0.90	1.24	13.71	11.06	7.00	3.12	Pedestrian	Vehicle	232.74	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**14.35**	**17.93**	-----	-----
		U_5 - L_5	186.37	59.61	-3.58	13.44	0.00	0.90	1.24	66.36	-3.99	13.44	0.00	Vehicle	Vehicle	386.07	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.20**	**7.00**	-----	-----
		U_6 - L_6	177.53	55.30	-14.70	14.14	0.00	0.90	1.24	61.56	-16.37	14.14	0.00	Vehicle	Vehicle	364.17	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.61**	**7.69**	-----	-----
		U_7 - L_7	173.15	49.29	-16.14	13.87	0.00	0.90	1.24	54.87	-17.97	13.87	0.00	Vehicle	Vehicle	343.99	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.22**	**8.70**	-----	-----
		U_8 - L_8	328.03	82.42	-0.60	19.31	0.00	0.90	1.20	88.86	-0.65	19.31	0.00	Vehicle	Vehicle	618.96	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.28**	**7.14**	-----	-----
		U_9 - L_{10}	339.64	83.87	-3.06	19.75	0.00	0.90	1.20	90.42	-3.29	19.75	0.00	Vehicle	Vehicle	637.45	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**4.13**	**6.89**	-----	-----
		U_{10} - L_{11}	313.15	80.07	10.78	18.15	0.00	0.90	1.20	86.33	11.63	18.15	0.00	Vehicle	Vehicle	594.14	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**4.15**	**6.92**	-----	-----
		U_{11} - L_{12}	270.62	65.46	10.55	14.84	0.00	0.90	1.20	70.58	11.38	14.84	0.00	Vehicle	Vehicle	504.72	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.31**	**7.18**	-----	-----
		U_{12} - L_{13}	194.11	52.40	-5.66	10.79	0.00	0.90	1.20	56.49	-6.10	10.79	0.00	Vehicle	Vehicle	374.74	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**4.64**	**7.73**	-----	-----
		U_{13} - L_{14}	123.52	41.57	-14.05	2.11	3.86	0.90	1.20	44.82	-15.15	3.86	2.11	Vehicle	Vehicle	257.67	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.07**	**6.79**	-----	-----
		U_{15} - L_{14}	-16.31	32.86	-23.24	0.00	-0.88	0.90	1.20	35.43	-25.06	0.00	-0.88	Vehicle	Vehicle	55.56	-75.49	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.52**	**12.53**	**7.47**	**12.45**
		U_{15} - L_{15}	59.11	43.76	-11.37	6.08	-2.09	0.90	1.20	47.18	-12.26	6.08	-2.09	Vehicle	Vehicle	179.07	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.69**	**7.81**	-----	-----
		U_{17} - L_{16}	172.05	59.83	-11.17	9.93	-1.86	0.90	1.20	64.51	-12.04	9.93	-1.86	Vehicle	Vehicle	363.44	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**3.28**	**5.46**	-----	-----
		U_{18} - L_{17}	210.69	61.12	-9.46	12.50	-1.53	0.90	1.20	65.90	-10.20	12.50	-1.53	Vehicle	Vehicle	416.68	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.01**	**6.68**	-----	-----
		U_{19} - L_{18}	242.30	61.67	-7.55	13.72	-1.21	0.90	1.20	66.49	-8.14	13.72	-1.21	Vehicle	Vehicle	459.06	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.22**	**7.04**	-----	-----
		U_{20} - L_{19}	257.77	53.99	-6.20	15.71	-1.03	0.90	1.20	58.22	-6.69	15.71	-1.03	Vehicle	Vehicle	461.23	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.66**	**7.77**	-----	-----
		U_0 - L_1	299.01	57.43	-14.13	14.21	-2.21	0.90	1.18	61.14	-15.04	14.21	-2.21	Vehicle	Vehicle	521.18	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.70**	**7.83**	-----	-----
		U_1 - L_2	284.23	77.28	-16.81	14.05	-2.66	0.90	1.18	82.28	-17.90	14.05	-2.66	Vehicle	Vehicle	547.77	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.60**	**6.00**	-----	-----
		U_2 - L_3	221.45	69.97	-17.93	11.83	-2.85	0.90	1.18	74.50	-19.09	11.83	-2.85	Vehicle	Vehicle	449.29	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.46**	**5.76**	-----	-----
		U_3 - L_4	178.33	67.99	-20.24	10.08	-3.23	0.90	1.18	72.39	-21.55	10.08	-3.23	Vehicle	Vehicle	388.67	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**3.30**	**5.51**	-----	-----
		U_4 - L_5	53.62	42.15	-13.35	5.38	-2.87	0.90	1.18	44.87	-14.21	5.38	-2.87	Vehicle	Vehicle	166.80	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.00**	**8.34**	-----	-----
		U_5 - L_6	-16.50	35.09	-24.02	2.23	-1.22	0.90	1.18	37.36	-25.57	2.23	-1.22	Vehicle	Vehicle	59.50	-76.85	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.13**	**11.89**	**7.26**	**12.09**
		U_6 - L_7	-133.20	13.33	-45.32	0.00	-5.36	0.90	1.18	14.19	-48.25	0.00	-5.36	Vehicle	Vehicle	-----	-277.70	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**2.81**	**4.69**
		U_7 - L_7	208.77	53.30	-11.40	8.33	0.00	0.90	1.18	56.75	-12.14	8.33	0.00	Vehicle	Vehicle	394.35	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**4.17**	**6.95**	-----	-----
		U_8 - L_8	289.58	69.01	-2.54	10.70	0.00	0.90	1.18	73.47	-2.70	10.70	0.00	Vehicle	Vehicle	535.65	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.43**	**5.72**	-----	-----
		U_{10} - L_9	327.97	70.93	-2.73	12.66	0.00	0.90	1.18	75.52	-2.90	12.66	0.00	Vehicle	Vehicle	589.98	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.57**	**5.95**	-----	-----
		U_{11} - L_{10}	349.27	76.48	-4.07	12.70	0.00	0.90	1.18	81.43	-4.33	12.70	0.00	Vehicle	Vehicle	630.48	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.65**	**6.08**	-----	-----
		U_{12} - L_{11}	358.20	71.36	-11.06	13.52	0.00	0.90	1.18	75.97	-11.78	13.52	0.00	Vehicle	Vehicle	630.26	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.84**	**6.40**	-----	-----
		U_{13} - L_{12}	307.76	58.48	-21.34	12.26	-0.24	0.90	1.18	62.26	-22.72	12.26	-0.24	Vehicle	Vehicle	534.98	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.53**	**7.55**	-----	-----
		U_{14} - L_{13}	260.25	48.04	-18.21	9.65	0.00	0.90	1.18	51.15	-19.39	9.65	0.00	Vehicle	Vehicle	449.15	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.07**	**10.11**	-----	-----
		U_{14} - L_{15}	208.41	66.31	-8.34	11.04	-2.52	0.90	1.17	69.76	-8.78	11.04	-2.52	Vehicle	Vehicle	422.08	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.80**	**6.34**	-----	-----
		U_{15} - L_{16}	243.53	74.31	-5.77	11.54	-1.48	0.90	1.17	78.18	-6.07	11.54	-1.48	Vehicle	Vehicle	485.97	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.12**	**5.21**	-----	-----
		U_{16} - L_{17}	255.83	75.20	-9.47	12.23	0.00	0.90	1.17	79.12	-9.96	12.23	0.00	Vehicle	Vehicle	503.99	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**3.45**	**5.74**	-----	-----
		U_{17} - L_{18}	235.25	72.22	-11.09	11.35	0.00	0.90	1.17	75.99	-11.67	11.35	0.00	Vehicle	Vehicle	470.46	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.28**	**5.47**	-----	-----
		U_{18} - L_{19}	212.06	66.88	-13.54	11.09	0.00	0.90	1.17	70.37	-14.25	11.09	0.00	Vehicle	Vehicle	428.14	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.74**	**6.23**	-----	-----
	Structure 2	U_0 - L_{20}	168.18	57.50	-5.89	9.14	0.00	0.90	1.17	60.50	-6.20	9.14	0.00	Vehicle	Vehicle	349.72	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**4.32**	**7.19**	-----	-----
		U_{20} - L_{21}	97.21	44.23	-18.41	6.66	0.00	0.90	1.17	46.54	-19.36	6.66	0.00	Vehicle	Vehicle	227.20	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.26**	**7.10**	-----	-----
		U_{21} - L_{22}	30.55	15.98	-25.63	0.58	-2.18	0.90	1.17	16.81	-26.96	0.58	-2.18	Vehicle	Vehicle	76.15	-18.70	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**14.17**	**23.62**	**7.93**	**13.21**
		U_{23} - L_{22}	49.81	40.43	-20.58	5.11	-0.95	0.90	1.17	42.54	-21.65	5.11	-0.95	Vehicle	Vehicle	156.93	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.33**	**8.88**	-----	-----
		U_{24} - L_{23}	115.09	50.67	-13.47	8.00	-0.72	0.90	1.17	53.31	-14.17	8.00	-0.72	Vehicle	Vehicle	265.12	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**3.52**	**5.86**	-----	-----
		U_{25} - L_{24}	179.20	62.01	-15.86	10.10	0.00	0.90	1.17	65.24	-16.69	10.10	0.00	Vehicle	Vehicle	374.32	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**3.90**	**6.50**	-----	-----
		U_{26} - L_{25}	220.95	65.81	-13.91	11.89	0.00	0.90	1.17	69.24	-14.63	11.89	0.00	Vehicle	Vehicle	437.25	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.72**	**6.21**	-----	-----
		U_{27} - L_{26}	234.79	67.17	-11.06	11.44	0.00	0.90	1.17	70.67	-11.64	11.44	0.00	Vehicle	Vehicle	458.34	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.53**	**5.88**	-----	-----
		U_{28} - L_{27}	253.01	64.45	-9.97	12.25	0.00	0.90	1.17	67.81	-10.49	12.25	0.00	Vehicle	Vehicle	475.83	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.05**	**6.74**	-----	-----
		U_{29} - L_{28}	215.83	52.72	-21.29	10.20	0.61	0.90	1.17	55.47	-22.40	10.20	0.61	Vehicle	Vehicle	400.76	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.70**	**7.84**	-----	-----
		U_{30} - L_{29}	179.92	44.84	-18.05	8.46	0.00	0.90	1.17	47.17	-18.99	8.46	0.00	Vehicle	Vehicle	336.10	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.99**	**9.98**	-----	-----
		U_{30} - L_{31}	294.37	65.93	-10.13	12.88	0.00	0.90	1.18	70.19	-10.78	12.88	0.00	Vehicle	Vehicle	534.76	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.13**	**6.88**	-----	-----
		U_{31} - L_{32}	342.78	77.03	-9.36	13.71	-0.55	0.90	1.18	82.02	-9.96	13.71	-0.55	Vehicle	Vehicle	623.32	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**3.18**	**5.30**	-----	-----
		U_{32} - L_{33}	363.31	77.42	-4.78	14.15	0.00	0.90	1.18	82.43	-5.09	14.15	0.00	Vehicle	Vehicle	650.90	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**3.50**	**5.84**	-----	-----
		$U

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-U_1	-131.25	-22.60	-0.29	1.77	1.43	-14.89	3.31	23.65	19.08	-198.87
	U_1-U_2	-54.49	-51.15	0.28	3.06	-2.66	-19.50	3.73	40.81	-35.51	-260.50
	U_2-U_3	-18.27	-39.57	0.28	4.68	-3.47	-14.76	17.22	59.81	-169.73	-164.54
	U_3-U_4	-52.26	-51.06	2.76	4.43	-4.32	-17.30	36.82	59.16	-57.70	-231.16
	U_4-U_5	-28.29	-50.99	3.09	4.43	-4.32	-17.30	41.28	57.21	-74.28	-222.61
	U_5-L_0	2.12	145.13	3.64	4.04	-13.04	-3.38	48.64	53.97	-180.82	-45.18
	L_0-L_1	84.34	84.34	0.23	0.23	-6.14	-7.90	51.07	53.37	-165.80	-101.03
	L_1-L_2	-69.92	-603.38	109.79	22.64	0.33	-0.11	-364.36	302.39	4.38	-1.40
	L_2-L_3	-531.73	-129.19	-0.04	1.13	12.84	-12.50	690.13	-136.39	1001.26	-187.74
	L_3-L_4	68.54	43.95	2.35	3.60	1.87	-10.42	154.98	197.95	141.61	-234.37
	L_4-L_5	100.48	-176.70	3.79	3.10	1.66	-15.42	49.04	40.04	21.49	-199.24
	L_5-U_5	25.23	-160.18	4.30	2.61	1.66	-14.28	55.62	33.77	21.49	-180.74
	U_5-L_5	-56.66	-218.08	3.29	1.23	1.37	-17.44	43.85	13.99	17.75	-225.61
	L_5-L_6	-173.50	-173.50	3.40	3.40	1.37	-27.97	-47.33	8.11	-60.60	-381.91
	L_6-L_7	-287.80	-237.44	2.98	1.71	-26.40	-16.54	38.52	22.16	-341.63	-210.95
	L_7-L_8	-196.20	-237.71	1.53	0.70	1.52	-19.16	19.78	9.06	19.69	-247.89
	L_8-L_9	-299.83	-154.73	-3.66	-0.70	-4.78	-12.73	-47.12	8.11	-169.73	-164.74
	L_9-L_{10}	-189.93	-29.96	-7.25	4.90	-1.34	-4.85	-93.84	63.41	-17.29	-82.70
	L_{10}-L_{11}	-179.63	-39.55	-10.02	2.34	-13.05	-5.46	-129.63	51.60	-75.36	-75.30
	L_{11}-L_{12}	-249.78	-258.69	-11.45	15.68	0.25	-0.90	-148.18	202.90	3.26	-89.30
	L_{12}-L_{13}	-28.62	-172.11	-0.61	1.44	5.33	-14.78	-7.76	18.42	-58.12	-188.80
	L_{13}-L_{14}	-24.91	-195.34	-2.28	1.78	5.33	-19.39	-40.10	18.42	-218.15	-188.80
	L_{14}-L_{15}	-53.03	-283.30	-0.83	1.97	0.08	-23.30	-8.46	-33.18	-68.69	-301.23
	L_{15}-L_{16}	-339.68	-339.68	-2.27	2.27	-0.74	-32.51	8.91	-33.18	-268.54	-268.54
	L_{16}-L_{17}	-360.46	-389.97	0.18	3.27	-3.49	-38.06	2.34	41.79	-44.58	-486.26
	L_{17}-L_{18}	-403.42	-403.42	2.44	2.44	-4.07	-38.06	-45.55	27.79	-52.14	-486.26
	L_{18}-L_{19}	-349.63	-208.07	4.55	6.49	-23.79	-33.25	58.15	57.39	-309.33	-424.85
	L_{19}-L_{20}	-253.78	-280.71	3.53	4.89	-7.23	-21.26	45.13	62.43	-92.34	-371.68
	L_{20}-L_{21}	-237.02	-237.02	3.53	3.53	-4.07	-21.26	-24.47	41.79	-92.34	-371.68
	L_{21}-L_{22}	-237.02	-39.91	5.08	0.43	-21.85	-11.67	64.96	82.13	-229.20	-149.15
	L_{22}-L_{23}	-152.28	-152.28	0.43	0.43	-3.85	-9.20	80.21	80.21	-149.15	-119.33
	L_{23}-L_{24}	-116.69	-170.79	-9.23	4.95	-4.65	-4.86	-118.18	63.19	-59.40	-62.07
	L_{24}-L_{25}	-31.71	-58.84	3.30	3.30	-3.71	-4.86	-44.14	63.19	-59.40	-62.07
	L_{25}-L_{26}	-48.31	-31.52	0.15	4.16	-3.69	-17.01	1.94	52.55	-46.57	-214.72
	L_{26}-L_{27}	10.77	13.63	-7.97	5.82	-2.75	-11.16	-100.61	70.94	-34.66	-140.82
	L_{27}-L_{28}	57.22	122.85	-6.92	5.97	-5.30	-7.69	-87.42	72.35	-66.88	-97.06
	L_{28}-L_{29}	85.41	4.86	-1.10	3.86	1.51	-15.21	-13.93	48.77	19.05	-192.03
	L_{29}-L_{30}	13.52	206.37	3.16	3.16	1.51	-15.21	80.86	111.86	152.31	-409.75
	L_{30}-L_{31}	821.42	-89.58	0.13	2.75	26.08	-19.37	1.66	35.31	333.19	-247.52
	L_{31}-L_{32}	25.52	37.40	0.97	0.97	12.26	-9.20	12.26	12.26	189.33	-189.33
	L_{32}-L_{33}	145.61	-52.49	3.69	4.56	2.47	-16.64	47.14	58.20	31.51	-212.60
	L_{33}-L_{34}	17.52	-88.46	4.83	5.12	0.59	-15.47	61.71	65.38	7.47	-197.60
	L_{34}-L_{35}	25.52	37.40	0.97	0.97	12.26	-9.20	12.26	12.26	189.33	-189.33
	L_{35}-L_{36}	-75.13	-230.47	5.10	3.19	-2.13	-19.34	65.16	40.78	-27.15	-247.12
	L_{36}-L_{37}	-206.03	-206.03	3.19	3.19	-2.13	-19.34	55.21	55.21	-11.52	-247.12
	L_{37}-L_{38}	-64.17	-278.54	5.02	4.39	-24.15	-25.51	64.16	56.13	-308.50	-325.98
	L_{38}-L_{39}	-17.58	-27.58	0.67	0.67	-3.80	-25.51	64.16	64.16	-308.50	-325.98
	L_{39}-L_{40}	-274.89	-274.55	2.09	1.00	-32.92	-27.95	29.26	12.73	-420.54	-367.15
	L_{40}-L_{41}	-296.96	-269.01	1.78	0.68	-26.74	-22.54	22.72	8.64	-341.67	-287.95
	L_{41}-L_{42}	-154.04	-40.69	-10.20	1.44	-1.95	-16.19	59.91	42.46	-68.02	-308.12
	L_{42}-L_{43}	-154.33	-34.80	-1.24	1.95	-16.19	-8.43	-15.83	24.85	-208.80	-107.65
	L_{43}-L_{44}	-36.10	-136.39	-0.47	0.47	-2.81	-8.43	-43.63	-17.07	-208.80	-107.65
	L_{44}-L_{45}	40.05	-167.61	-0.58	0.89	3.19	-11.18	-7.49	7.63	-4.27	-144.64
	L_{45}-L_{46}	-10.43	-132.23	-0.43	0.72	3.03	-13.38	-5.58	9.30	39.14	-173.19
	L_{46}-L_{47}	-36.10	-136.39	-0.47	0.47	-2.81	-8.43	-43.63	-17.07	-208.80	-107.65
	L_{47}-L_{48}	-140.08	-260.72	0.33	0.99	-4.42	-18.61	4.30	12.83	-57.16	-240.72
	L_{48}-L_{49}	-187.01	-275.87	1.61	2.25	-5.89	-31.29	20.88	29.10	-76.29	-404.62
	L_{49}-L_{50}	-322.39	-140.83	1.12	2.17	-3.74	-31.29	57.35	49.99	-49.74	-297.92
	L_{50}-L_{51}	-147.74	-26.71	2.67	4.26	-3.78	-9.40	34.53	56.08	-48.89	-121.57
	L_{51}-L_{52}	-36.10	-136.39	-0.47	0.47	-2.81	-8.43	-43.63	-17.07	-208.80	-107.65
	L_{52}-L_{53}	10.81	46.01	-4.22	3.29	-8.59	-3.76	64.65	42.62	-111.18	-48.60
	L_{53}-L_{54}	-10.43	-132.23	-0.43	0.72	3.03	-13.38	-5.58	9.30	39.14	-173.19
	L_{54}-L_{55}	126.04	54.05	4.29	3.74	3.72	-15.11	57.35	49.99	-49.74	-297.92
	L_{55}-L_{56}	70.11	43.65	4.61	3.55	-3.55	-14.05	61.64	44.71	-47.37	-187.74
	L_{56}-L_{57}	-8.37	-30.47	-11.62	13.93	-1.72	-7.27	-155.25	186.08	-22.94	-97.07

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	Shape Factor f	M_p (k-in)	Formula I.8 Term F-1 F_y*S_{xx}	M_y (k-in)	Equivalent Mom. Factor a	C_m(a)	C_m(b)
Structure 1	U_0-U_1	-177.80	21.85	-129.29	-460.27	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_1-U_2	-62.76	21.94	-147.77	-630.91	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_2-U_3	-141.68	17.22	-265.61	-368.56	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_3-U_4	11.83	297.54	-192.96	-421.48	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_4-U_5	52.67	180.24	-187.71	-398.63	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_5-L_0	108.15	305.51	-399.02	90.77	90.2	90.24	76.71	127.46	2147	1328.6	1.41
	L_0-L_1	233.00	136.35	-724.46	97.1	97.11	78.18	142.56	2586	1949.1	1434.1	1.36
	L_1-L_2	667.67	1439.59	-81.45	781.36	138.2	138.17	111.77	198.97	3942	2197.7	1.45
	L_2-L_3	690.13	-136.39	1001.26	-187.74	133.3	133.26	105.11	180.77	2955	1795.3	1.39
	L_3-L_4	154.98	197.95	141.61	-234.37	95.6	95.61	79.12	139.23	2172	1307.9	1.40
	L_4-L_5	256.87	-142.94	177.19	-661.39	96.6	96.61	83.55	130.29	2174	1387.9	1.40
	L_5-U_5	173.34	-135.00	220.96	-658.41	96.6	96.61	83.55	130.29	2174	1387.9	1.40
	U_5-L_5	-20.66	-249.05	-87.20	-573.21	151.8	151.76	130.94	219.77	4535	2532.6	1.45
	L_5-L_6	-163.02	-356.57	-322.83	-582.64	151.8	151.76	130.94	219.77	4535	2532.6	1.45
	L_6-L_7	38.52	22.16	-341.63	-210.95	100.1	100.06	86.37	145.00	2992	1672.0	1.45
	L_7-L_8	19.78	9.06	19.69	-247.89	100.1	100.06	86.37	145.00	2992	1672.0	1.45
	L_8-L_9	-47.12	8.11	-169.73	-164.74	100.1	100.06	86.37	145.00	2992	1672.0	1.45
	L_9-L_{10}	-93.84	63.41	-17.29	-82.70	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{10}-L_{11}	-129.63	51.60	-75.36	-75.30	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{11}-L_{12}	-148.18	202.90	3.26	-89.30	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{12}-L_{13}	-7.76	18.42	-58.12	-188.80	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{13}-L_{14}	-40.10	18.42	-218.15	-188.80	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{14}-L_{15}	-8.46	-33.18	-68.69	-301.23	212.6	212.59	170.43	297.57	4967	2491.6	1.40
	L_{15}-L_{16}	8.91	-33.18	-268.54	-268.54	212.6	212.59	170.43	297.57	4967	2491.6	1.40
	L_{16}-L_{17}	2.34	41.79	-44.58	-486.26	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{17}-L_{18}	-45.55	27.79	-52.14	-486.26	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{18}-L_{19}	58.15	57.39	-309.33	-424.85	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{19}-L_{20}	45.13	62.43	-92.34	-371.68	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{20}-L_{21}	-24.47	41.79	-92.34	-371.68	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{21}-L_{22}	64.96	82.13	-229.20	-149.15	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{22}-L_{23}	80.21	80.21	-149.15	-119.33	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{23}-L_{24}	-118.18	63.19	-59.40	-62.07	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{24}-L_{25}	-44.14	63.19	-59.40	-62.07	100.0	100.00	86.33	144.93	2988	1671.2	1.45
	L_{25}-L_{26}	1.94	52.55	-46.57	-214.72	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{26}-L_{27}	-100.61	70.94	-34.66	-140.82	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{27}-L_{28}	-87.42	72.35	-66.88	-97.06	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{28}-L_{29}	-13.93	48.77	19.05	-192.03	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{29}-L_{30}	80.86	111.86	152.31	-409.75	185.7	185.70	154.12	268.55	4767	2721.4	1.44
	L_{30}-L_{31}	1.66	35.31	333.19	-247.52	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{31}-L_{32}	12.26	12.26	189.33	-189.33	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{32}-L_{33}	47.14	58.20	31.51	-212.60	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{33}-L_{34}	61.71	65.38	7.47	-197.60	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{34}-L_{35}	12.26	12.26	189.33	-189.33	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{35}-L_{36}	65.16	40.78	-27.15	-247.12	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{36}-L_{37}	55.21	55.21	-11.52	-247.12	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{37}-L_{38}	64.16	56.13	-308.50	-325.98	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{38}-L_{39}	64.16	64.16	-308.50	-325.98	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{39}-L_{40}	29.26	12.73	-420.54	-367.15	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{40}-L_{41}	22.72	8.64	-341.67	-287.95	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{41}-L_{42}	59.91	42.46	-68.02	-308.12	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{42}-L_{43}	-15.83	24.85	-208.80	-107.65	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{43}-L_{44}	-43.63	-17.07	-208.80	-107.65	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{44}-L_{45}	-7.49	7.63	-4.27	-144.64	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{45}-L_{46}	-5.58	9.30	39.14	-173.19	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{46}-L_{47}	-43.63	-17.07	-208.80	-107.65	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{47}-L_{48}	4.30	12.83	-57.16	-240.72	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{48}-L_{49}	20.88	29.10	-76.29	-404.62	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{49}-L_{50}	57.35	49.99	-49.74	-297.92	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{50}-L_{51}	34.53	56.08	-48.89	-121.57	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{51}-L_{52}	-43.63	-17.07	-208.80	-107.65	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{52}-L_{53}	64.65	42.62	-111.18	-48.60	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{53}-L_{54}	-5.58	9.30	39.14	-173.19	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{54}-L_{55}	57.35	49.99	-49.74	-297.92	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{55}-L_{56}	61.64	44.71	-47.37	-187.74	0.0	0.00	0.00	0.00	0	0.0	0.00
	L_{56}-L_{57}	186.08	186.08	-97.07	-97.07	0.0	0.00	0.00	0.00	0	0.0	0.00

M_y Information

ZZ Axis Moment Properties

Location	Member	Shape Factor f	M_p (k-in)	Formula I.8 Term F-1 F_y*S_{yy}	M_z (k-in)	Equivalent Mom. Factor a	C_m(a)	C_m(b)
Structure 1	U_0-U_1	1.13	4206	0.99880041	2974.3	0.281	0.71	0.71
	U_1-U_2	1.13	4206	0.99880041	2974.3	0.234	0.69	0.69
	U_2-U_3	1.13	4206	0.99880041	2974.3	0.234	0.69	0.69
	U_3-U_4	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	U_4-U_5	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	U_5-L_0	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_0-L_1	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_1-L_2	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_2-L_3	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_3-L_4	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_4-L_5	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_5-U_5	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	U_5-L_5	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_5-L_6	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_6-L_7	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_7-L_8	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_8-L_9	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_9-L_{10}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{10}-L_{11}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{11}-L_{12}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{12}-L_{13}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{13}-L_{14}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{14}-L_{15}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{15}-L_{16}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{16}-L_{17}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{17}-L_{18}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{18}-L_{19}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{19}-L_{20}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{20}-L_{21}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{21}-L_{22}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{22}-L_{23}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{23}-L_{24}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{24}-L_{25}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{25}-L_{26}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{26}-L_{27}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{27}-L_{28}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{28}-L_{29}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{29}-L_{30}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{30}-L_{31}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{31}-L_{32}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{32}-L_{33}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{33}-L_{34}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{34}-L_{35}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{35}-L_{36}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{36}-L_{37}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{37}-L_{38}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{38}-L_{39}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{39}-L_{40}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{40}-L_{41}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{41}-L_{42}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{42}-L_{43}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{43}-L_{44}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{44}-L_{45}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{45}-L_{46}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{46}-L_{47}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{47}-L_{48}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{48}-L_{49}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{49}-L_{50}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{50}-L_{51}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{51}-L_{52}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{52}-L_{53}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{53}-L_{54}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{54}-L_{55}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{55}-L_{56}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78
	L_{56}-L_{57}	1.13	4206	0.99880041	2974.3	0.458	0.78	0.78

Tension

Yield

Location	Member	Axial Axial Force	Moment Bending	Total	Pass
Structure 1	U_0-U_1	0.446	0.132	0.58	Yes
	U_1-U_2	0.695	0.173	0.87	Yes
	U_2-U_3	0.634	0.131	0.77	Yes
	U_3-U_4	0.487	0.130	0.62	Yes
	U_4-

Moment (End) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information | **M_y Information**

| Location | Member | ZZ Axis Moments from STAAD | | |

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Condition: HS20 Truck

Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.33	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.83

(+) Positive Stresses / Forces Indicate Tension

(-) Negative Stresses / Forces Indicate Compression

& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel

** Area deducted for rivet holes (see separate calculations)

*** K = 0.75 per MCEB 6.6.2.1

**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1

(Does Lumpsteel vs Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009

Checked: NRF Date: 11/2/2009

M_2 Information

M_3 Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_b (in^3) | Z_z (in^3) | I_z (in^4) | I_{xx} (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{top} | M_y (k-in) | Equivalent Mem. Factor a | Equivalent Mem. Factor C_{mx} | Equivalent Mem. Factor C_{mm} | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_b (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | r_{min} (in) | Formula 1.8 Term * F$_y$/S_{top} | M_y (k-in) | Tension Yield Axial | Tension Yield Moment | Tension Yield Total | Pass | Tension Fracture Axial | Tension Fracture Moment | Tension Fracture Total | Pass | Compression Buckle Axial | Compression Buckle Moment | Compression Buckle Total | Pass | Compression Yield Axial | Compression Yield Moment | Compression Yield Total | Pass |
|---|---|---|---

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck

Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.83

* MCEB Table 6.6.2.1-1, A.36 Steel

** Area deducted for rivet holes (see separate calculations)

*** K = 0.75 per MCEB 6.6.2.1

**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1

(Case I considered in Max. Tension/Compression Load)

(+) Positive Stresses / Forces Indicate Tension

(-) Negative Stresses / Forces Indicate Compression

& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

Calculated: BKC Date: 10/28/2009

Checked: NRF Date: 11/2/2009

M_2 Information

M_1 Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{req} (in^3) | S_x (in^3) | Z_x (in^3) | I (in^4) | $I_{x/n}$ (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_x | M_u (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{m/n}$ | Equivalent Mom. Factor $C_{m/n}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{req} (in^3) | S_x (in^3) | S_y (in^3) | Z_y (in^3) | $I_{y/n}$ (in^4) | Shape Factor | M_p (k-in) | $P_{n/n}$ (kip) | Formula 1.8 Term * F_y/S_x | M_u (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{m/n}$ | Equivalent Mom. Factor $C_{m/n}$ | Pass | Axial Force (kip) | Moment Start (k-in) | Moment End (k-in) | Pass | Axial Force (kip) | Moment Start (k-in) | Moment End (k-in) | Pass | Axial Force (kip) | Moment Start (k-in) | Moment End (k-in) | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Governing Specification for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) End (k-ft)	Live Load (Min) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_1–U_2	-79.17	-0.72	-1.13	1.51	6.42	-18.75	-12.57	16.84	-71.46	-308.69
	U_2–U_3	-46.82	-20.29	3.26	2.81	-2.45	-19.26	-6.01	28.36	-27.48	-214.60
	U_3–U_4	-112.29	86.52	1.33	3.65	-2.25	-17.71	14.83	40.62	-2.76	-197.14
	U_4–U_5	-75.71	66.12	2.29	3.41	-2.53	-18.25	25.49	31.77	-28.03	-200.56
	U_5–U_6	-9.25	51.62	1.50	3.48	-0.89	-10.47	21.11	38.78	-9.85	-116.57
	U_6–U_7	42.76	120.21	6.20	5.06	-0.09	-5.13	-69.05	56.33	-0.96	-97.09
	U_7–U_8	93.19	179.79	4.03	4.98	2.49	-20.73	-40.49	27.77	-61.16	-114.46
	U_8–U_9	-47.38	526.15	24.35	24.96	0.05	-9.35	-648.88	1285.95	-60.34	682.86
	U_9–U_{10}	475.03	-124.35	1.62	1.85	15.62	-17.07	85.34	-118.35	1005.73	-574.83
	U_{10}–U_{11}	46.82	20.99	1.87	2.90	1.61	-12.54	20.15	31.24	17.39	-130.23
	U_{11}–U_{12}	136.67	1.38	1.38	3.33	2.22	-17.07	31.58	23.95	22.74	-156.09
	U_{12}–U_{13}	27.91	-140.51	3.14	1.74	-6.94	-17.68	33.87	18.79	-48.40	-190.60
	U_{13}–U_{14}	-106.12	-155.13	2.49	0.89	-7.61	-21.27	26.85	9.62	-82.01	-229.34
	U_{14}–U_{15}	-138.04	-262.90	1.96	0.29	-7.76	-23.39	20.61	2.56	-104.58	-258.56
	U_{15}–U_{16}	-245.82	-183.07	1.71	1.27	-18.81	-22.14	18.48	13.67	-202.77	-238.70
	U_{16}–U_{17}	-123.51	-327.11	-10.22	1.84	-13.38	-21.50	13.99	-144.30	-229.70	-299.41
	U_{17}–U_{18}	-269.97	-145.19	-9.87	1.32	-3.54	-15.83	-9.42	-14.21	-38.20	-170.72
	U_{18}–U_{19}	-134.36	-67.49	-7.44	1.30	0.01	-7.89	66.28	27.77	61.55	-85.69
	U_{19}–U_{20}	-170.82	-20.32	1.35	3.22	-10.24	-5.05	-14.54	34.70	-110.38	-65.18
	U_{20}–U_{21}	-186.23	23.42	-7.81	10.74	2.63	-17.97	-84.18	115.77	-28.40	-183.77
	U_{21}–U_{22}	-14.62	-208.71	-5.27	4.27	1.72	-19.78	3.23	101.06	-19.01	-219.09
	U_{22}–U_{23}	-71.24	-180.99	-0.27	2.09	0.03	-19.87	-2.92	22.26	-3.92	-211.56
	U_{23}–U_{24}	-224.63	-2.45	-2.64	-0.73	2.32	-20.45	-6.72	33.46	-24.45	-214.34
	U_{24}–U_{25}	-327.34	-325.40	1.27	3.66	-20.85	-34.86	13.56	37.91	-221.95	-371.18
	U_{25}–U_{26}	-338.58	-341.71	1.73	3.54	-21.26	-34.68	-437.31	2.00	-295.96	-413.91
	U_{26}–U_{27}	-396.14	-197.74	2.90	5.63	-9.32	-24.46	30.90	59.97	-69.27	-260.39
	U_{27}–U_{28}	-344.18	-179.44	4.39	3.79	-17.45	-41.28	46.27	40.39	-185.75	-439.54
	U_{28}–U_{29}	-224.16	-295.72	3.15	4.29	-20.25	-29.54	50.25	30.21	-322.05	-379.14
	U_{29}–U_{30}	-350.21	-90.73	2.90	4.94	-2.22	-17.51	30.88	52.51	-23.59	-186.40
	U_{30}–U_{31}	-87.79	-21.78	4.05	6.27	-3.06	-16.29	43.13	57.61	-0.89	-122.44
	U_{31}–U_{32}	-167.09	-39.84	4.65	4.71	-13.82	-11.33	49.95	50.16	-147.14	-122.65
	U_{32}–U_{33}	-109.78	-170.74	-9.96	-5.34	-2.27	-4.47	-106.02	56.62	-24.15	-68.89
	U_{33}–U_{34}	-8.79	-79.50	1.00	2.45	-10.73	-19.47	-11.62	-40.29	-23.77	-153.70
	U_{34}–U_{35}	-261.01	-266.00	-31.69	-34.41	-5.75	-1.50	-337.40	-366.38	-10.62	-15.82
	U_{35}–U_{36}	-1192.78	-9.96	5.13	1.15	-38.39	-38.39	1.15	-1.15	-1.15	-1.15
	U_{36}–U_{37}	-25.29	-11.66	2.55	4.47	-9.94	-20.59	26.80	47.05	5.90	-216.17
	U_{37}–U_{38}	-22.53	-22.53	2.55	2.55	-37.28	-37.28	3.80	3.80	-224.82	-224.82
	U_{38}–U_{39}	-150.60	-33.06	3.32	3.66	2.73	-18.66	34.91	37.48	28.74	-196.32
	U_{39}–U_{40}	-147.31	4.37	4.11	2.95	-6.25	-21.74	43.21	31.04	-85.71	-228.75
	U_{40}–U_{41}	-81.26	-81.26	2.55	2.55	-41.78	-41.78	4.06	4.06	-244.65	-244.65
	U_{41}–U_{42}	-31.69	-33.99	0.10	3.30	0.79	-23.11	1.07	34.69	8.33	-243.09
	U_{42}–U_{43}	-86.03	-71.79	2.19	3.11	-0.70	-22.69	22.69	33.72	-0.39	-242.91
	U_{43}–U_{44}	-60.96	-66.58	1.37	1.88	-17.19	-21.71	14.45	19.80	-180.83	-226.41
	U_{44}–U_{45}	-21.55	-18.52	0.96	1.31	-11.43	-10.86	10.00	13.63	-134.80	-130.62
	U_{45}–U_{46}	-33.03	-28.69	1.03	4.00	-16.10	-16.96	32.91	42.13	-169.38	-178.45
	U_{46}–U_{47}	-15.13	113.78	-8.94	5.71	-0.86	-11.91	44.08	62.10	-9.00	-125.29
	U_{47}–U_{48}	-19.16	129.54	-9.18	5.71	-0.69	-11.91	44.08	62.10	-9.00	-125.29
	U_{48}–U_{49}	-2.74	209.84	-10.27	8.27	1.36	-9.06	-108.07	86.58	14.33	-85.34
	U_{49}–U_{50}	-1.92	209.84	-10.27	8.27	1.36	-9.06	-8.87	86.58	14.33	-85.34
	U_{50}–U_{51}	-122.51	1157.58	-22.32	37.49	0.17	-1.94	-339.00	394.42	1.75	-20.45
	U_{51}–U_{52}	-1154.91	-197.36	0.00	3.93	34.00	-29.49	0.01	41.87	361.98	-313.99
	U_{52}–U_{53}	-138.04	-262.90	1.96	0.29	-7.76	-23.39	20.61	2.56	-104.58	-258.56
	U_{53}–U_{54}	-178.89	-59.81	3.43	3.20	-20.62	-5.05	51.22	27.77	-215.51	-85.69
	U_{54}–U_{55}	-170.82	-20.32	1.35	3.22	-10.24	-5.05	-14.54	34.70	-110.38	-65.18
	U_{55}–U_{56}	68.66	-178.68	5.06	4.08	-0.05	-26.83	53.87	43.44	-0.48	-285.61
	U_{56}–U_{57}	-186.23	23.42	-7.81	10.74	2.63	-17.97	-84.18	115.77	-28.40	-183.77
	U_{57}–U_{58}	-236.51	-153.10	3.83	3.36	-13.75	-44.05	40.79	39.82	-146.41	-469.04
	U_{58}–U_{59}	-98.60	-313.21	4.03	3.81	-26.14	-26.54	42.88	40.53	-278.29	-282.58
	U_{59}–U_{60}	-200.37	-386.86	-5.15	2.13	-29.54	-29.43	-54.87	-22.67	-314.55	-313.38
	U_{60}–U_{61}	-262.51	-181.61	-3.80	1.61	-29.54	-29.43	-67.16	118.26	-322.07	-313.38
	U_{61}–U_{62}	-279.98	-117.76	-7.87	5.66	-5.97	-13.66	-83.83	60.22	-63.61	-145.40
	U_{62}–U_{63}	-262.51	-181.61	-3.80	1.61	-29.54	-29.43	-67.16	118.26	-322.07	-313.38
	U_{63}–U_{64}	-139.08	-187.97	-0.10	0.91	4.95	-16.34	-87.16	118.26	-322.07	-313.38
	U_{64}–U_{65}	-47.38	-119.85	-0.10	1.00	2.67	-16.20	-7.05	9.77	53.39	-176.20
	U_{65}–U_{66}	-52.58	-129.17	-0.22	1.16	5.66	-20.03	-2.35	12.47	61.07	-215.92
	U_{66}–U_{67}	-277.84	-111.68	0.87	2.25	0.74	-24.81	9.33	24.29	8.01	-267.48
	U_{67}–U_{68}	-166.98	-243.52	1.54	2.12	-3.36	-29.01	16.67	22.81	-36.24	-312.76
	U_{68}–U_{69}	-287.74	-127.82	1.54	2.11	-16.01	-18.42	-72.07	22.55	-238.16	-238.16
	U_{69}–U_{70}	-141.43	-113.94	-7.57	4.17	0.48	-13.92	-81.59	44.99	51.15	-150.11
	U_{70}–U_{71}	-140.52	-140.52	2.73	2.73	-3.89	-3.89	-113.07	0.00	0.00	0.00
	U_{71}–U_{72}	-141.64	-56.96	-8.50	3.55	-3.15	-4.52	-66.00	0.00	-34.01	-48.77
	U_{72}–U_{73}	2.97	-40.71	-3.12	3.18	1.66	-5.65	-33.68	34.29	17.85	-60.96
	U_{73}–U_{74}	-136.67	671.04	-19.09	16.78	0.19	-1.94	-205.84	180.94	1.97	-0.42
	U_{74}–U_{75}	497.26	-34.44	2.88	2.02	22.01	-19.87	32.96	22.46	245.06	-227.18
	U_{75}–U_{76}	-136.67	671.04	-19.09	16.78	0.19	-1.94	-205.84	180.94	1.97	-0.42
	U_{76}–U_{77}	113.04	44.48	3.58	2.80	4.75	-15.64	39.83	27.97	52.92	-174.12
	U_{77}–U_{78}	59.35	15.11	3.46	2.19	-8.83	-15.19	38.53	24.33	-98.25	-169.13
	U_{78}–U_{79}	86.09	-19.75	3.48	1.91	-7.75	-14.49	38.77	21.30	-85.30	-161.28
	U_{79}–U_{80}	80.30	-119.58	-3.51	1.24	2.53	-14.46	-39.07	-13.76	28.20	-160.83
	U_{80}–U_{81}	24.63	-27.07	-0.52	1.38	-16.87	-9.48	-5.82	19.35	-187.62	-105.49
	U_{81}–U_{82}	29.38	-160.66	-7.94	9.60	-15.21	-10.83	-88.46	106.87	-113.70	-120.59

Location	Member	ZZ Axis Moments from STAAD: Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	S_{av} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term / F$_y$*S_{av}	M_n k-in	Equivalent Mom. Factor a	C_{b1d}	C_{b2d}
Structure 2	U_1–U_2	0.00	0.00	0.00	0.00	0.00	-118.46	-30.55	63.61	-453.10	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.140	0.54	0.54
	U_2–U_3	0.00	0.00	0.00	0.00	0.00	-54.70	-83.74	-113.91	-461.31	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.218	0.75	0.75
	U_3–U_4	0.00	0.00	0.00	0.00	0.00	-113.84	200.49	-151.96	-314.67	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.483	0.79	0.79
	U_4–U_5	0.00	0.00	0.00	0.00	0.00	-34.82	-34.82	-25.49	-201.74	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.222	0.69	0.69
	U_5–U_6	0.00	0.00	0.00	0.00	0.00	-33.71	164.12	-33.37	-172.47	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.194	0.68	0.68
	U_6–U_7	0.00	0.00	0.00	0.00	0.00	-64.02	219.32	53.46	32.97	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.338	0.46	0.46
	U_7–U_8	0.00	0.00	0.00	0.00	0.00	-42.72	131.31	-24.72	-131.31	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.222	0.69	0.69
	U_8–U_9	0.00	0.00	0.00	0.00	0.00	-648.88	1285.95	-60.34	682.86	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6999	0.99894545	4264.8	-0.505	0.40	0.40
	U_9–U_{10}	0.00	0.00	0.00	0.00	0.00	85.34	-118.35	1005.73	-574.83	130.3	130.26	105.11	180.77	2960	1799.3	1.39	5965	0.99880039	4292.8	-0.572	0.37	0.37
	U_{10}–U_{11}	0.00	0.00	0.00	0.00	0.00	104.52	94.45	98.54	-266.22	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873196	3184.1	-0.370	0.45	0.45
	U_{11}–U_{12}	0.00	0.00	0.00	0.00	0.00	13.39	-128.67	140.78	-273.16	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873196	3184.1	-0.543	0.38	0.38
	U_{12}–U_{13}	0.00	0.00	0.00	0.00	0.00	129.65	-141.94	-111.52	-599.64	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99872585	4241.5	0.188	0.68	0.68
	U_{13}–U_{14}	0.00	0.00	0.00	0.00	0.00	79.79	-180.84	-319.64	-698.59	151.8	151.76	130.94	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4	0.402	0.78	0.78
	U_{14}–U_{15}	0.00	0.00	0.00	0.00	0.00	305.64	-164.56	-322.36	-1000.47	151.8	151.76	130.94	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4	0.402	0.78	0.78
	U_{15}–U_{16}	0.00	0.00	0.00	0.00	0.00	279.50	-208.37	758.97	-755.18	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99859994	6214.6	0.995	1.00	1.00
	U_{16}–U_{17}	0.00	0.00	0.00	0.00	0.00	399.41	-202.22	-473.21	-929.41	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99859994	6214.6	0.995	1.00	1.00
	U_{17}–U_{18}	0.00	0.00	0.00	0.00	0.00	-371.38	-157.95	-633.73	-558.64	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99859994	6214.6	0.776	0.91	0.91
	U_{18}–U_{19}	0.00	0.00	0.00	0.00	0.00	374.55	36.12	-350.36	-312.10	127.3	127.33	110.40	189.23	3668	2305.5	1.46	6146	0.99907146	4197.7	-0.090	0.56	0.56
	U_{19}–U_{20}	0.00	0.00	0.00	0.00	0.00	-14.54	34.70	-110.38	-65.18	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.363	0.75	0.75
	U_{20}–U_{21}	0.00	0.00	0.00	0.00	0.00	-203.08	48.75	461.21	-167.64	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.6	0.363	0.75	0.75
	U_{21}–U_{22}	0.00	0.00	0.00	0.00	0.00	-424.47	291.28	-180.56	-389.40	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.6	-0.663	0.33	0.33
	U_{22}–U_{23}	0.00	0.00	0.00	0.00	0.00	-155.40	-212.39	50.04	-219.09	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.6	-0.363	0.75	0.75
	U_{23}–U_{24}	0.00	0.00	0.00	0.00	0.00	-88.53	-187.26	-51.91	-493.01	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6999	0.99894545	4553.8	0.133	0.65	0.65
	U_{24}–U_{25}	0.00	0.00	0.00	0.00	0.00	-221.95	-371.18	-24.74	-437.31	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.222	0.69	0.69
	U_{25}–U_{26}	0.00	0.00	0.00	0.00	0.00	-396.15	-340.88	-668.43	-1227.24	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99888308	7670.8	0.739	0.90	0.90
	U_{26}–U_{27}	0.00	0.00	0.00	0.00	0.00	-69.27	-260.39	-613.69	-1044.63	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99888308	7670.8	0.717	0.89	0.89
	U_{27}–U_{28}	0.00	0.00	0.00	0.00	0.00	-185.75	-439.54	-296.96	-1012.69	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99888308	7670.8	0.896	0.96	0.96
	U_{28}–U_{29}	0.00	0.00	0.00	0.00	0.00	-322.05	-379.14	-1127.12	-730.08	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99888308	7670.8	0.889	0.96	0.96
	U_{29}–U_{30}	0.00	0.00	0.00	0.00	0.00	-367.58	-145.74	-849.88	-1185.60	232.7	232.70	198.45	340.10	6520	3217.6	1.46	11223	0.99888308	7670.8	0.717	0.89	0.89
	U_{30}–U_{31}	0.00	0.00	0.00	0.00	0.00	-220.61	-285.41	-991.78	-850.68	232.7	232.70	198.45	340.10	6520	3217.6	1.46	11223	0.99888308	7670.8	0.896	0.96	0.96
	U_{31}–U_{32}	0.00	0.00	0.00	0.00	0.00	-388.38	-3.97	-506.40	-521.81	198.9	198.88	169.65	293.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.970	0.99	0.99
	U_{32}–U_{33}	0.00	0.00	0.00	0.00	0.00	-43.13	57.61	-0.89	-122.44	198.9	198.88	169.65	293.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.970	0.99	0.99
	U_{33}–U_{34}	0.00	0.00	0.00	0.00	0.00	-109.89	160.47	-636.02	-209.62	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7809	0.99854451	5168.9	0.391	0.76	0.76
	U_{34}–U_{35}	0.00	0.00	0.00	0.00	0.00	-372.43	345.07	-199.03	72.70	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7809	0.99854451	5168.9	0.327	0.23	0.23
	U_{35}–U_{36}	0.00	0.00	0.00	0.00	0.00	11.62	-60.29	-237.75	-79.12	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7809	0.99854451	5168.9	0.391	0.76	0.76
	U_{36}–U_{37}	0.00	0.00	0.00	0.00	0.00	-1070.36	3439.63	-356.69	1611.31	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6	-0.439	0.42	0.42
	U_{37}–U_{38}	0.00	0.00	0.00	0.00	0.00	-1192.78	-9.96	5.13	1.15	-38.39	-38.39	1.15	-1.15	-1.15	-1.15	1.47	2330	0.99893092	7310.6	-0.439	0.42	0.42
	U_{38}–U_{39}	0.00	0.00	0.00	0.00	0.00	-25.29	11.66	2.55	4.47	0.94	-20.59	26.80	47.05	5.90	-216.17	0.00	8796	0.99886081	6121.2	0.030	0.61	0.61
	U_{39}–U_{40}	0.00	0.00	0.00	0.00	0.00	-37.28	-37.28	3.80	3.80	-224.82	-224.82	3.80	3.80	-224.82	-224.82	1.47	2330	0.99893092	7310.6	-0.439	0.42	0.42
	U_{40}–U_{41}	0.00	0.00	0.00	0.00	0.00	-34.91	37.48	28.74	-196.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{41}–U_{42}	0.00	0.00	0.00	0.00	0.00	-274.41	124.18	258.05	-382.39	127.8	127.83	103.64	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.675	0.33	0.33
	U_{42}–U_{43}	0.00	0.00	0.00	0.00	0.00	-285.13	72.93	69.12	-689.64	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.100	0.56	0.56
	U_{43}–U_{44}	0.00	0.00	0.00	0.00	0.00	-154.69	64.21	-25.01	-244.85	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.804	0.28	0.28
	U_{44}–U_{45}	0.00	0.00	0.00	0.00	0.00	-54.69	64.21	-25.01	-244.85	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.804	0.28	0.28
	U_{45}–U_{46}	0.00	0.00	0.00	0.00	0.00	-237.72	451.24	27.48	66.22	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7959	0.99862324	5702.3	-0.515	0.35	0.35
	U_{46}–U_{47}	0.00	0.00	0.00	0.00	0.00	-183.43	1553.10	-2.84	2330.29	185.7	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99886081	6121.2	0.030	0.61	0.61
	U_{47}–U_{48}	0.00	0.00	0.00	0.00	0.00	-25.19	195.14	-11.42	-375.23	185.7	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99886081	6121.2	0.030	0.61	0.61
	U_{48}–U_{49}	0.00	0.00	0.00	0.00	0.00	-37.28	37.48	28.74	-196.32	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7959	0.99862324	5702.3	-0.515	0.35	0.35
	U_{49}–U_{50}	0.00	0.00	0.00	0.00	0.00	-277.41	124.18	258.05	-382.39	127.8	127.83	103.64	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.675	0.33	0.33
	U_{50}–U_{51}	0.00	0.00	0.00	0.00	0.00	-285.13	72.93	69.12	-689.64	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.100	0.56	0.56
	U_{51}–U_{52}	0.00	0.00	0.00	0.00	0.00	-154.69	64.21	-25.01	-244.85	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.804	0.28	0.28
	U_{52}–U_{53}	0.00	0.00	0.00	0.00	0.00	-54.69	64.21	-25.01	-244.85	127.8	127.83	103.64	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.804	0.28	0.28
	U_{53}–U_{54}	0.00	0.00	0.00	0.00	0.00	-237.72	451.24	27.48	66.22	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7959	0.99862324	5702.3	-0.515	0.35	0.35
	U_{54}–U_{55}	0.00	0.00	0.00	0.00	0.00	-183.43	1553.10	-2.84	2330.29	185.7	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99886081	6121.2	0.030	0.61	0.61
	U_{55}–U_{56}	0.00	0.00	0.00	0.00	0.00	-893.76	2359.41	-156.48	1460.52	221.8	221.77	186.91	327.26	6244	3427.0	1.48

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Guide Specifications for Structural Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load		Live Load (Max)		Live Load (Min)		Pedestrian Load (Max)		Pedestrian Load (Min)		Lane Reduction & Impact Live Load (Max)		Lane Reduction & Impact Live Load (Min)		Impact Pedestrian Load Max		Impact Pedestrian Load Min		Max. Pos. Mom.			Min. Neg. Mom.			Pass
		Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	S_{max} (in^3)	S_{min} (in^3)		
Structure 1	L_0-L_1	-15.50	-73.38	-1.00	1.04	4.45	-10.63					-11.14	11.61	-49.52	-118.38	0.00	0.00	0.00	0.00	-44.30	-70.23	87.14	-351.87	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332
	L_1-L_2	39.75	-88.06	-0.13	2.31	-3.86	-13.04					-1.41	25.76	-42.95	-145.22	0.00	0.00	0.00	0.00	8.61	-4.22	117.92	30.99	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332
	L_2-L_3	39.40	-42.24	-0.13	2.43	-9.86	-15.51					15.95	27.00	-109.73	-172.64	0.00	0.00	0.00	0.00	-68.13	-3.17	-340.44	-428.31	99.5	99.53	81.00	120.43	3450	1374.8	1.21	3332
	L_3-L_4	-11.39	-11.52	1.18	4.02	1.41	-16.19					13.10	44.77	15.65	-160.20	0.00	0.00	0.00	0.00	13.59	111.97	19.11	-375.45	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141
	L_4-L_5	-49.18	208.14	-16.19	4.92	-64.91	-127.03					-43.48	43.48	-64.91	-127.03	0.00	0.00	0.00	0.00	-43.48	43.48	-64.91	-127.03	83.6	83.58	76.68	114.47	3186	-25.88	22.18	-43.48	-64.91	83.6	83.58	76.68	114.47	3186
	L_5-L_6	-0.43	187.22	2.22	5.65	-3.42	-6.82					24.66	60.63	-39.09	-75.97	0.00	0.00	0.00	0.00	52.87	39.05	-31.25	-93.26	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520
	L_6-L_7	41.36	78.74	-10.98	4.57	-6.68	-11.76					-122.24	54.75	-213.97	-131.73	0.00	0.00	0.00	0.00	-218.60	229.59	-213.94	-131.74	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520
	L_7-L_8	-25.09	448.92	-8.16	17.05	0.06	-0.06					-50.88	189.84	0.69	-0.61	0.00	0.00	0.00	0.00	-229.52	894.91	-31.12	582.27	140.8	140.75	130.44	228.84	6500	2932.4	1.57	7552
	L_8-L_9	426.08	-36.00	2.78	1.29	12.23	-8.48					29.95	13.85	-131.81	-91.44	0.00	0.00	0.00	0.00	618.80	-16.79	839.50	-244.93	140.8	140.75	130.74	228.84	6500	2932.4	1.57	7552
	L_9-L_{10}	120.53	-116.03	3.87	1.85	-2.58	-8.98					41.72	-19.91	-27.86	-86.87	0.00	0.00	0.00	0.00	247.05	-107.70	96.32	-360.72	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777
	L_{10}-L_{11}	120.53	-116.03	3.87	1.85	-2.58	-8.98					41.72	-19.91	-27.86	-86.87	0.00	0.00	0.00	0.00	247.05	-107.70	96.32	-360.72	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777
	L_{11}-L_{12}	39.16	-88.06	-0.13	2.31	-3.86	-13.04					25.94	15.50	-5.66	-117.72	0.00	0.00	0.00	0.00	255.25	-223.36	112.99	-431.34	83.6	83.58	76.68	114.47	3295	1304.9	1.24	3777
	L_{12}-L_{13}	-45.20	-121.29	2.42	1.14	-5.12	-13.41					26.66	12.33	-20.64	-144.55	0.00	0.00	0.00	0.00	-2.29	-130.95	-178.44	-476.88	130.1	130.08	121.10	170.72	3885	1793.2	1.31	3534
	L_{13}-L_{14}	96.42	-269.16	1.90	1.36	-5.89	-21.69					20.50	14.69	-43.49	-233.89	0.00	0.00	0.00	0.00	169.76	-429.89	-12.15	-868.48	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258
	L_{14}-L_{15}	96.42	-269.16	1.90	1.36	-5.89	-21.69					20.50	14.69	-43.49	-233.89	0.00	0.00	0.00	0.00	169.76	-429.89	-12.15	-868.48	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258
	L_{15}-L_{16}	-0.43	187.22	2.22	5.65	-3.42	-6.82					24.66	60.63	-39.09	-75.97	0.00	0.00	0.00	0.00	52.87	39.05	-31.25	-93.26	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520
	L_{16}-L_{17}	-192.00	-318.69	-1.72	1.43	-8.12	-19.50					-18.56	15.42	-87.53	-210.22	0.00	0.00	0.00	0.00	-288.80	-380.89	-439.24	-809.77	179.7	179.69	170.68	251.43	7453	3050.7	1.40	8297
	L_{17}-L_{18}	-339.87	44.80	1.50	4.57	-4.64	-11.76					-151.32	38.53	-110.14	-223.50	0.00	0.00	0.00	0.00	-770.12	141.73	-953.39	-1,103.76	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{18}-L_{19}	-154.69	-31.48	-3.72	4.17	-4.27	-5.18					-40.14	44.98	-47.13	-55.80	0.00	0.00	0.00	0.00	-288.03	56.53	-333.17	-161.82	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188
	L_{19}-L_{20}	-216.17	148.84	-10.74	1.18	-3.73	-2.84					-119.81	58.40	-34.97	-20.66	0.00	0.00	0.00	0.00	-531.94	310.49	-368.07	-121.24	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{20}-L_{21}	-136.64	-69.93	-10.53	5.60	-0.41	-2.27					-109.26	60.42	-4.42	-2.90	0.00	0.00	0.00	0.00	-414.37	195.83	-187.21	58.63	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332
	L_0-L_1	2.99	-170.85	-0.72	1.39	4.42	-11.87					-7.63	14.79	47.02	-126.35	0.00	0.00	0.00	0.00	-12.65	-190.06	105.76	-495.96	98.1	98.05	103.28	125.70	3592	1066.5	1.28	4148
	L_1-L_2	39.56	-265.54	-0.13	2.31	-3.86	-13.04					-1.41	25.76	-42.95	-145.22	0.00	0.00	0.00	0.00	194.01	-277.09	29.75	-579.36	98.1	98.05	103.29	148.92	3592	1395.7	1.22	4914
	L_2-L_3	-6.26	-180.81	-0.18	1.50	-3.22	-15.46					-1.87	16.01	-34.33	-164.60	0.00	0.00	0.00	0.00	-12.19	-200.36	-62.51	-591.69	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919
	L_3-L_4	-253.03	-206.08	1.40	2.44	-11.62	-24.38					14.93	25.95	-123.72	-259.62	0.00	0.00	0.00	0.00	-256.62	-327.39	-597.02	-845.11	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583
	L_4-L_5	-253.03	-206.08	1.40	2.44	-11.62	-24.38					14.93	25.95	-123.72	-259.62	0.00	0.00	0.00	0.00	-256.62	-327.39	-597.02	-845.11	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583
	L_5-L_6	81.36	-264.64	-0.13	2.31	-3.86	-13.04					25.94	15.50	-5.66	-117.72	0.00	0.00	0.00	0.00	255.25	-223.36	112.99	-431.34	83.6	83.58	76.68	114.47	3295	1304.9	1.24	3777
	L_6-L_7	-475.14	-252.78	3.75	3.79	-21.37	-30.43					39.92	40.35	-327.01	-323.96	0.00	0.00	0.00	0.00	-531.20	-240.41	-1150.61	-1029.75	216.3	216.33	205.74	398.74	7625	3425.8	1.99	13178
	L_7-L_8	-280.52	-64.48	3.08	5.44	-13.41	-19.95					32.84	37.88	-110.80	-212.45	0.00	0.00	0.00	0.00	-293.53	41.57	-604.74	-544.14	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057
	L_8-L_9	-292.07	219.77	-4.47	3.87	-13.82	-19.74					-47.24	48.23	-105.03	-147.19	0.00	0.00	0.00	0.00	-482.43	360.20	-537.65	-333.37	168.3	168.34	149.99	215.24	6743	3050.7	1.40	8297
	L_9-L_{10}	-225.88	141.33	2.45	5.56	-4.55	-10.96					26.04	59.17	-52.67	-116.72	0.00	0.00	0.00	0.00	-237.19	311.92	-607.34	-49.17	149.0	149.01	130.01	189.42	4793	1908.4	1.27	6251
	L_{10}-L_{11}	-201.56	295.65	-7.30	4.57	-4.67	-8.35					-88.27	52.23	-68.68	-88.86	0.00	0.00	0.00	0.00	-312.79	-47.53	-410.84	377.03	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{11}-L_{12}	-160.09	387.18	-6.11	7.51	-6.12	-8.41					-65.67	79.91	-65.13	-89.55	0.00	0.00	0.00	0.00	-349.06	676.47	-349.18	309.31	160.6	160.55	155.01	222.43	5842	2444.6	1.34	7340
	L_{12}-L_{13}	-202.72	204.41	0.99	3.69	-8.58	-23.30					10.50	39.33	-91.34	-248.62	0.00	0.00	0.00	0.00	-240.79	-180.52	-441.44	-804.47	226.0	225.96	215.39	364.84	9370	3884.1	1.61	12452
	L_{13}-L_{14}	-376.75	103.93	1.76	2.42	-13.93	-20.45					-72.42	52.82	-12.74	-13.93	0.00	0.00	0.00	0.00	-628.73	-213.37	-1,000.35	-1,000.35	226.0	225.96	215.39	364.84	9370	3884.1	1.61	12452
	L_{14}-L_{15}	1072.48	-412.36	0.49	1.61	27.15	-23.12					5.12	16.92	285.65	-242.27	0.00	0.00	0.00	0.00	1405.32	-499.42	2013.12	-1063.15	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452
	L_{15}-L_{16}	539.48	-413.53	0.49	1.61	13.67	-11.64					2.58	8.52	143.81	-122.00	0.00	0.00	0.00	0.00	707.41	-251.44	1013.49	-535.19	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452
	L_{16}-L_{17}	475.61	-49.01	5.04	2.33	0.69	-14.82					53.05	24.50	7.28	-155.95	0.00	0.00	0.00	0.00	726.23	-10.63	627.57	-601.61	180.3	180.26	169.70	243.67	6400	2727.8	1.36	8317
	L_{17}-L_{18}	226.53	-41.80	5.03	2.15	3.62	-13.93					53.70	22.64	-38.08	-146.58	0.00	0.00	0.00	0.00	410.83	-5.29	211.59	-371.93	127.4	127.41	116.92	157.02	3868	1501.0	1.23	5182
	L_{18}-L_{19}	214.46	-56.44	2.93	3.09	-3.97	-17.01					30.86	32.50	-41.73	-179.00	0.00	0.00	0.00	0.00	345.66	-5.56	188.39	-463.71	127.4	127.41	108.77	157.02	3868	1501.0	1.23	5182
	L_{19}-L_{20}	201.56	-295.65	7.30	4.57	4.67	-8.35					88.27	-52.23	68.68	-88.86	0.00	0.00	0.00	0.00	155.98	-46.57	410.84	-377.03	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{20}-L_{21}	49.26	-202.49	0.49	3.06	-12.25	-29.21					5.11	32.17	-128.91	-307.30	0.00	0.00	0.00	0.00	75.12	-193.53	-219.27	-929.09	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852
	L_{21}-L_{22}	-197.13	24.33	0.21	2.13	-5.34	-9.42					-19.77	19.77	-19.77	-19.77	0.00	0.00	0.00	0.00	-233.91	100.02	-388.90	-422.43	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852
	L_{22}-L_{23}	-111.93	0.87	-3.88	4.34	-15.68	-18.58					-80.80	45.64	-112.33	-195.49	0.00	0.00	0.00	0.00	-233.91	100.02	-388.90	-422.43	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852
	L_{23}-L_{24}	-111.93	0.87	-3.88	4.34	-15.68	-18.58					-80.80	45.64	-112.33	-195.49	0.00	0.00	0.00	0.00	-233.91	100.02	-388.90	-422.43	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852
	L_{24}-L_{25}	-60.79	179.83	-6.09	6.01	-6.49	-11.80					-64.04	63.25	-68.25	-224.11	0.00	0.00	0.00	0.00	-217.79	370.83	-226.91	-35.12	127.4	127.41	116.92	157.02	3868	1501.0	1.23	5182
	L_{25}-L_{26}	-81.88	265.66	-6.42	7.15	-7.37	-10.13					-67.50	75.19	-77.51	-106.58	0.00	0.00	0.00	0.00	-252.70	508.28	-274.37	-144.49	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251
	L_{26}-L_{27}	-100.08	-279.84	2.02	3.60	-9.08	-24.43					21.22	37.52	-95.57	-256.98	0.00	0.00	0.00	0.00	-64.12	281.64	-337.17	-920.57	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060
	L_{27}-L_{28}	-100.08	-279.84	2.02	3.60	-9.08	-24.43					21.22	37.52	-95.57	-256.98	0.00	0.00	0.00	0.00	-64.12	281.64	-337.17	-920.57	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060
	L_{28}-L_{29}	-372.05	1000.64	1.76	2.42	-13.93	-20.45					-72.42	52.82	-12.74	-13.93	0.00	0.00	0.00	0.00	-628.73	-213.37	-1,000.35	-1,000.35	226.0	225.96	215.39	364.84	9370	3884.1	1.61	12452
	L_{29}-L_{30}	1027.57	-362.88	1.69	27.71	-24.10					-17.41	21.22	295.03	-256.53	0.00	0.00	0.00	0.00	1298.12	-425.77	1975.08	-1027.58	249.4	249.40	238.81	367.03	8248	3698.4	1.39	11452
	L_{30}-L_{31}	-227.20	-125.85	1.03	5.07	-10.90	-16.09					10.95	53.96	-111.76	-171.30	0.00	0.00	0.00	0.00	-211.64	-46.64	-537.50	-534.75	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060
	L_{31}-L_{32}	-68.89	-114.31	3.70	3.72	-5.63	-15.73					33.66	37.71	-52.55	-169.52	0.00	0.00	0.00	0.00	-545.58	225.79	-653.75	-313.29	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{32}-L_{33}	-278.16	-133.13	2.36	4.39	-0.58	-14.49					25.11	47.79	-75.15	-154.26	0.00	0.00	0.00	0.00	-616.00	-69.51	-948.32	-268.27	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{33}-L_{34}	-222.98	-243.33	3.16	3.54	4.94	-15.92					33.66	37.71	-52.55	-169.52	0.00	0.00	0.00	0.00	362.79	-234.62	176.00	-683.62	168.8	168.54	149.99	224.57	5911	2429.7	1.33	7411
	L_{34}-L_{35}	-68.89	-114.31	3.70	3.72	-5.63	-15.73					33.66	37.71	-52.55	-169.52	0.00	0.00	0.00	0.00	-545.58	225.79	-653.75	-313.29	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{35}-L_{36}	-167.99	-470.88	3.94	2.85	-6.34	-31.63					-141.91	30.39	-67.46	-326.80	0.00	0.00	0.00	0.00	-127.59	-546.47	-364.55	-1,049.73	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{36}-L_{37}	-445.18	-93.03	3.28	0.80	-16.63	-28.93					34.91	8.51	-177.09	-308.00	0.00	0.00	0.00	0.00	-503.09	-103.16	-962.43	-789.92	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279
	L_{37}-L_{38}	-291.76	-319.65	3.36	2.85	-6.34	-31.63					-83.38	38.90	-94.56	-326.80	0.00	0.00	0.00	0.00	-509.86	-114.20	-1,049.73	-1,049.73	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{38}-L_{39}	-392.42	-38.25	-4.85	3.28	-13.47	-15.51					-51.60	34.87	-143.46	-165.12	0.00	0.00	0.00	0.00	-621.94	-128.27	-820.97	-308.04	176.7	176.70	158.45	268.88	6704	2849.3	1.47	9143
	L_{39}-L_{40}	-297.27	-199.08	-6.85	4.13	-4.05	-5.33					-59.10	34.87	-98.40	-102.97	0.00	0.00	0.00	0.00	-644.49	302.03	-479.83	83.78	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914
	L_{40}-L_{41}	-297.27	-199.08	-6.85	4.13	-4.05	-5.33					-72.96	43.95	-43.14	-56.78	0.00	0.00	0.00	0.00	-644.49	302.03	-479.83	83.78	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914
	L_{41}-L_{42}	-24.89	-109.65	-0.43	0.66	4.85	-10.24					-9.59	7.15	-52.27	-110.36	0.00	0.00	0.00	0.00	22.14	-127.06	-185.35	-381.67	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332
	L_{42}-L_{43}	-139.96	-178.06	-0.42	0.92	2.07	-10.67					-6.52	9.95	-22.35	-115.04	0.00	0.00	0.00	0.00	166.96	-209.91	225.18	-480.73	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{43}-L_{44}	-51.70	-130.01	-0.18	1.50	-3.22	-15.46					-1.36	16.53	-34.33	-164.60	0.00	0.00	0.00	0.00	-12.19	-200.36	-62.51	-591.69	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919
	L_{44}-L_{45}	47.96	-259.32	-0.28	1.29	-3.67	-16.94					-3.04	13.93	-39.61	-182.61	0.00	0.00	0.00	0.00	-55.76	-351.92	-22.48	-777.76	153.9	153.89	138.16	200.43	5912	2460.7	1.34	8297
	L_{45}-L_{46}	-41.79	-343.26	0.37	2.33	-13.44	-25.09					3.98	25.12	-112.53	-270.49	0.00	0.00	0.00	0.00	-45.70	-391.81	-298.14	-1032.39	179.7	179.69	164.15	251.43	6743	3050.7	1.40	8297
	L_{46}-L_{47}	-341.10	-86.25	10.46	4.15	-8.77	-16.10					-112.67	64.26	-60.95	-173.99	0.00	0.00	0.00	0.00	-597.62	-255.68	-647.27	-263.60	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{47}-L_{48}	-329.43	-240.98	10.46	4.15	-8.77	-16.10					-112.67	64.26	-60.95	-173.99	0.00	0.00	0.00	0.00	-597.62	-255.68	-647.27	-263.60	163.9	163.89	153.93	188.16	6768	2460.7	1.34	8297
	L_{48}-L_{49}	-201.18	-192.50	5.04	4.26	-3.53	-8.54					-60.83	45.89	-38.09	-32.11	0.00	0.00	0.00	0.00	-293.34	297.67	-344.07	-1.33	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777
	L_{49}-L_{50}	-147.72	-149.48	-4.42	5.28	-4.59	-9.70					-47.61	56.90	-47.38	-104.59	0.00	0.00	0.00	0.00	-295.20	317.60	-294.69	-32.28	142.7	142.71	129.09	191.21	5010	2360.8	1.34	6703
	L_{50}-L_{51}	-428.40	-26.47	3.08	1.16	13.86	-8.81					37.61	12.91	154.27	-88.02	0.00	0.00	0.00	0.00	638.40	-6.43	891.17	-249.99	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552
	L_{51}-L_{52}	70.64	-27.53	3.31	3.27	-1.78	-12.28					3.44	36.40	-19.78	-136.67	0.00	0.00	0.00	0.00	93.09	-33.09	481.33	-144.93	144.9	144.85	129.09	192.84	5010	2375.8	1.33	6364
	L_{52}-L_{53}	194.51	-25.06	3.46	2.89	-2.04	-15.97					38.52	32.15	-22.74	-177.76	0.00	0.00	0.00	0.00	336.33	37.08	203.69	-417.73	92.6	92.58	76.68	114.47	3186	1261.9	1.24	3777
	L_{53}-L_{54}	70.64	-27.53	3.31	3.27	-1.78	-12.28					3.44	36.40	-19.78	-136.67	0.00	0.00	0.00	0.00	93.09	-33.09	481.33	-144.93	144.9	144.85	129.09	192.84	5010	2375.8	1.33	6364
	L_{54}-L_{55}	-45.44	-80.85	0.63	1.89	4.90	-15.60					7.04	21.05	-54.55	-173.64	0.00	0.00	0.00	0.00	-43.83	-69.49	-177.27	-481.33	99.9	99.93	91.00	129.49	3409	1372.0	1.26	4141
	L_{55}-L_{56}	-74.43	-5.53	0.83	0.03	0.76	-0.74					-109.44	67.09	8.49	-0.21	0.00	0.00	0.00	0.00	-333.87	138.16	-78.35	-24.87	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332

YY Axis Moments from STAAD

Location	Member	Dead Load		Live Load (Max)		Live Load (Min)		Pedestrian Load (Max)		Pedestrian Load (Min)		Lane Reduction & Impact Live Load (Max)		Lane Reduction & Impact Live Load (Min)		Impact Pedestrian Load Max		Impact Pedestrian Load Min		Max. Pos. Mom.			Min. Neg. Mom.			Pass
		Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	S_{max} (in^3)	S_{min} (in^3)		
Structure 1	L_0-L_1	-4.03	-14.79	0.20	0.72	-0.61	-2.25					2.17	-7.98	-8.84	-25.09	0.00	0.00	0.00	0.00	0.53	1.93	-20.04	-73.59	128.3	128.29	121.63	141.18	626.8	1.10	4659
	L_1-L_2	-10.21	27.86	0.77	-0.28	-10.59	2.78					-3.13	-3.14	-3.14	-22.14	-2.25	-2.25	-1.59	-2.67	16.05	1.85	-26.15	-43.38	171.6	171.62	161.38	188.21	749.3	1.10	6220
	L_2-L_3	6.99	-7.59	-19.54	-10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.38	56.41	-100.99	49.92	171.6	171.62	158.81	188.47	749.3	1.10	6220
	L_3-L_4	-25.88	22.18	-43.48	-64.91	83.6	83.58	76.68	114.47	3186	-25.88	22.18	-43.48	-64.91	83.6	83.58	76.68	114.47	3186	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_4-L_5	-6.42	81.64	-45.81	55.86	206.5	206.53	175.28	225.18	784.3	1.10	7464
	L_5-L_6	-1.07	-5.01	-5.30	-3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0

Moment (End) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.60

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 w/o 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_1~L_1	-29.87	49.03	-4.94	8.01	0.85	-0.93	-54.96	66.85	9.47	-10.32
	U_1~L_2	-9.08	15.18	-3.83	4.11	0.73	-0.78	-42.65	45.76	8.07	-8.72
	U_2~L_2	10.50	9.70	-3.92	3.97	1.27	-1.13	-36.20	44.21	14.14	-13.24
	U_2~L_3	33.45	-34.40	-3.36	3.55	2.44	-2.39	-37.35	39.47	27.15	-26.62
	U_3~L_3	41.64	-42.40	-1.73	1.93	2.55	-2.50	-19.24	17.77	28.03	-27.30
	U_3~L_4	45.56	-51.10	-0.76	0.61	3.86	-4.08	-8.49	6.80	42.96	-43.42
	U_4~L_4	45.56	-55.68	-0.36	0.33	3.68	-4.45	-3.95	3.44	44.34	-49.90
	U_4~L_5	91.24	-101.87	-0.02	0.02	6.69	-6.19	-0.22	0.24	63.30	-68.86
	U_5~L_5	-20.57	21.23	-5.79	6.96	8.00	-8.48	-64.45	77.49	89.01	-105.57
	U_5~L_6	-91.15	124.05	-3.77	5.32	-3.98	5.00	-309.11	357.25	-169.39	194.03
	U_6~L_6	-88.47	88.21	-3.44	4.57	0.00	-0.27	-37.04	49.22	0.02	-2.95
	U_6~L_7	-91.15	124.05	-3.89	5.37	0.00	-0.25	-47.96	61.56	0.00	-2.68
	U_7~L_7	-79.57	78.39	-4.63	6.33	1.20	-1.50	-49.89	48.86	12.97	-9.96
	U_7~L_8	-49.26	60.16	-4.28	4.44	1.61	-1.48	-46.16	47.84	17.39	-15.91
	U_8~L_8	-29.77	34.66	-3.35	3.46	2.03	-1.88	-44.96	44.96	21.92	-20.35
	U_8~L_9	-1.50	-2.65	-2.88	2.86	3.65	-3.81	-31.10	30.79	39.32	-41.09
	U_9~L_9	34.13	-36.55	-1.86	1.60	4.28	-4.34	-10.23	9.44	-45.96	50.00
	U_9~L_{10}	46.23	-55.85	-0.65	0.41	4.11	-4.12	-7.00	4.45	44.33	-46.03
	U_{10}~L_{10}	110.44	-114.63	-0.48	0.48	4.54	-4.57	-132.41	-137.69	286.33	-302.62
	U_{10}~L_{11}	121.36	-131.24	-0.42	0.43	7.33	-7.19	-4.56	4.59	79.01	-77.55
	U_{11}~L_{11}	-134.59	-173.50	-0.26	0.36	6.22	-7.91	-2.62	3.88	67.05	-85.37
	U_{11}~L_{12}	-134.23	168.97	-2.39	3.11	10.00	-10.86	-12.08	0.00	0.00	0.00
	U_{12}~L_{12}	-123.79	131.39	-6.91	8.72	10.10	-10.73	0.00	0.00	0.00	0.00
	U_{12}~L_{13}	-113.40	113.40	-6.65	8.43	10.19	-11.16	0.00	0.00	0.00	0.00
	U_{13}~L_{13}	-56.01	62.13	-3.66	3.69	6.64	-6.67	-38.97	38.27	0.00	0.00
	U_{13}~L_{14}	-34.05	39.79	-3.52	3.33	6.47	-7.01	-14.07	13.47	0.00	0.00
	U_{14}~L_{14}	-7.04	-12.29	-3.55	3.70	2.39	-2.12	-37.74	39.40	25.39	-25.70
	U_{14}~L_{15}	15.85	-15.59	-3.23	3.28	2.77	-2.79	-34.39	34.89	29.46	-29.65
	U_{15}~L_{15}	38.86	-44.94	-1.72	1.75	2.33	-2.49	-19.36	19.82	29.42	-29.81
	U_{15}~L_{16}	86.91	-96.07	-1.92	1.75	5.56	-5.49	-20.46	18.58	59.19	-58.46
	U_{16}~L_{16}	136.08	-144.91	-1.72	1.24	4.80	-4.80	-10.16	7.72	82.37	-82.45
	U_{16}~L_{17}	141.23	-149.41	-1.19	0.77	5.86	-5.94	-12.65	8.24	62.40	-63.25
	U_{17}~L_{17}	192.55	-192.83	-0.67	0.42	5.90	-5.91	-7.10	4.49	62.86	-62.91
	U_{17}~L_{18}	201.47	-201.47	-0.37	0.37	5.92	-5.92	-4.00	4.00	62.90	-62.90
	U_{18}~L_{18}	203.52	-203.17	-0.52	0.55	7.02	-6.91	-5.49	5.85	74.72	-73.61
	U_{18}~L_{19}	84.05	84.05	-0.71	0.71	7.38	-7.38	-7.55	7.55	78.56	-78.56
	U_{19}~L_{19}	-159.89	162.81	-7.61	7.38	0.84	-0.89	-80.08	77.68	8.88	-9.32
	U_{19}~L_{20}	-113.84	113.84	-6.76	6.76	0.84	-0.84	-72.03	72.03	8.83	-8.83
	U_{20}~L_{20}	-130.37	127.18	-6.85	6.58	0.81	-0.79	-72.02	73.47	8.51	-8.31
	U_{20}~L_{21}	-113.07	114.60	-6.88	6.89	0.91	-0.93	-72.33	72.51	9.52	-9.61
	U_{21}~L_{21}	-58.08	-67.70	-6.44	7.01	0.77	-0.84	-40.47	49.74	8.83	-9.72
	U_{21}~L_{22}	-44.77	46.58	-3.85	3.87	1.53	-1.24	-40.47	40.74	16.06	-13.05
	U_{22}~L_{22}	-30.30	34.39	-3.77	3.77	1.53	-1.24	-39.77	39.77	16.06	-13.05
	U_{22}~L_{23}	-3.69	4.33	-2.67	2.81	2.28	-2.38	-28.13	29.61	23.81	-25.09
	U_{23}~L_{23}	24.84	-25.72	-2.39	2.39	2.39	-2.39	-24.84	24.84	25.72	-25.72
	U_{23}~L_{24}	42.14	-42.14	-1.89	4.02	4.05	-4.05	-19.32	17.75	42.30	-42.65
	U_{24}~L_{24}	66.57	-67.50	-1.41	1.13	4.58	-4.43	-14.80	11.91	-46.17	-46.80
	U_{24}~L_{25}	90.99	-90.99	-0.94	0.94	5.10	-5.10	-10.27	10.27	-47.76	-47.76
	U_{25}~L_{25}	138.29	-139.04	-0.76	0.75	7.93	-7.93	-7.54	7.84	83.41	-83.38
	U_{25}~L_{26}	124.54	-124.54	-0.71	0.71	7.92	-7.92	-7.41	7.41	82.62	-82.62
	U_{26}~L_{26}	173.56	-176.28	-0.42	0.37	8.24	-7.91	-4.44	3.92	86.69	-83.26
	U_{26}~L_{27}	174.09	-174.09	-0.37	0.37	8.24	-8.24	-3.92	3.92	83.26	-83.26
	U_{27}~L_{27}	-167.25	167.49	-6.82	6.73	0.77	-0.85	-72.57	71.65	8.14	-9.04
	U_{27}~L_{28}	-116.13	110.00	-5.53	5.66	0.38	-0.68	-58.82	60.21	4.07	-7.21
	U_{28}~L_{28}	-116.09	121.56	-5.60	5.80	0.38	-0.68	-58.72	61.99	4.07	-7.21
	U_{28}~L_{29}	-119.87	124.44	-5.80	5.81	0.56	-0.48	-61.78	61.91	5.98	-5.07
	U_{29}~L_{29}	-119.87	119.87	-5.80	5.80	0.56	-0.56	-61.91	61.91	5.98	-5.98
	U_{29}~L_{30}	-79.51	88.87	-5.01	4.95	1.22	-1.29	-53.30	52.69	12.95	-12.74
	U_{30}~L_{30}	-43.86	51.94	-2.87	3.18	1.42	-1.56	-30.55	33.89	15.10	-16.59
	U_{31}~L_{31}	-38.39	31.04	-3.41	3.16	1.42	-1.56	-30.55	33.89	15.10	-16.59
	U_{32}~L_{32}	-5.58	1.82	-2.78	2.66	3.59	-3.75	-29.59	28.27	38.19	-39.95
	U_{33}~L_{33}	28.68	-28.68	-2.39	2.39	2.39	-2.39	-28.68	28.68	28.68	-28.68
	U_{34}~L_{34}	55.25	-51.69	-0.62	0.63	3.95	-3.95	-6.55	6.69	42.03	-42.00
	U_{35}~L_{35}	115.60	-122.77	-0.57	0.57	4.91	-4.91	-6.84	6.84	43.76	-43.76
	U_{36}~L_{36}	137.10	-150.77	-0.81	0.81	7.06	-6.99	-8.67	8.78	75.16	-74.45
	U_{37}~L_{37}	165.74	-206.85	-0.60	0.80	5.99	-8.11	-6.36	8.50	63.74	-86.36
	U_{38}~L_{38}	92.56	-144.10	-0.76	0.76	2.33	-2.33	-6.61	6.61	23.71	-23.71
	U_{39}~L_{39}	-109.90	-112.02	-0.76	0.48	0.53	-0.56	-72.64	69.89	5.68	-6.06
	U_{40}~L_{40}	-38.43	-48.15	-0.59	0.61	0.39	-0.41	-38.72	38.90	4.15	-4.43
	U_{41}~L_{41}	-38.43	-38.15	-0.59	0.59	0.39	-0.39	-38.72	38.72	4.15	-4.15
	U_{42}~L_{42}	-7.76	8.97	-3.82	3.92	2.02	-2.02	-47.20	42.30	21.87	-21.87
	U_{43}~L_{43}	25.90	-28.71	-2.47	2.60	3.20	-3.32	-26.59	27.98	34.47	-35.82
	U_{44}~L_{44}	51.18	-54.15	-1.89	1.89	3.92	-3.92	-14.61	14.61	47.72	-47.72
	U_{45}~L_{45}	79.40	-77.51	-1.61	1.49	4.36	-4.44	-17.32	16.02	47.51	-47.82
	U_{46}~L_{46}	107.38	-105.84	-0.94	0.93	4.97	-4.97	-10.31	10.31	47.82	-47.82
	U_{47}~L_{47}	142.75	-166.22	-0.09	0.12	5.82	-6.95	-0.98	1.29	62.79	-74.91
	U_{48}~L_{48}	132.63	-132.77	-0.07	0.07	5.82	-5.82	-0.98	0.98	62.79	-62.79
	U_{49}~L_{49}	79.40	-77.51	-1.61	1.49	4.36	-4.44	-17.32	16.02	47.51	-47.82
	U_{50}~L_{50}	107.38	-105.84	-0.94	0.93	4.97	-4.97	-10.31	10.31	47.82	-47.82
	U_{51}~L_{51}	-38.96	-42.97	-3.05	3.72	0.23	-0.20	-34.00	41.45	2.50	-2.18
	U_{52}~L_{52}	-38.90	-40.31	-3.45	3.34	1.40	-1.20	-38.38	37.17	15.53	-13.32
	U_{53}~L_{53}	-37.48	-38.74	-3.13	3.25	2.89	-3.17	-34.81	36.10	32.17	-35.33
	U_{54}~L_{54}	-10.30	11.14	-1.40	1.44	4.04	-4.48	-15.62	16.02	44.92	-49.88
	U_{55}~L_{55}	3.52	-11.56	-0.76	0.73	4.90	-4.54	-8.41	8.16	54.52	-50.57
	U_{56}~L_{56}	44.79	-53.88	-0.52	0.71	5.03	-6.45	-5.83	7.95	53.94	71.82

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{bb} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{bb}$	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	$C_{m(x)}$
Structure 1	U_1~L_1	-197.92	208.69	-18.31	41.38	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_1~L_2	-104.22	118.88	5.68	8.85	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_2~L_2	-74.16	83.17	43.89	-41.29	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_2~L_3	-37.45	40.80	102.31	-102.39	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_3~L_3	12.45	13.71	104.74	-139.05	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_3~L_4	40.82	61.69	152.51	-164.84	19.4	19.37	19.31	29.87	3	907.0	1.54	.986	1.5
	U_4~L_4	63.72	84.37	154.38	-174.34	20.80	20.67	34.66	41.34	3	1076.0	1.67	1144	1.5
	U_4~L_5	118.13	-131.90	255.77	-281.63	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5
	U_5~L_5	-166.38	196.48	166.11	-201.15	107.1	107.13	107.11	162.71	26	2058.9	1.52	5369	1.5
	U_5~L_6	-309.11	357.25	-169.39	194.03	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	U_6~L_6	-195.26	221.31	-114.97	108.27	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5
	U_6~L_7	-209.36	286.61	-146.66	150.46	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_7~L_7	-211.64	207.77	-75.34	80.31	21.1	21.09	21.09	36.46	10	1137.6	1.68	1170	1.5
	U_7~L_8	-164.09	191.86	-26.36	43.73	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_8~L_8	-114.79	129.92	13.37	4.46	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_8~L_9	-69.33	63.28	83.24	-92.47	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_9~L_9	-39.37	34.28	124.36	-147.11	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_9~L_{10}	-44.94	-62.95	156.20	-168.87	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
	U_{10}~L_{10}	-132.41	-137.69	286.33	-302.62	35.5	35.09	35.09	53.51	14	1737.0	1.673	1766	1.5
	U_{10}~L_{11}	-4.56	4.59	79.01	-77.55	60.0	59.94	59.87	92.27	42.74	42.74	65.30	8	1389.6
	U_{11}~L_{11}	-2.62	3.88	67.05	-85.37	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{11}~L_{12}	-301.34	406.63	-225.06	265.16	42.7	42.74	42.74	65.30	10	1711.0	1.53	2357	1.5
	U_{12}~L_{12}	-300.21	325.71	-139.03	147.55	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	U_{12}~L_{13}	-290.46	313.40	-139.03	147.55	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	U_{13}~L_{13}	-157.24	163.68	-58.07	65.22	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
	U_{13}~L_{14}	-134.76	137.58	-19.52	27.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{14}~L_{14}	-90.94	101.36	85.86	-92.35	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{14}~L_{15}	-53.90	55.33	84.44	-84.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{15}~L_{15}	-14.76	25.92	19.37	-19.47	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{15}~L_{16}	-68.65	-64.63	241.23	-251.56	20.8	20.80	20.67	34.64	3	1037.5	1.67	1143	1.5
	U_{16}~L_{16}	-166.11	-172.62	337.45	-339.53	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	U_{16}~L_{17}	-156.19	-176.38	318.80	-331.29	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	U_{17}~L_{17}	-7.10	4.49	62.86	-62.91	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	U_{17}~L_{18}	-4.00	4.00	62.90	-62.90	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	U_{18}~L_{18}	-5.49	5.85	74.72	-73.61	43.0	43.01	43.01	69.33	14	1392.6	1.62	2090	1.5
	U_{18}~L_{19}	-7.55	7.55	78.56	-78.56	43.0	43.01	43.01	69.33	14	1392.6	1.62	2090	1.5
	U_{19}~L_{19}	-80.08	77.68	8.88	-9.32	43.0	43.01	43.01	69.33	14	1392.6	1.62	2090	1.5
	U_{19}~L_{20}	-72.03	72.03	8.83	-8.83	43.0	43.01	43.01	69.33	14	1392.6	1.62	2090	1.5
	U_{20}~L_{20}	-72.02	73.47	8.51	-8.31	43.0	43.01	43.01	69.33	14	1392.6	1.62	2090	1.5
	U_{20}~L_{21}	-72.33	72.51	9.52	-9.61	43.0	43.01	43.01	69.33	14	1392.6	1.62	2090	1.5
	U_{21}~L_{21}	-40.47	49.74	16.06	-13.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{22}~L_{22}	-40.47	40.74	16.06	-13.05	0.00	0.00	0.00	0.00	0.00	824.7	1.54	876	1.5
	U_{22}~L_{23}	-39.77	39.77	16.06	-13.05	0.00	0.00	0.00	0.00	0.00	853.4	-0.980	0.21	0.21
	U_{23}~L_{23}	-28.13	29.61	23.81	-25.09	0.00	0.00	0.00	0.00	0.00	853.4	-0.980	0.21	0.21
	U_{24}~L_{24}	-24.84	24.84	25.72	-25.72	0.00	0.00	0.00	0.00	0.00	853.4	-0.980	0.21	0.21
	U_{24}~L_{25}	-19.32	17.75	42.30	-42.65	0.00	0.00	0.00	0.00	0.00	9.96	16.33	143.47	-147.19
	U_{25}~L_{25}	-14.80	11.91	-46.17	-46.80	0.00	0.00	0.00	0.00	0.00	54.47	-61.95	190.90	-188.71
	U_{26}~L_{26}	-10.27	10.27	-47.76	-47.76	0.00	0.00	0.00	0.00	0.00	122.41	-126.51	324.10	-326.12
	U_{26}~L_{27}	-7.54	7.84	83.41	-83.38	0.00	0.00	0.00	0.00	0.00	162.56	-163.76	360.49	-361.40
	U_{27}~L_{27}	-7.41	7.41	82.62	-82.62	0.00	0.00	0.00	0.00	0.00	162.56	-163.76	360.49	-361.40
	U_{27}~L_{28}	-4.44	3.92	86.69	-83.26	0.00	0.00	0.00	0.00	0.00	215.53	-220.66	413.99	-409.57
	U_{28}~L_{28}	-3.92	3.92	83.26	-83.26	0.00	0.00	0.00	0.00	0.00	215.53	-220.66	413.99	-409.57
	U_{28}~L_{29}	-72.57	71.65	8.14	-9.04	0.00	0.00	0.00	0.00	0.00	374.65	372.87	-199.77	198.15
	U_{29}~L_{29}	-58.82	60.21	4.07	-7.21	0.00	0.00	0.00	0.00	0.00	278.42	272.45	-142.16	127.38
	U_{29}~L_{30}	-58.72	61.99	4.07	-7.21	0.00	0.00	0.00	0.00	0.00	278.42	272.45	-142.16	127.38
	U_{30}~L_{30}	-61.78	61.91	5.98	-5.07	0.00	0.00	0.00	0.00	0.00	289.79	295.68	-142.67	150.78
	U_{31}~L_{31}	-61.91	61.91	5.98	-5.98	0.00	0.00	0.00	0.00	0.00	289.79	295.68	-142.67	150.78
	U_{32}~L_{32}	-53.30	52.69	12.95	-12.74	0.00	0.00	0.00	0.00	0.00	218.85	229.70	-75.32	98.20
	U_{33}~L_{33}	-30.55	33.89	15.10	-16.59	0.00	0.00	0.00	0.00	0.00	122.21	140.95	-24.31	31.58
	U_{34}~L_{34}	-30.55	33.89	15.10	-16.59	0.00	0.00	0.00	0.00	0.00	122.21	140.95	-24.31	31.58
	U_{35}~L_{35}	-29.59	28.27	38.19	-39.95	0.00	0.00	0.00	0.00	0.00	6.72	-3.50	63.61	71.49
	U_{36}~L_{36}	-28.68	28.68	28.68	-28.68	0.00	0.00	0.00	0.00	0.00	57.04	-64.53	162.90	-170.42
	U_{37}~L_{37}	-6.55	6.69	42.03	-42.00	0.00	0.00	0.00	0.00	0.00	57.04	-64.53	162.90	-170.42
	U_{38}~L_{38}	-6.84	6.84	43.76	-43.76	0.00	0.00	0.00	0.00	0.00	115.60	-122.77	301.54	-315.24
	U_{39}~L_{39}	-8.67	8.78	75.16	-74.45	0.00	0.00	0.00	0.00	0.00	159.92	-176.97	341.13	-357.32
	U_{40}~L_{40}	-6.36	8.50	63.74	-86.36	0.00	0.00	0.00	0.00	0.00	201.68	-200.50	353.57	-356.02
	U_{41}~L_{41}	-6.61	6.61	23.71	-23.71	0.00	0.00	0.00	0.00	0.00	201.68	-200.50	353.57	-356.02
	U_{42}~L_{42}	-72.64	69.89	5.68	-6.06	0.00	0.00	0.00	0.00	0.00	299.49	298.35	-129.39	133.79
	U_{43}~L_{43}	-67.05	67.05	6.51	-6.51	0.00	0.00	0.00	0.00	0.00	299.49	298.35	-129.39	133.79
	U_{44}~L_{44}	-38.72	38.90	4.15	-4.43	0.00	0.00	0.00	0.00	0.00	133.89	146.88	-49.97	52.64
	U_{45}~L_{45}	-38.72	38.72	4.15	-4.15	0.00	0.00	0.00	0.00	0.00	133.89	146.88	-49.97	52.64
	U_{46}~L_{46}	-47.20	42.30	21.87	-21.87	0.00	0.00	0.00	0.00	0.00	60.85	150.63	43.68	36.26
	U_{47}~L_{47}	-26.59	27.98	34.47	-35.82	0.00	0.00	0.00	0.00	0.00	23.94	23.29	108.36	-114.93
	U_{48}~L_{48}	-14.61	14.61	47.72	-47.72	0.00	0.00	0.00	0.00	0.00	12.47	-24.61	102.68	-105.54
	U_{49}~L_{49}	-17.32	16.02	47.51	-47.82	0.00	0.00	0.00	0.00	0.00	65.70	49.39	205.07	203.71
	U_{50}~L_{50}	-10.31	10.31	47.82	-47.82	0.00	0.00	0.00	0.00	0.00	159.92	-176.97	341.13	-357.32
	U_{51}~L_{51}	-34.00	41.45	2.50	-2.18	0.00	0.00	0.00	0.00	0.00	299.49	298.35	-129.39	133.79
	U_{52}~L_{52}	-38.38	37.17	15.53	-13.32	0.00	0.00	0.00	0.00	0.00	135.02	132.95	-18.22	23.56
	U_{53}~L_{53}	-34.81	36.10	32.17	-35.33	0.00	0.00	0.00	0.00	0.00	135.02	132.95	-18.22	23.56
	U_{54}~L_{54}	-15.62	16.02	44.92	-49.88	0.00	0.00	0.00	0.00	0.00	47.23	49.19	83.94	-93.59
	U_{55}~L_{55}	-8.41	8.16	54.52	-50.57	0.00	0.00	0.00	0.00	0.00	13.64	-2.14	122.72	-125.11
	U_{56}~L_{56}	-5.83	7.95	53.94	71.82	0.00	0.00	0.00	0.00	0.00	45.59	-52.82	179.44	-223.85

M_y Information

YY Axis Moment from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_1~L_1	94.27	-125.94	-0.94	0.80	5.06	-5.92	-10.15	8.61	54.54	-63.87
	U_1~L_2	92.31	-95.87	-0.29	0.44	4.76	-5.10	-3.98	4.77	51.33	-54.98
	U_2~L_2	142.75

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Live Load Distribution Factor Equations Used for Girder Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	-12.57	3.38	2.19	1.35	0.41	-0.24				
	L_1-L_2	-24.37	14.59	4.61	-2.65	0.00	0.00				
	L_2-L_3	-40.18	36.86	-6.35	-1.35	15.6	15.63	15.58	25.96	5	
	L_3-L_4	-51.04	51.04	-10.26	10.26	15.4	15.42	15.42	23.71	2	
	L_4-L_5	-40.18	36.86	-6.35	-1.35	15.6	15.63	15.58	25.96	5	
	L_5-L_6	-24.37	14.59	4.61	-2.65	0.00	0.00				
	L_6-U_7	-12.57	3.38	2.19	1.35	0.41	-0.24				
	U_0-U_1	-13.33	17.60	-1.37	1.61	-11.10	8.78	-15.27	8.06	0.00	0.00
	U_1-U_2	-26.83	58.49	2.69	-0.90	-0.56		-25.36	29.91	-10.05	6.28
	U_2-U_3	-39.79	104.80	-1.60	0.33	-0.01		-47.06	54.03	-0.01	0.00
	U_3-U_4	-6.35	88.86	2.54	4.37	0.01	-0.01	-28.29	48.63	0.06	-0.09
	U_4-U_5	-9.60	109.55	-1.73	3.87	0.19	-0.12	-28.77	41.70	2.09	-1.30
	U_5-U_6	-74.80	111.68	0.25	-4.63	0.00	0.00	-58.57	28.31	0.00	0.00
	U_6-U_7	-56.84	54.78	-1.88	1.85	-1.18	-0.43	-20.20	19.98	-12.72	-4.59
	L_1-U_1	-66.50	66.50	2.28	-2.28	-0.98		-25.79	21.06	10.73	-10.51
	L_2-U_2	-55.25	39.07	2.19	2.31	0.15	-0.97	-23.68	24.91	1.61	-10.42
	L_3-U_3	-20.99	7.38	-1.04	1.02	0.59	-1.01	-11.26	10.94	6.37	-10.90
	L_4-U_4	1.18	-30.29	-1.04	1.04	0.59	-1.01	-11.26	11.26	6.37	-10.90
	L_5-U_5	-19.00	4.09	-1.77	1.48	0.90	-1.18	-19.09	11.59	9.66	-12.73
	L_6-U_6	-28.64	12.99	2.41	1.06	0.00	0.00	-23.03	21.17	2.68	-7.55
	U_1-L_2	-89.35	58.15	-3.87	3.62	0.23	-0.38	-41.69	39.06	2.44	-4.12
	U_2-L_3	-20.87	61.38	4.83	1.35	-0.03	-0.33	-52.04	38.32	5.24	-3.34
	U_3-L_4	-55.39	89.05	8.87	4.25	0.22	-0.22	-63.31	49.78	2.34	-2.33
	U_4-L_5	-82.31	86.28	-6.55	4.82	0.81	-0.74	-69.77	51.32	8.60	-7.88
	U_5-L_6	-20.82	61.38	4.83	1.35	-0.03	-0.33	-52.04	38.32	5.24	-3.34
	L_0-U_1	-91.42	62.98	-4.52	3.68	0.85	-0.69	-48.16	39.19	9.04	-7.34
	L_1-U_2	-73.56	73.56	-3.63	3.63	0.00	0.00	-23.73	23.73	7.24	-7.24
	L_2-U_3	-17.30	7.00	-1.78	1.64	0.62	-1.01	-18.99	17.47	6.64	-10.77
	L_3-U_4	-0.61	-11.46	1.69	-1.58	0.34	-0.56	-17.95	14.23	10.96	-16.94
	L_4-U_5	-7.43	-23.92	-0.88	0.71	1.36	-1.70	-9.38	7.34	14.44	-18.13
	L_5-U_6	-44.32	35.88	-1.96	1.80	0.89	-1.38	-20.90	19.15	9.36	-14.40
	L_6-U_7	-36.39	68.66	2.31	-3.74	-0.27	0.00	-35.86	30.97	4.24	-10.40
	U_1-U_2	-88.53	73.83	-3.35	2.69	0.47	-0.99	-35.64	28.60	5.05	-10.02
	U_2-U_3	-70.40	58.67	-3.33	3.16	0.47	-0.45	-47.13	33.79	5.24	-6.43
	U_3-U_4	-108.38	116.68	-4.08	3.83	0.63	-0.29	-43.39	40.79	6.72	-3.07
	U_4-U_5	-154.28	139.71	-6.16	4.93	0.03	-0.31	-65.33	52.50	0.33	-3.28
	U_5-U_6	-85.83	58.71	-3.24	2.52	0.47	-0.74	-38.86	28.60	5.05	-7.38
	L_1-L_3	-24.73	100.38	-3.80	4.84	0.65	-0.59	-39.99	50.87	6.85	-6.24
	L_2-L_4	-98.38	98.38	3.79	-3.79	-0.42	0.00	-62.24	57.89	4.57	-6.00
	L_3-L_5	-74.14	95.51	-5.25	4.60	0.47	-0.53	-55.27	48.34	4.90	-5.62
	L_4-L_6	-98.38	98.38	3.79	-3.79	-0.42	0.00	-62.24	57.89	4.57	-6.00
	L_5-L_7	-55.45	68.85	-4.30	3.25	0.59	-1.06	-45.22	34.19	6.19	-11.15
	U_0-L_1	-32.97	39.97	-2.47	2.44	0.53	-1.00	-25.94	25.63	5.07	-10.47
	U_1-L_3	-10.32	4.39	-1.20	1.03	0.86	-1.27	-12.66	10.86	9.07	-13.40
	U_2-L_4	-6.27	2.67	-0.73	0.63	0.52	-0.77	-7.69	6.60	5.51	-8.13
	U_3-L_5	-17.08	16.16	-1.79	1.70	0.90	-1.09	-18.78	17.89	9.51	-11.51
	U_4-L_6	-6.27	2.67	-0.73	0.63	0.52	-0.77	-7.69	6.60	5.51	-8.13
	U_5-L_7	-55.69	65.14	-3.84	3.21	0.65	-1.09	-40.25	33.75	6.87	-11.48
	L_0-L_1	-49.22	80.41	-3.91	3.75	0.64	-0.69	-41.14	39.44	6.77	-7.24
	L_1-L_2	-29.98	68.47	-2.87	2.72	0.42	-0.56	-47.98	31.84	8.30	-6.06
	L_2-L_3	-106.11	102.57	-6.10	5.05	0.34	-0.36	-64.14	53.08	3.56	-3.97
	L_3-L_4	-98.38	98.38	3.79	-3.79	-0.42	0.00	-62.24	57.89	4.57	-6.00
	L_4-L_5	-47.87	128.15	-4.34	5.39	0.69	-0.66	-46.15	57.41	7.39	-6.57
	L_5-L_6	-55.45	68.85	-4.30	3.25	0.59	-1.06	-45.22	34.19	6.19	-11.15
	L_6-L_7	-89.53	99.33	-4.42	3.83	0.29	-0.18	-47.08	40.72	3.11	-1.94
	U_0-U_1	-86.54	82.57	-3.43	3.15	0.14	-0.54	-36.49	33.50	1.46	-5.78
	U_1-U_2	-68.38	68.38	-3.27	3.27	0.00	0.00	-43.22	39.42	0.00	0.00
	U_2-U_3	-50.17	67.66	-3.21	3.24	0.56	-1.39	-34.12	34.44	5.96	-14.82
	U_3-U_4	-68.38	68.38	-3.27	3.27	0.00	0.00	-43.22	39.42	0.00	0.00
	U_4-U_5	-86.54	82.57	-3.43	3.15	0.14	-0.54	-36.49	33.50	1.46	-5.78
	U_5-U_6	-68.38	68.38	-3.27	3.27	0.00	0.00	-43.22	39.42	0.00	0.00
	U_6-U_7	-50.17	67.66	-3.21	3.24	0.56	-1.39	-34.12	34.44	5.96	-14.82
	L_0-U_1	-12.59	-26.40	-0.98	0.63	1.51	-1.72	-10.47	6.71	16.08	-18.31
	L_1-U_2	6.51	-17.79	-1.62	1.36	1.21	-1.56	-17.26	14.51	12.95	-16.59
	L_2-U_3	-11.68	8.87	-1.74	1.59	0.92	-1.08	-19.22	16.92	9.82	-11.98
	L_3-U_4	-38.92	20.55	-2.46	2.08	0.46	-0.75	-26.16	22.19	4.90	-6.00
	L_4-U_5	-68.53	71.15	-4.47	4.01	0.63	-0.53	-47.05	42.69	6.65	-5.63
	L_5-U_6	-73.32	51.68	-4.62	3.26	0.57	-0.68	-52.01	47.52	5.71	-6.68
	L_6-U_7	-10.40	-69.24	-6.91	4.62	0.47	-0.38	-54.77	39.31	4.74	-4.66
	U_0-L_1	-86.92	56.40	-5.08	3.65	0.44	-0.33	-54.77	39.31	4.74	-4.66
	U_1-L_3	-28.11	12.70	-2.41	1.84	0.33	-0.66	-29.95	19.85	3.51	-7.08
	U_2-L_4	-6.07	-18.30	-1.03	0.77	0.78	-1.42	-11.12	8.30	8.44	-15.31
	U_3-L_5	-50.49	35.10	-3.27	2.18	-0.02	-1.11	-30.42	23.54	-0.26	-11.97
	U_4-L_6	-59.60	20.61	-2.93	1.77	-1.15	-1.15	-31.58	19.05	-12.40	-12.38
	U_5-L_7	-73.32	51.68	-4.62	3.26	0.57	-0.68	-52.01	47.52	5.71	-6.68
	L_0-L_1	-77.34	67.11	-3.24	2.89	0.00	-0.01	-39.43	34.61	0.00	0.00
	L_1-L_2	-77.34	67.11	-3.24	2.89	0.00	-0.01	-39.43	34.61	0.00	0.00
	L_2-L_3	-2.84	82.10	-3.29	4.37	0.02	-0.01	-26.12	46.42	0.17	-0.16
	L_3-L_4	-54.59	58.66	-2.77	2.34	0.00	-0.01	-53.13	37.22	0.02	-0.01
	L_4-L_5	-9.15	17.58	-0.68	0.98	-0.99	-0.72	-7.59	10.92	-11.00	-8.00
	L_5-L_6	-8.13	-8.77	-0.75	0.44	-0.69	-0.97	-1.70	4.85	-2.72	-10.80
	L_6-L_7	-23.22	7.61	-2.45	1.34	0.18	-0.13	-27.21	14.96	1.97	-1.81

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{req} (in^3)	S_x (in^3)	Z_x (in^3)	I (in^4)	I_{req} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Terms * F_y/Sq	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$	Pass
Structure 1	U_0-L_1	-69.14	36.86	-6.35	-1.35	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.533	0.39	0.39	—
	L_1-L_2	-102.74	58.15	-3.87	3.62	0.23	-0.38	-41.69	39.06	2.44	751.9	1.54	782	1.5	763.3	-0.354	0.46	0.46	—
	L_2-L_3	-77.79	61.38	4.83	1.35	-0.03	-0.33	-52.04	38.32	5.24	751.9	1.54	782	1.5	763.3	-0.108	0.54	0.54	—
	L_3-L_4	10.30	-12.54	6.64	-42.06	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.108	0.54	0.54	—
	L_4-L_5	-27.47	-10.50	3.25	19.14	19.37	19.37	19.37	29.87	5	907.0	1.54	1396	1.5	930.8	-0.070	0.57	0.57	—
	L_5-L_6	-69.83	140.85	-56.67	62.48	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.638	0.34	0.34	—
	L_6-U_7	-190.68	166.15	-77.83	94.87	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.814	0.25	0.25	—
	U_0-U_1	-69.55	220.88	-8.14	115.32	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.315	0.47	0.47	—
	U_1-U_2	-167.94	254.72	-7.95	139.90	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.226	0.51	0.51	—
	U_2-U_3	-158.57	168.09	-97.24	84.74	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.501	0.23	0.23	—
	U_3-U_4	-117.89	114.92	-101.46	61.26	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6	-0.971	0.21	0.21	—
	U_4-U_5	-154.95	74.72	-100.69	8.21	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.551	0.38	0.38	—
	U_5-U_6	-210.77	29.06	-73.27	-7.95	139.9	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.221	0.23	0.23	—
	U_6-U_7	-152.82	104.76	-68.34	28.23	20.8	20.80	20.67	34.66	1	1076.0	1.67	1444	1.5	1029.6	-0.662	0.26	0.26	—
	U_0-L_1	-61.67	33.30	-13.47	-14.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.645	0.34	0.34	—
	L_1-L_3	-23.13	10.95	28.52	-10.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.108	0.54	0.54	—
	L_2-L_4	-19.00	4.09	-1.77	1.48	0.90	-1.18	-19.09	11.59	9.66	-12.73	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_3-L_5	-66.07	39.82	-3.77	-22.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.603	0.36	0.36	—
	L_4-L_6	-47.13	82.73	-32.15	-31.41	1.61	1.61	1.61	1.94	0	93.8	1.20	101	1.5	97.0	-0.154	0.84	0.84	—
	L_5-L_7	-41.69	39.06	-2.44	-4.12	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_0-L_1	-234.01	162.62	-106.44	32.55	35.4	35.83	35.23	53.13	4	1284.6	1.53	1955	1.5	1922.1	-0.684	0.32	0.32	—
	L_1-L_2	-214.79	214.96	-131.94	110.71	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.784	0.29	0.29	—
	L_2-L_3	-258.17	223.36	-88.36	95.09	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.865	0.25	0.25	—
	L_3-L_4	-251.04	109.77	-104.64	12.55	35.4	35.83	35.23	53.13	4	1284.6	1.53	1955	1.5	1922.1	-0.684	0.32	0.32	—
	L_4-L_5	-239.71	102.62	-106.44	32.55	35.4	35.83	35.23	53.13	4	1284.6	1.53	1955	1.5	1922.1	-0.684	0.32	0.32	—
	L_5-L_6	-214.79	214.96	-131.94	110.71	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.784	0.29	0.29	—
	L_6-U_7	-258.17	223.36	-88.36	95.09	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.865	0.25	0.25	—
	U_0-L_1	-251.04	109.77	-104.64	12.55	35.4	35.83	35.23	53.13	4	1284.6	1.53	1955	1.5	1922.1	-0.684	0.32	0.32	—
	L_1-U_2	-73.56	73.56	-3.63	3.63	0.00	0.00	-23.73	23.73	7.24	751.9	1.54	782	1.5	763.3	-0.766	0.28	0.28	—
	U_2-L_3	-17.30	7.00	-1.78	1.64	0.62	-1.01	-18.99	17.47	6.64	-10.77	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_3-U_4	-43.64	46.56	-9.69	-14.24	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.738	0.30	0.30	—
	U_4-L_5	-17.95	14.23	10.96	-16.94	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.766	0.28	0.28	—
	L_5-U_6	-10.67	14.76	46.94	-70.38	17.2	17.24	17.24	26.54	2	853.4	1.54	870	1.5	853.4	-0.582	0.37	0.37	—
	U_6-U_7	-102.90	88.14	-37.13	14.71	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2	-0.857	0.26	0.26	—
	U_0-U_1	-211.67	169.33	-118.12	55.58	38.5	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.684	0.32	0.32	—
	U_1-U_2	-192.33	197.94	-104.18	73.18	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	-0.821	0.27	0.27	—
	U_2-U_3	-227.03	196.52	-128.93	93.58	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.865	0.25	0.25	—
	U_3-U_4	-234.89	238.75	-126.33	143.73	46.7	46.71	46.71	75.43	10	1711.0	1.53	2357	1.5	2312.1	-0.984	0.21	0.21	—
	U_4-U_5	-242.55	295.37	-199.64	174.52	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.962	0.26	0.26	—
	U_5-U_6	-182.66	314.44	-76.13	154.76	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	-0.821	0.27	0.27	—
	U_6-U_7	-118.79	240.97	-117.31	117.24	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.493	0.40	0.40	—
	U_0-L_1	-262.62	238.41	-116.76	115.46	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.938	0.20	0.20	—
	L_1-L_3	-216.13	228.91	-85.76	111.99	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.944	0.22	0.22	—
	L_2-L_4	-44.02	118.82	-18.82	68.66	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	L_3-L_5	-170.06	163.60	-68.68	65.35	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.962	0.22	0.22	—
	L_4-L_6	-44.02	118.82	-18.82	68.66	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	L_5-L_7	-45.22	34.19	6.19	-11.15	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_0-U_1	-25.94	25.63	5.07	-10.47	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_1-U_2	-12.66	10.86	9.07	-13.40	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_2-U_3	-12.08	10.86	9.07	-13.40	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_3-U_4	-18.78	17.89	9.51	-11.51	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_4-U_5	-27.43	27.43	11.88	-11.88	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_5-U_6	-40.25	33.75	6.87	-11.48	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_6-U_7	-41.14	39.44	6.77	-7.24	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_0-L_1	-47.98	31.84	8.30	-6.06	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	L_1-L_2	-64.14	53.08	3.56	-3.97	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	L_2-L_3	-62.24	57.89	4.57	-6.00	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	L_3-L_4	-46.15	57.41	7.39	-6.57	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	L_4-L_5	-46.06	63.63	6.33	-11.03	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	L_5-L_6	-47.08	40.72	3.11	-1.94	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	L_6-L_7	-36.49	33.50	1.46	-5.78	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263	1.5	192.7	-0.000	0.00	0.00	—
	U_0-U_1	-191.56	179.92	-109.34	94.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.939	0.22	0.22	—
	U_1-U_2	-170.15	189.76	-95.27	74.47	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.865	0.25	0.25	—
	U_2-U_3	-191.16	162.93	-104.30	55.65	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.851	0.26	0.26	—
	U_3-U_4	-210.77	29.06	-73.27	-7.95	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2	-0.857	0.26	0.26	—
	U_4-U_5	-218.40	217.36	-109.66	124.93	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.995	0.20	0.20	—
	U_5-U_6	-191.56	179.92	-109.34	94.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.939	0.22	0.22	—
	U_6-U_7	-170.15	189.76	-95.27	74.47	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.865	0.25	0.25	—
	U_0-L_1	-100.66	112.49	-43.64	49.61	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2	-0.857	0.26	0.26	—
	L_1-L_3	-8.31	-19.79	61.20	-74.60	17.2	17.24	17.24	26.54	2	853.4	1.54	870	1.5	853.4	-0.692	0.32	0.32	—
	L_2-L_4	-28.93	9.31	36.31	-59.07	19.4	19.42	19.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.615	0.35	0.35	—
	L_3-L_5	-24.17	-6.80	18.20	-66.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.320	0.47	0.47	—
	L_4-L_6	-24.17	-6.80	18.20	-66.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.320	0.47	0.47	—
	L_5-L_7	-28.93	9.31	36.31	-59.07	19.4	19.42	19.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.615	0.35	0.35	—
	U_0-L_1	-27.26	32.02	-2.36	-11.59	0.00	0.00	0.00	0.00	0.00	206.49	1.92	263

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors: DL Factor= 1.30; DL Factor= 1.30; LL Factor= 2.17; LL Factor= 1.65
Pedestrian Load Factors

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

M_y Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max | Impact Pedestrian Load Min | ZZ Axis Moment Properties: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{top} (in^3) | S_b (in^3) | S_z (in^3) | I (in^4) | $I_{x/r}$ | Shape Factor f | M_p (k-in) | Formula 1.8 Term = F_y*S_top | M_z (k-in) | Equivalent Mom. Factor: a | $C_{b(+)}$ | $C_{b(-)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Max | Lane Reduction & Impact Live Load Min | Impact Pedestrian Load Max | Impact Pedestrian Load Min | YY Axis Moment Properties: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | Max. Neg. Mom. (k-in) | S_{top} (in^3) | S_b (in^3) | S_z (in^3) | Z_f (in^3) | $I_{y/r}$ (in^4) | Shape Factor f | M_p (k-in) | P_{cr} (kip) | Formula 1.8 Term = F_y*S_top | M_y (k-in) | Equivalent Mom. Factor: a | $C_{b(+)}$ | $C_{b(-)}$ | Yield: Axial Portion | Yield: Moment Portion | Yield: Total | Pass | Tension: Pass | Fracture: Axial Portion | Fracture: Moment Portion | Fracture: Total | Pass | Buckle: Pass | Compression: Axial Portion | Compression: Moment Portion | Compression: Total | Pass |
|---|---|---

Moment (End) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.63

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Mat. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) (k-in)	Pedestrian Load (Min) (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	L_0-L_1	-19.48	-91.69	-0.70	0.73	3.77	-4.95	-0.11	0.13	0.30	-0.64
	L_1-L_2	30.30	-116.56	-0.64	2.33	-1.47	-9.16	-0.16	0.42	-0.07	-1.33
	L_2-L_3	39.07	-78.01	-2.53	7.43	-7.63	0.21	0.50	-1.04	-0.27	-1.22
	L_3-L_4	-65.02	14.74	1.29	4.23	-3.90	-8.17	0.23	0.86	-1.19	-1.34
	L_4-L_5	-50.69	-224.13	-0.69	1.03	-2.04	-3.93	-0.15	0.19	-0.43	-0.77
	L_5-L_6	-2.17	269.23	2.47	0.46	-2.21	-0.31	1.16	0.00	0.00	32.98
	L_6-L_7	-2.17	269.23	2.47	0.46	-2.21	-0.31	1.16	0.00	0.00	32.98
	L_7-L_8	-38.81	571.46	-0.55	6.76	0.63	-2.05	-0.35	3.66	0.00	-7.32
	L_8-L_9	555.91	-39.94	2.85	0.93	6.10	2.81	1.31	0.05	2.10	-0.32
	L_9-L_{10}	185.62	-153.59	-0.33	-0.33	-2.44	0.98	-0.13	-0.37	0.46	0.70
	L_{10}-L_{11}	164.49	164.37	2.94	1.65	-1.23	-5.53	0.70	0.32	0.30	-1.05
	L_{11}-L_{12}	78.56	-201.18	-1.56	2.27	-4.35	0.42	0.26	0.16	-0.16	-2.84
	L_{12}-L_{13}	-57.21	-170.41	2.14	1.07	-4.96	-6.49	0.43	0.20	-0.57	-0.97
	L_{13}-L_{14}	70.10	-469.56	1.65	1.47	-1.85	-14.82	0.35	0.23	-0.45	-2.28
	L_{14}-L_{15}	-488.53	-191.76	5.89	2.14	-8.18	-8.69	1.20	0.43	-1.62	-2.34
	L_{15}-L_{16}	-272.75	-394.04	6.56	1.00	-6.39	-9.44	0.00	0.00	-1.30	-7.07
	L_{16}-L_{17}	-389.62	-47.38	5.22	1.87	-3.98	-5.31	0.00	0.00	-1.30	-7.07
	L_{17}-L_{18}	-202.39	20.51	-2.77	1.48	-2.16	-1.75	-0.96	0.27	0.06	-0.97
	L_{18}-L_{19}	-240.68	180.28	-0.19	1.24	-0.00	-0.51	-1.50	0.57	0.06	-0.06
	L_{19}-L_{20}	-192.40	90.95	-3.78	2.34	0.57	-0.23	-1.23	0.86	0.06	-0.06
	L_{20}-L_{21}	26.60	-260.09	-2.42	0.90	2.76	-7.73	-0.06	0.13	0.06	-0.06
	L_{21}-L_{22}	201.84	-347.07	-1.74	0.17	0.45	-2.27	-0.46	0.17	0.06	-0.06
	L_{22}-L_{23}	7.16	-277.32	-0.69	1.13	-2.09	-8.29	-0.13	0.17	0.23	-1.18
	L_{23}-L_{24}	16.39	-479.24	1.26	1.21	-0.22	-9.22	0.22	0.22	0.23	-1.18
	L_{24}-L_{25}	-367.51	-421.35	5.55	2.06	-1.00	-13.06	0.04	0.32	-1.24	-1.72
	L_{25}-L_{26}	-219.09	-681.80	5.55	2.13	-1.85	-13.06	0.04	0.32	-1.24	-1.72
	L_{26}-L_{27}	-419.43	-397.04	3.40	3.69	-11.39	-14.62	0.47	0.59	2.41	-2.01
	L_{27}-L_{28}	-394.52	-7.37	2.99	5.56	-9.76	-9.98	0.46	0.90	-1.94	-0.96
	L_{28}-L_{29}	-324.29	-260.71	2.99	5.56	-9.76	-9.98	0.46	0.90	-1.94	-0.96
	L_{29}-L_{30}	-295.59	262.58	2.68	5.23	-3.89	-4.91	-0.92	1.06	1.43	-0.05
	L_{30}-L_{31}	-184.33	184.33	0.47	2.68	-0.00	-0.47	-4.90	0.00	0.00	0.00
	L_{31}-L_{32}	-188.97	686.21	2.75	5.48	-1.33	-2.12	-0.58	1.88	0.00	0.00
	L_{32}-L_{33}	-139.46	-276.11	1.31	2.35	-0.39	-0.97	0.04	0.55	1.24	-16.76
	L_{33}-L_{34}	-472.29	1391.45	6.50	4.55	-1.30	-2.16	-0.58	1.88	0.00	0.00
	L_{34}-L_{35}	1356.12	-488.32	-4.43	3.10	12.76	-9.26	0.00	0.00	-1.83	-55.93
	L_{35}-L_{36}	336.66	-88.91	-2.24	1.13	-4.55	0.00	0.00	0.00	-1.83	-55.93
	L_{36}-L_{37}	579.83	-109.25	4.38	2.06	-0.15	-7.80	0.85	0.41	0.93	-0.52
	L_{37}-L_{38}	275.68	-101.76	2.15	1.03	-0.15	-3.90	0.72	0.41	0.93	-0.52
	L_{38}-L_{39}	275.68	-101.76	2.15	2.11	-2.97	-7.73	0.70	0.49	0.12	-0.38
	L_{39}-L_{40}	209.89	-114.91	2.65	3.10	-2.11	-11.50	0.42	0.64	-0.18	-1.10
	L_{40}-L_{41}	209.89	-114.91	2.65	3.10	-2.11	-11.50	0.42	0.64	-0.18	-1.10
	L_{41}-L_{42}	-33.73	-318.64	0.26	2.93	-6.96	-17.38	0.43	0.76	-3.99	-2.03
	L_{42}-L_{43}	328.90	-1.00	2.91	3.57	-0.00	-0.00	0.00	0.00	0.00	-0.00
	L_{43}-L_{44}	-183.23	53.46	1.83	3.97	-5.04	-8.54	0.42	0.44	-0.98	-0.56
	L_{44}-L_{45}	472.29	1391.45	6.50	4.55	-1.30	-2.16	-0.58	1.88	0.00	0.00
	L_{45}-L_{46}	1356.12	-488.32	-4.43	3.10	12.76	-9.26	0.00	0.00	-1.83	-55.93
	L_{46}-L_{47}	336.66	-88.91	-2.24	1.13	-4.55	0.00	0.00	0.00	-1.83	-55.93
	L_{47}-L_{48}	579.83	-109.25	4.38	2.06	-0.15	-7.80	0.85	0.41	0.93	-0.52
	L_{48}-L_{49}	275.68	-101.76	2.15	1.03	-0.15	-3.90	0.72	0.41	0.93	-0.52
	L_{49}-L_{50}	275.68	-101.76	2.15	2.11	-2.97	-7.73	0.70	0.49	0.12	-0.38
	L_{50}-L_{51}	209.89	-114.91	2.65	3.10	-2.11	-11.50	0.42	0.64	-0.18	-1.10
	L_{51}-L_{52}	209.89	-114.91	2.65	3.10	-2.11	-11.50	0.42	0.64	-0.18	-1.10
	L_{52}-L_{53}	-33.73	-318.64	0.26	2.93	-6.96	-17.38	0.43	0.76	-3.99	-2.03
	L_{53}-L_{54}	328.90	-1.00	2.91	3.57	-0.00	-0.00	0.00	0.00	0.00	-0.00
	L_{54}-L_{55}	-183.23	53.46	1.83	3.97	-5.04	-8.54	0.42	0.44	-0.98	-0.56
	L_{55}-L_{56}	-100.74	310.70	2.05	6.15	-4.94	-4.29	-0.56	1.26	0.00	0.00
	L_{56}-L_{57}	-100.74	310.70	2.05	6.15	-4.94	-4.29	-0.56	1.26	0.00	0.00
	L_{57}-L_{58}	-69.72	308.73	-0.88	4.83	-2.64	-2.99	-0.22	0.85	0.00	0.00
	L_{58}-L_{59}	-69.72	308.73	-0.88	4.83	-2.64	-2.99	-0.22	0.85	0.00	0.00
	L_{59}-L_{60}	-18.47	438.87	1.18	3.09	-1.39	-6.95	-0.15	0.00	-1.65	14.55
	L_{60}-L_{61}	-18.47	438.87	1.18	3.09	-1.39	-6.95	-0.15	0.00	-1.65	14.55
	L_{61}-L_{62}	1437.37	-471.51	3.88	2.42	12.44	-8.57	0.00	0.00	0.29	-7.88
	L_{62}-L_{63}	-253.75	-181.16	-1.36	3.86	-3.27	0.07	-1.01	-1.07	-16.07	-49.27
	L_{63}-L_{64}	544.71	-98.25	2.70	1.35	-5.45	-0.00	0.00	0.00	0.00	0.00
	L_{64}-L_{65}	390.20	-203.85	1.94	3.96	-1.13	-8.96	0.33	0.80	0.42	-1.24
	L_{65}-L_{66}	390.20	-203.85	1.94	3.96	-1.13	-8.96	0.33	0.80	0.42	-1.24
	L_{66}-L_{67}	243.13	-341.77	2.86	3.13	-1.39	-10.82	0.50	0.46	-0.15	-1.37
	L_{67}-L_{68}	243.13	-341.77	2.86	3.13	-1.39	-10.82	0.50	0.46	-0.15	-1.37
	L_{68}-L_{69}	-365.08	644.79	1.88	2.43	-6.69	-18.87	0.68	0.27	2.07	-2.23
	L_{69}-L_{70}	-620.48	-212.54	2.40	0.66	-10.24	-11.55	0.38	0.07	2.14	-1.36
	L_{70}-L_{71}	-434.07	-326.98	1.93	0.61	-7.16	-8.08	0.27	0.05	1.50	-0.95
	L_{71}-L_{72}	-457.50	30.67	0.63	1.61	-7.50	-4.39	0.00	0.00	-1.17	-0.38
	L_{72}-L_{73}	-332.43	186.70	0.20	2.48	-5.37	-1.11	-1.17	0.34	0.10	-0.10
	L_{73}-L_{74}	-332.43	186.70	0.20	2.48	-5.37	-1.11	-1.17	0.34	0.10	-0.10
	L_{74}-L_{75}	53.61	-162.26	-0.33	0.44	3.39	-6.27	-0.06	0.04	0.53	-0.99
	L_{75}-L_{76}	-192.76	-240.13	-0.35	0.61	-1.78	-6.71	-0.10	0.60	-1.48	-1.65
	L_{76}-L_{77}	24.74	-246.61	-0.35	0.61	-1.78	-6.71	-0.10	0.60	-1.48	-1.65
	L_{77}-L_{78}	40.28	-374.07	-0.28	0.96	-1.17	-10.52	-0.09	0.05	-0.04	-1.42
	L_{78}-L_{79}	40.28	-374.07	-0.28	0.96	-1.17	-10.52	-0.09	0.05	-0.04	-1.42
	L_{79}-L_{80}	-121.39	-479.27	2.22	2.39	-5.68	-15.74	0.05	0.30	-1.04	-2.51
	L_{80}-L_{81}	-476.75	95.76	3.56	3.07	-4.29	-6.36	0.19	0.38	-2.32	-0.38
	L_{81}-L_{82}	-476.75	95.76	3.56	3.07	-4.29	-6.36	0.19	0.38	-2.32	-0.38
	L_{82}-L_{83}	-241.27	199.03	2.38	3.28	-1.29	-2.23	-0.97	0.65	0.00	0.00
	L_{83}-L_{84}	-241.27	199.03	2.38	3.28	-1.29	-2.23	-0.97	0.65	0.00	0.00
	L_{84}-L_{85}	-127.13	162.45	-0.27	3.51	0.32	-3.81	-0.85	0.67	0.45	-0.34
	L_{85}-L_{86}	-127.13	162.45	-0.27	3.51	0.32	-3.81	-0.85	0.67	0.45	-0.34
	L_{86}-L_{87}	606.98	-34.68	3.01	0.72	6.73	-3.43	0.00	0.00	-0.50	-0.00
	L_{87}-L_{88}	606.98	-34.68	3.01	0.72	6.73	-3.43	0.00	0.00	-0.50	-0.00
	L_{88}-L_{89}	88.37	-47.56	0.34	2.94	0.75	-6.90	-0.46	0.65	0.00	0.00
	L_{89}-L_{90}	88.37	-47.56	0.34	2.94	0.75	-6.90	-0.46	0.65	0.00	0.00
	L_{90}-L_{91}	-217.20	-65.09	2.04	3.20	-0.81	-10.04	0.66	0.69	-0.04	-1.53
	L_{91}-L_{92}	-217.20	-65.09	2.04	3.20	-0.81	-10.04	0.66	0.69	-0.04	-1.53
	L_{92}-L_{93}	-112.39	-133.89	2.06	0.85	-6.92	-5.95	0.49	0.22	-1.38	-1.22
	L_{93}-L_{94}	-120.88	38.04	3.08	2.49	0.70	-0.71	-0.88	0.72	0.19	-0.18

YY Axis Moments from STAAD

Location	Member	Start (k-in)	End (k-in)	Max. Neg. Mom. (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{top}$	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(top)}$	Equivalent Mom. Factor $C_{m(bot)}$
Structure 1	L_0-L_1	39.17	129.34	0.09	0.39	-4.60	-16.91	-0.03	-0.11	0.46	1.68	1.26	4.61	41.45	-225.91
	L_1-L_2	109.27	-70.78	1.91	-0.95	-19.57	8.74	0.15	-0.11	1.96	-0.87	25.52	-12.66	266.80	90.04
	L_2-L_3	-128.95	70.12	-2.50	1.25	-14.11	6.46	-0.15	0.06	-1.44	0.64	18.37	-9.11	192.19	64.86
	L_3-L_4	139.68	-144.75	1.58	-0.61	-11.60	3.41	0.04	0.09	1.79	-1.91	21.15	-6.16	-154.92	45.53
	L_4-L_5	-66.46	170.43	0.35	-0.74	-5.32	7.22	-0.05	-0.07	0.53	1.96	4.64	-7.09	7.29	-43.44
	L_5-L_6	141.61	-39.77	-0.39	-0.61	-2.09	1.81	0.57	-1.24	0.00	0.00	-5.24	-10.78	-27.89	24.17
	L_6-L_7	217.30	234.93	0.96	-4.82	3.13	-0.11	0.77	-1.09	0.00	0.00	12.88	64.35	41.82	-1.46
	L_7-L_8	310.43	353.65	350.48	280.16	305.4	355.4	355.44	352.52	403.40	1093.1	1.13	13312		
	L_8-L_9	159.50	214.76	302.36	188.34	204.4	232.4	232.45	355.44	304.93	403.40	1093.1	1.13	13312	
	L_9-L_{10}	1.20	-14.15	-5.81	-24.08	-148.20	-0.40	-1.93	-11.06	17.18	-207.43	75.15	-124.59	-229.04	158.2
	L_{10}-L_{11}	-33.05	-0.03	-0.77	-2.51	-11.47	111.79	-62.31	-62.31	-62.31	-62.31	-62.31	-62.31	-62.31	-62.31
	L_{11}-L_{12}	-0.42	-0.18	0.82	-1.36	-4.12	-0.05	-0.07	-0.13	0.53	1.96	1.20	-4.52	-10.01	-29.64
	L_{12}-L_{13}	-0.60	13.98	0.15	-1.89	-38.41	-2.64	-0.13	-0.40	0.53	1.96	1.20	-4.52	-10.01	-29.64
	L_{13}-L_{14}	-0.60	13.98	0.15	-1.89	-38.41	-2.64	-0.13	-0.40	0.53	1.96	1.20	-4.52	-10.01	-29.64
	L_{14}-L_{15}	-0.03	-0.11	0.46	1.68	1.26	4.61	-41.45	-225.91	-0.45	-1.66	6.78	24.94	48.44	178.12
	L_{15}-L_{16}	-0.03	-0.11	0.46	-1.87	25.52	-12.66	-266.80	90.04	2.29	-0.89	29.02	-12.93	275.34	-119.46
	L_{16}-L_{17}	-0.01	-0.11	1.96	-0.87	25.52	-12.66	-266.80	90.04	2.29	-0.89	29.02	-12.93	275.34	-119.46
	L_{17}-L_{18}	-0.02	-0.02	-26.18	14.38	-172.22	104.47	19.56	-169.19	172.25	-43.32	39.38	182.47	749.5	1.00
	L_{18}-L_{19}	-0.02	-0.02	-26.18	14.38	-172.22	104.47	19.56	-169.19	172.25	-43.32	39.38	182.47	749.5	1.00
	L_{19}-L_{20}	-0.02	-0.02	-26.18	14.38	-172.22	104.47	19.56	-169.19	172.25	-43.32	39.38	182.47	749.5	1.00
	L_{20}-L_{21}	-0.02	-0.02	-26.18	14.38	-172.22	104.47	19.56	-169.19	172.25	-43.32	39.38	182.47	749.5	1.00
	L_{21}-L_{22}	-0.02	-0.08	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{22}-L_{23}	-0.03	-0.13	2.75	-10.90	-18.45	-32.49	-126.50	-0.37	-0.77	-6.67	13.97	-72.79	161.82	2.81
	L_{23}-L_{24}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{24}-L_{25}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{25}-L_{26}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{26}-L_{27}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{27}-L_{28}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{28}-L_{29}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{29}-L_{30}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{30}-L_{31}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{31}-L_{32}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{32}-L_{33}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{33}-L_{34}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{34}-L_{35}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{35}-L_{36}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{36}-L_{37}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{37}-L_{38}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{38}-L_{39}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{39}-L_{40}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{40}-L_{41}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{41}-L_{42}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{42}-L_{43}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{43}-L_{44}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{44}-L_{45}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{45}-L_{46}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{46}-L_{47}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{47}-L_{48}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{48}-L_{49}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{49}-L_{50}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{50}-L_{51}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{51}-L_{52}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{52}-L_{53}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{53}-L_{54}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{54}-L_{55}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{55}-L_{56}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{56}-L_{57}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{57}-L_{58}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{58}-L_{59}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{59}-L_{60}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{60}-L_{61}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{61}-L_{62}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{62}-L_{63}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{63}-L_{64}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{64}-L_{65}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{65}-L_{66}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{66}-L_{67}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{67}-L_{68}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{68}-L_{69}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{69}-L_{70}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{70}-L_{71}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{71}-L_{72}	-0.03	-0.13	-0.77	-6.67	13.97	-72.79	161.82	2.81	-108.92	298.9	218.75	284.83	1462.6	1.10
	L_{72}-L_{73}	-0.03	-0.13	-0.77	-6

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HS20 Truck

Condition: As Inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.00	DL Factor:	1.00
LL Factor:	2.17	LL Factor:	1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) (k-in)	Pedestrian Load (Min) (k-in)	Lane Reduction & Impact Live Load Max (k-in)	Lane Reduction & Impact Live Load Min (k-in)	Impact Pedestrian Load Max (k-in)	Impact Pedestrian Load Min (k-in)
Structure 1	U_0–L_1	-15.73	54.50	3.43	3.68	0.51	-0.74	-0.04	0.43	0.03	-0.13
	U_1–L_1	-27.56	29.23	-7.73	2.72	0.98	-0.90	-0.57	0.52	0.20	-0.18
	U_1–L_2	40.63	5.27	2.18	0.91	-1.06	-0.26	-0.35	0.22	0.07	-0.05
	U_1–U_2	40.63	-41.52	-0.96	1.16	1.28	-1.21	-0.06	0.10	0.17	-0.21
	U_2–L_2	56.81	-27.81	-0.39	0.33	1.00	-1.05	-0.30	0.30	0.13	-0.14
	U_2–L_3	64.44	-72.23	-0.11	0.18	1.82	-2.11	0.00	0.00	0.42	-0.47
	U_3–L_3	72.27	-89.72	-0.32	0.41	2.01	-2.31	0.00	0.00	0.48	-0.50
	U_3–L_4	109.02	-121.41	-0.79	0.85	2.39	-2.43	0.00	0.00	0.57	-0.60
	U_4–L_4	-42.58	47.66	3.08	2.87	-3.43	-0.77	0.93	0.77	-0.53	-0.87
	U_4–L_5	-181.49	200.17	-3.67	3.98	0.09	-0.21	-0.94	1.08	0.00	-0.25
	U_5–L_5	-123.88	126.08	-2.87	3.18	-0.06	-0.29	-0.61	0.71	-0.04	-0.05
	U_5–L_6	-127.66	117.41	-3.07	3.64	-0.21	-0.57	-0.68	0.85	0.00	-0.02
	U_6–L_6	-106.25	107.52	-2.30	2.50	0.12	-0.55	0.00	0.00	0.00	-0.02
	U_6–L_7	-66.44	79.85	-2.12	2.27	0.33	-0.28	-0.35	0.40	0.00	0.00
	U_7–L_7	-31.62	56.77	-1.36	1.70	0.53	-0.03	-0.13	0.15	0.00	0.00
	U_8–L_8	17.15	-23.67	-0.74	0.74	2.19	-2.31	0.10	0.26	-0.30	-0.51
	U_8–L_9	60.44	-14.52	-0.49	0.49	2.41	-2.39	0.27	0.30	-0.01	-0.10
	U_9–L_9	74.38	-85.04	-0.36	0.37	2.17	-2.25	-0.06	0.06	0.43	-0.46
	U_9–L_{10}	137.76	-162.61	-0.49	0.50	3.60	-3.66	-0.08	0.08	0.83	-0.87
	U_{10}–L_{10}	163.50	-173.08	-0.43	0.41	3.42	-3.48	-0.07	0.07	0.91	-0.95
	U_{10}–L_{11}	187.92	-226.20	-0.28	0.36	2.66	-3.27	-0.06	0.07	0.93	-1.13
	U_{11}–L_{11}	133.50	224.40	-4.53	5.05	0.38	-0.72	0.04	-0.02	0.46	-0.28
	U_{11}–L_{12}	-201.27	204.78	-4.49	4.59	0.92	-0.87	0.91	0.88	0.15	-0.14
	U_{12}–L_{12}	-179.55	188.73	-4.41	4.43	0.97	-0.97	0.96	0.92	-0.11	-0.18
	U_{12}–L_{13}	-79.55	88.71	-2.41	2.52	0.61	-0.64	-0.37	0.41	0.10	-0.10
	U_{13}–L_{13}	-47.01	54.58	-2.06	2.09	0.70	-0.76	-0.36	0.41	0.06	-0.03
	U_{13}–L_{14}	-4.05	12.51	-1.82	1.96	0.75	-0.79	-0.17	0.21	0.13	-0.13
	U_{14}–L_{14}	27.52	-27.99	-1.27	1.36	1.32	-1.34	-0.04	0.05	0.10	-0.12
	U_{14}–L_{15}	59.94	-69.39	-0.46	0.50	1.73	-1.85	0.00	0.00	0.18	-0.20
	U_{15}–L_{15}	130.30	-141.79	-0.36	0.24	2.85	-3.02	0.00	0.00	0.47	-0.50
	U_{15}–L_{16}	216.97	-221.44	-0.31	0.20	4.29	-4.29	0.00	0.00	0.69	-0.69
	U_{16}–L_{16}	193.17	-200.18	-0.26	0.37	3.54	-3.72	0.00	0.00	0.67	-0.68
	U_{16}–L_{17}	194.78	-194.58	-0.45	0.55	3.39	-3.46	0.00	0.00	0.65	-0.65
	U_{17}–L_{17}	177.01	-169.56	-0.75	0.95	3.09	-3.09	0.00	0.00	0.60	-0.59
	U_{17}–L_{18}	231.79	-230.81	-1.25	1.26	3.12	-2.95	0.00	0.00	0.77	-0.77
	U_{18}–L_{18}	29.69	-29.69	-0.45	0.45	0.94	-0.94	-0.34	0.34	-0.19	0.19
	U_{18}–L_{19}	-225.27	219.21	-4.74	4.43	0.37	-0.46	-0.83	0.81	0.00	-0.06
	U_{19}–L_{19}	-209.32	209.32	-4.52	4.52	0.00	0.00	-0.87	0.87	0.00	0.00
	U_{19}–L_{20}	-182.72	181.55	-4.77	4.80	0.67	-0.64	-0.77	0.78	0.07	-0.08
	U_{20}–L_{20}	-159.30	160.85	-4.39	4.72	0.81	-0.81	-0.74	0.76	0.07	-0.09
	U_{20}–L_{21}	-109.33	94.95	-2.68	2.77	0.61	-0.61	-0.50	0.58	0.07	-0.08
	U_{21}–L_{21}	-59.48	63.33	-2.27	2.20	0.69	-0.62	-0.34	0.36	0.00	-0.01
	U_{21}–L_{22}	-37.60	-4.29	-1.77	1.67	0.73	-0.67	-0.16	0.19	0.00	-0.01
	U_{22}–L_{22}	-4.58	-5.03	-0.99	1.09	1.24	-1.34	-0.07	0.09	0.13	-0.14
	U_{22}–L_{23}	28.81	-56.10	-0.74	0.43	1.67	-1.84	-0.13	0.16	0.26	-0.29
	U_{23}–L_{23}	70.77	-74.09	-0.70	0.70	2.34	-2.40	-0.05	0.05	0.40	-0.41
	U_{23}–L_{24}	104.64	-104.99	-0.66	0.63	2.93	-2.87	-0.06	0.06	0.52	-0.51
	U_{24}–L_{24}	139.52	-139.52	-0.63	0.63	3.52	-3.52	-0.06	0.06	0.63	-0.63
	U_{24}–L_{25}	189.52	-191.09	-0.66	0.64	4.33	-4.36	-0.06	0.06	0.80	-0.81
	U_{25}–L_{25}	152.80	-177.43	-0.57	0.64	3.45	-3.77	-0.06	0.06	0.64	-0.74
	U_{25}–L_{26}	207.45	-212.05	-1.33	1.34	3.44	-3.21	0.05	0.00	0.81	-0.82
	U_{26}–L_{26}	42.03	-44.49	-0.74	0.74	1.48	-1.48	-0.29	0.29	-0.29	0.29
	U_{26}–L_{27}	-251.63	246.66	-4.98	3.89	0.42	-0.42	-0.82	0.81	0.00	-0.06
	U_{27}–L_{27}	-185.28	177.57	-3.72	3.75	0.37	-0.65	-0.66	0.69	0.00	-0.06
	U_{27}–L_{28}	-185.33	192.16	-3.49	3.78	-0.03	-0.13	-0.64	0.64	0.00	0.00
	U_{28}–L_{28}	-152.36	147.07	-2.84	2.89	-0.03	-0.13	-0.53	0.53	0.00	0.00
	U_{28}–L_{29}	-116.39	129.35	-2.79	2.90	0.26	-0.18	-0.42	0.45	0.00	0.00
	U_{29}–L_{29}	-52.79	62.47	-1.37	1.57	0.53	-0.56	-0.18	0.22	0.00	0.00
	U_{29}–L_{30}	-19.79	29.04	-0.77	0.91	0.30	-0.31	-0.10	0.12	0.00	0.00
	U_{30}–L_{30}	18.85	-25.58	-0.78	0.81	1.99	-2.12	-0.14	0.14	0.22	-0.25
	U_{30}–L_{31}	59.19	-59.04	-0.71	0.71	2.61	-2.61	-0.14	0.14	0.36	-0.36
	U_{31}–L_{31}	89.93	-96.82	-0.69	0.60	2.29	-2.35	-0.10	0.10	0.37	-0.40
	U_{31}–L_{32}	124.87	-124.87	-0.63	0.63	2.90	-2.90	-0.06	0.06	0.50	-0.50
	U_{32}–L_{32}	189.50	-202.27	-0.72	0.70	3.51	-3.56	-0.12	0.11	0.78	-0.81
	U_{33}–L_{33}	214.86	-270.07	-0.44	0.64	2.89	-3.54	-0.06	0.10	0.79	-1.02
	U_{34}–L_{34}	227.63	185.14	-4.32	4.61	0.51	-0.70	-0.04	0.43	0.03	-0.13
	U_{34}–L_{35}	-186.34	183.96	-4.53	4.51	0.61	-0.51	-0.94	1.00	0.00	-0.08
	U_{35}–L_{35}	-144.22	152.73	-3.75	3.77	0.61	-0.61	-0.74	0.78	0.00	-0.06
	U_{36}–L_{36}	-66.05	78.17	-2.40	2.47	0.42	-0.43	-0.44	0.48	0.00	0.00
	U_{37}–L_{37}	-19.15	29.04	-1.01	1.11	0.30	-0.31	-0.13	0.15	0.00	0.00
	U_{38}–L_{38}	-11.00	18.47	-1.76	1.93	0.74	-0.73	-0.22	0.26	0.00	-0.01
	U_{39}–L_{39}	39.39	-43.58	-0.90	0.96	1.51	-1.62	0.00	0.00	0.16	-0.17
	U_{40}–L_{40}	119.88	-119.88	-0.63	0.63	2.92	-2.92	-0.06	0.06	0.50	-0.50
	U_{41}–L_{41}	119.88	-118.13	-0.33	0.29	2.62	-2.66	0.00	0.00	0.50	-0.50
	U_{42}–L_{42}	129.24	-129.17	-0.26	0.45	2.98	-2.59	0.05	0.02	0.62	-0.71
	U_{43}–L_{43}	187.65	-187.65	-0.39	0.39	4.48	-4.48	0.00	0.00	0.77	-0.77
	U_{44}–L_{44}	180.45	-209.65	-0.87	1.02	2.69	-2.86	0.00	0.00	0.93	-1.09
	U_{45}–L_{45}	24.87	-49.22	-4.37	4.96	2.41	-3.08	-0.77	0.86	0.79	-1.01
	U_{46}–L_{46}	-121.63	132.23	-3.19	3.35	0.68	-0.12	-0.72	0.78	0.00	0.00
	U_{47}–L_{47}	-77.64	76.04	-2.12	2.64	0.61	-0.20	-0.43	0.51	-0.04	-0.03
	U_{48}–L_{48}	-42.63	70.41	-1.68	2.06	0.03	-0.09	-0.40	0.40	0.00	0.00
	U_{49}–L_{49}	-57.66	58.81	-1.39	1.39	0.38	-0.31	-0.32	0.33	0.00	0.00
	U_{50}–L_{50}	-41.96	42.31	-0.79	0.93	1.92	-1.65	-0.17	0.20	0.03	-0.06
	U_{51}–L_{51}	-9.20	-2.43	-0.87	0.97	1.98	-2.27	-0.19	0.21	0.28	-0.35
	U_{52}–L_{52}	28.08	-38.33	-0.76	0.72	2.21	-2.13	-0.15	0.18	0.50	-0.53
	U_{53}–L_{53}	78.24	-95.55	-0.47	0.89	1.95	-2.48	-0.15	0.17	0.56	-0.71

ZZ Axis Moment Properties

Location	Member	Max. Pos. Moment Start (k-in)	Max. Pos. Moment End (k-in)	S_{bot} (in^3)	S_{top} (in^3)	Z_z (in^3)	I_z (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula (.8 Sxtop + .2Sxbot) F_y/Sq	M_y (k-in)	Equivalent Mom. Factor
Structure 1	U_0–L_1	-119.64	177.34	11.09	49.40	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_1–L_1	-119.64	116.79	7.37	11.89	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_1–L_2	41.93	58.33	37.37	37.65	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_1–U_2	41.93	-41.93	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_2–L_2	58.33	-29.74	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_2–L_3	67.04	-74.65	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_3–L_3	74.65	-92.14	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_3–L_4	111.41	-123.80	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_4–L_4	-44.64	49.74	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_4–L_5	-183.50	202.18	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_5–L_5	-125.89	128.09	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_5–L_6	-129.67	119.42	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_6–L_6	-108.26	109.53	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_6–L_7	-68.45	81.86	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_7–L_7	-33.63	58.79	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_8–L_8	15.15	-25.65	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_8–L_9	58.44	-16.50	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_9–L_9	72.38	-87.06	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_9–L_{10}	135.76	-164.63	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{10}–L_{10}	161.50	-175.10	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{10}–L_{11}	185.92	-228.22	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{11}–L_{11}	131.50	226.42	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{11}–L_{12}	-203.25	206.80	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{12}–L_{12}	-181.53	190.75	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{12}–L_{13}	-81.53	90.73	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{13}–L_{13}	-49.01	56.60	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{13}–L_{14}	-6.05	14.53	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{14}–L_{14}	25.52	-25.97	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{14}–L_{15}	57.92	-67.41	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{15}–L_{15}	128.30	-139.81	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{15}–L_{16}	214.97	-219.46	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{16}–L_{16}	191.17	-198.20	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{16}–L_{17}	192.78	-192.60	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{17}–L_{17}	175.01	-167.58	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{17}–L_{18}	229.79	-228.83	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{18}–L_{18}	27.69	-27.69	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{18}–L_{19}	-227.27	221.21	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{19}–L_{19}	-211.32	211.32	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{19}–L_{20}	-184.72	183.55	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{20}–L_{20}	-161.30	162.85	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{20}–L_{21}	-111.33	96.95	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{21}–L_{21}	-61.48	65.33	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{21}–L_{22}	-39.60	-2.29	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{22}–L_{22}	-6.58	-7.03	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{22}–L_{23}	26.81	-58.10	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{23}–L_{23}	68.77	-72.09	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{23}–L_{24}	102.64	-102.99	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{24}–L_{24}	137.52	-137.52	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{24}–L_{25}	187.52	-189.09	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{25}–L_{25}	150.80	-175.43	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{25}–L_{26}	205.45	-210.05	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{26}–L_{26}	40.03	-42.49	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{26}–L_{27}	-249.63	244.66	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{27}–L_{27}	-183.28	175.57	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{27}–L_{28}	-183.33	190.16	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{28}–L_{28}	-150.36	145.07	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{28}–L_{29}	-114.39	127.35	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{29}–L_{29}	-50.79	60.47	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{29}–L_{30}	-17.79	27.04	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{30}–L_{30}	20.85	-27.58	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{30}–L_{31}	61.19	-61.04	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{31}–L_{31}	91.93	-98.82	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{31}–L_{32}	126.87	-126.87	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{32}–L_{32}	191.50	-204.27	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{33}–L_{33}	216.86	-272.07	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{34}–L_{34}	229.63	187.14	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{34}–L_{35}	-184.34	185.96	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{35}–L_{35}	-142.22	154.73	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{36}–L_{36}	-64.05	80.17	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{37}–L_{37}	-17.15	31.04	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{38}–L_{38}	-8.00	20.47	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{39}–L_{39}	41.39	-45.58	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{40}–L_{40}	121.88	-121.88	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{41}–L_{41}	121.88	-120.13	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{42}–L_{42}	131.24	-131.17	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{43}–L_{43}	189.65	-189.65	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{44}–L_{44}	182.45	-211.65	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{45}–L_{45}	26.87	-51.22	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{46}–L_{46}	-123.63	134.23	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{47}–L_{47}	-79.64	78.04	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{48}–L_{48}	-44.63	72.41	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{49}–L_{49}	-59.66	60.81	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{50}–L_{50}	-43.96	44.31	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{51}–L_{51}	-11.20	-4.43	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{52}–L_{52}	26.08	-40.33	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782
	U_{53}–L_{53}	76.24	-97.55	37.65	37.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) (k-in)	Pedestrian Load (Min) (k-in)	Lane Reduction & Impact Live Load Max (k-in)	Lane Reduction & Impact Live Load Min (k-in)	Impact Pedestrian Load Max (k-in)	Impact Pedestrian Load Min (k-in)
Structure 2	U_{54}–L_{54}	140.57	-181.44	-0.32	0.23	2.80	-3.42	0.00	0.00	0.72	-0.89
	U_{54}–L_{55}	129.24	-129.17	-0.26	0.45	2.38	-2.59	0.05	0.02	0.62	-0.71
	U_{55}–L_{55}	180.45	-209.65	-0.87	1.02	2.69	-2.86	0.00	0.00	0.93	-1.09
	U_{56}–L_{56}	24.87	-49.22	-4.37	4.96	2.41	-3.08	-0.77	0.86	0.79	-1.01
	U_{57}–L_{57}	-121.63	132.23	-3.19	3.35	0.68	-0.12	-0.72	0.78	0.00	0.00
	U_{58}–L_{58}	-77.64	76.04	-2.12	2.64	0.61	-0.20	-0.43	0.51	-0.04	-0.03
	U_{59}–L_{59}	-42.63	70.41	-1.68

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	2.17	LL Factor:	1.80

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
For Guidelines for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Min End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Min End (k-in)
Structure 1	U_0-L_1	3.62	-1.41	-1.72	0.87	0.06	-0.13	0.15	0.01	0.03	-0.02
	U_1-L_1	-11.46	-3.33	-0.81	0.32	-0.41	-0.24	0.25	0.07	0.08	-0.04
	U_1-L_2	-0.13	11.79	-0.86	0.50	-0.46	0.00	-0.04	0.06	-5.13	1.87
	U_1-L_3	9.82	-15.00	0.13	0.11	-0.29	-0.74	0.08	0.01	-0.08	-0.12
	U_2-L_2	-16.21	57.07	2.47	-1.05	-0.27	0.12	-0.17	0.01	2.49	0.89
	U_2-L_3	-34.06	79.11	1.64	1.38	-0.30	-0.09	-0.28	0.44	0.00	0.00
	U_3-L_3	-100.86	92.26	-2.08	-2.55	1.10	0.41	-0.92	-0.50	0.51	0.00
	U_3-L_4	-1.45	103.74	0.89	1.74	0.34	-0.58	-0.09	0.65	0.00	0.00
	U_4-L_4	-12.32	139.19	-0.94	2.38	-0.13	-0.11	0.01	0.71	0.00	0.00
	U_4-L_5	-73.41	69.80	-1.72	1.18	-0.67	-0.05	-0.31	0.35	0.00	0.00
	U_5-L_5	-87.96	42.70	-1.75	0.60	-0.39	0.23	0.00	0.00	-27.94	12.37
	U_5-L_6	-69.88	47.84	-1.39	1.16	-0.25	-0.30	-0.31	0.21	0.00	0.00
	U_6-L_6	-27.39	6.37	-0.67	0.35	0.04	-0.51	-0.03	0.05	-0.12	-0.62
	U_6-L_7	-0.38	32.70	-0.01	0.61	-0.01	-0.06	-0.01	0.00	0.00	0.00
	U_7-L_7	-31.03	12.71	-1.13	0.88	0.21	-0.33	0.19	0.11	0.05	-0.04
	U_7-L_8	-46.63	27.25	-1.03	0.22	-0.28	-0.19	0.04	0.04	-14.56	11.44
	U_8-L_8	-118.88	85.28	-2.68	2.08	0.35	-0.33	-0.55	0.42	0.06	-0.05
	U_8-L_9	-117.64	87.57	-2.47	2.14	0.30	-0.57	-0.45	0.54	0.04	-0.04
	U_9-L_9	-148.08	120.85	-2.30	2.06	0.20	-0.29	-0.79	0.63	0.04	0.04
	U_9-L_{10}	-86.91	116.74	-3.66	2.98	0.22	-0.43	-0.13	0.38	0.01	-0.06
	U_{10}-L_{10}	-114.63	114.46	-3.52	2.92	-0.69	-0.33	0.12	0.00	0.00	0.00
	U_{10}-L_{11}	-118.23	92.26	-2.96	2.56	0.73	-0.65	-0.62	0.43	0.00	0.00
	U_{11}-L_{11}	-58.34	58.07	-1.89	1.28	-0.42	-0.33	-0.32	0.27	0.00	0.00
	U_{11}-L_{12}	-24.33	8.61	-1.13	0.51	0.07	-0.38	-0.18	0.11	0.07	-0.06
	U_{12}-L_{12}	1.47	13.42	-0.86	0.55	0.05	-0.06	-0.04	0.04	-10.11	-10.11
	U_{12}-L_{13}	13.33	-37.03	-0.36	0.18	0.47	-1.00	0.00	0.00	0.04	0.10
	U_{13}-L_{13}	-66.01	54.01	-1.39	1.12	0.10	-0.46	-0.23	0.17	0.00	0.00
	U_{13}-L_{14}	-133.77	104.34	-3.01	2.51	0.19	-0.42	-0.42	0.32	0.00	0.00
	U_{14}-L_{14}	-116.17	105.67	-2.30	1.71	0.03	-0.19	-0.36	0.36	0.00	0.00
	U_{14}-L_{15}	-139.98	104.35	-2.57	2.04	0.15	-0.45	-0.45	0.36	0.00	0.00
	U_{15}-L_{15}	-131.97	151.07	-2.50	2.35	0.63	-0.39	-0.42	0.51	0.00	0.00
	U_{15}-L_{16}	-175.19	162.79	-2.67	2.48	1.03	-0.74	-0.56	0.54	0.02	0.04
	U_{16}-L_{16}	-64.29	165.27	-1.49	2.06	0.74	-0.58	-0.14	0.41	0.00	0.00
	U_{16}-L_{17}	-45.28	135.71	-2.32	2.84	0.58	-0.21	-0.36	0.49	0.18	-0.02
	U_{17}-L_{17}	-143.90	131.73	-3.73	3.29	0.92	-0.36	-0.77	0.61	0.03	0.03
	U_{17}-L_{18}	-112.49	136.83	-3.24	3.01	0.33	-0.40	-0.48	0.55	0.00	0.00
	U_{18}-L_{18}	-83.98	108.58	-2.63	2.43	0.26	-0.26	-0.26	0.45	0.00	0.00
	U_{18}-L_{19}	-83.86	94.66	-2.63	2.06	0.44	-0.45	-0.37	0.40	0.00	0.00
	U_{19}-L_{19}	-51.74	54.21	-1.63	1.34	-0.09	-0.43	-0.27	0.25	0.00	0.00
	U_{19}-L_{20}	-30.37	25.15	-1.16	0.76	0.18	-0.15	-0.18	0.16	0.00	0.00
Structure 2	U_0-L_1	-14.00	1.02	-0.24	0.42	0.20	-0.79	0.00	0.04	-0.01	-0.01
	U_1-L_1	18.17	5.29	-0.04	0.04	0.00	-0.01	0.00	0.00	0.00	0.00
	U_1-L_2	-32.82	30.91	-1.22	1.05	0.15	-0.39	-0.20	0.17	0.03	-0.03
	U_2-L_2	-53.04	49.89	-1.71	1.71	0.29	-0.61	-0.29	0.29	0.00	0.00
	U_2-L_3	-83.88	100.04	-2.49	2.11	0.44	-0.48	-0.39	0.44	0.00	0.00
	U_3-L_3	-98.49	117.09	-2.49	2.31	0.37	-0.45	-0.42	0.49	0.00	0.00
	U_3-L_4	-125.63	123.54	-2.51	2.41	1.02	-0.79	-0.52	0.49	0.01	-0.01
	U_4-L_4	-30.08	123.80	-1.48	2.39	0.48	-0.14	-0.15	0.49	0.00	0.00
	U_4-L_5	-83.58	187.86	-3.07	3.65	0.65	-0.30	-0.45	0.61	0.00	0.00
	U_5-L_5	-118.54	150.45	-2.75	2.56	0.35	-0.37	-0.45	0.53	0.00	0.00
	U_5-L_6	-128.90	122.99	-2.65	2.00	-0.12	-0.11	-0.40	0.44	0.00	0.00
	U_6-L_6	-128.46	96.46	-2.64	1.86	-0.27	-0.44	-0.41	0.35	0.00	0.00
	U_6-L_7	-128.40	95.00	-2.44	1.86	-0.27	-0.44	-0.41	0.35	0.00	0.00
	U_7-L_7	-63.23	40.39	-1.58	1.26	0.44	-0.38	-0.27	0.19	0.07	-0.07
	U_7-L_8	-43.21	40.39	-1.58	1.26	0.44	-0.38	-0.27	0.19	0.07	-0.07
	U_8-L_8	-135.93	107.52	-2.09	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08
	U_8-L_9	-135.93	107.52	-2.09	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08
	U_9-L_9	-66.35	89.44	-2.05	2.93	0.13	-0.24	-0.23	0.38	0.01	-0.01
	U_9-L_{10}	-137.90	96.45	-3.11	2.34	0.62	-0.35	-0.75	0.56	0.05	-0.05
	U_{10}-L_{10}	-113.96	82.81	-2.56	1.86	0.40	-0.30	-0.61	0.40	0.00	0.00
	U_{10}-L_{11}	-89.32	90.65	-3.14	2.06	-0.06	-0.56	-0.57	0.50	-0.42	0.00
	U_{11}-L_{11}	-49.89	24.72	-1.40	1.10	0.30	-0.25	-0.30	0.20	0.05	-0.05
	U_{11}-L_{12}	-30.80	13.60	-1.07	0.47	0.03	-0.22	-0.13	0.09	0.03	-0.03
	U_{12}-L_{12}	-2.65	25.29	-0.51	0.23	0.29	-0.83	0.00	0.00	-0.05	-0.09
	U_{12}-L_{13}	-0.49	22.81	-0.34	0.20	0.29	-0.83	0.00	0.00	-0.05	-0.09
	U_{13}-L_{13}	-71.40	53.68	-1.50	1.24	-0.07	-0.29	-0.32	0.23	0.00	0.00
	U_{13}-L_{14}	-81.43	41.31	-1.88	0.90	-0.82	-0.34	-0.36	0.26	0.00	0.00
	U_{14}-L_{14}	-113.96	76.06	-2.49	1.67	-0.12	-0.31	-0.49	0.37	0.00	0.00
	U_{14}-L_{15}	-94.50	94.90	-1.97	1.49	0.61	-0.24	-0.45	0.52	0.00	0.00
	U_{15}-L_{15}	-113.96	76.06	-2.49	1.67	-0.12	-0.31	-0.49	0.37	0.00	0.00
	U_{15}-L_{16}	-10.14	116.78	-1.41	2.48	-0.11	-0.14	-0.10	0.66	0.00	0.00
	U_{16}-L_{16}	-113.96	82.81	-2.56	1.86	-0.40	-0.30	-0.61	0.40	0.00	0.00
	U_{16}-L_{17}	-89.32	90.65	-3.14	2.06	-0.06	-0.56	-0.57	0.50	-0.42	0.00
	U_{17}-L_{17}	-49.89	24.72	-1.40	1.10	0.30	-0.25	-0.30	0.20	0.05	-0.05
	U_{17}-L_{18}	-30.80	13.60	-1.07	0.47	0.03	-0.22	-0.13	0.09	0.03	-0.03
	U_{18}-L_{18}	-18.99	22.49	0.15	0.49	-0.62	-0.46	0.04	0.11	-0.18	-0.01
	U_{18}-L_{19}	-4.49	12.52	-0.70	0.17	0.30	0.00	0.00	0.00	-0.62	-0.91
	U_{19}-L_{19}	-34.24	14.49	-0.67	0.55	0.10	-0.20	0.13	0.07	-0.06	-0.09
	U_{19}-L_{20}	-20.69	7.32	-0.47	0.33	0.00	-0.20	0.09	0.05	-0.04	-0.06

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	$I_{t/n}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term = F_y*S_top	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m/n}$	Equivalent Mom. Factor C_{max}
Structure 1	U_0-L_1	3.62	-1.41	-1.72	0.87	0.06	-0.13	0.15	0.01	45.20	23.21	8.44	5.57	15.6	15.63	15.58	25.96
	U_1-L_1	-11.46	-3.33	-0.81	0.32	-0.41	-0.24	0.25	0.07	46.92	24.09	8.62	5.68	16.2	16.25	16.19	26.98
	U_1-L_2	-0.13	11.79	-0.86	0.50	-0.46	0.00	-0.04	0.06	-5.13	1.87	-0.67	-0.74	-0.74	-1.29	-0.13	-0.27
	U_1-L_3	9.82	-15.00	0.13	0.11	-0.29	-0.74	0.08	0.01	-0.08	-0.12	1.79	1.50	-3.82	0.86	0.90	0.13
	U_2-L_2	-16.21	57.07	2.47	-1.05	-0.27	0.12	-0.17	0.01	2.49	0.89	-7.86	3.66	-3.66	-3.66	-3.66	-7.32
	U_2-L_3	-34.06	79.11	1.64	1.38	-0.30	-0.09	-0.28	0.44	0.00	0.00	-91.87	142.79	-52.87	100.38	35.1	70.29
	U_3-L_3	-100.86	92.26	-2.08	-2.55	1.10	0.41	-0.92	-0.50	0.51	0.00	-27.39	21.14	-13.62	5.41	-4.11	-8.15
	U_3-L_4	-1.45	103.74	0.89	1.74	0.34	-0.58	-0.09	0.65	0.00	0.00	-11.84	23.23	-4.48	7.74	-1.07	7.78
	U_4-L_4	-12.32	139.19	-0.94	2.38	-0.13	-0.11	0.01	0.71	0.00	0.00	-12.16	30.83	-1.64	8.32	0.60	9.20
	U_4-L_5	-73.41	69.80	-1.72	1.18	-0.67	-0.05	-0.31	0.35	0.00	0.00	-22.27	15.23	-8.72	-0.65	-3.77	4.25
	U_5-L_5	-87.96	42.70	-1.75	0.60	-0.39	0.23	0.00	0.00	-27.94	12.37	-13.57	1.73	-6.51	-0.51	-4.52	2.71
	U_5-L_6	-69.88	47.84	-1.39	1.16	-0.25	-0.30	-0.31	0.21	0.00	0.00	-17.93	15.01	-3.21	-3.62	3.70	2.66
	U_6-L_6	-27.39	6.37	-0.67	0.35	0.04	-0.51	-0.03	0.05	-0.12	-0.62	-8.60	4.50	0.56	-6.61	-0.31	0.61
	U_6-L_7	-0.38	32.70	-0.01	0.61	-0.01	-0.06	-0.01	0.00	0.00	0.00	-0.96	0.00	0.00	0.00	0.00	0.00
	U_7-L_7	-31.03	12.71	-1.13	0.88	0.21	-0.33	0.19	0.11	0.05	-0.04	-14.56	11.44	2.73	-4.32	-2.29	1.32
	U_7-L_8	-46.63	27.25	-1.03	0.22	-0.28	-0.19	0.04	0.04	-14.56	11.44	2.73	-4.32	-2.29	1.32	0.56	-0.52
	U_8-L_8	-118.88	85.28	-2.68	2.08	0.35	-0.33	-0.55	0.42	0.06	-0.05	-26.89	15.48	-12.4	-6.59	5.04	6.67
	U_8-L_9	-117.64	87.57	-2.47	2.14	0.30	-0.57	-0.45	0.54	0.04	-0.04	-31.06	14.87	-13.1	-3.30	-6.79	5.48
	U_9-L_9	-148.08	120.85	-2.30	2.06	0.20	-0.29	-0.79	0.63	0.04	0.04	-29.71	26.61	2.52	-2.63	0.47	-7.56
	U_9-L_{10}	-86.91	116.74	-3.66	2.98	0.22	-0.43	-0.13	0.38	0.01	-0.06	-46.79	38.05	-2.86	-5.46	-1.51	4.57
	U_{10}-L_{10}	-114.63	114.46	-3.52	2.92	-0.69	-0.33	0.12	0.00	0.00	0.00	-44.96	37.38	1.27	-4.76	1.36	4.76
	U_{10}-L_{11}	-118.23	92.26	-2.96	2.56	0.73	-0.65	-0.62	0.43	0.00	0.00	-37.75	32.71	9.38	-8.28	-6.28	5.11
	U_{11}-L_{11}	-58.34	58.07	-1.89	1.28	-0.42	-0.33	-0.32	0.27	0.00	0.00	-23.52	16.01	-4.33	-2.39	2.42	2.39
	U_{11}-L_{12}	-24.33	8.61	-1.13	0.51	0.07	-0.38	-0.18	0.11	0.07	-0.06	-11.68	7.87	-4.83	-2.14	1.27	-0.86
	U_{12}-L_{12}	1.47	13.42	-0.86	0.55	0.05	-0.06	-0.04	0.04	-10.11	-10.11	-0.97	0.00	-0.01	-0.01	-0.01	-0.01
	U_{12}-L_{13}	13.33	-37.03	-0.36	0.18	0.47	-1.00	0.00	0.00	0.04	0.10	-6.65	2.35	-6.52	-0.50	-1.54	7.25
	U_{13}-L_{13}	-66.01	54.01	-1.39	1.12	0.10	-0.46	-0.23	0.17	0.00	0.00	-17.76	14.26	-1.21	-5.90	-2.80	2.04
	U_{13}-L_{14}	-133.77	104.34	-3.01	2.51	0.19	-0.42	-0.42	0.32	0.00	0.00	-33.07	25.12	-1.93	-7.30	-4.70	5.45
	U_{14}-L_{14}	-116.17	105.67	-2.30	1.71	0.03	-0.19	-0.36	0.36	0.00	0.00	-29.41	21.88	0.32	-2.45	-4.27	4.21
	U_{14}-L_{15}	-139.98	104.35	-2.57	2.04	0.15	-0.45	-0.45	0.36	0.00	0.00	-33.85	25.01	-2.13	-6.60	-4.40	5.00
	U_{15}-L_{15}	-131.97	151.07	-2.50	2.35	0.63	-0.39	-0.42	0.51	0.00	0.00	-31.99	29.96	7.99	-4.41	-5.03	6.11
	U_{15}-L_{16}	-175.19	162.79	-2.67	2.48	1.03	-0.74	-0.56	0.54	0.02	0.04	-34.14	31.63	13.15	-9.45	-7.64	6.66
	U_{16}-L_{16}	-64.29	165.27	-1.49	2.06	0.74	-0.58	-0.14	0.41	0.00	0.00	-20.72	29.90	16.54	-2.72	-1.81	5.16
	U_{16}-L_{17}	-45.28	135.71	-2.32	2.84	0.58	-0.21	-0.36	0.49	0.18	-0.02	-29.23	35.87	7.35	-2.65	-4.34	5.82
	U_{17}-L_{17}	-143.90	131.73	-3.73	3.29	0.92	-0.36	-0.77	0.61	0.03	0.03	-36.89	34.56	9.10	-3.10	-5.74	7.70
	U_{17}-L_{18}	-112.49	136.83	-3.24	3.01	0.33	-0.40	-0.48	0.55	0.00	0.00	-40.94	37.99	4.18	-5.04	-5.76	6.59
	U_{18}-L_{18}	-83.98	108.58	-2.63	2.43	0.26	-0.26	-0.26	0.45	0.00	0.00	-24.94	29.88	-13.7	14.65	-16.66	16.88
	U_{18}-L_{19}	-83.86	94.66	-2.63	2.06	0.44	-0.45	-0.37	0.40	0.00	0.00	-33.18	29.56	5.61	-5.72	-4.49	4.60
	U_{19}-L_{19}	-51.74	54.21	-1.63	1.34	-0.09	-0.43	-0.27	0.25	0.00	0.00	-11.98	15.07	-2.57	-6.52	-3.26	3.01
	U_{19}-L_{20}	-30.37	25.15	-1.16	0.76	0.18	-0.15	-0.18	0.16	0.00	0.00	-8.18	8.55	-0.18	-3.16	-1.54	2.54
Structure 2	U_0-L_1	-14.00	1.02	-0.24	0.42	0.20	-0.79	0.00	0.04	-0.01	-0.01	-3.06	3.06	5.24	0.92	0.02	0.53
	U_1-L_1	18.17	5.29	-0.04	0.04	0.00	-0.01	0.00	0.00	0.00	0.00	4.72	4.72	0.00	0.00	0.00	0.00
	U_1-L_2	-32.82	30.91	-1.22	1.05	0.15	-0.39	-0.20	0.17	0.03	-0.03	-15.44	13.27	-1.93	-4.86	-2.36	2.08
	U_2-L_2	-53.04	49.89	-1.71	1.71	0.29	-0.61	-0.29	0.29	0.00	0.00	-24.96	21.45	-2.51	-6.30	-3.42	3.02
	U_2-L_3	-83.88	100.04	-2.49	2.11	0.44	-0.48	-0.39	0.44	0.00	0.00	-37.44	26.63	5.53	-6.10	-4.67	5.27
	U_3-L_3	-98.49	117.09	-2.49	2.31	0.37	-0.45	-0.42	0.49	0.00	0.00	-31.49	29.20	4.66	-5.63	-5.02	5.86
	U_3-L_4	-125.63	123.54	-2.51	2.41	1.02	-0.79	-0.52	0.49	0.01	-0.01	-31.71	30.38	12.85	-9.96	-6.22	5.89
	U_4-L_4	-30.08	123.80	-1.48	2.39	0.48	-0.14	-0.15	0.49	0.00	0.00	-26.56	29.74	6.06	-3.26	-3.77	5.89
	U_4-L_5	-83.58	187.86	-3.07	3.65	0.65	-0.30	-0.45	0.61	0.00	0.00	-30.33	38.92	8.24	-4.41	-5.36	7.26
	U_5-L_5	-118.54	150.45	-2.75	2.56	0.35	-0.37	-0.45	0.53	0.00	0.00	-35.19	32.57	4.43	-6.83	-5.42	6.30
	U_5-L_6	-128.90	122.99	-2.65	2.00	-0.12	-0.11	-0.40	0.44	0.00	0.00	-33.79	25.57	-1.47	-5.85	-5.30	5.00
	U_6-L_6	-128.46	96.46	-2.64	1.86	-0.27	-0.44	-0.41	0.35	0.00	0.00	-31.14	23.76	-3.39	-5.67	-4.96	4.16
	U_6-L_7	-128.40	95.00	-2.44	1.86	-0.27	-0.44	-0.41	0.35	0.00	0.00	-31.14	23.76	-3.39	-5.67	-4.96	4.16
	U_7-L_7	-63.23	40.39	-1.58	1.26	0.44	-0.38	-0.27	0.19	0.07	-0.07	-20.14	16.10	5.63	-3.91	-3.20	2.30
	U_7-L_8	-43.21	40.39	-1.58	1.26	0.44	-0.38	-0.27	0.19	0.07	-0.07	-20.14	16.10	5.63	-3.91	-3.20	2.30
	U_8-L_8	-135.93	107.52	-2.09	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08	-33.14	28.61	6.39	-6.59	-5.39	6.59
	U_8-L_9	-135.93	107.52	-2.09	2.19	0.55	-0.49	-0.35	0.45	0.08	-0.08	-33.14	28.61	6.39	-6.59	-5.39	6.59
	U_9-L_9	-66.35	89.44	-2.05	2.93	0.13	-0.24	-0.23	0.38	0.01	-0.01	-22.36	31.77	2.62	-2.63	-2.63	3.79
	U_9-L_{10}	-137.90	96.45	-3.11	2.34	0.62	-0.35	-0.75	0.56	0.05	-0.05	-40.25	30.28	5.49	-4.58	-6.01	6.67
	U_{10}-L_{10}	-113.96	82.81	-2.56	1.86	0.40	-0.30	-0.61	0.40	0.00	0.00	-33.03	25.57	4.00	-4.13	-5.42	5.42
	U_{10}-L_{11}	-89.32	90.65	-3.14	2.06	-0.06	-0.56	-0.57	0.50	-0.42	0.00	-41.96	27.67	0.77	-6.67	-5.62	5.62
	U_{11}-L_{11}	-49.89	24.72	-1.40	1.10	0.30	-0.25	-0.30	0.20	0.05	-0.05	-18.10	14.23	3.91	-3.25	-3.54	2.40
	U_{11}-L_{12}	-30.80	13.60	-1.07	0.47	0.03	-0.22	-0.13	0.09	0.03	-0.03	-12.12	6.91	-2.66	-1.32	-2.03	1.32
	U_{12}-L_{12}	-2.65	25.29	-0.51	0.23	0.29	-0.83	0.00	0.00	-0.05	-0.09	-6.59	2.98	7.49	-0.67	-1.02	1.00
	U_{12}-L_{13}	-0.49	22.81	-0.34	0.20	0.29	-0.83	0.00	0.00	-0.05	-0.09	-6.59	2.98	7.49	-0.67	-1.02	1.00
	U_{13}-L_{13}	-71.40	53.68	-1.50	1.24	-0.07	-0.29	-0.32	0.23	0.00	0.00	-19.39	16.06	-0.08	-4.32	-3.80	3.80
	U_{13}-L_{14}	-81.43	41.31	-1.88	0.90	-0.82	-0.34	-0.36	0.26	0.00	0.00	-24.36	11.68	-10.62	-4.36	-4.57	3.01
	U_{14}-L_{14}	-113.96	76.06	-2.49	1.67	-0.12	-0.31	-0.49	0.37	0.00	0.00	-30.56	20.74	-1.64	-5.53	-4.51	4.51
	U_{14}-L_{15}	-94.50	94.90	-1.97	1.49	0.61	-0.24	-0.45	0.52	0.00	0.00	-20.26	19.30	7.34	-3.04	-3.76	4.25
	U_{15}-L_{15}	-113.96	76.06	-2.49	1.67	-0.12	-0.31	-0.49	0.37	0.00	0.00	-30.56	20.74	-1.64	-5.53	-4.51	4.51
	U_{15}-L_{16}	-10.14	116.78	-1.41	2.48	-0.11	-0.14	-0.10	0.66	0.00	0.00	-18.88	33.12	-1.47	-3.91	-1.20	7.91
	U_{16}-L_{16}	-113.96	82.81	-2.56	1.86	-0.40	-0.30	-0.61	0.40	0.00	0.00	-41.96	27.67	0.77	-6.67	-5.62	5.62
	U_{16}-L_{17}	-89.32	90.65	-3.14	2.06	-0.06	-0.56	-0.57	0.50	-0.42	0.00	-41.96	27.67	0.77	-6.67	-5.62	5.62
	U_{17}-L_{17}	-49.89	24.72	-1.40	1.10	0.30	-0.25	-0.30	0.20	0.05	-0.05	-18.10	14.23	3.91	-3.25	-3.54	2.40
	U_{17}-L_{18}	-30.80	13.60	-1.07	0.47	0.03	-0.22	-0.13	0.09	0.03	-0.03	-12.12	6.91	-2.66	-1.32	-2.03	1.32
	U_{18}-L_{18}	-18.99	22.49	0.15	0.49	-0.62	-0.46	0.04	0.11	-0.18	-0.01	-2.00	6.49	4.24	-0.08	0.42	1.36
	U_{18}-L_{19}	-4.49	12.52	-0.70	0.17	0.30	0.00	0.00	0.00	-0.62	-0.91	-26.10	11.30	-13.65	15.4	15.42	23.71
	U_{19}-L_{19}	-34.24	14.49	-0.67	0.55

Moment (End) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-547.70	-185	70	-91	-863	9	-9	-26	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.248	1.00	Yes	0.739	0.205	0.95	Yes	1.00	**1.93**
		U_1 - U_2	-----	-581.58	-61	38	-162	-733	-7	-34	-44	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.200	1.00	Yes	0.784	0.174	0.96	Yes	1.00	**1.18**
		U_2 - U_3	109.17	-597.36	-131	232	-316	-516	7	26	52	132	0.125	0.145	0.27	Yes	0.084	0.094	0.18	Yes	0.813	0.181	1.00	Yes	0.806	0.123	0.93	Yes	1.00	**1.34**
		U_3 - U_4	304.69	-572.36	58	281	-265	-710	11	35	155	24	0.349	0.195	0.55	Yes	0.240	0.134	0.38	Yes	0.779	0.214	1.00	Yes	0.772	0.169	0.95	Yes	1.00	**1.58**
		U_4 - U_5	431.14	-586.85	163	343	-397	-529	9	-35	33	-186	0.494	0.157	0.66	Yes	0.339	0.108	0.45	Yes	0.799	0.197	1.00	Yes	0.791	0.126	0.92	Yes	1.00	**2.24**
		U_5 - U_6	639.43	-487.98	240	452	-578	-32	-139	-59	343	-52	0.733	0.267	1.00	Yes	0.494	0.174	0.67	Yes	0.664	0.186	0.85	Yes	0.658	0.209	0.87	Yes	1.00	**2.25**
		U_6 - U_7	881.94	-66.12	387	234	-432	-452	-303	-109	397	-287	0.843	0.151	1.00	Yes	0.589	0.104	0.70	Yes	0.075	0.138	0.22	Yes	0.074	0.096	0.18	Yes	1.00	**2.36**
		U_7 - U_8	543.45	-----	-2584	3636	-50	771	669	-426	-434	-298	0.377	0.619	1.00	Yes	0.263	0.422	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		U_8 - U_9	493.22	-----	685	13	2759	-2181	-1036	-146	-504	296	0.404	0.590	1.00	Yes	0.276	0.401	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		U_9 - U_{10}	704.46	-186.61	244	293	212	-628	-161	15	79	543	0.764	0.228	1.00	Yes	0.518	0.153	0.68	Yes	0.240	0.133	0.38	Yes	0.238	0.141	0.38	Yes	1.00	**2.34**
		U_{10} - U_{11}	265.32	-602.51	318	-77	213	-989	27	93	285	174	0.288	0.267	0.56	Yes	0.192	0.172	0.37	Yes	0.776	0.203	0.98	Yes	0.769	0.222	1.00	Yes	1.00	**1.76**
		U_{11} - U_{12}	-----	-877.61	228	-105	124	-771	102	408	217	588	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.162	1.00	Yes	0.823	0.128	0.96	Yes	1.00	**1.41**
		U_{12} - U_{13}	-----	-1208.13	4	-237	-73	-948	346	208	566	384	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.174	1.00	Yes	0.807	0.131	0.94	Yes	1.00	**1.36**
		U_{13} - U_{14}	-----	-1355.08	-147	-382	-391	-1433	222	177	390	517	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.210	1.00	Yes	0.777	0.158	0.94	Yes	1.00	**1.25**
		U_{14} - U_{15}	-----	-1342.00	-272	-250	-1282	-877	213	31	580	151	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.220	1.00	Yes	0.769	0.141	0.92	Yes	1.00	**1.23**
		U_{15} - U_{16}	-----	-1404.78	-178	-404	-178	-1404	63	51	352	89	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.181	1.00	Yes	0.805	0.155	0.97	Yes	1.00	**1.80**
		U_{16} - U_{17}	-----	-1407.95	-607	-158	-901	-977	384	-67	551	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.180	1.00	Yes	0.807	0.108	0.92	Yes	1.00	**2.17**
		U_{17} - U_{18}	-----	-1122.45	-600	200	-312	-275	438	-1	210	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.104	1.00	Yes	0.878	0.098	0.98	Yes	1.00	**1.74**
		U_{18} - U_{19}	-----	-721.10	-683	54	-696	-295	383	-178	383	-267	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1.00	Yes	0.811	0.140	0.96	Yes	1.00	**1.60**
		U_{19} - U_{20}	-----	-535.64	-1510	1960	-299	-378	266	-822	75	-587	-----	-----	-----	-----	-----	-----	-----	-----	0.608	0.236	0.85	Yes	0.603	0.394	1.00	Yes	1.00	**3.69**
	Structure 2	U_0 - U_1	-----	-610.76	-94	-89	462	-1608	4	-71	-85	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.243	0.97	Yes	0.721	0.273	1.00	Yes	1.00	**3.39**
		U_1 - U_2	-----	-832.01	-46	-191	25	-1200	-69	-218	-41	-289	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.188	1.00	Yes	0.803	0.182	0.99	Yes	1.00	**1.76**
		U_2 - U_3	-----	-1173.12	-99	-275	-65	-1470	-27	369	-20	386	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1.00	Yes	0.833	0.150	0.99	Yes	1.00	**1.71**
		U_3 - U_4	-----	-1314.56	-413	-407	-1256	-1596	341	515	393	619	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.239	1.00	Yes	0.749	0.142	0.90	Yes	1.00	**1.45**
		U_4 - U_5	-----	-1486.97	-461	-374	-611	-2056	774	307	353	267	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.231	1.00	Yes	0.763	0.170	0.94	Yes	1.00	**1.47**
		U_5 - U_6	-----	-1559.92	-423	4	-1097	-1249	186	-216	327	449	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.184	1.00	Yes	0.801	0.104	0.91	Yes	1.00	**1.51**
		U_6 - U_7	-----	-1367.20	-284	-103	-1345	-1515	-135	-186	304	161	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.216	1.00	Yes	0.779	0.135	0.92	Yes	1.00	**1.35**
		U_7 - U_8	-----	-1424.54	-141	-103	-717	-1503	-128	-208	186	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.179	1.00	Yes	0.811	0.134	0.95	Yes	1.00	**1.93**
		U_8 - U_9	3.82	-1228.86	-229	191	-914	-927	-122	-214	289	-182	0.002	0.122	0.13	Yes	0.002	0.080	0.09	Yes	0.839	0.154	1.00	Yes	0.833	0.099	0.94	Yes	1.00	**1.91**
		U_9 - U_{10}	145.32	-951.32	-79	341	-1294	-475	-139	-153	253	-70	0.107	0.185	0.30	Yes	0.072	0.125	0.20	Yes	0.826	0.170	1.00	Yes	0.821	0.158	0.98	Yes	1.00	**1.63**
		U_{10} - U_{11}	910.33	-811.77	446	610	-587	-898	-288	-195	269	-357	0.769	0.170	0.94	Yes	0.523	0.111	0.64	Yes	0.812	0.180	1.00	Yes	0.807	0.127	0.94	Yes	1.00	**3.70**
		U_{11} - U_{12}	-----	-728.01	-1906	1160	-1033	-699	809	-130	677	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.163	0.90	Yes	0.723	0.269	1.00	Yes	1.00	**6.85**
		U_{12} - U_{13}	1157.22	-1.69	486	175	-1111	-1245	-433	-373	544	-309	0.781	0.209	1.00	Yes	0.557	0.142	0.70	Yes	0.001	0.254	0.26	Yes	0.001	0.157	0.16	Yes	1.00	**3.23**
		U_{13} - U_{14}	783.07	-----	-2340	5551	-352	1375	-46	-1356	-412	-500	0.385	0.607	1.00	Yes	0.273	0.398	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		U_{14} - U_{15}	777.02	-----	1424	280	5650	-3448	-1274	-938	-1051	-42	0.382	0.610	1.00	Yes	0.271	0.400	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		U_{15} - U_{16}	1334.35	-----	130	505	146	-1167	-661	-441	-201	694	0.807	0.191	1.00	Yes	0.574	0.130	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		U_{16} - U_{17}	1021.31	-32.78	647	309	885	-1527	-209	-26	480	354	0.753	0.242	1.00	Yes	0.501	0.160	0.67	Yes	0.029	0.112	0.15	Yes	0.028	0.192	0.23	Yes	1.00	**2.88**
		U_{17} - U_{18}	717.64	-287.20	454	325	282	-971	3	252	205	748	0.720	0.275	1.00	Yes	0.480	0.181	0.67	Yes	0.341	0.174	0.52	Yes	0.339	0.165	0.51	Yes	1.00	**2.27**
		U_{18} - U_{19}	562.09	-640.16	529	237	-209	-1111	100	117	410	466	0.564	0.257	0.83	Yes	0.370	0.164	0.54	Yes	0.761	0.232	1.00	Yes	0.756	0.189	0.95	Yes	1.00	**2.32**
		U_{19} - U_{20}	315.76	-722.32	316	219	18	-1011	21	13	219	481	0.296	0.227	0.53	Yes	0.196	0.149	0.35	Yes	0.802	0.194	1.00	Yes	0.797	0.162	0.96	Yes	1.00	**1.82**
		U_{20} - U_{21}	72.84	-890.05	-66	110	-160	-994	75	-10	298	269	0.057	0.177	0.24	Yes	0.040	0.114	0.16	Yes	0.818	0.176	1.00	Yes	0.812	0.144	0.96	Yes	1.00	**1.80**
		U_{21} - U_{22}	63.05	-807.41	-44	22	-809	-1132	43	61	152	393	0.049	0.207	0.26	Yes	0.035	0.139	0.18	Yes	0.742	0.254	1.00	Yes	0.737	0.164	0.91	Yes	1.00	**1.46**
		U_{22} - U_{23}	73.81	-822.37	69	-38	-933	-905	58	-2	431	59	0.057	0.182	0.24	Yes	0.041	0.123	0.17	Yes	0.756	0.234	1.00	Yes	0.751	0.135	0.89	Yes	1.00	**1.51**
		U_{23} - U_{24}	233.31	-881.03	-54	203	-279	-1039	-37	-64	256	51	0.181	0.178	0.36	Yes	0.127	0.115	0.25	Yes	0.810	0.183	1.00	Yes	0.804	0.151	0.96	Yes	1.00	**2.15**
		U_{24} - U_{25}	270.54	-715.28	176	269	-967	-542	-57	-86	394	-126	0.254	0.208	0.47	Yes	0.168	0.136	0.31	Yes	0.794	0.204	1.00	Yes	0.789	0.155	0.95	Yes	1.00	**1.66**
		U_{25} - U_{26}	-----	-719.85	-715	693	-237	-841	268	-231	213	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.098	0.96	Yes	0.850	0.143	1.00	Yes	1.00	**3.34**
		U_{26} - U_{27}	-----	-711.05	-819	929	-609	-832	367	-373	399	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.141	0.99	Yes	0.840	0.158	1.00	Yes	1.00	**4.72**
		U_{27} - U_{28}	7.35	-785.17	-1398	1614	-2527	-776	533	-313	976	-8	0.005	0.420	0.43	Yes	0.004	0.276	0.29	Yes	0.685	0.303	0.99	Yes	0.681	0.317	1.00	Yes	1.00	**6.13**
		U_{28} - U_{29}	1129.49	-----	-55	587	338	-2278	118	-676	46	-550	0.683	0.316	1.00	Yes	0.486	0.212	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		U_{29} - U_{30}	446.20	-----	-5128	7722	-82	538	663	-874	-240	107	0.219	0.775	1.00	Yes	0.155	0.507	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.49**
		U_{30} - U_{31}	780.59	-----	1091	380	5754	-3598	-1126	-607	-1056	86	0.384	0.610	1.00	Yes	0.272	0.400	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		U_{31} - U_{32}	1135.49	-----	49	422	-19	-1201	-398	-202	62	807	0.767	0.228	1.00	Yes	0.547	0.156	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		U_{32} - U_{33}	878.10	-256.08	461	267	371	-1294	-83	7	545	479	0.742	0.249	1.00	Yes	0.498	0.166	0.67	Yes	0.256	0.175	0.44	Yes	0.254	0.183	0.44	Yes	1.00	**2.66**
		U_{33} - U_{34}	786.37	-726.87	426	312	72	-1405	-3	240	530	1000	0.664	0.320	0.99	Yes	0.452	0.210	0.67	Yes	0.727	0.272	1.00	Yes	0.722	0.198	0.93	Yes	1.00	**3.01**
		U_{34} - U_{35}	349.02	-889.83	347	66	89	-1568	200	163	648	535	0.256	0.261	0.52	Yes	0.173	0.177	0.35	Yes	0.772	0.227	1.00	Yes	0.768	0.191	0.96	Yes	1.00	**2.00**
		U_{35} - U_{36}	132.71	-1180.48	162	-137	-206	-1285	108	92	403	563	0.077	0.183	0.26	Yes	0.054	0.121	0.18	Yes	0.806	0.187	1.00	Yes	0.801	0.137	0.94	Yes	1.00	**1.84**
		U_{36} - U_{37}	-----	-1325.73	-67	29	-1068	-1754	87	-1	381	342	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.231	1.00	Yes	0.755	0.156	0.92	Yes	1.00	**1.70**
		U_{37} - U_{38}	-----	-1355.73	119	-151	-1284	-1589	44	19	363	279	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.216	1.00	Yes	0.772	0.142	0.92	Yes	1.00	**1.74**
		U_{38} - U_{39}	-----	-1531.21	167	-272	-465	-2025	129	-30	542	149	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1.00	Yes	0.786	0.168	0.96	Yes	1.00	**2.14**
		U_{39} - U_{40}	-----	-1438.34	-250	-310	-1894	-1662	51	-9	481	192	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.248	1.00	Yes	0.738	0.157	0.90	Yes	1.00	**1.69**
		U_{40} - U_{41}	-----	-1335.46	-249	-318	-1607	-1423	47	-95	575	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.230	1.00	Yes	0.760	0.143	0.91	Yes	1.00	**1.72**
		U_{41} - U_{42}	-----	-1242.41	-1099	220	-841	-774	393	-24	310	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.107	1.00	Yes	0.882	0.112	1.00	Yes	1.00	**2.46**
		U_{42} - U_{43}	-----	-784.05	-280	79	-1232	-582	-65	-114	386	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.230	1.00	Yes	0.757	0.187	0.95	Yes	1.00	**2.30**
		U_{43} - U_{44}	-----	-589.31	-1712	1770	6	-990	166	-646	30	-843	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.214	0.92	Yes	0.696	0.300	1.00	Yes	1.00	**3.64**
	Structure 3	U_0 - U_1	-----	-639.22	-7	-158	380	-1366	-2	-50	175	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.210	0.94	Yes	0.719	0.275	1.00	Yes	1.00	**3.66**
		U_1 - U_2	-----	-727.09	-33	-140	121	-769	-62	-232	-65	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.166	1.00	Yes	0.818	0.155	0.98	Yes	1.00	**1.59**
		U_2 - U_3	-----	-1049.44	-72	-165	131	-976	-50	334	8	389	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.161	1.00	Yes	0.821	0.159	0.98	Yes	1.00	**1.49**
		U_3 - U_4	-----	-1396.92	-167	-293	-385	-1193	365	571	357	468	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.187	1.00	Yes	0.801	0.132	0.94	Yes	1.00	**1.64**
		U_4 - U_5	-----	-1401.21	-400	-52	-452	-1001	699	232	381	233	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1.00	Yes	0.803	0.110	0.92	Yes	1.00	**1.52**
		U_5 - U_6	-----	-1344.54	-182	-273	-467	-1549	138	-151	314	320	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.213	1.00	Yes	0.771	0.171	0.95	Yes	1.00	**1.36**
		U_6 - U_7	-----	-1440.40	-361	-69	-916	-916	-115	-204	401	29	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.159	1.00	Yes	0.826	0.101	0.93	Yes	1.00	**1.86**
		U_7 - U_8	-----	-1223.90	-135	91	-344	-889	-87	-212	232	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1.00	Yes	0.817	0.123	0.95	Yes	1.00	**2.27**
		U_8 - U_9	63.82	-908.28	-31	292	-420	-533	-80	-174	277	-362	0.051	0.132	0.19	Yes	0.034	0.088	0.13	Yes	0.860	0.136	1.00	Yes	0.852	0.088	0.95	Yes	1.00	**2.15**
		U_9 - U_{10}	440.10	-663.71	45	375	-612	-197	-155	-127	282	-218	0.477	0.182	0.66	Yes	0.318	0.118	0.44	Yes	0.855	0.143	1.00	Yes	0.847	0.137	0.99	Yes	1.00	**2.84**
		U_{10} - U_{11}	-----	-577.25	-454	425	-938	-356	283	-398	675	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.247	1.00	Yes	0.737	0.210	0.95	Yes	1.00	**3.95**
		U_{11} - U_{12}	511.31	-----	-1664	2710	-149	550	200	-1002	-393	-385	0.419	0.578	1.00	Yes	0.287	0.393	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		U_{12} - U_{13}	957.91	-----	1033	127	1804	-1044	-536	-495	-409	-16	0.664	0.328	1.00	Yes	0.463	0.224	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		U_{13} - U_{14}	876.17	-----	232	440	176	-458	-343	-224	-41	415	0.838	0.154	1.00	Yes	0.586	0.106	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		U_{14} - U_{15}	648.13	-347.71	426	297	392	-844	-129	-40	292	103	0.743	0.250	1.00	Yes	0.501	0.163	0.67	Yes	0.473	0.126	0.60	Yes	0.469	0.201	0.67	Yes	1.00	**2.09**
		U_{15} - U_{16}	433.18	-577.32	338	236	-99	-696	-69	131	111	452	0.497	0.242	0.74	Yes	0.341	0.165	0.51	Yes	0.786	0.208	1.00	Yes	0.779	0.166	0.95	Yes	1.00	**1.85**
		U_{16} - U_{17}	411.59	-551.44	394	128	-361	-717	76	74	402	149	0.472	0.238	0.72	Yes	0.324	0.163	0.49	Yes	0.750	0.243	1.00	Yes	0.744	0.170	0.92	Yes	1.00	**1.76**
		U_{17} - U_{18}	347.46	-543.72	454	-31	119	-1102	-106	71	267	52	0.398	0.307	0.71	Yes	0.269	0.200	0.47	Yes	0.740	0.238	0.98	Yes	0.733	0.262	1.00	Yes	1.00	**2.47**
		U_{18} - U_{19}	94.73	-515.07	169	-37	-814	-489	-38	32	467	-21	0.109	0.273	0.39	Yes	0.075	0.187	0.27	Yes	0.701	0.295	1.00	Yes	0.695	0.194	0.89	Yes	1.00	**1.53**
		U_{19} - U_{20}	-----	-552.08	-910	1038	-144	-602	334	-479	388	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.113	0.87	Yes	0.744	0.247	1.00	Yes	1.00	**2.67**

Moment (End) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.216	0.580	0.80	Yes	0.214	0.780	1.00	Yes	1.00	**11.23**
North Truss - Lower Chord	Structure 1	L_0 - L_1			-----	-118.85	-361	206	1438	-2599	-27	-101	138	507																		
		L_1 - L_2			458.56	-1.06	149	-18	285	-845	-26	-37	-198	-179	0.702	0.296	1.00	Yes	0.428	0.199	0.63	Yes	0.002	0.173	0.18	Yes	0.002	0.254	0.26	Yes	1.00	**1.80**
		L_2 - L_3			688.34	-26.73	-20	21	-627	-722	-32	22	-150	40	0.792	0.198	1.00	Yes	0.458	0.119	0.58	Yes	0.037	0.221	0.26	Yes	0.036	0.174	0.22	Yes	1.00	**1.51**
		L_3 - L_4			638.54	-202.21	102	312	-32	-900	79	72	-262	-156	0.735	0.259	1.00	Yes	0.436	0.167	0.61	Yes	0.276	0.202	0.48	Yes	0.274	0.217	0.50	Yes	1.00	**1.96**
		L_4 - L_5			459.99	-----	-1162	699	-658	-91	-320	49	-275	497	0.596	0.396	1.00	Yes	0.357	0.257	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		L_5 - L_6			-----	-733.88	165	604	-325	12	77	129	129	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.140	1.00	Yes	0.847	0.134	0.99	Yes	1.00	**1.75**
		L_6 - L_7			-----	-1033.88	-774	973	-714	-801	-104	124	111	924	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.157	1.00	Yes	0.832	0.153	0.99	Yes	1.00	**4.29**
		L_7 - L_8			-----	-1191.82	-98	1749	17	590	-18	-174	-132	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1.00	Yes	0.755	0.232	0.99	Yes	1.00	**2.49**
		L_8 - L_9			-----	-1286.96	1230	55	1283	-502	-170	-52	46	356	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.170	1.00	Yes	0.815	0.170	0.99	Yes	1.00	**2.93**
		L_9 - L_{10}			-----	-1068.30	147	137	258	-860	38	140	250	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.070	0.94	Yes	0.860	0.135	1.00	Yes	1.00	**2.95**
		L_{10} - L_{11}			-----	-549.21	522	-11	359	-606	139	46	8	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.077	0.93	Yes	0.837	0.160	1.00	Yes	1.00	**2.04**
		L_{11} - L_{12}			584.10	-212.65	477	-171	232	-812	85	-26	109	-50	0.756	0.234	1.00	Yes	0.454	0.154	0.61	Yes	0.327	0.120	0.45	Yes	0.324	0.215	0.54	Yes	1.00	**1.90**
		L_{12} - L_{13}			1038.99	-----	159	-77	-348	-795	26	35	113	254	0.820	0.171	1.00	Yes	0.524	0.102	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		L_{13} - L_{14}			1274.41	-----	350	-446	72	-1605	9	-1	240	-20	0.750	0.241	1.00	Yes	0.486	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.71**
		L_{14} - L_{15}			1643.75	-----	-1085	3	-1473	-894	-220	-107	-210	211	0.803	0.193	1.00	Yes	0.522	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**
		L_{15} - L_{16}			1564.27	-----	-213	-361	-795	-1626	-126	-54	-148	-474	0.764	0.229	1.00	Yes	0.491	0.135	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		L_{16} - L_{17}			1210.89	-----	-909	374	-1306	-478	-414	4	-392	364	0.766	0.229	1.00	Yes	0.497	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		L_{17} - L_{18}			895.14	-----	-754	559	-662	-431	-227	-202	-172	-573	0.779	0.219	1.00	Yes	0.499	0.133	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		L_{18} - L_{19}			359.29	-14.84	-1058	912	-667	105	-591	-42	-347	593	0.550	0.440	1.00	Yes	0.372	0.279	0.66	Yes	0.027	0.167	0.20	Yes	0.027	0.318	0.35	Yes	1.00	**3.73**
		L_{19} - L_{20}			134.22	-364.35	-1146	536	-80	-50	293	66	-25	-5	0.205	0.405	0.62	Yes	0.125	0.272	0.40	Yes	0.662	0.241	0.91	Yes	0.656	0.344	1.00	Yes	1.00	**3.64**
	Structure 2	L_0 - L_1			33.44	-185.44	-141	68	1199	-3611	-25	-87	-348	-1209	0.041	0.933	0.98	Yes	0.024	0.595	0.62	Yes	0.267	0.629	0.90	Yes	0.265	0.735	1.00	Yes	1.00	**11.16**
		L_1 - L_2			541.67	-----	158	-210	693	-1453	-39	32	-245	-231	0.658	0.336	1.00	Yes	0.391	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		L_2 - L_3			997.90	-----	-44	-164	-185	-1159	78	78	59	229	0.797	0.195	1.00	Yes	0.524	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
		L_3 - L_4			1308.50	-----	44	-425	-228	-1708	32	56	198	69	0.776	0.219	1.00	Yes	0.524	0.141	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**
		L_4 - L_5			1750.83	-----	-389	-249	-1292	-1795	94	203	-56	144	0.816	0.183	1.00	Yes	0.540	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		L_5 - L_6			1825.44	-----	-146	-383	-1215	-2291	113	-16	147	-68	0.783	0.212	1.00	Yes	0.526	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		L_6 - L_7			1835.41	-----	-431	-89	-2112	-2055	-166	45	-48	510	0.777	0.217	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		L_7 - L_8			1440.24	-49.73	-184	346	-1211	-1321	-131	10	-54	-243	0.826	0.166	1.00	Yes	0.542	0.098	0.65	Yes	0.034	0.195	0.23	Yes	0.034	0.146	0.18	Yes	1.00	**2.17**
		L_8 - L_9			1132.31	-----	-869	576	-1151	-391	-194	56	-172	542	0.792	0.206	1.00	Yes	0.533	0.130	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**
		L_9 - L_{10}			869.75	-794.66	-41	859	-871	-634	36	116	-49	-389	0.776	0.186	0.97	Yes	0.452	0.115	0.57	Yes	0.840	0.153	1.00	Yes	0.834	0.139	0.98	Yes	1.00	**3.33**
		L_{10} - L_{11}			620.05	-42.16	-1519	1182	-1202	-423	-644	113	-323	828	0.619	0.377	1.00	Yes	0.363	0.234	0.60	Yes	0.050	0.126	0.18	Yes	0.050	0.266	0.32	Yes	1.00	**4.74**
		L_{11} - L_{12}			153.99	-928.35	-1558	1704	-1276	-657	-6	235	241	-651	0.107	0.293	0.41	Yes	0.071	0.177	0.25	Yes	0.767	0.167	0.94	Yes	0.761	0.232	1.00	Yes	1.00	**6.17**
		L_{12} - L_{13}			-----	-1313.49	-589	10	-764	-1668	82	-81	56	265	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.198	1.00	Yes	0.786	0.166	0.96	Yes	1.00	**3.25**
		L_{13} - L_{14}			-----	-1375.32	-999	3417	-348	1191	-194	-384	-183	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.229	0.93	Yes	0.692	0.298	1.00	Yes	1.00	**2.97**
		L_{14} - L_{15}			-----	-1422.87	1417	-263	3194	-1974	-223	-329	-69	246	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.181	0.91	Yes	0.716	0.279	1.00	Yes	1.00	**3.33**
		L_{15} - L_{16}			-----	-1436.54	-868	340	-1087	-1106	-15	372	26	6	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.131	1.00	Yes	0.859	0.110	0.97	Yes	1.00	**3.16**
		L_{16} - L_{17}			-----	-1148.99	1201	119	691	-915	399	187	-41	1	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.151	1.00	Yes	0.837	0.148	0.99	Yes	1.00	**2.72**
		L_{17} - L_{18}			-----	-822.60	472	230	357	-796	101	-56	50	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.048	0.92	Yes	0.864	0.127	1.00	Yes	1.00	**1.99**
		L_{18} - L_{19}			113.44	-635.29	661	113	126	-694	-3	34	176	248	0.129	0.172	0.31	Yes	0.074	0.102	0.18	Yes	0.852	0.148	1.00	Yes	0.847	0.134	0.99	Yes	1.00	**1.95**
		L_{19} - L_{20}			548.05	-572.76	552	224	63	-1184	58	-43	297	-94	0.621	0.274	0.90	Yes	0.367	0.174	0.55	Yes	0.768	0.152	0.93	Yes	0.763	0.229	1.00	Yes	1.00	**2.50**
		L_{20} - L_{21}			914.65	-462.18	556	49	-642	-1431	-94	-102	110	352	0.739	0.251	1.00	Yes	0.486	0.146	0.64	Yes	0.442	0.227	0.67	Yes	0.439	0.213	0.66	Yes	1.00	**2.90**
		L_{21} - L_{22}			845.39	-----	51	-57	-606	-1960	-37	41	226	-22	0.683	0.316	1.00	Yes	0.458	0.191	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		L_{22} - L_{23}			916.17	-129.10	-138	226	-1043	-1396	-18	3	-89	425	0.740	0.254	1.00	Yes	0.497	0.155	0.66	Yes	0.124	0.291	0.42	Yes	0.123	0.208	0.34	Yes	1.00	**2.46**
		L_{23} - L_{24}			921.35	-316.55	12	393	-1044	-1436	11	80	76	-302	0.745	0.247	1.00	Yes	0.490	0.143	0.64	Yes	0.303	0.289	0.60	Yes	0.301	0.214	0.52	Yes	1.00	**2.95**
		L_{24} - L_{25}			660.70	-----	-564	483	-883	-801	-191	223	-271	497	0.748	0.246	1.00	Yes	0.443	0.155	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		L_{25} - L_{26}			606.96	-492.41	-826	1060	-902	-1216	-65	-171	134	-470	0.688	0.307	1.00	Yes	0.397	0.182	0.58	Yes	0.660	0.145	0.81	Yes	0.656	0.235	0.90	Yes	1.00	**4.79**
		L_{26} - L_{27}			32.50	-800.80	-786	979	-872	-413	-365	16	-227	478	0.029	0.214	0.25	Yes	0.017	0.132	0.15	Yes	0.847	0.104	0.96	Yes	0.841	0.157	1.00	Yes	1.00	**3.46**
		L_{27} - L_{28}			-----	-1138.26	-549	1362	-444	-26	-77	-62	33	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.130	0.97	Yes	0.829	0.168	1.00	Yes	1.00	**3.07**
		L_{28} - L_{29}			-----	-1371.06	64	-58	-551	-1460	-43	-18	87	287	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.169	1.00	Yes	0.820	0.145	0.97	Yes	1.00	**2.35**
		L_{29} - L_{30}			-----	-1393.11	-1129	3411	-384	765	81	148	-57	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.204	0.92	Yes	0.701	0.298	1.00	Yes	1.00	**3.28**
		L_{30} - L_{31}			-----	-1371.15	1565	-268	3481	-2452	-460	-370	183	603	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.206	0.91	Yes	0.690	0.304	1.00	Yes	1.00	**4.45**
		L_{31} - L_{32}			-----	-1099.33	-484	530	-1521	-2261	-525	33	376	193	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.326	1.00	Yes	0.663	0.228	0.90	Yes	1.00	**6.32**
		L_{32} - L_{33}			-----	-1009.89	980	144	320	-1250	-134	-69	332	288	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.154	0.99	Yes	0.828	0.170	1.00	Yes	1.00	**3.70**
		L_{33} - L_{34}			235.33	-667.53	396	172	242	-1224	7	-89	236	-31	0.235	0.246	0.49	Yes	0.138	0.155	0.30	Yes	0.789	0.142	0.94	Yes	0.784	0.214	1.00	Yes	1.00	**2.87**
		L_{34} - L_{35}			606.41	-700.10	702	75	647	-1614	-42	60	179	302	0.541	0.295	0.84	Yes	0.315	0.183	0.50	Yes	0.740	0.179	0.92	Yes	0.735	0.258	1.00	Yes	1.00	**3.79**
		L_{35} - L_{36}			1085.39	-264.29	385	-9	-66	-1355	101	-48	559	32	0.759	0.236	1.00	Yes	0.511	0.148	0.66	Yes	0.219	0.177	0.40	Yes	0.217	0.183	0.41	Yes	1.00	**2.60**
		L_{36} - L_{37}			1326.61	-39.10	244	2	-638	-1867	-103	12	-18	398	0.761	0.239	1.00	Yes	0.500	0.141	0.65	Yes	0.027	0.223	0.25	Yes	0.026	0.206	0.24	Yes	1.00	**2.22**
		L_{37} - L_{38}			1774.43	-----	-39	-350	-660	-2675	-42	-8	82	-165	0.751	0.245	1.00	Yes	0.499	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		L_{38} - L_{39}			1870.90	-----	-234	-155	-1919	-1948	-55	4	-106	346	0.803	0.194	1.00	Yes	0.539	0.119	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		L_{39} - L_{40}			1633.27	-----	-189	-298	-1008	-2113	-52	-32	-172	-546	0.761	0.236	1.00	Yes	0.504	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.73**
		L_{40} - L_{41}			1324.97	-----	-1094	206	-1508	-1000	-403	37	-287	499	0.778	0.216	1.00	Yes	0.524	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		L_{41} - L_{42}			1034.07	-----	-891	398	-972	-774	-99	13	-12	-417	0.815	0.185	1.00	Yes	0.534	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		L_{42} - L_{43}			447.82	-----	-1411	671	-777	-404	-414	144	-299	658	0.573	0.423	1.00	Yes	0.342	0.242	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		L_{43} - L_{44}			258.91	-338.37	-2443	939	-30	-33	1102	322	-183	-53	0.314	0.678	1.00	Yes	0.187	0.431	0.62	Yes	0.487	0.424	0.92	Yes	0.483	0.497	0.99	Yes	1.00	**7.65**
	Structure 3	L_0 - L_1			180.66	-256.96	-17	-79	956	-1709	-9	-41	-138	-627	0.287	0.655	0.95	Yes	0.176	0.429	0.61	Yes	0.485	0.362	0.85	Yes	0.481	0.516	1.00	Yes	1.00	**5.96**
		L_1 - L_2			397.64	-----	150	-185	466	-1059	-50	21	-333	-6	0.609	0.387	1.00	Yes	0.412	0.243	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		L_2 - L_3			914.44	-----	-35	-161	21	-933	36	23	182	103	0.796	0.203	1.00	Yes	0.510	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		L_3 - L_4			1210.37	-----	62	-365	-119	-1365	44	54	294	127	0.765	0.227	1.00	Yes	0.497	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**
		L_4 - L_5			1645.44	-----	-378	-179	-1219	-1413	115	222	81	281	0.804	0.190	1.00	Yes	0.516	0.111	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		L_5 - L_6			1550.07	-----	-83	-348	-609	-1878	141	78	165	75	0.757	0.238	1.00	Yes	0.492	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**
		L_6 - L_7			1359.78	-----	-1081	358	-1194	-585	-199	20	-152	409	0.800	0.199	1.00	Yes	0.518	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**
		L_7 - L_8			1081.70	-----	-65	156	-526	-690	-26	40	-35	-205	0.854	0.146	1.00	Yes	0.546	0.088	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**
		L_8 - L_9			570.78	-----	-644	403	-521	-145	-167	151	-159	500	0.739	0.258	1.00	Yes	0.444	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.77**
		L_9 - L_{10}			283.58	-558.75	14	515	-529	-196	74	138	154	-51	0.367	0.167	0.54	Yes	0.214	0.101	0.32	Yes	0.859	0.126	0.99	Yes	0.851	0.140	1.00	Yes	1.00	**2.64**
		L_{10} - L_{11}			-----	-1040.70	-1017	1028	-577	-645	-385	-102	76	866	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.129	0.98	Yes	0.838	0.162	1.00	Yes	1.00	**4.78**
		L_{11} - L_{12}			-----	-1232.17	-193	1388	-34	468	-278	-482	-213	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.203	1.00	Yes	0.780	0.184	0.97	Yes	1.00	**2.48**
		L_{12} - L_{13}			-----	-1223.03	1177	94	1639	-667	-145	-299	-37	356	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.209	1.00	Yes	0.775	0.217	1.00	Yes	1.00	**3.94**
		L_{13} - L_{14}			-----	-1105.72	-12	285	70	-644	-250	126	63	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.082	0.99	Yes	0.890	0.101	1.00	Yes	1.00	**2.30**
		L_{14} - L_{15}			-----	-738.89	564	164	157	-368	147	-8	11	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.129	1.00	Yes	0.852	0.125	0.98	Yes	1.00	**1.62**
		L_{15} - L_{16}			207.10	-541.97	423	194	162	-632	16	-58	44	-50	0.268	0.178	0.45	Yes	0.161	0.117	0.28	Yes	0.833	0.098	0.94	Yes	0.826	0.167	1.00	Yes	1.00	**1.47**
		L_{16} - L_{17}			635.87	-294.41	384	47	-40	-889	96	-49	67	290	0.732	0.261	1.00	Yes	0.435	0.168	0.61	Yes	0.402	0.203	0.61	Yes	0.398	0.215	0.62	Yes	1.00	**1.89**
		L_{17} - L_{18}			643.92	-160.78	125	10	-397	-954	1	12	58	-166	0.741	0.257	1.00	Yes	0.429	0.154	0.59	Yes	0.220	0.239	0.46	Yes	0.218	0.230	0.45	Yes	1.00	**1.94**
		L_{18} - L_{19}			425.82	-----	-633	262	-573	-561	-109	133	-201	730	0.652	0.346	1.00	Yes	0.398	0.225	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		L_{19} - L_{20}			2.19	-179.46	-1967	1164	-807	-252	1872	509	-972	-264	0.003	0.992	1.00	Yes	0.002	0.596	0.60	Yes	0.326	0.650	0.98	Yes	0.323	0.590	0.92	Yes	1.00	**8.60**

Moment (End) AI Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Inventory Loads - HS20 Truck																													
			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
		Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
				(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$		-----	-283.97	-170	222	-58	88	-386	-124	-30	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.261	0.97	Yes	0.663	0.331	1.00	Yes	1.00	**0.75**
		$U_1 - L_1$		20.64	-326.69	-232	238	27	-15	-47	23	0	-2	0.037	0.318	0.36	Yes	0.020	0.175	0.20	Yes	0.714	0.083	0.80	Yes	0.691	0.305	1.00	Yes	1.00	**1.71**
		$U_2 - L_2$		102.99	-305.11	-224	274	88	-98	-16	59	68	31	0.185	0.370	0.56	Yes	0.102	0.204	0.31	Yes	0.667	0.120	0.79	Yes	0.646	0.350	1.00	Yes	1.00	**2.51**
		$U_3 - L_3$		218.47	-263.26	-307	342	274	-256	-333	-56	160	153	0.393	0.534	0.93	Yes	0.216	0.294	0.51	Yes	0.577	0.188	0.77	Yes	0.557	0.437	1.00	Yes	1.00	**4.51**
		$U_4 - L_4$		-----	-203.12	-54	38	441	-432	-7	139	-515	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.447	0.266	0.72	Yes	0.430	0.563	1.00	Yes	1.00	**4.36**
		$U_5 - L_5$		-----	-420.17	67	-90	237	-269	19	21	-145	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.133	0.90	Yes	0.725	0.273	1.00	Yes	1.00	**1.46**
		$U_6 - L_6$		-----	-489.75	84	-79	249	-264	-209	-46	60	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.123	0.91	Yes	0.740	0.256	1.00	Yes	1.00	**1.30**
		$U_7 - L_7$		-----	-412.22	129	-143	275	-292	-149	15	165	29	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.146	0.88	Yes	0.672	0.323	1.00	Yes	1.00	**0.87**
		$U_8 - L_8$		-----	-1204.28	-348	410	487	-582	-118	-7	918	288	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.124	1.00	Yes	0.835	0.108	0.95	Yes	1.00	**2.34**
		$U_9 - L_9$		-----	-646.40	-378	427	-172	201	-171	-208	-394	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.152	0.95	Yes	0.748	0.249	1.00	Yes	1.00	**1.43**
		$U_{10} - L_{10}$		-----	-691.88	-335	343	-137	105	-932	-623	-334	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1.00	Yes	0.711	0.192	0.91	Yes	1.00	**1.78**
		$U_{11} - L_{11}$		-----	-663.33	-354	479	-144	195	-453	-425	-568	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.175	0.98	Yes	0.772	0.222	1.00	Yes	1.00	**1.82**
		$U_{12} - L_{12}$		-----	-512.59	-339	335	-99	100	-348	-259	-338	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.161	0.91	Yes	0.703	0.290	1.00	Yes	1.00	**1.73**
		$U_{13} - L_{13}$		-----	-365.02	-232	262	-49	68	-41	-35	-173	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.128	0.87	Yes	0.699	0.299	1.00	Yes	1.00	**1.37**
		$U_{14} - L_{14}$		-----	-158.71	-474	518	257	-258	37	199	-37	118	-----	-----	-----	-----	-----	-----	-----	-----	0.354	0.214	0.57	Yes	0.336	0.662	1.00	Yes	1.00	**5.84**
		$U_{15} - L_{15}$		167.49	-305.25	-124	112	249	-274	59	111	130	-117	0.301	0.387	0.69	Yes	0.166	0.213	0.38	Yes	0.684	0.131	0.82	Yes	0.646	0.350	1.00	Yes	1.00	**2.38**
		$U_{16} - L_{16}$		-----	-320.71	27	-31	239	-248	-73	-101	236	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.107	0.83	Yes	0.679	0.317	1.00	Yes	1.00	**1.59**
		$U_{17} - L_{17}$		-----	-431.40	60	-74	228	-246	-120	-112	60	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.111	0.92	Yes	0.744	0.249	1.00	Yes	1.00	**1.22**
		$U_{18} - L_{18}$		-----	-533.85	142	-148	432	-444	-136	-121	122	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.090	0.88	Yes	0.743	0.251	1.00	Yes	1.00	**1.34**
		$U_{19} - L_{19}$		-----	-642.02	170	-169	537	-527	-118	-46	184	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.098	0.90	Yes	0.747	0.249	1.00	Yes	1.00	**1.50**
		$U_{20} - L_{20}$		-----	-582.38	159	-259	344	-516	26	3	355	47	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.194	1.00	Yes	0.713	0.248	0.97	Yes	1.00	**1.11**
	Structure 2	$U_0 - L_0$		-----	-645.53	-422	532	-162	210	-492	-83	-41	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.723	0.240	0.97	Yes	1.00	**1.46**
		$U_1 - L_1$		-----	-716.01	-531	538	-114	123	-187	31	-107	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.081	0.90	Yes	0.767	0.228	1.00	Yes	1.00	**2.08**
		$U_2 - L_2$		-----	-588.44	-470	479	-104	115	-154	-33	-107	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.086	0.88	Yes	0.750	0.245	1.00	Yes	1.00	**1.79**
		$U_3 - L_3$		-----	-497.26	-221	238	-55	63	71	-44	78	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.076	0.93	Yes	0.780	0.216	1.00	Yes	1.00	**1.52**
		$U_4 - L_4$		-----	-335.52	-223	222	-12	21	-180	-38	249	76	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.149	0.91	Yes	0.710	0.285	1.00	Yes	1.00	**1.62**
		$U_5 - L_5$		76.13	-326.51	-212	235	77	-60	13	-31	-3	97	0.137	0.329	0.47	Yes	0.075	0.181	0.26	Yes	0.738	0.129	0.87	Yes	0.691	0.301	1.00	Yes	1.00	**2.11**
		$U_6 - L_6$		345.74	-239.55	-232	245	217	-214	-62	-25	120	203	0.622	0.373	1.00	Yes	0.342	0.205	0.55	Yes	0.539	0.147	0.69	Yes	0.507	0.314	0.83	Yes	1.00	**3.32**
		$U_7 - L_7$		-----	-212.05	-146	156	384	-430	-128	236	281	64	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.229	0.71	Yes	0.449	0.549	1.00	Yes	1.00	**5.18**
		$U_8 - L_8$		-----	-465.05	66	-83	354	-374	-5	-66	101	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.101	0.78	Yes	0.670	0.327	1.00	Yes	1.00	**1.75**
		$U_9 - L_9$		-----	-686.65	158	-172	599	-605	-37	-195	120	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.086	0.86	Yes	0.736	0.257	1.00	Yes	1.00	**2.09**
		$U_{10} - L_{10}$		-----	-790.73	182	-184	555	-578	-147	-94	227	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.091	0.88	Yes	0.739	0.255	1.00	Yes	1.00	**2.17**
		$U_{11} - L_{11}$		-----	-813.57	186	-185	519	-536	-190	-69	151	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.100	0.92	Yes	0.761	0.236	1.00	Yes	1.00	**1.92**
		$U_{12} - L_{12}$		-----	-880.78	156	-133	535	-541	-145	10	172	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.098	0.95	Yes	0.763	0.232	1.00	Yes	1.00	**1.97**
		$U_{13} - L_{13}$		-----	-745.48	208	-204	582	-561	-170	20	279	40	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1.00	Yes	0.719	0.278	1.00	Yes	1.00	**1.69**
		$U_{14} - L_{14}$		-----	-1156.07	-450	418	676	-644	258	266	744	305	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.151	1.00	Yes	0.767	0.120	0.89	Yes	1.00	**2.74**
		$U_{15} - L_{15}$		-----	-735.18	-608	587	-115	123	-191	-111	-308	9	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.161	0.99	Yes	0.709	0.291	1.00	Yes	1.00	**2.60**
		$U_{16} - L_{16}$		-----	-655.70	-516	486	-89	63	-1166	-470	-808	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.238	1.00	Yes	0.703	0.219	0.93	Yes	1.00	**2.11**
		$U_{17} - L_{17}$		-----	-636.61	-538	534	-124	122	-532	-425	-274	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.168	0.96	Yes	0.741	0.249	1.00	Yes	1.00	**1.99**
		$U_{18} - L_{18}$		-----	-584.56	-458	484	-95	95	-82	-280	-114	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.111	0.89	Yes	0.745	0.248	1.00	Yes	1.00	**1.81**
		$U_{19} - L_{19}$		-----	-467.25	-305	299	-54	58	-233	-174	-66	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.124	0.83	Yes	0.698	0.294	1.00	Yes	1.00	**1.67**
		$U_{20} - L_{20}$		-----	-380.96	-226	233	-20	20	-29	-87	-68	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.094	0.88	Yes	0.730	0.266	1.00	Yes	1.00	**1.65**
	Structure 3	$U_{21} - L_{21}$		31.85	-329.54	-213	234	19	-13	156	-17	-20	47	0.057	0.345	0.41	Yes	0.032	0.190	0.23	Yes	0.744	0.123	0.87	Yes	0.697	0.299	1.00	Yes	1.00	**1.80**
		$U_{22} - L_{22}$		-----	-215.05	-393	419	320	-339	-12	264	414	148	-----	-----	-----	-----	-----	-----	-----	-----	0.484	0.199	0.69	Yes	0.455	0.536	1.00	Yes	1.00	**6.02**
		$U_{23} - L_{23}$		82.62	-312.69	-49	45	242	-258	78	67	147	-57	0.149	0.373	0.53	Yes	0.082	0.205	0.29	Yes	0.706	0.107	0.82	Yes	0.662	0.330	1.00	Yes	1.00	**1.97**
		$U_{24} - L_{24}$		-----	-370.37	10	-22	241	-252	75	27	197	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.109	0.87	Yes	0.710	0.288	1.00	Yes	1.00	**1.63**
		$U_{25} - L_{25}$		-----	-469.53	38	-38	309	-302	-89	-29	241	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.097	0.81	Yes	0.701	0.297	1.00	Yes	1.00	**1.64**
		$U_{26} - L_{26}$		-----	-565.48	67	-70	508	-535	-123	-22	326	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.105	0.86	Yes	0.721	0.274	1.00	Yes	1.00	**1.80**
		$U_{27} - L_{27}$		-----	-626.89	85	-85	570	-572	-136	2	265	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.100	0.88	Yes	0.730	0.265	1.00	Yes	1.00	**1.89**
		$U_{28} - L_{28}$		-----	-705.77	75	-72	555	-548	-156	16	355	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.104	0.92	Yes	0.756	0.236	1.00	Yes	1.00	**2.03**
		$U_{29} - L_{29}$		-----	-710.98	118	-124	639	-614	-118	27	416	42	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.196	0.99	Yes	0.685	0.306	1.00	Yes	1.00	**2.23**
		$U_{30} - L_{30}$		-----	-1148.51	-612	550	732	-717	-74	294	804	48	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.139	1.00	Yes	0.776	0.132	0.91	Yes	1.00	**3.19**
		$U_{31} - L_{31}$		-----	-756.14	-513	498	-109	109	97	-91	-309	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.155	1.00	Yes	0.729	0.246	0.98	Yes	1.00	**2.29**
		$U_{32} - L_{32}$		-----	-808.12	-463	455	-81	57	-847	-429	-672	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1.00	Yes	0.700	0.199	0.90	Yes	1.00	**2.35**
		$U_{33} - L_{33}$		-----	-831.25	-458	471	-117	106	-253	-432	-453	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.152	1.00	Yes	0.784	0.211	1.00	Yes	1.00	**2.32**
		$U_{34} - L_{34}$		-----	-800.86	-547	556	-120	113	-443	-396	-317	-301	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.148	0.94	Yes	0.749	0.246	1.00	Yes	1.00	**2.58**
		$U_{35} - L_{35}$		-----	-705.81	-549	562	-110	125	-49	-140	-157	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.067	0.86	Yes	0.756	0.238	1.00	Yes	1.00	**2.29**
		$U_{36} - L_{36}$		-----	-488.81	-306	330	-54	66	258	38	-47	62	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.120	0.83	Yes	0.704	0.289	1.00	Yes	1.00	**1.79**
		$U_{37} - L_{37}$		-----	-185.18	-417	469	80	-80	-164	192	81	101	-----	-----	-----	-----	-----	-----	-----	-----	0.418	0.231	0.65	Yes	0.392	0.600	1.00	Yes	1.00	**4.71**
		$U_{38} - L_{38}$		338.77	-177.13	-241	248	168	-173	236	116	178	-73	0.609	0.385	1.00	Yes	0.335	0.212	0.55	Yes	0.399	0.134	0.54	Yes	0.375	0.317	0.70	Yes	1.00	**2.79**
		$U_{39} - L_{39}$		153.91	-323.15	-134	120	225	-245	50	72	161	-102	0.277	0.360	0.64	Yes	0.152	0.198	0.36	Yes	0.730	0.110	0.85	Yes	0.684	0.314	1.00	Yes	1.00	**2.39**
		$U_{40} - L_{40}$		5.05	-340.71	-10	4	218	-217	15	-34	166	-123	0.009	0.326	0.34	Yes	0.005	0.179	0.19	Yes	0.773	0.087	0.86	Yes	0.721	0.278	1.00	Yes	1.00	**1.75**
		$U_{41} - L_{41}$		-----	-484.23	27	-31	244	-256	7	-31	142	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.083	0.91	Yes	0.759	0.233	1.00	Yes	1.00	**1.64**
		$U_{42} - L_{42}$		-----	-584.29	59	-68	493	-499	11	-35	165	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.075	0.86	Yes	0.745	0.255	1.00	Yes	1.00	**1.77**
		$U_{43} - L_{43}$		-----	-708.49	76	-90	567	-565	-50	-51	260	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.086	0.90	Yes	0.759	0.241	1.00	Yes	1.00	**1.95**
		$U_{44} - L_{44}$		-----	-670.52	115	-130	390	-536	-142	-24	628	106	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.197	1.00	Yes	0.719	0.228	0.95	Yes	1.00	**1.70**
	Structure 4	$U_0 - L_0$		-----	-563.69	-397	457	-145	194	-781	-102	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.227	1.00	Yes	0.677	0.219	0.90	Yes	1.00	**1.19**
		$U_1 - L_1$		-----	-663.35	-466	480	-112	124	-577	23	-123	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.140	0.97	Yes	0.772	0.223	1.00	Yes	1.00	**1.94**
		$U_2 - L_2$		-----	-533.03	-438	442	-108	114	-305	-27	-148	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.112	0.90	Yes	0.741	0.250	1.00	Yes	1.00	**1.69**
		$U_3 - L_3$		-----	-446.38	-204	222	-45	58	-38	-63	45	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.080	0.92	Yes	0.770	0.225	1.00	Yes	1.00	**1.42**
		$U_4 - L_4$		-----	-321.54	-243	248	-16	22	-209	-25	231	48	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.146	0.88	Yes	0.680	0.317	1.00	Yes	1.00	**1.81**
		$U_5 - L_5$		99.58	-305.88	-256	275	67	-63	-158	-30	-90	82	0.179	0.397	0.58	Yes	0.099	0.218	0.32	Yes	0.686	0.149	0.84	Yes	0.647	0.351	1.00	Yes	1.00	**2.25**
		$U_6 - L_6$		-----	-200.47	-286	308	427	-445	252	106	-160	51	-----	-----	-----	-----	-----	-----	-----	-----	0.447	0.215	0.67	Yes	0.424	0.569	1.00	Yes	1.00	**5.75**
		$U_7 - L_7$		-----	-359.35	12	-26	243	-265	-11	-22	-2	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.120	0.85	Yes	0.688	0.303	1.00	Yes	1.00	**1.56**
		$U_8 - L_8$		-----	-514.08	63	-69	339	-340	-15	-84	90	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.102	0.85	Yes	0.705	0.291	1.00	Yes	1.00	**1.86**
		$U_9 - L_9$		-----	-653.74	131	-169	408	-514	-187	-140	42	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.103	0.89	Yes	0.761	0.239	1.00	Yes	1.00	**1.92**
		$U_{10} - L_{10}$		-----	-774.81	131	-109	403	-438	-3	24	198	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.077	0.88	Yes	0.765	0.227	1.00	Yes	1.00	**2.01**
		$U_{11} - L_{11}$		-----	-645.41	167	-192	428	-472	-166	-33	294	57	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.124	0.90	Yes	0.729	0.263	1.00	Yes	1.00	**1.43**
		$U_{12} - L_{12}$		-----	-1177.55	-379	412	490	-635	457	182	980	375	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.143	1.00	Yes	0.816	0.118	0.94	Yes	1.00	**2.64**
		$U_{13} - L_{13}$		-----	-462.72	-275	290	-67	76	-215	-118	-298	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.155	0.93	Yes	0.714	0.286	1.00	Yes	1.00	**1.49**
		$U_{14} - L_{14}$		-----	-471.81	-253	253	-44	28	-1006	-533	-659	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.283	1.00	Yes	0.677	0.221	0.90	Yes	1.00	**1.75**
		$U_{15} - L_{15}$		-----	-444.50	-171	206	-46	47	-66	-209	-443	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1.00	Yes	0.767	0.209	0.98	Yes	1.00	**1.46**
		$U_{16} - L_{16}$		-----	-260.86	-344	347	35	-15	204	-21	-630	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.290	0.87	Yes	0.552	0.443	1.00	Yes	1.00	**3.56**
		$U_{17} - L_{17}$		283.50	-183.68	-302	312	156	-179	-121	100	-294	-196	0.510	0.483	1.00	Yes	0.280	0.266	0.55	Yes	0.402	0.175	0.58	Yes	0.389	0.398	0.79	Yes	1.00	**3.23**
		$U_{18} - L_{18}$		122.23	-291.50	-114	127	253	-297	-111	18	51	-121	0.220	0.415	0.64	Yes	0.121	0.228	0.35	Yes	0.637	0.141	0.78	Yes	0.617	0.380	1.00	Yes	1.00	**2.51**
		$U_{19} - L_{19}$		48.14	-308.92	-57	45	263	-243	-84	-3	56	-65	0.087	0.361	0.45	Yes	0.048	0.198	0.25	Yes	0.675	0.105	0.79	Yes	0.654	0.336	1.00	Yes	1.00	**1.60**
		$U_{20} - L_{20}$		-----	-316.03	19	-28	110	-194	-46	-15	630	202	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.289	1.00	Yes	0.669	0.248	0.92	Yes	1.00	**0.90**

Moment (End) AI Inventory

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Inventory Loads - HS20 Truck																													
			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield								Buckle				Yield							
	Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Controlling Bi-Axial Moment & Axial Value	Rating		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
North Truss - Diagonals	Structure 1	$U_0 - L_1$	515.95	-----	-140	73	-16	-2	-616	-127	-13	4	0.677	0.319	1.00	Yes	0.409	0.176	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.83**		
		$U_1 - L_2$	412.17	-----	-75	24	-17	-30	-160	-173	544	137	0.741	0.254	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**		
		$U_2 - L_3$	435.51	-161.11	-114	35	-86	-98	-222	-174	-37	-104	0.783	0.210	1.00	Yes	0.431	0.116	0.55	Yes	0.371	0.220	0.60	Yes	0.341	0.146	0.49	Yes	1.00	**4.05**		
		$U_3 - L_4$	-----	-317.67	53	-7	-88	-146	110	115	-11	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.266	1.00	Yes	0.672	0.186	0.86	Yes	1.00	**3.56**		
		$U_4 - L_4$	459.29	-----	-5	78	-144	-34	66	20	-709	-538	0.680	0.311	1.00	Yes	0.374	0.172	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**		
		$U_4 - L_5$	680.17	-----	-191	241	-37	91	-288	-288	-158	-100	0.804	0.190	1.00	Yes	0.442	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.74**		
		$U_5 - L_6$	656.47	-----	-303	253	-96	102	-253	-217	142	51	0.776	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.39**		
		$U_6 - L_7$	655.11	-----	-105	316	-10	132	-176	-130	229	114	0.775	0.221	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.46**		
		$U_5 - L_8$	988.29	-----	-98	357	16	138	329	375	320	94	0.790	0.207	1.00	Yes	0.489	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**		
		$U_8 - L_{10}$	1028.97	-----	-298	276	-75	86	181	350	91	110	0.823	0.177	1.00	Yes	0.510	0.100	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**		
		$U_{10} - L_{11}$	975.17	-----	-218	212	-156	77	103	336	522	229	0.824	0.169	1.00	Yes	0.510	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**		
		$U_{11} - L_{12}$	862.02	-----	-246	142	-165	-8	49	183	218	152	0.853	0.147	1.00	Yes	0.469	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**		
		$U_{12} - L_{13}$	653.77	-----	-203	172	-78	30	26	54	-63	-109	0.797	0.199	1.00	Yes	0.501	0.111	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**		
		$U_{13} - L_{14}$	463.84	-----	-87	51	-23	-32	-30	-79	-74	-179	0.834	0.163	1.00	Yes	0.459	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**		
		$U_{15} - L_{14}$	253.89	-333.04	-64	5	59	-121	-245	-266	-279	-124	0.457	0.236	0.70	Yes	0.251	0.130	0.39	Yes	0.780	0.217	1.00	Yes	0.705	0.155	0.86	Yes	1.00	**2.55**		
		$U_{16} - L_{15}$	400.02	-87.74	-127	94	-8	-34	-368	-289	-384	-147	0.719	0.273	1.00	Yes	0.396	0.150	0.55	Yes	0.208	0.175	0.39	Yes	0.186	0.162	0.35	Yes	1.00	**1.95**		
		$U_{17} - L_{16}$	510.02	-----	-139	99	-51	11	-464	-355	-453	-227	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.33**		
		$U_{18} - L_{17}$	614.09	-----	-307	259	-110	75	-553	-450	-108	-115	0.726	0.274	1.00	Yes	0.399	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.45**		
		$U_{19} - L_{18}$	672.61	-----	-350	253	-131	86	-535	-467	-64	-106	0.729	0.267	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.36**		
		$U_{20} - L_{19}$	693.84	-----	-261	262	-95	92	-647	-423	-98	-38	0.752	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.48**		
	Structure 2	$U_0 - L_1$	760.07	-----	-394	367	-115	100	-428	-58	-61	-50	0.752	0.247	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**		
		$U_1 - L_2$	780.35	-----	-386	310	-94	70	-183	-262	-100	-29	0.772	0.219	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.99**		
		$U_2 - L_3$	657.43	-----	-333	271	-82	62	-165	38	-22	91	0.777	0.219	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.78**		
		$U_3 - L_4$	602.18	-----	-179	146	-35	13	-145	-94	110	64	0.803	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.86**		
		$U_4 - L_5$	433.26	-65.27	-134	105	-3	-26	-164	-8	-84	-152	0.779	0.219	1.00	Yes	0.429	0.121	0.55	Yes	0.161	0.102	0.27	Yes	0.138	0.172	0.31	Yes	1.00	**1.99**		
		$U_5 - L_6$	434.61	-247.52	-127	71	57	-104	-161	19	-170	-164	0.782	0.211	1.00	Yes	0.430	0.116	0.55	Yes	0.585	0.161	0.75	Yes	0.524	0.162	0.69	Yes	1.00	**2.59**		
		$U_6 - L_7$	67.79	-384.66	-36	-5	57	-105	-120	-145	-97	-297	0.110	0.197	0.31	Yes	0.061	0.108	0.17	Yes	0.824	0.174	1.00	Yes	0.737	0.120	0.86	Yes	1.00	**1.70**		
		$U_8 - L_7$	589.54	-----	-179	139	-36	-21	-250	-427	-361	-196	0.752	0.247	1.00	Yes	0.473	0.140	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.05**		
		$U_8 - L_9$	689.53	-----	-322	240	-141	42	-460	-374	-525	-243	0.747	0.251	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.70**		
		$U_{10} - L_9$	792.35	-----	-303	230	-115	56	-472	-441	-282	-202	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**		
		$U_{11} - L_{10}$	867.97	-----	-333	285	-147	107	-442	-461	-363	-214	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.79**		
		$U_{12} - L_{11}$	863.77	-----	-364	353	-142	148	-404	-357	14	-46	0.787	0.210	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.73**		
		$U_{13} - L_{12}$	753.46	-----	-423	380	-151	153	-192	-159	344	133	0.745	0.248	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.46**		
		$U_{14} - L_{13}$	746.35	-----	-271	424	-33	147	-260	-131	385	189	0.738	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**		
		$U_{14} - L_{15}$	630.75	-----	-222	357	26	70	234	161	215	-43	0.746	0.244	1.00	Yes	0.410	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.38**		
		$U_{15} - L_{16}$	636.82	-----	-371	344	-62	68	-163	202	-10	21	0.753	0.247	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**		
		$U_{16} - L_{17}$	711.59	-----	-327	334	-69	96	-296	315	-149	63	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**		
		$U_{17} - L_{18}$	658.84	-----	-290	285	-66	78	-43	293	-27	101	0.779	0.217	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.83**		
		$U_{18} - L_{19}$	677.96	-----	-271	282	-69	58	159	188	61	12	0.802	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**		
		$U_{19} - L_{20}$	619.03	-----	-196	184	-32	9	85	149	-16	-44	0.789	0.205	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.05**		
		$U_{20} - L_{21}$	448.44	-10.60	-126	113	-12	-9	19	90	-5	-72	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	0.025	0.063	0.09	Yes	0.022	0.161	0.19	Yes	1.00	**1.78**		
		$U_{21} - L_{22}$	447.32	-228.13	-103	69	30	-83	8	3	-38	-193	0.805	0.188	1.00	Yes	0.442	0.103	0.55	Yes	0.539	0.127	0.67	Yes	0.483	0.132	0.62	Yes	1.00	**2.65**		
		$U_{23} - L_{22}$	405.43	-334.78	-101	65	50	-105	-262	-276	-340	-16	0.729	0.232	0.97	Yes	0.401	0.128	0.53	Yes	0.797	0.200	1.00	Yes	0.708	0.134	0.85	Yes	1.00	**3.07**		
		$U_{24} - L_{23}$	415.95	-32.16	-120	106	2	-17	-317	-217	-154	-58	0.748	0.245	1.00	Yes	0.411	0.135	0.55	Yes	0.077	0.139	0.22	Yes	0.068	0.154	0.23	Yes	1.00	**1.78**		
		$U_{25} - L_{24}$	581.64	-----	-189	183	-20	8	-405	-316	-194	-111	0.742	0.252	1.00	Yes	0.408	0.143	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**		
		$U_{26} - L_{25}$	657.19	-----	-271	264	-26	37	-362	-353	120	47	0.777	0.219	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**		
		$U_{27} - L_{26}$	650.00	-----	-288	285	-45	57	-331	-274	180	71	0.768	0.223	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**		
		$U_{28} - L_{27}$	708.06	-----	-332	360	-47	66	-273	-248	204	113	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.96**		
		$U_{29} - L_{28}$	626.74	-----	-371	342	-72	72	-225	-169	212	103	0.741	0.251	1.00	Yes	0.408	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.80**		
		$U_{30} - L_{29}$	637.30	-----	-224	361	-14	77	-212	-120	192	107	0.753	0.243	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**		
		$U_{30} - L_{31}$	762.73	-----	-293	434	14	73	152	189	283	0	0.755	0.244	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**		
		$U_{31} - L_{32}$	725.11	-----	-411	360	-74	77	-180	236	10	47	0.753	0.242	1.00	Yes	0.414	0.124	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**		
		$U_{32} - L_{33}$	881.44	-----	-357	345	-58	93	-283	277	-147	140	0.803	0.190	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**		
		$U_{33} - L_{34}$	900.57	-----	-341	315	-109	75	-1	244	52	141	0.820	0.178	1.00	Yes	0.451	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.46**		
		$U_{34} - L_{35}$	837.00	-----	-305	251	-93	44	113	192	87	-30	0.828	0.170	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**		
		$U_{35} - L_{36}$	749.50	-----	-337	258	-115	29	14	86	3	-87	0.812	0.187	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**		
		$U_{36} - L_{37}$	621.97	-----	-177	170	-32	-16	-63	5	-70	-227	0.793	0.204	1.00	Yes	0.499	0.115	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**		
		$U_{38} - L_{37}$	14.28	-387.79	-22	-6	60	-96	-187	-198	-249	-69	0.023	0.175	0.20	Yes	0.013	0.096	0.11	Yes	0.838	0.152	1.00	Yes	0.743	0.110	0.86	Yes	1.00	**1.56**		
		$U_{39} - L_{38}$	324.35	-312.50	-99	54	64	-110	-365	-250	-464	-93	0.583	0.274	0.86	Yes	0.321	0.151	0.48	Yes	0.745	0.252	1.00	Yes	0.661	0.140	0.81	Yes	1.00	**2.41**		
		$U_{40} - L_{39}$	404.04	-113.57	-130	100	18	-43	-358	-284	-241	-132	0.727	0.270	1.00	Yes	0.400	0.149	0.55	Yes	0.272	0.189	0.47	Yes	0.240	0.167	0.41	Yes	1.00	**2.13**		
		$U_{41} - L_{40}$	563.96	-----	-170	130	-16	1	-408	-362	-91	-76	0.752	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.81**		
		$U_{42} - L_{41}$	611.47	-----	-317	264	-48	31	-490	-407	-66	-63	0.723	0.268	1.00	Yes	0.398	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.75**		
		$U_{43} - L_{42}$	753.07	-----	-383	313	-64	43	-486	-434	-3	-44	0.745	0.250	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.90**		
		$U_{44} - L_{43}$	752.83	-----	-287	323	-93	79	-702	-410	58	-21	0.745	0.255	1.00	Yes	0.410	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**		
	Structure 3	$U_0 - L_1$	569.95	-----	-425	316	-113	95	-997	64	-62	-53	0.617	0.382	1.00	Yes	0.340	0.210	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.72**		
		$U_1 - L_2$	715.64	-----	-342	252	-99	67	-280	-52	-124	-44	0.775	0.221	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**		
		$U_2 - L_3$	642.57	-----	-329	241	-97	64	-253	126	-48	78	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.62**		
		$U_3 - L_4$	553.02	-----	-150	108	-41	5	-140	-18	34	-6	0.811	0.185	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.63**		
		$U_4 - L_5$	432.15	-97.73	-132	109	-4	-36	-148	-61	-127	-177	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	0.232	0.106	0.34	Yes	0.207	0.168	0.38	Yes	1.00	**2.18**		
		$U_5 - L_6$	333.56	-328.11	-76	24	19	-119	-129	-157	-125	-309	0.600	0.242	0.85	Yes	0.330	0.133	0.47	Yes	0.769	0.228	1.00	Yes	0.694	0.152	0.85	Yes	1.00	**2.91**		
		$U_7 - L_6$	428.43	-63.59	-82	38	-15	-41	-211	-298	-428	-183	0.771	0.229	1.00	Yes	0.424	0.126	0.55	Yes	0.148	0.180	0.33	Yes	0.135	0.105	0.24	Yes	1.00	**1.90**		
		$U_8 - L_7$	604.74	-----	-195	154	-59	8	-435	-386	-349	-224	0.737	0.256	1.00	Yes	0.464	0.145	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.84**		
		$U_8 - L_8$	751.01	-----	-229	103	-154	-21	-509	-517	-952	-466	0.743	0.248	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**		
		$U_{10} - L_9$	914.15	-----	-240	172	-148	51	-594	-576	-844	-418	0.772	0.222	1.00	Yes	0.478	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.02**		
		$U_{11} - L_{10}$	997.48	-----	-302	259	-95	85	-502	-426	52	-21	0.797	0.198	1.00	Yes	0.494	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**		
		$U_{12} - L_{11}$	981.03	-----	-104	362	-10	129	-391	-289	247	121	0.784	0.211	1.00	Yes	0.486	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**		
		$U_{12} - L_{13}$	656.95	-----	-113	293	25	73	273	182	173	-14	0.777	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**		
		$U_{13} - L_{14}$	668.36	-----	-286	241	-28	56	-81	229	-50	26	0.790	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.95**		
		$U_{14} - L_{15}$	700.13	-----	-181	229	-52	58	-86	218	100	88	0.828	0.170	1.00	Yes	0.455	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**		
		$U_{15} - L_{16}$	446.68	-----	36	188	-208	-96	475	472	547	141	0.655	0.338	1.00	Yes	0.360	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.66**		
		$U_{17} - L_{16}$	-----	-359.49	23	-4	-8	-72	224	143	-265	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.173	1.00	Yes	0.761	0.092	0.86	Yes	1.00	**1.85**		
		$U_{18} - L_{17}$	354.21	-117.82	-91	18	-84	-99	-299	-261	-796	-262	0.637	0.357	1.00	Yes	0.350	0.196	0.55	Yes	0.271	0.328	0.60	Yes	0.249	0.126	0.38	Yes	1.00	**3.48**		
		$U_{19} - L_{18}$	411.76	-138.90	-96	33	27	-20	-438	-334	172	133	0.741	0.249	1.00	Yes	0.407	0.137	0.55	Yes	0.319	0.217	0.54	Yes	0.294	0.123	0.42	Yes	1.00	**1.94**		
		$U_{20} - L_{19}$	587.28	-----	-44	40	53	-8	-629	-373	470	-1	0.770	0.220	1.00	Yes	0.465	0.121	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.86**		

Moment (End) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Upper Chord	Structure 1	U_0 - U_1	0.23	-548.59	-155	84	271	-1059	15	-13	-41	-438	0.000	0.326	0.33	Yes	0.000	0.223	0.23	Yes	0.746	0.249	1	Yes	0.740	0.252	1.00	Yes	1.00	**2.34**
		U_1 - U_2	44.90	-583.35	-50	92	-161	-814	-6	43	-42	73	0.051	0.206	0.26	Yes	0.035	0.141	0.18	Yes	0.794	0.205	1	Yes	0.787	0.193	0.99	Yes	1.00	**1.69**
		U_2 - U_3	155.57	-583.62	-86	277	-157	-686	-7	-90	252	-190	0.178	0.206	0.39	Yes	0.120	0.134	0.26	Yes	0.794	0.201	1	Yes	0.787	0.163	0.96	Yes	1.00	**1.87**
		U_3 - U_4	326.29	-560.55	99	264	-152	-858	-90	-82	-8	-261	0.374	0.248	0.63	Yes	0.257	0.170	0.43	Yes	0.763	0.237	1	Yes	0.756	0.204	0.96	Yes	1.00	**2.17**
		U_4 - U_5	474.97	-545.11	146	371	-86	-794	-129	59	-290	-340	0.544	0.246	0.80	Yes	0.374	0.169	0.55	Yes	0.742	0.250	1	Yes	0.735	0.189	0.93	Yes	1.00	**3.46**
		U_5 - U_6	-----	-558.89	-858	901	43	-599	178	-502	-337	-513	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.235	1	Yes	0.754	0.214	0.97	Yes	1.00	**6.10**
		U_6 - U_7	158.78	-542.04	-381	401	-886	-1364	-624	-355	-583	-395	0.152	0.376	0.53	Yes	0.106	0.258	0.37	Yes	0.616	0.382	1	Yes	0.610	0.290	0.90	Yes	1.00	**5.73**
		U_7 - U_8	444.70	-----	-3557	4267	-54	677	-420	117	-245	164	0.308	0.689	1.00	Yes	0.215	0.469	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		U_8 - U_9	720.75	-----	767	10	2152	-1795	-146	35	69	354	0.591	0.404	1.00	Yes	0.404	0.275	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		U_9 - U_{10}	615.89	-432.67	231	291	208	-1118	71	309	228	483	0.668	0.328	1.00	Yes	0.452	0.220	0.68	Yes	0.557	0.234	0.8	Yes	0.552	0.250	0.81	Yes	1.00	**3.91**
		U_{10} - U_{11}	144.21	-597.18	230	-70	205	-1061	208	56	342	116	0.156	0.293	0.45	Yes	0.104	0.188	0.30	Yes	0.769	0.219	0.99	Yes	0.762	0.238	1.00	Yes	1.00	**2.13**
		U_{11} - U_{12}	-----	-862.91	165	-111	-223	-907	152	57	270	136	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.178	1	Yes	0.810	0.150	0.96	Yes	1.00	**1.75**
		U_{12} - U_{13}	-----	-1169.36	-28	-162	-475	-1145	222	-34	290	34	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.202	1	Yes	0.781	0.158	0.94	Yes	1.00	**1.90**
		U_{13} - U_{14}	-----	-1351.59	-409	-338	-261	-1709	293	25	84	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1	Yes	0.775	0.189	0.97	Yes	1.00	**1.89**
		U_{14} - U_{15}	-----	-1358.72	-243	-182	-1157	-1224	185	-49	187	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1	Yes	0.779	0.135	0.92	Yes	1.00	**1.91**
		U_{15} - U_{16}	-----	-1379.57	-601	-346	-737	-1355	269	-75	60	-334	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.195	1	Yes	0.791	0.149	0.95	Yes	1.00	**1.84**
		U_{16} - U_{17}	-----	-1340.81	-411	-98	-594	-1275	244	-313	-343	-447	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1	Yes	0.769	0.141	0.91	Yes	1.00	**2.94**
		U_{17} - U_{18}	-----	-1099.07	-625	214	-200	-537	-89	-401	-200	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.121	1	Yes	0.860	0.102	0.97	Yes	1.00	**2.44**
		U_{18} - U_{19}	-----	-703.38	-283	119	-683	-299	-246	-221	-7	-308	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.194	1	Yes	0.791	0.137	0.93	Yes	1.00	**1.93**
		U_{19} - U_{20}	-----	-516.67	-1141	1267	61	-2039	-336	-176	-76	-917	-----	-----	-----	-----	-----	-----	-----	-----	0.587	0.308	0.9	Yes	0.581	0.410	1.00	Yes	1.00	**4.93**
	Structure 2	U_0 - U_1	-----	-584.93	169	-141	866	-1764	95	183	-9	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.208	0.91	Yes	0.691	0.299	1.00	Yes	1.00	**3.27**
		U_1 - U_2	-----	-785.38	-104	-147	-91	-1077	338	642	210	282	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.228	1	Yes	0.758	0.163	0.93	Yes	1.00	**1.84**
		U_2 - U_3	-----	-1139.48	-80	-215	42	-1652	610	1	581	50	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.186	1	Yes	0.809	0.168	0.98	Yes	1.00	**2.06**
		U_3 - U_4	-----	-1312.37	-371	-271	-1317	-1914	204	-391	262	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.240	1	Yes	0.747	0.171	0.92	Yes	1.00	**1.85**
		U_4 - U_5	-----	-1481.00	-359	-317	-585	-2311	-70	-359	66	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.226	1	Yes	0.760	0.192	0.96	Yes	1.00	**1.96**
		U_5 - U_6	-----	-1540.41	-373	19	-973	-1458	-118	-302	-116	-463	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.194	1	Yes	0.791	0.121	0.92	Yes	1.00	**2.13**
		U_6 - U_7	-----	-1315.45	-266	-75	-1177	-1959	-87	-263	-16	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.749	0.175	0.93	Yes	1.00	**1.81**
		U_7 - U_8	-----	-1339.06	-151	-191	-1654	-1293	-188	-220	-208	-330	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.231	1	Yes	0.762	0.147	0.91	Yes	1.00	**1.95**
		U_8 - U_9	5.02	-1135.93	-277	186	-592	-1197	-167	-105	-252	-480	0.003	0.167	0.17	Yes	0.002	0.110	0.12	Yes	0.776	0.221	1	Yes	0.770	0.127	0.90	Yes	1.00	**2.67**
		U_9 - U_{10}	151.55	-936.81	-84	324	-1303	-602	-167	-39	-161	-187	0.111	0.179	0.30	Yes	0.075	0.121	0.20	Yes	0.813	0.181	1	Yes	0.808	0.159	0.97	Yes	1.00	**2.27**
		U_{10} - U_{11}	529.31	-786.33	113	386	-1198	-752	-182	-76	-218	-263	0.447	0.201	0.65	Yes	0.304	0.130	0.44	Yes	0.786	0.211	1	Yes	0.781	0.169	0.96	Yes	1.00	**3.08**
		U_{11} - U_{12}	-----	-684.32	-2223	1337	-617	-1130	-233	-815	-589	-940	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.231	0.92	Yes	0.680	0.314	1.00	Yes	1.00	**9.06**
		U_{12} - U_{13}	799.14	-210.81	134	232	-1405	-2767	-831	-1112	-902	-491	0.540	0.455	1.00	Yes	0.385	0.309	0.70	Yes	0.169	0.487	0.66	Yes	0.167	0.349	0.52	Yes	1.00	**6.32**
		U_{13} - U_{14}	348.41	-----	-6331	8152	-482	1363	-946	-196	-622	-332	0.171	0.819	1.00	Yes	0.121	0.536	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.20**
		U_{14} - U_{15}	1062.45	-----	1560	200	4604	-2686	-541	-174	-116	619	0.522	0.469	1.00	Yes	0.370	0.307	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		U_{15} - U_{16}	1105.85	-----	244	580	70	-2143	-151	244	496	927	0.669	0.322	1.00	Yes	0.476	0.217	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		U_{16} - U_{17}	922.52	-158.89	649	311	866	-2039	186	63	573	213	0.680	0.316	1.00	Yes	0.452	0.208	0.67	Yes	0.139	0.132	0.28	Yes	0.138	0.256	0.40	Yes	1.00	**4.08**
		U_{17} - U_{18}	711.19	-425.91	473	341	424	-1518	-40	-6	158	30	0.714	0.281	1.00	Yes	0.475	0.186	0.67	Yes	0.506	0.141	0.65	Yes	0.503	0.258	0.77	Yes	1.00	**3.67**
		U_{18} - U_{19}	458.91	-636.28	459	198	-216	-1411	8	45	179	-18	0.461	0.266	0.73	Yes	0.302	0.169	0.48	Yes	0.756	0.206	0.97	Yes	0.751	0.240	1.00	Yes	1.00	**2.86**
		U_{19} - U_{20}	247.46	-693.16	287	153	-565	-1197	10	147	103	69	0.232	0.212	0.45	Yes	0.154	0.139	0.30	Yes	0.770	0.225	1	Yes	0.765	0.192	0.96	Yes	1.00	**2.35**
		U_{20} - U_{21}	67.22	-876.28	-35	145	4	-1367	56	-94	105	-203	0.052	0.220	0.28	Yes	0.037	0.141	0.18	Yes	0.806	0.187	1	Yes	0.800	0.198	1.00	Yes	1.00	**2.51**
		U_{21} - U_{22}	51.26	-803.20	-13	15	-826	-1405	-16	-51	58	-36	0.040	0.210	0.25	Yes	0.028	0.139	0.17	Yes	0.738	0.259	1	Yes	0.733	0.203	0.94	Yes	1.00	**2.07**
		U_{22} - U_{23}	59.11	-817.99	-12	-20	-925	-1181	-75	-102	-37	-166	0.046	0.189	0.24	Yes	0.033	0.126	0.16	Yes	0.752	0.243	1	Yes	0.747	0.171	0.92	Yes	1.00	**2.16**
		U_{23} - U_{24}	203.19	-829.65	39	161	-51	-1375	-252	-110	-231	-428	0.158	0.246	0.41	Yes	0.110	0.159	0.27	Yes	0.763	0.233	1	Yes	0.757	0.199	0.96	Yes	1.00	**3.05**
		U_{24} - U_{25}	208.42	-705.77	116	241	-861	-825	-238	-32	-136	-155	0.195	0.170	0.37	Yes	0.130	0.112	0.25	Yes	0.784	0.213	1	Yes	0.779	0.138	0.92	Yes	1.00	**2.23**
		U_{25} - U_{26}	-----	-684.80	-967	753	-110	-1114	-24	-72	-261	-402	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.131	0.95	Yes	0.809	0.189	1.00	Yes	1.00	**4.65**
		U_{26} - U_{27}	-----	-641.01	-1161	891	-178	-1387	-163	-127	-399	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.168	0.94	Yes	0.757	0.236	1.00	Yes	1.00	**6.10**
		U_{27} - U_{28}	-----	-628.10	-3610	3175	475	-2908	-472	-1007	-943	-1242	-----	-----	-----	-----	-----	-----	-----	-----	0.548	0.384	0.94	Yes	0.544	0.454	1.00	Yes	1.00	**15.40**
		U_{28} - U_{29}	992.82	-41.43	-103	358	-1656	-2773	-783	-501	-919	-469	0.600	0.393	1.00	Yes	0.427	0.264	0.70	Yes	0.030	0.435	0.47	Yes	0.029	0.315	0.35	Yes	1.00	**5.97**
		U_{29} - U_{30}	477.63	-----	-5529	7753	-132	1181	-663	108	-72	374	0.235	0.763	1.00	Yes	0.166	0.499	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.31**
		U_{30} - U_{31}	1069.47	-----	1501	100	4587	-2933	-430	-191	213	605	0.526	0.466	1.00	Yes	0.372	0.305	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		U_{31} - U_{32}	1064.28	-----	142	493	-324	-1568	-56	214	587	834	0.719	0.277	1.00	Yes	0.512	0.189	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		U_{32} - U_{33}	796.24	-359.17	528	280	479	-1757	193	51	617	159	0.673	0.323	1.00	Yes	0.452	0.216	0.67	Yes	0.359	0.193	0.56	Yes	0.357	0.248	0.61	Yes	1.00	**3.53**
		U_{33} - U_{34}	585.72	-773.73	414	266	71	-1628	60	38	231	10	0.495	0.258	0.76	Yes	0.337	0.166	0.51	Yes	0.774	0.199	0.98	Yes	0.769	0.230	1.00	Yes	1.00	**3.40**
		U_{34} - U_{35}	231.54	-912.86	361	-14	87	-1670	114	-2	174	-138	0.170	0.222	0.40	Yes	0.115	0.151	0.27	Yes	0.792	0.166	0.96	Yes	0.788	0.203	1.00	Yes	1.00	**2.32**
		U_{35} - U_{36}	13.35	-1198.29	181	-205	-144	-1533	71	36	235	197	0.008	0.182	0.20	Yes	0.005	0.119	0.13	Yes	0.819	0.173	1	Yes	0.813	0.163	0.98	Yes	1.00	**2.49**
		U_{36} - U_{37}	-----	-1302.31	-134	-47	-930	-2192	163	-48	262	26	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.246	1	Yes	0.742	0.195	0.94	Yes	1.00	**1.96**
		U_{37} - U_{38}	-----	-1369.56	72	-218	-1427	-1726	19	21	113	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.207	1	Yes	0.780	0.154	0.94	Yes	1.00	**2.15**
		U_{38} - U_{39}	-----	-1490.43	38	-399	-1422	-2071	82	-107	161	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.223	1	Yes	0.765	0.172	0.94	Yes	1.00	**2.10**
		U_{39} - U_{40}	-----	-1459.15	-696	-404	-1833	-1876	60	-175	-132	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.245	1	Yes	0.749	0.155	0.91	Yes	1.00	**2.02**
		U_{40} - U_{41}	-----	-1324.62	-494	-422	-1533	-1634	24	-260	-244	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.238	1	Yes	0.754	0.146	0.90	Yes	1.00	**1.93**
		U_{41} - U_{42}	-----	-1241.32	-855	200	-736	-1006	-105	-202	-162	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.108	1	Yes	0.881	0.102	0.99	Yes	1.00	**2.71**
		U_{42} - U_{43}	-----	-820.08	-415	120	-1107	-543	2	-154	205	-193	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.792	0.168	0.96	Yes	1.00	**2.52**
		U_{43} - U_{44}	-----	-479.06	-1129	1107	-9	-1782	-363	-170	-53	-766	-----	-----	-----	-----	-----	-----	-----	-----	0.569	0.421	1	Yes	0.566	0.303	0.87	Yes	1.00	**4.70**
	Structure 3	U_0 - U_1	-----	-612.61	173	-173	571	-1533	62	132	-47	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.208	0.91	Yes	0.689	0.308	1.00	Yes	1.00	**3.37**
		U_1 - U_2	-----	-692.67	-68	-114	37	-778	252	511	198	286	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.209	1	Yes	0.779	0.157	0.94	Yes	1.00	**1.65**
		U_2 - U_3	-----	-1020.15	-78	-117	182	-1052	518	5	614	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1	Yes	0.798	0.171	0.97	Yes	1.00	**1.89**
		U_3 - U_4	-----	-1373.62	-138	-194	-324	-1510	131	-255	320	280	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.196	1	Yes	0.787	0.167	0.96	Yes	1.00	**2.29**
		U_4 - U_5	-----	-1367.42	-320	-38	-326	-1328	-18	-313	39	-511	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.198	1	Yes	0.784	0.146	0.94	Yes	1.00	**2.04**
		U_5 - U_6	-----	-1330.51	-142	-214	-381	-1728	-59	-217	-117	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.227	1	Yes	0.763	0.191	0.96	Yes	1.00	**2.08**
		U_6 - U_7	-----	-1354.94	-273	-45	-488	-1230	-138	-251	-154	-490	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.777	0.136	0.92	Yes	1.00	**2.85**
		U_7 - U_8	-----	-1189.62	-642	104	-155	-990	95	-190	-259	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.190	1	Yes	0.795	0.137	0.94	Yes	1.00	**2.59**
		U_8 - U_9	43.68	-819.16	-74	290	-215	-734	-106	-74	-257	-403	0.035	0.170	0.21	Yes	0.024	0.114	0.14	Yes	0.775	0.219	1	Yes	0.769	0.122	0.90	Yes	1.00	**3.12**
		U_9 - U_{10}	-----	-604.58	-983	428	-467	-332	-157	-346	-230	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.202	0.99	Yes	0.771	0.220	1.00	Yes	1.00	**3.84**
		U_{10} - U_{11}	-----	-305.25	-1513	1597	808	-2693	-1256	-885	-958	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.393	0.519	0.92	Yes	0.390	0.603	1.00	Yes	1.00	**20.79**
		U_{11} - U_{12}	372.28	-----	-3685	3696	-144	605	-590	-4	-264	37	0.305	0.692	1.00	Yes	0.209	0.471	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.87**
		U_{12} - U_{13}	866.09	-----	863	107	2301	-1538	-430	-88	-122	371	0.600	0.392	1.00	Yes	0.419	0.267	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**
		U_{13} - U_{14}	778.67	-110.08	223	359	194	-856	-160	278	157	500	0.745	0.251	1.00	Yes	0.520	0.172	0.70	Yes	0.125	0.268	0.4	Yes	0.124	0.182	0.31	Yes	1.00	**3.17**
		U_{14} - U_{15}	599.18	-429.40	398	233	480	-1039	50	151	342	1	0.687	0.305	1.00	Yes	0.463	0.199	0.67	Yes	0.584	0.141	0.73	Yes	0.579	0.247	0.83	Yes	1.00	**2.91**
		U_{15} - U_{16}	307.26	-563.89	255	132	-375	-759	-8	140	141	168	0.352	0.209	0.57	Yes	0.242	0.143	0.39	Yes	0.767	0.229	1	Yes	0.760	0.181	0.95	Yes	1.00	**2.13**
		U_{16} - U_{17}	318.56	-575.89	301	78	-309	-812	33	73	152	-21	0.365	0.219	0.59	Yes	0.251	0.150	0.41	Yes	0.784	0.208	1	Yes	0.777	0.193	0.97	Yes	1.00	**2.25**
		U_{17} - U_{18}	-----	-512.63	-165	-61	299	-1264	63	-355	-111	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.251	0.95	Yes	0.691	0.300	1.00	Yes	1.00	**3.18**
		U_{18} - U_{19}	-----	-548.45	-56	27	-793	-463	-13	123	133	29	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.246	1	Yes	0.740	0.189	0.93	Yes	1.00	**1.87**
		U_{19} - U_{20}	-----	-498.34	-571	526	-745	-1038	44	-86	341	-431	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.320	1	Yes	0.672	0.247	0.92	Yes	1.00	**3.17**

Moment (End) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-72.42	-283	178	1148	-2887	46	169	-166	-611	-----	-----	-----	-----	-----	-----	-----	-----	0.131	0.630	0.77	Yes	0.130	0.866	1.00	Yes	1.00	**10.88**
		L_1 - L_2	432.65	-18.40	46	-5	-131	-732	23	18	-515	168	0.662	0.330	1.00	Yes	0.404	0.217	0.63	Yes	0.033	0.224	0.26	Yes	0.033	0.220	0.26	Yes	1.00	**1.96**
		L_2 - L_3	667.14	-80.71	-27	73	-622	-872	8	-10	-82	-20	0.768	0.224	1.00	Yes	0.444	0.135	0.58	Yes	0.110	0.254	0.37	Yes	0.109	0.211	0.32	Yes	1.00	**2.18**
		L_3 - L_4	577.19	-285.83	76	326	94	-1238	-13	20	-194	-1	0.664	0.330	1.00	Yes	0.394	0.214	0.61	Yes	0.391	0.235	0.63	Yes	0.387	0.299	0.69	Yes	1.00	**3.21**
		L_4 - L_5	474.93	-----	-1248	705	-491	-526	-130	55	-292	46	0.615	0.382	1.00	Yes	0.369	0.251	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		L_5 - L_6	-----	-749.45	140	581	-217	-197	18	84	-85	16	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.123	1	Yes	0.865	0.129	1.00	Yes	1.00	**2.63**
		L_6 - L_7	-----	-745.08	-2489	1193	-1526	-2505	96	-142	-10	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.180	0.79	Yes	0.600	0.394	1.00	Yes	1.00	**9.19**
		L_7 - L_8	-----	-1097.32	-834	2257	-27	578	113	91	36	75	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.256	0.96	Yes	0.695	0.299	1.00	Yes	1.00	**4.07**
		L_8 - L_9	-----	-1135.14	895	111	2055	-1089	-15	-41	-28	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.216	0.95	Yes	0.719	0.272	1.00	Yes	1.00	**5.26**
		L_9 - L_{10}	-----	-963.96	175	168	119	-1375	48	52	183	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.138	0.93	Yes	0.776	0.216	1.00	Yes	1.00	**4.76**
		L_{10} - L_{11}	293.52	-511.73	450	-11	-39	-832	90	20	-54	-25	0.380	0.236	0.62	Yes	0.221	0.143	0.37	Yes	0.787	0.151	0.94	Yes	0.780	0.220	1.00	Yes	1.00	**3.25**
		L_{11} - L_{12}	591.69	-115.05	332	-184	134	-801	-27	22	-85	98	0.766	0.229	1.00	Yes	0.460	0.151	0.62	Yes	0.177	0.128	0.31	Yes	0.175	0.212	0.39	Yes	1.00	**2.15**
		L_{12} - L_{13}	1032.70	-----	78	-93	-349	-916	-22	-38	-107	66	0.815	0.175	1.00	Yes	0.521	0.104	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**
		L_{13} - L_{14}	1289.67	-----	223	-392	-177	-1576	-106	63	-222	130	0.758	0.236	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		L_{14} - L_{15}	1637.07	-----	-1158	47	-845	-1389	7	160	-340	-129	0.800	0.191	1.00	Yes	0.520	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
		L_{15} - L_{16}	1577.42	-----	-364	-319	-791	-1716	49	170	-260	-186	0.771	0.225	1.00	Yes	0.495	0.131	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		L_{16} - L_{17}	1233.91	-----	-1339	286	-1130	-673	-122	18	-167	61	0.780	0.211	1.00	Yes	0.506	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.73**
		L_{17} - L_{18}	927.10	-----	-558	359	-620	-537	-35	37	-310	-546	0.807	0.189	1.00	Yes	0.517	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		L_{18} - L_{19}	407.06	-----	-989	531	-527	2	-130	4	-173	345	0.623	0.369	1.00	Yes	0.421	0.232	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		L_{19} - L_{20}	260.68	-47.24	-1430	758	-228	32	822	184	1	0	0.399	0.600	1.00	Yes	0.243	0.397	0.65	Yes	0.086	0.344	0.43	Yes	0.085	0.429	0.52	Yes	1.00	**5.29**
	Structure 2	L_0 - L_1	3.64	-102.03	-150	76	952	-2771	14	49	-430	-1494	0.005	0.985	1.00	Yes	0.003	0.490	0.50	Yes	0.182	0.702	0.89	Yes	0.181	0.668	0.85	Yes	1.00	**9.31**
		L_1 - L_2	545.67	-----	165	-205	277	-1224	77	102	-495	298	0.663	0.330	1.00	Yes	0.394	0.210	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		L_2 - L_3	1002.75	-----	-20	-133	-227	-1285	123	166	25	21	0.790	0.203	1.00	Yes	0.518	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		L_3 - L_4	1302.41	-----	56	-314	-277	-1816	45	125	-57	219	0.765	0.230	1.00	Yes	0.515	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.69**
		L_4 - L_5	1686.53	-----	-231	-213	-1141	-2087	16	-11	-27	114	0.786	0.205	1.00	Yes	0.521	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		L_5 - L_6	1791.87	-----	-30	-334	-1388	-2409	-93	57	-248	64	0.769	0.229	1.00	Yes	0.516	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		L_6 - L_7	1840.11	-----	-367	-74	-2047	-2364	53	-17	-29	115	0.779	0.215	1.00	Yes	0.518	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		L_7 - L_8	1416.30	-67.31	-153	290	-1080	-1456	-63	79	-330	-163	0.812	0.188	1.00	Yes	0.533	0.111	0.65	Yes	0.046	0.225	0.28	Yes	0.045	0.161	0.21	Yes	1.00	**2.98**
		L_8 - L_9	1181.18	-----	-716	629	-1128	-762	84	81	-189	114	0.826	0.170	1.00	Yes	0.557	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
		L_9 - L_{10}	915.91	-747.91	-44	751	-799	-935	39	133	-216	-175	0.818	0.176	1.00	Yes	0.476	0.109	0.59	Yes	0.791	0.147	0.94	Yes	0.785	0.150	0.94	Yes	1.00	**4.43**
		L_{10} - L_{11}	727.14	-----	-1331	1200	-1207	-838	46	18	-279	-151	0.726	0.271	1.00	Yes	0.426	0.170	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.35**
		L_{11} - L_{12}	292.33	-901.30	-1351	1907	-1352	-1070	96	203	-81	-375	0.204	0.295	0.50	Yes	0.135	0.176	0.32	Yes	0.745	0.164	0.91	Yes	0.739	0.260	1.00	Yes	1.00	**8.11**
		L_{12} - L_{13}	-----	-1020.94	-144	183	-1306	-3104	-503	-461	-48	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.616	0.382	1	Yes	0.611	0.309	0.92	Yes	1.00	**5.27**
		L_{13} - L_{14}	-----	-1169.00	-2612	4711	-474	1289	-9	8	-226	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.593	0.267	0.87	Yes	0.588	0.411	1.00	Yes	1.00	**4.82**
		L_{14} - L_{15}	-----	-1237.43	1446	-366	4268	-2984	267	232	-203	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.223	0.86	Yes	0.623	0.373	1.00	Yes	1.00	**4.64**
		L_{15} - L_{16}	-----	-1234.12	-393	489	-1810	-2034	-48	148	-32	113	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.246	1	Yes	0.738	0.202	0.95	Yes	1.00	**4.97**
		L_{16} - L_{17}	-----	-1122.57	1087	156	677	-1460	186	53	-27	118	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.162	0.99	Yes	0.818	0.180	1.00	Yes	1.00	**4.13**
		L_{17} - L_{18}	-----	-789.67	485	212	250	-1065	16	-44	-53	107	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.070	0.91	Yes	0.829	0.170	1.00	Yes	1.00	**2.85**
		L_{18} - L_{19}	209.19	-610.57	613	80	69	-923	-43	-74	19	7	0.237	0.189	0.43	Yes	0.137	0.113	0.25	Yes	0.819	0.141	0.97	Yes	0.814	0.178	1.00	Yes	1.00	**2.73**
		L_{19} - L_{20}	628.42	-533.12	503	160	-25	-1378	-31	-30	-68	84	0.712	0.279	1.00	Yes	0.421	0.179	0.61	Yes	0.715	0.150	0.87	Yes	0.711	0.266	0.98	Yes	1.00	**3.36**
		L_{20} - L_{21}	934.04	-370.55	384	10	-688	-1628	0	-39	-78	-12	0.745	0.246	1.00	Yes	0.488	0.145	0.64	Yes	0.350	0.224	0.58	Yes	0.348	0.238	0.59	Yes	1.00	**3.36**
		L_{21} - L_{22}	861.85	-80.52	92	-85	-648	-1961	-52	58	-150	158	0.687	0.303	1.00	Yes	0.460	0.189	0.65	Yes	0.076	0.260	0.34	Yes	0.076	0.286	0.37	Yes	1.00	**2.55**
		L_{22} - L_{23}	926.69	-188.94	-135	197	-819	-1561	26	-41	-240	-78	0.739	0.254	1.00	Yes	0.494	0.159	0.66	Yes	0.178	0.300	0.48	Yes	0.177	0.228	0.41	Yes	1.00	**2.77**
		L_{23} - L_{24}	956.24	-----	-445	336	-970	-1434	72	186	-143	-120	0.763	0.229	1.00	Yes	0.500	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		L_{24} - L_{25}	702.31	-----	-431	521	-757	-889	145	97	-175	-70	0.796	0.198	1.00	Yes	0.471	0.126	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		L_{25} - L_{26}	657.30	-65.05	-799	945	-846	-1161	108	198	-160	-148	0.745	0.254	1.00	Yes	0.430	0.152	0.59	Yes	0.087	0.123	0.22	Yes	0.087	0.224	0.32	Yes	1.00	**5.19**
		L_{26} - L_{27}	644.75	-675.88	-1386	1771	-1576	-1675	240	150	-281	132	0.575	0.317	0.90	Yes	0.335	0.197	0.54	Yes	0.715	0.168	0.89	Yes	0.710	0.283	1.00	Yes	1.00	**8.75**
		L_{27} - L_{28}	-----	-1037.01	-932	1960	-801	-475	189	340	-192	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.185	0.95	Yes	0.755	0.242	1.00	Yes	1.00	**5.78**
		L_{28} - L_{29}	-----	-1076.78	108	62	-1203	-3248	-66	-194	-37	38	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.343	1	Yes	0.644	0.323	0.97	Yes	1.00	**5.18**
		L_{29} - L_{30}	-----	-1231.04	-2474	4251	-496	1164	79	151	98	134	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.226	0.86	Yes	0.619	0.371	1.00	Yes	1.00	**4.20**
		L_{30} - L_{31}	-----	-1251.78	1170	-269	4148	-2917	-356	-256	-61	12	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.226	0.87	Yes	0.630	0.362	1.00	Yes	1.00	**4.40**
		L_{31} - L_{32}	-----	-1234.03	-194	335	-1328	-1747	-169	-44	128	191	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.253	1	Yes	0.738	0.174	0.92	Yes	1.00	**4.26**
		L_{32} - L_{33}	-----	-1009.29	941	85	431	-1238	16	-39	119	82	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.139	0.98	Yes	0.828	0.169	1.00	Yes	1.00	**3.50**
		L_{33} - L_{34}	151.48	-687.30	510	110	325	-1087	-20	9	6	192	0.151	0.216	0.37	Yes	0.089	0.136	0.23	Yes	0.813	0.098	0.92	Yes	0.807	0.190	1.00	Yes	1.00	**2.73**
		L_{34} - L_{35}	809.20	-708.28	716	2	-65	-1574	-10	-68	-11	181	0.722	0.274	1.00	Yes	0.421	0.171	0.60	Yes	0.749	0.179	0.93	Yes	0.744	0.252	1.00	Yes	1.00	**4.00**
		L_{35} - L_{36}	1112.02	-331.26	518	-61	-66	-1464	-80	13	-212	140	0.778	0.218	1.00	Yes	0.524	0.135	0.66	Yes	0.275	0.139	0.42	Yes	0.273	0.198	0.48	Yes	1.00	**3.12**
		L_{36} - L_{37}	1303.70	-29.00	314	-67	-431	-2119	17	-3	25	161	0.748	0.247	1.00	Yes	0.491	0.144	0.64	Yes	0.020	0.220	0.24	Yes	0.020	0.234	0.26	Yes	1.00	**2.63**
		L_{37} - L_{38}	1752.72	-----	36	-428	-628	-2658	-78	44	-313	-32	0.742	0.253	1.00	Yes	0.493	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		L_{38} - L_{39}	1854.07	-----	-345	-65	-1764	-2182	-4	-60	-149	75	0.796	0.203	1.00	Yes	0.534	0.123	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.09**
		L_{39} - L_{40}	1639.46	-----	-958	-90	-1073	-2259	118	219	-230	-198	0.764	0.229	1.00	Yes	0.506	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		L_{40} - L_{41}	1364.80	-----	-870	293	-1512	-1103	12	23	-194	-27	0.802	0.192	1.00	Yes	0.540	0.119	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		L_{41} - L_{42}	1037.18	-----	-718	370	-918	-832	36	137	-149	-393	0.817	0.175	1.00	Yes	0.536	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		L_{42} - L_{43}	518.84	-----	-1102	638	-810	-350	86	11	-167	838	0.630	0.362	1.00	Yes	0.375	0.227	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		L_{43} - L_{44}	25.66	-74.88	-3244	1134	-20	-79	1843	538	-59	-17	0.031	0.963	1.00	Yes	0.019	0.609	0.63	Yes	0.108	0.646	0.76	Yes	0.107	0.660	0.77	Yes	1.00	**10.86**
	Structure 3	L_0 - L_1	34.73	-175.11	-56	-5	1039	-2268	1	5	-246	-1113	0.053	0.912	0.97	Yes	0.032	0.605	0.64	Yes	0.318	0.549	0.87	Yes	0.315	0.681	1.00	Yes	1.00	**8.89**
		L_1 - L_2	454.28	-----	156	-186	279	-757	35	61	-341	269	0.695	0.298	1.00	Yes	0.470	0.188	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		L_2 - L_3	917.22	-----	-24	-138	-60	-911	85	127	24	21	0.799	0.192	1.00	Yes	0.511	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		L_3 - L_4	1214.12	-----	45	-303	-162	-1418	30	118	-52	218	0.768	0.228	1.00	Yes	0.498	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		L_4 - L_5	1644.10	-----	-271	-132	-1239	-1498	26	11	68	95	0.803	0.187	1.00	Yes	0.516	0.109	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		L_5 - L_6	1530.71	-----	-33	-310	-666	-1915	-65	132	-70	272	0.748	0.250	1.00	Yes	0.486	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**
		L_6 - L_7	1396.51	-----	-1108	503	-997	-911	80	164	-221	104	0.821	0.171	1.00	Yes	0.532	0.105	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		L_7 - L_8	1048.72	-----	-277	130	-517	-776	78	247	-141	-12	0.828	0.167	1.00	Yes	0.529	0.100	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**
		L_8 - L_9	634.36	-----	-587	444	-466	-295	67	-23	-96	63	0.821	0.172	1.00	Yes	0.493	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
		L_9 - L_{10}	383.14	-566.01	-20	511	-516	-335	-23	19	13	22	0.496	0.141	0.64	Yes	0.289	0.085	0.38	Yes	0.870	0.106	0.98	Yes	0.862	0.137	1.00	Yes	1.00	**3.54**
		L_{10} - L_{11}	-----	-969.21	-875	1010	-871	-1306	278	-225	61	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.075	0.87	Yes	0.785	0.207	1.00	Yes	1.00	**6.62**
		L_{11} - L_{12}	-----	-1144.73	-818	2027	-42	532	58	-19	-85	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.226	0.96	Yes	0.725	0.268	1.00	Yes	1.00	**4.61**
		L_{12} - L_{13}	-----	-1155.82	898	83	1957	-925	-316	-257	-158	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.234	0.98	Yes	0.732	0.259	1.00	Yes	1.00	**4.19**
		L_{13} - L_{14}	-----	-1019.68	119	252	-65	-1118	-117	-67	-58	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.143	0.98	Yes	0.821	0.176	1.00	Yes	1.00	**3.65**
		L_{14} - L_{15}	18.93	-731.30	560	152	77	-681	52	-48	-65	88	0.019	0.162	0.19	Yes	0.012	0.098	0.12	Yes	0.853	0.140	1	Yes	0.844	0.151	1.00	Yes	1.00	**2.86**
		L_{15} - L_{16}	294.39	-492.66	446	128	139	-922	6	-70	-105	210	0.381	0.281	0.67	Yes	0.229	0.185	0.42	Yes	0.757	0.142	0.9	Yes	0.751	0.244	1.00	Yes	1.00	**2.31**
		L_{16} - L_{17}	609.09	-----	-366	45	58	-1095	63	-12	-162	-64	0.701	0.291	1.00	Yes	0.416	0.188	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		L_{17} - L_{18}	606.34	-----	-24	0	-331	-972	172	371	-70	-61	0.698	0.294	1.00	Yes	0.404	0.176	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**
		L_{18} - L_{19}	432.52	-----	-893	190	-415	-638	46	38	-44	281	0.662	0.328	1.00	Yes	0.404	0.219	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.33**
		L_{19} - L_{20}	21.14	-----	-2505	1469	90	-188	990	269	-151	-41	0.032	0.964	1.00	Yes	0.019	0.586	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.16**

Moment (End) AI Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-336.44	-136	182	-22	45	-569	-183	-94	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.246	1	Yes	0.712	0.233	0.95	Yes	1.00	**0.82**
		$U_1 - L_1$	20.30	-349.78	-182	202	20	-15	-382	-91	45	20	0.037	0.369	0.41	Yes	0.020	0.203	0.23	Yes	0.764	0.170	0.94	Yes	0.740	0.258	1.00	Yes	1.00	**1.84**
		$U_2 - L_2$	79.87	-265.68	-305	336	125	-117	111	117	-130	-24	0.144	0.467	0.62	Yes	0.079	0.257	0.34	Yes	0.581	0.143	0.73	Yes	0.562	0.429	1.00	Yes	1.00	**3.64**
		$U_3 - L_3$	262.25	-222.02	-285	302	282	-279	69	235	-465	-189	0.472	0.521	1.00	Yes	0.259	0.287	0.55	Yes	0.487	0.199	0.69	Yes	0.470	0.386	0.86	Yes	1.00	**4.06**
		$U_4 - L_4$	35.27	-57.07	-253	217	677	-650	162	234	-163	-171	0.063	0.933	1.00	Yes	0.035	0.513	0.55	Yes	0.125	0.252	0.38	Yes	0.121	0.865	0.99	Yes	1.00	**7.36**
		$U_5 - L_5$	-----	-421.04	21	-36	251	-269	-119	-43	-75	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.103	0.87	Yes	0.726	0.273	1.00	Yes	1.00	**2.06**
		$U_6 - L_6$	-----	-518.80	55	-57	264	-286	-97	13	-44	15	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.090	0.88	Yes	0.744	0.250	1.00	Yes	1.00	**1.99**
		$U_7 - L_7$	-----	-452.44	118	-132	273	-300	-130	46	29	75	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.118	0.88	Yes	0.698	0.296	1.00	Yes	1.00	**1.13**
		$U_8 - L_8$	-----	-1268.04	-407	485	499	-595	-212	-57	-141	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.916	0.055	0.98	Yes	0.879	0.111	1.00	Yes	1.00	**2.72**
		$U_9 - L_9$	-----	-670.75	-373	432	-166	190	-249	-190	-224	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.128	0.93	Yes	0.758	0.240	1.00	Yes	1.00	**1.48**
		$U_{10} - L_{10}$	-----	-819.13	-303	365	-115	100	-264	-181	-257	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.113	0.97	Yes	0.808	0.189	1.00	Yes	1.00	**2.35**
		$U_{11} - L_{11}$	-----	-679.92	-326	447	-69	148	-114	19	-125	12	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.087	0.91	Yes	0.791	0.207	1.00	Yes	1.00	**2.28**
		$U_{12} - L_{12}$	-----	-513.62	-346	339	-40	54	-56	104	-93	57	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.093	0.84	Yes	0.705	0.295	1.00	Yes	1.00	**2.24**
		$U_{13} - L_{13}$	-----	-362.51	-240	261	2	18	-15	138	-85	84	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.104	0.84	Yes	0.694	0.298	1.00	Yes	1.00	**1.76**
		$U_{14} - L_{14}$	105.80	-60.79	-575	615	342	-342	20	54	59	79	0.190	0.809	1.00	Yes	0.105	0.445	0.55	Yes	0.136	0.214	0.35	Yes	0.129	0.786	0.92	Yes	1.00	**7.05**
		$U_{15} - L_{15}$	245.90	-308.58	-201	194	250	-266	-110	-135	-31	-177	0.442	0.392	0.84	Yes	0.243	0.215	0.46	Yes	0.692	0.163	0.86	Yes	0.653	0.340	1.00	Yes	1.00	**2.95**
		$U_{16} - L_{16}$	93.64	-310.90	-49	33	260	-263	-59	-78	-128	-192	0.168	0.391	0.56	Yes	0.093	0.215	0.31	Yes	0.701	0.160	0.87	Yes	0.658	0.336	1.00	Yes	1.00	**2.16**
		$U_{17} - L_{17}$	-----	-433.33	33	-55	231	-244	-89	-51	-77	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.108	0.92	Yes	0.748	0.247	1.00	Yes	1.00	**1.78**
		$U_{18} - L_{18}$	-----	-530.49	121	-126	448	-455	-161	-63	68	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.094	0.88	Yes	0.738	0.258	1.00	Yes	1.00	**1.99**
		$U_{19} - L_{19}$	-----	-644.61	137	-149	522	-528	-66	9	54	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.073	0.88	Yes	0.750	0.245	1.00	Yes	1.00	**2.13**
		$U_{20} - L_{20}$	-----	-632.30	165	-211	422	-540	23	3	237	31	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.158	1	Yes	0.736	0.250	0.99	Yes	1.00	**1.70**
	Structure 2	$U_0 - L_0$	-----	-600.33	-417	494	-115	181	-1333	-226	-262	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.275	1	Yes	0.643	0.210	0.86	Yes	1.00	**1.47**
		$U_1 - L_1$	-----	-713.57	-542	541	-109	115	-6	5	43	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.068	0.89	Yes	0.765	0.230	1.00	Yes	1.00	**2.39**
		$U_2 - L_2$	-----	-581.36	-491	489	-79	88	1	84	99	44	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.080	0.86	Yes	0.741	0.251	1.00	Yes	1.00	**2.31**
		$U_3 - L_3$	-----	-486.70	-254	258	-41	47	-12	133	20	130	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.094	0.93	Yes	0.763	0.235	1.00	Yes	1.00	**2.14**
		$U_4 - L_4$	3.78	-335.01	-227	224	14	8	-59	126	-56	100	0.007	0.327	0.34	Yes	0.004	0.180	0.19	Yes	0.760	0.094	0.86	Yes	0.709	0.290	1.00	Yes	1.00	**2.02**
		$U_5 - L_5$	155.73	-323.73	-227	243	137	-114	-44	150	-127	78	0.280	0.355	0.64	Yes	0.154	0.195	0.35	Yes	0.731	0.115	0.85	Yes	0.685	0.311	1.00	Yes	1.00	**2.66**
		$U_6 - L_6$	362.69	-215.46	-235	240	240	-241	-87	129	-128	93	0.652	0.346	1.00	Yes	0.359	0.190	0.55	Yes	0.485	0.091	0.58	Yes	0.456	0.308	0.77	Yes	1.00	**3.44**
		$U_7 - L_7$	21.40	-158.71	-229	244	454	-513	-88	104	-165	-100	0.038	0.704	0.75	Yes	0.021	0.387	0.41	Yes	0.359	0.228	0.59	Yes	0.336	0.656	1.00	Yes	1.00	**7.04**
		$U_8 - L_8$	-----	-458.91	21	-42	378	-387	-103	-107	-202	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.128	0.8	Yes	0.661	0.338	1.00	Yes	1.00	**2.07**
		$U_9 - L_9$	-----	-687.73	80	-115	611	-613	-129	-106	-101	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.082	0.85	Yes	0.737	0.260	1.00	Yes	1.00	**2.67**
		$U_{10} - L_{10}$	-----	-790.95	107	-144	562	-578	-53	10	-53	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.083	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**2.80**
		$U_{11} - L_{11}$	-----	-814.04	158	-172	531	-532	-47	-138	-118	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.084	0.91	Yes	0.761	0.235	1.00	Yes	1.00	**2.46**
		$U_{12} - L_{12}$	-----	-881.11	159	-152	547	-548	-2	54	83	101	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.087	0.94	Yes	0.764	0.235	1.00	Yes	1.00	**2.48**
		$U_{13} - L_{13}$	-----	-752.20	242	-240	569	-564	-87	42	79	88	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.116	0.96	Yes	0.725	0.272	1.00	Yes	1.00	**1.88**
		$U_{14} - L_{14}$	-----	-1296.36	-504	468	635	-605	-41	147	-93	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.948	0.047	1	Yes	0.860	0.112	0.98	Yes	1.00	**2.90**
		$U_{15} - L_{15}$	-----	-735.65	-598	590	-165	166	-152	-95	-80	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.139	0.96	Yes	0.709	0.286	1.00	Yes	1.00	**2.25**
		$U_{16} - L_{16}$	-----	-739.62	-477	483	-128	102	-284	-142	-166	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.103	0.96	Yes	0.793	0.205	1.00	Yes	1.00	**2.13**
		$U_{17} - L_{17}$	-----	-646.77	-514	517	-129	126	-137	-42	-99	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.082	0.89	Yes	0.753	0.240	1.00	Yes	1.00	**2.21**
		$U_{18} - L_{18}$	-----	-572.53	-520	523	-98	99	-99	3	-82	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.078	0.85	Yes	0.730	0.267	1.00	Yes	1.00	**2.38**
		$U_{19} - L_{19}$	-----	-473.68	-300	290	-44	49	-116	32	-155	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.096	0.81	Yes	0.707	0.289	1.00	Yes	1.00	**2.04**
		$U_{20} - L_{20}$	-----	-376.54	-237	240	13	3	-71	67	-171	5	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.112	0.89	Yes	0.721	0.275	1.00	Yes	1.00	**2.04**
		$U_{21} - L_{21}$	83.25	-314.55	-246	257	51	-50	-103	68	-158	26	0.150	0.374	0.53	Yes	0.082	0.206	0.29	Yes	0.711	0.126	0.84	Yes	0.666	0.328	1.00	Yes	1.00	**2.40**
		$U_{22} - L_{22}$	89.30	-162.08	-487	513	403	-422	17	150	20	25	0.161	0.699	0.86	Yes	0.088	0.384	0.48	Yes	0.365	0.200	0.57	Yes	0.343	0.655	1.00	Yes	1.00	**7.90**
		$U_{23} - L_{23}$	129.33	-311.61	-102	93	254	-264	-65	-45	-125	-119	0.233	0.373	0.61	Yes	0.128	0.205	0.34	Yes	0.704	0.135	0.84	Yes	0.659	0.337	1.00	Yes	1.00	**2.41**
		$U_{24} - L_{24}$	66.66	-368.64	-39	28	250	-255	-72	-62	-55	-71	0.109	0.310	0.42	Yes	0.060	0.170	0.23	Yes	0.756	0.099	0.86	Yes	0.706	0.291	1.00	Yes	1.00	**2.16**
		$U_{25} - L_{25}$	-----	-468.32	20	-34	305	-299	-79	2	-44	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.082	0.79	Yes	0.699	0.293	1.00	Yes	1.00	**2.09**
		$U_{26} - L_{26}$	-----	-559.88	88	-109	529	-547	-87	-5	-141	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.092	0.84	Yes	0.713	0.280	1.00	Yes	1.00	**2.18**
		$U_{27} - L_{27}$	-----	-627.26	142	-144	573	-574	-150	0	-48	29	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.084	0.86	Yes	0.730	0.266	1.00	Yes	1.00	**2.18**
		$U_{28} - L_{28}$	-----	-705.61	132	-129	565	-557	-33	-24	54	91	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.075	0.89	Yes	0.756	0.240	1.00	Yes	1.00	**2.25**
		$U_{29} - L_{29}$	-----	-711.02	205	-210	644	-631	-114	25	24	69	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.124	0.92	Yes	0.686	0.308	1.00	Yes	1.00	**2.23**
		$U_{30} - L_{30}$	-----	-1293.53	-613	548	664	-657	-163	68	-22	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.946	0.052	1	Yes	0.858	0.118	0.98	Yes	1.00	**3.08**
		$U_{31} - L_{31}$	-----	-768.08	-523	519	-183	180	-174	-89	-119	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.134	1	Yes	0.741	0.250	1.00	Yes	1.00	**1.94**
		$U_{32} - L_{32}$	-----	-904.29	-494	494	-127	101	-266	-121	-184	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.120	0.99	Yes	0.784	0.212	1.00	Yes	1.00	**2.69**
		$U_{33} - L_{33}$	-----	-841.08	-449	468	-162	144	-124	1	-135	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.080	0.93	Yes	0.786	0.206	1.00	Yes	1.00	**2.46**
		$U_{34} - L_{34}$	-----	-799.42	-549	556	-118	129	-91	79	-162	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.083	0.88	Yes	0.747	0.245	1.00	Yes	1.00	**2.94**
		$U_{35} - L_{35}$	-----	-701.95	-576	580	-108	125	10	170	-182	38	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.074	0.86	Yes	0.752	0.246	1.00	Yes	1.00	**2.80**
		$U_{36} - L_{36}$	-----	-467.70	-360	369	-41	54	-50	126	-155	66	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.096	0.78	Yes	0.674	0.323	1.00	Yes	1.00	**2.22**
		$U_{37} - L_{37}$	2.48	-141.81	-483	540	154	-164	-51	158	-184	-33	0.004	0.744	0.75	Yes	0.002	0.409	0.42	Yes	0.320	0.234	0.56	Yes	0.300	0.691	1.00	Yes	1.00	**6.44**
		$U_{38} - L_{38}$	351.05	-139.11	-240	247	165	-164	-71	-104	-139	-169	0.631	0.364	1.00	Yes	0.347	0.200	0.55	Yes	0.313	0.134	0.45	Yes	0.294	0.316	0.61	Yes	1.00	**2.57**
		$U_{39} - L_{39}$	254.11	-315.84	-196	183	237	-253	-110	-107	-29	-141	0.457	0.364	0.83	Yes	0.251	0.200	0.46	Yes	0.713	0.146	0.86	Yes	0.668	0.323	1.00	Yes	1.00	**2.95**
		$U_{40} - L_{40}$	99.94	-332.50	-54	32	229	-227	-83	-39	-60	-108	0.180	0.324	0.51	Yes	0.099	0.178	0.28	Yes	0.754	0.115	0.87	Yes	0.704	0.293	1.00	Yes	1.00	**2.22**
		$U_{41} - L_{41}$	-----	-481.70	43	-50	260	-267	-104	-43	-111	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.104	0.93	Yes	0.755	0.243	1.00	Yes	1.00	**2.06**
		$U_{42} - L_{42}$	-----	-572.46	102	-112	518	-516	-84	-49	96	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.081	0.85	Yes	0.729	0.265	1.00	Yes	1.00	**2.16**
		$U_{43} - L_{43}$	-----	-706.91	136	-153	549	-563	-40	-19	250	17	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.098	0.91	Yes	0.758	0.239	1.00	Yes	1.00	**2.28**
		$U_{44} - L_{44}$	-----	-695.40	191	-236	459	-598	-37	-6	234	40	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.146	0.98	Yes	0.745	0.254	1.00	Yes	1.00	**1.76**
	Structure 3	$U_0 - L_0$	-----	-572.26	-356	451	-103	167	-819	-107	-245	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.238	1	Yes	0.666	0.209	0.88	Yes	1.00	**1.49**
		$U_1 - L_1$	-----	-648.88	-514	508	-108	116	55	19	6	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.074	0.89	Yes	0.755	0.238	1.00	Yes	1.00	**2.38**
		$U_2 - L_2$	-----	-538.24	-427	434	-90	95	-79	60	87	33	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.078	0.87	Yes	0.749	0.246	1.00	Yes	1.00	**2.12**
		$U_3 - L_3$	-----	-441.80	-213	226	-33	44	38	184	1	120	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.116	0.95	Yes	0.762	0.229	1.00	Yes	1.00	**1.94**
		$U_4 - L_4$	57.96	-315.29	-259	259	36	-16	-103	173	-128	126	0.104	0.381	0.49	Yes	0.057	0.210	0.27	Yes	0.711	0.105	0.82	Yes	0.667	0.331	1.00	Yes	1.00	**2.34**
		$U_5 - L_5$	166.92	-300.14	-266	281	135	-128	-88	164	-168	71	0.300	0.407	0.71	Yes	0.165	0.224	0.39	Yes	0.673	0.129	0.81	Yes	0.635	0.359	1.00	Yes	1.00	**2.94**
		$U_6 - L_6$	-----	-73.23	-429	450	634	-661	56	121	-301	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.163	0.275	0.44	Yes	0.155	0.845	1.00	Yes	1.00	**8.04**
		$U_7 - L_7$	26.14	-359.64	-32	20	252	-271	-175	-141	-154	-168	0.043	0.355	0.40	Yes	0.023	0.195	0.22	Yes	0.727	0.143	0.88	Yes	0.689	0.309	1.00	Yes	1.00	**1.92**
		$U_8 - L_8$	-----	-512.11	16	-20	340	-340	-136	-103	-238	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.133	0.88	Yes	0.703	0.291	1.00	Yes	1.00	**2.32**
		$U_9 - L_9$	-----	-650.29	68	-117	415	-507	-93	-143	-197	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.106	0.89	Yes	0.757	0.235	1.00	Yes	1.00	**2.48**
		$U_{10} - L_{10}$	-----	-778.97	102	-98	412	-437	-13	87	27	96	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.071	0.88	Yes	0.769	0.227	1.00	Yes	1.00	**2.62**
		$U_{11} - L_{11}$	-----	-652.73	182	-212	397	-468	-51	62	147	141	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.116	0.9	Yes	0.737	0.260	1.00	Yes	1.00	**1.55**
		$U_{12} - L_{12}$	-----	-1277.75	-404	435	433	-568	52	75	-127	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.923	0.048	0.98	Yes	0.886	0.106	1.00	Yes	1.00	**2.69**
		$U_{13} - L_{13}$	-----	-460.54	-269	289	-105	115	-160	-108	-113	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.138	0.91	Yes	0.710	0.284	1.00	Yes	1.00	**1.28**
		$U_{14} - L_{14}$	-----	-544.62	-216	245	-62	54	-269	-155	-191	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.132	0.96	Yes	0.781	0.214	1.00	Yes	1.00	**1.76**
		$U_{15} - L_{15}$	-----	-449.84	-182	216	-41	47	-173	-18	-164	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.107	0.93	Yes	0.776	0.219	1.00	Yes	1.00	**1.78**
		$U_{16} - L_{16}$	93.78	-135.15	-555	540	152	-122	-111	45	-343	-206	0.169	0.809	0.98	Yes	0.093	0.445	0.54	Yes	0.297	0.254	0.56	Yes	0.286	0.710	1.00	Yes	1.00	**6.06**
		$U_{17} - L_{17}$	289.38	-175.92	-289	300	173	-194	-112	-24	-310	-252	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.385	0.180	0.57	Yes	0.372	0.384	0.76	Yes	1.00	**3.19**
		$U_{18} - L_{18}$	80.29	-271.77	-120	124	294	-327	112	10	-212	-162	0.144	0.479	0.63	Yes	0.079	0.264	0.35	Yes	0.594	0.174	0.77	Yes	0.575	0.418	1.00	Yes	1.00	**3.16**
		$U_{19} - L_{19}$	21.73	-315.63	-35	23	259	-252	-169	-90	-140	-113	0.039	0.380	0.42	Yes	0.021	0.209	0.24	Yes	0.690	0.125	0.82	Yes	0.668	0.332	1.00	Yes	1.00	**2.16**
		$U_{20} - L_{20}$	-----	-352.07	48	-56	155	-194	-170	-54	359	115	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.189	0.98	Yes	0.745	0.248	1.00	Yes	1.00	**0.80**

Moment (End) AI Inventory

Inventory Loads - HS20 Truck | Calc: BKC Date: 10/28/2009 | Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300 | LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	295.01	-113.58	-237	140	25	-20	-1311	-81	-26	-14	0.387	0.607	1.00	Yes	0.234	0.334	0.57	Yes	0.194	0.416	0.61	Yes	0.175	0.277	0.46	Yes	1.00	**4.18**
		$U_1 - L_2$	356.19	-----	-70	43	-39	-42	13	-105	-909	-430	0.641	0.353	1.00	Yes	0.352	0.194	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		$U_2 - L_3$	384.42	-317.39	-70	45	-43	-96	-151	-392	-415	-242	0.691	0.243	0.94	Yes	0.380	0.133	0.52	Yes	0.731	0.263	1	Yes	0.672	0.122	0.80	Yes	1.00	**3.96**
		$U_3 - L_4$	-----	-377.00	8	-10	1	-68	-119	-55	-149	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.133	1	Yes	0.798	0.087	0.89	Yes	1.00	**1.98**
		$U_4 - L_4$	580.56	-----	-74	71	-97	-27	-66	-197	-178	-200	0.851	0.145	1.00	Yes	0.468	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		$U_5 - L_5$	709.29	-----	-182	249	-93	40	53	-99	-38	-10	0.839	0.160	1.00	Yes	0.461	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		$U_7 - L_6$	647.15	-----	-299	245	-78	85	325	146	295	169	0.765	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
		$U_8 - L_7$	657.78	-----	-111	292	-8	115	303	154	241	174	0.778	0.221	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_9 - L_9$	1005.84	-----	-108	357	-2	136	257	211	96	111	0.804	0.192	1.00	Yes	0.498	0.107	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.37**
		$U_9 - L_{10}$	1046.39	-----	-297	285	-97	85	174	129	89	104	0.837	0.155	1.00	Yes	0.518	0.086	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		$U_{10} - L_{11}$	1032.45	-----	-225	220	-169	37	-99	-163	101	-82	0.872	0.126	1.00	Yes	0.540	0.070	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		$U_{11} - L_{12}$	844.25	-----	-236	158	-141	-35	-324	-345	-301	-243	0.835	0.161	1.00	Yes	0.459	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		$U_{12} - L_{13}$	619.57	-----	-185	170	-64	1	-387	-353	-349	-279	0.755	0.237	1.00	Yes	0.475	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.21**
		$U_{13} - L_{14}$	444.53	-45.08	-77	58	1	-39	-284	-337	-294	-320	0.800	0.196	1.00	Yes	0.440	0.108	0.55	Yes	0.105	0.151	0.26	Yes	0.095	0.098	0.20	Yes	1.00	**2.04**
		$U_{15} - L_{14}$	259.37	-335.99	-58	11	66	-105	-222	-341	-197	-301	0.466	0.234	0.71	Yes	0.257	0.128	0.39	Yes	0.787	0.211	1	Yes	0.711	0.135	0.85	Yes	1.00	**2.40**
		$U_{16} - L_{15}$	413.75	-192.71	-133	95	30	-67	-249	-279	-199	-182	0.744	0.250	1.00	Yes	0.409	0.138	0.55	Yes	0.457	0.182	0.64	Yes	0.408	0.170	0.58	Yes	1.00	**2.61**
		$U_{17} - L_{16}$	541.44	-----	-144	115	-25	-16	-149	-246	-183	-132	0.794	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**
		$U_{18} - L_{17}$	657.69	-----	-328	274	-104	55	-153	-156	-135	-70	0.778	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{19} - L_{18}$	719.24	-----	-369	262	-89	64	-174	-171	-153	-19	0.779	0.217	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.20**
		$U_{20} - L_{19}$	616.82	-----	-407	311	-127	106	-715	-113	0	34	0.668	0.326	1.00	Yes	0.367	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**
	Structure 2	$U_0 - L_1$	644.44	-----	-450	364	-65	73	-1006	-176	-121	50	0.638	0.359	1.00	Yes	0.351	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		$U_1 - L_2$	787.80	-----	-413	307	-86	58	-113	-167	43	11	0.779	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.31**
		$U_2 - L_3$	653.63	-----	-323	259	-65	49	-202	-233	-76	-179	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		$U_3 - L_4$	577.93	-----	-170	143	-38	-1	-321	-303	-268	-207	0.770	0.223	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		$U_4 - L_5$	413.29	-119.71	-120	98	11	-46	-355	-297	-287	-213	0.743	0.256	1.00	Yes	0.409	0.141	0.55	Yes	0.296	0.190	0.49	Yes	0.253	0.153	0.41	Yes	1.00	**2.36**
		$U_5 - L_6$	384.17	-313.57	-109	71	86	-117	-431	-302	-365	-246	0.691	0.274	0.97	Yes	0.380	0.151	0.54	Yes	0.740	0.256	1	Yes	0.663	0.150	0.82	Yes	1.00	**2.78**
		$U_6 - L_7$	75.19	-372.89	-27	-1	67	-103	-323	-277	-273	-258	0.122	0.201	0.33	Yes	0.067	0.111	0.18	Yes	0.798	0.199	1	Yes	0.714	0.117	0.84	Yes	1.00	**1.82**
		$U_8 - L_7$	618.14	-41.55	-174	153	-5	-35	-138	-272	-185	-246	0.788	0.211	1.00	Yes	0.496	0.119	0.62	Yes	0.069	0.098	0.17	Yes	0.062	0.156	0.22	Yes	1.00	**2.57**
		$U_9 - L_8$	733.88	-----	-327	276	-104	11	-128	-206	-187	-160	0.795	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{10} - L_9$	841.29	-----	-312	254	-87	38	-53	-150	-20	-61	0.832	0.167	1.00	Yes	0.458	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{11} - L_{10}$	910.25	-----	-363	310	-119	87	56	-63	62	32	0.829	0.163	1.00	Yes	0.456	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{12} - L_{11}$	890.80	-----	-361	357	-107	135	165	68	246	159	0.811	0.187	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**
		$U_{13} - L_{12}$	738.10	-----	-436	370	-199	170	266	124	411	247	0.730	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.66**
		$U_{14} - L_{13}$	765.38	-----	-282	434	-65	176	273	156	232	137	0.757	0.242	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{14} - L_{15}$	639.86	-----	-217	365	-1	102	161	93	49	36	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.13**
		$U_{15} - L_{16}$	641.01	-----	-373	334	-111	104	121	89	62	69	0.758	0.233	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.82**
		$U_{16} - L_{17}$	747.88	-----	-358	353	-73	98	9	-7	9	5	0.810	0.185	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		$U_{17} - L_{18}$	683.88	-----	-299	290	-73	75	-77	-73	-76	-20	0.809	0.183	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.18**
		$U_{18} - L_{19}$	682.18	-----	-282	248	-43	38	-150	-148	-109	-98	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.14**
		$U_{19} - L_{20}$	603.10	-2.22	-188	195	-12	-7	-266	-232	-175	-140	0.769	0.229	1.00	Yes	0.423	0.129	0.56	Yes	0.004	0.104	0.11	Yes	0.003	0.174	0.18	Yes	1.00	**2.58**
		$U_{20} - L_{21}$	433.52	-55.05	-116	108	9	-24	-227	-172	-215	-152	0.780	0.214	1.00	Yes	0.429	0.118	0.55	Yes	0.131	0.110	0.25	Yes	0.116	0.148	0.27	Yes	1.00	**2.05**
		$U_{21} - L_{22}$	442.33	-258.95	-95	76	45	-81	-259	-275	-232	-237	0.796	0.201	1.00	Yes	0.438	0.111	0.55	Yes	0.612	0.167	0.78	Yes	0.548	0.122	0.67	Yes	1.00	**2.98**
		$U_{23} - L_{22}$	429.22	-354.44	-100	69	70	-100	-95	-246	-169	-241	0.772	0.199	0.98	Yes	0.425	0.109	0.54	Yes	0.844	0.153	1	Yes	0.750	0.128	0.88	Yes	1.00	**3.36**
		$U_{24} - L_{23}$	446.64	-96.57	-120	114	27	-39	-59	-127	-56	-83	0.803	0.190	1.00	Yes	0.442	0.104	0.55	Yes	0.231	0.067	0.3	Yes	0.204	0.153	0.36	Yes	1.00	**2.40**
		$U_{25} - L_{24}$	623.52	-28.54	-200	195	7	-26	21	-92	-13	-56	0.795	0.198	1.00	Yes	0.437	0.110	0.55	Yes	0.048	0.053	0.11	Yes	0.043	0.179	0.23	Yes	1.00	**2.73**
		$U_{26} - L_{25}$	689.58	-----	-296	272	-34	21	60	-27	25	16	0.815	0.179	1.00	Yes	0.448	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.56**
		$U_{27} - L_{26}$	673.42	-----	-293	299	-57	69	151	33	157	82	0.796	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.27**
		$U_{28} - L_{27}$	719.32	-----	-334	362	-83	104	212	111	185	109	0.779	0.220	1.00	Yes	0.429	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$U_{29} - L_{28}$	622.07	-----	-370	325	-125	119	250	118	217	111	0.735	0.255	1.00	Yes	0.404	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.67**
		$U_{30} - L_{29}$	638.81	-----	-220	357	-38	128	216	76	178	102	0.755	0.241	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.94**
		$U_{30} - L_{31}$	775.95	-----	-286	445	-26	133	122	68	62	38	0.768	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**
		$U_{31} - L_{32}$	781.78	-----	-459	388	-129	130	56	40	36	47	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{32} - L_{33}$	908.07	-----	-365	344	-100	119	-117	-98	-60	-22	0.827	0.171	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**
		$U_{33} - L_{34}$	902.66	-----	-336	312	-104	72	-251	-231	-173	-131	0.822	0.177	1.00	Yes	0.452	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		$U_{34} - L_{35}$	819.44	-----	-283	246	-86	42	-356	-335	-223	-223	0.811	0.184	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**
		$U_{35} - L_{36}$	714.02	-----	-305	277	-84	7	-382	-325	-402	-285	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		$U_{36} - L_{37}$	607.91	-----	-160	167	-19	-21	-354	-365	-294	-320	0.775	0.224	1.00	Yes	0.488	0.127	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**
		$U_{38} - L_{37}$	31.13	-390.65	-22	-10	75	-101	-131	-227	-157	-229	0.051	0.175	0.23	Yes	0.028	0.096	0.13	Yes	0.844	0.150	1	Yes	0.748	0.115	0.87	Yes	1.00	**1.68**
		$U_{39} - L_{38}$	292.30	-343.79	-84	55	77	-112	-174	-234	-205	-183	0.526	0.211	0.74	Yes	0.289	0.116	0.41	Yes	0.819	0.175	1	Yes	0.727	0.143	0.88	Yes	1.00	**2.47**
		$U_{40} - L_{39}$	429.31	-188.29	-129	101	43	-69	-131	-204	-88	-112	0.772	0.224	1.00	Yes	0.425	0.123	0.55	Yes	0.451	0.139	0.59	Yes	0.398	0.165	0.57	Yes	1.00	**2.70**
		$U_{41} - L_{40}$	596.75	-----	-187	142	-25	-15	-99	-163	-102	-59	0.795	0.204	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.40**
		$U_{42} - L_{41}$	667.37	-----	-333	283	-70	47	-76	-94	-3	-3	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.39**
		$U_{43} - L_{42}$	800.57	-----	-390	328	-91	61	-65	-119	-8	-32	0.792	0.199	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		$U_{44} - L_{43}$	733.77	-----	-406	367	-138	121	-524	-197	34	5	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**
	Structure 3	$U_0 - L_1$	588.84	-----	-431	317	-68	71	-834	-200	-131	45	0.638	0.357	1.00	Yes	0.351	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.10**
		$U_1 - L_2$	721.31	-----	-363	253	-91	57	-62	-148	37	13	0.781	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.11**
		$U_2 - L_3$	640.00	-----	-333	242	-78	48	-254	-267	-74	-167	0.757	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.08**
		$U_3 - L_4$	528.93	-----	-142	99	-19	-13	-324	-315	-302	-219	0.776	0.219	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**
		$U_4 - L_5$	407.64	-161.11	-118	100	19	-55	-397	-332	-309	-239	0.733	0.266	1.00	Yes	0.403	0.146	0.55	Yes	0.382	0.204	0.59	Yes	0.341	0.151	0.50	Yes	1.00	**2.53**
		$U_5 - L_6$	273.53	-313.26	-56	18	43	-101	-408	-378	-385	-335	0.492	0.247	0.74	Yes	0.271	0.136	0.41	Yes	0.734	0.264	1	Yes	0.663	0.130	0.80	Yes	1.00	**2.34**
		$U_7 - L_6$	450.79	-53.30	-80	47	11	-36	-107	-278	-97	-241	0.811	0.183	1.00	Yes	0.446	0.101	0.55	Yes	0.124	0.115	0.24	Yes	0.113	0.103	0.22	Yes	1.00	**2.02**
		$U_8 - L_7$	638.14	-62.12	-193	168	-67	-17	-154	-238	-172	-180	0.778	0.215	1.00	Yes	0.489	0.121	0.62	Yes	0.098	0.101	0.2	Yes	0.089	0.169	0.26	Yes	1.00	**2.40**
		$U_8 - L_9$	850.74	-----	-269	142	-153	-48	-70	-219	-71	-133	0.842	0.158	1.00	Yes	0.463	0.087	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		$U_{10} - L_9$	1028.90	-----	-246	203	-150	29	95	-34	-97	-7	0.869	0.126	1.00	Yes	0.538	0.070	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**
		$U_{11} - L_{10}$	1002.72	-----	-305	269	-101	87	451	292	307	198	0.802	0.194	1.00	Yes	0.497	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.70**
		$U_{12} - L_{11}$	978.34	-----	-107	366	-13	141	396	274	279	210	0.782	0.214	1.00	Yes	0.484	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		$U_{12} - L_{13}$	664.38	-----	-119	312	-3	106	188	124	115	93	0.785	0.212	1.00	Yes	0.432	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.04**
		$U_{13} - L_{14}$	677.76	-----	-291	231	-71	76	146	98	93	118	0.801	0.192	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.91**
		$U_{14} - L_{15}$	698.13	-----	-166	238	-35	39	-147	-189	-9	-13	0.825	0.170	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		$U_{15} - L_{16}$	572.80	-----	-62	95	-84	-30	-236	-261	-273	-230	0.840	0.160	1.00	Yes	0.462	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_{17} - L_{16}$	-----	-382.09	5	-9	3	-65	16	-74	-154	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.119	1	Yes	0.808	0.083	0.90	Yes	1.00	**1.95**
		$U_{18} - L_{17}$	387.03	-202.50	-79	35	-73	-114	-27	-518	-513	-233	0.696	0.295	1.00	Yes	0.383	0.162	0.55	Yes	0.466	0.250	0.72	Yes	0.428	0.145	0.58	Yes	1.00	**4.37**
		$U_{19} - L_{18}$	423.54	-----	-84	41	-78	-46	51	-125	-437	-258	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		$U_{20} - L_{19}$	472.22	-23.57	-176	90	-20	1	-670	-137	33	-3	0.620	0.374	1.00	Yes	0.374	0.206	0.59	Yes	0.040	0.242	0.29	Yes	0.036	0.205	0.25	Yes	1.00	**2.46**

Moment (End) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
South Truss - Upper Chord	Structure 1	U_0 - U_1	26.08	-559.90	-141	92	612	-1015	-74	129	138	-782	0.030	0.373	0.41	Yes	0.021	0.255	0.28	Yes	0.762	0.179	0.95	Yes	0.755	0.241	1.00	Yes	1.00	**3.52**
		U_1 - U_2	33.56	-532.13	-101	101	-376	-719	-160	130	114	-490	0.038	0.254	0.30	Yes	0.026	0.174	0.20	Yes	0.724	0.270	1	Yes	0.718	0.171	0.89	Yes	1.00	**1.91**
		U_2 - U_3	182.53	-553.57	-90	310	-390	-480	-117	124	-314	-513	0.209	0.201	0.42	Yes	0.141	0.133	0.28	Yes	0.753	0.238	1	Yes	0.746	0.114	0.87	Yes	1.00	**2.16**
		U_3 - U_4	516.31	-597.97	159	429	-501	-567	-224	-4	6	-415	0.592	0.205	0.80	Yes	0.406	0.140	0.55	Yes	0.814	0.180	1	Yes	0.806	0.135	0.95	Yes	1.00	**3.20**
		U_4 - U_5	548.54	-573.76	226	436	-726	-364	-87	-4	-472	373	0.629	0.252	0.89	Yes	0.431	0.173	0.61	Yes	0.781	0.218	1	Yes	0.774	0.173	0.95	Yes	1.00	**3.39**
		U_5 - U_6	717.60	-----	292	513	-18	88	99	148	-76	292	0.823	0.171	1.00	Yes	0.555	0.112	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		U_6 - U_7	895.93	-----	414	228	72	-96	333	286	-210	292	0.857	0.134	1.00	Yes	0.599	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		U_7 - U_8	794.76	-----	-894	2173	222	467	261	635	1167	936	0.551	0.448	1.00	Yes	0.384	0.306	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		U_8 - U_9	801.04	-----	1040	-130	1605	-1044	247	479	193	-563	0.656	0.338	1.00	Yes	0.449	0.230	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		U_9 - U_{10}	668.20	-351.30	253	273	85	-754	-8	317	517	-630	0.725	0.270	1.00	Yes	0.491	0.181	0.68	Yes	0.452	0.181	0.64	Yes	0.448	0.169	0.62	Yes	1.00	**4.21**
		U_{10} - U_{11}	85.30	-618.75	258	-166	193	-897	46	111	-86	-474	0.093	0.277	0.37	Yes	0.062	0.179	0.25	Yes	0.797	0.196	1	Yes	0.790	0.201	1.00	Yes	1.00	**2.12**
		U_{11} - U_{12}	-----	-911.77	157	-205	27	-802	12	103	-6	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.129	1	Yes	0.855	0.133	0.99	Yes	1.00	**1.55**
		U_{12} - U_{13}	-----	-1263.86	-46	-267	-334	-735	82	8	263	-468	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.136	1	Yes	0.844	0.101	0.95	Yes	1.00	**1.78**
		U_{13} - U_{14}	-----	-1385.18	-195	-504	-595	-1396	-42	-7	50	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.188	1	Yes	0.794	0.154	0.95	Yes	1.00	**1.64**
		U_{14} - U_{15}	-----	-1406.70	-399	-288	-1181	-793	43	-275	-230	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.184	1	Yes	0.806	0.130	0.94	Yes	1.00	**1.74**
		U_{15} - U_{16}	-----	-1421.13	-251	-423	-597	-1051	-23	-229	-422	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.170	1	Yes	0.815	0.116	0.94	Yes	1.00	**2.22**
		U_{16} - U_{17}	-----	-1402.64	-373	-190	-1175	-743	0	-224	-293	256	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.182	1	Yes	0.804	0.130	0.94	Yes	1.00	**2.53**
		U_{17} - U_{18}	-----	-1105.13	-661	108	-345	-257	-21	-205	-316	660	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.118	1	Yes	0.865	0.108	0.98	Yes	1.00	**2.51**
		U_{18} - U_{19}	-----	-721.11	-762	114	-405	-53	159	-185	643	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.177	1	Yes	0.811	0.153	0.97	Yes	1.00	**2.49**
		U_{19} - U_{20}	-----	-657.59	-1273	611	-358	-219	-340	-127	102	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.247	1	Yes	0.740	0.256	1.00	Yes	1.00	**7.58**
	Structure 2	U_0 - U_1	-----	-589.10	264	-304	1008	-1738	71	47	307	-722	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.159	0.86	Yes	0.696	0.295	1.00	Yes	1.00	**4.02**
		U_1 - U_2	-----	-832.79	-150	-315	-167	-1027	-22	25	-15	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.186	1	Yes	0.804	0.156	0.96	Yes	1.00	**2.12**
		U_2 - U_3	-----	-1142.96	-136	-420	-387	-1405	-36	-56	205	-674	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.180	1	Yes	0.811	0.143	0.96	Yes	1.00	**2.05**
		U_3 - U_4	-----	-1371.08	-531	-540	-905	-1556	-117	-38	-110	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.204	1	Yes	0.781	0.139	0.92	Yes	1.00	**1.69**
		U_4 - U_5	-----	-1508.40	-582	-553	-1428	-1612	-123	-86	69	-674	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.774	0.134	0.91	Yes	1.00	**1.77**
		U_5 - U_6	-----	-1548.91	-566	8	-1140	-1247	-197	-47	-564	-641	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.190	1	Yes	0.795	0.103	0.90	Yes	1.00	**2.00**
		U_6 - U_7	-----	-1377.73	-310	-201	-1089	-1362	-172	-93	-209	-399	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.205	1	Yes	0.784	0.121	0.91	Yes	1.00	**1.98**
		U_7 - U_8	-----	-1368.02	-337	-189	-1502	-1053	-80	-179	-375	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.207	1	Yes	0.779	0.134	0.92	Yes	1.00	**2.02**
		U_8 - U_9	-----	-1173.98	-345	229	-1327	-580	-11	-186	-570	23	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1	Yes	0.796	0.141	0.94	Yes	1.00	**2.30**
		U_9 - U_{10}	547.26	-916.07	69	716	-1029	-496	-94	-166	-844	-28	0.401	0.217	0.62	Yes	0.272	0.146	0.42	Yes	0.795	0.204	1	Yes	0.791	0.125	0.92	Yes	1.00	**4.05**
		U_{10} - U_{11}	822.24	-511.55	331	608	-1176	-332	-172	-93	-1114	26	0.695	0.302	1.00	Yes	0.473	0.199	0.68	Yes	0.511	0.254	0.77	Yes	0.508	0.166	0.68	Yes	1.00	**3.93**
		U_{11} - U_{12}	95.60	-665.03	-2112	1520	-2355	-397	-702	-1093	-1658	476	0.081	0.534	0.62	Yes	0.054	0.356	0.42	Yes	0.665	0.324	0.99	Yes	0.661	0.332	1.00	Yes	1.00	**12.96**
		U_{12} - U_{13}	1072.74	-----	757	319	3	-1256	353	907	-862	1163	0.724	0.269	1.00	Yes	0.516	0.185	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.50**
		U_{13} - U_{14}	1088.13	-----	-1642	4148	94	1178	280	948	795	1104	0.535	0.459	1.00	Yes	0.379	0.302	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		U_{14} - U_{15}	1288.01	-----	2391	-47	3374	-1158	528	661	608	16	0.633	0.358	1.00	Yes	0.448	0.235	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		U_{15} - U_{16}	1337.61	-----	145	414	-178	-1291	177	423	-38	-472	0.809	0.187	1.00	Yes	0.575	0.126	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		U_{16} - U_{17}	1078.70	-----	678	225	726	-1045	-32	325	-181	-700	0.795	0.205	1.00	Yes	0.529	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		U_{17} - U_{18}	752.66	-245.11	488	260	394	-1080	-59	287	-222	-396	0.756	0.241	1.00	Yes	0.503	0.160	0.67	Yes	0.291	0.108	0.4	Yes	0.289	0.183	0.48	Yes	1.00	**3.04**
		U_{18} - U_{19}	572.04	-682.61	586	159	128	-1128	3	158	134	-732	0.574	0.299	0.88	Yes	0.377	0.191	0.57	Yes	0.811	0.171	0.99	Yes	0.806	0.191	1.00	Yes	1.00	**3.31**
		U_{19} - U_{20}	236.53	-736.44	269	104	-467	-932	-55	133	330	-385	0.222	0.201	0.43	Yes	0.147	0.132	0.28	Yes	0.818	0.179	1	Yes	0.813	0.149	0.97	Yes	1.00	**2.33**
		U_{20} - U_{21}	20.94	-855.67	-77	12	-255	-948	-74	-16	-244	-646	0.016	0.208	0.23	Yes	0.011	0.137	0.15	Yes	0.787	0.212	1	Yes	0.781	0.137	0.92	Yes	1.00	**2.43**
		U_{21} - U_{22}	8.07	-833.06	-108	-75	-580	-1136	-182	-101	-167	-230	0.006	0.190	0.20	Yes	0.004	0.127	0.14	Yes	0.766	0.228	1	Yes	0.760	0.165	0.93	Yes	1.00	**2.14**
		U_{22} - U_{23}	0.61	-828.78	-74	-121	-1119	-787	-53	-166	-202	-6	0.000	0.184	0.19	Yes	0.000	0.123	0.13	Yes	0.762	0.236	1	Yes	0.756	0.162	0.92	Yes	1.00	**2.16**
		U_{23} - U_{24}	257.55	-832.45	-114	274	-278	-980	7	-69	-494	166	0.200	0.196	0.40	Yes	0.140	0.128	0.27	Yes	0.765	0.225	1	Yes	0.760	0.142	0.91	Yes	1.00	**3.57**
		U_{24} - U_{25}	430.48	-725.68	268	414	-708	-684	-12	-57	-503	258	0.404	0.181	0.59	Yes	0.268	0.119	0.39	Yes	0.806	0.190	1	Yes	0.801	0.113	0.92	Yes	1.00	**3.67**
		U_{25} - U_{26}	734.47	-528.41	239	688	-802	-203	25	-26	-824	-56	0.737	0.257	1.00	Yes	0.484	0.165	0.65	Yes	0.628	0.232	0.87	Yes	0.624	0.136	0.77	Yes	1.00	**4.41**
		U_{26} - U_{27}	-----	-525.91	-1622	1493	-135	-1283	-1003	-469	-1543	1916	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.367	1	Yes	0.621	0.275	0.90	Yes	1.00	**14.79**
		U_{27} - U_{28}	877.20	-----	-1173	1889	-591	-360	-231	-559	-1049	559	0.646	0.347	1.00	Yes	0.430	0.229	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.35**
		U_{28} - U_{29}	1324.15	-----	70	278	-772	-958	-62	279	-957	769	0.801	0.190	1.00	Yes	0.570	0.130	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		U_{29} - U_{30}	1160.15	-----	-689	3598	163	1400	614	1090	1006	1321	0.570	0.423	1.00	Yes	0.404	0.279	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		U_{30} - U_{31}	1264.66	-----	2352	-212	3492	-1546	588	611	687	-278	0.622	0.370	1.00	Yes	0.440	0.243	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		U_{31} - U_{32}	1236.84	-----	99	375	-155	-908	203	396	-5	-451	0.835	0.157	1.00	Yes	0.595	0.107	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		U_{32} - U_{33}	856.22	-202.64	594	150	490	-1182	7	226	-167	-856	0.723	0.271	1.00	Yes	0.486	0.181	0.67	Yes	0.203	0.143	0.35	Yes	0.201	0.167	0.37	Yes	1.00	**3.21**
		U_{33} - U_{34}	607.84	-799.20	475	157	13	-1375	-26	215	-93	-539	0.513	0.260	0.78	Yes	0.349	0.169	0.52	Yes	0.799	0.192	1	Yes	0.794	0.194	0.99	Yes	1.00	**3.36**
		U_{34} - U_{35}	112.79	-965.25	399	-182	70	-1268	43	47	-45	-511	0.083	0.210	0.30	Yes	0.056	0.142	0.20	Yes	0.838	0.158	1	Yes	0.833	0.154	0.99	Yes	1.00	**2.34**
		U_{35} - U_{36}	-----	-1209.54	97	-464	-191	-1385	-18	88	-180	-321	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.169	1	Yes	0.820	0.147	0.97	Yes	1.00	**1.84**
		U_{36} - U_{37}	-----	-1425.30	-290	-313	-841	-1340	-22	-120	52	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.173	1	Yes	0.812	0.119	0.94	Yes	1.00	**1.78**
		U_{37} - U_{38}	-----	-1415.78	-199	-423	-1198	-1310	-94	-197	-272	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.182	1	Yes	0.806	0.117	0.93	Yes	1.00	**1.78**
		U_{38} - U_{39}	-----	-1550.67	-165	-633	-1036	-1621	8	-211	-458	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.197	1	Yes	0.796	0.134	0.94	Yes	1.00	**1.82**
		U_{39} - U_{40}	-----	-1528.61	-609	-505	-1267	-1547	31	-100	-361	243	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.207	1	Yes	0.785	0.128	0.92	Yes	1.00	**2.46**
		U_{40} - U_{41}	-----	-1376.10	-502	-485	-1629	-1216	89	-156	-82	116	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.784	0.145	0.93	Yes	1.00	**2.30**
		U_{41} - U_{42}	-----	-1198.02	-1054	81	-1252	-454	54	-235	-275	396	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.141	1	Yes	0.850	0.128	0.98	Yes	1.00	**2.72**
		U_{42} - U_{43}	-----	-871.15	-860	44	-417	-159	-88	-417	-79	548	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.146	1	Yes	0.841	0.131	0.98	Yes	1.00	**3.02**
		U_{43} - U_{44}	-----	-602.68	-1331	677	-1007	-248	-389	-177	653	12	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.275	1	Yes	0.712	0.226	0.94	Yes	1.00	**6.20**
	Structure 3	U_0 - U_1	-----	-589.98	368	-303	1252	-1640	94	70	201	-1000	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.152	0.83	Yes	0.664	0.330	1.00	Yes	1.00	**4.52**
		U_1 - U_2	-----	-717.61	-82	-225	-68	-765	-23	8	124	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.176	1	Yes	0.807	0.154	0.97	Yes	1.00	**1.91**
		U_2 - U_3	-----	-1047.85	-57	-236	-139	-768	-34	-54	327	-677	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.160	1	Yes	0.820	0.125	0.95	Yes	1.00	**1.94**
		U_3 - U_4	-----	-1377.47	-219	-365	-612	-1295	-109	-34	47	-521	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.198	1	Yes	0.790	0.143	0.94	Yes	1.00	**2.04**
		U_4 - U_5	-----	-1431.62	-440	-126	-790	-804	-93	-52	-46	-703	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.164	1	Yes	0.821	0.089	0.91	Yes	1.00	**1.92**
		U_5 - U_6	-----	-1366.97	-254	-374	-805	-1293	-186	-149	31	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.784	0.143	0.93	Yes	1.00	**1.81**
		U_6 - U_7	-----	-1381.81	-490	-144	-1327	-690	-117	-295	-347	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.198	1	Yes	0.792	0.146	0.94	Yes	1.00	**1.97**
		U_7 - U_8	-----	-1212.92	-204	98	-609	-607	-87	-304	-716	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.173	1	Yes	0.810	0.084	0.90	Yes	1.00	**2.94**
		U_8 - U_9	-----	-833.40	-84	315	-666	-107	-217	-171	-517	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.208	1	Yes	0.782	0.110	0.90	Yes	1.00	**2.78**
		U_9 - U_{10}	697.85	-337.61	136	588	-258	-87	33	137	-306	673	0.757	0.240	1.00	Yes	0.504	0.156	0.67	Yes	0.435	0.162	0.6	Yes	0.431	0.132	0.57	Yes	1.00	**6.37**
		U_{10} - U_{11}	356.96	-1.03	-561	825	12	-604	-529	-470	-1978	2642	0.387	0.610	1.00	Yes	0.262	0.408	0.68	Yes	0.001	0.296	0.3	Yes	0.001	0.185	0.19	Yes	1.00	**13.99**
		U_{11} - U_{12}	705.13	-----	-815	1792	32	564	180	460	974	891	0.578	0.420	1.00	Yes	0.395	0.286	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		U_{12} - U_{13}	934.75	-----	1124	-7	1882	-935	78	468	50	-568	0.648	0.343	1.00	Yes	0.452	0.234	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**
		U_{13} - U_{14}	845.44	-23.45	223	365	-3	-564	-102	381	165	-463	0.808	0.183	1.00	Yes	0.565	0.126	0.70	Yes	0.027	0.186	0.22	Yes	0.026	0.120	0.15	Yes	1.00	**3.14**
		U_{14} - U_{15}	604.00	-437.00	441	210	38	-685	-58	251	451	-831	0.692	0.303	1.00	Yes	0.467	0.200	0.67	Yes	0.595	0.216	0.82	Yes	0.589	0.163	0.76	Yes	1.00	**3.06**
		U_{15} - U_{16}	298.38	-586.48	266	118	-261	-754	-75	199	304	139	0.342	0.231	0.58	Yes	0.235	0.158	0.40	Yes	0.798	0.200	1	Yes	0.791	0.179	0.98	Yes	1.00	**2.39**
		U_{16} - U_{17}	445.40	-596.10	433	98	-143	-814	224	-36	107	428	0.511	0.266	0.78	Yes	0.350	0.182	0.54	Yes	0.811	0.183	1	Yes	0.804	0.194	1.00	Yes	1.00	**3.55**
		U_{17} - U_{18}	112.05	-583.03	245	-166	-448	-663	70	36	-233	-2	0.128	0.197	0.33	Yes	0.087	0.129	0.22	Yes	0.793	0.199	1	Yes	0.786	0.158	0.95	Yes	1.00	**2.42**
		U_{18} - U_{19}	-----	-576.25	6	-68	-722	-258	214	-194	-307	385	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1	Yes	0.777	0.172	0.95	Yes	1.00	**2.74**
		U_{19} - U_{20}	-----	-493.71	-501	-16	-258	-587	-184	-85	1012	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.324	1	Yes	0.666	0.140	0.81	Yes	1.00	**4.17**

Moment (End) AI Inventory

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1	28.18	-26.71	-206	70	761	-1193	70	258	-751	-2759	0.043	0.950	1.00	Yes	0.025	0.564	0.59	Yes	0.048	0.618	0.67	Yes	0.048	0.358	0.41	Yes	1.00	**8.96**
		L_1 - L_2	374.23	-----	1	-13	-48	-699	334	-149	-973	311	0.573	0.418	1.00	Yes	0.349	0.271	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.06**
		L_2 - L_3	655.84	-112.53	-38	70	-647	-621	-181	123	275	-523	0.755	0.240	1.00	Yes	0.437	0.142	0.58	Yes	0.154	0.224	0.38	Yes	0.152	0.156	0.31	Yes	1.00	**2.36**
		L_3 - L_4	622.16	-308.85	21	363	-402	-645	305	-238	-767	89	0.716	0.279	1.00	Yes	0.425	0.175	0.61	Yes	0.422	0.223	0.65	Yes	0.418	0.156	0.58	Yes	1.00	**2.81**
		L_4 - L_5	-----	-567.25	104	473	-219	130	-67	192	-56	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.128	1	Yes	0.864	0.125	0.99	Yes	1.00	**1.91**
		L_5 - L_6	-----	-746.05	124	589	-78	236	163	-236	76	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.127	1	Yes	0.861	0.130	1.00	Yes	1.00	**1.77**
		L_6 - L_7	-----	-1063.09	-331	654	37	-598	334	804	-555	-950	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.126	1	Yes	0.856	0.103	0.96	Yes	1.00	**6.45**
		L_7 - L_8	-----	-1226.50	-92	1260	-15	625	356	582	462	208	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.205	1	Yes	0.777	0.167	0.95	Yes	1.00	**2.64**
		L_8 - L_9	-----	-1124.65	988	34	1284	-268	214	353	120	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.276	1	Yes	0.712	0.170	0.89	Yes	1.00	**3.32**
		L_9 - L_{10}	-----	-1021.81	170	109	397	-1080	389	-274	-1859	342	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.149	0.99	Yes	0.822	0.170	1.00	Yes	1.00	**5.12**
		L_{10} - L_{11}	120.73	-494.81	463	-74	110	-682	-269	50	-19	-870	0.156	0.333	0.49	Yes	0.091	0.197	0.29	Yes	0.761	0.233	1	Yes	0.754	0.181	0.94	Yes	1.00	**3.02**
		L_{11} - L_{12}	513.49	-157.71	384	-213	406	-895	140	-100	-320	531	0.665	0.330	1.00	Yes	0.399	0.213	0.62	Yes	0.242	0.160	0.41	Yes	0.240	0.237	0.48	Yes	1.00	**2.79**
		L_{12} - L_{13}	1024.61	-----	59	-155	-384	-626	-160	120	-163	-672	0.809	0.190	1.00	Yes	0.517	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.23**
		L_{13} - L_{14}	1236.66	-----	184	-528	-12	-1439	146	22	-808	55	0.727	0.266	1.00	Yes	0.471	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.00**
		L_{14} - L_{15}	1567.53	-----	-554	-149	-1278	-862	-152	173	-326	-1061	0.766	0.229	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		L_{15} - L_{16}	1614.98	-----	-301	-365	-967	-1365	115	-136	-585	194	0.789	0.206	1.00	Yes	0.506	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		L_{16} - L_{17}	1200.80	-----	-1032	249	-907	-292	449	410	-351	-951	0.759	0.236	1.00	Yes	0.493	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		L_{17} - L_{18}	908.90	-----	-623	220	-545	-202	159	-156	-648	-389	0.791	0.203	1.00	Yes	0.507	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		L_{18} - L_{19}	412.30	-----	-986	551	-327	179	336	234	-121	-231	0.631	0.366	1.00	Yes	0.427	0.230	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_{19} - L_{20}	56.23	-301.58	-1207	709	-168	58	190	42	141	32	0.095	0.438	0.54	Yes	0.059	0.262	0.33	Yes	0.605	0.233	0.84	Yes	0.600	0.394	1.00	Yes	1.00	**9.03**
	Structure 2	L_0 - L_1	80.91	-125.47	-92	-65	739	-2335	39	137	-732	-2540	0.098	0.892	1.00	Yes	0.058	0.557	0.62	Yes	0.180	0.644	0.83	Yes	0.179	0.475	0.66	Yes	1.00	**11.00**
		L_1 - L_2	466.54	-----	198	-350	332	-1245	153	-57	-1075	548	0.567	0.430	1.00	Yes	0.337	0.270	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		L_2 - L_3	984.74	-----	-47	-269	-160	-1033	-74	155	147	-637	0.776	0.217	1.00	Yes	0.509	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		L_3 - L_4	1275.33	-----	-12	-507	-133	-1520	181	-4	-818	386	0.749	0.243	1.00	Yes	0.505	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
		L_4 - L_5	1733.29	-----	-437	-395	-1294	-1516	-82	163	267	-649	0.808	0.187	1.00	Yes	0.535	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		L_5 - L_6	1790.52	-----	-220	-493	-942	-2049	191	-91	-739	177	0.768	0.228	1.00	Yes	0.516	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		L_6 - L_7	1877.44	-----	-516	-151	-1773	-1706	-164	220	167	-755	0.795	0.202	1.00	Yes	0.528	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		L_7 - L_8	1405.65	-102.58	-263	454	-1329	-843	234	-141	-459	420	0.806	0.184	1.00	Yes	0.529	0.110	0.64	Yes	0.070	0.156	0.23	Yes	0.069	0.147	0.22	Yes	1.00	**3.01**
		L_8 - L_9	1016.43	-514.42	-31	649	-1021	-159	-75	187	-314	-1583	0.711	0.287	1.00	Yes	0.479	0.185	0.67	Yes	0.427	0.221	0.65	Yes	0.423	0.138	0.57	Yes	1.00	**3.66**
		L_9 - L_{10}	502.15	-812.52	-113	870	-778	-155	149	-128	-550	-103	0.448	0.205	0.66	Yes	0.261	0.126	0.39	Yes	0.859	0.110	0.97	Yes	0.853	0.139	1.00	Yes	1.00	**3.65**
		L_{10} - L_{11}	329.34	-----	-2146	1688	-901	-229	888	648	-448	-2151	0.329	0.665	1.00	Yes	0.193	0.408	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.51**
		L_{11} - L_{12}	-----	-1031.78	-73	1107	-329	629	62	-367	-34	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.128	0.99	Yes	0.846	0.151	1.00	Yes	1.00	**2.27**
		L_{12} - L_{13}	-----	-1284.52	-364	42	-153	-1540	-79	401	-383	-607	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.211	1	Yes	0.775	0.155	0.94	Yes	1.00	**5.41**
		L_{13} - L_{14}	-----	-1456.81	-1268	2981	-443	1356	99	329	713	609	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.215	0.96	Yes	0.733	0.260	1.00	Yes	1.00	**3.64**
		L_{14} - L_{15}	-----	-1259.22	1392	-375	2866	-1326	549	556	-98	-396	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.356	1	Yes	0.634	0.250	0.89	Yes	1.00	**3.06**
		L_{15} - L_{16}	-----	-1404.69	-769	260	-842	-1156	196	-301	-681	174	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.149	1	Yes	0.840	0.115	0.96	Yes	1.00	**4.42**
		L_{16} - L_{17}	-----	-1122.54	1163	50	739	-879	-403	-5	-111	-1019	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.167	1	Yes	0.818	0.143	0.97	Yes	1.00	**3.41**
		L_{17} - L_{18}	-----	-803.45	515	167	467	-828	126	-192	-666	370	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.142	1	Yes	0.844	0.132	0.98	Yes	1.00	**2.58**
		L_{18} - L_{19}	126.97	-614.25	694	23	140	-701	-206	63	21	-602	0.144	0.227	0.38	Yes	0.083	0.133	0.22	Yes	0.824	0.172	1	Yes	0.819	0.135	0.96	Yes	1.00	**2.69**
		L_{19} - L_{20}	534.33	-445.40	496	112	96	-1118	149	-171	-1127	433	0.605	0.388	1.00	Yes	0.358	0.241	0.60	Yes	0.597	0.208	0.81	Yes	0.594	0.216	0.81	Yes	1.00	**3.08**
		L_{20} - L_{21}	924.10	-273.65	391	-84	-688	-1217	-183	70	189	-790	0.737	0.263	1.00	Yes	0.483	0.160	0.65	Yes	0.259	0.237	0.5	Yes	0.257	0.178	0.44	Yes	1.00	**3.25**
		L_{21} - L_{22}	893.79	-----	-25	-191	-496	-1518	137	-154	-594	63	0.713	0.285	1.00	Yes	0.477	0.180	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**
		L_{22} - L_{23}	887.39	-107.44	-277	143	-1329	-784	-49	213	-146	-864	0.708	0.287	1.00	Yes	0.473	0.183	0.66	Yes	0.101	0.236	0.34	Yes	0.101	0.194	0.30	Yes	1.00	**2.87**
		L_{23} - L_{24}	969.13	-466.55	2	590	-965	-1182	180	-145	-487	278	0.773	0.225	1.00	Yes	0.507	0.136	0.65	Yes	0.441	0.191	0.64	Yes	0.438	0.172	0.62	Yes	1.00	**4.79**
		L_{24} - L_{25}	478.87	-543.31	196	528	-774	-190	-100	145	38	-1274	0.542	0.344	0.89	Yes	0.321	0.211	0.54	Yes	0.729	0.262	1	Yes	0.724	0.149	0.88	Yes	1.00	**3.81**
		L_{25} - L_{26}	41.31	-641.08	29	728	-516	70	102	-167	-417	67	0.047	0.204	0.26	Yes	0.027	0.120	0.15	Yes	0.860	0.126	0.99	Yes	0.854	0.140	1.00	Yes	1.00	**2.85**
		L_{26} - L_{27}	-----	-719.48	-1151	1283	-440	-7	772	584	-332	-1153	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.232	1	Yes	0.756	0.205	0.97	Yes	1.00	**6.67**
		L_{27} - L_{28}	-----	-1093.18	-519	1609	-338	642	456	-149	-114	43	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.158	0.97	Yes	0.796	0.198	1.00	Yes	1.00	**4.54**
		L_{28} - L_{29}	-----	-1375.17	101	-245	-170	-1619	-24	370	-348	-675	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.168	1	Yes	0.823	0.161	0.99	Yes	1.00	**3.85**
		L_{29} - L_{30}	-----	-1438.35	-1550	3142	-550	1323	-15	208	832	899	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.229	0.96	Yes	0.724	0.274	1.00	Yes	1.00	**4.35**
		L_{30} - L_{31}	-----	-1292.59	1631	-465	2667	-1087	667	580	45	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.343	1	Yes	0.650	0.233	0.89	Yes	1.00	**2.21**
		L_{31} - L_{32}	-----	-1398.55	-486	69	-637	-1087	241	-244	-513	263	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.155	1	Yes	0.837	0.108	0.95	Yes	1.00	**3.39**
		L_{32} - L_{33}	-----	-1040.75	1013	-73	665	-761	-327	28	194	-577	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.127	0.99	Yes	0.853	0.138	1.00	Yes	1.00	**2.55**
		L_{33} - L_{34}	-----	-720.69	577	-17	526	-826	100	-130	-627	434	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.068	0.92	Yes	0.847	0.145	1.00	Yes	1.00	**2.26**
		L_{34} - L_{35}	607.44	-712.34	807	-117	38	-1362	-210	99	177	-1372	0.542	0.383	0.93	Yes	0.316	0.232	0.55	Yes	0.753	0.245	1	Yes	0.748	0.218	0.97	Yes	1.00	**3.97**
		L_{35} - L_{36}	960.88	-276.78	569	-168	193	-1401	165	-122	-1378	438	0.672	0.319	1.00	Yes	0.453	0.204	0.66	Yes	0.229	0.183	0.42	Yes	0.228	0.189	0.42	Yes	1.00	**3.19**
		L_{36} - L_{37}	1312.86	-----	296	-262	-572	-1573	-203	152	52	-835	0.753	0.242	1.00	Yes	0.494	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**
		L_{37} - L_{38}	1740.42	-----	-330	-651	-1219	-2289	107	-173	-940	300	0.737	0.259	1.00	Yes	0.490	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.78**
		L_{38} - L_{39}	1792.35	-----	-567	-211	-1828	-1429	-105	172	-277	-1074	0.769	0.229	1.00	Yes	0.516	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
		L_{39} - L_{40}	1711.38	-----	-429	-310	-1384	-1745	128	-121	-450	401	0.798	0.195	1.00	Yes	0.528	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		L_{40} - L_{41}	1276.71	-----	-1210	216	-1415	-441	362	389	-45	-871	0.757	0.238	1.00	Yes	0.511	0.154	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		L_{41} - L_{42}	1018.15	-----	-936	317	-669	-325	308	-6	-431	-136	0.813	0.184	1.00	Yes	0.534	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_{42} - L_{43}	525.00	-----	-1190	604	-631	80	218	375	-34	-714	0.638	0.359	1.00	Yes	0.379	0.227	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_{43} - L_{44}	126.13	-264.88	-3029	1297	31	-117	1230	359	-102	-30	0.153	0.818	0.98	Yes	0.091	0.520	0.62	Yes	0.381	0.534	0.92	Yes	0.378	0.616	1.00	Yes	1.00	**22.48**
	Structure 3	L_0 - L_1	31.59	-334.02	6	-125	639	-1263	25	115	-246	-1114	0.048	0.610	0.66	Yes	0.029	0.400	0.43	Yes	0.607	0.387	1	Yes	0.601	0.379	0.99	Yes	1.00	**6.97**
		L_1 - L_2	356.17	-----	210	-241	461	-996	154	-33	-729	596	0.545	0.450	1.00	Yes	0.369	0.287	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		L_2 - L_3	847.93	-----	-10	-216	-29	-803	-60	166	14	-798	0.738	0.257	1.00	Yes	0.473	0.157	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		L_3 - L_4	1145.46	-----	30	-409	-42	-1331	190	7	-822	542	0.724	0.269	1.00	Yes	0.470	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.87**
		L_4 - L_5	1604.73	-----	-389	-236	-1206	-1102	-47	213	1	-900	0.784	0.209	1.00	Yes	0.503	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		L_5 - L_6	1482.93	-----	-143	-456	-556	-1727	243	-37	-898	158	0.725	0.271	1.00	Yes	0.471	0.166	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		L_6 - L_7	1211.94	-----	-1373	366	-1115	-379	574	318	-237	-1108	0.713	0.282	1.00	Yes	0.462	0.174	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		L_7 - L_8	1033.87	-81.21	-85	195	-599	-497	151	-168	-591	15	0.816	0.175	1.00	Yes	0.522	0.107	0.63	Yes	0.076	0.143	0.22	Yes	0.075	0.106	0.19	Yes	1.00	**3.40**
		L_8 - L_9	481.62	-----	-874	563	-478	-26	250	249	-126	-795	0.624	0.370	1.00	Yes	0.374	0.237	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_9 - L_{10}	-----	-561.67	-65	517	-272	136	145	-153	28	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.081	0.95	Yes	0.856	0.137	1.00	Yes	1.00	**2.74**
		L_{10} - L_{11}	-----	-1007.23	-662	882	-46	-469	431	925	-579	-1275	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.171	1	Yes	0.811	0.139	0.95	Yes	1.00	**7.73**
		L_{11} - L_{12}	-----	-1216.97	-93	1352	-11	611	293	612	529	148	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.216	1	Yes	0.771	0.179	0.95	Yes	1.00	**3.41**
		L_{12} - L_{13}	-----	-1130.32	1018	5	1308	-238	-151	69	-61	-378	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.273	1	Yes	0.716	0.173	0.89	Yes	1.00	**2.39**
		L_{13} - L_{14}	-----	-1040.48	64	175	182	-676	220	-247	-1175	58	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.150	1	Yes	0.838	0.106	0.95	Yes	1.00	**3.09**
		L_{14} - L_{15}	-----	-677.13	535	89	177	-381	-250	88	-103	-705	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.192	1	Yes	0.794	0.121	0.92	Yes	1.00	**2.05**
		L_{15} - L_{16}	270.62	-513.15	459	112	226	-810	257	-209	-1020	324	0.350	0.396	0.75	Yes	0.210	0.252	0.47	Yes	0.789	0.201	0.99	Yes	0.782	0.214	1.00	Yes	1.00	**2.41**
		L_{16} - L_{17}	658.97	-----	-19	-54	-314	-673	-80	478	-134	-343	0.758	0.239	1.00	Yes	0.450	0.152	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**
		L_{17} - L_{18}	647.77	-49.27	24	-104	-717	-665	111	-112	-497	258	0.745	0.253	1.00	Yes	0.431	0.150	0.59	Yes	0.067	0.238	0.31	Yes	0.067	0.173	0.24	Yes	1.00	**2.85**
		L_{18} - L_{19}	422.83	-----	-653	119	-258	-186	205	440	29	-685	0.647	0.343	1.00	Yes	0.395	0.224	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		L_{19} - L_{20}	61.78	-59.36	-1599	1215	148	-257	-1939	-527	226	61	0.095	0.896	1.00	Yes	0.056	0.536	0.60	Yes	0.108	0.695	0.81	Yes	0.107	0.480	0.59	Yes	1.00	**16.17**

Inventory Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-284.84	-108	165	-13	52	-1011	-324	203	65	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.363	1	Yes	0.603	0.211	0.82	Yes	1.00	**0.88**
		$U_1 - L_1$	10.24	-296.56	-191	193	20	-13	-1046	-352	566	211	0.018	0.549	0.57	Yes	0.010	0.302	0.32	Yes	0.648	0.342	1	Yes	0.628	0.246	0.88	Yes	1.00	**1.96**
		$U_2 - L_2$	143.09	-283.05	-222	271	127	-142	-972	-307	853	228	0.257	0.628	0.89	Yes	0.142	0.345	0.49	Yes	0.619	0.374	1	Yes	0.599	0.346	0.95	Yes	1.00	**4.39**
		$U_3 - L_3$	185.20	-131.74	-76	103	225	-217	-1278	-283	-1180	-738	0.333	0.658	1.00	Yes	0.183	0.362	0.55	Yes	0.289	0.329	0.62	Yes	0.279	0.288	0.57	Yes	1.00	**4.66**
		$U_4 - L_4$	-----	-176.93	4	-17	329	-328	1029	188	-481	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.389	0.602	1	Yes	0.374	0.421	0.80	Yes	1.00	**6.12**
		$U_5 - L_5$	-----	-368.15	78	-84	181	-206	1047	593	120	228	-----	-----	-----	-----	-----	-----	-----	-----	0.666	0.330	1	Yes	0.635	0.209	0.85	Yes	1.00	**1.85**
		$U_6 - L_6$	-----	-414.58	77	-65	209	-217	1493	744	822	436	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.368	1	Yes	0.595	0.190	0.79	Yes	1.00	**1.89**
		$U_7 - L_7$	-----	-385.18	101	-114	264	-282	1239	309	621	195	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.356	1	Yes	0.594	0.277	0.88	Yes	1.00	**1.77**
		$U_8 - L_8$	-----	-1200.49	-403	479	223	-272	-1291	-588	-51	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.129	1	Yes	0.835	0.089	0.93	Yes	1.00	**3.36**
		$U_9 - L_9$	-----	-659.36	-404	449	-232	257	-611	-128	728	353	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.202	0.99	Yes	0.745	0.250	1.00	Yes	1.00	**1.63**
		$U_{10} - L_{10}$	-----	-789.08	-352	378	-166	143	287	216	713	313	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.181	1	Yes	0.779	0.196	0.98	Yes	1.00	**2.65**
		$U_{11} - L_{11}$	-----	-660.82	-376	485	-167	217	-294	128	640	367	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.179	0.98	Yes	0.769	0.225	1.00	Yes	1.00	**2.44**
		$U_{12} - L_{12}$	-----	-508.75	-284	299	-131	137	-850	-139	409	296	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.261	1	Yes	0.698	0.255	0.96	Yes	1.00	**2.27**
		$U_{13} - L_{13}$	-----	-367.33	-224	252	-65	86	48	188	71	99	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.144	0.89	Yes	0.704	0.287	1.00	Yes	1.00	**2.32**
		$U_{14} - L_{14}$	-----	-189.07	-377	407	130	-136	-1314	-1000	-1364	-538	-----	-----	-----	-----	-----	-----	-----	-----	0.422	0.578	1	Yes	0.400	0.520	0.93	Yes	1.00	**8.81**
		$U_{15} - L_{15}$	64.87	-308.45	-54	46	250	-270	396	-188	-766	-181	0.117	0.567	0.69	Yes	0.064	0.312	0.38	Yes	0.691	0.284	0.98	Yes	0.653	0.345	1.00	Yes	1.00	**3.70**
		$U_{16} - L_{16}$	-----	-318.09	44	-49	245	-252	474	107	-32	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.218	0.94	Yes	0.673	0.323	1.00	Yes	1.00	**2.55**
		$U_{17} - L_{17}$	-----	-418.84	78	-92	205	-223	505	200	199	110	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.210	1	Yes	0.723	0.226	0.95	Yes	1.00	**1.79**
		$U_{18} - L_{18}$	-----	-534.15	172	-179	438	-450	679	172	105	15	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.184	0.97	Yes	0.743	0.255	1.00	Yes	1.00	**2.37**
		$U_{19} - L_{19}$	-----	-650.04	177	-191	496	-514	586	117	209	43	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.157	0.97	Yes	0.757	0.238	1.00	Yes	1.00	**2.96**
		$U_{20} - L_{20}$	-----	-543.54	229	-275	390	-470	433	57	314	41	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.203	1	Yes	0.696	0.249	0.95	Yes	1.00	**1.96**
	Structure 2	$U_0 - L_0$	-----	-609.57	-318	453	-161	269	-1221	-207	38	6	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.267	1	Yes	0.653	0.192	0.85	Yes	1.00	**1.15**
		$U_1 - L_1$	-----	-718.41	-528	538	-207	215	-834	-70	629	162	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.175	1	Yes	0.770	0.228	1.00	Yes	1.00	**2.14**
		$U_2 - L_2$	-----	-592.37	-454	471	-152	168	43	240	624	284	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.176	0.97	Yes	0.755	0.241	1.00	Yes	1.00	**2.03**
		$U_3 - L_3$	-----	-459.82	-215	232	-75	86	-44	213	546	265	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.721	0.211	0.94	Yes	1.00	**1.67**
		$U_4 - L_4$	-----	-319.88	-180	192	-21	31	-613	49	561	236	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.269	1	Yes	0.677	0.245	0.93	Yes	1.00	**2.09**
		$U_5 - L_5$	98.09	-319.36	-208	234	78	-72	-455	65	565	173	0.176	0.463	0.64	Yes	0.097	0.255	0.36	Yes	0.721	0.277	1	Yes	0.676	0.300	0.98	Yes	1.00	**4.02**
		$U_6 - L_6$	308.89	-89.77	-107	116	183	-187	-700	-65	-507	-234	0.556	0.442	1.00	Yes	0.306	0.243	0.55	Yes	0.202	0.237	0.44	Yes	0.190	0.239	0.43	Yes	1.00	**4.05**
		$U_7 - L_7$	-----	-196.00	-17	15	392	-443	-334	-507	-1645	-735	-----	-----	-----	-----	-----	-----	-----	-----	0.443	0.556	1	Yes	0.415	0.567	0.99	Yes	1.00	**7.48**
		$U_8 - L_8$	-----	-471.55	149	-170	335	-359	417	-30	-10	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.149	0.84	Yes	0.679	0.314	1.00	Yes	1.00	**2.09**
		$U_9 - L_9$	-----	-694.89	277	-277	587	-596	1161	618	-64	112	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.221	1	Yes	0.745	0.253	1.00	Yes	1.00	**2.72**
		$U_{10} - L_{10}$	-----	-747.44	233	-233	511	-533	1182	695	-12	215	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.257	1	Yes	0.699	0.235	0.94	Yes	1.00	**2.65**
		$U_{11} - L_{11}$	-----	-733.69	226	-219	459	-462	1187	668	526	493	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.260	1	Yes	0.686	0.204	0.90	Yes	1.00	**2.19**
		$U_{12} - L_{12}$	-----	-720.78	186	-168	417	-410	1490	652	1012	506	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.305	1	Yes	0.625	0.179	0.81	Yes	1.00	**2.15**
		$U_{13} - L_{13}$	-----	-622.85	223	-221	496	-484	1157	317	516	178	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.300	1	Yes	0.600	0.237	0.84	Yes	1.00	**2.26**
		$U_{14} - L_{14}$	-----	-1223.04	-591	548	430	-413	-730	-381	722	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.096	1	Yes	0.811	0.105	0.92	Yes	1.00	**4.15**
		$U_{15} - L_{15}$	-----	-662.80	-585	564	-263	256	-334	-9	858	82	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1	Yes	0.639	0.280	0.92	Yes	1.00	**2.30**
		$U_{16} - L_{16}$	-----	-711.34	-460	451	-202	171	-249	94	818	178	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.170	1	Yes	0.762	0.195	0.96	Yes	1.00	**2.24**
		$U_{17} - L_{17}$	-----	-643.18	-537	537	-195	196	-52	144	594	193	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.156	0.96	Yes	0.749	0.249	1.00	Yes	1.00	**2.29**
		$U_{18} - L_{18}$	-----	-579.05	-470	496	-159	164	-302	60	622	214	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.94	Yes	0.738	0.254	1.00	Yes	1.00	**2.19**
		$U_{19} - L_{19}$	-----	-485.44	-276	279	-87	89	-731	32	520	195	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.209	0.94	Yes	0.725	0.269	1.00	Yes	1.00	**2.09**
		$U_{20} - L_{20}$	-----	-378.01	-219	230	-36	41	-93	66	517	179	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.220	1	Yes	0.724	0.263	0.99	Yes	1.00	**2.45**
	Structure 3	$U_{21} - L_{21}$	27.84	-322.85	-225	245	21	-14	-469	44	87	4	0.050	0.448	0.50	Yes	0.028	0.247	0.28	Yes	0.729	0.233	0.97	Yes	0.683	0.313	1.00	Yes	1.00	**3.20**
		$U_{22} - L_{22}$	-----	-196.44	-161	178	268	-289	422	-200	-1757	-897	-----	-----	-----	-----	-----	-----	-----	-----	0.442	0.553	1	Yes	0.416	0.369	0.79	Yes	1.00	**7.70**
		$U_{23} - L_{23}$	-----	-320.60	11	-14	230	-249	524	166	-99	33	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.247	0.98	Yes	0.678	0.318	1.00	Yes	1.00	**2.63**
		$U_{24} - L_{24}$	-----	-370.88	51	-56	227	-235	584	204	133	108	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.236	1	Yes	0.711	0.269	0.98	Yes	1.00	**2.12**
		$U_{25} - L_{25}$	-----	-471.70	99	-100	302	-300	589	223	-34	118	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.184	0.9	Yes	0.704	0.291	1.00	Yes	1.00	**2.08**
		$U_{26} - L_{26}$	-----	-572.84	167	-175	500	-524	708	301	225	273	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.190	0.96	Yes	0.730	0.268	1.00	Yes	1.00	**2.36**
		$U_{27} - L_{27}$	-----	-632.84	199	-203	556	-560	771	314	505	437	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.193	0.98	Yes	0.737	0.260	1.00	Yes	1.00	**2.61**
		$U_{28} - L_{28}$	-----	-611.19	156	-129	465	-448	1650	557	902	389	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.289	1	Yes	0.655	0.197	0.86	Yes	1.00	**2.38**
		$U_{29} - L_{29}$	-----	-619.04	150	-155	579	-564	1192	199	462	137	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.304	1	Yes	0.597	0.277	0.88	Yes	1.00	**3.29**
		$U_{30} - L_{30}$	-----	-1164.54	-523	463	244	-258	-841	-290	419	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.110	1	Yes	0.801	0.097	0.90	Yes	1.00	**3.37**
		$U_{31} - L_{31}$	-----	-711.44	-532	515	-306	300	-564	14	509	96	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.205	1	Yes	0.686	0.254	0.95	Yes	1.00	**1.81**
		$U_{32} - L_{32}$	-----	-856.56	-477	469	-218	189	-135	59	617	189	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.173	1	Yes	0.742	0.204	0.95	Yes	1.00	**2.29**
		$U_{33} - L_{33}$	-----	-825.66	-499	499	-248	231	-466	102	548	237	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.155	0.99	Yes	0.772	0.220	1.00	Yes	1.00	**2.40**
		$U_{34} - L_{34}$	-----	-757.17	-470	498	-243	241	-1136	-123	503	238	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.244	1	Yes	0.708	0.220	0.93	Yes	1.00	**2.37**
		$U_{35} - L_{35}$	-----	-694.51	-570	587	-254	269	-312	109	630	377	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.152	0.93	Yes	0.744	0.249	1.00	Yes	1.00	**2.73**
		$U_{36} - L_{36}$	-----	-478.37	-322	348	-135	157	-323	65	224	174	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.145	0.84	Yes	0.689	0.304	1.00	Yes	1.00	**2.24**
		$U_{37} - L_{37}$	-----	-173.93	-427	492	35	-33	-1237	-729	-1089	-373	-----	-----	-----	-----	-----	-----	-----	-----	0.393	0.593	0.99	Yes	0.368	0.629	1.00	Yes	1.00	**9.47**
		$U_{38} - L_{38}$	289.46	-146.90	-181	184	153	-164	-175	-500	-823	-259	0.521	0.474	1.00	Yes	0.286	0.261	0.55	Yes	0.331	0.220	0.56	Yes	0.311	0.236	0.55	Yes	1.00	**4.29**
		$U_{39} - L_{39}$	56.62	-322.55	-53	47	222	-244	530	156	-399	-38	0.102	0.465	0.57	Yes	0.056	0.256	0.32	Yes	0.729	0.251	0.98	Yes	0.682	0.311	1.00	Yes	1.00	**3.58**
		$U_{40} - L_{40}$	-----	-327.19	34	-42	221	-224	598	172	-60	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.256	1	Yes	0.692	0.287	0.98	Yes	1.00	**2.26**
		$U_{41} - L_{41}$	-----	-462.14	86	-95	236	-248	579	192	216	112	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1	Yes	0.725	0.226	0.96	Yes	1.00	**1.88**
		$U_{42} - L_{42}$	-----	-577.89	168	-178	496	-502	668	171	323	135	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.172	0.95	Yes	0.736	0.257	1.00	Yes	1.00	**2.47**
		$U_{43} - L_{43}$	-----	-705.28	187	-205	536	-555	620	186	483	224	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.152	0.96	Yes	0.756	0.235	1.00	Yes	1.00	**2.97**
		$U_{44} - L_{44}$	-----	-672.47	248	-305	488	-607	536	91	228	39	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1	Yes	0.721	0.258	0.98	Yes	1.00	**2.61**
	Structure 4	$U_0 - L_0$	-----	-531.66	-268	380	-133	231	-682	-89	106	14	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.238	1	Yes	0.666	0.195	0.87	Yes	1.00	**1.03**
		$U_1 - L_1$	-----	-652.53	-507	503	-206	206	-360	72	621	143	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.161	0.98	Yes	0.759	0.236	1.00	Yes	1.00	**2.09**
		$U_2 - L_2$	-----	-544.94	-379	403	-158	169	-673	111	660	306	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.195	1	Yes	0.758	0.228	0.99	Yes	1.00	**1.82**
		$U_3 - L_3$	-----	-408.82	-191	210	-68	83	46	229	566	269	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.705	0.213	0.92	Yes	1.00	**1.56**
		$U_4 - L_4$	-----	-322.57	-217	229	-30	36	-566	89	613	223	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1	Yes	0.683	0.292	0.98	Yes	1.00	**2.47**
		$U_5 - L_5$	52.53	-248.99	-162	187	48	-38	-1257	-49	-150	-60	0.094	0.603	0.70	Yes	0.052	0.332	0.39	Yes	0.558	0.441	1	Yes	0.527	0.239	0.77	Yes	1.00	**3.01**
		$U_6 - L_6$	-----	-166.61	-150	156	327	-354	-683	-824	-181	-274	-----	-----	-----	-----	-----	-----	-----	-----	0.372	0.620	1	Yes	0.353	0.452	0.81	Yes	1.00	**7.93**
		$U_7 - L_7$	-----	-367.15	79	-95	233	-258	495	81	-385	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.211	0.96	Yes	0.703	0.295	1.00	Yes	1.00	**2.03**
		$U_8 - L_8$	-----	-507.44	133	-134	333	-334	897	373	-51	47	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.258	1	Yes	0.696	0.285	0.99	Yes	1.00	**2.41**
		$U_9 - L_9$	-----	-622.96	160	-220	380	-477	1159	420	451	424	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.725	0.221	0.95	Yes	1.00	**2.52**
		$U_{10} - L_{10}$	-----	-625.58	152	-140	317	-330	1707	942	1088	679	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.345	1	Yes	0.617	0.171	0.79	Yes	1.00	**2.23**
		$U_{11} - L_{11}$	-----	-564.26	190	-220	374	-421	1499	671	745	423	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.320	1	Yes	0.637	0.234	0.88	Yes	1.00	**1.85**
		$U_{12} - L_{12}$	-----	-1173.54	-406	434	274	-373	-1253	-525	716	211	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.147	1	Yes	0.814	0.081	0.90	Yes	1.00	**3.47**
		$U_{13} - L_{13}$	-----	-436.66	-264	283	-156	168	-879	-67	639	177	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.265	1	Yes	0.674	0.279	0.96	Yes	1.00	**1.14**
		$U_{14} - L_{14}$	-----	-504.25	-198	219	-100	89	-851	-238	776	277	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.723	0.191	0.92	Yes	1.00	**1.78**
		$U_{15} - L_{15}$	-----	-394.20	-171	201	-80	87	-929	-209	682	254	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.286	1	Yes	0.680	0.204	0.89	Yes	1.00	**1.83**
		$U_{16} - L_{16}$	-----	-167.55	-279	280	-19	32	-2034	-950	-1018	-459	-----	-----	-----	-----	-----	-----	-----	-----	0.368	0.629	1	Yes	0.355	0.358	0.72	Yes	1.00	**5.06**
		$U_{17} - L_{17}$	188.78	-215.39	-187	209	194	-220	441	159	-1302	-559	0.340	0.658	1.00	Yes	0.187	0.362	0.55	Yes	0.472	0.411	0.89	Yes	0.456	0.281	0.74	Yes	1.00	**5.74**
		$U_{18} - L_{18}$	107.52	-290.12	-113	122	256	-297	461	147	-186	-185	0.193	0.513	0.71	Yes	0.106	0.282	0.39	Yes	0.634	0.233	0.87	Yes	0.614	0.379	1.00	Yes	1.00	**4.48**
		$U_{19} - L_{19}$	-----	-326.52	-30	14	230	-237	425	219	225	125	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.204	0.92	Yes	0.691	0.302	1.00	Yes	1.00	**3.03**
		$U_{20} - L_{20}$	-----	-318.97	78	-90	199	-248	604	194	276	88	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.276	0.99	Yes	0.675	0.316	1.00	Yes	1.00	**1.72**

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 2.167 1.625

			Inventory Loads - HS20 Truck																																	
			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression															
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating				
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass								
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																								
South Truss - Diagonals	Structure 1	$U_0 - L_1$	458.07	-----	-116	59	9	-11	-1010	-482	11	88	0.601	0.390	1.00	Yes	0.363	0.215	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**							
		$U_1 - L_2$	295.62	-----	-70	18	-43	-21	-316	-161	-1302	-525	0.532	0.467	1.00	Yes	0.292	0.257	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**							
		$U_2 - L_3$	75.94	-201.23	-35	-3	-45	-57	-77	-94	-1827	-277	0.137	0.602	0.74	Yes	0.075	0.331	0.41	Yes	0.463	0.535	1	Yes	0.426	0.073	0.50	Yes	1.00	**3.13**							
		$U_3 - L_4$	-----	-280.80	23	-13	-7	-70	453	250	-880	-308	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.352	1	Yes	0.594	0.089	0.69	Yes	1.00	**2.35**							
		$U_4 - L_4$	391.30	-----	5	110	-118	-13	-49	198	1295	845	0.574	0.422	1.00	Yes	0.316	0.232	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**							
		$U_5 - L_5$	615.23	-----	-168	206	-67	96	-273	243	815	79	0.727	0.266	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.59**							
		$U_7 - L_6$	592.19	-----	-253	244	-36	84	-360	30	-819	-113	0.700	0.293	1.00	Yes	0.385	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**							
		$U_8 - L_7$	613.08	-----	-86	299	30	80	-112	15	-561	-297	0.725	0.272	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**							
		$U_9 - L_9$	953.41	-----	-88	364	-26	173	-219	-361	550	156	0.762	0.232	1.00	Yes	0.472	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**							
		$U_9 - L_{10}$	1013.18	-----	-301	267	-122	116	-399	-258	370	155	0.810	0.185	1.00	Yes	0.502	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**							
		$U_{10} - L_{11}$	884.18	-----	-218	175	-144	87	-509	-591	-1095	-537	0.747	0.245	1.00	Yes	0.462	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**							
		$U_{11} - L_{12}$	722.48	-----	-222	97	-167	14	-476	-437	-1197	-695	0.715	0.282	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**							
		$U_{12} - L_{13}$	555.55	-----	-187	143	-108	42	-386	-379	-786	-361	0.677	0.317	1.00	Yes	0.426	0.182	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**							
		$U_{13} - L_{14}$	387.83	-----	-79	31	-33	-25	-139	-232	-678	-305	0.698	0.298	1.00	Yes	0.384	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.34**							
		$U_{15} - L_{14}$	283.79	-236.89	-79	-3	9	-99	-310	-315	869	-254	0.510	0.378	0.89	Yes	0.281	0.208	0.49	Yes	0.555	0.440	1	Yes	0.501	0.127	0.63	Yes	1.00	**3.97**							
		$U_{16} - L_{15}$	410.45	-9.85	-143	97	-21	-14	-208	-14	-260	-130	0.738	0.259	1.00	Yes	0.406	0.142	0.55	Yes	0.023	0.143	0.17	Yes	0.021	0.183	0.21	Yes	1.00	**3.26**							
		$U_{17} - L_{16}$	524.09	-----	-143	100	-46	22	-333	-130	-306	-105	0.769	0.223	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**							
		$U_{18} - L_{17}$	621.81	-----	-330	253	-130	88	-382	-8	-402	-112	0.735	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.44**							
		$U_{19} - L_{18}$	691.35	-----	-334	253	-131	95	-377	-132	-458	-204	0.749	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**							
		$U_{20} - L_{19}$	701.09	-----	-379	324	-177	141	-159	-65	-273	-139	0.759	0.239	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**							
	Structure 2	$U_0 - L_1$	649.36	-----	-312	314	-101	129	-1367	-422	-158	4	0.642	0.350	1.00	Yes	0.353	0.193	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**							
		$U_1 - L_2$	755.13	-----	-394	312	-158	112	-431	-397	156	-20	0.747	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.16**							
		$U_2 - L_3$	614.92	-----	-319	264	-113	84	-401	-457	138	-17	0.727	0.264	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.03**							
		$U_3 - L_4$	556.50	-----	-175	120	-50	23	-359	-445	178	16	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.07**							
		$U_4 - L_5$	351.24	-19.66	-122	84	-26	-19	-362	-307	-710	-232	0.632	0.362	1.00	Yes	0.347	0.199	0.55	Yes	0.049	0.279	0.33	Yes	0.042	0.156	0.20	Yes	1.00	**2.90**							
		$U_5 - L_6$	288.87	-233.83	-89	34	52	-108	-396	-269	-1060	-190	0.520	0.445	0.97	Yes	0.286	0.245	0.54	Yes	0.552	0.443	1	Yes	0.495	0.138	0.64	Yes	1.00	**3.83**							
		$U_6 - L_7$	-----	-362.34	-1	-39	41	-98	45	-72	-476	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.216	1	Yes	0.694	0.112	0.81	Yes	1.00	**1.81**							
		$U_8 - L_7$	604.58	-----	-190	154	-79	36	-244	-9	-56	-142	0.771	0.220	1.00	Yes	0.485	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**							
		$U_9 - L_8$	733.05	-----	-338	258	-183	111	-183	-64	33	-44	0.794	0.203	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.24**							
		$U_{10} - L_9$	838.24	-----	-311	257	-149	124	-117	131	-116	12	0.829	0.164	1.00	Yes	0.456	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.52**							
		$U_{11} - L_{10}$	889.29	-----	-343	308	-156	158	-220	178	-285	81	0.810	0.185	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**							
		$U_{12} - L_{11}$	843.40	-----	-331	345	-132	174	-507	177	-566	62	0.768	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.29**							
		$U_{13} - L_{12}$	734.85	-----	-411	382	-157	161	-486	53	-542	0	0.727	0.272	1.00	Yes	0.400	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**							
		$U_{14} - L_{13}$	734.44	-----	-250	428	-17	125	-23	53	-493	-256	0.727	0.272	1.00	Yes	0.400	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**							
		$U_{14} - L_{15}$	599.41	-----	-196	345	-24	164	153	-395	518	237	0.709	0.289	1.00	Yes	0.390	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.17**							
		$U_{15} - L_{16}$	604.53	-----	-360	326	-175	163	53	-289	429	104	0.715	0.282	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.70**							
		$U_{16} - L_{17}$	690.82	-----	-332	349	-127	154	43	-415	373	110	0.748	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**							
		$U_{17} - L_{18}$	649.76	-----	-285	287	-109	125	-74	-191	359	90	0.768	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.09**							
		$U_{18} - L_{19}$	635.89	-----	-279	256	-80	94	-183	-462	293	80	0.752	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**							
		$U_{19} - L_{20}$	565.50	-----	-185	167	-74	38	-284	-216	-531	-184	0.721	0.274	1.00	Yes	0.397	0.156	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.65**							
		$U_{20} - L_{21}$	402.19	-----	-122	105	-24	-3	-188	-271	-399	-91	0.723	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**							
		$U_{21} - L_{22}$	202.60	-221.46	-48	52	6	-95	290	68	-1392	-277	0.364	0.524	0.89	Yes	0.200	0.288	0.49	Yes	0.523	0.475	1	Yes	0.469	0.121	0.59	Yes	1.00	**4.47**							
		$U_{23} - L_{22}$	433.48	-122.91	-116	63	10	-59	-239	-82	85	-136	0.780	0.217	1.00	Yes	0.429	0.119	0.55	Yes	0.293	0.140	0.44	Yes	0.260	0.148	0.41	Yes	1.00	**4.00**							
		$U_{24} - L_{23}$	439.12	-----	-127	112	-32	14	-148	44	86	-58	0.790	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.51**							
		$U_{25} - L_{24}$	596.74	-----	-189	179	-40	48	-181	48	-301	-82	0.761	0.231	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**							
		$U_{26} - L_{25}$	669.43	-----	-283	277	-79	96	-50	179	-254	-57	0.791	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**							
		$U_{27} - L_{26}$	649.68	-----	-282	295	-105	125	-266	161	-342	-8	0.768	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.25**							
		$U_{28} - L_{27}$	675.90	-----	-307	343	-94	148	-418	232	-545	41	0.732	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.36**							
		$U_{29} - L_{28}$	590.47	-----	-341	330	-92	105	-360	42	-550	-42	0.698	0.293	1.00	Yes	0.384	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**							
		$U_{30} - L_{29}$	629.19	-----	-196	367	33	69	-91	5	-236	-197	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**							
		$U_{30} - L_{31}$	733.05	-----	-260	438	-68	222	-38	-277	426	185	0.725	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.30**							
		$U_{31} - L_{32}$	738.86	-----	-424	373	-232	216	9	-303	457	120	0.731	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.65**							
		$U_{32} - L_{33}$	862.97	-----	-347	350	-159	192	-303	-412	286	60	0.786	0.205	1.00	Yes	0.432	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**							
		$U_{33} - L_{34}$	860.39	-----	-328	281	-175	153	-431	-524	97	-92	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.19**							
		$U_{34} - L_{35}$	775.83	-----	-288	238	-181	120	-477	-451	-640	-338	0.768	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**							
		$U_{35} - L_{36}$	685.34	-----	-312	234	-183	97	-376	-335	-576	-299	0.742	0.254	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**							
		$U_{36} - L_{37}$	553.59	-----	-175	146	-79	20	-208	-442	-635	-263	0.706	0.286	1.00	Yes	0.444	0.164	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.89**							
		$U_{38} - L_{37}$	-----	-370.96	-26	-27	51	-101	-308	-176	-49	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1	Yes	0.711	0.115	0.83	Yes	1.00	**2.51**							
		$U_{39} - L_{38}$	428.62	-229.36	-132	67	55	-105	-136	-113	189	-94	0.771	0.224	1.00	Yes	0.424	0.123	0.55	Yes	0.546	0.179	0.73	Yes	0.485	0.169	0.66	Yes	1.00	**4.77**							
		$U_{40} - L_{39}$	397.09	-10.90	-135	91	-6	-9	-214	91	-379	-103	0.714	0.282	1.00	Yes	0.393	0.155	0.55	Yes	0.026	0.160	0.19	Yes	0.023	0.172	0.20	Yes	1.00	**2.85**							
		$U_{41} - L_{40}$	559.76	-----	-175	127	-56	30	-322	-99	-413	-179	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.12**							
		$U_{42} - L_{41}$	624.74	-----	-322	264	-120	90	-385	-73	-403	-171	0.739	0.255	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**							
		$U_{43} - L_{42}$	771.39	-----	-378	310	-134	101	-362	-80	-375	-195	0.763	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**							
		$U_{44} - L_{43}$	799.48	-----	-382	378	-159	152	-80	66	-171	11	0.791	0.203	1.00	Yes	0.435	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**							
	Structure 3	$U_0 - L_1$	605.43	-----	-298	270	-79	104	-1148	-435	-147	3	0.656	0.341	1.00	Yes	0.361	0.188	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.87**							
		$U_1 - L_2$	672.12	-----	-347	252	-156	106	-386	-515	169	-36	0.728	0.262	1.00	Yes	0.400	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**							
		$U_2 - L_3$	587.76	-----	-311	240	-123	84	-387	-689	134	-26	0.695	0.301	1.00	Yes	0.382	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.97**							
		$U_3 - L_4$	512.77	-----	-141	98	-39	17	-417	-362	171	-14	0.752	0.241	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.15**							
		$U_4 - L_5$	323.26	-24.26	-117	76	-38	-14	-313	-461	-909	-264	0.581	0.413	1.00	Yes	0.320	0.227	0.55	Yes	0.057	0.313	0.38	Yes	0.051	0.150	0.21	Yes	1.00	**2.67**							
		$U_5 - L_6$	170.16	-242.61	-49	-12	23	-107	-195	-126	-908	-288	0.306	0.399	0.71	Yes	0.168	0.220	0.39	Yes	0.568	0.422	1	Yes	0.513	0.136	0.65	Yes	1.00	**3.19**							
		$U_7 - L_6$	443.86	-----	-91	39	-36	-14	-210	-183	292	-126	0.798	0.201	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.38**							
		$U_8 - L_7$	621.04	-----	-201	160	-98	49	-162	1	323	-85	0.757	0.239	1.00	Yes	0.476	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.58**							
		$U_9 - L_8$	793.03	-----	-244	120	-166	29	-156	46	648	371	0.785	0.210	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.62**							
		$U_{10} - L_9$	886.95	-----	-209	184	-107	89	-220	248	1103	225	0.749	0.241	1.00	Yes	0.464	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**							
		$U_{11} - L_{10}$	945.08	-----	-275	268	-65	101	-285	153	-939	-233	0.756	0.242	1.00	Yes	0.468	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**							
		$U_{12} - L_{11}$	920.01	-----	-78	355	26	113	59	240	-811	-283	0.735	0.261	1.00	Yes	0.456	0.148	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**							
		$U_{13} - L_{12}$	613.10	-----	-90	287	-19	144	102	-397	570	166	0.725	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.88**							
		$U_{13} - L_{14}$	631.95	-----	-291	233	-113	114	-324	-318	443	156	0.747	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**1.92**							
		$U_{14} - L_{15}$	607.83	-----	-166	211	-87	96	-190	-255	-874	-383	0.719	0.279	1.00	Yes	0.395	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**							
		$U_{15} - L_{16}$	319.57	-----	-10	75	-89	-19	449	225	-1888	-982	0.469	0.530	1.00	Yes	0.258	0.292	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**							
		$U_{17} - L_{16}$	-----	-299.87	46	-11	-48	-95	-246	-19	671	31	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.305	1	Yes	0.635	0.121	0.76	Yes	1.00	**4.05**							
		$U_{18} - L_{17}$	392.51	-106.08	-126	13	-65	-64	-435	-243	380	-31	0.706	0.288	1.00	Yes	0.388	0.158	0.55	Yes	0.244	0.257	0.51	Yes	0.224	0.162	0.39	Yes	1.00	**5.95**							
		$U_{19} - L_{18}$	365.51	-----	-72	14	-29	-21	-278	-251	857	380	0.657	0.341	1.00	Yes	0.362	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**							
		$U_{20} - L_{19}$	626.94	-11.97	-120	80	-27	2	-147	-31	-54	22	0.822	0.177	1.00	Yes	0.497	0.098	0.60	Yes	0.020	0.091	0.12	Yes	0.018	0.140	0.16	Yes	1.00	**3.86**							

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-548.27	-185	70	-91	-864	9	-9	-26	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.248	1.00	Yes	0.739	0.205	0.95	Yes	1.00	**3.23**
		$U_1 - U_2$	-----	-580.79	-61	38	-162	-732	-7	-34	-44	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.200	1.00	Yes	0.783	0.174	0.96	Yes	1.00	**1.96**
		$U_2 - U_3$	110.33	-600.52	-131	233	-317	-519	7	26	53	133	0.126	0.146	0.28	Yes	0.085	0.095	0.19	Yes	0.817	0.182	1.00	Yes	0.810	0.123	0.94	Yes	1.00	**2.25**
		$U_3 - U_4$	304.27	-571.51	58	281	-265	-709	11	35	155	25	0.349	0.195	0.55	Yes	0.239	0.134	0.38	Yes	0.778	0.214	1.00	Yes	0.771	0.169	0.94	Yes	1.00	**2.62**
		$U_4 - U_5$	430.24	-585.55	163	343	-396	-528	9	-35	33	-185	0.493	0.157	0.65	Yes	0.338	0.107	0.45	Yes	0.797	0.197	1.00	Yes	0.790	0.125	0.92	Yes	1.00	**3.72**
		$U_5 - U_6$	634.81	-481.79	238	449	-870	-29	-138	-59	339	-52	0.728	0.264	1.00	Yes	0.491	0.173	0.67	Yes	0.656	0.184	0.84	Yes	0.650	0.207	0.86	Yes	1.00	**3.71**
		$U_6 - U_7$	883.49	-67.20	387	235	-434	-453	-304	-109	398	-288	0.845	0.151	1.00	Yes	0.590	0.104	0.70	Yes	0.076	0.138	0.22	Yes	0.076	0.096	0.18	Yes	1.00	**3.94**
		$U_7 - U_8$	543.11	-----	-2568	3618	-50	771	663	-424	-433	-297	0.376	0.616	1.00	Yes	0.262	0.420	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		$U_8 - U_9$	493.23	-----	685	13	2760	-2182	-1036	-146	-504	296	0.404	0.590	1.00	Yes	0.276	0.401	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.58**
		$U_9 - U_{10}$	707.32	-188.50	244	295	213	-631	-162	14	79	545	0.767	0.229	1.00	Yes	0.520	0.154	0.68	Yes	0.243	0.133	0.38	Yes	0.241	0.141	0.39	Yes	1.00	**3.93**
		$U_{10} - U_{11}$	265.48	-602.74	318	-77	213	-990	27	93	285	174	0.288	0.268	0.56	Yes	0.192	0.172	0.37	Yes	0.776	0.203	0.98	Yes	0.769	0.222	1.00	Yes	1.00	**2.93**
		$U_{11} - U_{12}$	-----	-878.21	228	-105	124	-772	102	408	217	588	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.162	1.00	Yes	0.824	0.128	0.96	Yes	1.00	**2.35**
		$U_{12} - U_{13}$	-----	-1211.04	4	-236	-73	-951	346	207	566	385	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1.00	Yes	0.809	0.131	0.95	Yes	1.00	**2.28**
		$U_{13} - U_{14}$	-----	-1349.13	-148	-383	-390	-1424	222	177	389	515	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.209	1.00	Yes	0.773	0.157	0.94	Yes	1.00	**2.07**
		$U_{14} - U_{15}$	-----	-1339.65	-272	-250	-1279	-875	213	31	579	150	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.220	1.00	Yes	0.768	0.141	0.91	Yes	1.00	**2.04**
		$U_{15} - U_{16}$	-----	-1403.86	-178	-404	-178	-1403	63	51	352	89	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.181	1.00	Yes	0.805	0.155	0.96	Yes	1.00	**2.99**
		$U_{16} - U_{17}$	-----	-1408.85	-608	-158	-902	-978	384	-67	551	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.181	1.00	Yes	0.808	0.108	0.92	Yes	1.00	**3.63**
		$U_{17} - U_{18}$	-----	-1123.70	-601	200	-312	-275	438	-1	210	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.104	1.00	Yes	0.879	0.098	0.98	Yes	1.00	**2.90**
		$U_{18} - U_{19}$	-----	-720.32	-682	53	-695	-295	383	-178	383	-267	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.174	1.00	Yes	0.810	0.140	0.96	Yes	1.00	**2.66**
		$U_{19} - U_{20}$	-----	-536.78	-1514	1964	-299	-380	267	-824	76	-588	-----	-----	-----	-----	-----	-----	-----	-----	0.609	0.237	0.85	Yes	0.604	0.395	1.00	Yes	1.00	**6.17**
	Structure 2	$U_0 - U_1$	-----	-609.40	-94	-89	461	-1604	4	-71	-84	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.243	0.97	Yes	0.720	0.272	1.00	Yes	1.00	**5.63**
		$U_1 - U_2$	-----	-832.49	-46	-191	25	-1201	-69	-218	-41	-289	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.188	1.00	Yes	0.803	0.182	0.99	Yes	1.00	**2.94**
		$U_2 - U_3$	-----	-1173.12	-99	-275	-65	-1470	-27	369	-20	386	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1.00	Yes	0.833	0.150	0.99	Yes	1.00	**2.85**
		$U_3 - U_4$	-----	-1314.70	-413	-407	-1256	-1596	341	515	393	619	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.239	1.00	Yes	0.749	0.142	0.90	Yes	1.00	**2.42**
		$U_4 - U_5$	-----	-1480.59	-461	-375	-610	-2045	774	307	356	267	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.230	1.00	Yes	0.760	0.169	0.93	Yes	1.00	**2.43**
		$U_5 - U_6$	-----	-1568.16	-422	7	-1102	-1258	186	-217	329	454	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.186	1.00	Yes	0.805	0.104	0.91	Yes	1.00	**2.53**
		$U_6 - U_7$	-----	-1364.49	-285	-104	-1342	-1511	-135	-185	303	160	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1.00	Yes	0.777	0.135	0.92	Yes	1.00	**2.24**
		$U_7 - U_8$	-----	-1420.10	-142	-105	-715	-1498	-128	-207	185	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.178	1.00	Yes	0.809	0.133	0.95	Yes	1.00	**3.21**
		$U_8 - U_9$	6.08	-1232.95	-228	192	-916	-931	-123	-215	290	-182	0.004	0.123	0.13	Yes	0.002	0.081	0.09	Yes	0.842	0.155	1.00	Yes	0.836	0.099	0.94	Yes	1.00	**3.20**
		$U_9 - U_{10}$	144.58	-950.05	-79	341	-1292	-474	-138	-153	252	-70	0.106	0.185	0.30	Yes	0.072	0.125	0.20	Yes	0.825	0.169	1.00	Yes	0.820	0.157	0.98	Yes	1.00	**2.71**
		$U_{10} - U_{11}$	918.18	-817.74	451	615	-591	-905	-290	-196	271	-359	0.776	0.171	0.95	Yes	0.528	0.112	0.64	Yes	0.818	0.181	1.00	Yes	0.813	0.128	0.95	Yes	1.00	**6.22**
		$U_{11} - U_{12}$	-----	-728.01	-1906	1160	-1033	-699	809	-130	677	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.163	0.90	Yes	0.723	0.269	1.00	Yes	1.00	**11.42**
		$U_{12} - U_{13}$	1161.43	-3.43	488	176	-1117	-1251	-434	-373	547	-309	0.784	0.210	1.00	Yes	0.559	0.143	0.71	Yes	0.003	0.255	0.26	Yes	0.003	0.158	0.17	Yes	1.00	**5.41**
		$U_{13} - U_{14}$	786.94	-----	-2370	5609	-353	1373	-41	-1369	-411	-500	0.387	0.613	1.00	Yes	0.274	0.402	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.00**
		$U_{14} - U_{15}$	776.60	-----	1424	279	5641	-3441	-1272	-937	-1050	-43	0.382	0.609	1.00	Yes	0.270	0.400	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.89**
		$U_{15} - U_{16}$	1329.91	-----	130	503	146	-1160	-660	-439	-201	690	0.804	0.190	1.00	Yes	0.572	0.129	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		$U_{16} - U_{17}$	1021.62	-32.96	647	309	885	-1527	-209	-26	481	354	0.753	0.242	1.00	Yes	0.501	0.160	0.67	Yes	0.029	0.112	0.15	Yes	0.029	0.192	0.23	Yes	1.00	**4.81**
		$U_{17} - U_{18}$	715.53	-285.03	452	324	282	-967	3	252	204	747	0.718	0.274	1.00	Yes	0.478	0.181	0.66	Yes	0.339	0.173	0.52	Yes	0.337	0.164	0.51	Yes	1.00	**3.76**
		$U_{18} - U_{19}$	562.49	-640.78	529	237	-209	-1112	100	117	410	466	0.565	0.257	0.83	Yes	0.370	0.164	0.54	Yes	0.761	0.232	1.00	Yes	0.757	0.189	0.95	Yes	1.00	**3.87**
		$U_{19} - U_{20}$	314.93	-720.51	316	218	18	-1009	21	13	218	480	0.295	0.226	0.53	Yes	0.196	0.148	0.35	Yes	0.800	0.193	1.00	Yes	0.795	0.162	0.96	Yes	1.00	**3.02**
		$U_{20} - U_{21}$	73.58	-894.04	-67	111	-161	-999	75	-10	299	271	0.057	0.177	0.24	Yes	0.040	0.115	0.16	Yes	0.822	0.177	1.00	Yes	0.816	0.145	0.97	Yes	1.00	**3.02**
		$U_{21} - U_{22}$	63.44	-809.00	-43	22	-811	-1134	42	61	152	393	0.049	0.207	0.26	Yes	0.035	0.139	0.18	Yes	0.744	0.255	1.00	Yes	0.738	0.164	0.91	Yes	1.00	**2.44**
		$U_{22} - U_{23}$	73.91	-822.75	69	-38	-933	-905	58	-2	431	59	0.057	0.182	0.24	Yes	0.041	0.123	0.17	Yes	0.756	0.234	1.00	Yes	0.751	0.135	0.89	Yes	1.00	**2.51**
		$U_{23} - U_{24}$	234.04	-882.85	-54	204	-280	-1041	-37	-64	257	51	0.182	0.179	0.37	Yes	0.127	0.116	0.25	Yes	0.812	0.183	1.00	Yes	0.806	0.151	0.96	Yes	1.00	**3.58**
		$U_{24} - U_{25}$	268.09	-709.51	175	267	-959	-536	-57	-86	390	-126	0.251	0.206	0.46	Yes	0.167	0.135	0.31	Yes	0.788	0.203	1.00	Yes	0.783	0.153	0.94	Yes	1.00	**2.74**
		$U_{25} - U_{26}$	-----	-724.09	-719	695	-238	-846	270	-232	214	-265	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.099	0.96	Yes	0.855	0.144	1.00	Yes	1.00	**5.60**
		$U_{26} - U_{27}$	-----	-705.88	-814	925	-605	-827	364	-372	396	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.141	0.98	Yes	0.834	0.157	1.00	Yes	1.00	**7.82**
		$U_{27} - U_{28}$	7.98	-782.72	-1395	1611	-2521	-773	532	-313	973	-8	0.006	0.419	0.43	Yes	0.004	0.276	0.28	Yes	0.683	0.303	0.99	Yes	0.679	0.317	1.00	Yes	1.00	**10.19**
		$U_{28} - U_{29}$	1125.80	-----	-54	584	337	-2267	117	-674	45	-548	0.681	0.315	1.00	Yes	0.484	0.211	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.11**
		$U_{29} - U_{30}$	446.13	-----	-5148	7747	-82	536	667	-877	-240	108	0.219	0.777	1.00	Yes	0.155	0.509	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.53**
		$U_{30} - U_{31}$	782.01	-----	1091	382	5773	-3612	-1130	-609	-1059	87	0.385	0.612	1.00	Yes	0.272	0.401	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.86**
		$U_{31} - U_{32}$	1139.51	-----	49	424	-18	-1207	-399	-204	63	811	0.769	0.229	1.00	Yes	0.548	0.157	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{32} - U_{33}$	879.37	-256.87	462	268	371	-1296	-83	7	546	479	0.743	0.249	1.00	Yes	0.499	0.166	0.67	Yes	0.257	0.175	0.44	Yes	0.255	0.183	0.44	Yes	1.00	**4.44**
		$U_{33} - U_{34}$	784.75	-725.31	425	311	71	-1402	-3	240	529	999	0.663	0.320	0.99	Yes	0.451	0.210	0.67	Yes	0.725	0.272	1.00	Yes	0.721	0.198	0.92	Yes	1.00	**5.01**
		$U_{34} - U_{35}$	344.69	-883.15	345	63	89	-1556	201	164	646	532	0.253	0.259	0.52	Yes	0.171	0.175	0.35	Yes	0.767	0.225	1.00	Yes	0.762	0.189	0.96	Yes	1.00	**3.30**
		$U_{35} - U_{36}$	132.89	-1180.87	162	-137	-206	-1285	108	92	403	563	0.077	0.183	0.26	Yes	0.054	0.121	0.18	Yes	0.807	0.187	1.00	Yes	0.801	0.137	0.94	Yes	1.00	**3.07**
		$U_{36} - U_{37}$	-----	-1330.02	-66	30	-1071	-1761	87	-1	382	343	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.232	1.00	Yes	0.757	0.157	0.92	Yes	1.00	**2.85**
		$U_{37} - U_{38}$	-----	-1356.55	119	-151	-1285	-1590	44	19	363	279	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.216	1.00	Yes	0.772	0.142	0.92	Yes	1.00	**2.90**
		$U_{38} - U_{39}$	-----	-1527.04	166	-272	-464	-2019	129	-30	541	148	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.201	1.00	Yes	0.784	0.167	0.96	Yes	1.00	**3.55**
		$U_{39} - U_{40}$	-----	-1445.52	-250	-310	-1905	-1672	51	-8	484	194	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1.00	Yes	0.742	0.158	0.91	Yes	1.00	**2.83**
		$U_{40} - U_{41}$	-----	-1338.84	-249	-317	-1612	-1427	47	-95	577	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.231	1.00	Yes	0.762	0.144	0.91	Yes	1.00	**2.88**
		$U_{41} - U_{42}$	-----	-1244.27	-1101	220	-843	-775	394	-23	311	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.107	1.00	Yes	0.883	0.112	1.00	Yes	1.00	**4.11**
		$U_{42} - U_{43}$	-----	-785.81	-280	79	-1236	-584	-65	-114	387	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.231	1.00	Yes	0.758	0.188	0.95	Yes	1.00	**3.85**
		$U_{43} - U_{44}$	-----	-587.90	-1707	1765	5	-987	165	-645	29	-841	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.213	0.92	Yes	0.694	0.300	1.00	Yes	1.00	**6.05**
	Structure 3	$U_0 - U_1$	-----	-641.59	-8	-157	381	-1371	-2	-50	175	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.211	0.94	Yes	0.722	0.276	1.00	Yes	1.00	**6.13**
		$U_1 - U_2$	-----	-727.43	-33	-140	122	-769	-62	-232	-65	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.166	1.00	Yes	0.818	0.155	0.98	Yes	1.00	**2.65**
		$U_2 - U_3$	-----	-1047.26	-72	-165	131	-973	-50	334	8	389	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.161	1.00	Yes	0.819	0.158	0.98	Yes	1.00	**2.48**
		$U_3 - U_4$	-----	-1388.89	-167	-294	-383	-1185	366	573	358	471	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.187	1.00	Yes	0.796	0.131	0.93	Yes	1.00	**2.70**
		$U_4 - U_5$	-----	-1404.72	-400	-52	-452	-1005	699	233	380	233	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.183	1.00	Yes	0.805	0.111	0.92	Yes	1.00	**2.55**
		$U_5 - U_6$	-----	-1346.19	-182	-273	-468	-1551	138	-151	314	321	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.213	1.00	Yes	0.772	0.171	0.95	Yes	1.00	**2.27**
		$U_6 - U_7$	-----	-1442.09	-361	-69	-917	-917	-115	-204	402	29	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.159	1.00	Yes	0.827	0.101	0.93	Yes	1.00	**3.11**
		$U_7 - U_8$	-----	-1226.30	-135	92	-344	-891	-87	-213	233	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.170	1.00	Yes	0.819	0.123	0.95	Yes	1.00	**3.80**
		$U_8 - U_9$	63.08	-907.18	-31	291	-420	-532	-80	-174	276	-361	0.050	0.131	0.19	Yes	0.034	0.088	0.13	Yes	0.859	0.136	1.00	Yes	0.851	0.088	0.94	Yes	1.00	**3.58**
		$U_9 - U_{10}$	435.67	-659.67	44	373	-609	-195	-155	-127	280	-217	0.473	0.181	0.66	Yes	0.315	0.117	0.44	Yes	0.849	0.142	1.00	Yes	0.842	0.136	0.98	Yes	1.00	**4.70**
		$U_{10} - U_{11}$	-----	-579.68	-456	426	-941	-358	284	-399	678	-455	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.248	1.00	Yes	0.740	0.211	0.96	Yes	1.00	**6.61**
		$U_{11} - U_{12}$	510.80	-----	-1660	2705	-149	550	199	-1001	-393	-385	0.419	0.577	1.00	Yes	0.286	0.392	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.07**
		$U_{12} - U_{13}$	965.14	-----	1039	129	1820	-1057	-539	-498	-411	-12	0.669	0.330	1.00	Yes	0.466	0.226	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_{13} - U_{14}$	878.45	-----	233	441	177	-460	-343	-224	-40	417	0.840	0.155	1.00	Yes	0.587	0.107	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_{14} - U_{15}$	646.82	-346.21	426	296	391	-842	-128	-40	291	102	0.741	0.249	1.00	Yes	0.500	0.163	0.67	Yes	0.471	0.125	0.60	Yes	0.467	0.200	0.67	Yes	1.00	**3.47**
		$U_{15} - U_{16}$	433.56	-578.01	339	236	-99	-697	-69	131	111	452	0.497	0.242	0.74	Yes	0.341	0.166	0.51	Yes	0.786	0.209	1.00	Yes	0.779	0.166	0.95	Yes	1.00	**3.09**
		$U_{16} - U_{17}$	412.24	-552.67	395	129	-362	-718	76	74	402	149	0.473	0.239	0.72	Yes	0.324	0.163	0.49	Yes	0.752	0.243	1.00	Yes	0.745	0.171	0.92	Yes	1.00	**2.93**
		$U_{17} - U_{18}$	347.16	-543.26	453	-31	119	-1101	-106	71	267	52	0.398	0.307	0.71	Yes	0.268	0.200	0.47	Yes	0.739	0.238	0.98	Yes	0.733	0.262	1.00	Yes	1.00	**4.11**
		$U_{18} - U_{19}$	94.99	-515.93	169	-37	-816	-490	-39	32	468	-21	0.109	0.273	0.39	Yes	0.075	0.187	0.27	Yes	0.702	0.296	1.00	Yes	0.696	0.194	0.89	Yes	1.00	**2.55**
		$U_{19} - U_{20}$	-----	-552.73	-911	1039	-144	-602	335	-480	389	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.113	0.87	Yes	0.745	0.247	1.00	Yes	1.00	**4.46**

Moment (End) Al Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-119.37	-362	207	1444	-2609	-27	-101	138	509	-----	-----	-----	-----	-----	-----	-----	-----	0.217	0.582	0.80	Yes	0.215	0.783	1.00	Yes	1.00	**18.80**
		L_1 - L_2	458.87	-1.14	149	-18	286	-846	-26	-37	-199	-180	0.702	0.296	1.00	Yes	0.428	0.199	0.63	Yes	0.002	0.173	0.18	Yes	0.002	0.254	0.26	Yes	1.00	**3.01**
		L_2 - L_3	693.28	-28.08	-20	22	-632	-727	-32	23	-151	41	0.798	0.200	1.00	Yes	0.461	0.120	0.59	Yes	0.038	0.223	0.27	Yes	0.038	0.176	0.22	Yes	1.00	**2.53**
		L_3 - L_4	640.00	-202.97	102	313	-32	-902	79	72	-263	-156	0.736	0.260	1.00	Yes	0.437	0.167	0.61	Yes	0.277	0.202	0.48	Yes	0.275	0.218	0.50	Yes	1.00	**3.27**
		L_4 - L_5	459.46	-----	-1161	699	-657	-91	-320	49	-275	497	0.595	0.396	1.00	Yes	0.357	0.257	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		L_5 - L_6	-----	-733.00	165	603	-324	12	76	129	129	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.140	1.00	Yes	0.846	0.133	0.98	Yes	1.00	**2.91**
		L_6 - L_7	-----	-1026.46	-765	963	-706	-787	-102	121	110	911	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.155	1.00	Yes	0.826	0.151	0.98	Yes	1.00	**7.06**
		L_7 - L_8	-----	-1187.39	-97	1740	17	590	-18	-173	-131	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.233	1.00	Yes	0.752	0.230	0.99	Yes	1.00	**4.11**
		L_8 - L_9	-----	-1286.85	1230	55	1283	-502	-170	-52	46	356	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.170	1.00	Yes	0.815	0.170	0.99	Yes	1.00	**4.88**
		L_9 - L_{10}	-----	-1068.28	147	137	258	-860	38	140	250	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.070	0.94	Yes	0.860	0.135	1.00	Yes	1.00	**4.91**
		L_{10} - L_{11}	-----	-546.91	520	-12	358	-603	139	46	9	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.077	0.92	Yes	0.833	0.160	1.00	Yes	1.00	**3.37**
		L_{11} - L_{12}	589.61	-216.73	479	-170	231	-818	86	-27	111	-51	0.764	0.236	1.00	Yes	0.458	0.156	0.62	Yes	0.333	0.121	0.46	Yes	0.330	0.217	0.55	Yes	1.00	**3.20**
		L_{12} - L_{13}	1048.43	-----	162	-75	-352	-804	25	35	114	257	0.827	0.173	1.00	Yes	0.529	0.103	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		L_{13} - L_{14}	1275.45	-----	351	-446	71	-1607	9	-1	240	-21	0.750	0.241	1.00	Yes	0.486	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.86**
		L_{14} - L_{15}	1648.80	-----	-1088	3	-1478	-899	-220	-108	-210	213	0.806	0.194	1.00	Yes	0.523	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		L_{15} - L_{16}	1573.22	-----	-213	-361	-800	-1638	-126	-54	-149	-478	0.769	0.231	1.00	Yes	0.493	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		L_{16} - L_{17}	1215.86	-----	-912	376	-1312	-482	-416	5	-394	366	0.769	0.230	1.00	Yes	0.499	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		L_{17} - L_{18}	890.86	-----	-750	555	-659	-427	-226	-200	-171	-569	0.776	0.217	1.00	Yes	0.497	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.27**
		L_{18} - L_{19}	360.38	-15.67	-1062	915	-669	104	-593	-42	-348	596	0.552	0.442	1.00	Yes	0.373	0.281	0.66	Yes	0.028	0.168	0.20	Yes	0.028	0.319	0.35	Yes	1.00	**6.24**
		L_{19} - L_{20}	134.07	-364.01	-1145	536	-80	-50	292	66	-25	-5	0.205	0.404	0.61	Yes	0.125	0.271	0.40	Yes	0.661	0.241	0.91	Yes	0.655	0.344	1.00	Yes	1.00	**6.06**
	Structure 2	L_0 - L_1	33.41	-184.98	-141	67	1197	-3603	-25	-86	-348	-1207	0.041	0.931	0.98	Yes	0.024	0.594	0.62	Yes	0.266	0.628	0.90	Yes	0.264	0.733	1.00	Yes	1.00	**18.56**
		L_1 - L_2	543.64	-----	158	-209	696	-1459	-40	32	-246	-233	0.660	0.337	1.00	Yes	0.393	0.217	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_2 - L_3	1001.44	-----	-45	-163	-186	-1164	78	78	59	230	0.800	0.196	1.00	Yes	0.526	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_3 - L_4	1308.69	-----	44	-425	-228	-1708	32	56	199	69	0.776	0.219	1.00	Yes	0.524	0.141	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		L_4 - L_5	1736.95	-----	-389	-251	-1281	-1778	94	202	-54	144	0.810	0.182	1.00	Yes	0.536	0.107	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_5 - L_6	1819.12	-----	-146	-384	-1209	-2282	113	-16	147	-68	0.781	0.212	1.00	Yes	0.524	0.128	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_6 - L_7	1835.44	-----	-431	-89	-2112	-2055	-166	45	-48	510	0.777	0.217	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		L_7 - L_8	1445.24	-52.09	-182	348	-1215	-1327	-131	10	-54	-245	0.829	0.167	1.00	Yes	0.544	0.098	0.65	Yes	0.035	0.196	0.24	Yes	0.035	0.147	0.19	Yes	1.00	**3.64**
		L_8 - L_9	1125.48	-----	-865	574	-1145	-386	-193	55	-171	537	0.787	0.205	1.00	Yes	0.530	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		L_9 - L_{10}	874.55	-799.62	-39	862	-874	-639	37	117	-49	-391	0.781	0.187	0.97	Yes	0.454	0.115	0.57	Yes	0.845	0.154	1.00	Yes	0.840	0.140	0.98	Yes	1.00	**5.58**
		L_{10} - L_{11}	616.74	-42.68	-1514	1178	-1198	-420	-641	113	-322	824	0.616	0.376	1.00	Yes	0.361	0.233	0.60	Yes	0.050	0.125	0.18	Yes	0.050	0.265	0.32	Yes	1.00	**7.87**
		L_{11} - L_{12}	153.14	-927.43	-1556	1702	-1274	-655	-6	235	240	-649	0.107	0.293	0.40	Yes	0.071	0.177	0.25	Yes	0.767	0.167	0.94	Yes	0.761	0.232	1.00	Yes	1.00	**10.27**
		L_{12} - L_{13}	-----	-1321.65	-593	12	-770	-1684	82	-81	55	269	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.200	1.00	Yes	0.791	0.167	0.96	Yes	1.00	**5.47**
		L_{13} - L_{14}	-----	-1375.76	-999	3418	-348	1191	-194	-384	-183	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.229	0.93	Yes	0.692	0.298	1.00	Yes	1.00	**4.95**
		L_{14} - L_{15}	-----	-1426.31	1418	-263	3203	-1982	-223	-330	-67	249	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.182	0.91	Yes	0.718	0.280	1.00	Yes	1.00	**5.58**
		L_{15} - L_{16}	-----	-1432.76	-866	338	-1083	-1101	-16	371	25	6	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.130	1.00	Yes	0.857	0.109	0.97	Yes	1.00	**5.24**
		L_{16} - L_{17}	-----	-1146.59	1199	118	691	-912	398	186	-40	1	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.151	1.00	Yes	0.835	0.148	0.99	Yes	1.00	**4.51**
		L_{17} - L_{18}	-----	-827.86	473	233	357	-805	103	-57	51	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.048	0.93	Yes	0.869	0.129	1.00	Yes	1.00	**3.35**
		L_{18} - L_{19}	111.20	-632.60	659	112	128	-690	-2	34	175	246	0.126	0.171	0.30	Yes	0.073	0.101	0.18	Yes	0.848	0.147	1.00	Yes	0.843	0.133	0.98	Yes	1.00	**3.23**
		L_{19} - L_{20}	547.72	-572.52	551	224	63	-1184	58	-43	297	-94	0.620	0.274	0.90	Yes	0.367	0.174	0.55	Yes	0.768	0.152	0.92	Yes	0.763	0.228	1.00	Yes	1.00	**4.16**
		L_{20} - L_{21}	922.36	-466.16	560	50	-649	-1442	-94	-103	111	355	0.745	0.253	1.00	Yes	0.490	0.147	0.64	Yes	0.446	0.229	0.68	Yes	0.443	0.215	0.66	Yes	1.00	**4.88**
		L_{21} - L_{22}	842.99	-----	51	-57	-604	-1954	-37	41	225	-22	0.681	0.315	1.00	Yes	0.457	0.191	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		L_{22} - L_{23}	914.71	-128.73	-138	226	-1041	-1394	-18	3	-89	424	0.739	0.254	1.00	Yes	0.496	0.155	0.66	Yes	0.123	0.290	0.42	Yes	0.122	0.207	0.33	Yes	1.00	**4.10**
		L_{23} - L_{24}	925.60	-318.13	13	395	-1048	-1442	11	80	77	-303	0.748	0.248	1.00	Yes	0.492	0.143	0.64	Yes	0.305	0.290	0.60	Yes	0.302	0.215	0.52	Yes	1.00	**4.94**
		L_{24} - L_{25}	661.51	-----	-565	483	-884	-802	-191	223	-271	497	0.749	0.247	1.00	Yes	0.443	0.155	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		L_{25} - L_{26}	606.02	-492.03	-826	1059	-901	-1215	-65	-171	134	-469	0.687	0.306	1.00	Yes	0.396	0.181	0.58	Yes	0.660	0.145	0.81	Yes	0.656	0.234	0.90	Yes	1.00	**7.97**
		L_{26} - L_{27}	33.44	-802.35	-788	982	-874	-415	-367	16	-228	480	0.030	0.215	0.25	Yes	0.017	0.132	0.15	Yes	0.848	0.105	0.96	Yes	0.843	0.157	1.00	Yes	1.00	**5.79**
		L_{27} - L_{28}	-----	-1136.28	-548	1359	-443	-25	-77	-61	33	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.130	0.97	Yes	0.828	0.168	1.00	Yes	1.00	**5.11**
		L_{28} - L_{29}	-----	-1371.67	64	-58	-552	-1460	-43	-18	87	288	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.169	1.00	Yes	0.820	0.145	0.97	Yes	1.00	**3.92**
		L_{29} - L_{30}	-----	-1392.42	-1129	3409	-384	765	81	148	-57	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.204	0.92	Yes	0.701	0.298	1.00	Yes	1.00	**5.47**
		L_{30} - L_{31}	-----	-1372.32	1566	-268	3484	-2455	-460	-370	184	604	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.206	0.91	Yes	0.691	0.304	1.00	Yes	1.00	**7.42**
		L_{31} - L_{32}	-----	-1100.48	-485	531	-1524	-2264	-526	33	376	193	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.326	1.00	Yes	0.664	0.228	0.90	Yes	1.00	**10.55**
		L_{32} - L_{33}	-----	-1008.66	979	144	320	-1249	-134	-69	332	288	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.154	0.99	Yes	0.827	0.170	1.00	Yes	1.00	**6.16**
		L_{33} - L_{34}	234.57	-666.11	396	171	242	-1222	7	-88	236	-31	0.234	0.245	0.48	Yes	0.137	0.154	0.30	Yes	0.788	0.142	0.93	Yes	0.782	0.214	1.00	Yes	1.00	**4.77**
		L_{34} - L_{35}	607.99	-702.40	704	76	649	-1618	-42	59	179	303	0.543	0.295	0.84	Yes	0.316	0.184	0.50	Yes	0.743	0.180	0.93	Yes	0.738	0.259	1.00	Yes	1.00	**6.33**
		L_{35} - L_{36}	1087.91	-265.74	386	-8	-67	-1359	101	-48	560	32	0.761	0.236	1.00	Yes	0.513	0.149	0.67	Yes	0.220	0.177	0.40	Yes	0.219	0.183	0.41	Yes	1.00	**4.34**
		L_{36} - L_{37}	1322.49	-37.43	242	1	-635	-1860	-103	12	-18	396	0.758	0.238	1.00	Yes	0.498	0.140	0.64	Yes	0.025	0.222	0.25	Yes	0.025	0.205	0.24	Yes	1.00	**3.69**
		L_{37} - L_{38}	1778.53	-----	-39	-349	-662	-2682	-42	-8	82	-166	0.753	0.246	1.00	Yes	0.500	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		L_{38} - L_{39}	1862.66	-----	-235	-155	-1911	-1938	-55	4	-106	344	0.799	0.193	1.00	Yes	0.536	0.118	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		L_{39} - L_{40}	1634.85	-----	-189	-298	-1009	-2116	-52	-32	-172	-547	0.762	0.237	1.00	Yes	0.505	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_{40} - L_{41}	1328.88	-----	-1097	207	-1513	-1004	-405	38	-287	502	0.781	0.217	1.00	Yes	0.526	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		L_{41} - L_{42}	1029.37	-----	-887	395	-967	-769	-99	13	-12	-415	0.811	0.184	1.00	Yes	0.532	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_{42} - L_{43}	446.93	-----	-1407	669	-776	-402	-413	144	-298	656	0.571	0.422	1.00	Yes	0.341	0.242	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.06**
		L_{43} - L_{44}	259.51	-339.40	-2449	942	-30	-34	1105	323	-183	-53	0.315	0.680	1.00	Yes	0.187	0.432	0.62	Yes	0.488	0.425	0.92	Yes	0.485	0.498	0.99	Yes	1.00	**12.78**
	Structure 3	L_0 - L_1	180.41	-256.44	-17	-79	955	-1706	-9	-41	-138	-626	0.287	0.654	0.95	Yes	0.176	0.429	0.61	Yes	0.484	0.362	0.85	Yes	0.480	0.515	1.00	Yes	1.00	**9.91**
		L_1 - L_2	396.31	-----	150	-186	464	-1054	-50	21	-331	-6	0.607	0.385	1.00	Yes	0.410	0.242	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		L_2 - L_3	911.95	-----	-35	-161	21	-930	36	23	181	102	0.794	0.202	1.00	Yes	0.508	0.121	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_3 - L_4	1210.10	-----	62	-365	-119	-1365	44	54	294	127	0.765	0.227	1.00	Yes	0.496	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		L_4 - L_5	1641.13	-----	-378	-180	-1216	-1408	115	222	81	280	0.802	0.189	1.00	Yes	0.515	0.111	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		L_5 - L_6	1553.51	-----	-83	-348	-611	-1883	141	78	165	75	0.759	0.239	1.00	Yes	0.493	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		L_6 - L_7	1359.92	-----	-1081	358	-1194	-585	-199	20	-152	409	0.800	0.199	1.00	Yes	0.518	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		L_7 - L_8	1081.70	-----	-65	156	-526	-690	-26	40	-35	-205	0.854	0.146	1.00	Yes	0.546	0.088	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		L_8 - L_9	568.55	-----	-642	402	-520	-143	-166	150	-158	497	0.736	0.257	1.00	Yes	0.442	0.165	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		L_9 - L_{10}	284.34	-559.78	15	516	-530	-197	74	138	154	-51	0.368	0.167	0.54	Yes	0.214	0.101	0.32	Yes	0.861	0.126	0.99	Yes	0.853	0.140	1.00	Yes	1.00	**4.41**
		L_{10} - L_{11}	-----	-1039.37	-1016	1027	-576	-644	-384	-103	76	864	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.128	0.98	Yes	0.837	0.161	1.00	Yes	1.00	**7.94**
		L_{11} - L_{12}	-----	-1235.42	-193	1392	-34	468	-278	-484	-214	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.782	0.184	0.97	Yes	1.00	**4.15**
		L_{12} - L_{13}	-----	-1225.58	1179	95	1643	-669	-144	-299	-36	358	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.210	1.00	Yes	0.776	0.218	1.00	Yes	1.00	**6.60**
		L_{13} - L_{14}	-----	-1111.26	-13	287	70	-649	-250	127	65	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.905	0.083	0.99	Yes	0.894	0.102	1.00	Yes	1.00	**3.87**
		L_{14} - L_{15}	-----	-741.02	566	165	157	-370	148	-8	11	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.129	1.00	Yes	0.855	0.125	0.99	Yes	1.00	**2.71**
		L_{15} - L_{16}	207.03	-541.92	423	194	162	-632	16	-58	44	-50	0.268	0.178	0.45	Yes	0.161	0.117	0.28	Yes	0.833	0.098	0.94	Yes	0.826	0.167	1.00	Yes	1.00	**2.45**
		L_{16} - L_{17}	634.30	-293.64	383	47	-39	-887	96	-49	67	289	0.730	0.261	1.00	Yes	0.433	0.168	0.61	Yes	0.401	0.202	0.61	Yes	0.397	0.214	0.62	Yes	1.00	**3.14**
		L_{17} - L_{18}	643.49	-160.62	125	10	-397	-954	1	12	58	-165	0.740	0.257	1.00	Yes	0.428	0.154	0.59	Yes	0.219	0.238	0.46	Yes	0.217	0.230	0.45	Yes	1.00	**3.22**
		L_{18} - L_{19}	424.96	-----	-631	261	-572	-560	-109	133	-201	728	0.650	0.346	1.00	Yes	0.397	0.225	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		L_{19} - L_{20}	2.23	-178.65	-1959	1159	-804	-251	1864	507	-968	-263	0.003	0.988	1.00	Yes	0.002	0.594	0.60	Yes	0.324	0.648	0.98	Yes	0.322	0.588	0.91	Yes	1.00	**14.27**

Moment (End) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 Vehicle 1.300 Pedestrian
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-283.74	-170	222	-58	88	-385	-124	-30	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.261	0.97	Yes	0.663	0.331	1.00	Yes	1.00	**1.25**
		$U_1 - L_1$	20.73	-327.09	-232	239	27	-15	-47	23	0	-2	0.037	0.319	0.36	Yes	0.021	0.175	0.20	Yes	0.715	0.083	0.80	Yes	0.692	0.305	1.00	Yes	1.00	**2.85**
		$U_2 - L_2$	103.25	-306.05	-225	275	88	-98	-16	59	69	31	0.186	0.371	0.56	Yes	0.102	0.204	0.31	Yes	0.669	0.121	0.79	Yes	0.648	0.351	1.00	Yes	1.00	**4.19**
		$U_3 - L_3$	218.53	-263.38	-308	342	274	-256	-333	-56	160	153	0.393	0.534	0.93	Yes	0.216	0.294	0.51	Yes	0.577	0.188	0.77	Yes	0.557	0.437	1.00	Yes	1.00	**7.53**
		$U_4 - L_4$	-----	-203.92	-54	38	442	-433	-7	140	-518	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.267	0.72	Yes	0.431	0.566	1.00	Yes	1.00	**7.30**
		$U_5 - L_5$	-----	-418.19	67	-90	236	-268	19	20	-144	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.132	0.89	Yes	0.721	0.272	1.00	Yes	1.00	**2.41**
		$U_6 - L_6$	-----	-489.99	84	-79	249	-264	-209	-46	61	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.123	0.91	Yes	0.740	0.256	1.00	Yes	1.00	**2.17**
		$U_7 - L_7$	-----	-413.55	129	-143	275	-293	-150	15	166	29	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.147	0.89	Yes	0.674	0.324	1.00	Yes	1.00	**1.46**
		$U_8 - L_8$	-----	-1204.16	-348	410	487	-582	-118	-7	918	288	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.124	1.00	Yes	0.835	0.108	0.95	Yes	1.00	**3.90**
		$U_9 - L_9$	-----	-642.60	-376	425	-172	201	-172	-208	-394	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.151	0.94	Yes	0.744	0.247	1.00	Yes	1.00	**2.36**
		$U_{10} - L_{10}$	-----	-692.60	-336	344	-137	105	-933	-623	-334	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.247	1.00	Yes	0.712	0.192	0.91	Yes	1.00	**2.98**
		$U_{11} - L_{11}$	-----	-662.55	-354	478	-144	195	-453	-424	-567	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.175	0.97	Yes	0.771	0.222	1.00	Yes	1.00	**3.03**
		$U_{12} - L_{12}$	-----	-514.50	-341	337	-99	99	-350	-260	-339	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.162	0.91	Yes	0.706	0.291	1.00	Yes	1.00	**2.90**
		$U_{13} - L_{13}$	-----	-363.16	-231	260	-49	68	-41	-34	-172	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.127	0.87	Yes	0.696	0.297	1.00	Yes	1.00	**2.27**
		$U_{14} - L_{14}$	-----	-157.92	-472	515	255	-256	37	198	-37	117	-----	-----	-----	-----	-----	-----	-----	-----	0.352	0.213	0.57	Yes	0.334	0.659	1.00	Yes	1.00	**9.68**
		$U_{15} - L_{15}$	167.54	-305.33	-124	112	249	-274	59	111	130	-117	0.301	0.388	0.69	Yes	0.166	0.213	0.38	Yes	0.684	0.131	0.82	Yes	0.646	0.350	1.00	Yes	1.00	**3.96**
		$U_{16} - L_{16}$	-----	-320.45	27	-31	239	-248	-73	-101	236	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.107	0.83	Yes	0.678	0.317	1.00	Yes	1.00	**2.65**
		$U_{17} - L_{17}$	-----	-432.44	60	-74	229	-246	-120	-112	61	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.111	0.93	Yes	0.746	0.250	1.00	Yes	1.00	**2.05**
		$U_{18} - L_{18}$	-----	-533.52	142	-148	431	-444	-136	-121	122	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.090	0.88	Yes	0.742	0.251	1.00	Yes	1.00	**2.24**
		$U_{19} - L_{19}$	-----	-641.98	170	-169	537	-527	-118	-46	184	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.098	0.90	Yes	0.747	0.249	1.00	Yes	1.00	**2.50**
		$U_{20} - L_{20}$	-----	-580.50	160	-259	343	-514	26	3	353	46	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.193	1.00	Yes	0.710	0.247	0.96	Yes	1.00	**1.84**
	Structure 2	$U_0 - L_0$	-----	-645.51	-422	532	-162	210	-492	-83	-41	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.723	0.240	0.97	Yes	1.00	**2.43**
		$U_1 - L_1$	-----	-716.95	-532	539	-114	123	-187	31	-107	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.081	0.91	Yes	0.768	0.229	1.00	Yes	1.00	**3.48**
		$U_2 - L_2$	-----	-589.50	-471	480	-104	115	-154	-33	-107	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.086	0.88	Yes	0.751	0.246	1.00	Yes	1.00	**2.99**
		$U_3 - L_3$	-----	-498.93	-221	238	-54	62	72	-44	78	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.076	0.93	Yes	0.782	0.217	1.00	Yes	1.00	**2.54**
		$U_4 - L_4$	-----	-336.15	-224	222	-12	21	-181	-38	249	76	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.149	0.92	Yes	0.711	0.286	1.00	Yes	1.00	**2.71**
		$U_5 - L_5$	76.75	-328.34	-214	237	77	-61	12	-32	-4	97	0.138	0.330	0.47	Yes	0.076	0.182	0.26	Yes	0.742	0.130	0.88	Yes	0.695	0.302	1.00	Yes	1.00	**3.54**
		$U_6 - L_6$	347.23	-241.04	-233	247	218	-215	-63	-26	120	204	0.625	0.374	1.00	Yes	0.343	0.206	0.55	Yes	0.542	0.148	0.70	Yes	0.510	0.315	0.83	Yes	1.00	**5.57**
		$U_7 - L_7$	-----	-211.91	-146	156	384	-430	-128	236	281	64	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.229	0.71	Yes	0.448	0.549	1.00	Yes	1.00	**8.62**
		$U_8 - L_8$	-----	-464.78	66	-83	354	-373	-5	-66	101	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.100	0.78	Yes	0.669	0.327	1.00	Yes	1.00	**2.92**
		$U_9 - L_9$	-----	-690.00	158	-172	602	-608	-36	-195	121	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.086	0.86	Yes	0.739	0.258	1.00	Yes	1.00	**3.51**
		$U_{10} - L_{10}$	-----	-791.92	182	-184	556	-579	-147	-94	227	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.091	0.88	Yes	0.740	0.256	1.00	Yes	1.00	**3.63**
		$U_{11} - L_{11}$	-----	-810.05	186	-186	516	-533	-189	-69	149	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.100	0.92	Yes	0.757	0.235	1.00	Yes	1.00	**3.18**
		$U_{12} - L_{12}$	-----	-880.88	156	-133	535	-541	-145	10	172	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.098	0.95	Yes	0.764	0.232	1.00	Yes	1.00	**3.28**
		$U_{13} - L_{13}$	-----	-745.82	208	-204	582	-561	-170	20	280	40	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1.00	Yes	0.719	0.278	1.00	Yes	1.00	**2.82**
		$U_{14} - L_{14}$	-----	-1156.86	-451	419	676	-645	259	266	745	305	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.151	1.00	Yes	0.767	0.120	0.89	Yes	1.00	**4.58**
		$U_{15} - L_{15}$	-----	-729.84	-604	583	-116	124	-191	-110	-307	9	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.160	0.98	Yes	0.704	0.289	1.00	Yes	1.00	**4.30**
		$U_{16} - L_{16}$	-----	-654.80	-516	485	-89	63	-1164	-470	-807	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.238	1.00	Yes	0.702	0.219	0.93	Yes	1.00	**3.52**
		$U_{17} - L_{17}$	-----	-638.87	-539	536	-124	122	-533	-426	-275	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.169	0.96	Yes	0.744	0.250	1.00	Yes	1.00	**3.33**
		$U_{18} - L_{18}$	-----	-586.83	-460	486	-95	94	-81	-281	-114	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.111	0.90	Yes	0.748	0.249	1.00	Yes	1.00	**3.03**
		$U_{19} - L_{19}$	-----	-469.43	-307	300	-54	58	-234	-175	-66	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.125	0.84	Yes	0.701	0.295	1.00	Yes	1.00	**2.80**
		$U_{20} - L_{20}$	-----	-381.69	-227	233	-19	20	-29	-87	-68	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.094	0.88	Yes	0.731	0.266	1.00	Yes	1.00	**2.76**
		$U_{21} - L_{21}$	31.63	-328.87	-213	234	19	-13	156	-16	-20	47	0.057	0.344	0.41	Yes	0.031	0.189	0.23	Yes	0.743	0.123	0.87	Yes	0.696	0.299	1.00	Yes	1.00	**2.99**
		$U_{22} - L_{22}$	-----	-215.66	-395	420	321	-340	-12	265	416	149	-----	-----	-----	-----	-----	-----	-----	-----	0.485	0.200	0.69	Yes	0.456	0.537	1.00	Yes	1.00	**10.07**
		$U_{23} - L_{23}$	83.77	-314.94	-49	45	244	-260	79	68	149	-57	0.151	0.376	0.53	Yes	0.083	0.207	0.29	Yes	0.711	0.108	0.82	Yes	0.666	0.333	1.00	Yes	1.00	**3.32**
		$U_{24} - L_{24}$	-----	-370.41	10	-22	241	-252	75	27	197	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.109	0.87	Yes	0.710	0.288	1.00	Yes	1.00	**2.72**
		$U_{25} - L_{25}$	-----	-468.09	38	-38	308	-301	-88	-29	239	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.097	0.81	Yes	0.699	0.296	1.00	Yes	1.00	**2.72**
		$U_{26} - L_{26}$	-----	-567.83	67	-70	510	-537	-123	-22	329	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.106	0.87	Yes	0.724	0.275	1.00	Yes	1.00	**3.02**
		$U_{27} - L_{27}$	-----	-629.31	85	-85	572	-574	-137	3	267	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.101	0.88	Yes	0.732	0.267	1.00	Yes	1.00	**3.17**
		$U_{28} - L_{28}$	-----	-706.12	74	-72	556	-548	-156	16	355	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.104	0.92	Yes	0.757	0.236	1.00	Yes	1.00	**3.39**
		$U_{29} - L_{29}$	-----	-710.45	118	-124	638	-614	-118	27	416	42	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.195	0.99	Yes	0.685	0.305	1.00	Yes	1.00	**3.71**
		$U_{30} - L_{30}$	-----	-1148.76	-612	551	732	-717	-74	294	804	48	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.140	1.00	Yes	0.776	0.132	0.91	Yes	1.00	**5.31**
		$U_{31} - L_{31}$	-----	-751.61	-510	495	-109	110	94	-91	-308	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.153	1.00	Yes	0.725	0.244	0.97	Yes	1.00	**3.78**
		$U_{32} - L_{32}$	-----	-813.64	-467	458	-80	57	-851	-431	-675	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.219	1.00	Yes	0.705	0.200	0.91	Yes	1.00	**3.95**
		$U_{33} - L_{33}$	-----	-833.16	-459	472	-117	105	-253	-433	-453	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.153	1.00	Yes	0.785	0.211	1.00	Yes	1.00	**3.88**
		$U_{34} - L_{34}$	-----	-802.74	-548	558	-120	113	-444	-397	-318	-301	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.148	0.95	Yes	0.751	0.246	1.00	Yes	1.00	**4.31**
		$U_{35} - L_{35}$	-----	-706.14	-549	562	-110	125	-49	-140	-157	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.067	0.86	Yes	0.757	0.239	1.00	Yes	1.00	**3.82**
		$U_{36} - L_{36}$	-----	-490.76	-308	331	-54	66	259	38	-48	61	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.121	0.84	Yes	0.707	0.290	1.00	Yes	1.00	**2.99**
		$U_{37} - L_{37}$	-----	-186.56	-420	473	81	-81	-166	194	81	102	-----	-----	-----	-----	-----	-----	-----	-----	0.421	0.233	0.66	Yes	0.395	0.605	1.00	Yes	1.00	**7.93**
		$U_{38} - L_{38}$	338.63	-177.03	-241	248	168	-173	236	115	178	-73	0.609	0.385	1.00	Yes	0.335	0.212	0.55	Yes	0.398	0.134	0.54	Yes	0.375	0.317	0.70	Yes	1.00	**4.66**
		$U_{39} - L_{39}$	152.61	-320.86	-133	119	223	-244	50	71	160	-101	0.274	0.358	0.64	Yes	0.151	0.197	0.35	Yes	0.725	0.109	0.84	Yes	0.679	0.311	1.00	Yes	1.00	**3.95**
		$U_{40} - L_{40}$	5.03	-340.65	-10	4	218	-217	15	-34	166	-123	0.009	0.326	0.34	Yes	0.005	0.179	0.19	Yes	0.773	0.087	0.86	Yes	0.721	0.278	1.00	Yes	1.00	**2.92**
		$U_{41} - L_{41}$	-----	-487.65	26	-30	246	-258	8	-30	143	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.084	0.92	Yes	0.765	0.235	1.00	Yes	1.00	**2.76**
		$U_{42} - L_{42}$	-----	-580.79	60	-68	490	-496	11	-35	164	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.075	0.86	Yes	0.740	0.253	1.00	Yes	1.00	**2.93**
		$U_{43} - L_{43}$	-----	-703.78	77	-90	563	-562	-50	-51	257	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.085	0.90	Yes	0.754	0.239	1.00	Yes	1.00	**3.23**
		$U_{44} - L_{44}$	-----	-667.82	115	-130	389	-534	-141	-24	624	106	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.195	1.00	Yes	0.716	0.227	0.95	Yes	1.00	**2.81**
	Structure 3	$U_0 - L_0$	-----	-563.85	-397	457	-145	194	-781	-102	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.228	1.00	Yes	0.677	0.219	0.90	Yes	1.00	**1.98**
		$U_1 - L_1$	-----	-664.29	-467	481	-112	124	-578	23	-123	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.140	0.97	Yes	0.773	0.223	1.00	Yes	1.00	**3.23**
		$U_2 - L_2$	-----	-535.38	-440	444	-108	114	-306	-27	-148	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.112	0.90	Yes	0.745	0.251	1.00	Yes	1.00	**2.84**
		$U_3 - L_3$	-----	-446.87	-204	222	-45	58	-39	-63	45	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.081	0.92	Yes	0.771	0.225	1.00	Yes	1.00	**2.37**
		$U_4 - L_4$	-----	-321.37	-243	248	-16	22	-209	-25	231	48	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.146	0.87	Yes	0.680	0.317	1.00	Yes	1.00	**3.01**
		$U_5 - L_5$	99.64	-306.03	-256	275	67	-63	-158	-30	-90	82	0.179	0.397	0.58	Yes	0.099	0.219	0.32	Yes	0.686	0.149	0.84	Yes	0.648	0.352	1.00	Yes	1.00	**3.75**
		$U_6 - L_6$	-----	-200.88	-287	309	428	-446	252	106	-161	51	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.216	0.67	Yes	0.425	0.570	1.00	Yes	1.00	**9.61**
		$U_7 - L_7$	-----	-360.19	12	-26	244	-266	-11	-22	-2	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.120	0.85	Yes	0.690	0.304	1.00	Yes	1.00	**2.61**
		$U_8 - L_8$	-----	-514.45	63	-69	339	-340	-14	-84	90	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.102	0.85	Yes	0.706	0.291	1.00	Yes	1.00	**3.10**
		$U_9 - L_9$	-----	-653.07	131	-169	408	-514	-187	-140	42	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.103	0.89	Yes	0.760	0.239	1.00	Yes	1.00	**3.19**
		$U_{10} - L_{10}$	-----	-777.24	131	-109	404	-439	-2	25	199	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.077	0.89	Yes	0.767	0.228	1.00	Yes	1.00	**3.37**
		$U_{11} - L_{11}$	-----	-648.31	167	-192	430	-474	-167	-34	297	57	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.125	0.90	Yes	0.732	0.264	1.00	Yes	1.00	**2.40**
		$U_{12} - L_{12}$	-----	-1178.79	-380	413	490	-636	458	182	982	376	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.144	1.00	Yes	0.817	0.118	0.94	Yes	1.00	**4.41**
		$U_{13} - L_{13}$	-----	-459.23	-273	288	-67	76	-215	-117	-298	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.154	0.93	Yes	0.708	0.284	1.00	Yes	1.00	**2.46**
		$U_{14} - L_{14}$	-----	-472.28	-253	254	-44	28	-1007	-534	-660	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.283	1.00	Yes	0.677	0.222	0.90	Yes	1.00	**2.92**
		$U_{15} - L_{15}$	-----	-445.53	-172	207	-46	46	-66	-210	-444	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.189	1.00	Yes	0.769	0.210	0.98	Yes	1.00	**2.45**
		$U_{16} - L_{16}$	-----	-259.71	-343	345	35	-14	203	-21	-627	-294	-----	-----	-----	-----	-----	-----	-----	-----	0.571	0.289	0.86	Yes	0.550	0.442	1.00	Yes	1.00	**5.90**
		$U_{17} - L_{17}$	283.19	-183.38	-301	311	156	-179	-121	99	-294	-195	0.509	0.483	1.00	Yes	0.280	0.266	0.55	Yes	0.402	0.174	0.58	Yes	0.388	0.398	0.79	Yes	1.00	**5.37**
		$U_{18} - L_{18}$	122.29	-291.69	-114	127	253	-298	-111	18	51	-121	0.220	0.416	0.64	Yes	0.121	0.229	0.35	Yes	0.637	0.141	0.78	Yes	0.617	0.380	1.00	Yes	1.00	**4.19**
		$U_{19} - L_{19}$	48.28	-309.47	-57	45	264	-244	-84	-3	56	-65	0.087	0.361	0.45	Yes	0.048	0.199	0.25	Yes	0.676	0.106	0.79	Yes	0.655	0.337	1.00	Yes	1.00	**2.67**
		$U_{20} - L_{20}$	-----	-314.75	19	-28	109	-193	-46	-15	627	201	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.287	1.00	Yes	0.666	0.247	0.92	Yes	1.00	**1.50**

Moment (End) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$			515.92	-----	-140	73	-16	-2	-616	-127	-13	4	0.677	0.319	1.00	Yes	0.409	0.176	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_1 - L_2$			413.51	-----	-75	24	-17	-30	-160	-174	546	138	0.744	0.255	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_2 - L_3$			436.71	-161.38	-115	35	-86	-99	-222	-175	-37	-104	0.785	0.211	1.00	Yes	0.432	0.116	0.55	Yes	0.371	0.220	0.60	Yes	0.341	0.146	0.49	Yes	1.00	**6.77**
		$U_3 - L_4$			-----	-318.91	54	-7	-89	-146	111	116	-11	-305	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.268	1.00	Yes	1.00	**5.97**
		$U_4 - L_5$			460.07	-----	-5	78	-144	-35	66	21	-711	-539	0.681	0.312	1.00	Yes	0.374	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_5 - L_6$			678.20	-----	-191	240	-37	91	-287	-287	-157	-99	0.802	0.189	1.00	Yes	0.441	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.89**
		$U_6 - L_7$			656.71	-----	-303	253	-96	102	-253	-217	142	51	0.776	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.32**
		$U_7 - L_8$			654.03	-----	-104	315	-10	132	-175	-129	229	114	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**
		$U_8 - L_9$			989.34	-----	-99	357	16	138	329	375	320	94	0.791	0.207	1.00	Yes	0.490	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_9 - L_{10}$			1026.73	-----	-297	276	-75	86	180	349	91	110	0.821	0.177	1.00	Yes	0.508	0.099	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{10} - L_{11}$			975.11	-----	-218	212	-156	77	103	336	522	229	0.824	0.169	1.00	Yes	0.510	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		$U_{11} - L_{12}$			857.36	-----	-245	141	-165	-8	49	182	217	152	0.848	0.146	1.00	Yes	0.467	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_{12} - L_{13}$			653.81	-----	-203	172	-78	30	26	54	-63	-109	0.797	0.199	1.00	Yes	0.501	0.111	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		$U_{13} - L_{14}$			462.15	-----	-87	51	-23	-32	-31	-79	-74	-178	0.831	0.162	1.00	Yes	0.457	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{15} - L_{14}$			253.86	-333.01	-64	5	59	-121	-245	-266	-279	-124	0.457	0.236	0.70	Yes	0.251	0.130	0.39	Yes	0.780	0.217	1.00	Yes	0.705	0.155	0.86	Yes	1.00	**4.25**
		$U_{16} - L_{15}$			402.75	-88.96	-128	94	-8	-34	-370	-290	-385	-147	0.724	0.275	1.00	Yes	0.398	0.151	0.55	Yes	0.211	0.177	0.39	Yes	0.188	0.163	0.36	Yes	1.00	**3.28**
		$U_{17} - L_{16}$			509.90	-----	-139	99	-51	11	-464	-355	-453	-227	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.22**
		$U_{18} - L_{17}$			612.27	-----	-306	258	-110	75	-551	-448	-108	-115	0.724	0.273	1.00	Yes	0.398	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.41**
		$U_{19} - L_{18}$			673.26	-----	-351	253	-131	86	-536	-467	-64	-105	0.729	0.268	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.28**
		$U_{20} - L_{19}$			694.26	-----	-261	263	-95	92	-647	-423	-98	-38	0.752	0.241	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
	Structure 2	$U_0 - L_1$			757.86	-----	-393	366	-115	100	-426	-58	-61	-50	0.750	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_1 - L_2$			782.07	-----	-387	311	-94	70	-184	-263	-100	-29	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_2 - L_3$			654.28	-----	-332	270	-82	62	-164	38	-23	91	0.774	0.218	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		$U_3 - L_4$			598.79	-----	-178	145	-35	13	-144	-93	110	63	0.798	0.193	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_4 - L_5$			430.12	-64.18	-134	105	-3	-26	-163	-9	-83	-151	0.774	0.218	1.00	Yes	0.425	0.120	0.55	Yes	0.158	0.101	0.26	Yes	0.136	0.171	0.31	Yes	1.00	**3.29**
		$U_5 - L_6$			436.83	-248.82	-127	72	58	-105	-161	20	-171	-164	0.786	0.212	1.00	Yes	0.432	0.117	0.55	Yes	0.588	0.162	0.75	Yes	0.526	0.163	0.69	Yes	1.00	**4.33**
		$U_6 - L_7$			66.16	-382.18	-36	-5	57	-104	-120	-145	-97	-296	0.108	0.196	0.31	Yes	0.059	0.108	0.17	Yes	0.818	0.173	1.00	Yes	0.732	0.119	0.86	Yes	1.00	**2.81**
		$U_8 - L_7$			587.60	-----	-178	138	-36	-21	-250	-426	-360	-196	0.749	0.246	1.00	Yes	0.472	0.140	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_8 - L_9$			685.07	-----	-320	239	-141	42	-456	-372	-521	-242	0.742	0.250	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		$U_{10} - L_9$			792.71	-----	-303	230	-115	56	-473	-441	-282	-202	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{11} - L_{10}$			871.37	-----	-334	287	-147	107	-445	-464	-365	-214	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{12} - L_{11}$			859.83	-----	-363	351	-142	148	-400	-355	15	-46	0.783	0.209	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_{13} - L_{12}$			756.66	-----	-425	381	-151	153	-195	-160	346	134	0.749	0.249	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.46**
		$U_{14} - L_{13}$			745.11	-----	-270	423	-33	147	-259	-131	384	189	0.737	0.254	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{14} - L_{15}$			633.95	-----	-223	358	27	70	235	162	216	-43	0.749	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_{15} - L_{16}$			634.29	-----	-369	342	-62	68	-163	201	-10	21	0.750	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{16} - L_{17}$			709.78	-----	-326	333	-69	96	-295	314	-149	63	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_{17} - L_{18}$			658.26	-----	-290	285	-66	78	-43	293	-27	101	0.778	0.217	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{18} - L_{19}$			678.92	-----	-272	283	-69	58	159	188	61	12	0.803	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_{19} - L_{20}$			619.69	-----	-196	184	-32	9	85	149	-16	-44	0.790	0.206	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		$U_{20} - L_{21}$			448.64	-10.66	-126	113	-12	-9	19	90	-5	-72	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	0.025	0.063	0.09	Yes	0.023	0.162	0.19	Yes	1.00	**2.96**
		$U_{21} - L_{22}$			450.18	-230.02	-104	69	30	-83	9	4	-38	-194	0.810	0.189	1.00	Yes	0.445	0.104	0.55	Yes	0.543	0.128	0.68	Yes	0.487	0.133	0.62	Yes	1.00	**4.45**
		$U_{23} - L_{22}$			404.34	-333.71	-101	65	50	-104	-262	-275	-339	-16	0.727	0.231	0.96	Yes	0.400	0.127	0.53	Yes	0.795	0.199	1.00	Yes	0.706	0.133	0.84	Yes	1.00	**5.10**
		$U_{24} - L_{23}$			416.72	-32.46	-120	106	3	-17	-317	-217	-154	-58	0.749	0.246	1.00	Yes	0.412	0.135	0.55	Yes	0.078	0.140	0.22	Yes	0.069	0.154	0.23	Yes	1.00	**2.97**
		$U_{25} - L_{24}$			580.98	-----	-189	182	-20	8	-405	-316	-193	-111	0.741	0.252	1.00	Yes	0.407	0.143	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{26} - L_{25}$			655.96	-----	-271	264	-26	38	-361	-353	120	47	0.776	0.219	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		$U_{27} - L_{26}$			651.28	-----	-289	286	-45	57	-332	-275	180	71	0.770	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{28} - L_{27}$			705.39	-----	-331	358	-47	66	-271	-246	204	113	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_{29} - L_{28}$			626.59	-----	-371	342	-72	72	-225	-169	212	103	0.741	0.251	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{30} - L_{29}$			636.02	-----	-224	360	-14	77	-211	-119	191	107	0.752	0.242	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		$U_{30} - L_{31}$			761.72	-----	-293	433	14	73	152	189	283	0	0.754	0.243	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_{31} - L_{32}$			726.53	-----	-412	360	-74	77	-180	237	10	47	0.754	0.242	1.00	Yes	0.415	0.124	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{32} - L_{33}$			879.28	-----	-356	344	-58	93	-282	276	-147	140	0.801	0.190	1.00	Yes	0.441	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{33} - L_{34}$			900.09	-----	-341	315	-109	75	-1	244	52	141	0.820	0.178	1.00	Yes	0.451	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{34} - L_{35}$			833.37	-----	-304	250	-93	45	113	191	87	-29	0.824	0.169	1.00	Yes	0.453	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{35} - L_{36}$			750.31	-----	-337	258	-115	29	14	86	3	-87	0.813	0.187	1.00	Yes	0.447	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_{36} - L_{37}$			622.19	-----	-177	170	-32	-16	-63	5	-70	-227	0.793	0.204	1.00	Yes	0.499	0.115	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{38} - L_{37}$			14.27	-387.76	-22	-6	60	-96	-187	-198	-249	-69	0.023	0.175	0.20	Yes	0.013	0.096	0.11	Yes	0.838	0.152	1.00	Yes	0.743	0.110	0.86	Yes	1.00	**2.59**
		$U_{38} - L_{39}$			324.19	-312.35	-99	54	64	-110	-365	-250	-464	-93	0.583	0.274	0.86	Yes	0.321	0.151	0.48	Yes	0.744	0.252	1.00	Yes	0.661	0.140	0.81	Yes	1.00	**4.01**
		$U_{40} - L_{39}$			404.04	-113.57	-130	100	18	-43	-358	-284	-241	-132	0.727	0.270	1.00	Yes	0.400	0.149	0.55	Yes	0.272	0.189	0.47	Yes	0.240	0.167	0.41	Yes	1.00	**3.54**
		$U_{41} - L_{40}$			568.09	-----	-171	131	-16	1	-410	-364	-90	-76	0.757	0.242	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{42} - L_{41}$			613.72	-----	-318	265	-48	31	-492	-408	-66	-63	0.726	0.269	1.00	Yes	0.399	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**
		$U_{43} - L_{42}$			752.14	-----	-382	312	-64	43	-486	-434	-3	-44	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{44} - L_{43}$			752.31	-----	-287	323	-93	79	-701	-410	58	-21	0.744	0.255	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
	Structure 3	$U_0 - L_1$			568.23	-----	-424	315	-113	95	-992	64	-62	-53	0.615	0.380	1.00	Yes	0.338	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_1 - L_2$			715.63	-----	-342	252	-99	67	-280	-52	-124	-44	0.775	0.221	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_2 - L_3$			643.26	-----	-330	242	-97	63	-253	126	-49	78	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_3 - L_4$			554.49	-----	-150	108	-41	5	-141	-18	34	-7	0.813	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
		$U_4 - L_5$			430.21	-96.99	-131	108	-4	-35	-147	-61	-126	-177	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	0.230	0.106	0.34	Yes	0.205	0.168	0.38	Yes	1.00	**3.62**
		$U_5 - L_6$			331.18	-326.05	-75	23	19	-119	-129	-157	-125	-308	0.596	0.241	0.84	Yes	0.328	0.132	0.47	Yes	0.764	0.226	1.00	Yes	0.690	0.152	0.85	Yes	1.00	**4.82**
		$U_7 - L_6$			424.95	-61.35	-81	38	-15	-41	-210	-297	-425	-184	0.764	0.227	1.00	Yes	0.420	0.125	0.55	Yes	0.143	0.179	0.33	Yes	0.130	0.104	0.24	Yes	1.00	**3.14**
		$U_8 - L_7$			604.18	-----	-195	154	-59	8	-435	-386	-349	-224	0.736	0.255	1.00	Yes	0.463	0.145	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_9 - L_8$			754.29	-----	-230	104	-155	-21	-511	-519	-957	-468	0.746	0.250	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_{10} - L_9$			913.24	-----	-239	172	-148	51	-593	-575	-843	-418	0.771	0.222	1.00	Yes	0.478	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_{11} - L_{10}$			993.21	-----	-301	258	-95	85	-498	-423	52	-21	0.794	0.197	1.00	Yes	0.492	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$U_{12} - L_{11}$			980.65	-----	-104	362	-10	129	-391	-289	247	121	0.784	0.211	1.00	Yes	0.486	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{12} - L_{13}$			657.42	-----	-113	293	25	73	274	182	173	-14	0.777	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		$U_{13} - L_{14}$			668.25	-----	-286	241	-28	56	-81	229	-50	26	0.790	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_{14} - L_{15}$			699.81	-----	-181	228	-52	58	-86	218	100	88	0.827	0.170	1.00	Yes	0.455	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{15} - L_{16}$			447.66	-----	36	188	-208	-97	476	473	549	141	0.656	0.339	1.00	Yes	0.361	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.80**
		$U_{17} - L_{16}$			-----	-359.43	23	-4	-8	-72	224	143	-265	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.173	1.00	Yes	0.761	0.092	0.86	Yes	1.00	**3.08**
		$U_{18} - L_{17}$			354.75	-117.90	-91	18	-84	-99	-300	-261	-798	-262	0.638	0.358	1.00	Yes	0.351	0.197	0.55	Yes	0.271	0.329	0.61	Yes	0.249	0.127	0.38	Yes	1.00	**5.81**
		$U_{19} - L_{18}$			411.93	-138.96	-96	33	27	-20	-439	-334	172	134	0.741	0.250	1.00	Yes	0.407	0.137	0.55	Yes	0.319	0.217	0.54	Yes	0.294	0.123	0.42	Yes	1.00	**3.24**
		$U_{20} - L_{19}$			589.78	-----	-44	40	53	-8	-632	-375	472	-1	0.774	0.221	1.00	Yes	0.467	0.122	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 Vehicle 1.300 Pedestrian
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-546.98	-155	84	270	-1056	15	-13	-41	-436	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.248	1	Yes	0.738	0.251	0.99	Yes	1.00	**3.89**
		$U_1 - U_2$	44.02	-579.82	-50	91	-160	-808	-6	43	-42	73	0.050	0.204	0.26	Yes	0.035	0.140	0.18	Yes	0.789	0.204	1	Yes	0.782	0.192	0.98	Yes	1.00	**2.80**
		$U_2 - U_3$	155.87	-584.47	-86	277	-157	-687	-7	-90	252	-190	0.179	0.206	0.39	Yes	0.121	0.135	0.26	Yes	0.795	0.201	1	Yes	0.788	0.163	0.96	Yes	1.00	**3.12**
		$U_3 - U_4$	324.25	-556.21	99	263	-151	-851	-89	-81	-8	-260	0.372	0.246	0.62	Yes	0.255	0.169	0.43	Yes	0.757	0.235	1	Yes	0.750	0.202	0.96	Yes	1.00	**3.59**
		$U_4 - U_5$	476.82	-547.65	147	372	-86	-798	-129	60	-291	-341	0.547	0.247	0.80	Yes	0.375	0.169	0.55	Yes	0.745	0.252	1	Yes	0.739	0.190	0.93	Yes	1.00	**5.79**
		$U_5 - U_6$	-----	-556.72	-855	899	43	-597	177	-501	-336	-512	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.234	1	Yes	0.751	0.214	0.97	Yes	1.00	**10.14**
		$U_6 - U_7$	159.09	-540.07	-380	400	-884	-1360	-623	-355	-582	-395	0.152	0.375	0.53	Yes	0.106	0.257	0.37	Yes	0.614	0.381	1	Yes	0.608	0.289	0.90	Yes	1.00	**9.52**
		$U_7 - U_8$	444.68	-----	-3553	4262	-54	677	-420	117	-245	164	0.308	0.689	1.00	Yes	0.215	0.469	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.91**
		$U_8 - U_9$	723.56	-----	768	11	2164	-1807	-147	34	70	355	0.593	0.406	1.00	Yes	0.406	0.277	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		$U_9 - U_{10}$	613.59	-430.15	231	290	207	-1112	71	309	227	482	0.666	0.327	1.00	Yes	0.451	0.219	0.67	Yes	0.554	0.233	0.79	Yes	0.549	0.249	0.80	Yes	1.00	**6.48**
		$U_{10} - U_{11}$	141.60	-591.85	228	-71	204	-1052	209	56	341	115	0.154	0.290	0.45	Yes	0.102	0.186	0.29	Yes	0.762	0.217	0.98	Yes	0.755	0.236	1.00	Yes	1.00	**3.51**
		$U_{11} - U_{12}$	-----	-865.06	165	-111	-224	-909	152	57	270	136	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.179	1	Yes	0.812	0.151	0.97	Yes	1.00	**2.93**
		$U_{12} - U_{13}$	-----	-1171.55	-27	-162	-476	-1148	222	-34	290	35	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.783	0.158	0.95	Yes	1.00	**3.17**
		$U_{13} - U_{14}$	-----	-1351.59	-409	-338	-261	-1709	293	25	84	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1	Yes	0.775	0.189	0.97	Yes	1.00	**3.16**
		$U_{14} - U_{15}$	-----	-1351.75	-244	-182	-1150	-1215	185	-49	186	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1	Yes	0.775	0.134	0.91	Yes	1.00	**3.15**
		$U_{15} - U_{16}$	-----	-1378.74	-600	-346	-736	-1354	269	-75	60	-334	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.195	1	Yes	0.790	0.149	0.94	Yes	1.00	**3.07**
		$U_{16} - U_{17}$	-----	-1337.90	-411	-99	-593	-1271	244	-313	-342	-446	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.218	1	Yes	0.767	0.140	0.91	Yes	1.00	**4.88**
		$U_{17} - U_{18}$	-----	-1097.72	-624	214	-200	-536	-90	-400	-200	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.121	1	Yes	0.859	0.102	0.97	Yes	1.00	**4.06**
		$U_{18} - U_{19}$	-----	-704.50	-283	119	-685	-300	-246	-221	-6	-308	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1	Yes	0.793	0.138	0.94	Yes	1.00	**3.22**
		$U_{19} - U_{20}$	-----	-518.99	-1147	1275	63	-2053	-337	-177	-75	-923	-----	-----	-----	-----	-----	-----	-----	-----	0.589	0.310	0.9	Yes	0.584	0.413	1.00	Yes	1.00	**8.27**
	Structure 2	$U_0 - U_1$	-----	-588.24	169	-140	871	-1776	95	183	-9	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.210	0.91	Yes	0.695	0.302	1.00	Yes	1.00	**5.50**
		$U_1 - U_2$	-----	-784.23	-104	-147	-91	-1075	338	642	210	282	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.228	1	Yes	0.757	0.163	0.93	Yes	1.00	**3.05**
		$U_2 - U_3$	-----	-1137.72	-80	-215	42	-1648	610	1	580	50	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.185	1	Yes	0.807	0.168	0.98	Yes	1.00	**3.43**
		$U_3 - U_4$	-----	-1310.49	-371	-271	-1315	-1910	204	-390	262	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.239	1	Yes	0.746	0.170	0.92	Yes	1.00	**3.08**
		$U_4 - U_5$	-----	-1490.80	-358	-316	-587	-2332	-71	-360	66	-365	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.228	1	Yes	0.765	0.193	0.96	Yes	1.00	**3.31**
		$U_5 - U_6$	-----	-1549.91	-371	22	-977	-1470	-119	-303	-117	-465	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1	Yes	0.796	0.122	0.92	Yes	1.00	**3.58**
		$U_6 - U_7$	-----	-1314.64	-266	-75	-1176	-1957	-86	-263	-16	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.749	0.174	0.93	Yes	1.00	**3.02**
		$U_7 - U_8$	-----	-1329.37	-153	-194	-1638	-1282	-187	-219	-206	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.228	1	Yes	0.757	0.146	0.91	Yes	1.00	**3.21**
		$U_8 - U_9$	4.85	-1135.64	-277	186	-592	-1196	-167	-105	-252	-480	0.003	0.167	0.17	Yes	0.002	0.110	0.12	Yes	0.776	0.221	1	Yes	0.770	0.127	0.90	Yes	1.00	**4.45**
		$U_9 - U_{10}$	152.66	-938.82	-83	325	-1306	-604	-167	-39	-161	-187	0.112	0.179	0.30	Yes	0.076	0.122	0.20	Yes	0.815	0.181	1	Yes	0.810	0.159	0.97	Yes	1.00	**3.79**
		$U_{10} - U_{11}$	530.35	-787.69	114	387	-1200	-754	-182	-76	-218	-263	0.448	0.201	0.65	Yes	0.305	0.130	0.44	Yes	0.788	0.212	1	Yes	0.783	0.169	0.96	Yes	1.00	**5.14**
		$U_{11} - U_{12}$	-----	-686.99	-2230	1340	-618	-1134	-233	-817	-590	-942	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.231	0.92	Yes	0.683	0.315	1.00	Yes	1.00	**15.14**
		$U_{12} - U_{13}$	801.80	-214.52	135	234	-1414	-2784	-833	-1118	-905	-493	0.541	0.457	1.00	Yes	0.386	0.311	0.70	Yes	0.172	0.490	0.67	Yes	0.170	0.351	0.53	Yes	1.00	**10.60**
		$U_{13} - U_{14}$	345.62	-----	-6408	8236	-484	1360	-953	-198	-624	-336	0.170	0.828	1.00	Yes	0.120	0.542	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.84**
		$U_{14} - U_{15}$	1067.30	-----	1560	204	4637	-2714	-545	-178	-116	623	0.525	0.472	1.00	Yes	0.372	0.309	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.56**
		$U_{15} - U_{16}$	1108.33	-----	245	582	70	-2152	-152	243	497	928	0.670	0.323	1.00	Yes	0.477	0.218	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.99**
		$U_{16} - U_{17}$	922.47	-158.84	649	311	865	-2039	186	63	573	213	0.680	0.316	1.00	Yes	0.452	0.208	0.67	Yes	0.139	0.132	0.28	Yes	0.138	0.256	0.40	Yes	1.00	**6.79**
		$U_{17} - U_{18}$	711.50	-426.33	474	341	425	-1519	-40	-6	158	30	0.714	0.281	1.00	Yes	0.476	0.186	0.67	Yes	0.507	0.141	0.65	Yes	0.503	0.258	0.77	Yes	1.00	**6.12**
		$U_{18} - U_{19}$	460.09	-638.68	460	199	-217	-1416	8	46	179	-18	0.462	0.267	0.73	Yes	0.303	0.169	0.48	Yes	0.759	0.206	0.97	Yes	0.754	0.240	1.00	Yes	1.00	**4.78**
		$U_{19} - U_{20}$	248.15	-694.96	287	154	-566	-1200	10	148	103	69	0.233	0.212	0.45	Yes	0.154	0.139	0.30	Yes	0.772	0.225	1	Yes	0.767	0.192	0.96	Yes	1.00	**3.92**
		$U_{20} - U_{21}$	66.94	-874.75	-35	144	4	-1365	57	-94	105	-203	0.052	0.220	0.28	Yes	0.036	0.141	0.18	Yes	0.804	0.187	1	Yes	0.798	0.198	1.00	Yes	1.00	**4.18**
		$U_{21} - U_{22}$	51.66	-804.86	-13	16	-827	-1408	-16	-52	59	-36	0.040	0.210	0.26	Yes	0.028	0.140	0.17	Yes	0.740	0.259	1	Yes	0.735	0.204	0.94	Yes	1.00	**3.45**
		$U_{22} - U_{23}$	59.61	-819.99	-12	-20	-927	-1184	-75	-102	-37	-166	0.046	0.190	0.24	Yes	0.033	0.126	0.16	Yes	0.754	0.243	1	Yes	0.748	0.172	0.92	Yes	1.00	**3.61**
		$U_{23} - U_{24}$	203.03	-829.27	39	161	-51	-1374	-252	-110	-231	-428	0.158	0.246	0.41	Yes	0.110	0.159	0.27	Yes	0.762	0.233	1	Yes	0.757	0.199	0.96	Yes	1.00	**5.09**
		$U_{24} - U_{25}$	207.92	-704.49	116	240	-860	-823	-238	-32	-136	-155	0.195	0.170	0.37	Yes	0.129	0.112	0.25	Yes	0.782	0.213	1	Yes	0.777	0.138	0.92	Yes	1.00	**3.71**
		$U_{25} - U_{26}$	-----	-684.29	-966	753	-110	-1113	-24	-72	-260	-401	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.131	0.95	Yes	0.808	0.189	1.00	Yes	1.00	**7.74**
		$U_{26} - U_{27}$	-----	-642.42	-1163	892	-178	-1390	-164	-127	-399	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.169	0.94	Yes	0.759	0.236	1.00	Yes	1.00	**10.19**
		$U_{27} - U_{28}$	-----	-629.31	-3614	3179	475	-2913	-472	-1008	-944	-1244	-----	-----	-----	-----	-----	-----	-----	-----	0.549	0.385	0.94	Yes	0.546	0.454	1.00	Yes	1.00	**25.70**
		$U_{28} - U_{29}$	993.29	-41.84	-103	358	-1657	-2776	-784	-501	-919	-469	0.600	0.393	1.00	Yes	0.427	0.265	0.70	Yes	0.030	0.435	0.47	Yes	0.030	0.316	0.35	Yes	1.00	**9.96**
		$U_{29} - U_{30}$	477.87	-----	-5515	7736	-132	1182	-662	108	-73	373	0.235	0.762	1.00	Yes	0.166	0.498	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.15**
		$U_{30} - U_{31}$	1068.73	-----	1501	100	4583	-2930	-430	-190	212	605	0.526	0.466	1.00	Yes	0.372	0.305	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		$U_{31} - U_{32}$	1065.29	-----	143	493	-325	-1571	-57	213	587	834	0.719	0.277	1.00	Yes	0.513	0.189	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		$U_{32} - U_{33}$	796.94	-359.84	529	280	479	-1759	193	51	617	159	0.673	0.323	1.00	Yes	0.452	0.216	0.67	Yes	0.360	0.194	0.56	Yes	0.358	0.248	0.61	Yes	1.00	**5.89**
		$U_{33} - U_{34}$	585.14	-772.92	414	266	71	-1626	60	38	231	10	0.494	0.258	0.76	Yes	0.336	0.166	0.51	Yes	0.773	0.199	0.98	Yes	0.768	0.229	1.00	Yes	1.00	**5.66**
		$U_{34} - U_{35}$	231.85	-913.43	361	-13	87	-1672	114	-2	174	-139	0.170	0.222	0.40	Yes	0.115	0.151	0.27	Yes	0.793	0.166	0.96	Yes	0.788	0.203	1.00	Yes	1.00	**3.88**
		$U_{35} - U_{36}$	15.60	-1203.56	182	-204	-144	-1540	70	36	235	198	0.009	0.183	0.20	Yes	0.006	0.119	0.13	Yes	0.822	0.174	1	Yes	0.816	0.164	0.98	Yes	1.00	**4.18**
		$U_{36} - U_{37}$	-----	-1307.84	-133	-46	-934	-2206	163	-48	263	27	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.248	1	Yes	0.745	0.197	0.95	Yes	1.00	**3.29**
		$U_{37} - U_{38}$	-----	-1376.18	73	-217	-1436	-1735	19	21	114	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.208	1	Yes	0.784	0.155	0.94	Yes	1.00	**3.62**
		$U_{38} - U_{39}$	-----	-1492.61	38	-399	-1425	-2075	82	-107	162	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.223	1	Yes	0.766	0.172	0.94	Yes	1.00	**3.50**
		$U_{39} - U_{40}$	-----	-1455.46	-695	-404	-1828	-1870	60	-175	-132	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.244	1	Yes	0.747	0.155	0.91	Yes	1.00	**3.36**
		$U_{40} - U_{41}$	-----	-1325.00	-494	-422	-1534	-1634	24	-260	-244	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.238	1	Yes	0.754	0.146	0.91	Yes	1.00	**3.21**
		$U_{41} - U_{42}$	-----	-1244.51	-857	202	-737	-1010	-105	-202	-162	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.108	1	Yes	0.883	0.103	0.99	Yes	1.00	**4.53**
		$U_{42} - U_{43}$	-----	-820.66	-415	120	-1108	-543	2	-154	206	-193	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.199	1	Yes	0.792	0.168	0.97	Yes	1.00	**4.20**
		$U_{43} - U_{44}$	-----	-479.06	-1129	1107	-9	-1782	-363	-170	-53	-766	-----	-----	-----	-----	-----	-----	-----	-----	0.569	0.421	1	Yes	0.566	0.303	0.87	Yes	1.00	**7.83**
	Structure 3	$U_0 - U_1$	-----	-611.29	173	-173	570	-1529	62	132	-47	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.208	0.91	Yes	0.688	0.308	1.00	Yes	1.00	**5.61**
		$U_1 - U_2$	-----	-690.11	-68	-114	37	-774	252	511	198	288	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.208	1	Yes	0.776	0.156	0.94	Yes	1.00	**2.72**
		$U_2 - U_3$	-----	-1021.45	-78	-117	182	-1054	518	5	614	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.187	1	Yes	0.799	0.171	0.98	Yes	1.00	**3.16**
		$U_3 - U_4$	-----	-1378.85	-138	-194	-325	-1518	131	-256	321	283	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1	Yes	0.790	0.167	0.96	Yes	1.00	**3.84**
		$U_4 - U_5$	-----	-1366.89	-320	-38	-326	-1327	-17	-313	39	-511	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.198	1	Yes	0.784	0.146	0.93	Yes	1.00	**3.40**
		$U_5 - U_6$	-----	-1331.11	-142	-214	-381	-1729	-59	-217	-117	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.227	1	Yes	0.763	0.191	0.96	Yes	1.00	**3.47**
		$U_6 - U_7$	-----	-1349.41	-274	-46	-487	-1223	-137	-251	-153	-488	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.774	0.135	0.91	Yes	1.00	**4.71**
		$U_7 - U_8$	-----	-1192.94	-644	105	-155	-994	96	-190	-260	-455	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.191	1	Yes	0.797	0.137	0.94	Yes	1.00	**4.33**
		$U_8 - U_9$	43.44	-818.79	-74	290	-215	-733	-106	-74	-256	-402	0.035	0.170	0.21	Yes	0.023	0.114	0.14	Yes	0.775	0.219	1	Yes	0.768	0.122	0.89	Yes	1.00	**5.19**
		$U_9 - U_{10}$	-----	-607.66	-988	431	-469	-334	-157	-347	-231	-357	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.203	0.99	Yes	0.775	0.221	1.00	Yes	1.00	**6.44**
		$U_{10} - U_{11}$	-----	-305.66	-1515	1599	809	-2696	-1257	-885	-959	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.394	0.520	0.92	Yes	0.390	0.604	1.00	Yes	1.00	**34.68**
		$U_{11} - U_{12}$	372.04	-----	-3669	3681	-144	605	-589	-4	-265	37	0.305	0.690	1.00	Yes	0.209	0.470	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.05**
		$U_{12} - U_{13}$	867.00	-----	863	107	2305	-1541	-431	-88	-122	372	0.601	0.393	1.00	Yes	0.419	0.268	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		$U_{13} - U_{14}$	779.14	-110.45	223	359	194	-857	-160	278	158	500	0.745	0.251	1.00	Yes	0.521	0.172	0.70	Yes	0.126	0.268	0.4	Yes	0.124	0.182	0.31	Yes	1.00	**5.28**
		$U_{14} - U_{15}$	601.50	-432.45	399	234	482	-1044	49	152	343	1	0.689	0.306	1.00	Yes	0.465	0.200	0.67	Yes	0.588	0.141	0.73	Yes	0.583	0.248	0.84	Yes	1.00	**4.87**
		$U_{15} - U_{16}$	307.21	-563.76	255	132	-375	-759	-8	140	141	168	0.352	0.209	0.57	Yes	0.242	0.143	0.39	Yes	0.767	0.229	1	Yes	0.760	0.180	0.95	Yes	1.00	**3.54**
		$U_{16} - U_{17}$	319.64	-578.29	302	79	-311	-815	33	73	152	-21	0.366	0.220	0.59	Yes	0.251	0.151	0.41	Yes	0.787	0.209	1	Yes	0.780	0.194	0.98	Yes	1.00	**3.77**
		$U_{17} - U_{18}$	-----	-516.00	-167	-60	300	-1272	64	-358	-112	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.252	0.96	Yes	0.696	0.302	1.00	Yes	1.00	**5.34**
		$U_{18} - U_{19}$	-----	-548.52	-56	27	-794	-463	-13	123	133	29	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.246	1	Yes	0.740	0.189	0.93	Yes	1.00	**3.12**
		$U_{19} - U_{20}$	-----	-496.66	-569	523	-742	-1034	43	-85	340	-429	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.318	1	Yes	0.670	0.246	0.92	Yes	1.00	**5.27**

Moment (End) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-72.50	-283	179	1149	-2890	46	169	-167	-612	-----	-----	-----	-----	-----	-----	-----	-----	0.132	0.631	0.77	Yes	0.131	0.867	1.00	Yes	1.00	**18.16**
		L_1 - L_2	434.58	-18.85	46	-4	-132	-735	24	18	-517	169	0.665	0.332	1.00	Yes	0.406	0.218	0.63	Yes	0.034	0.225	0.26	Yes	0.034	0.221	0.26	Yes	1.00	**3.29**
		L_2 - L_3	670.38	-81.59	-27	74	-625	-877	8	-10	-83	-20	0.771	0.225	1.00	Yes	0.446	0.135	0.59	Yes	0.111	0.255	0.37	Yes	0.110	0.212	0.33	Yes	1.00	**3.66**
		L_3 - L_4	575.07	-284.58	76	325	94	-1233	-13	20	-194	0	0.662	0.329	1.00	Yes	0.393	0.213	0.61	Yes	0.389	0.234	0.63	Yes	0.385	0.298	0.69	Yes	1.00	**5.33**
		L_4 - L_5	472.99	-----	-1244	703	-490	-524	-130	54	-291	45	0.613	0.381	1.00	Yes	0.368	0.250	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		L_5 - L_6	-----	-749.78	140	581	-218	-197	18	84	-85	16	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.123	1	Yes	0.865	0.129	1.00	Yes	1.00	**4.38**
		L_6 - L_7	-----	-745.11	-2489	1193	-1526	-2505	96	-142	-10	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.180	0.79	Yes	0.600	0.394	1.00	Yes	1.00	**15.32**
		L_7 - L_8	-----	-1097.46	-834	2257	-27	578	113	91	36	75	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.256	0.96	Yes	0.695	0.299	1.00	Yes	1.00	**6.78**
		L_8 - L_9	-----	-1142.38	899	113	2074	-1101	-15	-41	-29	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.218	0.96	Yes	0.724	0.275	1.00	Yes	1.00	**8.87**
		L_9 - L_{10}	-----	-966.75	175	170	119	-1381	48	52	183	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.139	0.93	Yes	0.778	0.217	1.00	Yes	1.00	**7.96**
		L_{10} - L_{11}	292.41	-510.47	449	-11	-39	-830	90	20	-53	-25	0.379	0.236	0.62	Yes	0.221	0.143	0.37	Yes	0.785	0.151	0.94	Yes	0.778	0.220	1.00	Yes	1.00	**5.40**
		L_{11} - L_{12}	592.50	-115.48	333	-184	134	-802	-27	22	-85	98	0.767	0.230	1.00	Yes	0.460	0.151	0.62	Yes	0.178	0.128	0.31	Yes	0.176	0.212	0.39	Yes	1.00	**3.59**
		L_{12} - L_{13}	1041.40	-----	80	-92	-352	-926	-23	-39	-109	67	0.822	0.177	1.00	Yes	0.526	0.105	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		L_{13} - L_{14}	1290.38	-----	223	-392	-177	-1577	-106	63	-222	130	0.759	0.236	1.00	Yes	0.492	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_{14} - L_{15}	1645.76	-----	-1164	48	-848	-1400	8	162	-342	-130	0.804	0.193	1.00	Yes	0.523	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		L_{15} - L_{16}	1578.12	-----	-365	-319	-792	-1716	49	170	-260	-186	0.771	0.225	1.00	Yes	0.495	0.131	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		L_{16} - L_{17}	1236.09	-----	-1341	287	-1132	-675	-122	18	-167	61	0.782	0.212	1.00	Yes	0.507	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_{17} - L_{18}	925.40	-----	-557	358	-619	-536	-35	37	-310	-544	0.806	0.189	1.00	Yes	0.516	0.115	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		L_{18} - L_{19}	406.87	-----	-988	530	-526	2	-130	4	-172	345	0.623	0.368	1.00	Yes	0.421	0.231	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		L_{19} - L_{20}	259.85	-46.57	-1424	754	-228	32	818	183	1	0	0.398	0.597	1.00	Yes	0.243	0.395	0.64	Yes	0.085	0.342	0.43	Yes	0.084	0.427	0.52	Yes	1.00	**8.78**
	Structure 2	L_0 - L_1	3.44	-103.00	-151	78	959	-2789	14	49	-433	-1505	0.005	0.992	1.00	Yes	0.003	0.493	0.50	Yes	0.184	0.706	0.9	Yes	0.183	0.672	0.86	Yes	1.00	**15.63**
		L_1 - L_2	547.38	-----	164	-205	277	-1228	77	102	-498	299	0.665	0.332	1.00	Yes	0.395	0.211	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		L_2 - L_3	1006.29	-----	-20	-132	-228	-1291	123	166	25	21	0.793	0.204	1.00	Yes	0.520	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		L_3 - L_4	1304.02	-----	56	-314	-277	-1819	45	125	-57	220	0.766	0.230	1.00	Yes	0.516	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		L_4 - L_5	1686.75	-----	-231	-213	-1141	-2088	16	-11	-27	114	0.786	0.205	1.00	Yes	0.521	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		L_5 - L_6	1792.89	-----	-30	-334	-1389	-2410	-93	57	-248	64	0.769	0.229	1.00	Yes	0.516	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		L_6 - L_7	1842.60	-----	-366	-74	-2050	-2368	53	-17	-29	115	0.780	0.215	1.00	Yes	0.518	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		L_7 - L_8	1408.97	-63.53	-154	287	-1075	-1446	-63	79	-328	-161	0.808	0.186	1.00	Yes	0.531	0.110	0.65	Yes	0.043	0.224	0.27	Yes	0.043	0.160	0.21	Yes	1.00	**4.93**
		L_8 - L_9	1175.02	-----	-714	627	-1123	-755	84	80	-188	113	0.822	0.169	1.00	Yes	0.554	0.105	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_9 - L_{10}	915.44	-747.47	-44	751	-798	-935	39	133	-216	-175	0.817	0.176	1.00	Yes	0.476	0.109	0.59	Yes	0.790	0.147	0.94	Yes	0.785	0.150	0.94	Yes	1.00	**7.37**
		L_{10} - L_{11}	728.92	-----	-1334	1202	-1209	-841	46	18	-280	-151	0.728	0.271	1.00	Yes	0.427	0.170	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.61**
		L_{11} - L_{12}	284.74	-895.22	-1338	1891	-1339	-1052	95	201	-80	-370	0.198	0.292	0.50	Yes	0.132	0.174	0.31	Yes	0.740	0.163	0.91	Yes	0.734	0.258	1.00	Yes	1.00	**13.36**
		L_{12} - L_{13}	-----	-1017.31	-145	180	-1298	-3082	-499	-458	-47	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.379	1	Yes	0.609	0.306	0.92	Yes	1.00	**8.71**
		L_{13} - L_{14}	-----	-1166.56	-2601	4693	-474	1289	-10	8	-225	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.592	0.266	0.86	Yes	0.587	0.410	1.00	Yes	1.00	**8.00**
		L_{14} - L_{15}	-----	-1241.52	1446	-364	4292	-3004	270	235	-204	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.225	0.86	Yes	0.625	0.375	1.00	Yes	1.00	**7.80**
		L_{15} - L_{16}	-----	-1233.40	-393	489	-1808	-2031	-48	148	-33	113	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.246	1	Yes	0.738	0.202	0.94	Yes	1.00	**8.27**
		L_{16} - L_{17}	-----	-1124.13	1088	156	677	-1463	186	53	-27	118	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.162	0.99	Yes	0.819	0.180	1.00	Yes	1.00	**6.90**
		L_{17} - L_{18}	-----	-785.96	484	210	251	-1056	16	-43	-52	106	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.070	0.91	Yes	0.825	0.169	1.00	Yes	1.00	**4.71**
		L_{18} - L_{19}	211.06	-612.20	614	80	68	-926	-43	-75	19	7	0.239	0.190	0.43	Yes	0.138	0.114	0.26	Yes	0.821	0.142	0.97	Yes	0.816	0.179	1.00	Yes	1.00	**4.58**
		L_{19} - L_{20}	633.49	-536.12	505	162	-27	-1387	-31	-30	-68	85	0.718	0.281	1.00	Yes	0.425	0.180	0.61	Yes	0.719	0.151	0.88	Yes	0.715	0.268	0.99	Yes	1.00	**5.63**
		L_{20} - L_{21}	937.43	-371.95	385	10	-691	-1634	0	-39	-78	-12	0.748	0.247	1.00	Yes	0.490	0.146	0.64	Yes	0.351	0.225	0.58	Yes	0.349	0.238	0.59	Yes	1.00	**5.62**
		L_{21} - L_{22}	865.97	-81.35	92	-85	-652	-1970	-52	58	-151	158	0.691	0.305	1.00	Yes	0.462	0.190	0.66	Yes	0.077	0.261	0.34	Yes	0.076	0.287	0.37	Yes	1.00	**4.27**
		L_{22} - L_{23}	927.99	-189.39	-135	197	-820	-1564	26	-41	-240	-78	0.740	0.254	1.00	Yes	0.495	0.159	0.66	Yes	0.179	0.301	0.48	Yes	0.178	0.228	0.41	Yes	1.00	**4.63**
		L_{23} - L_{24}	960.70	-----	-447	338	-974	-1441	72	187	-143	-121	0.766	0.230	1.00	Yes	0.502	0.137	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_{24} - L_{25}	706.10	-----	-433	522	-760	-894	145	98	-176	-71	0.800	0.200	1.00	Yes	0.473	0.127	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**
		L_{25} - L_{26}	656.39	-65.17	-798	944	-845	-1160	108	197	-160	-148	0.744	0.254	1.00	Yes	0.429	0.151	0.59	Yes	0.087	0.123	0.22	Yes	0.087	0.224	0.32	Yes	1.00	**8.64**
		L_{26} - L_{27}	642.02	-674.87	-1383	1767	-1572	-1670	240	149	-280	131	0.573	0.316	0.89	Yes	0.334	0.197	0.54	Yes	0.714	0.168	0.89	Yes	0.709	0.283	1.00	Yes	1.00	**14.54**
		L_{27} - L_{28}	-----	-1037.65	-932	1961	-801	-476	189	340	-193	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.185	0.95	Yes	0.756	0.242	1.00	Yes	1.00	**9.65**
		L_{28} - L_{29}	-----	-1079.94	110	65	-1210	-3267	-68	-195	-39	38	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.345	1	Yes	0.646	0.325	0.98	Yes	1.00	**8.69**
		L_{29} - L_{30}	-----	-1232.41	-2479	4258	-496	1164	79	151	98	134	-----	-----	-----	-----	-----	-----	-----	-----	0.626	0.226	0.86	Yes	0.620	0.372	1.00	Yes	1.00	**7.01**
		L_{30} - L_{31}	-----	-1252.84	1170	-269	4154	-2922	-357	-256	-62	12	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.226	0.87	Yes	0.630	0.363	1.00	Yes	1.00	**7.35**
		L_{31} - L_{32}	-----	-1232.34	-194	334	-1326	-1743	-169	-44	127	190	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.252	1	Yes	0.737	0.173	0.92	Yes	1.00	**7.09**
		L_{32} - L_{33}	-----	-1008.78	941	84	431	-1237	16	-39	119	82	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.139	0.98	Yes	0.827	0.169	1.00	Yes	1.00	**5.84**
		L_{33} - L_{34}	149.75	-684.75	510	109	325	-1082	-20	9	6	191	0.150	0.215	0.37	Yes	0.088	0.135	0.23	Yes	0.810	0.097	0.91	Yes	0.804	0.189	1.00	Yes	1.00	**4.53**
		L_{34} - L_{35}	812.38	-711.14	718	2	-66	-1580	-10	-69	-11	182	0.725	0.275	1.00	Yes	0.422	0.171	0.60	Yes	0.752	0.180	0.94	Yes	0.747	0.253	1.00	Yes	1.00	**6.70**
		L_{35} - L_{36}	1111.61	-331.02	518	-61	-66	-1463	-80	13	-212	140	0.778	0.217	1.00	Yes	0.524	0.135	0.66	Yes	0.274	0.139	0.42	Yes	0.272	0.197	0.47	Yes	1.00	**5.21**
		L_{36} - L_{37}	1305.19	-29.66	314	-67	-431	-2122	17	-3	25	162	0.748	0.248	1.00	Yes	0.492	0.145	0.64	Yes	0.020	0.220	0.25	Yes	0.020	0.234	0.26	Yes	1.00	**4.40**
		L_{37} - L_{38}	1757.06	-----	37	-427	-630	-2666	-78	44	-313	-33	0.744	0.254	1.00	Yes	0.494	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		L_{38} - L_{39}	1854.29	-----	-345	-65	-1764	-2183	-4	-60	-149	75	0.796	0.203	1.00	Yes	0.534	0.123	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_{39} - L_{40}	1638.59	-----	-957	-91	-1072	-2258	118	219	-229	-198	0.764	0.229	1.00	Yes	0.506	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		L_{40} - L_{41}	1367.42	-----	-871	294	-1515	-1106	12	23	-194	-27	0.803	0.193	1.00	Yes	0.541	0.119	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_{41} - L_{42}	1036.68	-----	-717	369	-918	-832	36	137	-149	-393	0.817	0.174	1.00	Yes	0.536	0.105	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		L_{42} - L_{43}	520.86	-----	-1107	641	-812	-354	86	11	-168	843	0.633	0.364	1.00	Yes	0.376	0.229	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		L_{43} - L_{44}	25.63	-75.10	-3250	1136	-19	-79	1846	539	-59	-17	0.031	0.964	1.00	Yes	0.019	0.610	0.63	Yes	0.108	0.647	0.76	Yes	0.107	0.661	0.77	Yes	1.00	**18.14**
	Structure 3	L_0 - L_1	34.76	-174.87	-56	-5	1038	-2266	1	5	-245	-1112	0.053	0.911	0.97	Yes	0.032	0.605	0.64	Yes	0.318	0.549	0.87	Yes	0.315	0.680	1.00	Yes	1.00	**14.80**
		L_1 - L_2	454.23	-----	156	-186	279	-757	35	61	-341	268	0.695	0.298	1.00	Yes	0.470	0.188	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		L_2 - L_3	918.41	-----	-24	-138	-60	-912	85	127	24	21	0.800	0.192	1.00	Yes	0.512	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_3 - L_4	1213.91	-----	45	-303	-162	-1418	30	118	-52	218	0.768	0.228	1.00	Yes	0.498	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		L_4 - L_5	1648.54	-----	-271	-132	-1242	-1503	26	11	69	96	0.805	0.188	1.00	Yes	0.517	0.109	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_5 - L_6	1528.18	-----	-33	-310	-664	-1912	-65	132	-69	271	0.747	0.249	1.00	Yes	0.485	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_6 - L_7	1402.20	-----	-1112	505	-1001	-917	81	165	-222	105	0.825	0.172	1.00	Yes	0.534	0.105	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_7 - L_8	1045.30	-----	-277	129	-515	-772	77	246	-141	-12	0.825	0.166	1.00	Yes	0.528	0.099	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		L_8 - L_9	637.16	-----	-589	445	-467	-298	67	-22	-97	64	0.825	0.173	1.00	Yes	0.495	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		L_9 - L_{10}	383.03	-565.89	-20	511	-516	-335	-23	19	13	22	0.496	0.141	0.64	Yes	0.289	0.085	0.38	Yes	0.870	0.106	0.98	Yes	0.862	0.137	1.00	Yes	1.00	**5.90**
		L_{10} - L_{11}	-----	-973.57	-879	1016	-876	-1315	279	-226	61	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.076	0.88	Yes	0.788	0.208	1.00	Yes	1.00	**11.10**
		L_{11} - L_{12}	-----	-1141.24	-814	2019	-42	532	57	-20	-85	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.225	0.96	Yes	0.723	0.267	1.00	Yes	1.00	**7.65**
		L_{12} - L_{13}	-----	-1160.06	900	84	1966	-931	-317	-258	-159	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.235	0.98	Yes	0.735	0.260	1.00	Yes	1.00	**7.03**
		L_{13} - L_{14}	-----	-1019.64	119	252	-65	-1118	-117	-67	-58	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.143	0.98	Yes	0.821	0.176	1.00	Yes	1.00	**6.09**
		L_{14} - L_{15}	19.28	-731.85	560	152	77	-682	52	-48	-65	88	0.019	0.163	0.19	Yes	0.012	0.098	0.12	Yes	0.853	0.140	1	Yes	0.844	0.151	1.00	Yes	1.00	**4.78**
		L_{15} - L_{16}	296.25	-494.08	446	129	139	-926	6	-71	-105	210	0.384	0.282	0.67	Yes	0.230	0.185	0.42	Yes	0.760	0.143	0.91	Yes	0.753	0.245	1.00	Yes	1.00	**3.86**
		L_{16} - L_{17}	613.16	-----	-369	46	58	-1103	63	-12	-164	-64	0.705	0.293	1.00	Yes	0.419	0.190	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		L_{17} - L_{18}	610.24	-----	-24	1	-333	-978	174	373	-70	-63	0.702	0.296	1.00	Yes	0.406	0.177	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		L_{18} - L_{19}	434.31	-----	-897	190	-416	-641	46	39	-45	282	0.665	0.330	1.00	Yes	0.406	0.220	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		L_{19} - L_{20}	21.14	-----	-2501	1466	90	-187	988	269	-151	-41	0.032	0.963	1.00	Yes	0.019	0.585	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.90**

Moment (End) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-335.24	-136	182	-22	46	-567	-182	-94	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.245	1	Yes	0.709	0.232	0.95	Yes	1.00	**1.36**
		$U_1 - L_1$	20.06	-348.28	-181	201	20	-15	-380	-90	45	20	0.036	0.367	0.41	Yes	0.020	0.202	0.23	Yes	0.761	0.169	0.94	Yes	0.737	0.257	1.00	Yes	1.00	**3.05**
		$U_2 - L_2$	80.11	-266.76	-306	337	125	-117	111	118	-131	-24	0.144	0.469	0.62	Yes	0.079	0.258	0.34	Yes	0.583	0.144	0.73	Yes	0.564	0.431	1.00	Yes	1.00	**6.09**
		$U_3 - L_3$	262.57	-222.42	-285	303	283	-279	69	236	-466	-190	0.472	0.522	1.00	Yes	0.260	0.287	0.55	Yes	0.487	0.200	0.69	Yes	0.471	0.387	0.86	Yes	1.00	**6.77**
		$U_4 - L_4$	34.97	-56.87	-251	216	673	-647	160	232	-163	-171	0.063	0.928	1.00	Yes	0.035	0.510	0.55	Yes	0.125	0.251	0.38	Yes	0.120	0.861	0.99	Yes	1.00	**12.20**
		$U_5 - L_5$	-----	-418.66	22	-36	249	-267	-120	-43	-76	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.102	0.86	Yes	0.722	0.271	1.00	Yes	1.00	**3.40**
		$U_6 - L_6$	-----	-520.19	55	-56	264	-287	-97	13	-44	15	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.090	0.88	Yes	0.746	0.251	1.00	Yes	1.00	**3.33**
		$U_7 - L_7$	-----	-453.39	118	-132	274	-301	-130	46	30	75	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.119	0.88	Yes	0.699	0.296	1.00	Yes	1.00	**1.88**
		$U_8 - L_8$	-----	-1269.81	-408	486	500	-597	-212	-57	-140	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.917	0.055	0.98	Yes	0.880	0.111	1.00	Yes	1.00	**4.55**
		$U_9 - L_9$	-----	-670.31	-373	432	-166	190	-249	-190	-224	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.128	0.93	Yes	0.757	0.240	1.00	Yes	1.00	**2.47**
		$U_{10} - L_{10}$	-----	-817.46	-303	364	-115	100	-264	-181	-257	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.112	0.96	Yes	0.807	0.189	1.00	Yes	1.00	**3.90**
		$U_{11} - L_{11}$	-----	-678.64	-325	446	-69	148	-114	19	-125	12	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.087	0.91	Yes	0.790	0.207	1.00	Yes	1.00	**3.79**
		$U_{12} - L_{12}$	-----	-510.59	-343	337	-41	54	-57	103	-93	56	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.093	0.84	Yes	0.701	0.293	1.00	Yes	1.00	**3.70**
		$U_{13} - L_{13}$	-----	-363.94	-241	262	3	17	-14	139	-84	84	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.105	0.85	Yes	0.697	0.299	1.00	Yes	1.00	**2.95**
		$U_{14} - L_{14}$	105.71	-60.76	-574	614	342	-342	19	54	59	79	0.190	0.808	1.00	Yes	0.105	0.444	0.55	Yes	0.136	0.214	0.35	Yes	0.129	0.785	0.92	Yes	1.00	**11.74**
		$U_{15} - L_{15}$	246.32	-309.10	-201	194	250	-267	-110	-135	-31	-177	0.443	0.392	0.84	Yes	0.244	0.216	0.46	Yes	0.693	0.163	0.86	Yes	0.654	0.341	1.00	Yes	1.00	**4.93**
		$U_{16} - L_{16}$	93.91	-311.44	-50	33	261	-263	-58	-78	-128	-192	0.169	0.392	0.57	Yes	0.093	0.216	0.31	Yes	0.702	0.161	0.87	Yes	0.659	0.336	1.00	Yes	1.00	**3.61**
		$U_{17} - L_{17}$	-----	-434.47	33	-55	232	-244	-89	-51	-77	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.108	0.93	Yes	0.750	0.248	1.00	Yes	1.00	**2.97**
		$U_{18} - L_{18}$	-----	-530.87	121	-126	448	-455	-161	-63	69	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.094	0.88	Yes	0.738	0.258	1.00	Yes	1.00	**3.32**
		$U_{19} - L_{19}$	-----	-641.90	137	-150	520	-526	-66	9	53	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.073	0.88	Yes	0.747	0.244	1.00	Yes	1.00	**3.52**
		$U_{20} - L_{20}$	-----	-634.49	165	-211	423	-541	22	3	238	31	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.158	1	Yes	0.738	0.251	0.99	Yes	1.00	**2.85**
	Structure 2	$U_0 - L_0$	-----	-601.10	-417	495	-115	181	-1335	-226	-262	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.276	1	Yes	0.644	0.210	0.86	Yes	1.00	**2.45**
		$U_1 - L_1$	-----	-712.29	-541	540	-109	115	-6	5	43	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.068	0.89	Yes	0.763	0.229	1.00	Yes	1.00	**3.97**
		$U_2 - L_2$	-----	-581.85	-491	490	-79	88	1	84	99	44	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.080	0.86	Yes	0.741	0.251	1.00	Yes	1.00	**3.85**
		$U_3 - L_3$	-----	-485.64	-253	258	-41	48	-12	133	20	130	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.093	0.92	Yes	0.762	0.235	1.00	Yes	1.00	**3.56**
		$U_4 - L_4$	3.29	-333.13	-226	223	14	8	-60	125	-56	100	0.006	0.325	0.34	Yes	0.003	0.179	0.19	Yes	0.756	0.093	0.85	Yes	0.705	0.289	1.00	Yes	1.00	**3.34**
		$U_5 - L_5$	154.80	-322.08	-226	242	137	-113	-44	149	-127	78	0.278	0.353	0.64	Yes	0.153	0.194	0.35	Yes	0.728	0.114	0.85	Yes	0.682	0.310	1.00	Yes	1.00	**4.42**
		$U_6 - L_6$	362.09	-214.91	-235	239	240	-241	-87	129	-128	93	0.651	0.345	1.00	Yes	0.358	0.190	0.55	Yes	0.484	0.091	0.58	Yes	0.455	0.308	0.77	Yes	1.00	**5.72**
		$U_7 - L_7$	21.62	-159.28	-230	245	455	-515	-88	104	-165	-101	0.039	0.707	0.75	Yes	0.021	0.389	0.41	Yes	0.360	0.229	0.59	Yes	0.337	0.659	1.00	Yes	1.00	**11.79**
		$U_8 - L_8$	-----	-458.73	21	-42	378	-387	-103	-107	-202	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.128	0.8	Yes	0.661	0.338	1.00	Yes	1.00	**3.44**
		$U_9 - L_9$	-----	-687.05	80	-115	610	-613	-129	-106	-101	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.082	0.85	Yes	0.736	0.260	1.00	Yes	1.00	**4.44**
		$U_{10} - L_{10}$	-----	-787.71	107	-145	559	-575	-53	10	-54	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.082	0.87	Yes	0.736	0.254	1.00	Yes	1.00	**4.63**
		$U_{11} - L_{11}$	-----	-816.25	157	-172	533	-533	-46	-139	-118	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.084	0.91	Yes	0.763	0.235	1.00	Yes	1.00	**4.12**
		$U_{12} - L_{12}$	-----	-878.36	159	-152	545	-547	-2	54	82	101	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.086	0.93	Yes	0.761	0.234	1.00	Yes	1.00	**4.11**
		$U_{13} - L_{13}$	-----	-751.93	242	-240	569	-564	-87	42	79	88	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.116	0.96	Yes	0.725	0.272	1.00	Yes	1.00	**3.13**
		$U_{14} - L_{14}$	-----	-1300.51	-507	471	638	-608	-40	147	-93	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.951	0.047	1	Yes	0.862	0.113	0.98	Yes	1.00	**4.86**
		$U_{15} - L_{15}$	-----	-738.65	-600	592	-164	166	-152	-95	-80	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.140	0.97	Yes	0.712	0.287	1.00	Yes	1.00	**3.77**
		$U_{16} - L_{16}$	-----	-740.26	-477	484	-128	102	-284	-142	-166	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.104	0.96	Yes	0.793	0.205	1.00	Yes	1.00	**3.56**
		$U_{17} - L_{17}$	-----	-645.88	-514	516	-129	126	-137	-42	-99	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.082	0.88	Yes	0.752	0.240	1.00	Yes	1.00	**3.68**
		$U_{18} - L_{18}$	-----	-571.87	-519	522	-98	99	-99	3	-82	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.078	0.85	Yes	0.729	0.267	1.00	Yes	1.00	**3.96**
		$U_{19} - L_{19}$	-----	-473.25	-300	289	-44	49	-116	32	-155	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.096	0.81	Yes	0.707	0.289	1.00	Yes	1.00	**3.40**
		$U_{20} - L_{20}$	-----	-376.53	-237	240	13	3	-71	67	-171	5	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.112	0.89	Yes	0.721	0.275	1.00	Yes	1.00	**3.40**
		$U_{21} - L_{21}$	82.94	-313.99	-246	256	51	-50	-103	68	-158	26	0.149	0.373	0.53	Yes	0.082	0.205	0.29	Yes	0.709	0.126	0.84	Yes	0.664	0.328	1.00	Yes	1.00	**3.99**
		$U_{22} - L_{22}$	88.40	-160.97	-483	509	400	-419	16	148	19	24	0.159	0.693	0.86	Yes	0.087	0.381	0.47	Yes	0.362	0.198	0.57	Yes	0.341	0.650	1.00	Yes	1.00	**13.07**
		$U_{23} - L_{23}$	129.54	-311.94	-102	93	255	-264	-65	-45	-125	-119	0.233	0.374	0.61	Yes	0.128	0.206	0.34	Yes	0.705	0.135	0.84	Yes	0.660	0.338	1.00	Yes	1.00	**4.03**
		$U_{24} - L_{24}$	66.50	-368.32	-39	28	250	-255	-72	-62	-55	-71	0.108	0.309	0.42	Yes	0.060	0.170	0.23	Yes	0.755	0.099	0.86	Yes	0.706	0.291	1.00	Yes	1.00	**3.60**
		$U_{25} - L_{25}$	-----	-469.74	19	-34	306	-300	-79	2	-43	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.083	0.79	Yes	0.701	0.294	1.00	Yes	1.00	**3.50**
		$U_{26} - L_{26}$	-----	-561.55	88	-109	530	-548	-87	-5	-141	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.092	0.85	Yes	0.716	0.280	1.00	Yes	1.00	**3.66**
		$U_{27} - L_{27}$	-----	-625.45	142	-144	571	-572	-150	0	-48	29	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.084	0.86	Yes	0.728	0.266	1.00	Yes	1.00	**3.61**
		$U_{28} - L_{28}$	-----	-705.16	132	-129	565	-556	-33	-24	54	91	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.075	0.89	Yes	0.756	0.239	1.00	Yes	1.00	**3.75**
		$U_{29} - L_{29}$	-----	-709.49	205	-210	643	-630	-114	25	24	69	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.123	0.92	Yes	0.684	0.308	1.00	Yes	1.00	**3.70**
		$U_{30} - L_{30}$	-----	-1288.38	-609	544	660	-652	-163	67	-22	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.942	0.052	1	Yes	0.854	0.117	0.98	Yes	1.00	**5.10**
		$U_{31} - L_{31}$	-----	-768.65	-523	519	-183	180	-174	-89	-119	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.134	1	Yes	0.741	0.250	1.00	Yes	1.00	**3.24**
		$U_{32} - L_{32}$	-----	-904.05	-494	494	-127	101	-266	-121	-184	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.120	0.99	Yes	0.784	0.212	1.00	Yes	1.00	**4.48**
		$U_{33} - L_{33}$	-----	-845.70	-451	470	-162	144	-125	1	-135	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.080	0.94	Yes	0.791	0.207	1.00	Yes	1.00	**4.13**
		$U_{34} - L_{34}$	-----	-799.53	-550	556	-118	129	-91	79	-162	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.083	0.88	Yes	0.748	0.245	1.00	Yes	1.00	**4.90**
		$U_{35} - L_{35}$	-----	-702.17	-576	580	-108	125	10	170	-182	38	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.074	0.86	Yes	0.753	0.246	1.00	Yes	1.00	**4.67**
		$U_{36} - L_{36}$	-----	-468.65	-360	370	-41	54	-50	127	-156	66	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.096	0.78	Yes	0.675	0.323	1.00	Yes	1.00	**3.71**
		$U_{37} - L_{37}$	2.70	-142.62	-486	544	155	-166	-51	159	-184	-33	0.005	0.748	0.76	Yes	0.003	0.412	0.42	Yes	0.322	0.236	0.56	Yes	0.302	0.695	1.00	Yes	1.00	**10.81**
		$U_{38} - L_{38}$	350.00	-138.27	-239	246	164	-163	-71	-104	-139	-169	0.629	0.363	1.00	Yes	0.346	0.200	0.55	Yes	0.311	0.134	0.45	Yes	0.293	0.315	0.61	Yes	1.00	**4.27**
		$U_{39} - L_{39}$	254.97	-316.97	-197	184	238	-254	-110	-107	-29	-141	0.459	0.365	0.83	Yes	0.252	0.201	0.46	Yes	0.716	0.146	0.87	Yes	0.671	0.325	1.00	Yes	1.00	**4.94**
		$U_{40} - L_{40}$	100.32	-333.25	-54	32	230	-228	-83	-39	-60	-108	0.180	0.325	0.51	Yes	0.099	0.179	0.28	Yes	0.756	0.115	0.88	Yes	0.705	0.294	1.00	Yes	1.00	**3.71**
		$U_{41} - L_{41}$	-----	-479.99	43	-50	259	-266	-104	-43	-111	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.103	0.93	Yes	0.753	0.243	1.00	Yes	1.00	**3.42**
		$U_{42} - L_{42}$	-----	-572.52	102	-112	518	-516	-84	-49	96	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.081	0.85	Yes	0.730	0.265	1.00	Yes	1.00	**3.61**
		$U_{43} - L_{43}$	-----	-704.47	136	-153	547	-561	-40	-19	249	17	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.098	0.91	Yes	0.755	0.238	1.00	Yes	1.00	**3.77**
		$U_{44} - L_{44}$	-----	-693.97	191	-237	458	-597	-36	-6	233	40	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.145	0.98	Yes	0.744	0.253	1.00	Yes	1.00	**2.93**
	Structure 3	$U_0 - L_0$	-----	-572.42	-356	451	-103	167	-819	-107	-245	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.238	1	Yes	0.666	0.209	0.88	Yes	1.00	**2.48**
		$U_1 - L_1$	-----	-650.94	-515	509	-108	116	55	19	7	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.074	0.89	Yes	0.758	0.239	1.00	Yes	1.00	**3.99**
		$U_2 - L_2$	-----	-541.08	-429	436	-90	95	-80	60	87	33	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.078	0.88	Yes	0.753	0.247	1.00	Yes	1.00	**3.57**
		$U_3 - L_3$	-----	-443.34	-213	227	-32	44	38	184	1	120	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.116	0.95	Yes	0.765	0.230	1.00	Yes	1.00	**3.25**
		$U_4 - L_4$	57.60	-314.32	-258	258	36	-16	-103	173	-128	126	0.104	0.380	0.49	Yes	0.057	0.209	0.27	Yes	0.708	0.105	0.82	Yes	0.665	0.330	1.00	Yes	1.00	**3.89**
		$U_5 - L_5$	167.47	-301.05	-267	281	136	-128	-88	165	-169	71	0.301	0.408	0.71	Yes	0.166	0.225	0.40	Yes	0.675	0.129	0.81	Yes	0.637	0.360	1.00	Yes	1.00	**4.92**
		$U_6 - L_6$	-----	-72.77	-426	446	629	-656	55	120	-300	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.162	0.273	0.44	Yes	0.154	0.839	1.00	Yes	1.00	**13.29**
		$U_7 - L_7$	25.25	-357.96	-31	19	251	-270	-175	-140	-154	-167	0.041	0.353	0.40	Yes	0.023	0.194	0.22	Yes	0.724	0.143	0.87	Yes	0.686	0.308	1.00	Yes	1.00	**3.17**
		$U_8 - L_8$	-----	-514.79	16	-19	341	-342	-136	-103	-238	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.134	0.88	Yes	0.706	0.292	1.00	Yes	1.00	**3.90**
		$U_9 - L_9$	-----	-649.54	68	-118	415	-506	-93	-143	-197	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.105	0.89	Yes	0.756	0.235	1.00	Yes	1.00	**4.12**
		$U_{10} - L_{10}$	-----	-779.92	102	-97	412	-438	-13	87	28	97	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.071	0.88	Yes	0.770	0.227	1.00	Yes	1.00	**4.38**
		$U_{11} - L_{11}$	-----	-654.11	182	-212	397	-469	-51	62	147	142	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.116	0.9	Yes	0.739	0.261	1.00	Yes	1.00	**2.59**
		$U_{12} - L_{12}$	-----	-1283.20	-407	438	436	-571	53	76	-127	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.926	0.048	0.98	Yes	0.890	0.106	1.00	Yes	1.00	**4.52**
		$U_{13} - L_{13}$	-----	-459.07	-268	288	-105	115	-159	-107	-113	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.138	0.91	Yes	0.708	0.284	1.00	Yes	1.00	**2.12**
		$U_{14} - L_{14}$	-----	-546.74	-217	246	-62	54	-270	-155	-191	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.132	0.97	Yes	0.784	0.215	1.00	Yes	1.00	**2.95**
		$U_{15} - L_{15}$	-----	-452.01	-183	217	-41	47	-173	-17	-164	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.107	0.93	Yes	0.780	0.220	1.00	Yes	1.00	**2.99**
		$U_{16} - L_{16}$	93.96	-135.33	-556	541	152	-123	-111	45	-343	-207	0.169	0.810	0.98	Yes	0.093	0.446	0.54	Yes	0.298	0.254	0.56	Yes	0.286	0.711	1.00	Yes	1.00	**10.11**
		$U_{17} - L_{17}$	289.33	-175.87	-289	300	173	-194	-112	-24	-310	-252	0.520	0.473	1.00	Yes	0.286	0.260	0.55	Yes	0.385	0.180	0.57	Yes	0.372	0.383	0.76	Yes	1.00	**5.31**
		$U_{18} - L_{18}$	80.23	-271.50	-120	124	294	-327	112	10	-212	-162	0.144	0.479	0.63	Yes	0.079	0.263	0.35	Yes	0.593	0.174	0.77	Yes	0.574	0.417	1.00	Yes	1.00	**5.26**
		$U_{19} - L_{19}$	21.43	-313.89	-34	22	258	-250	-168	-90	-140	-113	0.039	0.378	0.42	Yes	0.021	0.208	0.23	Yes	0.686	0.125	0.82	Yes	0.664	0.330	1.00	Yes	1.00	**3.57**
		$U_{20} - L_{20}$	-----	-352.51	48	-56	155	-194	-170	-54	360	115	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.189	0.98	Yes	0.746	0.248	1.00	Yes	1.00	**1.33**

Moment (End) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$			296.12	-114.48	-238	141	26	-20	-1318	-82	-26	-14	0.388	0.610	1.00	Yes	0.235	0.336	0.58	Yes	0.196	0.418	0.62	Yes	0.177	0.278	0.46	Yes	1.00	**7.00**
		$U_1 - L_2$			357.33	-----	-70	44	-40	-42	13	-105	-912	-431	0.643	0.354	1.00	Yes	0.353	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		$U_2 - L_3$			386.19	-318.43	-70	45	-43	-96	-152	-394	-416	-243	0.695	0.243	0.94	Yes	0.382	0.134	0.52	Yes	0.733	0.264	1	Yes	0.674	0.123	0.80	Yes	1.00	**6.62**
		$U_3 - L_4$			-----	-378.02	8	-10	1	-69	-119	-55	-150	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.133	1	Yes	0.800	0.088	0.89	Yes	1.00	**3.31**
		$U_4 - L_4$			579.15	-----	-74	71	-97	-27	-65	-197	-177	-199	0.849	0.145	1.00	Yes	0.467	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_4 - L_5$			705.32	-----	-181	248	-93	40	54	-98	-36	-9	0.834	0.159	1.00	Yes	0.459	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_5 - L_6$			647.67	-----	-299	245	-78	85	325	146	295	169	0.766	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		$U_6 - L_7$			652.20	-----	-110	290	-8	115	302	155	241	174	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.76**
		$U_8 - L_9$			1009.83	-----	-109	358	-2	136	258	212	96	111	0.807	0.192	1.00	Yes	0.500	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_9 - L_{10}$			1048.71	-----	-298	286	-97	85	174	129	89	104	0.838	0.155	1.00	Yes	0.519	0.087	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		$U_{10} - L_{11}$			1034.29	-----	-226	221	-169	37	-99	-164	102	-82	0.874	0.126	1.00	Yes	0.541	0.070	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{11} - L_{12}$			846.90	-----	-237	158	-141	-35	-325	-345	-302	-243	0.838	0.162	1.00	Yes	0.461	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_{12} - L_{13}$			622.47	-----	-186	171	-64	1	-388	-354	-349	-280	0.759	0.238	1.00	Yes	0.477	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{13} - L_{14}$			444.64	-45.15	-77	58	1	-39	-284	-337	-294	-320	0.800	0.196	1.00	Yes	0.440	0.108	0.55	Yes	0.105	0.151	0.26	Yes	0.096	0.098	0.20	Yes	1.00	**3.40**
		$U_{15} - L_{14}$			258.59	-335.17	-57	11	66	-105	-222	-341	-197	-300	0.465	0.233	0.70	Yes	0.256	0.128	0.39	Yes	0.785	0.210	1	Yes	0.709	0.134	0.85	Yes	1.00	**3.99**
		$U_{16} - L_{15}$			414.80	-193.32	-133	96	30	-67	-249	-279	-199	-182	0.746	0.251	1.00	Yes	0.410	0.138	0.55	Yes	0.458	0.183	0.65	Yes	0.409	0.170	0.58	Yes	1.00	**4.37**
		$U_{17} - L_{16}$			539.09	-----	-144	115	-25	-16	-149	-245	-182	-132	0.791	0.203	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{18} - L_{17}$			659.59	-----	-329	275	-104	55	-153	-156	-135	-70	0.780	0.214	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_{19} - L_{18}$			715.87	-----	-367	261	-89	64	-172	-169	-151	-19	0.775	0.216	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{20} - L_{19}$			617.63	-----	-408	312	-127	106	-717	-113	0	34	0.669	0.327	1.00	Yes	0.368	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
	Structure 2	$U_0 - L_1$			642.32	-----	-448	363	-65	74	-1001	-175	-121	50	0.635	0.357	1.00	Yes	0.350	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		$U_1 - L_2$			787.48	-----	-412	307	-86	58	-113	-166	43	11	0.779	0.216	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_2 - L_3$			654.07	-----	-323	259	-65	49	-202	-233	-76	-179	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_3 - L_4$			577.28	-----	-170	143	-38	-1	-321	-303	-268	-207	0.770	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_4 - L_5$			411.82	-118.96	-119	98	11	-46	-354	-296	-287	-213	0.741	0.255	1.00	Yes	0.407	0.140	0.55	Yes	0.294	0.190	0.49	Yes	0.252	0.152	0.41	Yes	1.00	**3.92**
		$U_5 - L_6$			383.91	-313.35	-109	71	86	-117	-431	-302	-365	-246	0.690	0.274	0.97	Yes	0.380	0.151	0.54	Yes	0.740	0.256	1	Yes	0.663	0.149	0.82	Yes	1.00	**4.63**
		$U_6 - L_7$			75.17	-372.87	-27	-1	67	-103	-323	-277	-273	-258	0.122	0.201	0.33	Yes	0.067	0.111	0.18	Yes	0.798	0.199	1	Yes	0.714	0.117	0.84	Yes	1.00	**3.03**
		$U_8 - L_7$			614.85	-39.91	-173	153	-6	-35	-137	-270	-184	-245	0.784	0.210	1.00	Yes	0.493	0.119	0.62	Yes	0.066	0.097	0.17	Yes	0.060	0.155	0.22	Yes	1.00	**4.25**
		$U_8 - L_9$			734.88	-----	-327	277	-104	11	-128	-207	-188	-160	0.796	0.202	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_{10} - L_9$			837.63	-----	-310	253	-87	38	-52	-149	-19	-61	0.829	0.166	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_{11} - L_{10}$			910.76	-----	-363	310	-119	87	56	-63	62	32	0.830	0.163	1.00	Yes	0.456	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{12} - L_{11}$			891.10	-----	-361	358	-107	135	165	68	246	159	0.812	0.187	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_{13} - L_{12}$			735.50	-----	-435	369	-199	170	266	124	410	246	0.728	0.263	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**
		$U_{14} - L_{13}$			764.06	-----	-281	434	-65	176	273	156	232	137	0.756	0.242	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{14} - L_{15}$			641.79	-----	-217	366	0	102	162	93	49	35	0.759	0.237	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{15} - L_{16}$			641.93	-----	-374	335	-111	104	121	89	62	69	0.759	0.234	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
		$U_{16} - L_{17}$			745.47	-----	-357	352	-73	98	9	-7	9	5	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_{17} - L_{18}$			683.30	-----	-298	289	-73	75	-77	-73	-76	-20	0.808	0.183	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{18} - L_{19}$			683.20	-----	-282	248	-43	38	-150	-148	-109	-98	0.808	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{19} - L_{20}$			602.37	-1.95	-188	195	-12	-6	-266	-232	-175	-140	0.768	0.229	1.00	Yes	0.422	0.129	0.56	Yes	0.003	0.104	0.11	Yes	0.003	0.174	0.18	Yes	1.00	**4.29**
		$U_{20} - L_{21}$			435.17	-55.81	-117	108	9	-24	-227	-172	-215	-153	0.783	0.215	1.00	Yes	0.430	0.118	0.55	Yes	0.132	0.110	0.25	Yes	0.118	0.149	0.27	Yes	1.00	**3.44**
		$U_{21} - L_{22}$			443.12	-259.57	-95	76	45	-81	-259	-276	-232	-238	0.797	0.202	1.00	Yes	0.438	0.111	0.55	Yes	0.613	0.168	0.79	Yes	0.549	0.122	0.68	Yes	1.00	**4.97**
		$U_{22} - L_{22}$			428.50	-353.76	-100	69	70	-100	-94	-245	-168	-241	0.771	0.198	0.97	Yes	0.424	0.109	0.54	Yes	0.843	0.153	1	Yes	0.749	0.127	0.88	Yes	1.00	**5.59**
		$U_{24} - L_{23}$			449.42	-97.87	-121	115	28	-39	-60	-128	-57	-84	0.808	0.191	1.00	Yes	0.445	0.105	0.55	Yes	0.234	0.067	0.31	Yes	0.207	0.154	0.37	Yes	1.00	**4.03**
		$U_{25} - L_{24}$			623.20	-28.42	-200	195	7	-26	21	-92	-13	-56	0.795	0.198	1.00	Yes	0.437	0.110	0.55	Yes	0.047	0.053	0.11	Yes	0.043	0.179	0.23	Yes	1.00	**4.54**
		$U_{26} - L_{25}$			687.01	-----	-295	271	-34	21	61	-27	25	16	0.812	0.178	1.00	Yes	0.447	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{27} - L_{26}$			676.11	-----	-294	300	-56	69	151	33	157	82	0.799	0.198	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{28} - L_{27}$			719.68	-----	-335	362	-83	104	212	111	185	109	0.779	0.220	1.00	Yes	0.429	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{29} - L_{28}$			624.89	-----	-372	327	-125	119	250	118	217	111	0.739	0.256	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**
		$U_{30} - L_{29}$			639.84	-----	-220	358	-38	128	216	76	178	102	0.756	0.242	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_{30} - L_{31}$			775.59	-----	-286	445	-26	133	122	68	62	38	0.767	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{31} - L_{32}$			781.22	-----	-459	387	-129	130	56	40	36	47	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_{32} - L_{33}$			908.03	-----	-365	344	-100	119	-117	-98	-60	-22	0.827	0.171	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{33} - L_{34}$			898.43	-----	-334	311	-104	72	-250	-230	-173	-131	0.818	0.176	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{34} - L_{35}$			818.54	-----	-282	246	-86	42	-356	-335	-223	-223	0.810	0.184	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_{35} - L_{36}$			713.54	-----	-304	277	-85	7	-382	-325	-402	-285	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_{36} - L_{37}$			605.63	-----	-159	167	-19	-21	-354	-364	-294	-319	0.772	0.223	1.00	Yes	0.486	0.127	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		$U_{38} - L_{37}$			32.43	-392.67	-22	-10	75	-101	-132	-228	-158	-230	0.053	0.176	0.23	Yes	0.029	0.097	0.13	Yes	0.848	0.151	1	Yes	0.752	0.116	0.87	Yes	1.00	**2.82**
		$U_{39} - L_{38}$			293.59	-345.06	-84	55	78	-112	-174	-235	-206	-183	0.528	0.212	0.74	Yes	0.290	0.116	0.41	Yes	0.822	0.176	1	Yes	0.730	0.144	0.88	Yes	1.00	**4.14**
		$U_{40} - L_{38}$			427.09	-187.08	-128	100	43	-69	-131	-203	-87	-112	0.768	0.223	1.00	Yes	0.422	0.123	0.55	Yes	0.448	0.138	0.59	Yes	0.396	0.164	0.56	Yes	1.00	**4.48**
		$U_{41} - L_{40}$			596.75	-----	-187	142	-25	-15	-99	-163	-102	-59	0.795	0.204	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{42} - L_{41}$			669.50	-----	-334	284	-70	46	-76	-95	-3	-3	0.792	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{43} - L_{42}$			802.17	-----	-391	329	-91	61	-65	-120	-8	-32	0.794	0.199	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{44} - L_{43}$			734.21	-----	-406	368	-138	121	-524	-197	34	5	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**
	Structure 3	$U_0 - L_1$			589.33	-----	-431	317	-68	71	-835	-200	-131	45	0.638	0.358	1.00	Yes	0.351	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		$U_1 - L_2$			725.01	-----	-365	254	-91	57	-63	-150	37	13	0.785	0.211	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_2 - L_3$			642.82	-----	-334	243	-78	48	-255	-268	-74	-167	0.760	0.238	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		$U_3 - L_4$			526.58	-----	-141	99	-19	-13	-323	-314	-301	-219	0.772	0.219	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_4 - L_5$			405.14	-159.76	-118	99	19	-54	-396	-331	-309	-239	0.729	0.265	1.00	Yes	0.401	0.146	0.55	Yes	0.379	0.203	0.59	Yes	0.338	0.150	0.49	Yes	1.00	**4.19**
		$U_5 - L_6$			273.70	-313.43	-56	18	43	-101	-408	-378	-385	-335	0.492	0.248	0.74	Yes	0.271	0.136	0.41	Yes	0.734	0.264	1	Yes	0.663	0.130	0.80	Yes	1.00	**3.90**
		$U_7 - L_6$			452.30	-54.11	-81	48	12	-37	-107	-279	-98	-241	0.813	0.184	1.00	Yes	0.447	0.101	0.55	Yes	0.126	0.115	0.25	Yes	0.114	0.103	0.22	Yes	1.00	**3.38**
		$U_8 - L_7$			641.40	-63.83	-194	169	-67	-17	-155	-240	-173	-181	0.782	0.216	1.00	Yes	0.492	0.122	0.62	Yes	0.101	0.102	0.21	Yes	0.092	0.170	0.27	Yes	1.00	**4.03**
		$U_8 - L_9$			847.42	-----	-268	142	-152	-48	-69	-218	-71	-133	0.838	0.157	1.00	Yes	0.461	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_{10} - L_9$			1028.16	-----	-246	203	-149	29	95	-34	-96	-7	0.868	0.126	1.00	Yes	0.538	0.070	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{11} - L_{10}$			999.61	-----	-304	269	-101	87	450	291	307	198	0.799	0.193	1.00	Yes	0.495	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{12} - L_{11}$			979.80	-----	-107	367	-13	141	396	274	279	210	0.783	0.214	1.00	Yes	0.485	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_{12} - L_{13}$			659.52	-----	-118	310	-3	106	187	124	115	93	0.780	0.211	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_{13} - L_{14}$			675.35	-----	-290	230	-71	76	145	98	93	118	0.798	0.192	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		$U_{14} - L_{15}$			697.77	-----	-166	238	-35	39	-147	-189	-9	-13	0.825	0.170	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_{15} - L_{16}$			571.08	-----	-62	94	-84	-29	-236	-260	-273	-230	0.837	0.159	1.00	Yes	0.461	0.087	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
		$U_{17} - L_{16}$			-----	-383.87	5	-9	3	-66	16	-75	-155	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.120	1	Yes	0.812	0.084	0.90	Yes	1.00	**3.26**
		$U_{18} - L_{17}$			389.96	-203.46	-79	35	-73	-114	-28	-522	-517	-234	0.701	0.297	1.00	Yes	0.386	0.164	0.55	Yes	0.468	0.251	0.72	Yes	0.431	0.146	0.58	Yes	1.00	**7.33**
		$U_{19} - L_{18}$			422.40	-----	-84	41	-78	-46	51	-125	-436	-257	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_{20} - L_{19}$			473.10	-23.76	-176	90	-20	1	-671	-138	33	-3	0.621	0.375	1.00	Yes	0.375	0.206	0.59	Yes	0.041	0.242	0.29	Yes	0.037	0.206	0.25	Yes	1.00	**4.11**

Moment (End) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 (Vehicle) 1.300 (Pedestrian)
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$	25.73	-558.44	-140	91	610	-1012	-74	128	138	-779	0.029	0.372	0.41	Yes	0.020	0.255	0.28	Yes	0.760	0.178	0.94	Yes	0.753	0.241	1.00	Yes	1.00	**5.84**
		$U_1 - U_2$	34.52	-534.89	-100	102	-378	-723	-160	131	116	-494	0.040	0.255	0.30	Yes	0.027	0.175	0.21	Yes	0.728	0.272	1	Yes	0.721	0.172	0.90	Yes	1.00	**3.20**
		$U_2 - U_3$	183.08	-554.66	-90	310	-390	-481	-117	125	-315	-515	0.210	0.201	0.42	Yes	0.142	0.133	0.28	Yes	0.755	0.239	1	Yes	0.748	0.114	0.87	Yes	1.00	**3.60**
		$U_3 - U_4$	516.63	-598.41	159	429	-502	-567	-224	-4	6	-415	0.592	0.205	0.80	Yes	0.406	0.140	0.55	Yes	0.814	0.180	1	Yes	0.807	0.135	0.95	Yes	1.00	**5.34**
		$U_4 - U_5$	547.08	-571.93	225	435	-724	-363	-87	-5	-471	372	0.627	0.252	0.88	Yes	0.430	0.172	0.61	Yes	0.778	0.217	1	Yes	0.771	0.172	0.95	Yes	1.00	**5.63**
		$U_5 - U_6$	721.42	-----	294	515	-19	87	100	149	-77	295	0.827	0.172	1.00	Yes	0.558	0.113	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		$U_6 - U_7$	894.42	-----	414	228	39	-155	333	285	-316	368	0.855	0.139	1.00	Yes	0.598	0.095	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_7 - U_8$	803.91	-----	-922	2219	151	554	259	643	978	822	0.557	0.436	1.00	Yes	0.389	0.298	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_8 - U_9$	804.56	-----	1042	-129	1612	-1051	246	481	192	-571	0.659	0.340	1.00	Yes	0.451	0.232	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		$U_9 - U_{10}$	667.08	-350.40	253	273	85	-753	-8	317	516	-628	0.724	0.270	1.00	Yes	0.490	0.181	0.68	Yes	0.451	0.180	0.64	Yes	0.447	0.169	0.62	Yes	1.00	**7.00**
		$U_{10} - U_{11}$	84.54	-617.53	257	-166	193	-896	46	111	-85	-472	0.092	0.277	0.37	Yes	0.061	0.178	0.24	Yes	0.795	0.195	1	Yes	0.788	0.201	0.99	Yes	1.00	**3.53**
		$U_{11} - U_{12}$	-----	-912.58	158	-205	27	-803	12	104	-6	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.130	1	Yes	0.856	0.133	0.99	Yes	1.00	**2.58**
		$U_{12} - U_{13}$	-----	-1273.06	-44	-266	-337	-741	82	9	265	-475	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.137	1	Yes	0.850	0.102	0.96	Yes	1.00	**3.01**
		$U_{13} - U_{14}$	-----	-1392.12	-194	-503	-599	-1405	-42	-7	51	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1	Yes	0.798	0.155	0.96	Yes	1.00	**2.76**
		$U_{14} - U_{15}$	-----	-1402.15	-400	-288	-1176	-790	43	-275	-229	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1	Yes	0.804	0.130	0.94	Yes	1.00	**2.88**
		$U_{15} - U_{16}$	-----	-1425.00	-250	-422	-599	-1054	-23	-227	-424	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.171	1	Yes	0.817	0.116	0.94	Yes	1.00	**3.72**
		$U_{16} - U_{17}$	-----	-1406.59	-373	-190	-1179	-746	2	-223	-293	260	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1	Yes	0.806	0.130	0.94	Yes	1.00	**4.25**
		$U_{17} - U_{18}$	-----	-1104.86	-661	108	-345	-257	-21	-205	-316	659	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.118	1	Yes	0.865	0.108	0.98	Yes	1.00	**4.19**
		$U_{18} - U_{19}$	-----	-719.59	-760	113	-405	-52	160	-185	642	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.177	1	Yes	0.810	0.153	0.97	Yes	1.00	**4.13**
		$U_{19} - U_{20}$	-----	-656.24	-1270	609	-358	-219	-339	-127	102	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.247	1	Yes	0.738	0.255	1.00	Yes	1.00	**12.60**
	Structure 2	$U_0 - U_1$	-----	-589.71	263	-304	1009	-1740	70	47	307	-723	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.159	0.86	Yes	0.696	0.295	1.00	Yes	1.00	**6.70**
		$U_1 - U_2$	-----	-833.20	-150	-315	-167	-1028	-22	25	-15	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.186	1	Yes	0.804	0.156	0.97	Yes	1.00	**3.54**
		$U_2 - U_3$	-----	-1143.02	-136	-420	-387	-1405	-36	-56	205	-674	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.180	1	Yes	0.811	0.143	0.96	Yes	1.00	**3.43**
		$U_3 - U_4$	-----	-1371.39	-531	-540	-905	-1556	-117	-38	-110	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.204	1	Yes	0.781	0.139	0.92	Yes	1.00	**2.83**
		$U_4 - U_5$	-----	-1501.20	-583	-555	-1419	-1603	-122	-86	68	-669	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1	Yes	0.771	0.133	0.91	Yes	1.00	**2.92**
		$U_5 - U_6$	-----	-1549.87	-566	9	-1141	-1248	-197	-46	-565	-642	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.190	1	Yes	0.796	0.103	0.90	Yes	1.00	**3.34**
		$U_6 - U_7$	-----	-1383.39	-308	-199	-1094	-1369	-172	-92	-210	-401	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.206	1	Yes	0.788	0.122	0.91	Yes	1.00	**3.33**
		$U_7 - U_8$	-----	-1370.75	-336	-188	-1506	-1055	-80	-178	-375	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.208	1	Yes	0.781	0.134	0.92	Yes	1.00	**3.38**
		$U_8 - U_9$	-----	-1170.63	-347	228	-1323	-577	-11	-186	-568	21	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.195	1	Yes	0.794	0.141	0.94	Yes	1.00	**3.82**
		$U_9 - U_{10}$	544.21	-913.41	67	714	-1027	-493	-94	-166	-841	-29	0.399	0.216	0.62	Yes	0.270	0.146	0.42	Yes	0.793	0.204	1	Yes	0.788	0.125	0.92	Yes	1.00	**6.72**
		$U_{10} - U_{11}$	824.02	-512.78	332	609	-1178	-333	-172	-93	-1115	26	0.696	0.302	1.00	Yes	0.474	0.200	0.68	Yes	0.513	0.254	0.77	Yes	0.510	0.166	0.68	Yes	1.00	**6.57**
		$U_{11} - U_{12}$	94.65	-669.36	-2121	1525	-2364	-400	-705	-1097	-1665	479	0.080	0.537	0.62	Yes	0.054	0.358	0.42	Yes	0.669	0.326	1	Yes	0.665	0.334	1.00	Yes	1.00	**21.69**
		$U_{12} - U_{13}$	1072.79	-----	757	319	3	-1256	353	907	-862	1163	0.724	0.269	1.00	Yes	0.516	0.185	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.87**
		$U_{13} - U_{14}$	1097.52	-----	-1680	4212	-13	1373	279	959	691	988	0.540	0.457	1.00	Yes	0.382	0.300	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.33**
		$U_{14} - U_{15}$	1243.56	-----	2355	-65	3665	-1353	526	640	630	-71	0.611	0.383	1.00	Yes	0.433	0.251	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{15} - U_{16}$	1336.58	-----	145	413	-178	-1289	177	423	-37	-471	0.808	0.186	1.00	Yes	0.575	0.125	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		$U_{16} - U_{17}$	1076.45	-----	677	224	725	-1041	-32	325	-180	-697	0.793	0.204	1.00	Yes	0.528	0.134	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		$U_{17} - U_{18}$	754.23	-246.66	489	261	394	-1083	-59	287	-223	-397	0.757	0.242	1.00	Yes	0.504	0.160	0.67	Yes	0.293	0.109	0.41	Yes	0.291	0.184	0.48	Yes	1.00	**5.07**
		$U_{18} - U_{19}$	570.48	-680.28	585	158	129	-1124	3	158	134	-730	0.573	0.298	0.88	Yes	0.376	0.191	0.57	Yes	0.808	0.170	0.98	Yes	0.803	0.191	1.00	Yes	1.00	**5.50**
		$U_{19} - U_{20}$	234.30	-731.74	268	102	-463	-926	-55	132	327	-381	0.220	0.200	0.42	Yes	0.146	0.131	0.28	Yes	0.812	0.178	1	Yes	0.807	0.148	0.96	Yes	1.00	**3.85**
		$U_{20} - U_{21}$	79.81	-848.85	-70	61	-253	-940	-86	-10	-242	-640	0.062	0.206	0.27	Yes	0.043	0.136	0.18	Yes	0.780	0.210	1	Yes	0.775	0.136	0.92	Yes	1.00	**4.01**
		$U_{21} - U_{22}$	75.90	-836.87	-75	-29	-583	-1141	-189	-101	-167	-230	0.059	0.191	0.25	Yes	0.042	0.127	0.17	Yes	0.769	0.229	1	Yes	0.764	0.165	0.93	Yes	1.00	**3.58**
		$U_{22} - U_{23}$	64.92	-830.36	-27	-90	-1122	-789	-42	-158	-203	-6	0.050	0.185	0.24	Yes	0.036	0.123	0.16	Yes	0.763	0.236	1	Yes	0.758	0.162	0.93	Yes	1.00	**3.61**
		$U_{23} - U_{24}$	257.73	-832.74	-114	274	-278	-980	7	-69	-494	166	0.200	0.196	0.40	Yes	0.140	0.128	0.27	Yes	0.766	0.225	1	Yes	0.760	0.142	0.91	Yes	1.00	**5.95**
		$U_{24} - U_{25}$	429.34	-724.06	267	413	-707	-682	-12	-58	-502	257	0.403	0.181	0.59	Yes	0.267	0.119	0.39	Yes	0.804	0.189	1	Yes	0.799	0.113	0.92	Yes	1.00	**6.10**
		$U_{25} - U_{26}$	735.49	-529.44	240	689	-803	-204	26	-26	-825	-56	0.738	0.257	1.00	Yes	0.484	0.165	0.65	Yes	0.629	0.233	0.87	Yes	0.625	0.136	0.77	Yes	1.00	**7.36**
		$U_{26} - U_{27}$	-----	-529.15	-1629	1498	-136	-1289	-1006	-470	-1549	1924	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.369	1	Yes	0.625	0.276	0.91	Yes	1.00	**24.75**
		$U_{27} - U_{28}$	896.30	-----	-1226	1957	-475	-186	-244	-583	-816	428	0.660	0.332	1.00	Yes	0.439	0.218	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.85**
		$U_{28} - U_{29}$	1384.48	-----	66	305	-610	-788	-79	284	-760	670	0.837	0.154	1.00	Yes	0.595	0.105	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.16**
		$U_{29} - U_{30}$	1173.09	-----	-707	3656	84	1532	620	1104	886	1181	0.577	0.419	1.00	Yes	0.408	0.276	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		$U_{30} - U_{31}$	1264.34	-----	2352	-212	3491	-1545	588	611	687	-277	0.622	0.370	1.00	Yes	0.440	0.243	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_{31} - U_{32}$	1235.79	-----	99	374	-155	-907	203	396	-5	-450	0.835	0.157	1.00	Yes	0.595	0.107	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		$U_{32} - U_{33}$	855.71	-202.30	594	149	490	-1181	7	226	-167	-855	0.723	0.271	1.00	Yes	0.486	0.181	0.67	Yes	0.202	0.143	0.35	Yes	0.201	0.167	0.37	Yes	1.00	**5.34**
		$U_{33} - U_{34}$	612.06	-803.86	478	160	13	-1382	-26	216	-94	-543	0.517	0.261	0.78	Yes	0.352	0.170	0.53	Yes	0.804	0.193	1	Yes	0.799	0.195	1.00	Yes	1.00	**5.64**
		$U_{34} - U_{35}$	110.27	-961.63	397	-183	70	-1263	43	46	-45	-508	0.081	0.209	0.29	Yes	0.055	0.141	0.20	Yes	0.835	0.157	1	Yes	0.830	0.154	0.99	Yes	1.00	**3.88**
		$U_{35} - U_{36}$	-----	-1212.30	98	-464	-191	-1388	-18	89	-181	-323	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1	Yes	0.822	0.148	0.97	Yes	1.00	**3.08**
		$U_{36} - U_{37}$	-----	-1428.99	-289	-312	-843	-1344	-22	-120	52	-323	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1	Yes	0.814	0.120	0.94	Yes	1.00	**2.98**
		$U_{37} - U_{38}$	-----	-1417.47	-198	-423	-1200	-1312	-94	-197	-273	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.182	1	Yes	0.807	0.117	0.93	Yes	1.00	**2.97**
		$U_{38} - U_{39}$	-----	-1550.22	-165	-633	-1036	-1620	8	-211	-457	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.197	1	Yes	0.796	0.134	0.94	Yes	1.00	**3.03**
		$U_{39} - U_{40}$	-----	-1525.23	-610	-505	-1264	-1543	30	-101	-360	241	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.783	0.128	0.92	Yes	1.00	**4.08**
		$U_{40} - U_{41}$	-----	-1369.87	-503	-486	-1618	-1209	88	-157	-81	113	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.205	1	Yes	0.780	0.144	0.93	Yes	1.00	**3.80**
		$U_{41} - U_{42}$	-----	-1194.84	-1051	80	-1249	-452	54	-234	-274	394	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.140	1	Yes	0.848	0.127	0.98	Yes	1.00	**4.51**
		$U_{42} - U_{43}$	-----	-870.82	-860	44	-417	-159	-87	-417	-79	547	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.146	1	Yes	0.840	0.130	0.98	Yes	1.00	**5.04**
		$U_{43} - U_{44}$	-----	-604.62	-1336	681	-1010	-249	-391	-177	657	13	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.277	1	Yes	0.714	0.227	0.95	Yes	1.00	**10.39**
	Structure 3	$U_0 - U_1$	-----	-591.76	367	-303	1255	-1646	93	71	200	-1004	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.152	0.83	Yes	0.666	0.331	1.00	Yes	1.00	**7.57**
		$U_1 - U_2$	-----	-722.68	-82	-224	-68	-772	-23	9	126	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.177	1	Yes	0.813	0.155	0.97	Yes	1.00	**3.23**
		$U_2 - U_3$	-----	-1051.46	-57	-236	-140	-772	-35	-54	329	-681	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.161	1	Yes	0.823	0.126	0.95	Yes	1.00	**3.25**
		$U_3 - U_4$	-----	-1379.67	-219	-364	-613	-1298	-109	-33	48	-522	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1	Yes	0.791	0.143	0.94	Yes	1.00	**3.41**
		$U_4 - U_5$	-----	-1439.78	-440	-125	-793	-811	-94	-51	-46	-710	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.165	1	Yes	0.825	0.089	0.92	Yes	1.00	**3.23**
		$U_5 - U_6$	-----	-1366.08	-254	-375	-805	-1292	-186	-149	30	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.783	0.143	0.93	Yes	1.00	**3.01**
		$U_6 - U_7$	-----	-1380.82	-490	-145	-1326	-689	-117	-295	-347	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.198	1	Yes	0.792	0.146	0.94	Yes	1.00	**3.28**
		$U_7 - U_8$	-----	-1219.61	-203	100	-612	-612	-87	-303	-722	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.174	1	Yes	0.815	0.084	0.90	Yes	1.00	**4.95**
		$U_8 - U_9$	-----	-833.75	-128	259	-666	-107	-215	-187	-517	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.208	1	Yes	0.782	0.111	0.90	Yes	1.00	**3.47**
		$U_9 - U_{10}$	698.88	-337.89	137	588	-258	-87	33	138	-306	674	0.758	0.240	1.00	Yes	0.505	0.156	0.67	Yes	0.435	0.162	0.6	Yes	0.431	0.132	0.57	Yes	1.00	**10.62**
		$U_{10} - U_{11}$	386.29	-----	-654	937	14	-510	-607	-533	-1721	2284	0.419	0.577	1.00	Yes	0.284	0.387	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.24**
		$U_{11} - U_{12}$	717.40	-----	-844	1839	-27	621	183	469	791	758	0.588	0.406	1.00	Yes	0.402	0.276	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		$U_{12} - U_{13}$	935.16	-----	1125	-6	1883	-936	78	469	50	-569	0.648	0.343	1.00	Yes	0.452	0.234	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{13} - U_{14}$	847.39	-24.83	224	366	-3	-566	-102	382	166	-465	0.810	0.184	1.00	Yes	0.566	0.127	0.70	Yes	0.028	0.187	0.22	Yes	0.028	0.120	0.15	Yes	1.00	**5.25**
		$U_{14} - U_{15}$	606.04	-439.61	442	211	37	-688	-58	251	453	-835	0.695	0.305	1.00	Yes	0.469	0.201	0.67	Yes	0.598	0.217	0.82	Yes	0.593	0.163	0.76	Yes	1.00	**5.12**
		$U_{15} - U_{16}$	298.79	-587.23	266	118	-261	-754	-75	199	305	139	0.342	0.231	0.58	Yes	0.235	0.158	0.40	Yes	0.799	0.200	1	Yes	0.792	0.179	0.98	Yes	1.00	**3.99**
		$U_{16} - U_{17}$	446.41	-597.35	434	98	-143	-816	224	-35	107	429	0.512	0.266	0.78	Yes	0.351	0.182	0.54	Yes	0.813	0.183	1	Yes	0.806	0.194	1.00	Yes	1.00	**5.93**
		$U_{17} - U_{18}$	112.27	-583.45	246	-166	-449	-663	70	36	-233	-2	0.129	0.197	0.33	Yes	0.087	0.129	0.22	Yes	0.794	0.199	1	Yes	0.787	0.158	0.95	Yes	1.00	**4.03**
		$U_{18} - U_{19}$	-----	-576.51	6	-68	-722	-258	214	-194	-308	385	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1	Yes	0.777	0.172	0.95	Yes	1.00	**4.56**
		$U_{19} - U_{20}$	-----	-493.44	-501	-16	-258	-587	-184	-85	1011	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.324	1	Yes	0.665	0.140	0.81	Yes	1.00	**6.95**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1			20.86	-27.08	-163	25	773	-1210	64	236	-763	-2804	0.032	0.965	1.00	Yes	0.019	0.572	0.60	Yes	0.049	0.628	0.68	Yes	0.049	0.363	0.42	Yes	1.00	**11.38**
		L_1 - L_2			374.00	-----	1	-13	-48	-698	334	-149	-972	310	0.572	0.418	1.00	Yes	0.349	0.271	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.44**
		L_2 - L_3			653.11	-111.47	-39	69	-644	-618	-181	122	273	-520	0.751	0.239	1.00	Yes	0.435	0.142	0.58	Yes	0.152	0.223	0.38	Yes	0.151	0.156	0.31	Yes	1.00	**3.91**
		L_3 - L_4			624.46	-310.30	21	365	-403	-648	306	-238	-771	90	0.718	0.280	1.00	Yes	0.427	0.176	0.61	Yes	0.424	0.224	0.65	Yes	0.420	0.156	0.58	Yes	1.00	**4.70**
		L_4 - L_5			-----	-563.77	102	471	-218	132	-67	192	-56	-313	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.127	1	Yes	0.859	0.125	0.99	Yes	1.00	**3.15**
		L_5 - L_6			-----	-746.75	124	589	-78	236	163	-236	76	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.127	1	Yes	0.862	0.130	1.00	Yes	1.00	**2.96**
		L_6 - L_7			-----	-1068.27	-251	513	37	-605	231	685	-560	-963	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.122	1	Yes	0.860	0.095	0.96	Yes	1.00	**8.14**
		L_7 - L_8			-----	-1263.52	-84	1159	-12	617	342	510	475	208	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.187	1	Yes	0.800	0.153	0.96	Yes	1.00	**3.54**
		L_8 - L_9			-----	-1119.96	919	12	1277	-266	215	334	121	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.274	1	Yes	0.709	0.169	0.88	Yes	1.00	**4.10**
		L_9 - L_{10}			-----	-1022.55	146	212	397	-1081	439	-325	-1862	343	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.149	0.99	Yes	0.823	0.170	1.00	Yes	1.00	**8.54**
		L_{10} - L_{11}			120.21	-494.17	462	-74	110	-681	-269	50	-19	-868	0.156	0.332	0.49	Yes	0.091	0.197	0.29	Yes	0.760	0.233	1	Yes	0.753	0.180	0.94	Yes	1.00	**5.03**
		L_{11} - L_{12}			513.83	-157.97	384	-213	406	-895	140	-101	-320	531	0.665	0.330	1.00	Yes	0.399	0.213	0.62	Yes	0.243	0.160	0.41	Yes	0.241	0.237	0.48	Yes	1.00	**4.66**
		L_{12} - L_{13}			1019.06	-----	58	-155	-382	-623	-159	121	-163	-665	0.804	0.188	1.00	Yes	0.514	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		L_{13} - L_{14}			1242.13	-----	184	-527	-13	-1446	146	22	-816	55	0.731	0.267	1.00	Yes	0.473	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		L_{14} - L_{15}			1567.26	-----	-554	-149	-1278	-862	-152	173	-326	-1061	0.766	0.229	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		L_{15} - L_{16}			1614.12	-----	-301	-365	-966	-1364	115	-136	-584	194	0.789	0.205	1.00	Yes	0.506	0.121	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_{16} - L_{17}			1195.31	-----	-1028	248	-904	-289	444	408	-350	-943	0.756	0.235	1.00	Yes	0.490	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		L_{17} - L_{18}			912.25	-----	-626	221	-546	-203	160	-156	-652	-390	0.794	0.204	1.00	Yes	0.508	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.79**
		L_{18} - L_{19}			409.31	-----	-979	547	-332	162	330	233	-105	-352	0.626	0.367	1.00	Yes	0.424	0.231	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		L_{19} - L_{20}			41.28	-329.46	-1041	607	-160	51	182	41	141	32	0.070	0.382	0.46	Yes	0.043	0.229	0.28	Yes	0.661	0.204	0.87	Yes	0.655	0.340	1.00	Yes	1.00	**12.44**
	Structure 2	L_0 - L_1			53.15	-128.89	-65	-125	770	-2422	37	130	-765	-2655	0.065	0.929	1.00	Yes	0.038	0.579	0.62	Yes	0.185	0.671	0.86	Yes	0.184	0.493	0.68	Yes	1.00	**14.34**
		L_1 - L_2			465.63	-----	198	-350	332	-1243	153	-57	-1071	546	0.566	0.429	1.00	Yes	0.336	0.269	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		L_2 - L_3			988.48	-----	-47	-269	-161	-1037	-75	155	148	-642	0.779	0.218	1.00	Yes	0.511	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		L_3 - L_4			1276.67	-----	-12	-506	-134	-1522	181	-4	-820	387	0.750	0.243	1.00	Yes	0.505	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		L_4 - L_5			1726.71	-----	-437	-396	-1288	-1510	-81	163	265	-644	0.805	0.186	1.00	Yes	0.533	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		L_5 - L_6			1788.85	-----	-220	-494	-941	-2047	191	-91	-737	176	0.768	0.228	1.00	Yes	0.515	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		L_6 - L_7			1881.11	-----	-515	-150	-1776	-1710	-164	220	168	-758	0.796	0.203	1.00	Yes	0.529	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		L_7 - L_8			1407.33	-103.66	-263	455	-1331	-844	234	-141	-460	421	0.807	0.185	1.00	Yes	0.530	0.110	0.65	Yes	0.070	0.156	0.23	Yes	0.070	0.147	0.22	Yes	1.00	**5.03**
		L_8 - L_9			1011.45	-509.39	-34	647	-1018	-155	-75	187	-312	-1572	0.707	0.285	1.00	Yes	0.477	0.184	0.67	Yes	0.422	0.219	0.65	Yes	0.419	0.137	0.56	Yes	1.00	**6.06**
		L_9 - L_{10}			502.51	-813.07	-113	871	-778	-155	149	-128	-551	-103	0.449	0.206	0.66	Yes	0.261	0.126	0.39	Yes	0.860	0.110	0.97	Yes	0.854	0.139	1.00	Yes	1.00	**6.09**
		L_{10} - L_{11}			331.29	-----	-2152	1692	-903	-231	892	650	-449	-2158	0.331	0.667	1.00	Yes	0.194	0.409	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.91**
		L_{11} - L_{12}			-----	-1031.99	-73	1107	-329	628	62	-367	-34	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.128	0.99	Yes	0.846	0.151	1.00	Yes	1.00	**3.79**
		L_{12} - L_{13}			-----	-1287.83	-315	-56	-153	-1548	-97	344	-384	-612	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.212	1	Yes	0.777	0.156	0.94	Yes	1.00	**6.81**
		L_{13} - L_{14}			-----	-1496.99	-1143	2746	-429	1325	125	311	750	638	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.205	0.97	Yes	0.753	0.240	1.00	Yes	1.00	**4.90**
		L_{14} - L_{15}			-----	-1266.03	1478	-435	2892	-1342	474	476	-105	-410	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.353	1	Yes	0.637	0.253	0.89	Yes	1.00	**3.92**
		L_{15} - L_{16}			-----	-1406.05	-871	376	-843	-1159	211	-346	-683	175	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.150	1	Yes	0.841	0.115	0.96	Yes	1.00	**7.38**
		L_{16} - L_{17}			-----	-1131.62	1170	53	739	-893	-406	-6	-108	-1039	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.169	1	Yes	0.824	0.144	0.97	Yes	1.00	**5.79**
		L_{17} - L_{18}			-----	-808.63	517	171	468	-838	126	-193	-677	376	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.144	1	Yes	0.849	0.134	0.99	Yes	1.00	**4.36**
		L_{18} - L_{19}			127.58	-614.88	695	24	139	-702	-206	63	21	-603	0.145	0.228	0.38	Yes	0.083	0.134	0.22	Yes	0.825	0.173	1	Yes	0.819	0.135	0.96	Yes	1.00	**4.50**
		L_{19} - L_{20}			533.07	-444.59	496	111	96	-1116	149	-171	-1125	432	0.604	0.387	1.00	Yes	0.357	0.240	0.60	Yes	0.596	0.207	0.81	Yes	0.593	0.215	0.81	Yes	1.00	**5.12**
		L_{20} - L_{21}			923.46	-273.38	391	-84	-687	-1216	-183	70	188	-790	0.736	0.263	1.00	Yes	0.483	0.160	0.65	Yes	0.258	0.236	0.5	Yes	0.256	0.178	0.44	Yes	1.00	**5.41**
		L_{21} - L_{22}			826.92	-----	-27	-212	-591	-1750	137	-148	-745	94	0.659	0.336	1.00	Yes	0.441	0.212	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		L_{22} - L_{23}			887.17	-107.36	-277	143	-1328	-784	-49	213	-146	-864	0.707	0.287	1.00	Yes	0.473	0.182	0.66	Yes	0.101	0.236	0.34	Yes	0.101	0.194	0.30	Yes	1.00	**4.79**
		L_{23} - L_{24}			964.78	-464.02	1	588	-961	-1176	180	-145	-484	276	0.769	0.224	1.00	Yes	0.505	0.135	0.64	Yes	0.438	0.190	0.63	Yes	0.435	0.172	0.61	Yes	1.00	**7.95**
		L_{24} - L_{25}			481.57	-545.49	197	530	-777	-193	-100	145	39	-1280	0.546	0.346	0.90	Yes	0.323	0.212	0.54	Yes	0.732	0.263	1	Yes	0.727	0.150	0.88	Yes	1.00	**6.38**
		L_{25} - L_{26}			39.45	-638.83	28	726	-514	72	102	-167	-414	66	0.045	0.203	0.25	Yes	0.026	0.120	0.15	Yes	0.857	0.125	0.99	Yes	0.851	0.140	1.00	Yes	1.00	**4.72**
		L_{26} - L_{27}			-----	-730.52	-917	1090	-455	-24	585	496	-342	-1209	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.221	1	Yes	0.767	0.174	0.95	Yes	1.00	**8.68**
		L_{27} - L_{28}			-----	-1120.90	-439	1452	-350	630	400	-150	-133	55	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.142	0.97	Yes	0.816	0.179	1.00	Yes	1.00	**6.03**
		L_{28} - L_{29}			-----	-1374.89	101	-245	-170	-1619	-24	370	-348	-674	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.168	1	Yes	0.822	0.161	0.99	Yes	1.00	**6.42**
		L_{29} - L_{30}			-----	-1473.44	-1384	2867	-538	1293	38	215	873	945	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.217	0.97	Yes	0.741	0.250	1.00	Yes	1.00	**5.81**
		L_{30} - L_{31}			-----	-1296.46	1687	-500	2684	-1097	567	498	40	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.338	1	Yes	0.652	0.234	0.89	Yes	1.00	**2.82**
		L_{31} - L_{32}			-----	-1396.78	-538	169	-636	-1084	264	-297	-511	262	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.155	1	Yes	0.836	0.108	0.95	Yes	1.00	**5.63**
		L_{32} - L_{33}			-----	-1040.59	1013	-73	665	-761	-327	28	194	-577	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.127	0.99	Yes	0.853	0.138	1.00	Yes	1.00	**4.25**
		L_{33} - L_{34}			-----	-720.96	577	-17	526	-826	100	-131	-627	435	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.068	0.93	Yes	0.847	0.145	1.00	Yes	1.00	**3.77**
		L_{34} - L_{35}			608.10	-713.01	808	-116	38	-1363	-210	99	177	-1373	0.543	0.383	0.93	Yes	0.316	0.233	0.55	Yes	0.754	0.245	1	Yes	0.749	0.218	0.97	Yes	1.00	**6.63**
		L_{35} - L_{36}			961.77	-277.39	569	-167	193	-1402	165	-122	-1380	439	0.673	0.319	1.00	Yes	0.453	0.204	0.66	Yes	0.230	0.183	0.42	Yes	0.228	0.189	0.42	Yes	1.00	**5.33**
		L_{36} - L_{37}			1309.37	-----	295	-263	-570	-1568	-203	153	51	-831	0.751	0.241	1.00	Yes	0.493	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_{37} - L_{38}			1742.08	-----	-330	-651	-1221	-2291	107	-173	-942	301	0.737	0.260	1.00	Yes	0.490	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_{38} - L_{39}			1792.57	-----	-567	-211	-1828	-1429	-105	172	-277	-1074	0.769	0.229	1.00	Yes	0.516	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		L_{39} - L_{40}			1710.76	-----	-430	-310	-1384	-1744	128	-121	-449	400	0.798	0.195	1.00	Yes	0.528	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		L_{40} - L_{41}			1276.77	-----	-1210	216	-1416	-441	362	389	-45	-871	0.758	0.238	1.00	Yes	0.511	0.154	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.59**
		L_{41} - L_{42}			1013.87	-----	-932	316	-667	-322	307	-7	-427	-136	0.810	0.183	1.00	Yes	0.532	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.32**
		L_{42} - L_{43}			524.70	-----	-1190	604	-631	80	217	375	-34	-713	0.637	0.359	1.00	Yes	0.379	0.227	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.77**
		L_{43} - L_{44}			126.18	-264.94	-3029	1298	31	-117	1230	359	-102	-30	0.153	0.818	0.98	Yes	0.091	0.521	0.62	Yes	0.381	0.534	0.92	Yes	0.379	0.616	1.00	Yes	1.00	**28.10**
	Structure 3	L_0 - L_1			-----	-333.07	22	-147	636	-1259	26	118	-245	-1109	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.386	1	Yes	0.600	0.378	0.98	Yes	1.00	**8.68**
		L_1 - L_2			318.24	-----	216	-251	491	-1094	152	-27	-855	681	0.487	0.506	1.00	Yes	0.329	0.323	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		L_2 - L_3			848.57	-----	-11	-216	-29	-804	-60	166	14	-799	0.739	0.257	1.00	Yes	0.473	0.157	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		L_3 - L_4			1152.27	-----	29	-408	-43	-1340	191	6	-832	546	0.729	0.271	1.00	Yes	0.473	0.168	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		L_4 - L_5			1612.78	-----	-388	-235	-1212	-1108	-47	213	1	-909	0.788	0.210	1.00	Yes	0.506	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		L_5 - L_6			1479.46	-----	-143	-457	-555	-1722	243	-37	-894	158	0.723	0.270	1.00	Yes	0.470	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		L_6 - L_7			1216.79	-----	-1379	368	-1118	-383	579	319	-238	-1118	0.716	0.283	1.00	Yes	0.464	0.175	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		L_7 - L_8			1038.12	-83.82	-84	197	-602	-499	152	-168	-595	16	0.819	0.176	1.00	Yes	0.524	0.107	0.64	Yes	0.079	0.144	0.23	Yes	0.078	0.107	0.19	Yes	1.00	**5.70**
		L_8 - L_9			480.49	-----	-872	562	-477	-25	249	249	-126	-792	0.622	0.369	1.00	Yes	0.373	0.237	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.58**
		L_9 - L_{10}			-----	-561.65	-65	517	-272	136	145	-153	28	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.081	0.95	Yes	0.856	0.137	1.00	Yes	1.00	**4.56**
		L_{10} - L_{11}			-----	-1007.60	-662	883	-46	-469	431	925	-580	-1276	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.171	1	Yes	0.811	0.139	0.95	Yes	1.00	**9.67**
		L_{11} - L_{12}			-----	-1251.30	-87	1232	-7	602	269	492	553	158	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1	Yes	0.792	0.163	0.96	Yes	1.00	**4.56**
		L_{12} - L_{13}			-----	-1130.05	961	-8	1308	-237	-131	70	-61	-378	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.272	1	Yes	0.716	0.173	0.89	Yes	1.00	**2.99**
		L_{13} - L_{14}			-----	-1039.42	48	253	182	-675	241	-280	-1172	58	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.149	1	Yes	0.837	0.106	0.95	Yes	1.00	**5.14**
		L_{14} - L_{15}			-----	-675.90	534	88	178	-380	-250	88	-103	-702	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.191	1	Yes	0.793	0.121	0.92	Yes	1.00	**3.40**
		L_{15} - L_{16}			269.34	-512.07	459	111	226	-808	256	-208	-1016	323	0.349	0.395	0.75	Yes	0.209	0.251	0.47	Yes	0.787	0.200	0.99	Yes	0.780	0.214	1.00	Yes	1.00	**4.00**
		L_{16} - L_{17}			628.97	-----	-19	-58	-393	-815	-84	464	-130	-490	0.724	0.276	1.00	Yes	0.430	0.175	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		L_{17} - L_{18}			645.30	-48.27	23	-105	-715	-663	111	-112	-494	256	0.742	0.252	1.00	Yes	0.430	0.150	0.58	Yes	0.066	0.237	0.31	Yes	0.065	0.173	0.24	Yes	1.00	**4.73**
		L_{18} - L_{19}			422.97	-----	-653	119	-258	-186	205	440	29	-686	0.647	0.343	1.00	Yes	0.395	0.224	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		L_{19} - L_{20}			61.83	-77.83	-1600	1216	251	-360	-1940	-528	228	62	0.095	0.897	1.00	Yes	0.056	0.537	0.60	Yes	0.141	0.696	0.84	Yes	0.140	0.480	0.63	Yes	1.00	**26.96**

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension					Compression										Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
							Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	U_0 - L_0	-----	-283.61	-107	164	-13	52	-1002	-321	203	65	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.360	1	Yes	0.600	0.210	0.81	Yes	1.00	**1.46**
		U_1 - L_1	10.66	-297.98	-192	193	20	-14	-1055	-355	567	211	0.019	0.553	0.58	Yes	0.011	0.304	0.32	Yes	0.651	0.345	1	Yes	0.631	0.247	0.88	Yes	1.00	**3.29**
		U_2 - L_2	143.15	-283.18	-222	271	127	-142	-973	-307	853	228	0.257	0.628	0.89	Yes	0.142	0.345	0.49	Yes	0.619	0.375	1	Yes	0.599	0.346	0.95	Yes	1.00	**7.33**
		U_3 - L_3	186.15	-133.05	-77	104	227	-218	-1291	-287	-1193	-745	0.335	0.664	1.00	Yes	0.184	0.365	0.55	Yes	0.292	0.332	0.63	Yes	0.282	0.290	0.58	Yes	1.00	**7.83**
		U_4 - L_4	-----	-183.19	19	-29	341	-340	955	219	-534	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.403	0.595	1	Yes	0.388	0.436	0.83	Yes	1.00	**7.99**
		U_5 - L_5	-----	-367.75	78	-84	181	-206	1047	592	121	228	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.330	1	Yes	0.634	0.209	0.85	Yes	1.00	**3.07**
		U_6 - L_6	-----	-415.85	77	-65	210	-218	1497	746	821	436	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.369	1	Yes	0.596	0.190	0.79	Yes	1.00	**3.17**
		U_7 - L_7	-----	-382.49	102	-115	262	-280	1231	307	622	195	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.353	1	Yes	0.590	0.276	0.87	Yes	1.00	**2.90**
		U_8 - L_8	-----	-1200.76	-403	479	223	-273	-1292	-589	-51	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.129	1	Yes	0.836	0.089	0.93	Yes	1.00	**5.60**
		U_9 - L_9	-----	-661.80	-405	451	-232	257	-620	-131	730	354	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.203	1	Yes	0.748	0.250	1.00	Yes	1.00	**2.75**
		U_{10} - L_{10}	-----	-776.39	-408	441	-166	143	195	186	710	313	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1	Yes	0.766	0.228	1.00	Yes	1.00	**4.28**
		U_{11} - L_{11}	-----	-664.08	-378	487	-167	217	-302	126	641	367	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.180	0.98	Yes	0.773	0.226	1.00	Yes	1.00	**4.11**
		U_{12} - L_{12}	-----	-508.45	-284	299	-131	137	-848	-138	409	297	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.260	1	Yes	0.698	0.255	0.96	Yes	1.00	**3.77**
		U_{13} - L_{13}	-----	-368.28	-225	253	-65	86	46	187	69	98	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.144	0.89	Yes	0.706	0.288	1.00	Yes	1.00	**3.89**
		U_{14} - L_{14}	-----	-192.82	-299	324	135	-140	-886	-732	-1411	-555	-----	-----	-----	-----	-----	-----	-----	-----	0.430	0.565	1	Yes	0.408	0.414	0.83	Yes	1.00	**11.29**
		U_{15} - L_{15}	64.87	-308.46	-54	46	250	-270	396	-188	-766	-181	0.117	0.567	0.69	Yes	0.064	0.312	0.38	Yes	0.691	0.284	0.98	Yes	0.653	0.345	1.00	Yes	1.00	**6.17**
		U_{16} - L_{16}	-----	-318.45	44	-49	245	-253	474	107	-33	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.218	0.94	Yes	0.674	0.323	1.00	Yes	1.00	**4.25**
		U_{17} - L_{17}	-----	-418.70	78	-92	205	-223	505	200	200	110	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.210	1	Yes	0.722	0.226	0.95	Yes	1.00	**2.97**
		U_{18} - L_{18}	-----	-531.81	173	-179	436	-448	680	172	110	16	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.183	0.97	Yes	0.740	0.254	1.00	Yes	1.00	**3.92**
		U_{19} - L_{19}	-----	-651.16	177	-191	497	-515	585	117	208	43	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.158	0.98	Yes	0.758	0.239	1.00	Yes	1.00	**4.95**
		U_{20} - L_{20}	-----	-542.12	229	-275	389	-469	433	57	315	41	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.203	1	Yes	0.694	0.248	0.95	Yes	1.00	**3.24**
	Structure 2	U_0 - L_0	-----	-608.76	-318	452	-161	269	-1216	-206	38	6	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.266	1	Yes	0.652	0.192	0.85	Yes	1.00	**1.92**
		U_1 - L_1	-----	-716.35	-526	536	-208	215	-826	-68	629	162	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1	Yes	0.768	0.228	1.00	Yes	1.00	**3.55**
		U_2 - L_2	-----	-593.68	-455	472	-152	167	41	240	624	284	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.176	0.98	Yes	0.756	0.241	1.00	Yes	1.00	**3.40**
		U_3 - L_3	-----	-460.63	-215	232	-75	86	-46	213	546	265	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1	Yes	0.722	0.211	0.94	Yes	1.00	**2.79**
		U_4 - L_4	-----	-319.63	-180	192	-21	31	-612	49	561	236	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.269	1	Yes	0.676	0.245	0.93	Yes	1.00	**3.48**
		U_5 - L_5	97.52	-318.02	-207	233	78	-72	-451	66	565	173	0.175	0.462	0.64	Yes	0.096	0.254	0.36	Yes	0.718	0.276	1	Yes	0.673	0.298	0.98	Yes	1.00	**6.67**
		U_6 - L_6	307.56	-88.80	-106	115	183	-186	-693	-63	-501	-231	0.553	0.439	1.00	Yes	0.304	0.241	0.55	Yes	0.200	0.235	0.44	Yes	0.188	0.238	0.43	Yes	1.00	**6.72**
		U_7 - L_7	-----	-195.15	-16	14	390	-441	-328	-503	-1632	-730	-----	-----	-----	-----	-----	-----	-----	-----	0.441	0.552	1	Yes	0.413	0.564	0.98	Yes	1.00	**12.40**
		U_8 - L_8	-----	-473.67	148	-170	336	-361	416	-32	-16	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.149	0.84	Yes	0.682	0.316	1.00	Yes	1.00	**3.52**
		U_9 - L_9	-----	-691.00	277	-277	584	-593	1156	615	-56	114	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.220	0.99	Yes	0.741	0.252	1.00	Yes	1.00	**4.49**
		U_{10} - L_{10}	-----	-745.78	233	-233	509	-531	1180	694	-9	216	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.256	1	Yes	0.697	0.235	0.94	Yes	1.00	**4.39**
		U_{11} - L_{11}	-----	-733.69	226	-219	459	-462	1187	668	526	493	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.260	1	Yes	0.686	0.204	0.90	Yes	1.00	**3.64**
		U_{12} - L_{12}	-----	-720.41	186	-168	417	-409	1489	652	1012	506	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.305	1	Yes	0.624	0.179	0.81	Yes	1.00	**3.57**
		U_{13} - L_{13}	-----	-624.45	223	-221	497	-485	1160	318	515	178	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.301	1	Yes	0.602	0.238	0.84	Yes	1.00	**3.78**
		U_{14} - L_{14}	-----	-1224.50	-592	550	431	-414	-733	-381	723	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.895	0.096	1	Yes	0.812	0.105	0.92	Yes	1.00	**6.93**
		U_{15} - L_{15}	-----	-662.62	-585	564	-263	256	-334	-9	858	82	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1	Yes	0.639	0.280	0.92	Yes	1.00	**3.84**
		U_{16} - L_{16}	-----	-704.39	-534	528	-202	171	-534	64	815	179	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.178	1	Yes	0.755	0.227	0.99	Yes	1.00	**3.67**
		U_{17} - L_{17}	-----	-641.57	-535	536	-196	196	-49	144	594	193	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.156	0.95	Yes	0.747	0.249	1.00	Yes	1.00	**3.81**
		U_{18} - L_{18}	-----	-579.01	-470	496	-159	164	-302	60	622	214	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.94	Yes	0.738	0.253	1.00	Yes	1.00	**3.64**
		U_{19} - L_{19}	-----	-485.66	-276	280	-87	89	-732	32	520	195	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.209	0.94	Yes	0.725	0.269	1.00	Yes	1.00	**3.48**
		U_{20} - L_{20}	-----	-376.54	-219	229	-36	41	-89	67	517	179	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.220	1	Yes	0.721	0.262	0.99	Yes	1.00	**4.06**
		U_{21} - L_{21}	28.09	-323.38	-225	245	21	-14	-471	44	86	4	0.051	0.450	0.51	Yes	0.028	0.247	0.28	Yes	0.731	0.234	0.97	Yes	0.684	0.313	1.00	Yes	1.00	**5.34**
		U_{22} - L_{22}	-----	-196.58	-217	240	268	-289	358	-332	-1759	-898	-----	-----	-----	-----	-----	-----	-----	-----	0.442	0.554	1	Yes	0.416	0.370	0.79	Yes	1.00	**12.84**
		U_{23} - L_{23}	-----	-319.79	11	-14	230	-248	525	166	-96	34	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.246	0.97	Yes	0.677	0.317	1.00	Yes	1.00	**4.36**
		U_{24} - L_{24}	-----	-370.23	52	-56	227	-235	584	204	134	108	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.236	1	Yes	0.709	0.268	0.98	Yes	1.00	**3.52**
		U_{25} - L_{25}	-----	-471.84	99	-100	302	-300	589	223	-34	118	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.184	0.9	Yes	0.705	0.291	1.00	Yes	1.00	**3.46**
		U_{26} - L_{26}	-----	-571.77	168	-175	499	-523	708	301	227	273	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.190	0.96	Yes	0.729	0.267	1.00	Yes	1.00	**3.91**
		U_{27} - L_{27}	-----	-632.02	200	-203	555	-559	771	314	506	437	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.193	0.98	Yes	0.736	0.259	1.00	Yes	1.00	**4.34**
		U_{28} - L_{28}	-----	-613.19	155	-129	466	-449	1654	559	902	389	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.290	1	Yes	0.657	0.198	0.86	Yes	1.00	**3.99**
		U_{29} - L_{29}	-----	-617.65	151	-156	578	-563	1190	198	463	137	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.303	1	Yes	0.595	0.276	0.88	Yes	1.00	**5.47**
		U_{30} - L_{30}	-----	-1164.92	-524	463	244	-258	-842	-291	419	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.110	1	Yes	0.802	0.097	0.90	Yes	1.00	**5.62**
		U_{31} - L_{31}	-----	-711.42	-532	515	-306	300	-563	14	509	96	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.205	1	Yes	0.686	0.254	0.95	Yes	1.00	**3.02**
		U_{32} - L_{32}	-----	-856.98	-477	469	-218	189	-136	59	617	189	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.173	1	Yes	0.743	0.204	0.95	Yes	1.00	**3.82**
		U_{33} - L_{33}	-----	-825.29	-499	499	-248	231	-465	103	548	237	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.155	0.99	Yes	0.772	0.220	1.00	Yes	1.00	**4.00**
		U_{34} - L_{34}	-----	-757.20	-470	498	-243	241	-1137	-123	503	238	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.244	1	Yes	0.708	0.220	0.93	Yes	1.00	**3.95**
		U_{35} - L_{35}	-----	-695.75	-571	588	-254	269	-315	108	630	377	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.152	0.93	Yes	0.746	0.249	1.00	Yes	1.00	**4.56**
		U_{36} - L_{36}	-----	-479.68	-323	349	-135	157	-328	64	222	174	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.146	0.85	Yes	0.691	0.305	1.00	Yes	1.00	**3.75**
		U_{37} - L_{37}	-----	-185.69	-365	421	46	-45	-941	-580	-1247	-424	-----	-----	-----	-----	-----	-----	-----	-----	0.419	0.573	1	Yes	0.393	0.538	0.94	Yes	1.00	**13.04**
		U_{38} - L_{38}	288.68	-146.21	-180	184	153	-164	-173	-498	-819	-258	0.519	0.472	1.00	Yes	0.286	0.260	0.55	Yes	0.329	0.219	0.55	Yes	0.309	0.235	0.55	Yes	1.00	**7.12**
		U_{39} - L_{39}	56.99	-323.57	-53	47	223	-244	530	156	-403	-38	0.103	0.466	0.57	Yes	0.056	0.256	0.32	Yes	0.731	0.251	0.99	Yes	0.685	0.312	1.00	Yes	1.00	**5.98**
		U_{40} - L_{40}	-----	-326.69	34	-42	221	-224	598	172	-59	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.255	1	Yes	0.691	0.286	0.98	Yes	1.00	**3.76**
		U_{41} - L_{41}	-----	-462.89	86	-95	237	-249	579	192	214	112	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.210	1	Yes	0.726	0.227	0.96	Yes	1.00	**3.15**
		U_{42} - L_{42}	-----	-577.16	169	-178	495	-502	668	171	324	135	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.171	0.95	Yes	0.735	0.257	1.00	Yes	1.00	**4.10**
		U_{43} - L_{43}	-----	-707.58	187	-205	538	-557	619	185	482	224	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.152	0.97	Yes	0.758	0.236	1.00	Yes	1.00	**4.99**
		U_{44} - L_{44}	-----	-671.99	248	-305	488	-607	537	91	229	39	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1	Yes	0.720	0.257	0.98	Yes	1.00	**4.34**
	Structure 3	U_0 - L_0	-----	-531.77	-268	380	-133	231	-682	-89	106	14	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.238	1	Yes	0.666	0.195	0.87	Yes	1.00	**1.72**
		U_1 - L_1	-----	-652.06	-507	503	-206	206	-359	72	621	143	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.161	0.98	Yes	0.759	0.235	1.00	Yes	1.00	**3.48**
		U_2 - L_2	-----	-545.11	-379	403	-158	169	-674	111	660	306	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.195	1	Yes	0.758	0.228	0.99	Yes	1.00	**3.04**
		U_3 - L_3	-----	-409.10	-191	210	-68	83	45	229	566	269	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.706	0.213	0.92	Yes	1.00	**2.61**
		U_4 - L_4	-----	-322.57	-217	229	-30	36	-566	89	613	223	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1	Yes	0.683	0.292	0.98	Yes	1.00	**4.12**
		U_5 - L_5	52.37	-248.55	-162	187	48	-38	-1254	-48	-149	-59	0.094	0.602	0.70	Yes	0.052	0.331	0.39	Yes	0.557	0.440	1	Yes	0.526	0.239	0.77	Yes	1.00	**5.00**
		U_6 - L_6	-----	-179.69	-115	119	356	-384	-457	-649	-262	-321	-----	-----	-----	-----	-----	-----	-----	-----	0.401	0.590	1	Yes	0.380	0.491	0.88	Yes	1.00	**10.93**
		U_7 - L_7	-----	-367.41	79	-95	233	-258	495	81	-386	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.211	0.96	Yes	0.704	0.295	1.00	Yes	1.00	**3.39**
		U_8 - L_8	-----	-509.45	133	-134	334	-335	898	374	-57	45	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.259	1	Yes	0.699	0.286	0.99	Yes	1.00	**4.05**
		U_9 - L_9	-----	-622.85	160	-220	380	-477	1159	420	451	424	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.725	0.221	0.95	Yes	1.00	**4.19**
		U_{10} - L_{10}	-----	-628.40	152	-139	318	-332	1714	946	1089	680	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.347	1	Yes	0.620	0.172	0.80	Yes	1.00	**3.76**
		U_{11} - L_{11}	-----	-565.44	189	-220	375	-422	1502	673	745	423	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.321	1	Yes	0.639	0.234	0.88	Yes	1.00	**3.10**
		U_{12} - L_{12}	-----	-1173.05	-405	433	274	-373	-1252	-524	716	211	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.147	1	Yes	0.813	0.081	0.90	Yes	1.00	**5.77**
		U_{13} - L_{13}	-----	-435.33	-263	282	-156	168	-870	-66	638	177	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.263	1	Yes	0.672	0.278	0.95	Yes	1.00	**1.89**
		U_{14} - L_{14}	-----	-469.22	-213	238	-100	90	-1084	-316	754	274	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.283	1	Yes	0.673	0.208	0.89	Yes	1.00	**2.58**
		U_{15} - L_{15}	-----	-393.97	-171	201	-80	87	-928	-209	682	254	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.286	1	Yes	0.680	0.204	0.89	Yes	1.00	**3.05**
		U_{16} - L_{16}	-----	-166.86	-278	279	-19	32	-2019	-943	-1009	-455	-----	-----	-----	-----	-----	-----	-----	-----	0.367	0.625	1	Yes	0.353	0.356	0.71	Yes	1.00	**8.38**
		U_{17} - L_{17}	188.68	-215.21	-186	209	194	-219	441	159	-1301	-559	0.339	0.657	1.00	Yes	0.187	0.361	0.55	Yes	0.472	0.411	0.89	Yes	0.455	0.280	0.74	Yes	1.00	**9.56**
		U_{18} - L_{18}	108.03	-291.39	-114	123	257	-298	460	147	-189	-186	0.194	0.514	0.71	Yes	0.107	0.283	0.39	Yes	0.637	0.233	0.88	Yes	0.617	0.381	1.00	Yes	1.00	**7.50**
		U_{19} - L_{19}	-----	-328.34	-30	14	232	-238	424	219	223	125	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.204	0.93	Yes	0.695	0.304	1.00	Yes	1.00	**5.09**
		U_{20} - L_{20}	-----	-321.61	78	-89	200	-249	604	194	271	87	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.277	1	Yes	0.681	0.319	1.00	Yes	1.00	**2.90**

Moment (End) AI Operating

Operating Loads - HS20 Truck

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$			461.50	-----	-117	59	9	-11	-1019	-487	12	89	0.605	0.394	1.00	Yes	0.366	0.217	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_1 - L_2$			295.36	-----	-70	18	-43	-21	-316	-161	-1301	-524	0.531	0.466	1.00	Yes	0.292	0.256	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_2 - L_3$			75.82	-201.12	-35	-3	-45	-57	-76	-94	-1825	-277	0.136	0.601	0.74	Yes	0.075	0.331	0.41	Yes	0.463	0.534	1	Yes	0.426	0.073	0.50	Yes	1.00	**5.21**
		$U_3 - L_4$			-----	-280.25	26	-11	-7	-70	514	293	-875	-306	-----	-----	-----	-----	-----	-----	-----	-----	0.641	0.350	1	Yes	0.593	0.089	0.69	Yes	1.00	**3.91**
		$U_4 - L_4$			421.13	-----	9	122	-105	-7	-25	228	1095	734	0.618	0.379	1.00	Yes	0.340	0.208	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.25**
		$U_5 - L_5$			616.70	-----	-168	207	-67	96	-273	244	820	79	0.729	0.267	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_7 - L_6$			592.83	-----	-253	244	-36	83	-360	30	-820	-114	0.701	0.293	1.00	Yes	0.385	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_8 - L_7$			614.12	-----	-86	299	30	80	-112	16	-562	-297	0.726	0.273	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_9 - L_9$			953.93	-----	-88	364	-26	173	-220	-361	550	156	0.763	0.232	1.00	Yes	0.472	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_9 - L_{10}$			1011.29	-----	-301	266	-122	116	-396	-257	370	154	0.808	0.184	1.00	Yes	0.501	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{10} - L_{11}$			887.29	-----	-219	175	-144	87	-513	-594	-1103	-539	0.749	0.246	1.00	Yes	0.464	0.141	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_{11} - L_{12}$			723.71	-----	-222	97	-167	14	-477	-438	-1201	-697	0.716	0.283	1.00	Yes	0.394	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_{12} - L_{13}$			557.09	-----	-188	143	-108	42	-388	-380	-790	-362	0.679	0.318	1.00	Yes	0.427	0.183	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_{13} - L_{14}$			387.37	-----	-79	31	-33	-25	-139	-232	-676	-305	0.697	0.297	1.00	Yes	0.383	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		$U_{15} - L_{14}$			284.46	-237.37	-80	-3	9	-99	-310	-315	872	-254	0.512	0.379	0.90	Yes	0.281	0.209	0.50	Yes	0.556	0.441	1	Yes	0.502	0.127	0.63	Yes	1.00	**6.64**
		$U_{16} - L_{15}$			410.28	-9.80	-143	97	-21	-14	-208	-14	-260	-130	0.738	0.258	1.00	Yes	0.406	0.142	0.55	Yes	0.023	0.143	0.17	Yes	0.021	0.183	0.21	Yes	1.00	**5.44**
		$U_{17} - L_{16}$			526.00	-----	-144	101	-46	22	-334	-130	-306	-106	0.771	0.223	1.00	Yes	0.424	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{18} - L_{17}$			620.98	-----	-330	252	-130	89	-382	-8	-402	-112	0.734	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_{19} - L_{18}$			689.04	-----	-333	253	-131	95	-378	-133	-458	-204	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{20} - L_{19}$			698.03	-----	-378	323	-177	141	-160	-66	-273	-139	0.756	0.238	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
	Structure 2	$U_0 - L_1$			653.24	-----	-315	316	-101	128	-1384	-428	-157	5	0.646	0.354	1.00	Yes	0.355	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		$U_1 - L_2$			753.04	-----	-393	311	-158	112	-428	-395	156	-20	0.745	0.246	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_2 - L_3$			616.96	-----	-320	264	-112	83	-404	-459	139	-17	0.729	0.265	1.00	Yes	0.401	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		$U_3 - L_4$			559.06	-----	-176	121	-49	23	-362	-448	179	16	0.745	0.254	1.00	Yes	0.410	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		$U_4 - L_5$			350.30	-19.36	-122	84	-26	-19	-361	-306	-707	-231	0.630	0.361	1.00	Yes	0.347	0.198	0.55	Yes	0.048	0.278	0.33	Yes	0.041	0.156	0.20	Yes	1.00	**4.81**
		$U_5 - L_6$			289.70	-234.40	-89	34	52	-108	-398	-270	-1063	-191	0.521	0.446	0.97	Yes	0.287	0.245	0.54	Yes	0.554	0.445	1	Yes	0.496	0.138	0.64	Yes	1.00	**6.41**
		$U_6 - L_7$			-----	-362.13	-1	-39	41	-98	45	-72	-476	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.216	1	Yes	0.694	0.112	0.81	Yes	1.00	**3.01**
		$U_8 - L_7$			606.02	-----	-191	154	-79	35	-244	-8	-55	-142	0.773	0.220	1.00	Yes	0.486	0.124	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
		$U_8 - L_8$			732.66	-----	-338	258	-183	111	-183	-64	33	-44	0.794	0.203	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{10} - L_9$			841.50	-----	-313	258	-149	124	-117	132	-115	13	0.833	0.165	1.00	Yes	0.458	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{11} - L_{10}$			890.99	-----	-344	309	-156	158	-219	179	-284	81	0.812	0.185	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{12} - L_{11}$			843.39	-----	-331	345	-132	174	-507	177	-566	62	0.768	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		$U_{13} - L_{12}$			729.44	-----	-408	379	-158	162	-484	52	-539	-1	0.722	0.270	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_{14} - L_{13}$			732.01	-----	-249	427	-17	125	-24	52	-491	-255	0.724	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		$U_{14} - L_{15}$			599.41	-----	-196	345	-24	164	153	-395	518	237	0.709	0.289	1.00	Yes	0.390	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_{15} - L_{16}$			602.16	-----	-359	324	-175	163	56	-285	429	104	0.712	0.281	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.81**
		$U_{16} - L_{17}$			688.57	-----	-330	348	-127	154	45	-411	373	110	0.746	0.245	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$U_{17} - L_{18}$			646.80	-----	-284	286	-109	125	-70	-189	359	90	0.765	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		$U_{18} - L_{19}$			635.12	-----	-278	256	-80	94	-182	-461	293	80	0.751	0.241	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{19} - L_{20}$			565.47	-----	-185	167	-74	38	-284	-216	-530	-184	0.721	0.274	1.00	Yes	0.397	0.156	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_{20} - L_{21}$			401.52	-----	-122	105	-24	-3	-187	-270	-397	-91	0.722	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_{21} - L_{22}$			202.09	-220.65	-48	52	6	-95	290	68	-1387	-276	0.363	0.522	0.89	Yes	0.200	0.287	0.49	Yes	0.521	0.473	1	Yes	0.467	0.121	0.59	Yes	1.00	**7.43**
		$U_{23} - L_{22}$			433.58	-122.96	-116	63	10	-59	-239	-82	85	-136	0.780	0.217	1.00	Yes	0.429	0.119	0.55	Yes	0.293	0.140	0.44	Yes	0.260	0.148	0.41	Yes	1.00	**6.67**
		$U_{24} - L_{23}$			439.53	-----	-127	112	-32	14	-148	44	86	-58	0.791	0.205	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_{25} - L_{24}$			599.97	-----	-190	180	-40	48	-180	49	-301	-83	0.765	0.232	1.00	Yes	0.421	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{26} - L_{25}$			666.31	-----	-281	276	-79	97	-51	178	-254	-57	0.788	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_{27} - L_{26}$			646.35	-----	-280	293	-106	125	-267	160	-342	-8	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{28} - L_{27}$			676.63	-----	-307	343	-94	148	-418	233	-546	41	0.733	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{29} - L_{28}$			593.30	-----	-342	332	-91	104	-361	43	-552	-42	0.701	0.294	1.00	Yes	0.386	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{30} - L_{29}$			631.95	-----	-197	368	34	68	-91	6	-237	-197	0.747	0.251	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_{30} - L_{31}$			733.47	-----	-260	439	-67	222	-38	-277	426	186	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		$U_{31} - L_{32}$			738.25	-----	-423	373	-232	216	10	-303	456	120	0.730	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**
		$U_{32} - L_{33}$			868.41	-----	-349	352	-159	192	-310	-417	286	61	0.791	0.207	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_{33} - L_{34}$			857.60	-----	-327	280	-174	153	-427	-520	97	-91	0.781	0.210	1.00	Yes	0.430	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_{34} - L_{35}$			775.02	-----	-288	237	-181	120	-476	-450	-638	-337	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		$U_{35} - L_{36}$			681.44	-----	-310	233	-183	97	-371	-332	-568	-297	0.738	0.252	1.00	Yes	0.406	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{36} - L_{37}$			555.21	-----	-175	146	-79	20	-209	-444	-639	-264	0.708	0.287	1.00	Yes	0.446	0.164	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{38} - L_{37}$			-----	-370.58	-26	-28	51	-100	-308	-176	-49	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1	Yes	0.710	0.115	0.83	Yes	1.00	**4.17**
		$U_{39} - L_{38}$			430.52	-230.40	-133	67	56	-105	-135	-113	191	-94	0.774	0.225	1.00	Yes	0.426	0.124	0.55	Yes	0.549	0.181	0.73	Yes	0.488	0.170	0.66	Yes	1.00	**7.98**
		$U_{40} - L_{39}$			395.17	-10.21	-134	90	-6	-9	-215	90	-379	-103	0.711	0.281	1.00	Yes	0.391	0.155	0.55	Yes	0.024	0.159	0.19	Yes	0.022	0.172	0.20	Yes	1.00	**4.72**
		$U_{41} - L_{40}$			561.84	-----	-175	127	-56	30	-321	-98	-413	-180	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{42} - L_{41}$			623.55	-----	-321	263	-120	90	-385	-73	-403	-171	0.737	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{43} - L_{42}$			771.01	-----	-378	310	-134	101	-362	-80	-375	-195	0.763	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{44} - L_{43}$			797.31	-----	-381	377	-159	152	-81	65	-171	11	0.789	0.202	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
	Structure 3	$U_0 - L_1$			603.60	-----	-297	269	-79	104	-1141	-432	-147	3	0.654	0.340	1.00	Yes	0.360	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		$U_1 - L_2$			673.14	-----	-348	252	-156	106	-388	-516	170	-36	0.729	0.263	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_2 - L_3$			588.40	-----	-311	240	-123	84	-388	-690	135	-25	0.696	0.301	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.29**
		$U_3 - L_4$			511.76	-----	-141	98	-39	17	-415	-361	170	-14	0.750	0.240	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		$U_4 - L_5$			323.56	-24.36	-117	76	-38	-14	-313	-462	-910	-264	0.582	0.413	1.00	Yes	0.320	0.227	0.55	Yes	0.058	0.314	0.38	Yes	0.052	0.150	0.21	Yes	1.00	**4.46**
		$U_5 - L_6$			170.42	-242.87	-49	-12	23	-107	-196	-126	-909	-289	0.307	0.400	0.71	Yes	0.169	0.220	0.39	Yes	0.569	0.423	1	Yes	0.514	0.136	0.66	Yes	1.00	**5.32**
		$U_7 - L_6$			443.56	-----	-91	39	-36	-14	-210	-183	291	-126	0.798	0.200	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		$U_8 - L_7$			619.59	-----	-201	159	-98	49	-163	0	321	-85	0.755	0.238	1.00	Yes	0.475	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_8 - L_9$			795.28	-----	-245	120	-166	29	-156	46	652	373	0.787	0.211	1.00	Yes	0.433	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{10} - L_9$			891.53	-----	-210	184	-108	89	-221	250	1115	227	0.753	0.244	1.00	Yes	0.466	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		$U_{11} - L_{10}$			942.03	-----	-274	267	-65	101	-285	152	-935	-232	0.753	0.241	1.00	Yes	0.466	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{12} - L_{11}$			917.13	-----	-78	354	26	113	58	239	-807	-282	0.733	0.260	1.00	Yes	0.454	0.147	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.39**
		$U_{12} - L_{13}$			615.12	-----	-91	288	-19	144	100	-400	571	166	0.727	0.268	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{13} - L_{14}$			630.74	-----	-291	233	-113	114	-322	-316	443	156	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{14} - L_{15}$			608.49	-----	-166	211	-87	96	-191	-256	-876	-384	0.719	0.279	1.00	Yes	0.396	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{15} - L_{16}$			344.34	-----	-7	86	-84	-15	501	264	-1717	-898	0.505	0.487	1.00	Yes	0.278	0.268	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{17} - L_{16}$			-----	-300.87	46	-11	-48	-95	-246	-18	677	32	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.308	1	Yes	0.637	0.122	0.76	Yes	1.00	**6.80**
		$U_{18} - L_{17}$			374.07	-120.35	-122	12	-82	-77	-428	-237	561	-17	0.673	0.318	1.00	Yes	0.370	0.175	0.55	Yes	0.277	0.289	0.57	Yes	0.255	0.155	0.41	Yes	1.00	**9.52**
		$U_{19} - L_{18}$			364.73	-----	-72	14	-29	-21	-278	-251	855	379	0.656	0.340	1.00	Yes	0.361	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		$U_{20} - L_{19}$			621.01	-9.92	-119	79	-28	3	-146	-31	-54	21	0.815	0.176	1.00	Yes	0.492	0.097	0.59	Yes	0.017	0.091	0.11	Yes	0.015	0.139	0.16	Yes	1.00	**6.35**

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans

Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
North Truss - Upper Chord / Structure 1	U_0 - U_1	4.03	-7.05	2.95	2.95	-1.60	-1.60					1.24	0.90	4.03	3.29	-----	Vehicle	-7.05	-1.78	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**27.47**	**45.78**	**49.73**	**82.88**
	U_1 - U_2	3.66	-3.76	2.52	2.52	-0.62	-0.62					1.24	0.90	3.66	2.80	-----	Vehicle	-3.76	-0.69	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**32.34**	**53.90**	**131.97**	**219.94**
	U_2 - U_3	2.55	-7.28	1.75	1.75	-0.93	-0.93					1.24	0.90	2.55	1.95	-----	Vehicle	-7.28	-1.03	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**46.88**	**78.13**	**85.55**	**142.58**
	U_3 - U_4	2.05	-4.84	1.91	1.91	-1.22	-1.22					1.24	0.90	2.05	2.12	-----	Vehicle	-4.84	-1.36	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**43.11**	**71.85**	**66.26**	**110.44**
	U_4 - U_5	2.25	-4.26	0.57	0.57	-2.36	-2.36					1.24	0.90	2.25	0.63	-----	Vehicle	-4.26	-2.63	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**144.81**	**241.34**	**34.30**	**57.17**
	U_5 - U_6	3.34	-7.20	0.28	0.28	-2.43	-2.43					1.24	0.90	3.34	0.31	-----	Vehicle	-7.20	-2.70	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**290.09**	**483.49**	**32.73**	**54.55**
	U_6 - U_7	6.22	-5.16	1.27	1.27	-1.55	-1.55					1.24	0.90	6.22	1.41	-----	Vehicle	-5.16	-1.73	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**128.57**	**214.28**	**105.51**	**175.84**
	U_7 - U_8	-2.11	-14.70	0.08	0.08	-6.34	-6.34					1.24	0.90	-2.11	0.09	-----	Vehicle	-14.70	-7.06	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**2756.94**	**4594.89**	**33.77**	**56.29**
	U_8 - U_9	15.50	2.88	4.24	4.24	-0.22	-0.22					1.20	0.90	15.50	4.57	-----	Vehicle	2.88	-0.24	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**21.66**	**36.10**	**465.60**	**776.00**
	U_9 - U_{10}	6.69	-6.01	2.07	2.07	-0.42	-0.42					1.20	0.90	6.69	2.23	-----	Vehicle	-6.01	-0.45	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**39.82**	**66.36**	**196.86**	**328.10**
	U_{10} - U_{11}	9.67	-1.66	2.95	2.95	-0.12	-0.12					1.20	0.90	9.67	3.18	-----	Vehicle	-1.66	-0.13	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**27.31**	**45.52**	**691.91**	**1153.18**
	U_{11} - U_{12}	7.40	-2.11	2.46	2.46	-0.25	-0.25					1.20	0.90	7.40	2.66	-----	Vehicle	-2.11	-0.27	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**44.88**	**74.80**	**454.11**	**756.85**
	U_{12} - U_{13}	9.24	-6.21	2.82	2.82	-0.64	-0.64					1.20	0.90	9.24	3.04	-----	Vehicle	-6.21	-0.69	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**106.76**	**177.94**	**470.13**	**783.55**
	U_{13} - U_{14}	6.34	-2.26	3.33	3.33	-0.89	-0.89					1.20	0.90	6.34	3.59	-----	Vehicle	-2.26	-0.96	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**106.46**	**177.43**	**401.34**	**668.90**
	U_{14} - U_{15}	3.46	-4.65	1.20	1.20	-2.04	-2.04					1.20	0.90	3.46	1.29	-----	Vehicle	-4.65	-2.20	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**297.85**	**496.42**	**174.44**	**290.74**
	U_{15} - U_{16}	9.23	-5.79	3.01	3.01	-1.45	-1.45					1.20	0.90	9.23	3.25	-----	Vehicle	-5.79	-1.56	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**117.22**	**195.37**	**245.83**	**409.72**
	U_{16} - U_{17}	2.63	-6.22	0.65	0.65	-3.24	-3.24					1.20	0.90	2.63	0.70	-----	Vehicle	-6.22	-3.49	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**549.21**	**915.36**	**109.60**	**182.66**
	U_{17} - U_{18}	5.96	-9.96	0.52	0.52	-2.69	-2.69					1.20	0.90	5.96	0.56	-----	Vehicle	-9.96	-2.90	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**495.97**	**826.62**	**95.82**	**159.70**
	U_{18} - U_{19}	3.04	-6.68	0.78	0.78	-2.14	-2.14					1.20	0.90	3.04	0.84	-----	Vehicle	-6.68	-2.30	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**126.99**	**211.66**	**45.27**	**75.45**
	U_{19} - U_{20}	-1.83	-11.18	1.08	1.08	-4.55	-4.55					1.20	0.90	-1.83	1.16	-----	Vehicle	-11.18	-4.90	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**93.88**	**156.46**	**20.71**	**34.52**
Structure 2	U_0 - U_1	10.02	-6.16	3.40	3.40	-0.36	-0.36					1.18	0.90	10.02	3.62	-----	Vehicle	-6.16	-0.38	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**29.47**	**49.12**	**287.41**	**479.02**
	U_1 - U_2	9.17	-4.67	3.27	3.27	-0.33	-0.33					1.18	0.90	9.17	3.48	-----	Vehicle	-4.67	-0.35	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**63.10**	**105.17**	**637.02**	**1061.69**
	U_2 - U_3	8.60	-2.60	3.65	3.65	-0.47	-0.47					1.18	0.90	8.60	3.89	-----	Vehicle	-2.60	-0.50	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**42.12**	**70.21**	**335.93**	**559.89**
	U_3 - U_4	8.30	-7.59	2.69	2.69	-0.77	-0.77					1.18	0.90	8.30	2.86	-----	Vehicle	-7.59	-0.82	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**129.49**	**215.82**	**452.40**	**754.00**
	U_4 - U_5	5.53	-4.81	5.06	5.06	-1.40	-1.40					1.18	0.90	5.53	5.38	-----	Vehicle	-4.81	-1.49	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**83.09**	**138.49**	**301.39**	**502.32**
	U_5 - U_6	2.61	-7.66	1.67	1.67	-3.41	-3.41					1.18	0.90	2.61	1.78	-----	Vehicle	-7.66	-3.63	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**252.35**	**420.58**	**122.86**	**204.77**
	U_6 - U_7	6.14	-9.62	3.01	3.01	-0.81	-0.81					1.18	0.90	6.14	3.21	-----	Vehicle	-9.62	-0.86	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**115.89**	**193.14**	**429.71**	**716.18**
	U_7 - U_8	8.07	-7.40	2.12	2.12	-3.41	-3.41					1.18	0.90	8.07	2.25	-----	Vehicle	-7.40	-3.63	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**164.42**	**274.03**	**102.19**	**170.31**
	U_8 - U_9	4.03	-10.39	1.03	1.03	-3.31	-3.31					1.18	0.90	4.03	1.10	-----	Vehicle	-10.39	-3.52	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**288.80**	**481.33**	**88.86**	**148.11**
	U_9 - U_{10}	2.04	-9.48	0.90	0.90	-3.26	-3.26					1.18	0.90	2.04	0.96	-----	Vehicle	-9.48	-3.47	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**135.71**	**226.18**	**36.20**	**60.33**
	U_{10} - U_{11}	4.39	-9.86	0.95	0.95	-2.92	-2.92					1.18	0.90	4.39	1.01	-----	Vehicle	-9.86	-3.11	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**127.98**	**213.31**	**40.38**	**67.30**
	U_{11} - U_{12}	3.80	-11.57	0.19	0.19	-3.51	-3.51					1.18	0.90	3.80	0.20	-----	Vehicle	-11.57	-3.74	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**638.30**	**1063.83**	**33.27**	**55.44**
	U_{12} - U_{13}	9.58	-8.07	1.71	1.71	-1.54	-1.54					1.18	0.90	9.58	1.82	-----	Vehicle	-8.07	-1.64	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**151.68**	**252.80**	**168.34**	**280.57**
	U_{13} - U_{14}	-8.42	-23.99	0.35	0.35	-7.82	-7.82					1.18	0.90	-8.42	0.37	-----	Vehicle	-23.99	-8.33	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1080.68**	**1801.14**	**45.60**	**76.00**
	U_{14} - U_{15}	20.62	5.04	6.93	6.93	-0.37	-0.37					1.17	0.90	20.62	7.29	-----	Vehicle	5.04	-0.39	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**52.38**	**87.30**	**1014.96**	**1691.60**
	U_{15} - U_{16}	6.58	-9.91	2.23	2.23	-1.30	-1.30					1.17	0.90	6.58	2.35	-----	Vehicle	-9.91	-1.36	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**134.27**	**223.79**	**229.86**	**383.10**
	U_{16} - U_{17}	8.97	-2.82	3.98	3.98	-0.24	-0.24					1.17	0.90	8.97	4.19	-----	Vehicle	-2.82	-0.25	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**39.08**	**65.14**	**665.16**	**1108.61**
	U_{17} - U_{18}	8.01	-5.78	2.78	2.78	-0.75	-0.75					1.17	0.90	8.01	2.92	-----	Vehicle	-5.78	-0.79	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**36.88**	**61.46**	**138.90**	**231.50**
	U_{18} - U_{19}	8.40	-4.13	3.25	3.25	-0.37	-0.37					1.17	0.90	8.40	3.41	-----	Vehicle	-4.13	-0.39	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**31.52**	**52.53**	**286.06**	**476.76**
	U_{19} - U_{20}	5.53	-4.62	2.90	2.90	-0.58	-0.58					1.17	0.90	5.53	3.05	-----	Vehicle	-4.62	-0.61	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**41.95**	**69.92**	**209.72**	**349.53**
	U_{20} - U_{21}	6.82	-6.42	2.50	2.50	-1.86	-1.86					1.17	0.90	6.82	2.63	-----	Vehicle	-6.42	-1.95	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**91.37**	**152.28**	**122.93**	**204.89**
	U_{21} - U_{22}	6.17	-6.84	2.42	2.42	-0.31	-0.31					1.17	0.90	6.17	2.55	-----	Vehicle	-6.84	-0.32	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**94.31**	**157.19**	**745.27**	**1242.11**
	U_{22} - U_{23}	7.10	-6.07	2.10	2.10	-2.43	-2.43					1.17	0.90	7.10	2.21	-----	Vehicle	-6.07	-2.56	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**108.68**	**181.13**	**94.03**	**156.71**
	U_{23} - U_{24}	6.42	-6.83	1.96	1.96	-2.68	-2.68					1.17	0.90	6.42	2.06	-----	Vehicle	-6.83	-2.82	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**116.36**	**193.93**	**84.97**	**141.62**
	U_{24} - U_{25}	4.41	-5.74	1.02	1.02	-2.12	-2.12					1.17	0.90	4.41	1.07	-----	Vehicle	-5.74	-2.23	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**119.98**	**199.97**	**57.42**	**95.71**
	U_{25} - U_{26}	4.63	-7.90	1.30	1.30	-2.98	-2.98					1.17	0.90	4.63	1.37	-----	Vehicle	-7.90	-3.13	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**80.26**	**133.76**	**34.47**	**57.45**
	U_{26} - U_{27}	6.07	-7.72	0.45	0.45	-3.45	-3.45					1.17	0.90	6.07	0.47	-----	Vehicle	-7.72	-3.63	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**231.24**	**385.40**	**29.75**	**49.59**
	U_{27} - U_{28}	3.92	-7.87	0.81	0.81	-3.04	-3.04					1.17	0.90	3.92	0.85	-----	Vehicle	-7.87	-3.20	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**195.00**	**325.01**	**51.36**	**85.61**
	U_{28} - U_{29}	9.25	-7.25	2.46	2.46	-2.15	-2.15					1.17	0.90	9.25	2.59	-----	Vehicle	-7.25	-2.26	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**121.21**	**202.01**	**139.03**	**231.71**
	U_{29} - U_{30}	-2.24	-17.81	0.32	0.32	-8.40	-8.40					1.17	0.90	-2.24	0.34	-----	Vehicle	-17.81	-8.84	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1178.58**	**1964.29**	**43.38**	**72.30**
	U_{30} - U_{31}	19.02	3.44	6.70	6.70	-0.46	-0.46					1.18	0.90	19.02	7.13	-----	Vehicle	3.44	-0.49	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**53.66**	**89.44**	**814.43**	**1357.39**
	U_{31} - U_{32}	7.21	-10.44	2.24	2.24	-1.50	-1.50					1.18	0.90	7.21	2.38	-----	Vehicle	-10.44	-1.59	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**116.31**	**193.84**	**172.85**	**288.09**
	U_{32} - U_{33}	10.43	-4.94	3.14	3.14	-0.23	-0.23					1.18	0.90	10.43	3.34	-----	Vehicle	-4.94	-0.24	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**37.46**	**62.43**	**526.79**	**877.98**
	U_{33} - U_{34}	8.67	-5.58	2.81	2.81	-0.23	-0.23					1.18	0.90	8.67	2.99	-----	Vehicle	-5.58	-0.25	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**42.17**	**70.28**	**516.20**	**860.34**
	U_{34} - U_{35}	8.17	-3.35	4.16	4.16	-0.26	-0.26					1.18	0.90	8.17	4.43	-----	Vehicle	-3.35	-0.28	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**28.53**	**47.56**	**469.23**	**782.04**
	U_{35} - U_{36}	9.30	-5.12	2.90	2.90	-1.09	-1.09					1.18	0.90	9.30	3.08	-----	Vehicle	-5.12	-1.16	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**101.69**	**169.48**	**273.09**	**455.14**
	U_{36} - U_{37}	6.76	-8.71	2.99	2.99	-0.55	-0.55					1.18	0.90	6.76	3.19	-----	Vehicle	-8.71	-0.59	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**116.58**	**194.30**	**632.21**	**1053.68**
	U_{37} - U_{38}	10.16	-5.61	3.44	3.44	-2.78	-2.78					1.18	0.90	10.16	3.66	-----	Vehicle	-5.61	-2.96	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**100.90**	**168.17**	**125.84**	**209.74**
	U_{38} - U_{39}	7.26	-3.01	3.32	3.32	-1.87	-1.87					1.18	0.90	7.26	3.53	-----	Vehicle	-3.01	-2.00	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**126.22**	**210.37**	**224.89**	**374.82**
	U_{39} - U_{40}	5.16	-5.17	2.70	2.70	-2.94	-2.94					1.18	0.90	5.16	2.87	-----	Vehicle	-5.17	-3.13	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**155.93**	**259.89**	**142.84**	**238.07**
	U_{40} - U_{41}	8.09	-7.79	2.13	2.13	-2.94	-2.94					1.18	0.90	8.09	2.27	-----	Vehicle	-7.79	-3.13	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**163.49**	**272.48**	**118.45**	**197.41**
	U_{41} - U_{42}	3.96	-7.24	0.48	0.48	-4.25	-4.25					1.18	0.90	3.96	0.52	-----	Vehicle	-7.24	-4.53	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**323.24**	**538.74**	**36.37**	**60.61**
	U_{42} - U_{43}	5.30	-8.54	0.77	0.77	-2.37	-2.37					1.18	0.90	5.30	0.82	-----	Vehicle	-8.54	-2.52	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**269.49**	**449.15**	**87.35**	**145.59**
	U_{43} - U_{44}	6.34	-9.84	1.85	1.85	-5.22	-5.22					1.18	0.90	6.34	1.97	-----	Vehicle	-9.84	-5.56	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**55.25**	**92.09**	**19.19**	**31.98**
Structure 3	U_0 - U_1	7.32	-2.03	2.52	2.52	-0.55	-0.55					1.20	0.90	7.32	2.72	-----	Vehicle	-2.03	-0.59	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**38.15**	**63.59**	**182.09**	**303.48**
	U_1 - U_2	6.45	-3.27	2.57	2.57	-0.18	-0.18					1.20	0.90	6.45	2.77	-----	Vehicle	-3.27	-0.20	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**37.64**	**62.74**	**544.45**	**907.42**
	U_2 - U_3	9.46	-6.46	3.41	3.41	-0.23	-0.23					1.20	0.90	9.46	3.67	-----	Vehicle	-6.46	-0.24	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**75.69**	**126.15**	**1143.66**	**1906.10**
	U_3 - U_4	5.96	-2.88	2.17	2.17	-0.68	-0.68					1.20	0.90	5.96	2.34	-----	Vehicle	-2.88	-0.73	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**163.88**	**273.14**	**526.32**	**877.20**
	U_4 - U_5	5.42	-9.60	2.64	2.64	-1.36	-1.36					1.20	0.90	5.42	2.85	-----	Vehicle	-9.60	-1.47	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**134.53**	**224.22**	**259.45**	**432.41**
	U_5 - U_6	5.10	-3.00	3.59	3.59	-0.59	-0.59					1.20	0.90	5.10	3.88	-----	Vehicle	-3.00	-0.64	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**98.95**	**164.91**	**602.67**	**1004.44**
	U_6 - U_7	2.12	-6.47	1.09	1.09	-3.30	-3.30					1.20	0.90	2.12	1.17	-----	Vehicle	-6.47	-3.56	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**328.67**	**547.79**	**107.46**	**179.11**
	U_7 - U_8	7.00	-8.45	1.46	1.46	-1.85	-1.85					1.20	0.90	7.00	1.57	-----	Vehicle	-8.45	-1.99	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**207.07**	**345.12**	**163.25**	**272.08**
	U_8 - U_9	2.51	-7.01	0.87	0.87	-2.75	-2.75					1.20	0.90	2.51	0.94	-----	Vehicle	-7.01	-2.97	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**130.39**	**217.32**	**40.25**	**67.08**
	U_9 - U_{10}	2.56	-8.76	0.12	0.12	-3.21	-3.21					1.20	0.90	2.56	0.13	-----	Vehicle	-8.76	-3.46	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**682.28**	**1137.13**	**25.32**	**42.20**
	U_{10} - U_{11}	5.86	-6.85	0.65	0.65	-1.95	-1.95					1.20	0.90	5.86	0.70	-----	Vehicle	-6.85	-2.10	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**127.14**	**211.90**	**42.27**	**70.45**
	U_{11} - U_{12}	-1.36	-13.98	0.07	0.07	-5.17	-5.17					1.20	0.90	-1.36	0.07	-----	Vehicle	-13.98	-5.57	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**1532.16**	**2553.61**	**17.91**	**29.86**
	U_{12} - U_{13}	11.54	-1.05	4.92	4.92	-0.25	-0.25					1.24	0.90	11.54	5.48	-----	Vehicle	-1.05	-0.28	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**43.86**	**73.10**	**886.43**	**1477.38**
	U_{13} - U_{14}	4.46

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

		Member Forces from STAAD												Maximum Positive Shear				Minimum Negative Shear														Shear Force Rating			
		D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member		Negative Shear Member	
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)																					Inventory RF	Operating RF	Inventory RF	Operating RF
North Truss - Lower Chord																																			
Structure 1	L_0 - L_1	8.29	-6.54	2.41	2.41	-0.38	-0.38					1.24	0.90	8.29	2.68	-----	Vehicle	-6.54	-0.42	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**37.66**	**62.76**	**243.86**	**406.44**
	L_1 - L_2	13.57	-7.41	2.37	2.37	-0.44	-0.44					1.24	0.90	13.57	2.64	-----	Vehicle	-7.41	-0.49	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**37.09**	**61.82**	**208.75**	**347.92**
	L_2 - L_3	8.55	-7.89	1.41	1.41	-0.63	-0.63					1.24	0.90	8.55	1.57	-----	Vehicle	-7.89	-0.70	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**101.07**	**168.45**	**228.58**	**380.97**
	L_3 - L_4	10.78	-10.72	2.30	2.30	-1.16	-1.16					1.24	0.90	10.78	2.57	-----	Vehicle	-10.72	-1.29	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**61.33**	**102.22**	**121.84**	**203.07**
	L_4 - L_5	8.11	-17.42	0.11	0.11	-3.19	-3.19					1.24	0.90	8.11	0.12	-----	Vehicle	-17.42	-3.55	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**1075.81**	**1793.02**	**35.88**	**59.81**
	L_5 - L_6	5.24	-12.36	0.33	0.33	-1.93	-1.93					1.24	0.90	5.24	0.37	-----	Vehicle	-12.36	-2.15	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**550.21**	**917.02**	**91.52**	**152.53**
	L_6 - L_7	8.00	-14.21	0.99	0.99	-2.39	-2.39					1.24	0.90	8.00	1.10	-----	Vehicle	-14.21	-2.66	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**288.61**	**481.02**	**117.76**	**196.27**
	L_7 - L_8	-2.07	-18.23	0.06	0.06	-5.64	-5.64					1.24	0.90	-2.07	0.07	-----	Vehicle	-18.23	-6.28	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**6028.06**	**10046.76**	**66.45**	**110.75**
	L_8 - L_9	18.91	4.31	4.33	4.33	-0.14	-0.14					1.20	0.90	18.91	4.67	-----	Vehicle	4.31	-0.15	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**89.26**	**148.77**	**2895.67**	**4826.11**
	L_9 - L_{10}	15.84	-6.96	2.24	2.24	-1.18	-1.18					1.20	0.90	15.84	2.42	-----	Vehicle	-6.96	-1.27	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**129.26**	**215.44**	**250.01**	**416.69**
	L_{10} - L_{11}	13.53	-2.36	2.42	2.42	-0.03	-0.03					1.20	0.90	13.53	2.61	-----	Vehicle	-2.36	-0.04	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**49.64**	**82.74**	**3720.53**	**6200.88**
	L_{11} - L_{12}	19.25	-6.84	2.14	2.14	-0.24	-0.24					1.20	0.90	19.25	2.31	-----	Vehicle	-6.84	-0.26	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**54.77**	**91.29**	**514.55**	**857.58**
	L_{12} - L_{13}	12.12	-8.55	1.67	1.67	-0.52	-0.52					1.20	0.90	12.12	1.80	-----	Vehicle	-8.55	-0.56	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**145.74**	**242.90**	**475.73**	**792.89**
	L_{13} - L_{14}	22.27	-6.22	4.38	4.38	-0.33	-0.33					1.20	0.90	22.27	4.72	-----	Vehicle	-6.22	-0.35	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**79.05**	**131.75**	**1081.67**	**1802.78**
	L_{14} - L_{15}	10.80	-20.25	0.80	0.80	-2.95	-2.95					1.20	0.90	10.80	0.87	-----	Vehicle	-20.25	-3.19	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**545.10**	**908.50**	**146.58**	**244.30**
	L_{15} - L_{16}	11.52	-8.07	1.93	1.93	-1.32	-1.32					1.20	0.90	11.52	2.08	-----	Vehicle	-8.07	-1.42	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**227.34**	**378.91**	**334.43**	**557.39**
	L_{16} - L_{17}	4.39	-17.69	0.26	0.26	-3.05	-3.05					1.20	0.90	4.39	0.28	-----	Vehicle	-17.69	-3.29	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**1245.45**	**2075.75**	**104.52**	**174.21**
	L_{17} - L_{18}	6.80	-13.02	0.25	0.25	-2.21	-2.21					1.20	0.90	6.80	0.27	-----	Vehicle	-13.02	-2.38	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**856.02**	**1426.70**	**96.73**	**161.22**
	L_{18} - L_{19}	5.40	-17.11	0.20	0.20	-2.34	-2.34					1.20	0.90	5.40	0.22	-----	Vehicle	-17.11	-2.52	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**469.52**	**782.53**	**37.96**	**63.27**
	L_{19} - L_{20}	8.88	-11.26	0.14	0.14	-2.24	-2.24					1.20	0.90	8.88	0.15	-----	Vehicle	-11.26	-2.41	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**652.97**	**1088.28**	**41.11**	**68.52**
Structure 2	L_0 - L_1	8.18	-2.11	2.37	2.37	-0.26	-0.26					1.18	0.90	8.18	2.53	-----	Vehicle	-2.11	-0.28	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**54.70**	**91.17**	**506.55**	**844.26**
	L_1 - L_2	10.03	-0.24	2.46	2.46	-0.25	-0.25					1.18	0.90	10.03	2.62	-----	Vehicle	-0.24	-0.27	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**52.28**	**87.13**	**534.96**	**891.60**
	L_2 - L_3	7.20	-1.56	2.45	2.45	-0.32	-0.32					1.18	0.90	7.20	2.61	-----	Vehicle	-1.56	-0.34	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**98.76**	**164.61**	**764.93**	**1274.88**
	L_3 - L_4	11.38	-0.50	2.28	2.28	-0.25	-0.25					1.18	0.90	11.38	2.43	-----	Vehicle	-0.50	-0.27	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**153.03**	**255.05**	**1403.32**	**2338.87**
	L_4 - L_5	6.29	-6.01	2.72	2.72	-1.31	-1.31					1.18	0.90	6.29	2.89	-----	Vehicle	-6.01	-1.40	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**170.34**	**283.91**	**353.14**	**588.57**
	L_5 - L_6	10.14	-2.08	2.72	2.72	-0.45	-0.45					1.18	0.90	10.14	2.89	-----	Vehicle	-2.08	-0.48	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**186.71**	**311.18**	**1133.20**	**1888.67**
	L_6 - L_7	3.45	-8.48	2.41	2.41	-2.42	-2.42					1.18	0.90	3.45	2.57	-----	Vehicle	-8.48	-2.57	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**215.39**	**358.99**	**213.86**	**356.44**
	L_7 - L_8	3.58	-10.31	1.15	1.15	-3.44	-3.44					1.18	0.90	3.58	1.23	-----	Vehicle	-10.31	-3.66	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**315.87**	**526.45**	**104.74**	**174.56**
	L_8 - L_9	0.48	-13.07	0.11	0.11	-2.88	-2.88					1.18	0.90	0.48	0.11	-----	Vehicle	-13.07	-3.07	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**2703.77**	**4506.29**	**96.95**	**161.58**
	L_9 - L_{10}	1.68	-14.60	0.65	0.65	-2.66	-2.66					1.18	0.90	1.68	0.69	-----	Vehicle	-14.60	-2.84	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**320.22**	**533.70**	**75.43**	**125.71**
	L_{10} - L_{11}	3.92	-15.22	0.41	0.41	-2.91	-2.91					1.18	0.90	3.92	0.43	-----	Vehicle	-15.22	-3.10	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**434.91**	**724.85**	**58.56**	**97.60**
	L_{11} - L_{12}	1.30	-14.23	0.09	0.09	-2.63	-2.63					1.18	0.90	1.30	0.09	-----	Vehicle	-14.23	-2.80	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**3265.69**	**5442.81**	**106.58**	**177.63**
	L_{12} - L_{13}	6.61	-7.28	2.26	2.26	-2.20	-2.20					1.18	0.90	6.61	2.41	-----	Vehicle	-7.28	-2.34	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**184.87**	**308.12**	**190.26**	**317.09**
	L_{13} - L_{14}	-16.93	-26.03	0.24	0.24	-8.70	-8.70					1.18	0.90	-16.93	0.25	-----	Vehicle	-26.03	-9.26	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**2233.12**	**3721.87**	**57.57**	**95.95**
	L_{14} - L_{15}	25.44	16.49	7.93	7.93	-0.21	-0.21					1.17	0.90	25.44	8.35	-----	Vehicle	16.49	-0.22	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**63.90**	**106.50**	**2527.72**	**4212.86**
	L_{15} - L_{16}	1.92	-10.98	1.71	1.71	-2.54	-2.54					1.17	0.90	1.92	1.80	-----	Vehicle	-10.98	-2.67	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**249.33**	**415.56**	**165.95**	**276.59**
	L_{16} - L_{17}	14.35	-0.89	3.02	3.02	-0.26	-0.26					1.17	0.90	14.35	3.18	-----	Vehicle	-0.89	-0.27	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**109.13**	**181.88**	**1296.25**	**2160.42**
	L_{17} - L_{18}	10.22	-3.50	2.85	2.85	-0.38	-0.38					1.17	0.90	10.22	3.00	-----	Vehicle	-3.50	-0.40	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**72.10**	**120.16**	**547.24**	**912.07**
	L_{18} - L_{19}	9.38	-1.77	2.43	2.43	-0.53	-0.53					1.17	0.90	9.38	2.55	-----	Vehicle	-1.77	-0.56	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**60.12**	**100.19**	**283.79**	**472.98**
	L_{19} - L_{20}	12.39	-6.31	2.31	2.31	-0.17	-0.17					1.17	0.90	12.39	2.43	-----	Vehicle	-6.31	-0.18	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**62.37**	**103.95**	**862.80**	**1437.99**
	L_{20} - L_{21}	8.96	-3.52	2.20	2.20	-0.91	-0.91					1.17	0.90	8.96	2.31	-----	Vehicle	-3.52	-0.95	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**109.46**	**182.43**	**269.16**	**448.60**
	L_{21} - L_{22}	9.68	-4.49	3.39	3.39	-0.47	-0.47					1.17	0.90	9.68	3.57	-----	Vehicle	-4.49	-0.49	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**70.78**	**117.96**	**518.20**	**863.66**
	L_{22} - L_{23}	4.66	-10.03	1.37	1.37	-3.58	-3.58					1.17	0.90	4.66	1.44	-----	Vehicle	-10.03	-3.77	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**177.46**	**295.76**	**66.98**	**111.64**
	L_{23} - L_{24}	3.70	-6.40	1.30	1.30	-2.37	-2.37					1.17	0.90	3.70	1.36	-----	Vehicle	-6.40	-2.50	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**187.87**	**313.12**	**102.00**	**170.00**
	L_{24} - L_{25}	-0.87	-1.56	0.25	0.25	-2.01	-2.01					1.17	0.90	-0.87	0.27	-----	Vehicle	-1.56	-2.12	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**596.98**	**994.97**	**74.67**	**124.46**
	L_{25} - L_{26}	-3.04	-3.58	0.79	0.79	-2.36	-2.36					1.17	0.90	-3.04	0.84	-----	Vehicle	-3.58	-2.48	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**192.53**	**320.88**	**63.28**	**105.47**
	L_{26} - L_{27}	-1.83	-2.61	0.31	0.31	-3.35	-3.35					1.17	0.90	-1.83	0.33	-----	Vehicle	-2.61	-3.52	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**681.52**	**1135.86**	**62.75**	**104.59**
	L_{27} - L_{28}	-4.05	-5.16	0.40	0.40	-2.96	-2.96					1.17	0.90	-4.05	0.42	-----	Vehicle	-5.16	-3.11	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**849.61**	**1416.02**	**113.23**	**188.72**
	L_{28} - L_{29}	3.03	1.87	2.13	2.13	-1.92	-1.92					1.17	0.90	3.03	2.24	-----	Vehicle	1.87	-2.02	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**199.36**	**332.26**	**223.16**	**371.94**
	L_{29} - L_{30}	-16.84	-17.95	0.35	0.35	-8.95	-8.95					1.17	0.90	-16.84	0.37	-----	Vehicle	-17.95	-9.41	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**1530.32**	**2550.53**	**57.13**	**95.22**
	L_{30} - L_{31}	17.64	16.51	7.82	7.82	-0.30	-0.30					1.18	0.90	17.64	8.33	-----	Vehicle	16.51	-0.32	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**64.59**	**107.65**	**1736.92**	**2894.86**
	L_{31} - L_{32}	-0.36	-1.54	2.04	2.04	-2.57	-2.57					1.18	0.90	-0.36	2.18	-----	Vehicle	-1.54	-2.74	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**206.61**	**344.35**	**163.89**	**273.15**
	L_{32} - L_{33}	5.29	4.30	2.42	2.42	-0.08	-0.08					1.18	0.90	5.29	2.58	-----	Vehicle	4.30	-0.08	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**117.87**	**196.46**	**3677.68**	**6129.47**
	L_{33} - L_{34}	3.87	3.17	2.45	2.45	-0.39	-0.39					1.18	0.90	3.87	2.61	-----	Vehicle	3.17	-0.42	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**72.26**	**120.43**	**459.39**	**765.65**
	L_{34} - L_{35}	4.21	3.54	3.11	3.11	-0.41	-0.41					1.18	0.90	4.21	3.31	-----	Vehicle	3.54	-0.43	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**66.42**	**110.71**	**517.35**	**862.25**
	L_{35} - L_{36}	4.37	3.40	2.55	2.55	-0.20	-0.20					1.18	0.90	4.37	2.71	-----	Vehicle	3.40	-0.21	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**111.62**	**186.03**	**1451.19**	**2418.65**
	L_{36} - L_{37}	2.06	0.88	2.85	2.85	-0.47	-0.47					1.18	0.90	2.06	3.04	-----	Vehicle	0.88	-0.50	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**63.74**	**106.23**	**390.31**	**650.52**
	L_{37} - L_{38}	3.79	2.22	4.14	4.14	-1.80	-1.80					1.18	0.90	3.79	4.41	-----	Vehicle	2.22	-1.92	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**125.32**	**208.87**	**290.56**	**484.27**
	L_{38} - L_{39}	-1.73	-3.35	0.64	0.64	-2.84	-2.84					1.18	0.90	-1.73	0.68	-----	Vehicle	-3.35	-3.02	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**801.18**	**1335.29**	**180.23**	**300.38**
	L_{39} - L_{40}	1.42	-0.10	2.00	2.00	-1.83	-1.83					1.18	0.90	1.42	2.13	-----	Vehicle	-0.10	-1.95	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**232.84**	**388.06**	**255.14**	**425.24**
	L_{40} - L_{41}	-3.01	-4.16	0.29	0.29	-2.96	-2.96					1.18	0.90	-3.01	0.31	-----	Vehicle	-4.16	-3.16	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**1235.35**	**2058.92**	**119.09**	**198.48**
	L_{41} - L_{42}	-1.55	-2.29	0.41	0.41	-2.84	-2.84					1.18	0.90	-1.55	0.43	-----	Vehicle	-2.29	-3.02	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**610.61**	**1017.68**	**86.31**	**143.86**
	L_{42} - L_{43}	-3.17	-3.75	0.29	0.29	-2.61	-2.61					1.18	0.90	-3.17	0.31	-----	Vehicle	-3.75	-2.78	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**239.56**	**399.27**	**24.91**	**41.52**
	L_{43} - L_{44}	-3.25	-3.76	0.26	0.26	-2.65	-2.65					1.18	0.90	-3.25	0.28	-----	Vehicle	-3.76	-2.82	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**524.01**	**873.35**	**49.92**	**83.20**
Structure 3	L_0 - L_1	6.90	-2.96	2.13	2.13	-0.13	-0.13					1.20	0.90	6.90	2.30	-----	Vehicle	-2.96	-0.14	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**44.34**	**73.89**	**743.62**	**1239.37**
	L_1 - L_2	10.33	-2.13	2.04	2.04	-0.15	-0.15					1.20	0.90	10.33	2.20	-----	Vehicle	-2.13	-0.16	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**45.35**	**75.59**	**634.86**	**1058.09**
	L_2 - L_3	8.48	-3.27	2.30	2.30	-0.20	-0.20					1.20	0.90	8.48	2.48	-----	Vehicle	-3.27	-0.21	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**94.05**	**156.74**	**1113.68**	**1856.13**
	L_3 - L_4	10.92	-0.17	2.32	2.32	-0.19	-0.19					1.20	0.90	10.92	2.51	-----	Vehicle	-0.17	-0.21	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**138.84**	**231.41**	**1720.71**	**2867.85**
	L_4 - L_5	3.28	-6.17	1.73	1.73	-1.18	-1.18					1.20	0.90	3.28	1.86	-----	Vehicle	-6.17	-1.27	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**256.19**	**426.99**	**373.28**	**622.13**
	L_5 - L_6	10.07	-2.62	3.99	3.99	-0.36	-0.36					1.20	0.90	10.07	4.30	-----	Vehicle	-2.62	-0.38	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**110.00**	**183.33**	**1247.37**	**2078.94**
	L_6 - L_7	-0.48	-11.65	0.60	0.60	-4.23	-4.23					1.20	0.90	-0.48	0.65	-----	Vehicle	-11.65	-4.56	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**596.53**	**994.21**	**83.20**	**138.66**
	L_7 - L_8	3.36	-6.18	0.85	0.85	-1.15	-1.15					1.20	0.90	3.36	0.92	-----	Vehicle	-6.18	-1.24	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**293.10**	**488.49**	**214.27**	**357.12**
	L_8 - L_9	1.47	-11.13	0.26	0.26	-2.39	-2.39					1.20	0.90	1.47	0.28	-----	Vehicle	-11.13	-2.57	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**481.04**	**801.73**	**50.97**	**84.95**
	L_9 - L_{10}	-0.54	-9.03	0.14	0.14	-2.65	-2.65					1.20	0.90	-0.54	0.15	-----	Vehicle	-9.03	-2.85	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**935.15**	**1558.59**	**46.40**	**77.34**
	L_{10} - L_{11}	2.22	-10.62	1.00	1.00	-2.41	-2.41					1.20	0.90	2.22	1.07	-----	Vehicle	-10.62	-2.59	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**298.54**	**497.57**	**121.77**	**202.95**
	L_{11} - L_{12}	-6.24	-14.06	0.07	0.07	-5.54	-5.54					1.20	0.90	-6.24	0.07	-----	Vehicle	-14.06	-5.98	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**5892.25**	**9820.42**	**70.23**	**117.06**
	L_{12} - L_{13}	12.41	3.95	4.35	4.35	-0.11	-0.11					1.24	0.90	12.41	4.84	-----	Vehicle	3.95	-0.12	-----	Vehicle	15.00

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

North Truss - Verticals

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	U_0 - L_0	-3.17	-3.17	0.43	0.43	-2.68	-2.68					1.24	0.90	-3.17	0.48	-----	Vehicle	-3.17	-2.99	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**239.97**	**399.95**	**37.56**	**62.60**
	U_0 - L_1	-0.96	-0.96	0.57	0.57	-2.61	-2.61					1.24	0.90	-0.96	0.63	-----	Vehicle	-0.96	-2.91	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**182.23**	**303.71**	**39.05**	**65.08**
	U_0 - L_2	0.27	0.27	0.62	0.62	-1.88	-1.88					1.24	0.90	0.27	0.69	-----	Vehicle	0.27	-2.10	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**163.94**	**273.23**	**54.48**	**90.80**
	U_0 - L_3	1.48	1.48	0.83	0.83	-1.40	-1.40					1.24	0.90	1.48	0.92	-----	Vehicle	1.48	-1.56	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**123.20**	**205.33**	**73.58**	**122.64**
	U_0 - L_4	2.22	2.22	1.58	1.58	-0.47	-0.47					1.24	0.90	2.22	1.76	-----	Vehicle	2.22	-0.52	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**64.08**	**106.80**	**220.97**	**368.28**
	U_0 - L_5	2.71	2.71	2.05	2.05	-0.06	-0.06					1.24	0.90	2.71	2.28	-----	Vehicle	2.71	-0.07	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**60.09**	**100.14**	**2101.58**	**3502.64**
	U_0 - L_6	2.52	2.52	2.05	2.05	-0.06	-0.06					1.24	0.90	2.52	2.28	-----	Vehicle	2.52	-0.07	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**53.66**	**89.43**	**1874.07**	**3123.45**
	U_0 - L_7	2.77	2.77	1.76	1.76	-0.05	-0.05					1.24	0.90	2.77	1.96	-----	Vehicle	2.77	-0.05	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**63.22**	**105.37**	**2540.32**	**4233.87**
	U_0 - L_8	-0.17	-0.17	1.81	1.81	-1.22	-1.22					1.24	0.90	-0.17	2.01	-----	Vehicle	-0.17	-1.36	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**109.81**	**183.02**	**162.86**	**271.43**
	U_0 - L_9	-4.89	-4.89	0.15	0.15	-1.90	-1.90					1.20	0.90	-4.89	0.16	-----	Vehicle	-4.89	-2.05	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**930.56**	**1550.94**	**68.68**	**114.46**
	U_{10} - L_{10}	-4.01	-4.01	0.14	0.14	-2.07	-2.07					1.20	0.90	-4.01	0.15	-----	Vehicle	-4.01	-2.23	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**1595.12**	**2658.54**	**104.85**	**174.75**
	U_{11} - L_{11}	-5.48	-5.48	0.07	0.07	-2.40	-2.40					1.20	0.90	-5.48	0.07	-----	Vehicle	-5.48	-2.58	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2473.16**	**4121.93**	**64.55**	**107.58**
	U_{12} - L_{12}	-3.87	-3.87	0.26	0.26	-2.16	-2.16					1.20	0.90	-3.87	0.28	-----	Vehicle	-3.87	-2.33	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**520.36**	**867.27**	**60.70**	**101.16**
	U_{13} - L_{13}	-2.32	-2.32	0.33	0.33	-1.67	-1.67					1.20	0.90	-2.32	0.36	-----	Vehicle	-2.32	-1.80	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**351.61**	**586.02**	**68.61**	**114.35**
	U_{14} - L_{14}	-1.13	-1.13	0.68	0.68	-1.01	-1.01					1.20	0.90	-1.13	0.74	-----	Vehicle	-1.13	-1.08	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**155.56**	**259.26**	**104.62**	**174.37**
	U_{15} - L_{15}	0.33	0.33	1.22	1.22	-0.66	-0.66					1.20	0.90	0.33	1.31	-----	Vehicle	0.33	-0.71	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**86.90**	**144.84**	**160.30**	**267.17**
	U_{16} - L_{16}	1.29	1.29	1.27	1.27	-0.26	-0.26					1.20	0.90	1.29	1.37	-----	Vehicle	1.29	-0.28	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**82.46**	**137.44**	**409.59**	**682.64**
	U_{17} - L_{17}	1.86	1.86	1.45	1.45	-0.20	-0.20					1.20	0.90	1.86	1.56	-----	Vehicle	1.86	-0.21	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**88.22**	**147.04**	**655.19**	**1091.98**
	U_{18} - L_{18}	3.24	3.24	1.99	1.99	-0.24	-0.24					1.20	0.90	3.24	2.15	-----	Vehicle	3.24	-0.26	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**66.13**	**110.21**	**568.33**	**947.22**
	U_{19} - L_{19}	2.88	2.88	1.73	1.73	-0.18	-0.18					1.20	0.90	2.88	1.86	-----	Vehicle	2.88	-0.19	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**90.28**	**150.47**	**895.01**	**1491.68**
	U_{20} - L_{20}	2.24	2.24	1.03	1.03	-0.08	-0.08					1.20	0.90	2.24	1.11	-----	Vehicle	2.24	-0.08	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**152.50**	**254.16**	**2091.49**	**3485.82**
Structure 2	U_0 - L_0	-2.38	-2.38	0.13	0.13	-1.11	-1.11					1.18	0.90	-2.38	0.14	-----	Vehicle	-2.38	-1.18	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1371.69**	**2286.16**	**155.76**	**259.60**
	U_1 - L_1	-2.50	-2.50	0.19	0.19	-1.51	-1.51					1.18	0.90	-2.50	0.20	-----	Vehicle	-2.50	-1.61	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**924.44**	**1540.73**	**114.45**	**190.76**
	U_2 - L_2	-2.86	-2.86	0.28	0.28	-1.80	-1.80					1.18	0.90	-2.86	0.29	-----	Vehicle	-2.86	-1.92	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**530.78**	**884.64**	**79.51**	**132.52**
	U_3 - L_3	-1.82	-1.82	0.21	0.21	-1.15	-1.15					1.18	0.90	-1.82	0.23	-----	Vehicle	-1.82	-1.22	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**680.60**	**1134.33**	**123.90**	**206.50**
	U_4 - L_4	-1.16	-1.16	0.27	0.27	-1.29	-1.29					1.18	0.90	-1.16	0.29	-----	Vehicle	-1.16	-1.37	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**393.31**	**655.51**	**82.47**	**137.44**
	U_5 - L_5	-0.32	-0.32	0.44	0.44	-1.08	-1.08					1.18	0.90	-0.32	0.47	-----	Vehicle	-0.32	-1.15	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**242.74**	**404.57**	**98.74**	**164.57**
	U_6 - L_6	0.40	0.40	0.68	0.68	-0.90	-0.90					1.18	0.90	0.40	0.73	-----	Vehicle	0.40	-0.95	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**156.96**	**261.61**	**119.93**	**199.88**
	U_7 - L_7	1.09	1.09	0.75	0.75	-0.44	-0.44					1.18	0.90	1.09	0.80	-----	Vehicle	1.09	-0.47	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**141.44**	**235.73**	**243.73**	**406.21**
	U_8 - L_8	2.68	2.68	1.72	1.72	-0.33	-0.33					1.18	0.90	2.68	1.84	-----	Vehicle	2.68	-0.35	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**65.45**	**109.08**	**348.96**	**581.60**
	U_9 - L_9	4.62	4.62	2.52	2.52	-0.22	-0.22					1.18	0.90	4.62	2.69	-----	Vehicle	4.62	-0.23	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**68.00**	**113.33**	**811.19**	**1351.98**
	U_{10} - L_{10}	4.05	4.05	2.14	2.14	-0.05	-0.05					1.18	0.90	4.05	2.28	-----	Vehicle	4.05	-0.05	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**102.59**	**170.99**	**4396.41**	**7327.36**
	U_{11} - L_{11}	3.61	3.61	1.78	1.78	-0.06	-0.06					1.18	0.90	3.61	1.89	-----	Vehicle	3.61	-0.06	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**123.68**	**206.13**	**3861.48**	**6435.80**
	U_{12} - L_{12}	2.81	2.81	1.56	1.56	-0.17	-0.17					1.18	0.90	2.81	1.66	-----	Vehicle	2.81	-0.18	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**157.41**	**262.35**	**1469.87**	**2449.78**
	U_{13} - L_{13}	2.75	2.75	1.27	1.27	-0.13	-0.13					1.18	0.90	2.75	1.35	-----	Vehicle	2.75	-0.13	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**171.66**	**286.10**	**1754.82**	**2924.69**
	U_{14} - L_{14}	0.70	0.70	0.87	0.87	-0.81	-0.81					1.18	0.90	0.70	0.93	-----	Vehicle	0.70	-0.86	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**245.40**	**409.00**	**264.50**	**440.84**
	U_{15} - L_{15}	-1.74	-1.74	0.11	0.11	-0.98	-0.98					1.17	0.90	-1.74	0.12	-----	Vehicle	-1.74	-1.03	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1329.86**	**2216.44**	**149.06**	**248.43**
	U_{16} - L_{16}	-1.62	-1.62	0.16	0.16	-1.38	-1.38					1.17	0.90	-1.62	0.17	-----	Vehicle	-1.62	-1.45	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1094.10**	**1823.51**	**127.28**	**212.14**
	U_{17} - L_{17}	-2.53	-2.53	0.17	0.17	-1.68	-1.68					1.17	0.90	-2.53	0.18	-----	Vehicle	-2.53	-1.77	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**937.15**	**1561.91**	**95.17**	**158.62**
	U_{18} - L_{18}	-2.65	-2.65	0.28	0.28	-1.96	-1.96					1.17	0.90	-2.65	0.29	-----	Vehicle	-2.65	-2.06	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**530.95**	**884.91**	**74.15**	**123.58**
	U_{19} - L_{19}	-1.79	-1.79	0.23	0.23	-1.44	-1.44					1.17	0.90	-1.79	0.24	-----	Vehicle	-1.79	-1.51	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**576.89**	**961.49**	**91.45**	**152.41**
	U_{20} - L_{20}	-1.24	-1.24	0.28	0.28	-1.31	-1.31					1.17	0.90	-1.24	0.29	-----	Vehicle	-1.24	-1.38	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**430.71**	**717.84**	**90.11**	**150.19**
	U_{21} - L_{21}	-0.83	-0.83	0.36	0.36	-1.16	-1.16					1.17	0.90	-0.83	0.38	-----	Vehicle	-0.83	-1.22	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**299.10**	**498.50**	**93.20**	**155.33**
	U_{22} - L_{22}	-0.04	-0.04	0.68	0.68	-0.83	-0.83					1.17	0.90	-0.04	0.71	-----	Vehicle	-0.04	-0.87	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**160.15**	**266.91**	**131.20**	**218.67**
	U_{23} - L_{23}	0.80	0.80	1.22	1.22	-0.50	-0.50					1.17	0.90	0.80	1.28	-----	Vehicle	0.80	-0.52	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**88.84**	**148.07**	**218.14**	**363.57**
	U_{24} - L_{24}	1.40	1.40	1.41	1.41	-0.37	-0.37					1.17	0.90	1.40	1.48	-----	Vehicle	1.40	-0.38	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**84.09**	**140.15**	**328.28**	**547.14**
	U_{25} - L_{25}	1.60	1.60	1.55	1.55	-0.30	-0.30					1.17	0.90	1.60	1.63	-----	Vehicle	1.60	-0.31	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**84.95**	**141.58**	**451.37**	**752.28**
	U_{26} - L_{26}	2.43	2.43	2.32	2.32	-0.36	-0.36					1.17	0.90	2.43	2.44	-----	Vehicle	2.43	-0.38	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**62.71**	**104.52**	**406.62**	**677.69**
	U_{27} - L_{27}	2.17	2.17	2.04	2.04	-0.25	-0.25					1.17	0.90	2.17	2.15	-----	Vehicle	2.17	-0.26	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**78.50**	**130.84**	**654.03**	**1090.05**
	U_{28} - L_{28}	1.53	1.53	1.65	1.65	-0.15	-0.15					1.17	0.90	1.53	1.74	-----	Vehicle	1.53	-0.16	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**106.27**	**177.12**	**1158.12**	**1930.21**
	U_{29} - L_{29}	1.55	1.55	1.27	1.27	-0.08	-0.08					1.17	0.90	1.55	1.33	-----	Vehicle	1.55	-0.08	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**115.21**	**192.02**	**1966.70**	**3277.83**
	U_{30} - L_{30}	-0.10	-0.10	0.98	0.98	-0.76	-0.76					1.18	0.90	-0.10	1.04	-----	Vehicle	-0.10	-0.81	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**218.59**	**364.31**	**280.90**	**468.17**
	U_{31} - L_{31}	-1.79	-1.79	0.14	0.14	-0.99	-0.99					1.18	0.90	-1.79	0.14	-----	Vehicle	-1.79	-1.05	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**1633.83**	**2723.06**	**221.65**	**369.42**
	U_{32} - L_{32}	-1.78	-1.78	0.18	0.18	-1.24	-1.24					1.18	0.90	-1.78	0.19	-----	Vehicle	-1.78	-1.32	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**1400.16**	**2333.61**	**198.40**	**330.67**
	U_{33} - L_{33}	-2.46	-2.46	0.10	0.10	-1.49	-1.49					1.18	0.90	-2.46	0.11	-----	Vehicle	-2.46	-1.59	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**2255.76**	**3759.60**	**147.82**	**246.37**
	U_{34} - L_{34}	-2.82	-2.82	0.07	0.07	-2.00	-2.00					1.18	0.90	-2.82	0.07	-----	Vehicle	-2.82	-2.13	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**3438.82**	**5731.37**	**110.12**	**183.53**
	U_{35} - L_{35}	-3.37	-3.37	0.16	0.16	-2.34	-2.34					1.18	0.90	-3.37	0.17	-----	Vehicle	-3.37	-2.49	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1114.78**	**1857.97**	**73.55**	**122.59**
	U_{36} - L_{36}	-1.93	-1.93	0.19	0.19	-1.62	-1.62					1.18	0.90	-1.93	0.20	-----	Vehicle	-1.93	-1.73	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**620.58**	**1034.30**	**69.87**	**116.45**
	U_{37} - L_{37}	-0.91	-0.91	0.30	0.30	-0.93	-0.93					1.18	0.90	-0.91	0.32	-----	Vehicle	-0.91	-0.99	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**362.39**	**603.98**	**114.38**	**190.63**
	U_{38} - L_{38}	-0.45	-0.45	0.80	0.80	-0.92	-0.92					1.18	0.90	-0.45	0.85	-----	Vehicle	-0.45	-0.98	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**135.05**	**225.09**	**116.53**	**194.22**
	U_{39} - L_{39}	0.16	0.16	1.05	1.05	-0.62	-0.62					1.18	0.90	0.16	1.11	-----	Vehicle	0.16	-0.66	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**102.32**	**170.53**	**171.81**	**286.34**
	U_{40} - L_{40}	0.80	0.80	1.27	1.27	-0.33	-0.33					1.18	0.90	0.80	1.36	-----	Vehicle	0.80	-0.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**83.73**	**139.54**	**326.94**	**544.90**
	U_{41} - L_{41}	1.35	1.35	1.36	1.36	-0.26	-0.26					1.18	0.90	1.35	1.45	-----	Vehicle	1.35	-0.27	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**104.55**	**174.25**	**564.80**	**941.33**
	U_{42} - L_{42}	2.23	2.23	2.14	2.14	-0.34	-0.34					1.18	0.90	2.23	2.28	-----	Vehicle	2.23	-0.36	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**67.09**	**111.81**	**428.57**	**714.29**
	U_{43} - L_{43}	2.14	2.14	1.86	1.86	-0.25	-0.25					1.18	0.90	2.14	1.98	-----	Vehicle	2.14	-0.27	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**92.83**	**154.71**	**698.96**	**1164.94**
	U_{44} - L_{44}	1.70	1.70	1.11	1.11	-0.12	-0.12					1.18	0.90	1.70	1.18	-----	Vehicle	1.70	-0.13	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**156.53**	**260.88**	**1424.31**	**2373.86**
Structure 3	U_0 - L_0	-1.87	-1.87	0.08	0.08	-1.13	-1.13					1.20	0.90	-1.87	0.08	-----	Vehicle	-1.87	-1.22	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2035.21**	**3392.02**	**138.77**	**231.28**
	U_1 - L_1	-2.09	-2.09	0.12	0.12	-1.33	-1.33					1.20	0.90	-2.09	0.13	-----	Vehicle	-2.09	-1.44	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1312.98**	**2188.31**	**117.61**	**196.02**
	U_2 - L_2	-2.61	-2.61	0.19	0.19	-1.80	-1.80					1.20	0.90	-2.61	0.20	-----	Vehicle	-2.61	-1.94	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**729.24**	**1215.41**	**73.38**	**122.30**
	U_3 - L_3	-1.48	-1.48	0.15	0.15	-1.19	-1.19					1.20	0.90	-1.48	0.17	-----	Vehicle	-1.48	-1.28	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**841.04**	**1401.73**	**107.36**	**178.94**
	U_4 - L_4	-1.08	-1.08	0.21	0.21	-1.20	-1.20					1.20	0.90	-1.08	0.23	-----	Vehicle	-1.08	-1.29	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**499.41**	**832.35**	**87.64**	**146.07**
	U_5 - L_5	-0.23	-0.23	0.41	0.41	-1.33	-1.33					1.20	0.90	-0.23	0.45	-----	Vehicle	-0.23	-1.44	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**255.81**	**426.34**	**79.31**	**132.19**
	U_6 - L_6	0.90	0.90	0.91	0.91	-0.76	-0.76					1.20	0.90	0.90	0.98	-----	Vehicle	0.90	-0.82	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**116.33**	**193.88**	**139.28**	**232.14**
	U_7 - L_7	1.97	1.97	1.67	1.67	-0.53	-0.53					1.20	0.90	1.97	1.80	-----	Vehicle	1.97	-0.57	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**68.85**	**114.75**	**223.31**	**372.19**
	U_8 - L_8	3.44	3.44	2.15	2.15	-0.41	-0.41					1.20	0.90	3.44	2.32	-----	Vehicle	3.44	-0.44	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**60.95**	**101.58**	**331.01**	**551.68**
	U_9 - L_9	4.72	4.72	2.85	2.85	-0.05	-0.05					1.20	0.90	4.72	3.07	-----	Vehicle	4.72	-0.05	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**54.47**	**90.79**	**3562.94**	**5938.23**
	U_{10} - L_{10}	3.92	3.92	2.55	2.55	-0.07	-0.07					1.20	0.90	3.92	2.75	-----	Vehicle	3.92	-0.08	-----	Vehicle	16.16	0.83	2	9.75	5	73

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches)	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
North Truss - Diagonals																																			
Structure 1	U_0 - L_1	-0.26	-0.76	0.10	0.10	-0.63	-0.63					1.24	0.90	-0.26	0.11	-----	Vehicle	-0.76	-0.70	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**507.45**	**845.75**	**78.32**	**130.53**
	U_1 - L_2	0.21	-0.09	0.08	0.08	-0.28	-0.28					1.24	0.90	0.21	0.09	-----	Vehicle	-0.09	-0.31	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1311.86**	**2186.43**	**364.39**	**607.31**
	U_2 - L_3	0.24	-0.07	0.10	0.10	-0.20	-0.20					1.24	0.90	0.24	0.11	-----	Vehicle	-0.07	-0.22	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1065.74**	**1776.24**	**509.47**	**849.12**
	U_3 - L_4	0.40	0.09	0.13	0.13	-0.04	-0.04					1.24	0.90	0.40	0.15	-----	Vehicle	0.09	-0.04	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**780.31**	**1300.52**	**2697.04**	**4495.06**
	U_4 - L_4	-0.25	-0.59	0.05	0.05	-0.28	-0.28					1.24	0.90	-0.25	0.06	-----	Vehicle	-0.59	-0.31	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2446.54**	**4077.56**	**452.07**	**753.44**
	U_5 - L_5	-1.06	-1.52	0.06	0.06	-0.79	-0.79					1.24	0.90	-1.06	0.06	-----	Vehicle	-1.52	-0.88	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2277.65**	**3796.08**	**162.37**	**270.62**
	U_6 - L_6	-1.31	-1.77	0.03	0.03	-1.10	-1.10					1.24	0.90	-1.31	0.03	-----	Vehicle	-1.77	-1.23	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**5198.33**	**8663.88**	**116.32**	**193.86**
	U_7 - L_7	-0.76	-1.25	0.03	0.03	-0.70	-0.70					1.24	0.90	-0.76	0.03	-----	Vehicle	-1.25	-0.78	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**4471.02**	**7451.70**	**184.48**	**307.46**
	U_8 - L_9	-0.94	-1.86	0.10	0.10	-0.60	-0.60					1.20	0.90	-0.94	0.11	-----	Vehicle	-1.86	-0.65	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**1652.93**	**2754.89**	**273.82**	**456.37**
	U_9 - L_{10}	-1.58	-2.42	0.09	0.09	-0.87	-0.87					1.20	0.90	-1.58	0.10	-----	Vehicle	-2.42	-0.94	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**1858.90**	**3098.16**	**190.18**	**316.97**
	U_{10} - L_{11}	-1.35	-2.21	0.05	0.05	-0.65	-0.65					1.20	0.90	-1.35	0.06	-----	Vehicle	-2.21	-0.70	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2526.26**	**4210.44**	**204.20**	**340.33**
	U_{11} - L_{12}	-1.02	-1.50	0.07	0.07	-0.66	-0.66					1.20	0.90	-1.02	0.07	-----	Vehicle	-1.50	-0.71	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2293.85**	**3823.08**	**236.61**	**394.35**
	U_{12} - L_{13}	-0.89	-1.60	0.11	0.11	-0.60	-0.60					1.20	0.90	-0.89	0.12	-----	Vehicle	-1.60	-0.64	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1076.61**	**1794.36**	**190.32**	**317.20**
	U_{13} - L_{14}	-0.18	-0.51	0.13	0.13	-0.26	-0.26					1.20	0.90	-0.18	0.14	-----	Vehicle	-0.51	-0.28	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**827.14**	**1378.57**	**412.07**	**686.78**
	U_{14} - L_{15}	0.39	0.05	0.25	0.25	-0.19	-0.19					1.20	0.90	0.39	0.27	-----	Vehicle	0.05	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**415.59**	**692.64**	**556.86**	**928.10**
	U_{15} - L_{16}	-0.16	-0.50	0.15	0.15	-0.37	-0.37					1.20	0.90	-0.16	0.16	-----	Vehicle	-0.50	-0.40	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**720.14**	**1200.23**	**282.07**	**470.12**
	U_{16} - L_{17}	-0.37	-0.76	0.09	0.09	-0.53	-0.53					1.20	0.90	-0.37	0.10	-----	Vehicle	-0.76	-0.57	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1448.33**	**2413.88**	**243.40**	**405.66**
	U_{18} - L_{17}	-1.43	-1.90	0.12	0.12	-0.97	-0.97					1.20	0.90	-1.43	0.13	-----	Vehicle	-1.90	-1.04	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1091.50**	**1819.17**	**136.64**	**227.73**
	U_{19} - L_{18}	-1.43	-1.96	0.10	0.10	-0.95	-0.95					1.20	0.90	-1.43	0.11	-----	Vehicle	-1.96	-1.02	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1468.04**	**2446.74**	**149.45**	**249.09**
	U_{20} - L_{19}	-0.81	-1.39	0.05	0.05	-0.69	-0.69					1.20	0.90	-0.81	0.05	-----	Vehicle	-1.39	-0.74	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2814.14**	**4690.23**	**206.83**	**344.72**
Structure 2	U_0 - L_1	-1.46	-2.01	0.10	0.10	-0.88	-0.88					1.18	0.90	-1.46	0.11	-----	Vehicle	-2.01	-0.93	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1543.55**	**2572.58**	**181.02**	**301.70**
	U_1 - L_2	-1.39	-1.93	0.14	0.14	-0.97	-0.97					1.18	0.90	-1.39	0.14	-----	Vehicle	-1.93	-1.03	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1180.08**	**1966.81**	**163.86**	**273.10**
	U_2 - L_3	-1.30	-1.78	0.16	0.16	-0.93	-0.93					1.18	0.90	-1.30	0.17	-----	Vehicle	-1.78	-0.99	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**865.53**	**1442.54**	**144.56**	**240.93**
	U_3 - L_4	-0.57	-0.98	0.12	0.12	-0.57	-0.57					1.18	0.90	-0.57	0.13	-----	Vehicle	-0.98	-0.61	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1186.64**	**1977.73**	**249.05**	**415.09**
	U_4 - L_5	-0.10	-0.45	0.12	0.12	-0.42	-0.42					1.18	0.90	-0.10	0.13	-----	Vehicle	-0.45	-0.45	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**871.31**	**1452.19**	**255.65**	**426.08**
	U_5 - L_6	0.26	-0.08	0.23	0.23	-0.33	-0.33					1.18	0.90	0.26	0.25	-----	Vehicle	-0.08	-0.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**459.08**	**765.14**	**323.47**	**539.12**
	U_6 - L_7	0.47	0.08	0.28	0.28	-0.19	-0.19					1.18	0.90	0.47	0.29	-----	Vehicle	0.08	-0.20	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**423.66**	**706.10**	**629.21**	**1048.69**
	U_8 - L_7	-0.31	-1.10	0.16	0.16	-0.41	-0.41					1.18	0.90	-0.31	0.17	-----	Vehicle	-1.10	-0.43	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**598.67**	**997.78**	**239.29**	**398.82**
	U_8 - L_8	-1.36	-1.87	0.14	0.14	-0.86	-0.86					1.18	0.90	-1.36	0.15	-----	Vehicle	-1.87	-0.91	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1040.36**	**1733.93**	**168.03**	**280.05**
	U_{10} - L_9	-1.34	-1.84	0.07	0.07	-0.84	-0.84					1.18	0.90	-1.34	0.07	-----	Vehicle	-1.84	-0.90	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2325.51**	**3875.86**	**188.67**	**314.44**
	U_{11} - L_{10}	-1.60	-2.16	0.02	0.02	-0.93	-0.93					1.18	0.90	-1.60	0.02	-----	Vehicle	-2.16	-0.99	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**9729.81**	**16216.35**	**186.85**	**311.41**
	U_{12} - L_{11}	-1.61	-2.20	0.04	0.04	-0.93	-0.93					1.18	0.90	-1.61	0.04	-----	Vehicle	-2.20	-0.99	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**4378.49**	**7297.48**	**186.82**	**311.36**
	U_{13} - L_{12}	-1.62	-2.23	0.11	0.11	-0.97	-0.97					1.18	0.90	-1.62	0.11	-----	Vehicle	-2.23	-1.03	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1529.72**	**2549.53**	**164.19**	**273.66**
	U_{14} - L_{13}	-0.88	-1.51	0.12	0.12	-0.64	-0.64					1.18	0.90	-0.88	0.12	-----	Vehicle	-1.51	-0.69	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1369.25**	**2282.08**	**246.67**	**411.12**
	U_{14} - L_{15}	-0.27	-0.82	0.08	0.08	-0.51	-0.51					1.17	0.90	-0.27	0.09	-----	Vehicle	-0.82	-0.53	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1649.68**	**2749.47**	**269.37**	**448.96**
	U_{15} - L_{16}	-0.82	-1.35	0.11	0.11	-0.77	-0.77					1.17	0.90	-0.82	0.11	-----	Vehicle	-1.35	-0.81	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1270.74**	**2117.89**	**176.39**	**293.99**
	U_{16} - L_{17}	-0.97	-1.52	0.08	0.08	-0.87	-0.87					1.17	0.90	-0.97	0.09	-----	Vehicle	-1.52	-0.92	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1794.84**	**2991.40**	**167.15**	**278.58**
	U_{17} - L_{18}	-1.04	-1.53	0.10	0.10	-0.85	-0.85					1.17	0.90	-1.04	0.10	-----	Vehicle	-1.53	-0.90	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1445.95**	**2409.92**	**159.69**	**266.15**
	U_{18} - L_{19}	-0.98	-1.46	0.11	0.11	-0.84	-0.84					1.17	0.90	-0.98	0.12	-----	Vehicle	-1.46	-0.89	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1204.64**	**2007.73**	**161.26**	**268.76**
	U_{19} - L_{20}	-0.28	-1.03	0.11	0.11	-0.61	-0.61					1.17	0.90	-0.28	0.11	-----	Vehicle	-1.03	-0.64	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**928.43**	**1547.38**	**162.16**	**270.27**
	U_{20} - L_{21}	-0.23	-0.57	0.13	0.13	-0.42	-0.42					1.17	0.90	-0.23	0.13	-----	Vehicle	-0.57	-0.44	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**861.34**	**1435.56**	**256.10**	**426.83**
	U_{21} - L_{22}	0.04	-0.30	0.21	0.21	-0.27	-0.27					1.17	0.90	0.04	0.22	-----	Vehicle	-0.30	-0.28	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**521.05**	**868.41**	**406.87**	**678.11**
	U_{23} - L_{22}	0.07	-0.27	0.22	0.22	-0.23	-0.23					1.17	0.90	0.07	0.23	-----	Vehicle	-0.27	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**490.31**	**817.19**	**468.58**	**780.97**
	U_{24} - L_{23}	-0.17	-0.52	0.15	0.15	-0.38	-0.38					1.17	0.90	-0.17	0.16	-----	Vehicle	-0.52	-0.40	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**704.51**	**1174.19**	**281.52**	**469.19**
	U_{25} - L_{24}	-0.29	-1.06	0.15	0.15	-0.56	-0.56					1.17	0.90	-0.29	0.15	-----	Vehicle	-1.06	-0.59	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**680.48**	**1134.13**	**175.09**	**291.82**
	U_{26} - L_{25}	-0.69	-1.19	0.14	0.14	-0.83	-0.83					1.17	0.90	-0.69	0.15	-----	Vehicle	-1.19	-0.87	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**952.54**	**1587.57**	**164.56**	**274.27**
	U_{27} - L_{26}	-0.78	-1.29	0.12	0.12	-0.85	-0.85					1.17	0.90	-0.78	0.12	-----	Vehicle	-1.29	-0.89	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1162.85**	**1938.09**	**160.23**	**267.06**
	U_{28} - L_{27}	-0.72	-1.28	0.10	0.10	-0.90	-0.90					1.17	0.90	-0.72	0.10	-----	Vehicle	-1.28	-0.95	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1485.15**	**2475.25**	**161.39**	**268.98**
	U_{29} - L_{28}	-0.68	-1.22	0.06	0.06	-0.86	-0.86					1.17	0.90	-0.68	0.07	-----	Vehicle	-1.22	-0.91	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2143.06**	**3571.77**	**157.86**	**263.10**
	U_{30} - L_{29}	-0.22	-0.79	0.06	0.06	-0.55	-0.55					1.17	0.90	-0.22	0.06	-----	Vehicle	-0.79	-0.58	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2244.24**	**3740.39**	**248.31**	**413.85**
	U_{30} - L_{31}	-0.49	-1.12	0.11	0.11	-0.57	-0.57					1.18	0.90	-0.49	0.12	-----	Vehicle	-1.12	-0.60	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1403.33**	**2338.89**	**280.06**	**466.77**
	U_{31} - L_{32}	-1.09	-1.69	0.14	0.14	-0.85	-0.85					1.18	0.90	-1.09	0.15	-----	Vehicle	-1.69	-0.91	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1121.14**	**1868.56**	**186.55**	**310.91**
	U_{32} - L_{33}	-1.17	-1.76	0.10	0.10	-0.85	-0.85					1.18	0.90	-1.17	0.11	-----	Vehicle	-1.76	-0.91	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1731.64**	**2886.07**	**203.34**	**338.90**
	U_{33} - L_{34}	-1.34	-1.87	0.08	0.08	-0.92	-0.92					1.18	0.90	-1.34	0.09	-----	Vehicle	-1.87	-0.98	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2134.03**	**3556.71**	**187.83**	**313.05**
	U_{34} - L_{35}	-1.13	-1.62	0.05	0.05	-0.89	-0.89					1.18	0.90	-1.13	0.05	-----	Vehicle	-1.62	-0.95	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3340.50**	**5567.50**	**178.22**	**297.03**
	U_{35} - L_{36}	-1.11	-1.61	0.09	0.09	-0.92	-0.92					1.18	0.90	-1.11	0.10	-----	Vehicle	-1.61	-0.98	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1564.62**	**2607.70**	**156.84**	**261.40**
	U_{36} - L_{37}	-0.27	-1.04	0.14	0.14	-0.49	-0.49					1.18	0.90	-0.27	0.15	-----	Vehicle	-1.04	-0.52	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**711.31**	**1185.52**	**198.82**	**331.36**
	U_{38} - L_{37}	0.40	0.00	0.30	0.30	-0.13	-0.13					1.18	0.90	0.40	0.32	-----	Vehicle	0.00	-0.14	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**396.60**	**660.99**	**891.06**	**1485.11**
	U_{39} - L_{38}	0.27	-0.08	0.26	0.26	-0.27	-0.27					1.18	0.90	0.27	0.28	-----	Vehicle	-0.08	-0.29	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**405.16**	**675.26**	**399.52**	**665.86**
	U_{40} - L_{39}	0.01	-0.35	0.15	0.15	-0.36	-0.36					1.18	0.90	0.01	0.16	-----	Vehicle	-0.35	-0.38	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**700.07**	**1166.79**	**296.99**	**494.99**
	U_{41} - L_{40}	-0.30	-0.73	0.12	0.12	-0.55	-0.55					1.18	0.90	-0.30	0.13	-----	Vehicle	-0.73	-0.59	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1185.39**	**1975.65**	**259.26**	**432.10**
	U_{42} - L_{41}	-0.81	-1.29	0.16	0.16	-0.96	-0.96					1.18	0.90	-0.81	0.17	-----	Vehicle	-1.29	-1.03	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**837.08**	**1395.13**	**139.59**	**232.65**
	U_{43} - L_{42}	-0.95	-1.50	0.15	0.15	-1.05	-1.05					1.18	0.90	-0.95	0.16	-----	Vehicle	-1.50	-1.12	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1075.43**	**1792.39**	**150.72**	**251.20**
	U_{44} - L_{43}	-1.00	-1.57	0.07	0.07	-0.74	-0.74					1.18	0.90	-1.00	0.07	-----	Vehicle	-1.57	-0.79	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2289.58**	**3815.97**	**214.33**	**357.22**
Structure 3	U_0 - L_1	-1.06	-1.63	0.05	0.05	-0.93	-0.93					1.20	0.90	-1.06	0.06	-----	Vehicle	-1.63	-1.00	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2762.77**	**4604.62**	**152.70**	**254.50**
	U_1 - L_2	-1.16	-1.67	0.08	0.08	-0.84	-0.84					1.20	0.90	-1.16	0.08	-----	Vehicle	-1.67	-0.91	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1891.02**	**3151.70**	**169.21**	**282.02**
	U_2 - L_3	-1.32	-1.78	0.11	0.11	-0.98	-0.98					1.20	0.90	-1.32	0.11	-----	Vehicle	-1.78	-1.06	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1265.98**	**2109.97**	**135.31**	**225.52**
	U_3 - L_4	-0.36	-0.74	0.08	0.08	-0.53	-0.53					1.20	0.90	-0.36	0.09	-----	Vehicle	-0.74	-0.57	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1571.85**	**2619.76**	**241.59**	**402.65**
	U_4 - L_5	-0.13	-0.47	0.14	0.14	-0.42	-0.42					1.20	0.90	-0.13	0.15	-----	Vehicle	-0.47	-0.45	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**772.61**	**1287.68**	**254.24**	**423.74**
	U_5 - L_6	0.35	0.02	0.21	0.21	-0.23	-0.23					1.20	0.90	0.35	0.22	-----	Vehicle	0.02	-0.25	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**510.05**	**850.09**	**455.98**	**759.96**
	U_7 - L_6	-0.07	-0.41	0.15	0.15	-0.21	-0.21					1.20	0.90	-0.07	0.16	-----	Vehicle	-0.41	-0.23	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**705.43**	**1175.72**	**505.00**	**841.66**
	U_8 - L_7	-0.58	-1.31	0.13	0.13	-0.55	-0.55					1.20	0.90	-0.58	0.14	-----	Vehicle	-1.31	-0.60	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**898.63**	**1497.72**	**206.47**	**344.12**
	U_8 - L_8	-0.75	-1.24	0.04	0.04	-0.65	-0.65					1.20	0.90	-0.75	0.04	-----	Vehicle	-1.24	-0.70	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4161.09**	**6935.15**	**242.68**	**404.47**
	U_{10} - L_9	-0.89	-1.77	0.01	0.01	-0.69	-0.69					1.20	0.90	-0.89	0.01	-----	Vehicle	-1.77	-0.74	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**13363.22**	**22272.03**	**192.64**	**321.07**
	U_{11} - L_{10}	-1.27	-2.15	0.02	0.02	-0.98	-0.98					1.20	0.90	-1.27	0.03	-----	Vehicle	-2.15	-1.05	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**6963.65**	**11606.09**	**169.29**	**282.15**
	U_{12} - L_{11}	-0.73	-1.69	0.09	0.09	-0.67	-0.67					1.20	0.90	-0.73	0.10	-----	Vehicle	-1.69	-0.73	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**1833.31**	**3055.52**	**245.53**	**409.21**
	U_{12} - L_{13}	-0.33	-0.81	0.06

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	4.56	-6.52	4.40	4.40	-1.90	-1.90					1.24	0.75	4.56	4.08	-----	Vehicle	-6.52	-1.76	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**22.05**	**36.75**	**50.40**	**84.00**
		U_1 - U_2	3.38	-4.04	2.50	2.50	-1.20	-1.20					1.24	0.75	3.38	2.32	-----	Vehicle	-4.04	-1.11	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**39.12**	**65.20**	**81.14**	**135.23**
		U_2 - U_3	2.36	-7.47	2.70	2.70	-1.70	-1.70					1.24	0.75	2.36	2.50	-----	Vehicle	-7.47	-1.58	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**36.46**	**60.77**	**55.97**	**93.28**
		U_3 - U_4	2.44	-4.45	2.30	2.30	-2.50	-2.50					1.24	0.75	2.44	2.13	-----	Vehicle	-4.45	-2.32	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**42.78**	**71.30**	**38.84**	**64.74**
		U_4 - U_5	2.34	-4.17	1.50	1.50	-2.70	-2.70					1.24	0.75	2.34	1.39	-----	Vehicle	-4.17	-2.50	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**65.65**	**109.41**	**36.03**	**60.05**
		U_5 - U_6	4.24	-6.30	0.80	0.80	-2.70	-2.70					1.24	0.75	4.24	0.74	-----	Vehicle	-6.30	-2.50	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**121.55**	**202.58**	**35.52**	**59.20**
		U_6 - U_7	6.32	-5.06	1.80	1.80	-2.10	-2.10					1.24	0.75	6.32	1.67	-----	Vehicle	-5.06	-1.95	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**108.82**	**181.36**	**93.66**	**156.10**
		U_7 - U_8	-0.91	-13.50	0.00	0.00	-7.40	-7.40					1.24	0.75	-0.91	-----	-----	-----	-13.50	-6.87	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	-----	-----	**34.85**	**58.08**
		U_8 - U_9	14.68	2.06	5.80	5.80	-0.20	-0.20					1.20	0.75	14.68	5.21	-----	Vehicle	2.06	-0.18	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**19.07**	**31.79**	**609.07**	**1015.12**
		U_9 - U_{10}	6.72	-5.99	2.40	2.40	-0.90	-0.90					1.20	0.75	6.72	2.16	-----	Vehicle	-5.99	-0.81	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**41.14**	**68.57**	**110.26**	**183.77**
		U_{10} - U_{11}	8.58	-2.74	3.50	3.50	-0.40	-0.40					1.20	0.75	8.58	3.14	-----	Vehicle	-2.74	-0.36	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**27.86**	**46.43**	**253.51**	**422.51**
		U_{11} - U_{12}	6.93	-2.59	2.90	2.90	-0.70	-0.70					1.20	0.75	6.93	2.61	-----	Vehicle	-2.59	-0.63	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**45.87**	**76.45**	**194.17**	**323.61**
		U_{12} - U_{13}	8.34	-7.12	3.40	3.40	-1.60	-1.60					1.20	0.75	8.34	3.05	-----	Vehicle	-7.12	-1.44	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**106.44**	**177.40**	**226.69**	**377.82**
		U_{13} - U_{14}	6.26	-2.33	4.00	4.00	-2.10	-2.10					1.20	0.75	6.26	3.59	-----	Vehicle	-2.33	-1.89	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**106.49**	**177.48**	**204.09**	**340.14**
		U_{14} - U_{15}	3.31	-4.79	2.80	2.80	-2.50	-2.50					1.20	0.75	3.31	2.52	-----	Vehicle	-4.79	-2.25	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**152.83**	**254.72**	**170.78**	**284.63**
		U_{15} - U_{16}	9.98	-5.04	3.50	3.50	-3.40	-3.40					1.20	0.75	9.98	3.14	-----	Vehicle	-5.04	-3.05	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**120.99**	**201.66**	**125.52**	**209.20**
		U_{16} - U_{17}	2.83	-6.01	1.90	1.90	-3.60	-3.60					1.20	0.75	2.83	1.71	-----	Vehicle	-6.01	-3.23	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**225.39**	**375.66**	**118.37**	**197.28**
		U_{17} - U_{18}	6.87	-9.04	1.20	1.20	-3.10	-3.10					1.20	0.75	6.87	1.08	-----	Vehicle	-9.04	-2.79	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**259.38**	**432.30**	**99.94**	**166.56**
		U_{18} - U_{19}	2.90	-6.82	0.80	0.80	-3.00	-3.00					1.20	0.75	2.90	0.72	-----	Vehicle	-6.82	-2.70	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**148.12**	**246.87**	**38.63**	**64.38**
		U_{19} - U_{20}	1.99	-7.35	3.20	3.20	-3.90	-3.90					1.20	0.75	1.99	2.88	-----	Vehicle	-7.35	-3.50	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**37.22**	**62.04**	**29.62**	**49.37**
	Structure 2	U_0 - U_1	12.40	-3.78	4.70	4.70	-2.60	-2.60					1.18	0.75	12.40	4.17	-----	Vehicle	-3.78	-2.31	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**25.22**	**42.04**	**47.84**	**79.74**
		U_1 - U_2	8.38	-5.46	3.20	3.20	-0.60	-0.60					1.18	0.75	8.38	2.84	-----	Vehicle	-5.46	-0.53	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**77.57**	**129.28**	**416.99**	**694.99**
		U_2 - U_3	8.24	-2.95	4.70	4.70	-1.00	-1.00					1.18	0.75	8.24	4.17	-----	Vehicle	-2.95	-0.89	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**39.33**	**65.55**	**188.42**	**314.04**
		U_3 - U_4	7.92	-7.97	3.80	3.80	-1.40	-1.40					1.18	0.75	7.92	3.37	-----	Vehicle	-7.97	-1.24	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**109.95**	**183.24**	**298.40**	**497.34**
		U_4 - U_5	5.54	-4.79	5.90	5.90	-3.00	-3.00					1.18	0.75	5.54	5.23	-----	Vehicle	-4.79	-2.66	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**85.43**	**142.38**	**168.18**	**280.30**
		U_5 - U_6	2.70	-7.57	2.30	2.30	-5.10	-5.10					1.18	0.75	2.70	2.04	-----	Vehicle	-7.57	-4.52	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**219.98**	**366.63**	**98.56**	**164.27**
		U_6 - U_7	5.85	-9.91	5.30	5.30	-1.70	-1.70					1.18	0.75	5.85	4.70	-----	Vehicle	-9.91	-1.51	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**79.09**	**131.82**	**244.97**	**408.28**
		U_7 - U_8	8.61	-6.86	2.50	2.50	-5.60	-5.60					1.18	0.75	8.61	2.22	-----	Vehicle	-6.86	-4.97	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**166.93**	**278.22**	**74.73**	**124.56**
		U_8 - U_9	3.73	-10.69	2.50	2.50	-3.30	-3.30					1.18	0.75	3.73	2.22	-----	Vehicle	-10.69	-2.93	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**142.86**	**238.10**	**106.80**	**178.00**
		U_9 - U_{10}	2.20	-9.32	1.70	1.70	-3.60	-3.60					1.18	0.75	2.20	1.51	-----	Vehicle	-9.32	-3.19	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**86.24**	**143.74**	**39.39**	**65.65**
		U_{10} - U_{11}	4.11	-10.14	1.70	1.70	-3.30	-3.30					1.18	0.75	4.11	1.51	-----	Vehicle	-10.14	-2.93	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**85.48**	**142.47**	**42.80**	**71.33**
		U_{11} - U_{12}	3.90	-11.48	1.00	1.00	-4.00	-4.00					1.18	0.75	3.90	0.89	-----	Vehicle	-11.48	-3.55	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**145.47**	**242.45**	**35.08**	**58.47**
		U_{12} - U_{13}	9.71	-7.93	3.00	3.00	-1.50	-1.50					1.18	0.75	9.71	2.66	-----	Vehicle	-7.93	-1.33	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**103.60**	**172.66**	**208.00**	**346.67**
		U_{13} - U_{14}	-10.77	-26.35	0.40	0.40	-9.60	-9.60					1.18	0.75	-10.77	0.35	-----	Vehicle	-26.35	-8.52	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1128.97**	**1881.62**	**44.43**	**74.04**
		U_{14} - U_{15}	23.41	7.84	9.20	9.20	-0.70	-0.70					1.17	0.75	23.41	8.07	-----	Vehicle	7.84	-0.61	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**47.13**	**78.55**	**649.99**	**1083.31**
		U_{15} - U_{16}	7.06	-9.43	3.20	3.20	-1.90	-1.90					1.17	0.75	7.06	2.81	-----	Vehicle	-9.43	-1.67	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**112.23**	**187.06**	**188.17**	**313.62**
		U_{16} - U_{17}	8.63	-3.17	4.40	4.40	-1.00	-1.00					1.17	0.75	8.63	3.86	-----	Vehicle	-3.17	-0.88	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**42.45**	**70.76**	**190.53**	**317.55**
		U_{17} - U_{18}	8.38	-5.41	3.30	3.30	-1.60	-1.60					1.17	0.75	8.38	2.89	-----	Vehicle	-5.41	-1.40	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**37.19**	**61.99**	**77.98**	**129.96**
		U_{18} - U_{19}	8.11	-4.42	4.10	4.10	-0.70	-0.70					1.17	0.75	8.11	3.59	-----	Vehicle	-4.42	-0.61	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**29.98**	**49.97**	**179.20**	**298.67**
		U_{19} - U_{20}	5.79	-4.35	3.00	3.00	-1.90	-1.90					1.17	0.75	5.79	2.63	-----	Vehicle	-4.35	-1.67	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**48.64**	**81.06**	**77.31**	**128.86**
		U_{20} - U_{21}	6.65	-6.59	3.50	3.50	-2.40	-2.40					1.17	0.75	6.65	3.07	-----	Vehicle	-6.59	-2.10	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**78.23**	**130.38**	**114.10**	**190.16**
		U_{21} - U_{22}	6.33	-6.69	3.20	3.20	-1.50	-1.50					1.17	0.75	6.33	2.81	-----	Vehicle	-6.69	-1.32	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**85.63**	**142.71**	**182.51**	**304.18**
		U_{22} - U_{23}	6.91	-6.27	3.20	3.20	-3.20	-3.20					1.17	0.75	6.91	2.81	-----	Vehicle	-6.27	-2.81	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**85.50**	**142.51**	**85.64**	**142.74**
		U_{23} - U_{24}	7.16	-6.08	2.70	2.70	-3.70	-3.70					1.17	0.75	7.16	2.37	-----	Vehicle	-6.08	-3.24	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**101.27**	**168.79**	**74.10**	**123.50**
		U_{24} - U_{25}	4.32	-5.83	2.30	2.30	-2.00	-2.00					1.17	0.75	4.32	2.02	-----	Vehicle	-5.83	-1.75	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**63.88**	**106.47**	**72.94**	**121.57**
		U_{25} - U_{26}	4.60	-7.93	1.70	1.70	-4.10	-4.10					1.17	0.75	4.60	1.49	-----	Vehicle	-7.93	-3.59	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**73.71**	**122.86**	**30.01**	**50.02**
		U_{26} - U_{27}	5.15	-8.64	1.60	1.60	-3.60	-3.60					1.17	0.75	5.15	1.40	-----	Vehicle	-8.64	-3.16	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**78.09**	**130.14**	**34.04**	**56.74**
		U_{27} - U_{28}	3.24	-8.55	1.60	1.60	-3.50	-3.50					1.17	0.75	3.24	1.40	-----	Vehicle	-8.55	-3.07	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**119.05**	**198.42**	**53.38**	**88.97**
		U_{28} - U_{29}	8.81	-7.68	3.20	3.20	-2.90	-2.90					1.17	0.75	8.81	2.81	-----	Vehicle	-7.68	-2.54	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**111.86**	**186.43**	**123.70**	**206.16**
		U_{29} - U_{30}	-7.76	-23.33	0.30	0.30	-10.20	-10.20					1.17	0.75	-7.76	0.26	-----	Vehicle	-23.33	-8.94	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1516.45**	**2527.41**	**42.52**	**70.86**
		U_{30} - U_{31}	24.20	8.63	9.30	9.30	-0.70	-0.70					1.18	0.75	24.20	8.25	-----	Vehicle	8.63	-0.62	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**46.01**	**76.69**	**643.06**	**1071.76**
		U_{31} - U_{32}	7.18	-10.46	2.50	2.50	-2.70	-2.70					1.18	0.75	7.18	2.22	-----	Vehicle	-10.46	-2.40	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**125.00**	**208.34**	**114.92**	**191.54**
		U_{32} - U_{33}	10.91	-4.46	3.80	3.80	-0.60	-0.60					1.18	0.75	10.91	3.37	-----	Vehicle	-4.46	-0.53	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**37.03**	**61.72**	**241.81**	**403.01**
		U_{33} - U_{34}	9.22	-5.03	3.40	3.40	-0.70	-0.70					1.18	0.75	9.22	3.02	-----	Vehicle	-5.03	-0.62	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**41.73**	**69.54**	**206.71**	**344.52**
		U_{34} - U_{35}	9.09	-2.43	4.50	4.50	-1.10	-1.10					1.18	0.75	9.09	3.99	-----	Vehicle	-2.43	-0.98	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**31.55**	**52.58**	**133.14**	**221.91**
		U_{35} - U_{36}	10.27	-4.15	3.10	3.10	-2.40	-2.40					1.18	0.75	10.27	2.75	-----	Vehicle	-4.15	-2.13	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**113.78**	**189.64**	**148.70**	**247.83**
		U_{36} - U_{37}	6.69	-8.78	5.10	5.10	-0.80	-0.80					1.18	0.75	6.69	4.52	-----	Vehicle	-8.78	-0.71	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**82.08**	**136.81**	**521.51**	**869.19**
		U_{37} - U_{38}	10.53	-5.24	3.70	3.70	-5.30	-5.30					1.18	0.75	10.53	3.28	-----	Vehicle	-5.24	-4.70	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**112.44**	**187.40**	**79.17**	**131.95**
		U_{38} - U_{39}	8.00	-2.27	5.10	5.10	-2.40	-2.40					1.18	0.75	8.00	4.52	-----	Vehicle	-2.27	-2.13	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**98.50**	**164.17**	**210.93**	**351.56**
		U_{39} - U_{40}	5.61	-4.72	3.90	3.90	-4.00	-4.00					1.18	0.75	5.61	3.46	-----	Vehicle	-4.72	-3.55	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**129.23**	**215.38**	**126.15**	**210.24**
		U_{40} - U_{41}	7.75	-8.14	3.20	3.20	-3.80	-3.80					1.18	0.75	7.75	2.84	-----	Vehicle	-8.14	-3.37	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**130.60**	**217.66**	**109.91**	**183.18**
		U_{41} - U_{42}	3.50	-7.70	1.50	1.50	-5.00	-5.00					1.18	0.75	3.50	1.33	-----	Vehicle	-7.70	-4.44	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**125.37**	**208.95**	**37.04**	**61.74**
		U_{42} - U_{43}	4.07	-9.77	1.00	1.00	-2.50	-2.50					1.18	0.75	4.07	0.89	-----	Vehicle	-9.77	-2.22	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**251.14**	**418.56**	**98.91**	**164.85**
		U_{43} - U_{44}	6.60	-9.58	2.80	2.80	-4.30	-4.30					1.18	0.75	6.60	2.48	-----	Vehicle	-9.58	-3.82	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**43.74**	**72.91**	**28.02**	**46.69**
	Structure 3	U_0 - U_1	8.84	-0.50	3.80	3.80	-2.90	-2.90					1.20	0.75	8.84	3.41	-----	Vehicle	-0.50	-2.61	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**30.14**	**50.24**	**41.41**	**69.02**
		U_1 - U_2	5.80	-3.92	2.90	2.90	-0.20	-0.20					1.20	0.75	5.80	2.61	-----	Vehicle	-3.92	-0.18	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**40.19**	**66.99**	**589.11**	**981.85**
		U_2 - U_3	8.91	-7.00	3.90	3.90	-0.60	-0.60					1.20	0.75	8.91	3.50	-----	Vehicle	-7.00	-0.54	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**79.46**	**132.43**	**518.62**	**864.36**
		U_3 - U_4	5.49	-3.35	3.10	3.10	-1.40	-1.40					1.20	0.75	5.49	2.79	-----	Vehicle	-3.35	-1.26	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**137.57**	**229.29**	**305.65**	**509.41**
		U_4 - U_5	5.50	-9.53	3.70	3.70	-2.20	-2.20					1.20	0.75	5.50	3.32	-----	Vehicle	-9.53	-1.98	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**115.26**	**192.10**	**192.63**	**321.04**
		U_5 - U_6	4.95	-3.15	3.60	3.60	-1.80	-1.80					1.20	0.75	4.95	3.23	-----	Vehicle	-3.15	-1.62	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**118.56**	**197.61**	**237.80**	**396.33**
		U_6 - U_7	2.39	-6.20	2.40	2.40	-3.70	-3.70					1.20	0.75	2.39	2.16	-----	Vehicle	-6.20	-3.32	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**178.56**	**297.60**	**115.13**	**191.89**
		U_7 - U_8	7.38	-8.07	2.20	2.20	-2.30	-2.30					1.20	0.75	7.38	1.98	-----	Vehicle	-8.07	-2.07	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**164.79**	**274.65**	**157.42**	**262.37**
		U_8 - U_9	2.59	-6.93	1.60	1.60	-2.90	-2.90					1.20	0.75	2.59	1.44	-----	Vehicle	-6.93	-2.61	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**84.95**	**141.58**	**45.87**	**76.45**
		U_9 - U_{10}	2.81	-8.52	0.70	0.70	-3.50	-3.50					1.20	0.75	2.81	0.63	-----	Vehicle	-8.52	-3.14	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**144.80**	**241.33**	**27.87**	**46.45**
		U_{10} - U_{11}	5.83	-6.88	1.20	1.20	-1.90	-1.90					1.20	0.75	5.83	1.08	-----	Vehicle	-6.88	-1.71	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**82.79**	**137.98**	**51.92**	**86.53**
		U_{11} - U_{12}	-2.18	-14.80	0.10	0.10	-6.00	-6.00					1.20	0.75	-2.18	0.09	-----	Vehicle	-14.80	-5.39	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**1218.95**	**2031.58**	**18.43**	**30.71**
		U_{12} - U_{13}	12.98	0.39	6.30	6.30	0.00	0.00					1.24	0.75	12.98	5.84	-----	Vehicle	0.39	-----	-----	-----	14.00	1.00	2	7.00	5	73.85	92.32	1

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD																										Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$				Maximum Positive Shear				Minimum Negative Shear												Positive Shear Member		Negative Shear Member	
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Inventory RF	Operating RF	Inventory RF	Operating RF
Structure 1	L_0 - L_1	4.20	-2.36	2.90	2.90	-0.40	-0.40					1.24	0.75	4.20	2.69	-----	Vehicle	-2.36	-0.37	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**38.46**	**64.11**	**281.83**	**469.72**
	L_1 - L_2	5.75	-2.53	2.50	2.50	-1.00	-1.00					1.24	0.75	5.75	2.32	-----	Vehicle	-2.53	-0.93	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**44.22**	**73.69**	**112.63**	**187.71**
	L_2 - L_3	2.73	-3.85	2.20	2.20	-1.30	-1.30					1.24	0.75	2.73	2.04	-----	Vehicle	-3.85	-1.21	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**79.44**	**132.40**	**133.88**	**223.13**
	L_3 - L_4	3.90	-4.48	2.70	2.70	-2.40	-2.40					1.24	0.75	3.90	2.50	-----	Vehicle	-4.48	-2.23	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**64.45**	**107.41**	**72.35**	**120.58**
	L_4 - L_5	1.53	-7.85	0.80	0.80	-3.30	-3.30					1.24	0.75	1.53	0.74	-----	Vehicle	-7.85	-3.06	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**184.44**	**307.40**	**43.47**	**72.46**
	L_5 - L_6	1.34	-7.19	0.70	0.70	-2.20	-2.20					1.24	0.75	1.34	0.65	-----	Vehicle	-7.19	-2.04	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**312.98**	**521.64**	**97.87**	**163.11**
	L_6 - L_7	3.62	-6.82	1.10	1.10	-2.50	-2.50					1.24	0.75	3.62	1.02	-----	Vehicle	-6.82	-2.32	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**313.65**	**522.75**	**137.18**	**228.63**
	L_7 - L_8	-6.36	-14.66	0.10	0.10	-6.70	-6.70					1.24	0.75	-6.36	0.09	-----	Vehicle	-14.66	-6.22	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**4657.28**	**7762.13**	**67.48**	**112.47**
	L_8 - L_9	15.52	7.55	6.20	6.20	-0.20	-0.20					1.20	0.75	15.52	5.57	-----	Vehicle	7.55	-0.18	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**75.21**	**125.34**	**2408.43**	**4014.05**
	L_9 - L_{10}	10.29	-2.64	2.50	2.50	-1.20	-1.20					1.20	0.75	10.29	2.25	-----	Vehicle	-2.64	-1.08	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**140.72**	**234.53**	**297.42**	**495.70**
	L_{10} - L_{11}	8.89	0.36	2.80	2.80	-0.20	-0.20					1.20	0.75	8.89	2.52	-----	Vehicle	0.36	-0.18	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**52.66**	**87.76**	**768.08**	**1280.14**
	L_{11} - L_{12}	11.21	-1.42	2.30	2.30	-0.50	-0.50					1.20	0.75	11.21	2.07	-----	Vehicle	-1.42	-0.45	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**63.43**	**105.72**	**304.85**	**508.08**
	L_{12} - L_{13}	6.02	-3.53	2.20	2.20	-0.60	-0.60					1.20	0.75	6.02	1.98	-----	Vehicle	-3.53	-0.54	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**134.92**	**224.87**	**497.49**	**829.16**
	L_{13} - L_{14}	11.62	0.44	4.60	4.60	-1.00	-1.00					1.20	0.75	11.62	4.13	-----	Vehicle	0.44	-0.90	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**91.77**	**152.95**	**430.19**	**716.98**
	L_{14} - L_{15}	2.83	-9.85	2.00	2.00	-3.00	-3.00					1.20	0.75	2.83	1.80	-----	Vehicle	-9.85	-2.70	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**265.62**	**442.70**	**175.52**	**292.53**
	L_{15} - L_{16}	6.71	-2.72	2.20	2.20	-2.60	-2.60					1.20	0.75	6.71	1.98	-----	Vehicle	-2.72	-2.34	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**240.30**	**400.49**	**204.35**	**340.58**
	L_{16} - L_{17}	-0.07	-11.08	0.40	0.40	-3.10	-3.10					1.20	0.75	-0.07	0.36	-----	Vehicle	-11.08	-2.79	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**986.37**	**1643.95**	**124.87**	**208.12**
	L_{17} - L_{18}	3.82	-7.83	0.30	0.30	-2.30	-2.30					1.20	0.75	3.82	0.27	-----	Vehicle	-7.83	-2.07	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**876.36**	**1460.60**	**113.14**	**188.57**
	L_{18} - L_{19}	1.59	-10.77	0.20	0.20	-2.40	-2.40					1.20	0.75	1.59	0.18	-----	Vehicle	-10.77	-2.16	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**584.59**	**974.31**	**46.16**	**76.94**
	L_{19} - L_{20}	2.58	-7.20	0.10	0.10	-2.40	-2.40					1.20	0.75	2.58	0.09	-----	Vehicle	-7.20	-2.16	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1162.59**	**1937.65**	**47.16**	**78.59**
Structure 2	L_0 - L_1	7.47	-2.52	2.70	2.70	-0.40	-0.40					1.18	0.75	7.47	2.40	-----	Vehicle	-2.52	-0.35	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**57.87**	**96.45**	**398.98**	**664.96**
	L_1 - L_2	11.63	-2.16	2.50	2.50	-0.40	-0.40					1.18	0.75	11.63	2.22	-----	Vehicle	-2.16	-0.35	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**61.37**	**102.29**	**399.58**	**665.97**
	L_2 - L_3	8.06	-2.93	3.00	3.00	-0.30	-0.30					1.18	0.75	8.06	2.66	-----	Vehicle	-2.93	-0.27	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**96.75**	**161.25**	**979.08**	**1631.80**
	L_3 - L_4	12.24	-1.94	2.60	2.60	-0.40	-0.40					1.18	0.75	12.24	2.31	-----	Vehicle	-1.94	-0.35	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**160.81**	**268.02**	**1062.67**	**1771.12**
	L_4 - L_5	9.46	-8.43	3.30	3.30	-1.60	-1.60					1.18	0.75	9.46	2.93	-----	Vehicle	-8.43	-1.42	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**167.77**	**279.62**	**346.47**	**577.45**
	L_5 - L_6	11.40	-2.08	2.80	2.80	-1.40	-1.40					1.18	0.75	11.40	2.48	-----	Vehicle	-2.08	-1.24	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**217.27**	**362.11**	**439.04**	**731.73**
	L_6 - L_7	4.02	-9.79	4.00	4.00	-2.60	-2.60					1.18	0.75	4.02	3.55	-----	Vehicle	-9.79	-2.31	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**155.76**	**259.60**	**238.13**	**396.89**
	L_7 - L_8	4.78	-10.27	1.50	1.50	-4.80	-4.80					1.18	0.75	4.78	1.33	-----	Vehicle	-10.27	-4.26	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**290.56**	**484.27**	**90.03**	**150.05**
	L_8 - L_9	0.58	-13.59	0.80	0.80	-2.80	-2.80					1.18	0.75	0.58	0.71	-----	Vehicle	-13.59	-2.48	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**429.82**	**716.36**	**119.66**	**199.44**
	L_9 - L_{10}	-0.11	-10.43	1.00	1.00	-2.90	-2.90					1.18	0.75	-0.11	0.89	-----	Vehicle	-10.43	-2.57	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**250.98**	**418.29**	**84.09**	**140.14**
	L_{10} - L_{11}	-0.07	-12.28	0.50	0.50	-2.90	-2.90					1.18	0.75	-0.07	0.44	-----	Vehicle	-12.28	-2.57	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**430.21**	**717.01**	**71.29**	**118.82**
	L_{11} - L_{12}	1.07	-14.66	0.40	0.40	-2.90	-2.90					1.18	0.75	1.07	0.35	-----	Vehicle	-14.66	-2.57	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**862.54**	**1437.56**	**115.80**	**193.00**
	L_{12} - L_{13}	6.89	-6.84	2.90	2.90	-2.00	-2.00					1.18	0.75	6.89	2.57	-----	Vehicle	-6.84	-1.77	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**172.97**	**288.29**	**250.83**	**418.05**
	L_{13} - L_{14}	-19.00	-32.90	0.50	0.50	-10.90	-10.90					1.18	0.75	-19.00	0.44	-----	Vehicle	-32.90	-9.67	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**1262.29**	**2103.82**	**54.68**	**91.14**
	L_{14} - L_{15}	32.02	18.24	10.30	10.30	-0.60	-0.60					1.17	0.75	32.02	9.03	-----	Vehicle	18.24	-0.53	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**58.62**	**97.70**	**1063.63**	**1772.72**
	L_{15} - L_{16}	2.21	-10.14	2.00	2.00	-2.80	-2.80					1.17	0.75	2.21	1.75	-----	Vehicle	-10.14	-2.45	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**255.42**	**425.70**	**180.50**	**300.84**
	L_{16} - L_{17}	13.39	-0.69	3.40	3.40	-0.30	-0.30					1.17	0.75	13.39	2.98	-----	Vehicle	-0.69	-0.26	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**116.44**	**194.06**	**1348.57**	**2247.62**
	L_{17} - L_{18}	9.56	-2.17	3.00	3.00	-0.50	-0.50					1.17	0.75	9.56	2.63	-----	Vehicle	-2.17	-0.44	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**82.45**	**137.42**	**504.85**	**841.41**
	L_{18} - L_{19}	8.70	-1.33	2.90	2.90	-0.70	-0.70					1.17	0.75	8.70	2.54	-----	Vehicle	-1.33	-0.61	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**60.49**	**100.81**	**257.79**	**429.64**
	L_{19} - L_{20}	9.27	-3.28	2.10	2.10	-0.50	-0.50					1.17	0.75	9.27	1.84	-----	Vehicle	-3.28	-0.44	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**83.34**	**138.90**	**358.24**	**597.07**
	L_{20} - L_{21}	7.20	-3.21	3.00	3.00	-1.20	-1.20					1.17	0.75	7.20	2.63	-----	Vehicle	-3.21	-1.05	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**96.60**	**160.99**	**243.77**	**406.28**
	L_{21} - L_{22}	8.50	-2.78	3.80	3.80	-1.40	-1.40					1.17	0.75	8.50	3.33	-----	Vehicle	-2.78	-1.23	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**76.02**	**126.71**	**209.15**	**348.58**
	L_{22} - L_{23}	2.93	-8.09	2.50	2.50	-3.90	-3.90					1.17	0.75	2.93	2.19	-----	Vehicle	-8.09	-3.42	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**117.08**	**195.14**	**74.15**	**123.58**
	L_{23} - L_{24}	3.61	-6.79	1.50	1.50	-3.20	-3.20					1.17	0.75	3.61	1.32	-----	Vehicle	-6.79	-2.81	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**194.83**	**324.72**	**90.65**	**151.08**
	L_{24} - L_{25}	3.13	-9.39	0.80	0.80	-1.80	-1.80					1.17	0.75	3.13	0.70	-----	Vehicle	-9.39	-1.58	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**224.02**	**373.37**	**97.19**	**161.98**
	L_{25} - L_{26}	1.67	-8.33	1.10	1.10	-3.00	-3.00					1.17	0.75	1.67	0.96	-----	Vehicle	-8.33	-2.63	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**163.84**	**273.06**	**58.55**	**97.59**
	L_{26} - L_{27}	1.60	-10.07	0.70	0.70	-3.30	-3.30					1.17	0.75	1.60	0.61	-----	Vehicle	-10.07	-2.89	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**361.16**	**601.94**	**74.85**	**124.76**
	L_{27} - L_{28}	0.95	-13.04	0.30	0.30	-3.20	-3.20					1.17	0.75	0.95	0.26	-----	Vehicle	-13.04	-2.81	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**1347.98**	**2246.64**	**123.79**	**206.31**
	L_{28} - L_{29}	8.62	-3.57	2.90	2.90	-2.10	-2.10					1.17	0.75	8.62	2.54	-----	Vehicle	-3.57	-1.84	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**174.64**	**291.06**	**242.81**	**404.69**
	L_{29} - L_{30}	-17.40	-30.90	0.70	0.70	-11.10	-11.10					1.17	0.75	-17.40	0.61	-----	Vehicle	-30.90	-9.73	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**910.87**	**1518.11**	**54.46**	**90.77**
	L_{30} - L_{31}	30.59	16.41	10.50	10.50	-0.80	-0.80					1.18	0.75	30.59	9.32	-----	Vehicle	16.41	-0.71	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**56.91**	**94.86**	**786.74**	**1311.23**
	L_{31} - L_{32}	5.57	-8.34	2.20	2.20	-2.80	-2.80					1.18	0.75	5.57	1.95	-----	Vehicle	-8.34	-2.48	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**228.42**	**380.70**	**178.80**	**298.00**
	L_{32} - L_{33}	14.28	-1.54	2.80	2.80	-0.10	-0.10					1.18	0.75	14.28	2.48	-----	Vehicle	-1.54	-0.09	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**120.03**	**200.05**	**3446.94**	**5744.90**
	L_{33} - L_{34}	11.19	-1.33	2.70	2.70	-0.40	-0.40					1.18	0.75	11.19	2.40	-----	Vehicle	-1.33	-0.35	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**76.85**	**128.08**	**535.41**	**892.34**
	L_{34} - L_{35}	10.35	-0.01	3.30	3.30	-0.70	-0.70					1.18	0.75	10.35	2.93	-----	Vehicle	-0.01	-0.62	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**73.91**	**123.18**	**358.42**	**597.37**
	L_{35} - L_{36}	12.98	-1.23	2.50	2.50	-0.60	-0.60					1.18	0.75	12.98	2.22	-----	Vehicle	-1.23	-0.53	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**134.19**	**223.64**	**572.36**	**953.93**
	L_{36} - L_{37}	10.09	-4.97	4.20	4.20	-0.80	-0.80					1.18	0.75	10.09	3.73	-----	Vehicle	-4.97	-0.71	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**50.65**	**84.41**	**270.22**	**450.37**
	L_{37} - L_{38}	10.82	-3.01	4.20	4.20	-3.80	-3.80					1.18	0.75	10.82	3.73	-----	Vehicle	-3.01	-3.37	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**147.25**	**245.42**	**164.14**	**273.57**
	L_{38} - L_{39}	2.38	-11.08	1.80	1.80	-2.90	-2.90					1.18	0.75	2.38	1.60	-----	Vehicle	-11.08	-2.57	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**341.36**	**568.93**	**209.85**	**349.75**
	L_{39} - L_{40}	9.28	-8.60	2.30	2.30	-2.60	-2.60					1.18	0.75	9.28	2.04	-----	Vehicle	-8.60	-2.31	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**240.77**	**401.29**	**213.17**	**355.28**
	L_{40} - L_{41}	1.61	-12.52	0.50	0.50	-2.90	-2.90					1.18	0.75	1.61	0.44	-----	Vehicle	-12.52	-2.57	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**850.59**	**1417.66**	**144.11**	**240.18**
	L_{41} - L_{42}	3.29	-7.64	0.40	0.40	-3.20	-3.20					1.18	0.75	3.29	0.35	-----	Vehicle	-7.64	-2.84	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**733.71**	**1222.84**	**90.79**	**151.32**
	L_{42} - L_{43}	1.35	-12.36	0.30	0.30	-2.40	-2.40					1.18	0.75	1.35	0.27	-----	Vehicle	-12.36	-2.13	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**265.79**	**442.98**	**30.12**	**50.20**
	L_{43} - L_{44}	1.52	-8.38	0.30	0.30	-2.80	-2.80					1.18	0.75	1.52	0.27	-----	Vehicle	-8.38	-2.48	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**534.22**	**890.37**	**55.58**	**92.64**
Structure 3	L_0 - L_1	6.56	-3.30	2.20	2.20	-0.20	-0.20					1.20	0.75	6.56	1.98	-----	Vehicle	-3.30	-0.18	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**51.64**	**86.06**	**578.90**	**964.83**
	L_1 - L_2	10.13	-2.33	2.30	2.30	-0.20	-0.20					1.20	0.75	10.13	2.07	-----	Vehicle	-2.33	-0.18	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**48.36**	**80.59**	**582.11**	**970.19**
	L_2 - L_3	7.92	-3.84	2.50	2.50	-0.20	-0.20					1.20	0.75	7.92	2.25	-----	Vehicle	-3.84	-0.18	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**104.07**	**173.45**	**1314.47**	**2190.79**
	L_3 - L_4	10.42	-0.67	2.60	2.60	-0.30	-0.30					1.20	0.75	10.42	2.34	-----	Vehicle	-0.67	-0.27	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**149.05**	**248.42**	**1313.51**	**2189.19**
	L_4 - L_5	3.19	-6.26	2.50	2.50	-1.50	-1.50					1.20	0.75	3.19	2.25	-----	Vehicle	-6.26	-1.35	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**212.40**	**354.00**	**352.63**	**587.72**
	L_5 - L_6	10.01	-2.69	3.80	3.80	-1.00	-1.00					1.20	0.75	10.01	3.41	-----	Vehicle	-2.69	-0.90	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**138.54**	**230.90**	**531.33**	**885.55**
	L_6 - L_7	-0.14	-11.31	1.70	1.70	-4.40	-4.40					1.20	0.75	-0.14	1.53	-----	Vehicle	-11.31	-3.95	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**252.93**	**421.55**	**95.99**	**159.98**
	L_7 - L_8	3.69	-5.85	1.10	1.10	-1.80	-1.80					1.20	0.75	3.69	0.99	-----	Vehicle	-5.85	-1.62	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**271.26**	**452.10**	**164.97**	**274.95**
	L_8 - L_9	1.43	-11.17	0.80	0.80	-2.30	-2.30					1.20	0.75	1.43	0.72	-----	Vehicle	-11.17	-2.07	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**190.53**	**317.54**	**63.44**	**105.74**
	L_9 - L_{10}	-0.27	-8.76	0.50	0.50	-2.80	-2.80					1.20	0.75	-0.27	0.45	-----	Vehicle	-8.76	-2.52	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**307.12**	**511.86**	**52.69**	**87.81**
	L_{10} - L_{11}	2.24	-10.60	1.20	1.20	-2.30	-2.30					1.20	0.75	2.24	1.08	-----	Vehicle	-10.60	-2.07	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**297.64**	**496.06**	**152.86**	**254.77**
	L_{11} - L_{12}	-7.73	-15.55	0.10	0.10	-6.40	-6.40					1.20	0.75	-7.73	0.09	-----	Vehicle	-15.55	-5.75	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**4818.04**	**8030.06**	**72.85**	**121.42**
	L_{12} - L_{13}	14.02	5.56	5.90	5.90	0.00	0.00					1.24	0.75	14.02	5.47	-----	Vehicle	5.56	-----	-----	-----	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**76.70**	**127.84**	-----	-----
	L_{13} - $L_{14

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD														Maximum Positive Shear				Minimum Negative Shear												Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$																						Positive Shear Member		Negative Shear Member	
	Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Inventory RF	Operating RF	Inventory RF	Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-1.75	-1.75	0.47	0.47	-2.96	-2.96					1.24	0.75	-1.75	0.44	-----	Vehicle	-1.75	-2.75	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**261.73**	**436.22**	**41.12**	**68.53**
		U_1 - L_1	-0.62	-0.62	0.46	0.46	-2.62	-2.62					1.24	0.75	-0.62	0.43	-----	Vehicle	-0.62	-2.43	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**266.94**	**444.90**	**46.73**	**77.88**
		U_2 - L_2	0.44	0.44	0.65	0.65	-2.02	-2.02					1.24	0.75	0.44	0.61	-----	Vehicle	0.44	-1.87	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**187.53**	**312.54**	**61.03**	**101.71**
		U_3 - L_3	1.39	1.39	1.19	1.19	-1.70	-1.70					1.24	0.75	1.39	1.11	-----	Vehicle	1.39	-1.58	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**102.37**	**170.62**	**72.75**	**121.26**
		U_4 - L_4	1.88	1.88	1.84	1.84	-0.88	-0.88					1.24	0.75	1.88	1.71	-----	Vehicle	1.88	-0.81	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**66.04**	**110.06**	**141.56**	**235.93**
		U_5 - L_5	2.05	2.05	2.02	2.02	-0.35	-0.35					1.24	0.75	2.05	1.87	-----	Vehicle	2.05	-0.32	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**73.39**	**122.31**	**431.11**	**718.52**
		U_6 - L_6	2.06	2.06	1.90	1.90	-0.18	-0.18					1.24	0.75	2.06	1.76	-----	Vehicle	2.06	-0.17	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**69.53**	**115.89**	**748.00**	**1246.66**
		U_7 - L_7	2.38	2.38	1.76	1.76	-0.01	-0.01					1.24	0.75	2.38	1.63	-----	Vehicle	2.38	-0.01	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**76.22**	**127.04**	**22821.21**	**38035.35**
		U_8 - L_8	-0.39	-0.39	1.97	1.97	-1.44	-1.44					1.24	0.75	-0.39	1.82	-----	Vehicle	-0.39	-1.33	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**121.20**	**201.99**	**165.78**	**276.29**
		U_9 - L_9	-4.56	-4.56	0.12	0.12	-2.32	-2.32					1.20	0.75	-4.56	0.11	-----	Vehicle	-4.56	-2.08	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1334.50**	**2224.16**	**67.70**	**112.83**
		U_{10} - L_{10}	-3.59	-3.59	0.07	0.07	-2.16	-2.16					1.20	0.75	-3.59	0.06	-----	Vehicle	-3.59	-1.94	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**3966.87**	**6611.44**	**120.72**	**201.20**
		U_{11} - L_{11}	-4.40	-4.40	0.29	0.29	-2.45	-2.45					1.20	0.75	-4.40	0.26	-----	Vehicle	-4.40	-2.20	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**662.71**	**1104.52**	**76.01**	**126.69**
		U_{12} - L_{12}	-3.21	-3.21	0.52	0.52	-2.24	-2.24					1.20	0.75	-3.21	0.47	-----	Vehicle	-3.21	-2.01	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**311.37**	**518.95**	**70.43**	**117.38**
		U_{13} - L_{13}	-1.86	-1.86	0.63	0.63	-1.78	-1.78					1.20	0.75	-1.86	0.57	-----	Vehicle	-1.86	-1.60	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**223.20**	**372.00**	**77.74**	**129.56**
		U_{14} - L_{14}	-0.98	-0.98	0.86	0.86	-1.23	-1.23					1.20	0.75	-0.98	0.77	-----	Vehicle	-0.98	-1.11	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**148.87**	**248.12**	**102.41**	**170.68**
		U_{15} - L_{15}	0.02	0.02	1.23	1.23	-0.95	-0.95					1.20	0.75	0.02	1.10	-----	Vehicle	0.02	-0.85	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**103.35**	**172.25**	**134.33**	**223.88**
		U_{16} - L_{16}	0.93	0.93	1.35	1.35	-0.55	-0.55					1.20	0.75	0.93	1.21	-----	Vehicle	0.93	-0.49	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**93.70**	**156.17**	**234.04**	**390.06**
		U_{17} - L_{17}	1.41	1.41	1.37	1.37	-0.18	-0.18					1.20	0.75	1.41	1.23	-----	Vehicle	1.41	-0.16	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**112.45**	**187.41**	**882.81**	**1471.35**
		U_{18} - L_{18}	2.69	2.69	1.88	1.88	-0.14	-0.14					1.20	0.75	2.69	1.69	-----	Vehicle	2.69	-0.12	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**84.32**	**140.54**	**1173.52**	**1955.86**
		U_{19} - L_{19}	2.33	2.33	1.61	1.61	-0.09	-0.09					1.20	0.75	2.33	1.45	-----	Vehicle	2.33	-0.08	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**116.51**	**194.18**	**2029.86**	**3383.10**
		U_{20} - L_{20}	2.00	2.00	1.18	1.18	-0.05	-0.05					1.20	0.75	2.00	1.06	-----	Vehicle	2.00	-0.05	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**159.66**	**266.09**	**3595.87**	**5993.12**
	Structure 2	U_0 - L_0	-1.99	-1.99	0.18	0.18	-1.36	-1.36					1.18	0.75	-1.99	0.16	-----	Vehicle	-1.99	-1.21	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1169.04**	**1948.40**	**152.75**	**254.58**
		U_1 - L_1	-2.54	-2.54	0.23	0.23	-1.62	-1.62					1.18	0.75	-2.54	0.21	-----	Vehicle	-2.54	-1.44	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**904.71**	**1507.85**	**128.08**	**213.47**
		U_2 - L_2	-2.56	-2.56	0.31	0.31	-1.84	-1.84					1.18	0.75	-2.56	0.27	-----	Vehicle	-2.56	-1.63	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**568.27**	**947.12**	**93.60**	**156.00**
		U_3 - L_3	-1.64	-1.64	0.22	0.22	-1.21	-1.21					1.18	0.75	-1.64	0.19	-----	Vehicle	-1.64	-1.07	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**793.67**	**1322.78**	**141.75**	**236.25**
		U_4 - L_4	-1.05	-1.05	0.38	0.38	-1.30	-1.30					1.18	0.75	-1.05	0.33	-----	Vehicle	-1.05	-1.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**344.66**	**574.44**	**98.18**	**163.63**
		U_5 - L_5	-0.25	-0.25	0.69	0.69	-1.10	-1.10					1.18	0.75	-0.25	0.61	-----	Vehicle	-0.25	-0.98	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**187.62**	**312.69**	**116.28**	**193.80**
		U_6 - L_6	0.42	0.42	0.89	0.89	-1.04	-1.04					1.18	0.75	0.42	0.79	-----	Vehicle	0.42	-0.92	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**144.92**	**241.54**	**124.10**	**206.84**
		U_7 - L_7	1.07	1.07	0.81	0.81	-0.55	-0.55					1.18	0.75	1.07	0.72	-----	Vehicle	1.07	-0.49	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**157.02**	**261.70**	**235.45**	**392.42**
		U_8 - L_8	2.63	2.63	1.90	1.90	-0.63	-0.63					1.18	0.75	2.63	1.69	-----	Vehicle	2.63	-0.56	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**71.13**	**118.55**	**219.92**	**366.53**
		U_9 - L_9	4.75	4.75	2.40	2.40	-0.63	-0.63					1.18	0.75	4.75	2.13	-----	Vehicle	4.75	-0.56	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**85.89**	**143.15**	**338.04**	**563.41**
		U_{10} - L_{10}	4.10	4.10	2.00	2.00	-0.33	-0.33					1.18	0.75	4.10	1.77	-----	Vehicle	4.10	-0.29	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**131.91**	**219.84**	**810.52**	**1350.87**
		U_{11} - L_{11}	3.59	3.59	1.69	1.69	-0.16	-0.16					1.18	0.75	3.59	1.50	-----	Vehicle	3.59	-0.14	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**156.15**	**260.25**	**1711.79**	**2852.98**
		U_{12} - L_{12}	2.93	2.93	1.49	1.49	-0.15	-0.15					1.18	0.75	2.93	1.32	-----	Vehicle	2.93	-0.13	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**197.72**	**329.53**	**2001.16**	**3335.26**
		U_{13} - L_{13}	3.04	3.04	1.25	1.25	-0.10	-0.10					1.18	0.75	3.04	1.11	-----	Vehicle	3.04	-0.08	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**208.63**	**347.72**	**2794.98**	**4658.31**
		U_{14} - L_{14}	0.58	0.58	0.95	0.95	-0.99	-0.99					1.18	0.75	0.58	0.84	-----	Vehicle	0.58	-0.87	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**270.95**	**451.59**	**261.31**	**435.52**
		U_{15} - L_{15}	-2.18	-2.18	0.14	0.14	-1.21	-1.21					1.17	0.75	-2.18	0.12	-----	Vehicle	-2.18	-1.06	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1267.39**	**2112.32**	**143.70**	**239.51**
		U_{16} - L_{16}	-1.90	-1.90	0.13	0.13	-1.52	-1.52					1.17	0.75	-1.90	0.12	-----	Vehicle	-1.90	-1.33	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1588.68**	**2647.80**	**138.17**	**230.28**
		U_{17} - L_{17}	-2.63	-2.63	0.20	0.20	-1.70	-1.70					1.17	0.75	-2.63	0.17	-----	Vehicle	-2.63	-1.49	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1003.79**	**1672.99**	**113.29**	**188.82**
		U_{18} - L_{18}	-2.76	-2.76	0.27	0.27	-2.01	-2.01					1.17	0.75	-2.76	0.23	-----	Vehicle	-2.76	-1.76	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**666.06**	**1110.09**	**86.81**	**144.68**
		U_{19} - L_{19}	-1.74	-1.74	0.28	0.28	-1.37	-1.37					1.17	0.75	-1.74	0.24	-----	Vehicle	-1.74	-1.20	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**581.39**	**968.98**	**114.71**	**191.19**
		U_{20} - L_{20}	-1.31	-1.31	0.47	0.47	-1.32	-1.32					1.17	0.75	-1.31	0.42	-----	Vehicle	-1.31	-1.16	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**303.22**	**505.37**	**107.29**	**178.81**
		U_{21} - L_{21}	-0.84	-0.84	0.56	0.56	-1.19	-1.19					1.17	0.75	-0.84	0.49	-----	Vehicle	-0.84	-1.05	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**232.89**	**388.15**	**108.46**	**180.77**
		U_{22} - L_{22}	-0.11	-0.11	0.78	0.78	-0.92	-0.92					1.17	0.75	-0.11	0.68	-----	Vehicle	-0.11	-0.81	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**166.65**	**277.75**	**140.69**	**234.49**
		U_{23} - L_{23}	0.63	0.63	1.29	1.29	-0.73	-0.73					1.17	0.75	0.63	1.13	-----	Vehicle	0.63	-0.64	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**100.50**	**167.50**	**178.78**	**297.96**
		U_{24} - L_{24}	1.17	1.17	1.38	1.38	-0.60	-0.60					1.17	0.75	1.17	1.21	-----	Vehicle	1.17	-0.53	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**102.62**	**171.04**	**237.80**	**396.34**
		U_{25} - L_{25}	1.72	1.72	1.39	1.39	-0.39	-0.39					1.17	0.75	1.72	1.22	-----	Vehicle	1.72	-0.34	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**113.32**	**188.86**	**407.84**	**679.73**
		U_{26} - L_{26}	2.90	2.90	2.24	2.24	-0.33	-0.33					1.17	0.75	2.90	1.96	-----	Vehicle	2.90	-0.29	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**77.80**	**129.67**	**535.94**	**893.23**
		U_{27} - L_{27}	2.83	2.83	1.94	1.94	-0.18	-0.18					1.17	0.75	2.83	1.70	-----	Vehicle	2.83	-0.16	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**99.03**	**165.04**	**1064.54**	**1774.24**
		U_{28} - L_{28}	2.23	2.23	1.61	1.61	-0.14	-0.14					1.17	0.75	2.23	1.41	-----	Vehicle	2.23	-0.13	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**130.39**	**217.32**	**1479.92**	**2466.53**
		U_{29} - L_{29}	2.36	2.36	1.31	1.31	-0.06	-0.06					1.17	0.75	2.36	1.15	-----	Vehicle	2.36	-0.06	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**133.38**	**222.30**	**2774.38**	**4623.97**
		U_{30} - L_{30}	0.03	0.03	1.08	1.08	-0.96	-0.96					1.18	0.75	0.03	0.96	-----	Vehicle	0.03	-0.85	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**238.40**	**397.34**	**268.00**	**446.66**
		U_{31} - L_{31}	-2.50	-2.50	0.15	0.15	-1.21	-1.21					1.18	0.75	-2.50	0.13	-----	Vehicle	-2.50	-1.08	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**1828.68**	**3047.80**	**215.99**	**359.99**
		U_{32} - L_{32}	-2.25	-2.25	0.13	0.13	-1.34	-1.34					1.18	0.75	-2.25	0.11	-----	Vehicle	-2.25	-1.19	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**2344.19**	**3906.99**	**220.56**	**367.60**
		U_{33} - L_{33}	-2.93	-2.93	0.04	0.04	-1.54	-1.54					1.18	0.75	-2.93	0.03	-----	Vehicle	-2.93	-1.37	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**7251.44**	**12085.73**	**171.20**	**285.34**
		U_{34} - L_{34}	-3.45	-3.45	0.18	0.18	-1.97	-1.97					1.18	0.75	-3.45	0.16	-----	Vehicle	-3.45	-1.74	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**1509.27**	**2515.46**	**134.35**	**223.91**
		U_{35} - L_{35}	-4.24	-4.24	0.37	0.37	-2.21	-2.21					1.18	0.75	-4.24	0.33	-----	Vehicle	-4.24	-1.96	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**572.84**	**954.73**	**93.18**	**155.30**
		U_{36} - L_{36}	-2.42	-2.42	0.44	0.44	-1.72	-1.72					1.18	0.75	-2.42	0.39	-----	Vehicle	-2.42	-1.52	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**314.85**	**524.74**	**79.01**	**131.68**
		U_{37} - L_{37}	-1.22	-1.22	0.46	0.46	-0.93	-0.93					1.18	0.75	-1.22	0.41	-----	Vehicle	-1.22	-0.82	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**282.46**	**470.76**	**137.62**	**229.36**
		U_{38} - L_{38}	-0.80	-0.80	1.09	1.09	-1.10	-1.10					1.18	0.75	-0.80	0.97	-----	Vehicle	-0.80	-0.98	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**117.99**	**196.64**	**116.47**	**194.12**
		U_{39} - L_{39}	-0.09	-0.09	1.12	1.12	-0.83	-0.83					1.18	0.75	-0.09	0.99	-----	Vehicle	-0.09	-0.73	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**115.03**	**191.71**	**155.16**	**258.60**
		U_{40} - L_{40}	0.85	0.85	1.26	1.26	-0.54	-0.54					1.18	0.75	0.85	1.12	-----	Vehicle	0.85	-0.48	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**101.24**	**168.73**	**238.21**	**397.02**
		U_{41} - L_{41}	1.61	1.61	1.31	1.31	-0.21	-0.21					1.18	0.75	1.61	1.16	-----	Vehicle	1.61	-0.18	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**130.30**	**217.17**	**839.82**	**1399.69**
		U_{42} - L_{42}	2.80	2.80	2.04	2.04	-0.27	-0.27					1.18	0.75	2.80	1.81	-----	Vehicle	2.80	-0.24	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**84.34**	**140.57**	**646.16**	**1076.93**
		U_{43} - L_{43}	2.84	2.84	1.66	1.66	-0.19	-0.19					1.18	0.75	2.84	1.47	-----	Vehicle	2.84	-0.17	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**124.72**	**207.87**	**1087.63**	**1812.71**
		U_{44} - L_{44}	2.62	2.62	1.25	1.25	-0.12	-0.12					1.18	0.75	2.62	1.11	-----	Vehicle	2.62	-0.10	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**165.45**	**275.75**	**1786.92**	**2978.20**
	Structure 3	U_0 - L_0	-1.54	-1.54	0.08	0.08	-1.18	-1.18					1.20	0.75	-1.54	0.08	-----	Vehicle	-1.54	-1.06	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2265.17**	**3775.28**	**160.05**	**266.76**
		U_1 - L_1	-2.02	-2.02	0.12	0.12	-1.47	-1.47					1.20	0.75	-2.02	0.11	-----	Vehicle	-2.02	-1.32	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1575.20**	**2625.33**	**128.00**	**213.33**
		U_2 - L_2	-2.23	-2.23	0.17	0.17	-1.78	-1.78					1.20	0.75	-2.23	0.15	-----	Vehicle	-2.23	-1.60	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**956.48**	**1594.13**	**89.09**	**148.48**
		U_3 - L_3	-1.20	-1.20	0.13	0.13	-1.19	-1.19					1.20	0.75	-1.20	0.12	-----	Vehicle	-1.20	-1.07	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1175.99**	**1959.98**	**128.67**	**214.45**
		U_4 - L_4	-0.86	-0.86	0.40	0.40	-1.25	-1.25					1.20	0.75	-0.86	0.36	-----	Vehicle	-0.86	-1.12	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**321.17**	**535.28**	**101.16**	**168.60**
		U_5 - L_5	-0.15	-0.15	0.67	0.67	-1.28	-1.28					1.20	0.75	-0.15	0.60	-----	Vehicle	-0.15	-1.15	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**191.02**	**318.37**	**99.39**	**165.66**
		U_6 - L_6	0.83	0.83	1.20	1.20	-0.93	-0.93					1.20	0.75	0.83	1.07	-----	Vehicle	0.83	-0.83	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**105.66**	**176.10**	**137.23**	**228.71**
		U_7 - L_7	1.75	1.75	1.77	1.77	-0.84	-0.84					1.20	0.75	1.75	1.59	-----	Vehicle	1.75	-0.76	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**78.00**	**129.99**	**166.52**	**277.53**
		U_8 - L_8	3.18	3.18	2.15	2.15	-0.76	-0.76					1.20	0.75	3.18	1.93	-----	Vehicle	3.18	-0.68	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**73.36**	**122.26**	**214.14**	**356.90**
		U_9 - L_9	4.50	4.50	2.70	2.70	-0.43	-0.43					1.20	0.75	4.50	2.42	-----	Vehicle	4.50	-0.38	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**69.08**	**115.13**	**450.25**	**750.41**
		U_{10} - L_{10}	3.82	3.82	2.40	2.40	-0.19	-0.19	

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD												Maximum Positive Shear				Minimum Negative Shear												Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$																				Positive Shear Member		Negative Shear Member	
	Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Inventory RF	Operating RF	Inventory RF	Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	-0.01	-0.51	0.13	0.13	-0.81	-0.81					1.24	0.75	-0.01	0.12	-----	Vehicle	-0.51	-0.75	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**461.37**	**768.95**	**73.51**	**122.52**
		U_1 - L_2	0.22	-0.08	0.10	0.10	-0.32	-0.32					1.24	0.75	0.22	0.09	-----	Vehicle	-0.08	-0.30	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1240.27**	**2067.11**	**383.98**	**639.97**
		U_2 - L_3	0.25	-0.05	0.12	0.12	-0.19	-0.19					1.24	0.75	0.25	0.11	-----	Vehicle	-0.05	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1049.26**	**1748.76**	**636.76**	**1061.26**
		U_3 - L_4	0.41	0.09	0.17	0.17	-0.07	-0.07					1.24	0.75	0.41	0.16	-----	Vehicle	0.09	-0.06	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**721.55**	**1202.59**	**1808.62**	**3014.37**
		U_4 - L_4	-0.19	-0.52	0.11	0.11	-0.27	-0.27					1.24	0.75	-0.19	0.10	-----	Vehicle	-0.52	-0.25	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1412.12**	**2353.53**	**546.61**	**911.02**
		U_5 - L_5	-0.74	-1.19	0.14	0.14	-0.72	-0.72					1.24	0.75	-0.74	0.13	-----	Vehicle	-1.19	-0.67	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1103.40**	**1839.00**	**214.65**	**357.76**
		U_6 - L_6	-1.07	-1.54	0.00	0.00	-1.08	-1.08					1.24	0.75	-1.07	0.00	-----	Vehicle	-1.54	-1.00	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**77897.60**	**129829.33**	**143.23**	**238.71**
		U_7 - L_7	-0.62	-1.11	0.00	0.00	-0.75	-0.75					1.24	0.75	-0.62	0.00	-----	Vehicle	-1.11	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**38875.72**	**64792.87**	**205.57**	**342.62**
		U_8 - L_9	-0.89	-1.81	0.08	0.08	-0.76	-0.76					1.20	0.75	-0.89	0.07	-----	Vehicle	-1.81	-0.68	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2567.95**	**4279.92**	**261.19**	**435.31**
		U_9 - L_{10}	-1.43	-2.27	0.03	0.03	-1.01	-1.01					1.20	0.75	-1.43	0.03	-----	Vehicle	-2.27	-0.90	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**5901.81**	**9836.34**	**197.01**	**328.35**
		U_{10} - L_{11}	-1.02	-1.87	0.06	0.06	-0.69	-0.69					1.20	0.75	-1.02	0.06	-----	Vehicle	-1.87	-0.62	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2587.89**	**4313.16**	**231.07**	**385.12**
		U_{11} - L_{12}	-0.81	-1.29	0.13	0.13	-0.69	-0.69					1.20	0.75	-0.81	0.12	-----	Vehicle	-1.29	-0.62	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1426.97**	**2378.28**	**275.02**	**458.37**
		U_{12} - L_{13}	-0.67	-1.39	0.18	0.18	-0.60	-0.60					1.20	0.75	-0.67	0.16	-----	Vehicle	-1.39	-0.54	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**771.47**	**1285.78**	**227.86**	**379.77**
		U_{13} - L_{14}	-0.13	-0.46	0.20	0.20	-0.29	-0.29					1.20	0.75	-0.13	0.18	-----	Vehicle	-0.46	-0.26	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**638.26**	**1063.76**	**438.14**	**730.23**
		U_{14} - L_{14}	0.38	0.05	0.31	0.31	-0.22	-0.22					1.20	0.75	0.38	0.28	-----	Vehicle	0.05	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**412.62**	**687.70**	**571.89**	**953.15**
		U_{15} - L_{15}	-0.04	-0.39	0.23	0.23	-0.36	-0.36					1.20	0.75	-0.04	0.21	-----	Vehicle	-0.39	-0.33	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**547.22**	**912.04**	**348.95**	**581.58**
		U_{17} - L_{16}	-0.22	-0.61	0.13	0.13	-0.51	-0.51					1.20	0.75	-0.22	0.11	-----	Vehicle	-0.61	-0.45	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1217.16**	**2028.60**	**304.40**	**507.33**
		U_{18} - L_{17}	-1.16	-1.63	0.08	0.08	-0.92	-0.92					1.20	0.75	-1.16	0.07	-----	Vehicle	-1.63	-0.82	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2037.01**	**3395.02**	**173.46**	**289.10**
		U_{19} - L_{18}	-1.07	-1.60	0.10	0.10	-0.90	-0.90					1.20	0.75	-1.07	0.09	-----	Vehicle	-1.60	-0.80	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1759.22**	**2932.03**	**190.63**	**317.72**
		U_{20} - L_{19}	-1.08	-1.67	0.04	0.04	-0.86	-0.86					1.20	0.75	-1.08	0.04	-----	Vehicle	-1.67	-0.77	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4009.54**	**6682.57**	**198.34**	**330.57**
	Structure 2	U_0 - L_1	-1.14	-1.70	0.16	0.16	-1.15	-1.15					1.18	0.75	-1.14	0.14	-----	Vehicle	-1.70	-1.02	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1241.42**	**2069.04**	**166.38**	**277.29**
		U_1 - L_2	-1.31	-1.85	0.16	0.16	-1.05	-1.05					1.18	0.75	-1.31	0.14	-----	Vehicle	-1.85	-0.93	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1210.89**	**2018.15**	**181.85**	**303.09**
		U_2 - L_3	-1.13	-1.60	0.18	0.18	-0.95	-0.95					1.18	0.75	-1.13	0.16	-----	Vehicle	-1.60	-0.84	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**931.13**	**1551.88**	**169.58**	**282.63**
		U_3 - L_4	-0.50	-0.90	0.13	0.13	-0.60	-0.60					1.18	0.75	-0.50	0.11	-----	Vehicle	-0.90	-0.53	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1367.05**	**2278.41**	**287.90**	**479.84**
		U_4 - L_5	-0.05	-0.40	0.18	0.18	-0.42	-0.42					1.18	0.75	-0.05	0.16	-----	Vehicle	-0.40	-0.37	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**702.56**	**1170.94**	**309.08**	**515.14**
		U_5 - L_6	0.27	-0.07	0.33	0.33	-0.34	-0.34					1.18	0.75	0.27	0.29	-----	Vehicle	-0.07	-0.30	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**388.95**	**648.25**	**377.91**	**629.85**
		U_6 - L_7	0.48	0.08	0.33	0.33	-0.22	-0.22					1.18	0.75	0.48	0.29	-----	Vehicle	0.08	-0.20	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**430.65**	**717.74**	**638.91**	**1064.85**
		U_8 - L_7	-0.31	-1.10	0.24	0.24	-0.42	-0.42					1.18	0.75	-0.31	0.21	-----	Vehicle	-1.10	-0.37	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**492.97**	**821.62**	**276.93**	**461.56**
		U_8 - L_8	-1.34	-1.86	0.28	0.28	-0.84	-0.84					1.18	0.75	-1.34	0.24	-----	Vehicle	-1.86	-0.75	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**635.53**	**1059.22**	**205.48**	**342.47**
		U_{10} - L_9	-1.44	-1.94	0.18	0.18	-0.78	-0.78					1.18	0.75	-1.44	0.16	-----	Vehicle	-1.94	-0.70	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1052.57**	**1754.28**	**242.77**	**404.62**
		U_{11} - L_{10}	-1.67	-2.23	0.13	0.13	-0.87	-0.87					1.18	0.75	-1.67	0.11	-----	Vehicle	-2.23	-0.77	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1681.71**	**2802.84**	**237.77**	**396.28**
		U_{12} - L_{11}	-1.62	-2.22	0.10	0.10	-0.89	-0.89					1.18	0.75	-1.62	0.08	-----	Vehicle	-2.22	-0.79	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2212.40**	**3687.34**	**234.55**	**390.92**
		U_{13} - L_{12}	-1.77	-2.38	0.06	0.06	-0.94	-0.94					1.18	0.75	-1.77	0.05	-----	Vehicle	-2.38	-0.83	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3161.42**	**5269.04**	**201.95**	**336.58**
		U_{14} - L_{13}	-1.00	-1.63	0.07	0.07	-0.68	-0.68					1.18	0.75	-1.00	0.06	-----	Vehicle	-1.63	-0.60	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2747.47**	**4579.11**	**279.81**	**466.34**
		U_{15} - L_{15}	-0.47	-1.03	0.09	0.09	-0.63	-0.63					1.17	0.75	-0.47	0.08	-----	Vehicle	-1.03	-0.55	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1847.73**	**3079.55**	**261.48**	**435.80**
		U_{16} - L_{16}	-1.08	-1.61	0.10	0.10	-0.93	-0.93					1.17	0.75	-1.08	0.08	-----	Vehicle	-1.61	-0.81	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1735.40**	**2892.34**	**176.05**	**293.42**
		U_{18} - L_{17}	-1.08	-1.63	0.10	0.10	-0.94	-0.94					1.17	0.75	-1.08	0.08	-----	Vehicle	-1.63	-0.83	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1840.48**	**3067.46**	**185.20**	**308.67**
		U_{17} - L_{18}	-1.09	-1.58	0.11	0.11	-0.87	-0.87					1.17	0.75	-1.09	0.10	-----	Vehicle	-1.58	-0.76	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1485.33**	**2475.55**	**187.62**	**312.70**
		U_{19} - L_{19}	-0.94	-1.42	0.19	0.19	-0.86	-0.86					1.17	0.75	-0.94	0.16	-----	Vehicle	-1.42	-0.75	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**881.11**	**1468.51**	**190.16**	**316.93**
		U_{20} - L_{20}	-0.31	-1.06	0.17	0.17	-0.61	-0.61					1.17	0.75	-0.31	0.15	-----	Vehicle	-1.06	-0.53	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**693.22**	**1155.36**	**195.20**	**325.34**
		U_{20} - L_{21}	-0.23	-0.57	0.21	0.21	-0.42	-0.42					1.17	0.75	-0.23	0.19	-----	Vehicle	-0.57	-0.37	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**611.43**	**1019.06**	**309.51**	**515.86**
		U_{21} - L_{22}	0.03	-0.31	0.25	0.25	-0.29	-0.29					1.17	0.75	0.03	0.22	-----	Vehicle	-0.31	-0.25	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**528.70**	**881.16**	**449.36**	**748.94**
		U_{23} - L_{22}	0.11	-0.23	0.26	0.26	-0.25	-0.25					1.17	0.75	0.11	0.22	-----	Vehicle	-0.23	-0.22	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**509.81**	**849.68**	**511.50**	**852.49**
		U_{24} - L_{23}	-0.12	-0.47	0.21	0.21	-0.37	-0.37					1.17	0.75	-0.12	0.19	-----	Vehicle	-0.47	-0.32	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**613.96**	**1023.27**	**350.69**	**584.49**
		U_{25} - L_{24}	-0.19	-0.96	0.20	0.20	-0.54	-0.54					1.17	0.75	-0.19	0.18	-----	Vehicle	-0.96	-0.47	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**592.78**	**987.96**	**219.19**	**365.32**
		U_{26} - L_{25}	-0.84	-1.33	0.19	0.19	-0.81	-0.81					1.17	0.75	-0.84	0.16	-----	Vehicle	-1.33	-0.71	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**880.73**	**1467.89**	**201.75**	**336.25**
		U_{27} - L_{26}	-1.01	-1.51	0.14	0.14	-0.84	-0.84					1.17	0.75	-1.01	0.12	-----	Vehicle	-1.51	-0.73	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1220.85**	**2034.76**	**195.08**	**325.14**
		U_{28} - L_{27}	-1.07	-1.63	0.08	0.08	-0.89	-0.89					1.17	0.75	-1.07	0.07	-----	Vehicle	-1.63	-0.78	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2181.21**	**3635.36**	**196.66**	**327.76**
		U_{29} - L_{28}	-1.12	-1.67	0.06	0.06	-0.89	-0.89					1.17	0.75	-1.12	0.05	-----	Vehicle	-1.67	-0.78	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2892.88**	**4821.46**	**182.31**	**303.85**
		U_{30} - L_{29}	-0.53	-1.09	0.06	0.06	-0.61	-0.61					1.17	0.75	-0.53	0.05	-----	Vehicle	-1.09	-0.54	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2990.68**	**4984.47**	**267.39**	**445.66**
		U_{30} - L_{31}	-0.77	-1.41	0.10	0.10	-0.72	-0.72					1.18	0.75	-0.77	0.09	-----	Vehicle	-1.41	-0.64	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1884.02**	**3140.03**	**263.76**	**439.60**
		U_{31} - L_{32}	-1.50	-2.10	0.11	0.11	-1.00	-1.00					1.18	0.75	-1.50	0.10	-----	Vehicle	-2.10	-0.88	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1751.49**	**2919.14**	**191.18**	**318.64**
		U_{32} - L_{33}	-1.42	-2.00	0.06	0.06	-0.91	-0.91					1.18	0.75	-1.42	0.05	-----	Vehicle	-2.00	-0.81	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3818.96**	**6364.94**	**228.02**	**380.04**
		U_{33} - L_{34}	-1.55	-2.08	0.09	0.09	-0.94	-0.94					1.18	0.75	-1.55	0.08	-----	Vehicle	-2.08	-0.84	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2387.84**	**3979.74**	**220.46**	**367.43**
		U_{34} - L_{35}	-1.39	-1.88	0.14	0.14	-0.86	-0.86					1.18	0.75	-1.39	0.12	-----	Vehicle	-1.88	-0.76	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1395.57**	**2325.95**	**221.37**	**368.95**
		U_{35} - L_{36}	-1.38	-1.88	0.24	0.24	-0.88	-0.88					1.18	0.75	-1.38	0.21	-----	Vehicle	-1.88	-0.78	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**725.28**	**1208.80**	**195.69**	**326.14**
		U_{36} - L_{37}	-0.43	-1.20	0.23	0.23	-0.48	-0.48					1.18	0.75	-0.43	0.21	-----	Vehicle	-1.20	-0.42	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**508.19**	**846.98**	**243.84**	**406.40**
		U_{38} - L_{37}	0.53	0.13	0.33	0.33	-0.19	-0.19					1.18	0.75	0.53	0.29	-----	Vehicle	0.13	-0.17	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**427.91**	**713.19**	**751.23**	**1252.05**
		U_{39} - L_{38}	0.39	0.04	0.32	0.32	-0.32	-0.32					1.18	0.75	0.39	0.28	-----	Vehicle	0.04	-0.28	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**405.93**	**676.54**	**404.29**	**673.82**
		U_{40} - L_{39}	0.07	-0.29	0.21	0.21	-0.36	-0.36					1.18	0.75	0.07	0.19	-----	Vehicle	-0.29	-0.32	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**603.24**	**1005.40**	**355.52**	**592.54**
		U_{41} - L_{40}	-0.36	-0.78	0.14	0.14	-0.53	-0.53					1.18	0.75	-0.36	0.12	-----	Vehicle	-0.78	-0.47	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1229.71**	**2049.51**	**322.15**	**536.91**
		U_{42} - L_{41}	-1.06	-1.54	0.14	0.14	-0.91	-0.91					1.18	0.75	-1.06	0.12	-----	Vehicle	-1.54	-0.80	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1163.55**	**1939.25**	**177.86**	**296.43**
		U_{43} - L_{42}	-1.22	-1.77	0.12	0.12	-0.95	-0.95					1.18	0.75	-1.22	0.11	-----	Vehicle	-1.77	-0.84	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1577.62**	**2629.37**	**200.26**	**333.77**
		U_{44} - L_{43}	-1.57	-2.14	0.09	0.09	-0.92	-0.92					1.18	0.75	-1.57	0.08	-----	Vehicle	-2.14	-0.82	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2215.05**	**3691.75**	**206.97**	**344.94**
	Structure 3	U_0 - L_1	-0.75	-1.32	0.08	0.08	-1.03	-1.03					1.20	0.75	-0.75	0.07	-----	Vehicle	-1.32	-0.92	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2236.20**	**3726.99**	**165.99**	**276.65**
		U_1 - L_2	-1.05	-1.57	0.09	0.09	-0.96	-0.96					1.20	0.75	-1.05	0.08	-----	Vehicle	-1.57	-0.86	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2028.11**	**3380.19**	**178.31**	**297.18**
		U_2 - L_3	-1.08	-1.54	0.11	0.11	-1.00	-1.00					1.20	0.75	-1.08	0.10	-----	Vehicle	-1.54	-0.90	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1475.90**	**2459.83**	**158.96**	**264.94**
		U_3 - L_4	-0.22	-0.60	0.12	0.12	-0.55	-0.55					1.20	0.75	-0.22	0.11	-----	Vehicle	-0.60	-0.49	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1246.60**	**2077.67**	**282.11**	**470.19**
		U_4 - L_5	-0.08	-0.42	0.21	0.21	-0.42	-0.42					1.20	0.75	-0.08	0.19	-----	Vehicle	-0.42	-0.37	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**593.37**	**988.96**	**303.71**	**506.19**
		U_5 - L_6	0.35	0.03	0.28	0.28	-0.25	-0.25					1.20	0.75	0.35	0.25	-----	Vehicle	0.03	-0.23	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**454.09**	**756.82**	**503.76**	**839.61**
		U_7 - L_6	-0.05	-0.39	0.19	0.19	-0.25	-0.25					1.20	0.75	-0.05	0.17	-----	Vehicle	-0.39	-0.22	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**664.72**	**1107.86**	**506.68**	**844.47**
		U_8 - L_7	-0.51	-1.25	0.20	0.20	-0.55	-0.55					1.20	0.75	-0.51	0.18	-----	Vehicle	-1.25	-0.50	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**686.50**	**1144.17**	**248.30**	**413.83**
		U_9 - L_8	-0.70	-1.19	0.13	0.13	-0.67	-0.67					1.20	0.75	-0.70	0.12	-----	Vehicle	-1.19	-0.60	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1437.22**	**2395.37**	**283.38**	**472.31**
		U_{10} - L_9	-0.88	-1.76	0.08	0.08	-0.65	-0.65					1.20	0.75	-0.88	0.08	-----	Vehicle	-1.76	-0.58	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1908.94**	**3181.56**	**245.12**	**408.53**
		U_{11} - L_{10}	-1.33	-2.21	0.01	0.01	-0.97	-0.97					1.20	0.75	-1.33	0.00	-----	Vehicle	-2.21	-0.87	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**40119.47**	**66865.78**	**204.99**	**341.66**
		U_{12} - L_{11}	-0.81	-1.77	0.09	0.09	-0.70	-0.70					1.20	0.75	-0.81	0.08	-----	Vehicle	-1.77	-0.63	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2200.57**	**3667.61**	**282.40**	**470.67**
		$

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD											Maximum Positive Shear				Minimum Negative Shear												Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$																			Positive Shear Member		Negative Shear Member	
Location		Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Inventory RF	Operating RF	Inventory RF	Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	8.19	-2.89	2.30	2.30	-1.46	-1.46	0.75	0.75	-0.19	-0.19	1.24	0.90	8.19	2.57	0.75	Vehicle	-2.89	-1.62	-0.19	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**34.25**	**57.08**	**56.11**	**93.52**
		U_1 - U_2	2.96	-4.47	1.44	1.44	-0.33	-0.33	0.07	0.07	-0.06	-0.06	1.24	0.90	2.96	1.60	0.07	Vehicle	-4.47	-0.37	-0.06	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**56.95**	**94.92**	**243.70**	**406.17**
		U_2 - U_3	2.48	-7.36	0.83	0.83	-0.96	-0.96	0.07	0.07	-0.09	-0.09	1.24	0.90	2.48	0.93	0.07	Vehicle	-7.36	-1.07	-0.09	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**98.65**	**164.42**	**82.66**	**137.76**
		U_3 - U_4	1.94	-4.95	0.55	0.55	-0.67	-0.67	0.00	0.00	-0.05	-0.05	1.24	0.90	1.94	0.62	-----	Vehicle	-4.95	-0.75	-0.05	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**148.77**	**247.96**	**120.37**	**200.62**
		U_4 - U_5	1.94	-4.56	0.40	0.40	-0.87	-0.87	0.00	0.00	-0.15	-0.15	1.24	0.90	1.94	0.45	-----	Vehicle	-4.56	-0.97	-0.15	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**204.14**	**340.24**	**92.83**	**154.72**
		U_5 - U_6	3.13	-7.41	0.18	0.18	-1.46	-1.46	0.00	0.00	-0.25	-0.25	1.24	0.90	3.13	0.20	-----	Vehicle	-7.41	-1.63	-0.25	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**456.02**	**760.04**	**54.29**	**90.49**
		U_6 - U_7	6.57	-4.82	0.54	0.54	-0.75	-0.75	0.03	0.03	-0.09	-0.09	1.24	0.90	6.57	0.60	0.03	Vehicle	-4.82	-0.83	-0.09	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**304.85**	**508.08**	**219.89**	**366.48**
		U_7 - U_8	-2.87	-15.47	0.75	0.75	-2.25	-2.25	0.00	0.00	-0.80	-0.80	1.24	0.90	-2.87	0.83	-----	Vehicle	-15.47	-2.50	-0.80	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**299.09**	**498.49**	**95.04**	**158.40**
		U_8 - U_9	17.77	5.14	3.02	3.02	-0.24	-0.24	0.85	0.85	0.00	0.00	1.20	0.90	17.77	3.26	0.85	Vehicle	5.14	-0.25	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**29.96**	**49.93**	**437.41**	**729.02**
		U_9 - U_{10}	7.55	-5.15	1.29	1.29	-0.19	-0.19	0.20	0.20	-0.04	-0.04	1.20	0.90	7.55	1.39	0.20	Vehicle	-5.15	-0.20	-0.04	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**63.63**	**106.05**	**442.34**	**737.23**
		U_{10} - U_{11}	10.27	-1.06	1.96	1.96	-0.06	-0.06	0.37	0.37	0.00	0.00	1.20	0.90	10.27	2.11	0.37	Vehicle	-1.06	-0.06	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**41.08**	**68.47**	**1525.71**	**2542.85**
		U_{11} - U_{12}	8.07	-1.44	1.77	1.77	-0.03	-0.03	0.26	0.26	0.00	0.00	1.20	0.90	8.07	1.91	0.26	Vehicle	-1.44	-0.03	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**62.37**	**103.95**	**4556.04**	**7593.40**
		U_{12} - U_{13}	9.20	-6.26	1.10	1.10	-0.44	-0.44	0.20	0.20	0.00	0.00	1.20	0.90	9.20	1.18	0.20	Vehicle	-6.26	-0.47	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**274.23**	**457.05**	**688.04**	**1146.73**
		U_{13} - U_{14}	7.06	-1.54	1.89	1.89	-0.04	-0.04	0.17	0.17	0.00	0.00	1.20	0.90	7.06	2.04	0.17	Vehicle	-1.54	-0.04	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**187.18**	**311.97**	**9933.17**	**16555.28**
		U_{14} - U_{15}	2.68	-5.43	0.50	0.50	-1.83	-1.83	0.02	0.02	-0.11	-0.11	1.20	0.90	2.68	0.54	0.02	Vehicle	-5.43	-1.97	-0.11	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**711.08**	**1185.13**	**194.76**	**324.59**
		U_{15} - U_{16}	9.21	-5.82	0.96	0.96	-0.95	-0.95	0.06	0.06	-0.12	-0.12	1.20	0.90	9.21	1.03	0.06	Vehicle	-5.82	-1.03	-0.12	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**369.20**	**615.34**	**372.34**	**620.57**
		U_{16} - U_{17}	2.12	-6.72	0.54	0.54	-1.21	-1.21	0.01	0.01	-0.14	-0.14	1.20	0.90	2.12	0.58	0.01	Vehicle	-6.72	-1.31	-0.14	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**665.31**	**1108.84**	**292.42**	**487.37**
		U_{17} - U_{18}	5.43	-10.49	0.37	0.37	-1.63	-1.63	0.03	0.03	-0.26	-0.26	1.20	0.90	5.43	0.40	0.03	Vehicle	-10.49	-1.76	-0.26	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**699.42**	**1165.70**	**157.89**	**263.16**
		U_{18} - U_{19}	1.81	-7.91	0.13	0.13	-1.31	-1.31	0.02	0.02	-0.28	-0.28	1.20	0.90	1.81	0.13	0.02	Vehicle	-7.91	-1.42	-0.28	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**794.87**	**1324.79**	**73.09**	**121.81**
		U_{19} - U_{20}	1.62	-7.72	0.20	0.20	-1.18	-1.18	0.02	0.02	-0.22	-0.22	1.20	0.90	1.62	0.21	0.02	Vehicle	-7.72	-1.27	-0.22	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**504.89**	**841.49**	**81.28**	**135.46**
		U_0 - U_1	18.71	2.53	2.73	2.73	-1.59	-1.59	0.86	0.86	-0.13	-0.13	1.18	0.90	18.71	2.91	0.86	Vehicle	2.53	-1.69	-0.13	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**34.84**	**58.06**	**67.56**	**112.60**
		U_1 - U_2	9.39	-4.45	1.68	1.68	-0.21	-0.21	0.13	0.13	-0.03	-0.03	1.18	0.90	9.39	1.79	0.13	Vehicle	-4.45	-0.22	-0.03	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**122.93**	**204.89**	**1005.12**	**1675.20**
		U_2 - U_3	9.93	-1.26	2.45	2.45	-0.41	-0.41	0.32	0.32	-0.07	-0.07	1.18	0.90	9.93	2.61	0.32	Vehicle	-1.26	-0.44	-0.07	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**62.56**	**104.27**	**386.23**	**643.72**
		U_3 - U_4	8.70	-7.19	1.89	1.89	-0.33	-0.33	0.11	0.11	-0.03	-0.03	1.18	0.90	8.70	2.01	0.11	Vehicle	-7.19	-0.35	-0.03	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**184.47**	**307.45**	**1059.50**	**1765.83**
		U_4 - U_5	5.86	-4.47	1.73	1.73	-0.90	-0.90	0.14	0.14	-0.05	-0.05	1.18	0.90	5.86	1.84	0.14	Vehicle	-4.47	-0.96	-0.05	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**243.25**	**405.41**	**468.93**	**781.55**
		U_5 - U_6	1.29	-8.98	1.37	1.37	-1.18	-1.18	0.00	0.00	-0.15	-0.15	1.18	0.90	1.29	1.45	-----	Vehicle	-8.98	-1.25	-0.15	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**309.47**	**515.78**	**355.22**	**592.03**
		U_6 - U_7	6.54	-9.22	1.25	1.25	-1.25	-1.25	0.09	0.09	0.00	0.00	1.18	0.90	6.54	1.33	0.09	Vehicle	-9.22	-1.33	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**280.27**	**467.12**	**278.16**	**463.61**
		U_7 - U_8	6.96	-8.51	0.72	0.72	-1.20	-1.20	0.00	0.00	-0.18	-0.18	1.18	0.90	6.96	0.76	-----	Vehicle	-8.51	-1.28	-0.18	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**487.01**	**811.69**	**290.34**	**483.90**
		U_8 - U_9	2.04	-12.38	0.61	0.61	-1.81	-1.81	0.00	0.00	-0.25	-0.25	1.18	0.90	2.04	0.65	-----	Vehicle	-12.38	-1.93	-0.25	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**491.89**	**819.82**	**161.83**	**269.72**
		U_9 - U_{10}	-0.19	-11.71	0.25	0.25	-2.03	-2.03	0.00	0.00	-0.31	-0.31	1.18	0.90	-0.19	0.27	-----	Vehicle	-11.71	-2.16	-0.31	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**494.10**	**823.49**	**57.52**	**95.87**
		U_{10} - U_{11}	3.22	-11.03	0.34	0.34	-1.57	-1.57	0.00	0.00	-0.20	-0.20	1.18	0.90	3.22	0.37	-----	Vehicle	-11.03	-1.67	-0.20	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**353.50**	**589.16**	**74.79**	**124.66**
		U_{11} - U_{12}	1.81	-13.56	0.39	0.39	-1.71	-1.71	0.02	0.02	-0.32	-0.32	1.18	0.90	1.81	0.41	0.02	Vehicle	-13.56	-1.82	-0.32	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**317.09**	**528.49**	**67.59**	**112.64**
		U_{12} - U_{13}	10.30	-7.34	1.02	1.02	-0.84	-0.84	0.06	0.06	-0.06	-0.06	1.18	0.90	10.30	1.09	0.06	Vehicle	-7.34	-0.90	-0.06	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**253.10**	**421.83**	**308.45**	**514.08**
		U_{13} - U_{14}	-14.76	-30.33	1.31	1.31	-3.24	-3.24	0.00	0.00	-0.99	-0.99	1.18	0.90	-14.76	1.39	-----	Vehicle	-30.33	-3.44	-0.99	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**289.21**	**482.01**	**109.17**	**181.95**
		U_{14} - U_{15}	28.72	13.15	4.70	4.70	-0.74	-0.74	0.97	0.97	0.00	0.00	1.17	0.90	28.72	4.95	0.97	Vehicle	13.15	-0.78	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**76.20**	**127.01**	**513.69**	**856.15**
		U_{15} - U_{16}	7.66	-8.84	1.52	1.52	-0.65	-0.65	0.10	0.10	-0.07	-0.07	1.17	0.90	7.66	1.60	0.10	Vehicle	-8.84	-0.68	-0.07	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**196.42**	**327.37**	**462.45**	**770.75**
		U_{16} - U_{17}	10.20	-1.59	1.93	1.93	-0.21	-0.21	0.27	0.27	-0.02	-0.02	1.17	0.90	10.20	2.03	0.27	Vehicle	-1.59	-0.22	-0.02	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**80.31**	**133.86**	**771.37**	**1285.61**
		U_{17} - U_{18}	9.53	-4.26	2.19	2.19	-0.22	-0.22	0.21	0.21	-0.04	-0.04	1.17	0.90	9.53	2.30	0.21	Vehicle	-4.26	-0.23	-0.04	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**46.42**	**77.37**	**484.38**	**807.31**
		U_{18} - U_{19}	9.52	-3.01	1.75	1.75	-0.30	-0.30	0.25	0.25	-0.01	-0.01	1.17	0.90	9.52	1.84	0.25	Vehicle	-3.01	-0.31	-0.01	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**58.04**	**96.73**	**355.88**	**593.13**
		U_{19} - U_{20}	6.34	-3.80	1.37	1.37	-0.14	-0.14	0.11	0.11	0.00	0.00	1.17	0.90	6.34	1.44	0.11	Vehicle	-3.80	-0.15	0.00	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**88.46**	**147.44**	**876.63**	**1461.04**
	Structure 2	U_{20} - U_{21}	7.04	-6.20	1.44	1.44	-0.87	-0.87	0.17	0.17	0.00	0.00	1.17	0.90	7.04	1.51	0.17	Vehicle	-6.20	-0.91	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**158.40**	**263.99**	**264.07**	**440.11**
		U_{21} - U_{22}	6.53	-6.48	1.47	1.47	-0.36	-0.36	0.06	0.06	-0.02	-0.02	1.17	0.90	6.53	1.54	0.06	Vehicle	-6.48	-0.37	-0.02	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**155.68**	**259.46**	**641.17**	**1068.61**
		U_{22} - U_{23}	6.59	-6.58	0.46	0.46	-1.16	-1.16	0.03	0.03	-0.07	-0.07	1.17	0.90	6.59	0.48	0.03	Vehicle	-6.58	-1.22	-0.07	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**497.15**	**828.58**	**196.55**	**327.59**
		U_{23} - U_{24}	5.44	-7.80	1.25	1.25	-1.23	-1.23	0.02	0.02	-0.22	-0.22	1.17	0.90	5.44	1.31	0.02	Vehicle	-7.80	-1.30	-0.22	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**183.37**	**305.62**	**184.36**	**307.27**
		U_{24} - U_{25}	3.86	-6.29	0.32	0.32	-1.51	-1.51	0.01	0.01	-0.10	-0.10	1.17	0.90	3.86	0.34	0.01	Vehicle	-6.29	-1.59	-0.10	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**384.63**	**641.04**	**80.50**	**134.17**
		U_{25} - U_{26}	2.64	-9.89	0.34	0.34	-1.64	-1.64	0.03	0.03	-0.27	-0.27	1.17	0.90	2.64	0.36	0.03	Vehicle	-9.89	-1.73	-0.27	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**310.45**	**517.41**	**61.84**	**103.06**
		U_{26} - U_{27}	4.46	-9.33	0.52	0.52	-1.55	-1.55	0.03	0.03	-0.19	-0.19	1.17	0.90	4.46	0.55	0.03	Vehicle	-9.33	-1.63	-0.19	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**199.83**	**333.05**	**65.59**	**109.32**
		U_{27} - U_{28}	1.06	-10.73	0.30	0.30	-1.90	-1.90	0.03	0.03	-0.29	-0.29	1.17	0.90	1.06	0.32	0.03	Vehicle	-10.73	-2.00	-0.29	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**531.48**	**885.80**	**81.21**	**135.35**
		U_{28} - U_{29}	9.64	-6.86	0.99	0.99	-0.88	-0.88	0.04	0.04	-0.06	-0.06	1.17	0.90	9.64	1.04	0.04	Vehicle	-6.86	-0.93	-0.06	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**301.13**	**501.89**	**339.47**	**565.78**
		U_{29} - U_{30}	-12.69	-28.27	1.22	1.22	-3.12	-3.12	0.00	0.00	-0.96	-0.96	1.17	0.90	-12.69	1.29	-----	Vehicle	-28.27	-3.29	-0.96	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**312.03**	**520.05**	**114.78**	**191.30**
		U_{30} - U_{31}	31.65	16.08	4.36	4.36	-0.53	-0.53	1.05	1.05	0.00	0.00	1.18	0.90	31.65	4.64	1.05	Vehicle	16.08	-0.57	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**80.79**	**134.65**	**714.34**	**1190.57**
		U_{31} - U_{32}	8.09	-9.55	1.18	1.18	-0.47	-0.47	0.09	0.09	-0.06	-0.06	1.18	0.90	8.09	1.25	0.09	Vehicle	-9.55	-0.50	-0.06	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**221.01**	**368.35**	**550.08**	**916.79**
		U_{32} - U_{33}	13.14	-2.23	2.10	2.10	-0.16	-0.16	0.30	0.30	-0.01	-0.01	1.18	0.90	13.14	2.24	0.30	Vehicle	-2.23	-0.17	-0.01	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**55.19**	**91.98**	**773.17**	**1288.62**
		U_{33} - U_{34}	11.33	-2.92	1.91	1.91	-0.12	-0.12	0.22	0.22	-0.01	-0.01	1.18	0.90	11.33	2.03	0.22	Vehicle	-2.92	-0.12	-0.01	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**61.43**	**102.39**	**1049.77**	**1749.62**
		U_{34} - U_{35}	11.30	-0.22	2.00	2.00	-0.04	-0.04	0.29	0.29	0.00	0.00	1.18	0.90	11.30	2.13	0.29	Vehicle	-0.22	-0.05	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**58.50**	**97.50**	**2802.13**	**4670.22**
		U_{35} - U_{36}	12.24	-2.18	2.24	2.24	-0.11	-0.11	0.25	0.25	0.00	0.00	1.18	0.90	12.24	2.38	0.25	Vehicle	-2.18	-0.12	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**131.02**	**218.37**	**2738.54**	**4564.23**
		U_{36} - U_{37}	7.78	-7.69	1.55	1.55	-0.52	-0.52	0.13	0.13	0.00	0.00	1.18	0.90	7.78	1.65	0.13	Vehicle	-7.69	-0.55	0.00	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**224.96**	**374.94**	**669.79**	**1116.31**
		U_{37} - U_{38}	9.81	-5.96	1.27	1.27	-0.97	-0.97	0.03	0.03	-0.09	-0.09	1.18	0.90	9.81	1.35	0.03	Vehicle	-5.96	-1.03	-0.09	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**274.17**	**456.95**	**361.56**	**602.60**
		U_{38} - U_{39}	8.20	-2.06	1.81	1.81	-0.85	-0.85	0.13	0.13	0.00	0.00	1.18	0.90	8.20	1.93	0.13	Vehicle	-2.06	-0.91	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**230.85**	**384.74**	**495.29**	**825.48**
		U_{39} - U_{40}	3.71	-6.62	1.11	1.11	-2.06	-2.06	0.06	0.06	-0.20	-0.20	1.18	0.90	3.71	1.19	0.06	Vehicle	-6.62	-2.19	-0.20	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**378.31**	**630.52**	**203.70**	**339.50**
		U_{40} - U_{41}	7.22	-8.66	0.69	0.69	-1.36	-1.36	0.02	0.02	-0.07	-0.07	1.18	0.90	7.22	0.73	0.02	Vehicle	-8.66	-1.45	-0.07	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**505.15**	**841.92**	**255.88**	**426.47**
		U_{41} - U_{42}	1.01	-10.18	0.61	0.61	-1.74	-1.74	0.06	0.06	-0.30	-0.30	1.18	0.90	1.01	0.65	0.06	Vehicle	-10.18	-1.86	-0.30	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**260.05**	**433.41**	**87.70**	**146.16**
		U_{42} - U_{43}	3.31	-10.54	0.21	0.21	-1.63	-1.63	0.02	0.02	-0.20	-0.20	1.18	0.90	3.31	0.22	0.02	Vehicle	-10.54	-1.74	-0.20	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**1018.02**	**1696.69**	**125.85**	**209.75**
		U_{43} - U_{44}	4.39	-11.79	0.40	0.40	-1.57	-1.57	0.08	0.08	-0.37	-0.37	1.18	0.90	4.39	0.43	0.08	Vehicle	-11.79	-1.67	-0.37	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**255.72**	**426.20**	**63.07**	**105.12**
	Structure 3	U_0 - U_1	14.18	4.83	2.35	2.35	-1.20	-1.20	0.84	0.84	-0.05	-0.05	1.20	0.90	14.18	2.54	0.84	Vehicle	4.83	-1.29	-0.05	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**39.29**	**65.48**	**85.95**	**143.25**
		U_1 - U_2	6.82	-2.91	1.50	1.50	-0.15	-0.15	0.18	0.18	-0.02	-0.02	1.20	0.90	6.82	1.62	0.18	Vehicle	-2.91	-0.17	-0.02	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**64.34**	**107.23**	**641.23**	**1068.72**
		U_2 - U_3	10.42	-5.49	1.60	1.60	-0.21	-0.21	0.29	0.29	-0.03	-0.03	1.20	0.90	10.42	1.73	0.29	Vehicle	-5.49	-0.23	-0.03	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**160.58**	**267.63**	**1232.93**	**2054.88**
		U_3 - U_4	6.43	-2.41	1.91	1.91	-0.16	-0.16	0.16	0.16	-0.02	-0.02	1.20	0.90	6.43	2.06	0.16	Vehicle	-2.41	-0.17	-0.02	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**185.50**	**309.17**	**2204.38**	**3673.97**
		U_4 - U_5	5.41	-9.62	0.76	0.76	-1.34	-1.34	0.07	0.07	-0.06	-0.06	1.20	0.90	5.41

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches)	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	L_0 - L_1	4.43	-2.13	1.67	1.67	-0.27	-0.27	0.18	0.18	-0.05	-0.05	1.24	0.90	4.43	1.85	0.18	Vehicle	-2.13	-0.30	-0.05	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**55.72**	**92.87**	**344.57**	**574.28**
	L_1 - L_2	6.00	-2.28	1.53	1.53	-0.45	-0.45	0.19	0.19	-0.09	-0.09	1.24	0.90	6.00	1.71	0.19	Vehicle	-2.28	-0.50	-0.09	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**59.97**	**99.94**	**208.40**	**347.33**
	L_2 - L_3	2.92	-3.66	0.67	0.67	-0.76	-0.76	0.04	0.04	-0.05	-0.05	1.24	0.90	2.92	0.75	0.04	Vehicle	-3.66	-0.85	-0.05	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**216.57**	**360.95**	**190.23**	**317.04**
	L_3 - L_4	3.19	-5.19	0.75	0.75	-0.65	-0.65	0.02	0.02	-0.10	-0.10	1.24	0.90	3.19	0.84	0.02	Vehicle	-5.19	-0.72	-0.10	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**192.83**	**321.38**	**223.05**	**371.75**
	L_4 - L_5	1.06	-8.32	0.19	0.19	-1.46	-1.46	0.00	0.00	-0.22	-0.22	1.24	0.90	1.06	0.21	-----	Vehicle	-8.32	-1.63	-0.22	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**638.40**	**1064.00**	**81.55**	**135.91**
	L_5 - L_6	-0.11	-8.64	0.15	0.15	-1.11	-1.11	0.00	0.00	-0.28	-0.28	1.24	0.90	-0.11	0.16	-----	Vehicle	-8.64	-1.23	-0.28	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**1255.85**	**2093.08**	**161.37**	**268.96**
	L_6 - L_7	4.46	-5.99	0.82	0.82	-1.06	-1.06	0.18	0.18	-0.20	-0.20	1.24	0.90	4.46	0.91	0.18	Vehicle	-5.99	-1.18	-0.20	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**352.22**	**587.04**	**269.52**	**449.21**
	L_7 - L_8	-9.36	-17.66	0.72	0.72	-2.25	-2.25	0.00	0.00	-1.06	-1.06	1.24	0.90	-9.36	0.80	-----	Vehicle	-17.66	-2.50	-1.06	Pedestrian	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**539.79**	**899.64**	**156.19**	**195.23**
	L_8 - L_9	18.84	10.87	3.05	3.05	-0.53	-0.53	1.10	1.10	0.00	0.00	1.20	0.90	18.84	3.29	1.10	Pedestrian	10.87	-0.58	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**126.71**	**158.39**	**755.16**	**1258.60**
	L_9 - L_{10}	11.17	-1.76	1.50	1.50	-0.50	-0.50	0.27	0.27	-0.14	-0.14	1.20	0.90	11.17	1.61	0.27	Vehicle	-1.76	-0.54	-0.14	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**195.50**	**325.84**	**593.44**	**989.07**
	L_{10} - L_{11}	10.70	2.17	1.59	1.59	-0.03	-0.03	0.41	0.41	0.00	0.00	1.20	0.90	10.70	1.72	0.41	Vehicle	2.17	-0.03	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**76.50**	**127.49**	**4778.54**	**7964.23**
	L_{11} - L_{12}	12.21	-0.42	1.56	1.56	-0.04	-0.04	0.26	0.26	0.00	0.00	1.20	0.90	12.21	1.68	0.26	Vehicle	-0.42	-0.05	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**77.77**	**129.62**	**2899.54**	**4832.57**
	L_{12} - L_{13}	6.63	-2.92	0.55	0.55	-0.31	-0.31	0.13	0.13	0.00	0.00	1.20	0.90	6.63	0.59	0.13	Vehicle	-2.92	-0.34	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**451.59**	**752.65**	**798.36**	**1330.59**
	L_{13} - L_{14}	12.80	1.62	2.41	2.41	-0.10	-0.10	0.31	0.31	0.00	0.00	1.20	0.90	12.80	2.60	0.31	Vehicle	1.62	-0.11	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**145.75**	**242.92**	**3627.75**	**6046.25**
	L_{14} - L_{15}	1.98	-10.69	0.30	0.30	-2.24	-2.24	0.05	0.05	-0.21	-0.21	1.20	0.90	1.98	0.32	0.05	Vehicle	-10.69	-2.42	-0.21	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**1492.15**	**2486.92**	**195.42**	**325.70**
	L_{15} - L_{16}	5.99	-3.43	0.81	0.81	-0.56	-0.56	0.03	0.03	-0.07	-0.07	1.20	0.90	5.99	0.87	0.03	Vehicle	-3.43	-0.60	-0.07	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**547.07**	**911.78**	**788.53**	**1314.21**
	L_{16} - L_{17}	-0.84	-11.84	0.19	0.19	-1.47	-1.47	0.02	0.02	-0.20	-0.20	1.20	0.90	-0.84	0.20	0.02	Vehicle	-11.84	-1.58	-0.20	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**1760.51**	**2934.18**	**219.91**	**366.51**
	L_{17} - L_{18}	2.19	-9.46	0.14	0.14	-1.14	-1.14	0.03	0.03	-0.24	-0.24	1.20	0.90	2.19	0.16	0.03	Vehicle	-9.46	-1.23	-0.24	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**1527.75**	**2546.25**	**189.27**	**315.44**
	L_{18} - L_{19}	0.84	-11.52	0.12	0.12	-1.17	-1.17	0.02	0.02	-0.26	-0.26	1.20	0.90	0.84	0.13	0.02	Vehicle	-11.52	-1.26	-0.26	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**815.40**	**1359.00**	**78.82**	**131.37**
	L_{19} - L_{20}	1.28	-8.50	0.10	0.10	-0.94	-0.94	0.02	0.02	-0.32	-0.32	1.20	0.90	1.28	0.10	0.02	Vehicle	-8.50	-1.01	-0.32	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1006.26**	**1677.11**	**99.56**	**165.93**
Structure 2	L_0 - L_1	8.88	-1.10	1.71	1.71	-0.21	-0.21	0.23	0.23	-0.03	-0.03	1.18	0.90	8.88	1.82	0.23	Vehicle	-1.10	-0.23	-0.03	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**75.72**	**126.20**	**625.19**	**1041.98**
	L_1 - L_2	13.41	-0.38	1.63	1.63	-0.27	-0.27	0.25	0.25	-0.04	-0.04	1.18	0.90	13.41	1.73	0.25	Vehicle	-0.38	-0.29	-0.04	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**77.92**	**129.87**	**493.37**	**822.28**
	L_2 - L_3	9.63	-1.36	1.56	1.56	-0.32	-0.32	0.25	0.25	-0.05	-0.05	1.18	0.90	9.63	1.66	0.25	Vehicle	-1.36	-0.34	-0.05	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**154.38**	**257.31**	**774.93**	**1291.55**
	L_3 - L_4	13.25	-0.94	1.89	1.89	-0.32	-0.32	0.21	0.21	-0.05	-0.05	1.18	0.90	13.25	2.01	0.21	Vehicle	-0.94	-0.34	-0.05	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**183.95**	**306.59**	**1119.22**	**1865.36**
	L_4 - L_5	9.60	-8.29	0.86	0.86	-0.97	-0.97	0.07	0.07	-0.04	-0.04	1.18	0.90	9.60	0.92	0.07	Vehicle	-8.29	-1.03	-0.04	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**533.91**	**889.85**	**478.79**	**797.99**
	L_5 - L_6	11.25	-2.22	1.78	1.78	-0.43	-0.43	0.12	0.12	-0.06	-0.06	1.18	0.90	11.25	1.89	0.12	Vehicle	-2.22	-0.45	-0.06	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**285.49**	**475.82**	**1202.17**	**2003.62**
	L_6 - L_7	3.51	-10.30	0.74	0.74	-1.88	-1.88	0.00	0.00	-0.07	-0.07	1.18	0.90	3.51	0.79	-----	Vehicle	-10.30	-2.00	-0.07	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**699.18**	**1165.30**	**274.58**	**457.64**
	L_7 - L_8	2.60	-12.44	0.52	0.52	-1.39	-1.39	0.00	0.00	-0.24	-0.24	1.18	0.90	2.60	0.56	-----	Vehicle	-12.44	-1.48	-0.24	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**695.48**	**1159.14**	**258.01**	**430.01**
	L_8 - L_9	-0.35	-14.52	0.18	0.18	-1.63	-1.63	0.00	0.00	-0.19	-0.19	1.18	0.90	-0.35	0.19	0.00	Vehicle	-14.52	-1.73	-0.19	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**1568.68**	**2614.46**	**171.18**	**285.31**
	L_9 - L_{10}	-2.85	-13.17	0.23	0.23	-1.50	-1.50	0.00	0.00	-0.34	-0.34	1.18	0.90	-2.85	0.25	-----	Vehicle	-13.17	-1.60	-0.34	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**912.09**	**1520.15**	**134.53**	**224.22**
	L_{10} - L_{11}	-0.58	-12.80	0.40	0.40	-1.65	-1.65	0.05	0.05	-0.23	-0.23	1.18	0.90	-0.58	0.43	0.05	Vehicle	-12.80	-1.75	-0.23	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**447.74**	**746.23**	**104.50**	**174.16**
	L_{11} - L_{12}	-1.75	-17.48	0.12	0.12	-1.30	-1.30	0.00	0.00	-0.37	-0.37	1.18	0.90	-1.75	0.13	-----	Vehicle	-17.48	-1.38	-0.37	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**2389.27**	**3982.12**	**214.54**	**357.57**
	L_{12} - L_{13}	8.95	-4.77	1.74	1.74	-1.01	-1.01	0.30	0.30	-0.17	-0.17	1.18	0.90	8.95	1.86	0.30	Vehicle	-4.77	-1.08	-0.17	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**239.02**	**398.37**	**414.65**	**691.09**
	L_{13} - L_{14}	-25.08	-38.97	1.60	1.60	-4.13	-4.13	0.00	0.00	-1.43	-1.43	1.18	0.90	-25.08	1.70	-----	Vehicle	-38.97	-4.40	-1.43	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**330.86**	**551.43**	**119.32**	**198.87**
	L_{14} - L_{15}	38.11	24.33	4.57	4.57	-1.53	-1.53	1.40	1.40	0.00	0.00	1.17	0.90	38.11	4.81	1.40	Vehicle	24.33	-1.61	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**109.39**	**182.31**	**349.86**	**583.10**
	L_{15} - L_{16}	2.20	-10.15	1.39	1.39	-1.10	-1.10	0.09	0.09	-0.29	-0.29	1.17	0.90	2.20	1.47	0.09	Vehicle	-10.15	-1.15	-0.29	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**305.60**	**509.33**	**384.63**	**641.04**
	L_{16} - L_{17}	15.46	1.39	1.63	1.63	-0.23	-0.23	0.38	0.38	0.00	0.00	1.17	0.90	15.46	1.71	0.38	Vehicle	1.39	-0.24	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**202.29**	**337.15**	**1464.61**	**2441.02**
	L_{17} - L_{18}	10.48	-1.25	2.09	2.09	-0.31	-0.31	0.22	0.22	-0.08	-0.08	1.17	0.90	10.48	2.20	0.22	Vehicle	-1.25	-0.33	-0.08	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**98.33**	**163.89**	**682.45**	**1137.41**
	L_{18} - L_{19}	10.20	0.17	1.31	1.31	-0.29	-0.29	0.27	0.27	0.00	0.00	1.17	0.90	10.20	1.38	0.27	Vehicle	0.17	-0.30	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**111.01**	**185.02**	**523.29**	**872.15**
	L_{19} - L_{20}	9.84	-2.71	1.28	1.28	-0.17	-0.17	0.12	0.12	-0.03	-0.03	1.17	0.90	9.84	1.35	0.12	Vehicle	-2.71	-0.18	-0.03	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**113.42**	**189.04**	**859.73**	**1432.88**
	L_{20} - L_{21}	7.95	-2.45	1.12	1.12	-0.70	-0.70	0.16	0.16	0.00	0.00	1.17	0.90	7.95	1.18	0.16	Vehicle	-2.45	-0.74	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**215.42**	**359.04**	**348.35**	**580.59**
	L_{21} - L_{22}	8.88	-2.40	2.13	2.13	-0.36	-0.36	0.16	0.16	-0.05	-0.05	1.17	0.90	8.88	2.24	0.16	Vehicle	-2.40	-0.38	-0.05	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**112.82**	**188.03**	**670.94**	**1118.24**
	L_{22} - L_{23}	2.01	-9.01	0.42	0.42	-1.98	-1.98	0.06	0.06	-0.18	-0.18	1.17	0.90	2.01	0.44	0.06	Vehicle	-9.01	-2.08	-0.18	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**583.41**	**972.35**	**121.38**	**202.30**
	L_{23} - L_{24}	1.86	-8.53	0.68	0.68	-1.01	-1.01	0.00	0.00	-0.20	-0.20	1.17	0.90	1.86	0.71	-----	Vehicle	-8.53	-1.07	-0.20	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**361.20**	**602.00**	**237.64**	**396.07**
	L_{24} - L_{25}	2.80	-9.72	0.16	0.16	-1.44	-1.44	0.03	0.03	-0.11	-0.11	1.17	0.90	2.80	0.16	0.03	Vehicle	-9.72	-1.51	-0.11	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**958.58**	**1597.63**	**101.18**	**168.63**
	L_{25} - L_{26}	-0.70	-10.70	0.31	0.31	-1.29	-1.29	0.00	0.00	-0.30	-0.30	1.17	0.90	-0.70	0.33	-----	Vehicle	-10.70	-1.35	-0.30	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**490.40**	**817.34**	**112.87**	**188.11**
	L_{26} - L_{27}	1.32	-10.35	0.40	0.40	-1.70	-1.70	0.05	0.05	-0.19	-0.19	1.17	0.90	1.32	0.43	0.05	Vehicle	-10.35	-1.79	-0.19	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**521.88**	**869.79**	**120.78**	**201.30**
	L_{27} - L_{28}	-2.21	-16.20	0.24	0.24	-1.56	-1.56	0.00	0.00	-0.41	-0.41	1.17	0.90	-2.21	0.25	-----	Vehicle	-16.20	-1.64	-0.41	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**1411.65**	**2352.75**	**210.58**	**350.97**
	L_{28} - L_{29}	11.79	-0.40	1.62	1.62	-0.84	-0.84	0.27	0.27	-0.04	-0.04	1.17	0.90	11.79	1.71	0.27	Vehicle	-0.40	-0.88	-0.04	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**259.08**	**431.81**	**510.44**	**850.73**
	L_{29} - L_{30}	-25.96	-39.46	1.38	1.38	-4.21	-4.21	0.00	0.00	-1.47	-1.47	1.17	0.90	-25.96	1.45	-----	Vehicle	-39.46	-4.43	-1.47	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**389.13**	**648.55**	**118.56**	**197.60**
	L_{30} - L_{31}	38.82	24.63	4.39	4.39	-1.25	-1.25	1.43	1.43	0.00	0.00	1.18	0.90	38.82	4.68	1.43	Vehicle	24.63	-1.33	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**112.28**	**187.14**	**423.30**	**705.50**
	L_{31} - L_{32}	6.18	-7.73	1.34	1.34	-1.08	-1.08	0.15	0.15	-0.25	-0.25	1.18	0.90	6.18	1.43	0.15	Vehicle	-7.73	-1.15	-0.25	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**311.56**	**519.26**	**385.90**	**643.17**
	L_{32} - L_{33}	16.95	1.13	1.55	1.55	-0.16	-0.16	0.34	0.34	0.00	0.00	1.18	0.90	16.95	1.65	0.34	Vehicle	1.13	-0.17	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**179.37**	**298.95**	**1827.52**	**3045.87**
	L_{33} - L_{34}	12.91	0.40	1.78	1.78	-0.29	-0.29	0.24	0.24	-0.04	-0.04	1.18	0.90	12.91	1.90	0.24	Vehicle	0.40	-0.31	-0.04	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**96.59**	**160.99**	**618.76**	**1031.27**
	L_{34} - L_{35}	12.86	2.50	1.64	1.64	-0.14	-0.14	0.31	0.31	0.00	0.00	1.18	0.90	12.86	1.75	0.31	Vehicle	2.50	-0.15	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**122.77**	**204.62**	**1536.44**	**2560.73**
	L_{35} - L_{36}	14.48	0.27	1.77	1.77	-0.13	-0.13	0.19	0.19	0.00	0.00	1.18	0.90	14.48	1.88	0.19	Vehicle	0.27	-0.14	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**157.91**	**263.18**	**2207.87**	**3679.78**
	L_{36} - L_{37}	11.87	-3.19	1.64	1.64	-0.31	-0.31	0.19	0.19	0.00	0.00	1.18	0.90	11.87	1.75	0.19	Vehicle	-3.19	-0.33	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**107.21**	**178.69**	**582.48**	**970.80**
	L_{37} - L_{38}	10.52	-3.30	1.94	1.94	-0.78	-0.78	0.10	0.10	0.00	0.00	1.18	0.90	10.52	2.07	0.10	Vehicle	-3.30	-0.83	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**265.60**	**442.67**	**666.16**	**1110.27**
	L_{38} - L_{39}	1.68	-11.78	0.34	0.34	-1.64	-1.64	0.05	0.05	-0.12	-0.12	1.18	0.90	1.68	0.36	0.05	Vehicle	-11.78	-1.74	-0.12	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**1516.08**	**2526.79**	**309.93**	**516.55**
	L_{39} - L_{40}	7.67	-10.20	0.85	0.85	-1.08	-1.08	0.05	0.05	-0.12	-0.12	1.18	0.90	7.67	0.90	0.05	Vehicle	-10.20	-1.15	-0.12	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**546.55**	**910.92**	**426.42**	**710.70**
	L_{40} - L_{41}	0.89	-13.24	0.25	0.25	-1.56	-1.56	0.03	0.03	-0.16	-0.16	1.18	0.90	0.89	0.27	0.03	Vehicle	-13.24	-1.66	-0.16	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**1396.93**	**2328.21**	**223.42**	**372.36**
	L_{41} - L_{42}	1.02	-9.90	0.30	0.30	-1.24	-1.24	0.05	0.05	-0.24	-0.24	1.18	0.90	1.02	0.32	0.05	Vehicle	-9.90	-1.32	-0.24	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**819.48**	**1365.80**	**193.76**	**322.93**
	L_{42} - L_{43}	0.59	-13.12	0.20	0.20	-1.25	-1.25	0.03	0.03	-0.22	-0.22	1.18	0.90	0.59	0.21	0.03	Vehicle	-13.12	-1.33	-0.22	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**334.38**	**557.30**	**48.00**	**80.00**
	L_{43} - L_{44}	-0.09	-9.99	0.20	0.20	-1.15	-1.15	0.03	0.03	-0.29	-0.29	1.18	0.90	-0.09	0.21	0.03	Vehicle	-9.99	-1.22	-0.29	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**686.03**	**1143.39**	**112.38**	**187.29**
Structure 3	L_0 - L_1	7.56	-2.30	1.40	1.40	-0.11	-0.11	0.22	0.22	-0.01	-0.01	1.20	0.90	7.56	1.51	0.22	Vehicle	-2.30	-0.12	-0.01	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**67.03**	**111.72**	**874.22**	**1457.03**
	L_1 - L_2	11.66	-0.81	1.49	1.49	-0.17	-0.17	0.27	0.27	-0.02	-0.02	1.20	0.90	11.66	1.61	0.27	Vehicle	-0.81	-0.18	-0.02	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**61.63**	**102.72**	**582.55**	**970.92**
	L_2 - L_3	9.44	-2.32	1.19	1.19	-0.17	-0.17	0.25	0.25	-0.03	-0.03	1.20	0.90	9.44	1.28	0.25	Vehicle	-2.32	-0.19	-0.03	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**181.79**	**302.98**	**1271.25**	**2118.75**
	L_3 - L_4	11.46	0.38	1.81	1.81	-0.24	-0.24	0.24	0.24	-0.02	-0.02	1.20	0.90	11.46	1.95	0.24	Vehicle	0.38	-0.25	-0.02	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**178.30**	**297.17**	**1399.82**	**2333.04**
	L_4 - L_5	3.42	-6.02	0.57	0.57	-0.89	-0.89	0.04	0.04	-0.03	-0.03	1.20	0.90	3.42	0.61	0.04	Vehicle	-6.02	-0.96	-0.03	Veh

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD												Maximum Positive Shear				Minimum Negative Shear											Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)																							
South Truss - Verticals	Structure 1	U_0 - L_0	-1.56	-1.56	0.28	0.28	-1.90	-1.90	0.04	0.04	-0.12	-0.12	1.24	0.90	-1.56	0.31	0.04	Vehicle	-1.56	-2.11	-0.12	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**370.18**	**616.96**	**53.61**	**89.36**
		U_1 - L_1	-1.45	-1.45	0.58	0.58	-1.68	-1.68	0.12	0.12	-0.33	-0.33	1.24	0.90	-1.45	0.64	0.12	Vehicle	-1.45	-1.87	-0.33	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**178.59**	**297.64**	**60.47**	**100.79**
		U_2 - L_2	0.31	0.31	0.52	0.52	-1.07	-1.07	0.11	0.11	-0.16	-0.16	1.24	0.90	0.31	0.58	0.11	Vehicle	0.31	-1.19	-0.16	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**195.18**	**325.30**	**96.07**	**160.12**
		U_3 - L_3	1.69	1.69	0.61	0.61	-0.52	-0.52	0.09	0.09	-0.04	-0.04	1.24	0.90	1.69	0.68	0.09	Vehicle	1.69	-0.58	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**165.36**	**275.59**	**197.99**	**329.98**
		U_4 - L_4	2.57	2.57	0.88	0.88	-0.19	-0.19	0.16	0.16	0.00	0.00	1.24	0.90	2.57	0.98	0.16	Vehicle	2.57	-0.22	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**114.45**	**190.74**	**535.17**	**891.95**
		U_5 - L_5	2.90	2.90	1.00	1.00	-0.07	-0.07	0.23	0.23	0.00	0.00	1.24	0.90	2.90	1.11	0.23	Vehicle	2.90	-0.08	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**122.95**	**204.92**	**1705.40**	**2842.33**
		U_6 - L_6	2.64	2.64	0.99	0.99	-0.17	-0.17	0.22	0.22	0.00	0.00	1.24	0.90	2.64	1.10	0.22	Vehicle	2.64	-0.19	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**111.11**	**185.19**	**650.34**	**1083.89**
		U_7 - L_7	2.84	2.84	0.71	0.71	-0.24	-0.24	0.23	0.23	0.00	0.00	1.24	0.90	2.84	0.79	0.23	Vehicle	2.84	-0.27	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**156.31**	**260.52**	**472.53**	**787.56**
		U_8 - L_8	-0.84	-0.84	0.71	0.71	-0.89	-0.89	0.19	0.19	-0.19	-0.19	1.24	0.90	-0.84	0.79	0.19	Vehicle	-0.84	-0.99	-0.19	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**280.54**	**467.57**	**223.22**	**372.03**
		U_9 - L_9	-6.05	-6.05	0.06	0.06	-1.44	-1.44	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.05	0.07	-----	Vehicle	-6.05	-1.55	-0.38	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2132.92**	**3554.87**	**90.31**	**150.51**
		U_{10} - L_{10}	-5.08	-5.08	0.07	0.07	-1.48	-1.48	0.00	0.00	-0.32	-0.32	1.20	0.90	-5.08	0.07	0.00	Vehicle	-5.08	-1.59	-0.32	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**3269.33**	**5448.88**	**146.89**	**244.82**
		U_{11} - L_{11}	-6.10	-6.10	0.01	0.01	-1.70	-1.70	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.10	0.02	-----	Vehicle	-6.10	-1.83	-0.38	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**11507.24**	**19178.74**	**90.93**	**151.55**
		U_{12} - L_{12}	-4.35	-4.35	0.04	0.04	-1.17	-1.17	0.00	0.00	-0.26	-0.26	1.20	0.90	-4.35	0.04	-----	Vehicle	-4.35	-1.26	-0.26	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**3306.36**	**5510.61**	**111.44**	**185.73**
		U_{13} - L_{13}	-2.49	-2.49	0.12	0.12	-0.90	-0.90	0.00	0.00	-0.15	-0.15	1.20	0.90	-2.49	0.13	-----	Vehicle	-2.49	-0.97	-0.15	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**955.52**	**1592.54**	**128.08**	**213.47**
		U_{14} - L_{14}	-1.05	-1.05	0.35	0.35	-0.52	-0.52	0.00	0.00	-0.05	-0.05	1.20	0.90	-1.05	0.38	-----	Vehicle	-1.05	-0.56	-0.05	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**303.01**	**505.02**	**203.46**	**339.11**
		U_{15} - L_{15}	0.56	0.56	0.74	0.74	-0.24	-0.24	0.09	0.09	-0.04	-0.04	1.20	0.90	0.56	0.80	0.09	Vehicle	0.56	-0.26	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**142.52**	**237.53**	**436.57**	**727.61**
		U_{16} - L_{16}	1.64	1.64	0.74	0.74	-0.15	-0.15	0.13	0.13	-0.03	-0.03	1.20	0.90	1.64	0.80	0.13	Vehicle	1.64	-0.17	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**141.51**	**235.86**	**692.77**	**1154.62**
		U_{17} - L_{17}	2.21	2.21	0.73	0.73	-0.12	-0.12	0.15	0.15	-0.02	-0.02	1.20	0.90	2.21	0.79	0.15	Vehicle	2.21	-0.13	-0.02	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**173.90**	**289.83**	**1064.93**	**1774.88**
		U_{18} - L_{18}	3.83	3.83	1.02	1.02	-0.14	-0.14	0.24	0.24	-0.02	-0.02	1.20	0.90	3.83	1.10	0.24	Vehicle	3.83	-0.15	-0.02	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**129.14**	**215.23**	**954.86**	**1591.43**
		U_{19} - L_{19}	3.13	3.13	0.77	0.77	-0.09	-0.09	0.21	0.21	-0.02	-0.02	1.20	0.90	3.13	0.82	0.21	Vehicle	3.13	-0.10	-0.02	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**203.88**	**339.80**	**1714.48**	**2857.47**
		U_{20} - L_{20}	2.80	2.80	0.49	0.49	-0.05	-0.05	0.17	0.17	-0.01	-0.01	1.20	0.90	2.80	0.52	0.17	Vehicle	2.80	-0.05	-0.01	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**321.30**	**535.50**	**3122.79**	**5204.65**
		U_0 - L_0	-2.52	-2.52	0.09	0.09	-0.81	-0.81	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.52	0.10	0.01	Vehicle	-2.52	-0.86	-0.09	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1888.76**	**3147.94**	**213.62**	**356.03**
		U_1 - L_1	-4.00	-4.00	0.21	0.21	-1.08	-1.08	0.03	0.03	-0.21	-0.21	1.18	0.90	-4.00	0.22	0.03	Vehicle	-4.00	-1.15	-0.21	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**836.44**	**1394.07**	**159.09**	**265.16**
		U_2 - L_2	-3.87	-3.87	0.27	0.27	-1.24	-1.24	0.04	0.04	-0.21	-0.21	1.18	0.90	-3.87	0.29	0.04	Vehicle	-3.87	-1.32	-0.21	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**538.70**	**897.84**	**114.72**	**191.19**
		U_3 - L_3	-2.33	-2.33	0.21	0.21	-0.82	-0.82	0.03	0.03	-0.13	-0.13	1.18	0.90	-2.33	0.22	0.03	Vehicle	-2.33	-0.87	-0.13	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**698.42**	**1164.04**	**173.74**	**289.57**
		U_4 - L_4	-1.45	-1.45	0.24	0.24	-0.72	-0.72	0.04	0.04	-0.11	-0.11	1.18	0.90	-1.45	0.25	0.04	Vehicle	-1.45	-0.76	-0.11	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**453.49**	**755.81**	**148.46**	**247.44**
		U_5 - L_5	-0.22	-0.22	0.25	0.25	-0.58	-0.58	0.04	0.04	-0.06	-0.06	1.18	0.90	-0.22	0.27	0.04	Vehicle	-0.22	-0.61	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**425.54**	**709.24**	**186.08**	**310.13**
		U_6 - L_6	0.74	0.74	0.42	0.42	-0.42	-0.42	0.04	0.04	-0.01	-0.01	1.18	0.90	0.74	0.45	0.04	Vehicle	0.74	-0.45	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**251.65**	**419.41**	**256.64**	**427.73**
		U_7 - L_7	1.65	1.65	0.50	0.50	-0.15	-0.15	0.07	0.07	0.00	0.00	1.18	0.90	1.65	0.53	0.07	Vehicle	1.65	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**214.08**	**356.80**	**730.04**	**1216.74**
		U_8 - L_8	3.91	3.91	1.01	1.01	-0.10	-0.10	0.17	0.17	0.00	0.00	1.18	0.90	3.91	1.08	0.17	Vehicle	3.91	-0.11	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**110.92**	**184.87**	**1120.63**	**1867.72**
		U_9 - L_9	6.62	6.62	1.47	1.47	-0.06	-0.06	0.26	0.26	0.00	0.00	1.18	0.90	6.62	1.57	0.26	Vehicle	6.62	-0.06	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**115.68**	**192.79**	**3235.72**	**5392.86**
		U_{10} - L_{10}	5.55	5.55	1.23	1.23	-0.10	-0.10	0.23	0.23	0.00	0.00	1.18	0.90	5.55	1.31	0.23	Vehicle	5.55	-0.11	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**178.04**	**296.73**	**2164.05**	**3606.75**
		U_{11} - L_{11}	4.64	4.64	0.98	0.98	-0.14	-0.14	0.19	0.19	0.00	0.00	1.18	0.90	4.64	1.04	0.19	Vehicle	4.64	-0.15	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**223.57**	**372.61**	**1559.37**	**2598.95**
		U_{12} - L_{12}	3.46	3.46	0.76	0.76	-0.20	-0.20	0.16	0.16	-0.01	-0.01	1.18	0.90	3.46	0.80	0.16	Vehicle	3.46	-0.21	-0.01	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**323.91**	**539.85**	**1269.26**	**2115.43**
		U_{13} - L_{13}	3.45	3.45	0.54	0.54	-0.23	-0.23	0.14	0.14	0.00	0.00	1.18	0.90	3.45	0.58	0.14	Vehicle	3.45	-0.24	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**400.76**	**667.94**	**984.46**	**1640.77**
		U_{14} - L_{14}	0.27	0.27	0.39	0.39	-0.62	-0.62	0.11	0.11	-0.10	-0.10	1.18	0.90	0.27	0.42	0.11	Vehicle	0.27	-0.66	-0.10	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**546.50**	**910.84**	**347.71**	**579.51**
		U_{15} - L_{15}	-2.96	-2.96	0.07	0.07	-0.74	-0.74	0.00	0.00	-0.13	-0.13	1.17	0.90	-2.96	0.07	-----	Vehicle	-2.96	-0.78	-0.13	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2213.60**	**3689.34**	**195.06**	**325.10**
		U_{16} - L_{16}	-2.84	-2.84	0.10	0.10	-0.96	-0.96	0.03	0.03	-0.16	-0.16	1.17	0.90	-2.84	0.11	0.03	Vehicle	-2.84	-1.01	-0.16	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1744.54**	**2907.56**	**181.98**	**303.30**
		U_{17} - L_{17}	-3.71	-3.71	0.16	0.16	-1.17	-1.17	0.02	0.02	-0.19	-0.19	1.17	0.90	-3.71	0.17	0.02	Vehicle	-3.71	-1.23	-0.19	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1017.00**	**1695.00**	**136.33**	**227.21**
		U_{18} - L_{18}	-3.92	-3.92	0.24	0.24	-1.33	-1.33	0.02	0.02	-0.22	-0.22	1.17	0.90	-3.92	0.25	0.02	Vehicle	-3.92	-1.40	-0.22	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**628.10**	**1046.83**	**108.72**	**181.20**
		U_{19} - L_{19}	-2.44	-2.44	0.19	0.19	-0.84	-0.84	0.01	0.01	-0.14	-0.14	1.17	0.90	-2.44	0.20	0.01	Vehicle	-2.44	-0.88	-0.14	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**707.06**	**1178.43**	**156.71**	**261.18**
	Structure 2	U_{20} - L_{20}	-1.76	-1.76	0.21	0.21	-0.74	-0.74	0.00	0.00	-0.12	-0.12	1.17	0.90	-1.76	0.22	0.00	Vehicle	-1.76	-0.78	-0.12	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**566.17**	**943.62**	**159.28**	**265.47**
		U_{21} - L_{21}	-1.05	-1.05	0.25	0.25	-0.65	-0.65	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.05	0.26	-----	Vehicle	-1.05	-0.68	-0.09	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**437.74**	**729.57**	**166.10**	**276.83**
		U_{22} - L_{22}	0.13	0.13	0.44	0.44	-0.35	-0.35	0.05	0.05	-0.03	-0.03	1.17	0.90	0.13	0.46	0.05	Vehicle	0.13	-0.37	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**249.01**	**415.02**	**310.81**	**518.02**
		U_{23} - L_{23}	1.36	1.36	0.74	0.74	-0.24	-0.24	0.11	0.11	-0.02	-0.02	1.17	0.90	1.36	0.78	0.11	Vehicle	1.36	-0.25	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**144.66**	**241.09**	**454.88**	**758.13**
		U_{24} - L_{24}	2.07	2.07	0.81	0.81	-0.24	-0.24	0.14	0.14	-0.02	-0.02	1.17	0.90	2.07	0.85	0.14	Vehicle	2.07	-0.25	-0.02	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**145.13**	**241.89**	**500.86**	**834.77**
		U_{25} - L_{25}	2.70	2.70	0.90	0.90	-0.20	-0.20	0.16	0.16	-0.02	-0.02	1.17	0.90	2.70	0.94	0.16	Vehicle	2.70	-0.21	-0.02	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**146.04**	**243.40**	**668.91**	**1114.84**
		U_{26} - L_{26}	4.21	4.21	1.30	1.30	-0.24	-0.24	0.23	0.23	-0.03	-0.03	1.17	0.90	4.21	1.36	0.23	Vehicle	4.21	-0.26	-0.03	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**111.28**	**185.47**	**613.25**	**1022.08**
		U_{27} - L_{27}	3.88	3.88	1.06	1.06	-0.16	-0.16	0.20	0.20	-0.01	-0.01	1.17	0.90	3.88	1.12	0.20	Vehicle	3.88	-0.17	-0.01	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**150.10**	**250.17**	**1036.91**	**1728.18**
		U_{28} - L_{28}	2.75	2.75	0.81	0.81	-0.20	-0.20	0.14	0.14	-0.02	-0.02	1.17	0.90	2.75	0.85	0.14	Vehicle	2.75	-0.21	-0.02	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**215.48**	**359.14**	**898.42**	**1497.37**
		U_{29} - L_{29}	2.82	2.82	0.54	0.54	-0.22	-0.22	0.13	0.13	0.00	0.00	1.17	0.90	2.82	0.56	0.13	Vehicle	2.82	-0.23	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**270.05**	**450.08**	**689.43**	**1149.05**
		U_{30} - L_{30}	-0.53	-0.53	0.41	0.41	-0.54	-0.54	0.09	0.09	-0.10	-0.10	1.18	0.90	-0.53	0.44	0.09	Vehicle	-0.53	-0.58	-0.10	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**523.62**	**872.69**	**394.98**	**658.31**
		U_{31} - L_{31}	-3.70	-3.70	0.08	0.08	-0.71	-0.71	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.70	0.08	-----	Vehicle	-3.70	-0.76	-0.15	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**2916.40**	**4860.67**	**305.44**	**509.06**
		U_{32} - L_{32}	-3.62	-3.62	0.12	0.12	-0.89	-0.89	0.02	0.02	-0.16	-0.16	1.18	0.90	-3.62	0.13	0.02	Vehicle	-3.62	-0.95	-0.16	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**2056.74**	**3427.90**	**274.12**	**456.86**
		U_{33} - L_{33}	-4.59	-4.59	0.05	0.05	-1.07	-1.07	0.00	0.00	-0.18	-0.18	1.18	0.90	-4.59	0.05	-----	Vehicle	-4.59	-1.14	-0.18	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**4880.85**	**8134.75**	**204.62**	**341.03**
		U_{34} - L_{34}	-5.33	-5.33	0.02	0.02	-1.25	-1.25	0.00	0.00	-0.22	-0.22	1.18	0.90	-5.33	0.02	-----	Vehicle	-5.33	-1.33	-0.22	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**12496.46**	**20827.43**	**175.43**	**292.38**
		U_{35} - L_{35}	-6.23	-6.23	0.03	0.03	-1.49	-1.49	0.00	0.00	-0.25	-0.25	1.18	0.90	-6.23	0.04	-----	Vehicle	-6.23	-1.59	-0.25	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**5386.30**	**8977.17**	**114.66**	**191.09**
		U_{36} - L_{36}	-3.53	-3.53	0.08	0.08	-0.97	-0.97	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.53	0.08	-----	Vehicle	-3.53	-1.04	-0.15	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**1510.81**	**2518.02**	**115.35**	**192.26**
		U_{37} - L_{37}	-1.47	-1.47	0.17	0.17	-0.45	-0.45	0.00	0.00	-0.06	-0.06	1.18	0.90	-1.47	0.18	-----	Vehicle	-1.47	-0.48	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**634.97**	**1058.28**	**236.19**	**393.65**
		U_{38} - L_{38}	-0.52	-0.52	0.50	0.50	-0.42	-0.42	0.03	0.03	-0.04	-0.04	1.18	0.90	-0.52	0.53	0.03	Vehicle	-0.52	-0.45	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**216.99**	**361.65**	**253.13**	**421.89**
		U_{39} - L_{39}	0.56	0.56	0.63	0.63	-0.24	-0.24	0.07	0.07	-0.04	-0.04	1.18	0.90	0.56	0.67	0.07	Vehicle	0.56	-0.26	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**170.33**	**283.88**	**442.11**	**736.85**
		U_{40} - L_{40}	1.79	1.79	0.77	0.77	-0.24	-0.24	0.11	0.11	-0.04	-0.04	1.18	0.90	1.79	0.82	0.11	Vehicle	1.79	-0.25	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**137.62**	**229.37**	**456.21**	**760.35**
		U_{41} - L_{41}	2.59	2.59	0.77	0.77	-0.20	-0.20	0.13	0.13	-0.03	-0.03	1.18	0.90	2.59	0.82	0.13	Vehicle	2.59	-0.21	-0.03	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**183.92**	**306.54**	**734.61**	**1224.36**
		U_{42} - L_{42}	4.23	4.23	1.09	1.09	-0.25	-0.25	0.21	0.21	-0.04	-0.04	1.18	0.90	4.23	1.16	0.21	Vehicle	4.23	-0.27	-0.04	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**130.50**	**217.50**	**586.73**	**977.88**
		U_{43} - L_{43}	3.86	3.86	0.84	0.84	-0.17	-0.17	0.19	0.19	-0.03	-0.03	1.18	0.90	3.86	0.89	0.19	Vehicle	3.86	-0.18	-0.03	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**206.06**	**343.43**	**1043.85**	**1739.75**
		U_{44} - L_{44}	3.42	3.42	0.54	0.54	-0.09	-0.09	0.14	0.14	-0.01	-0.01	1.18	0.90	3.42	0.58	0.14	Vehicle	3.42	-0.10	-0.01	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**317.33**	**528.88**	**1935.82**	**3226.36**
	Structure 3	U_0 - L_0	-1.97	-1.97	0.06	0.06	-0.73	-0.73	0.01	0.01	-0.09	-0.09	1.20	0.90	-1.97	0.06	0.01	Vehicle	-1.97	-0.79	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2887.33**	**4812.22**	**214.24**	**357.07**
		U_1 - L_1	-3.42	-3.42	0.13	0.13	-1.00	-1.00	0.02	0.02	-0.24	-0.24	1.20	0.90	-3.42	0.14	0.02	Vehicle	-3.42	-1.08	-0.24	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1218.38**	**2030.63**	**155.65**	**259.42**

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HS20 Truck
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD											Maximum Positive Shear				Minimum Negative Shear														Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)																								
Structure 1	U_0 - L_1	0.34	-0.17	0.07	0.07	-0.51	-0.51	0.03	0.03	0.00	0.00	1.24	0.90	0.34	0.08	0.03	Pedestrian	-0.17	-0.57	0.00	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**714.15**	**892.69**	**97.25**	**162.09**
	U_1 - L_2	0.05	-0.25	0.08	0.08	-0.18	-0.18	0.02	0.02	-0.05	-0.05	1.24	0.90	0.05	0.09	0.02	Vehicle	-0.25	-0.20	-0.05	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1233.91**	**2056.51**	**568.35**	**947.26**
	U_2 - L_3	0.29	-0.01	0.08	0.08	-0.10	-0.10	0.02	0.02	-0.01	-0.01	1.24	0.90	0.29	0.09	0.02	Vehicle	-0.01	-0.11	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1278.51**	**2130.86**	**994.51**	**1657.51**
	U_3 - L_4	0.44	0.13	0.10	0.10	-0.01	-0.01	0.01	0.01	0.00	0.00	1.24	0.90	0.44	0.11	0.01	Vehicle	0.13	-0.02	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**992.23**	**1653.72**	**7322.11**	**12203.52**
	U_4 - L_4	-0.36	-0.70	0.03	0.03	-0.17	-0.17	0.00	0.00	-0.04	-0.04	1.24	0.90	-0.36	0.03	-----	Vehicle	-0.70	-0.19	-0.04	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**4458.19**	**7430.32**	**744.08**	**1240.14**
	U_5 - L_5	-1.05	-1.50	0.04	0.04	-0.41	-0.41	0.00	0.00	-0.10	-0.10	1.24	0.90	-1.05	0.05	-----	Vehicle	-1.50	-0.46	-0.10	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3019.04**	**5031.73**	**314.04**	**523.41**
	U_7 - L_6	-1.37	-1.84	0.13	0.13	-0.49	-0.49	0.00	0.00	-0.13	-0.13	1.24	0.90	-1.37	0.14	-----	Vehicle	-1.84	-0.55	-0.13	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1023.55**	**1705.92**	**261.23**	**435.38**
	U_8 - L_7	-0.71	-1.20	0.10	0.10	-0.29	-0.29	0.00	0.00	-0.08	-0.08	1.24	0.90	-0.71	0.11	-----	Vehicle	-1.20	-0.32	-0.08	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1309.43**	**2182.39**	**449.68**	**749.46**
	U_9 - L_9	-1.25	-2.17	0.06	0.06	-0.45	-0.45	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.25	0.06	0.01	Vehicle	-2.17	-0.49	-0.11	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**3038.53**	**5064.22**	**367.15**	**611.91**
	U_9 - L_{10}	-2.11	-2.95	0.02	0.02	-0.65	-0.65	0.00	0.00	-0.16	-0.16	1.20	0.90	-2.11	0.02	-----	Vehicle	-2.95	-0.70	-0.16	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**7286.72**	**12144.54**	**255.48**	**425.80**
	U_{10} - L_{11}	-1.43	-2.28	0.02	0.02	-0.47	-0.47	0.00	0.00	-0.10	-0.10	1.20	0.90	-1.43	0.02	-----	Vehicle	-2.28	-0.51	-0.10	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**7440.89**	**12401.48**	**281.17**	**468.61**
	U_{11} - L_{12}	-1.21	-1.69	0.02	0.02	-0.42	-0.42	0.00	0.00	-0.09	-0.09	1.20	0.90	-1.21	0.02	-----	Vehicle	-1.69	-0.46	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**10558.72**	**17597.86**	**369.73**	**616.22**
	U_{12} - L_{13}	-0.93	-1.64	0.01	0.01	-0.35	-0.35	0.00	0.00	-0.07	-0.07	1.20	0.90	-0.93	0.02	-----	Vehicle	-1.64	-0.38	-0.07	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**8230.03**	**13716.72**	**322.35**	**537.25**
	U_{13} - L_{14}	-0.18	-0.52	0.07	0.07	-0.13	-0.13	0.00	0.00	-0.02	-0.02	1.20	0.90	-0.18	0.08	-----	Vehicle	-0.52	-0.14	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1491.21**	**2485.34**	**805.25**	**1342.08**
	U_{15} - L_{14}	0.33	0.00	0.10	0.10	-0.11	-0.11	0.01	0.01	-0.01	-0.01	1.20	0.90	0.33	0.10	0.01	Vehicle	0.00	-0.12	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1088.54**	**1814.23**	**936.06**	**1560.09**
	U_{16} - L_{15}	-0.23	-0.58	0.06	0.06	-0.23	-0.23	0.01	0.01	-0.03	-0.03	1.20	0.90	-0.23	0.07	0.01	Vehicle	-0.58	-0.24	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1736.13**	**2893.55**	**468.67**	**781.11**
	U_{17} - L_{16}	-0.54	-0.93	0.06	0.06	-0.30	-0.30	0.01	0.01	-0.06	-0.06	1.20	0.90	-0.54	0.06	0.01	Vehicle	-0.93	-0.32	-0.06	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2303.47**	**3839.12**	**430.12**	**716.87**
	U_{18} - L_{17}	-1.69	-2.17	0.08	0.08	-0.53	-0.53	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.69	0.08	0.01	Vehicle	-2.17	-0.57	-0.11	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1745.47**	**2909.11**	**250.48**	**417.47**
	U_{19} - L_{18}	-1.52	-2.05	0.06	0.06	-0.46	-0.46	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.52	0.06	0.01	Vehicle	-2.05	-0.49	-0.11	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2524.85**	**4208.09**	**311.94**	**519.90**
	U_{20} - L_{19}	-1.60	-2.18	0.03	0.03	-0.37	-0.37	0.01	0.01	-0.12	-0.12	1.20	0.90	-1.60	0.04	0.01	Vehicle	-2.18	-0.40	-0.12	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4234.12**	**7056.87**	**383.41**	**639.01**
Structure 2	U_0 - L_1	-1.42	-1.97	0.07	0.07	-0.66	-0.66	0.01	0.01	-0.05	-0.05	1.18	0.90	-1.42	0.08	0.01	Vehicle	-1.97	-0.71	-0.05	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2169.00**	**3615.00**	**238.85**	**398.08**
	U_1 - L_2	-2.23	-2.78	0.15	0.15	-0.70	-0.70	0.02	0.02	-0.14	-0.14	1.18	0.90	-2.23	0.16	0.02	Vehicle	-2.78	-0.74	-0.14	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1080.31**	**1800.51**	**226.24**	**377.07**
	U_2 - L_3	-1.76	-2.23	0.16	0.16	-0.66	-0.66	0.03	0.03	-0.11	-0.11	1.18	0.90	-1.76	0.17	0.03	Vehicle	-2.23	-0.70	-0.11	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**867.15**	**1445.25**	**203.18**	**338.63**
	U_3 - L_4	-0.78	-1.19	0.11	0.11	-0.37	-0.37	0.02	0.02	-0.06	-0.06	1.18	0.90	-0.78	0.12	0.02	Vehicle	-1.19	-0.39	-0.06	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1283.03**	**2138.39**	**386.43**	**644.05**
	U_4 - L_5	-0.13	-0.47	0.09	0.09	-0.24	-0.24	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.13	0.09	0.01	Vehicle	-0.47	-0.25	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1218.02**	**2030.03**	**452.75**	**754.58**
	U_5 - L_6	0.36	0.01	0.14	0.14	-0.16	-0.16	0.01	0.01	-0.01	-0.01	1.18	0.90	0.36	0.15	0.01	Vehicle	0.01	-0.17	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**742.45**	**1237.42**	**682.31**	**1137.19**
	U_6 - L_7	0.65	0.25	0.16	0.16	-0.08	-0.08	0.02	0.02	0.00	0.00	1.18	0.90	0.65	0.17	0.02	Vehicle	0.25	-0.08	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**728.29**	**1213.82**	**1570.15**	**2616.92**
	U_8 - L_7	-0.66	-1.45	0.06	0.06	-0.27	-0.27	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.06	-----	Vehicle	-1.45	-0.29	-0.04	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1667.47**	**2779.11**	**359.97**	**599.95**
	U_8 - L_8	-2.06	-2.57	0.03	0.03	-0.54	-0.54	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.04	-----	Vehicle	-2.57	-0.57	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4425.58**	**7375.96**	**267.11**	**445.18**
	U_{10} - L_9	-2.06	-2.56	0.04	0.04	-0.52	-0.52	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.04	-----	Vehicle	-2.56	-0.55	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4468.49**	**7447.49**	**304.94**	**508.23**
	U_{11} - L_{10}	-2.31	-2.86	0.07	0.07	-0.55	-0.55	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.31	0.07	-----	Vehicle	-2.86	-0.59	-0.10	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2619.91**	**4366.51**	**313.29**	**522.15**
	U_{12} - L_{11}	-2.13	-2.73	0.10	0.10	-0.50	-0.50	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.13	0.11	-----	Vehicle	-2.73	-0.53	-0.10	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1754.33**	**2923.88**	**346.09**	**576.82**
	U_{13} - L_{12}	-2.09	-2.70	0.15	0.15	-0.44	-0.44	0.01	0.01	-0.10	-0.10	1.18	0.90	-2.09	0.16	0.01	Vehicle	-2.70	-0.47	-0.10	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1072.55**	**1787.58**	**356.28**	**593.79**
	U_{14} - L_{13}	-1.09	-1.71	0.12	0.12	-0.28	-0.28	0.01	0.01	-0.07	-0.07	1.18	0.90	-1.09	0.12	0.01	Vehicle	-1.71	-0.30	-0.07	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1382.05**	**2303.42**	**564.91**	**941.52**
	U_{15} - L_{14}	-0.80	-1.36	0.06	0.06	-0.37	-0.37	0.02	0.02	-0.06	-0.06	1.17	0.90	-0.80	0.06	0.02	Vehicle	-1.36	-0.39	-0.06	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2249.66**	**3749.43**	**368.55**	**614.26**
	U_{16} - L_{15}	-1.69	-2.23	0.05	0.05	-0.58	-0.58	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.69	0.05	0.01	Vehicle	-2.23	-0.61	-0.10	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2754.75**	**4591.24**	**232.82**	**388.03**
	U_{18} - L_{17}	-1.71	-2.26	0.07	0.07	-0.60	-0.60	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.71	0.07	0.01	Vehicle	-2.26	-0.63	-0.10	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2108.53**	**3514.21**	**242.22**	**403.70**
	U_{17} - L_{16}	-1.67	-2.16	0.09	0.09	-0.57	-0.57	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.67	0.09	0.00	Vehicle	-2.16	-0.60	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1620.24**	**2700.41**	**237.37**	**395.62**
	U_{19} - L_{18}	-1.45	-1.93	0.10	0.10	-0.55	-0.55	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.45	0.11	0.00	Vehicle	-1.93	-0.58	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1349.00**	**2248.33**	**248.03**	**413.38**
	U_{20} - L_{20}	-0.63	-1.37	0.09	0.09	-0.35	-0.35	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.63	0.09	-----	Vehicle	-1.37	-0.37	-0.06	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1131.12**	**1885.21**	**281.14**	**468.57**
	U_{20} - L_{21}	-0.36	-0.70	0.08	0.08	-0.23	-0.23	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.36	0.08	-----	Vehicle	-0.70	-0.25	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1374.74**	**2291.23**	**461.53**	**769.21**
	U_{21} - L_{22}	0.02	-0.31	0.13	0.13	-0.13	-0.13	0.01	0.01	-0.02	-0.02	1.17	0.90	0.02	0.13	0.01	Vehicle	-0.31	-0.14	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**867.08**	**1445.13**	**819.85**	**1366.41**
	U_{23} - L_{22}	-0.05	-0.39	0.10	0.10	-0.16	-0.16	0.00	0.00	-0.02	-0.02	1.17	0.90	-0.05	0.11	0.00	Vehicle	-0.39	-0.16	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1073.54**	**1789.23**	**693.42**	**1155.70**
	U_{24} - L_{23}	-0.39	-0.74	0.08	0.08	-0.24	-0.24	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.39	0.08	0.00	Vehicle	-0.74	-0.25	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1410.65**	**2351.09**	**446.19**	**743.64**
	U_{25} - L_{24}	-0.62	-1.39	0.09	0.09	-0.35	-0.35	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.62	0.09	0.00	Vehicle	-1.39	-0.37	-0.06	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1131.10**	**1885.16**	**281.12**	**468.53**
	U_{26} - L_{25}	-1.40	-1.89	0.10	0.10	-0.50	-0.50	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.40	0.10	0.00	Vehicle	-1.89	-0.53	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1389.59**	**2315.99**	**270.84**	**451.40**
	U_{27} - L_{26}	-1.57	-2.07	0.08	0.08	-0.50	-0.50	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.57	0.09	0.00	Vehicle	-2.07	-0.52	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1678.83**	**2798.04**	**273.37**	**455.61**
	U_{28} - L_{27}	-1.53	-2.09	0.10	0.10	-0.48	-0.48	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.53	0.10	-----	Vehicle	-2.09	-0.50	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1520.58**	**2534.30**	**304.24**	**507.07**
	U_{29} - L_{28}	-1.40	-1.95	0.15	0.15	-0.40	-0.40	0.00	0.00	-0.08	-0.08	1.17	0.90	-1.40	0.15	-----	Vehicle	-1.95	-0.42	-0.08	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**948.76**	**1581.27**	**340.00**	**566.67**
	U_{30} - L_{29}	-0.59	-1.15	0.11	0.11	-0.23	-0.23	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.59	0.11	0.00	Vehicle	-1.15	-0.25	-0.04	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1293.45**	**2155.75**	**581.69**	**969.48**
	U_{30} - L_{31}	-1.35	-1.98	0.08	0.08	-0.40	-0.40	0.01	0.01	-0.08	-0.08	1.18	0.90	-1.35	0.09	0.01	Vehicle	-1.98	-0.43	-0.08	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1981.06**	**3301.76**	**395.49**	**659.14**
	U_{31} - L_{32}	-2.47	-3.07	0.08	0.08	-0.60	-0.60	0.01	0.01	-0.12	-0.12	1.18	0.90	-2.47	0.08	0.01	Vehicle	-3.07	-0.64	-0.12	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2119.72**	**3532.87**	**262.85**	**438.09**
	U_{32} - L_{33}	-2.33	-2.91	0.05	0.05	-0.60	-0.60	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.33	0.05	-----	Vehicle	-2.91	-0.64	-0.11	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3735.05**	**6225.09**	**288.14**	**480.23**
	U_{33} - L_{34}	-2.44	-2.97	0.04	0.04	-0.60	-0.60	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.44	0.04	-----	Vehicle	-2.97	-0.64	-0.11	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**4283.18**	**7138.64**	**286.17**	**476.95**
	U_{34} - L_{35}	-2.15	-2.63	0.02	0.02	-0.55	-0.55	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.15	0.02	-----	Vehicle	-2.63	-0.59	-0.10	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**8045.79**	**13409.66**	**286.64**	**477.73**
	U_{35} - L_{36}	-2.05	-2.55	0.02	0.02	-0.54	-0.54	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.05	0.03	-----	Vehicle	-2.55	-0.58	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**6085.05**	**10141.76**	**264.67**	**441.11**
	U_{36} - L_{37}	-0.66	-1.43	0.07	0.07	-0.27	-0.27	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.07	-----	Vehicle	-1.43	-0.28	-0.04	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1490.58**	**2484.30**	**364.06**	**606.77**
	U_{38} - L_{37}	0.55	0.15	0.14	0.14	-0.08	-0.08	0.02	0.02	0.00	0.00	1.18	0.90	0.55	0.15	0.02	Vehicle	0.15	-0.09	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**814.65**	**1357.75**	**1453.12**	**2421.87**
	U_{39} - L_{38}	0.25	-0.10	0.12	0.12	-0.17	-0.17	0.01	0.01	-0.01	-0.01	1.18	0.90	0.25	0.13	0.01	Vehicle	-0.10	-0.18	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**891.44**	**1485.73**	**633.49**	**1055.81**
	U_{40} - L_{39}	-0.19	-0.54	0.08	0.08	-0.22	-0.22	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.19	0.08	0.01	Vehicle	-0.54	-0.24	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1410.78**	**2351.30**	**476.83**	**794.71**
	U_{41} - L_{40}	-0.79	-1.21	0.10	0.10	-0.33	-0.33	0.02	0.02	-0.05	-0.05	1.18	0.90	-0.79	0.10	0.02	Vehicle	-1.21	-0.35	-0.05	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1496.94**	**2494.90**	**433.37**	**722.28**
	U_{42} - L_{41}	-1.71	-2.19	0.13	0.13	-0.53	-0.53	0.02	0.02	-0.09	-0.09	1.18	0.90	-1.71	0.14	0.02	Vehicle	-2.19	-0.57	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1063.40**	**1772.33**	**251.72**	**419.54**
	U_{43} - L_{42}	-1.87	-2.42	0.11	0.11	-0.51	-0.51	0.02	0.02	-0.11	-0.11	1.18	0.90	-1.87	0.12	0.02	Vehicle	-2.42	-0.54	-0.11	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1461.44**	**2435.73**	**312.93**	**521.54**
	U_{44} - L_{43}	-2.06	-2.63	0.08	0.08	-0.40	-0.40	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.06	0.09	0.01	Vehicle	-2.63	-0.42	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2010.87**	**3351.45**	**397.54**	**662.57**
Structure 3	U_0 - L_1	-0.86	-1.43	0.04	0.04	-0.61	-0.61	0.00	0.00	-0.04	-0.04	1.20	0.90	-0.86	0.04	0.00	Vehicle	-1.43	-0.66	-0.04	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3588.71**	**5981.18**	**232.10**	**386.83**
	U_1 - L_2	-1.89	-2.41	0.09	0.09	-0.62	-0.62	0.01	0.01	-0.14	-0.14	1.20	0.90	-1.89	0.09	0.01	Vehicle	-2.41	-0.66	-0.14	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1675.87**	**2793.12**	**230.09**	**383.48**
	U_2 - L_3	-1.74	-2.20	0.11	0.11	-0.64	-0.64	0.02	0.02	-0.12	-0.12	1.20	0.90	-1.74	0.11	0.02	Vehicle	-2.20	-0.69	-0.12	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1280.27**	**2133.78**	**206.29**	**343.82**
	U_3 - L_4	-0.53	-0.91	0.07	0.07	-0.34	-0.34	0.01	0.01	-0.06	-0.06	1.20	0.90	-0.53	0.08	0.01	Vehicle	-0.91	-0.37	-0.06	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1842.73**	**3071.22**	**378.13**	**630.22**
	$U_4

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating Summary: **HS20 Truck**

Controlling As-Built Ratings

	Inventory	Operating
Maximum Axial Force	0.71	1.19
Maximum Moment (Start)	0.77	1.28
Maximum Moment (End)	0.80	1.33
	Inventory	Operating
Maximum Shear Force	16.9	28.19

Location	Member	Axial Load Case						Moment (Start)						Moment (End)						Controlling Tonnages		Maximum Shear Force			
		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss				Inventory		Operating	
		Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Tonnage	Operating Tonnage	Rating	Tonnage	Rating	Tonnage
Truss - Upper Chord	Structure 1																								
		$U_0 - U_1$	2.10	3.47	2.34	3.88	3.49	5.82	2.00	3.34	2.60	4.32	4.27	7.12	1.93	3.23	2.34	3.88	3.51	5.89	69.64	116.27	27.5	989	45.78	1648
		$U_1 - U_2$	1.19	1.98	1.69	2.80	1.92	3.22	1.34	2.24	1.76	2.94	1.92	3.22	1.19	1.97	1.69	2.80	1.92	3.17	42.73	70.75	32.3	1164	53.90	1941
		$U_2 - U_3$	1.24	2.06	1.69	2.82	2.09	3.52	1.19	1.98	2.63	4.36	2.74	4.56	1.34	2.25	1.88	3.12	2.15	3.60	42.86	71.29	46.9	1688	78.13	2813
		$U_3 - U_4$	1.49	2.48	2.06	3.42	2.96	4.95	1.97	3.29	3.07	5.13	2.99	4.97	1.58	2.62	2.17	3.61	3.20	5.34	53.60	89.28	43.1	1552	71.85	2587
		$U_4 - U_5$	1.53	2.53	2.13	3.56	3.01	5.04	1.54	2.56	2.13	3.56	3.08	5.12	2.23	3.72	3.45	5.78	3.39	5.63	55.20	91.16	34.3	1235	57.17	2058
		$U_5 - U_6$	2.34	3.92	2.86	4.73	2.90	4.83	2.23	3.74	2.88	4.81	2.89	4.79	2.70	4.45	6.13	10.19	3.16	5.25	80.15	134.67	32.7	1178	54.55	1964
		$U_6 - U_7$	2.19	3.64	2.72	4.54	2.93	4.88	2.19	3.65	2.76	4.61	2.92	4.88	2.38	3.94	5.71	9.55	2.91	4.84	78.77	130.96	105.5	3798	175.84	6330
		$U_7 - U_8$	1.86	3.08	2.37	3.94	2.81	4.73	1.95	3.27	2.78	4.58	5.52	6.93	4.42	7.36	6.04	10.01	4.94	6.44	66.97	110.89	33.8	1216	56.29	2026
		$U_8 - U_9$	2.03	3.40	3.07	5.12	3.37	5.57	6.85	11.48	7.91	13.33	5.05	6.47	5.80	9.61	3.98	6.65	3.15	5.25	72.98	122.28	21.7	780	36.10	1300
		$U_9 - U_{10}$	2.52	4.18	3.60	5.98	4.31	7.16	10.34	17.14	10.03	16.72	12.13	20.16	2.35	3.94	3.91	6.55	4.22	7.04	84.70	141.74	39.8	1433	66.36	2389
		$U_{10} - U_{11}$	1.76	2.94	2.20	3.64	2.18	3.65	3.79	6.32	3.98	6.57	3.06	5.12	1.77	2.95	2.13	3.51	2.12	3.53	63.35	105.70	27.3	983	45.52	1639
		$U_{11} - U_{12}$	1.33	2.20	1.75	2.93	1.55	2.58	2.38	3.96	2.69	4.53	2.02	3.33	1.41	2.33	1.75	2.93	1.55	2.58	47.79	79.37	44.9	1616	74.80	2693
		$U_{12} - U_{13}$	1.37	2.28	2.00	3.35	1.81	3.01	1.82	3.04	2.56	4.29	2.33	3.86	1.36	2.28	1.90	3.17	1.81	3.01	48.97	81.90	106.8	3844	177.94	6406
		$U_{13} - U_{14}$	1.26	2.09	1.92	3.21	1.66	2.76	1.72	2.87	2.61	4.35	1.75	2.93	1.25	2.09	1.89	3.15	1.64	2.73	45.18	75.30	106.5	3832	177.43	6387
		$U_{14} - U_{15}$	1.23	2.04	1.84	3.08	1.60	2.68	1.23	2.04	1.86	3.10	1.62	2.67	1.22	2.04	1.91	3.15	1.73	2.89	44.08	73.27	174.4	6280	290.74	10467
		$U_{15} - U_{16}$	1.31	2.19	1.85	3.09	1.86	3.09	1.31	2.19	1.94	3.23	1.87	3.12	1.80	2.99	1.84	3.07	2.22	3.67	47.20	78.71	117.2	4220	195.37	7033
		$U_{16} - U_{17}$	1.41	2.36	1.93	3.19	2.19	3.64	1.41	2.36	1.93	3.19	2.30	3.86	2.15	3.62	2.94	4.88	2.54	4.24	50.70	84.80	109.6	3946	182.66	6576
		$U_{17} - U_{18}$	1.43	2.38	1.79	2.97	2.21	3.66	1.48	2.45	1.78	2.97	2.23	3.66	1.74	2.89	2.47	4.11	2.51	4.19	51.37	85.57	95.8	3450	159.70	5749
		$U_{18} - U_{19}$	1.41	2.34	1.61	2.70	2.47	4.14	1.41	2.34	1.61	2.70	2.41	3.97	1.60	2.68	1.96	3.26	2.47	4.13	50.62	84.20	45.3	1630	75.45	2716
		$U_{19} - U_{20}$	3.05	5.06	3.38	5.62	7.17	11.89	3.05	5.08	3.37	5.62	6.98	11.72	3.66	6.10	4.95	8.27	7.54	12.54	109.82	182.33	20.7	746	34.52	1243
	Structure 2																								
		$U_0 - U_1$	3.37	5.58	3.36	5.61	4.02	6.75	3.35	5.60	4.54	7.62	5.99	9.92	3.38	5.63	3.30	5.50	4.03	6.71	118.98	197.89	29.5	1061	49.12	1768
		$U_1 - U_2$	1.77	2.95	1.84	3.07	2.17	3.61	2.17	3.61	2.24	3.73	2.28	3.81	1.75	2.94	1.84	3.05	2.13	3.54	62.82	105.84	63.1	2272	105.17	3786
		$U_2 - U_3$	1.71	2.85	2.07	3.44	1.90	3.19	2.24	3.75	2.76	4.61	2.55	4.25	1.71	2.85	2.06	3.43	2.07	3.42	61.53	102.46	42.1	1516	70.21	2527
		$U_3 - U_4$	1.46	2.44	2.02	3.38	1.67	2.81	1.45	2.41	2.00	3.33	2.26	3.80	1.45	2.42	1.85	3.11	1.70	2.83	52.10	86.86	129.5	4662	215.82	7770
		$U_4 - U_5$	1.47	2.43	1.96	3.27	1.77	2.91	1.86	3.09	2.44	4.10	1.84	3.10	1.46	2.43	1.96	3.28	1.77	2.91	52.44	87.34	83.1	2991	138.49	4986
		$U_5 - U_6$	1.44	2.40	1.95	3.28	1.85	3.08	1.44	2.40	1.95	3.28	1.94	3.22	1.52	2.53	2.13	3.58	2.00	3.34	51.73	86.52	122.9	4423	204.77	7372
		$U_6 - U_7$	1.34	2.23	1.81	3.02	2.01	3.35	1.34	2.23	1.83	3.08	1.99	3.31	1.33	2.24	1.81	3.02	1.98	3.33	48.00	80.46	115.9	4172	193.14	6953
		$U_7 - U_8$	1.40	2.33	1.88	3.11	2.03	3.38	1.40	2.33	1.88	3.11	1.99	3.32	1.93	3.21	1.95	3.21	2.02	3.38	50.39	83.94	102.2	3679	170.31	6131
		$U_8 - U_9$	1.42	2.36	2.00	3.34	2.21	3.68	1.46	2.43	2.00	3.34	2.21	3.63	1.91	3.20	2.67	4.43	2.30	3.80	51.10	85.09	88.9	3199	148.11	5332
		$U_9 - U_{10}$	1.61	2.67	2.17	3.63	2.76	4.61	1.65	2.73	2.14	3.56	2.74	4.60	1.63	2.71	2.27	3.79	4.05	6.72	58.04	96.29	36.2	1303	60.33	2172
		$U_{10} - U_{11}$	2.14	3.56	2.99	4.96	3.96	6.61	2.14	3.56	2.85	4.76	4.04	6.76	3.70	6.22	3.08	5.14	3.92	6.55	77.20	128.07	40.4	1454	67.30	2423
		$U_{11} - U_{12}$	2.62	4.37	3.28	5.45	3.28	5.48	2.62	4.37	3.29	5.48	3.22	5.39	6.86	11.45	9.06	15.05	13.01	21.69	94.39	157.22	33.3	1198	55.44	1996
		$U_{12} - U_{13}$	3.25	5.44	3.95	6.59	3.93	6.50	3.16	5.24	3.85	6.48	3.63	6.11	3.25	5.42	6.32	10.49	9.52	11.98	113.61	188.71	151.7	5461	252.80	9101
		$U_{13} - U_{14}$	3.94	6.58	4.03	6.71	3.21	5.44	2.88	4.80	3.32	5.61	6.35	7.86	4.73	7.98	8.32	13.84	5.71	7.30	103.76	172.95	45.6	1642	76.00	2736
		$U_{14} - U_{15}$	3.30	5.48	4.56	7.57	3.93	6.47	7.21	12.10	5.99	10.03	4.51	5.98	5.95	9.99	4.07	6.73	3.09	4.60	111.34	165.51	52.4	1886	87.30	3143
		$U_{15} - U_{16}$	3.47	5.82	4.29	7.17	4.29	7.17	5.08	8.49	5.76	9.69	6.57	9.11	3.56	5.93	4.81	7.99	4.14	6.89	125.09	209.50	134.3	4834	223.79	8056
		$U_{16} - U_{17}$	3.07	5.09	3.94	6.56	3.74	6.19	10.75	17.93	12.23	20.29	11.34	17.58	2.88	4.82	4.08	6.79	3.74	6.22	103.61	173.69	39.1	1407	65.14	2345
		$U_{17} - U_{18}$	2.36	3.95	3.73	6.25	3.03	5.05	5.52	9.19	6.45	10.75	3.38	5.63	2.27	3.78	3.67	6.08	3.03	5.07	81.63	136.12	36.9	1328	61.46	2213
		$U_{18} - U_{19}$	2.33	3.88	2.86	4.80	3.36	5.58	3.88	6.44	4.31	7.17	4.11	6.84	2.33	3.89	2.86	4.77	3.31	5.48	83.87	139.67	31.5	1135	52.53	1891
		$U_{19} - U_{20}$	1.79	3.00	2.42	4.06	2.33	3.85	2.19	3.66	3.12	5.17	2.45	4.09	1.82	3.02	2.35	3.92	2.33	3.85	64.51	107.82	42.0	1510	69.92	2517
		$U_{20} - U_{21}$	1.77	2.93	2.32	3.88	2.28	3.78	2.26	3.75	3.21	5.34	2.61	4.40	1.80	3.02	2.51	4.18	2.41	4.02	63.58	105.36	91.4	3289	152.28	5482
		$U_{21} - U_{22}$	1.46	2.44	2.07	3.43	2.12	3.54	1.46	2.44	2.12	3.52	2.13	3.54	1.46	2.44	2.07	3.43	2.14	3.58	52.58	87.83	94.3	3395	157.19	5659
		$U_{22} - U_{23}$	1.49	2.48	2.10	3.52	2.15	3.58	1.49	2.48	2.08	3.49	2.13	3.57	1.51	2.51	2.16	3.61	2.16	3.61	53.76	89.35	94.0	3385	156.71	5642
		$U_{23} - U_{24}$	1.73	2.89	2.25	3.74	2.54	4.23	1.70	2.83	2.27	3.78	2.53	4.21	2.15	3.58	3.06	5.12	3.59	6.00	61.17	101.96	85.0	3059	141.62	5098
		$U_{24} - U_{25}$	1.71	2.85	2.29	3.80	2.75	4.59	1.64	2.74	2.11	3.54	2.75	4.59	1.66	2.74	2.23	3.71	3.67	6.10	59.22	98.63	57.4	2067	95.71	3445
		$U_{25} - U_{26}$	2.13	3.56	2.74	4.58	4.01	6.70	2.13	3.56	2.64	4.39	4.01	6.71	3.34	5.57	4.37	7.28	4.42	7.38	76.78	128.29	34.5	1241	57.45	2068
		$U_{26} - U_{27}$	2.64	4.40	3.97	6.60	3.13	5.23	2.43	4.05	3.62	6.06	3.19	5.28	4.71	7.82	6.10	10.19	14.84	24.70	87.33	145.66	29.8	1071	49.59	1785
		$U_{27} - U_{28}$	3.34	5.57	4.23	7.07	4.18	7.01	3.33	5.55	4.30	7.15	4.08	6.76	6.11	10.18	15.35	25.50	11.31	14.86	119.94	199.87	51.4	1849	85.61	3082
		$U_{28} - U_{29}$	3.84	6.37	4.38	7.30	5.21	8.69	3.61	6.03	8.29	13.73	11.60	16.20	5.44	9.11	6.03	9.96	6.04	8.17	129.89	217.18	121.2	4363	202.01	7272
		$U_{29} - U_{30}$	4.41	7.37	4.69	7.84	3.34	4.17	3.26	5.44	3.61	6.01	7.41	10.89	7.49	12.50	7.31	12.05	4.23	5.42	117.39	150.22	43.4	1562	72.30	2603
		$U_{30} - U_{31}$	3.86	6.41	4.40	7.29	3.87	6.50	7.93	13.22	4.95	8.22	4.81	6.26	6.49	10.83	4.09	6.81	3.03	5.04	109.01	181.57	53.7	1932	89.44	3220
		$U_{31} - U_{32}$	3.25	5.43	3.58	5.93	3.81	6.32	5.80	9.61	4.51	7.50	3.94	6.55	3.10	5.17	4.10	6.84	3.81	6.37	111.69	186.27	116.3	4187	193.84	6978
		$U_{32} - U_{33}$	2.86	4.77	3.41	5.71	3.35	5.65	9.46	15.77	9.85	16.42	9.30	15.55	2.67	4.46	3.59	5.99	3.21	5.33	96.09	160.39	37.5	1348	62.43	2247
		$U_{33} - U_{34}$	2.77	4.63	3.16	5.28	3.36	5.63	2.69	4.46	3.36	5.63	4.32	7.19	3.01	5.00	3.40	5.66	3.39	5.64	96.91	160.51	42.2	1518	70.28	2530
		$U_{34} - U_{35}$	1.98	3.32	2.32	3.88	2.21	3.70	2.77	4.60	3.46	5.76	2.39	3.99	1.98	3.30	2.32	3.88	2.34	3.88	71.23	118.64	28.5	1027	47.56	1712
		$U_{35} - U_{36}$	1.84	3.06	2.22	3.70	1.88	3.14	2.44	4.08	2.93	4.89	2.11	3.51	1.84	3.07	2.49	4.18	1.84	3.09	66.13	110.26	101.7	3661	169.48	6101
		$U_{36} - U_{37}$	1.82	3.03	1.96	3.29	1.80	3.00	1.71	2.85	2.08	3.46	2.08	3.47	1.70	2.85	1.96	3.29	1.80	2.98	61.27	102.48	116.6	4197	194.30	6995
		$U_{37} - U_{38}$	1.75	2.89	1.99	3.33	1.76	2.96	1.72	2.86	2.00	3.33	1.77	2.94	1.74	2.89	2.15	3.60	1.78	2.95	61.81	103.12	100.9	3632	168.17	6054
		$U_{38} - U_{39}$	1.78	2.95	2.32	3.84	1.85	3.06	1.77	2.95	2.41	3.99	1.83	3.08	2.14	3.55	2.10	3.50	1.82	3.03	63.87	106.22	126.2	4544	210.37	7573
		$U_{39} - U_{40}$	1.75	2.91	2.00	3.38	1.87	3.12	1.69	2.83	1.89	3.14	1.82	3.05	1.69	2.83	2.00	3.36	2.45	4.08	60.72	101.89	87.4	3145	145.59	5241
		$U_{40} - U_{41}$	1.65	2.74	1.95	3.26	2.02	3.37	1.65	2.74	1.88	3.16	2.09	3.50	1.72	2.88	1.93	3.20	2.30	3.85	59.30	98.70	118.4	4264	197.41	7107
		$U_{41} - U_{42}$	1.83	3.05	1.93	3.23	2.43	4.07	2.08	3.47	1.93	3.23	2.59	4.34	2.45	4.11	2.71	4.53	2.70	4.50	65.76	109.86	36.4	1309	60.61	2182
		$U_{42} - U_{43}$	1.99	3.33	2.08	3.48	2.85	4.71	1.99	3.33	2.36	3.93	2.93	4.93	2.31	3.85	2.53	4.20	3.04	5.07	71.79	119.80	87.4	3145	145.59	5241
		$U_{43} - U_{44}$	3.24	5.40	3.36	5.61	6.05	10.09	3.24	5.40	3.26	5.39	6.05	10.09	3.64	6.05	4.70	7.83	6.22	10.39	116.75	194.00	19.2	691	31.98	1151
	Structure 3																								
		$U_0 - U_1$	3.65	6.08	3.37	5.61	4.51	7.55	3.91	6.54	4.64	7.70	5.97	9.97	3.66	6.11	3.37	5.61	4.52	7.55	121.48	201.88	38.2	1373	63.59	2289
		$U_1 - U_2$	1.61	2.69	1.64	2.72	1.86	3.14	1.61	2.68	1.64	2.73	2.07	3.45	1.59	2.66	1.65	2.74	1.91	3.24	57.30	95.61	37.6	1355	62.74	2258
		$U_2 - U_3$	1.49	2.48	1.83	3.05	1.92	3.22	1.52	2.52	1.89	3.15	2.37	3.96	1.49	2.50	1.89	3.16	1.94	3.29	53.57	89.24	75.7	2725	126.15	4541
		$U_3 - U_4$	1.57	2.64	2.10	3.50	2.07	3.45	1.62	2.71	2.28	3.77	2.57	4.27	1.63	2.72	2.29	3.82	2.04	3.41	56.58	94.98	163.9	5900	273.14	9833
		$U_4 - U_5$	1.39	2.34	1.94	3.25	1.86	3.12	1.42	2.38	2.12	3.52	2.18	3.61	1.52	2.55	2.06	3.40	1.92	3.20	49.93	84.17	134.5	4843	224.22	8072
		$U_5 - U_6$	1.35	2.23	1.99	3.32	1.81	3.02	1.35	2.23	1.99	3.32	1.89	3.10	1.36	2.27	2.08	3.47	1.81	3.02	48.49	80.14	98.9	3562	164.91	5937
		$U_6 - U_7$	1.39	2.29	2.07	3.45	1.82	3.00	1.35	2.27	1.97	3.28	1.82	3.03	1.86	3.11	2.85	4.71	1.98	3.28	48.62	81.73	107.5	3869	179.11	6448
		$U_7 - U_8$	1.46	2.41	2.02	3.35	2.08	3.46	1.43	2.37	1.97	3.28	2.06	3.39	2.27	3.80	2.59	4.33	2.94	4.95	51.63	85.38	163.2	5877	272.08	9795
		$U_8 - U_9$	1.22	2.01	1.79	3.00	2.12	3.54	1.22	2.01	1.80	2.99	2.16	3.61	2.15	3.58	3.11	5.17	2.75	3.47	43.75	72.44	40.2	1449	67.08	2415
		$U_9 - U_{10}$	1.44	2.41	1.97	3.28	3.30	5.46	1.44	2.41	1.99	3.29	3.35	5.56	2.84	4.74	3.84	6.44	6.34	10.59	51.72	86.89	25.3	912	42.20	1519
		$U_{10} - U_{11}$	2.83	4.72	3.71	6.17	4.09	6.80	2.79	4.68	3.80	6.31	4.14	6.86	3.96	6.63	20.67	34.49	13.92	20.22	100.30	168.49	42.3	1522	70.45	2536
		$U_{11} - U_{12}$	2.37	3.95	2.83	4.73	3.08	5.06	2.43	4.04	3.42	5.77	6.84	8.39	4.83	8.05	8.41	14.03	4.65	6.16	85.20	142.06	17.9	645	29.86	1075
		$U_{12} - U_{13}$	2.51	4.17	2.84	4.76	3.20	5.26	5.63	9.49	6.72	11.16	5.63	7.04	2.44	4.11	3.27	5.45	2.60	4.38	87.79	147.96	43.9	1579	73.10	2631
		$U_{13} - U_{14}$	2.31	3.85	2.98	5.00	3.14	5.25	2.36	3.95	10.11	16.76	3.09	5.18	2.31	3.88	3.17	5.28	3.15	5.25	83.17	138.57	94.9	3415	158.12	5692
		$U_{14} - U_{15}$	2.08	3.49	3.18	5.31	3.05	5.08	2.53	4.21	5.27	8.78	3.24	5.39	2.09	3.47	2.91	4.87	3.05	5.08	75.00	125.08	26.5	956	44.24	1593
		$U_{15} - U_{16}$	1.81	3.01	2.13	3.54	2.42	4.03	1.80	3.00	3.40	5.67	2.71	4.53	1.85	3.09	2.13	3.54	2.38	3.98	64.67	107.89	49.7	1791	82.90	2985
		$U_{16} - U_{17}$	1.76	2.92	2.13	3.53	2.45	4.08	2.12	3.55	2.23	3.73	2.36	3.92	1.76	2.93	2.25	3.77	3.54	5.93	63.22	105.23	40.4	1454	67.31	2423
		$U_{17} - U_{18}$	1.35	2.25	1.68	2.81	2.03	3.39	1.35	2.25	1.68	2.80	2.06	3.47	2.47	4.10	3.19	5.34	2.43	4.04	48.66	81.10	37.2	1340	62.03	2233
		$U_{18} - U_{19}$	1.33	2.21	1.60	2.67	2.24	3.73	1.33	2.21	1.58	2.63	2.37	3.93	1.53	2.55	1.87	3.12	2.72	4.57	47.75	79.44	35.9	1293	59.86	2155
		$U_{19} - U_{20}$	2.29	3.83	2.45	4.09	4.75	7.91	2.29	3.83	2.46	4.09	4.06	6.77	2.89	4.46	3.17	5.26	4.15	6.97	82.41	137.75	16.9	609	28.19	1015

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating Summary: **HS20 Truck**

Controlling As-Built Ratings

	Inventory	Operating
Maximum Axial Force	0.71	1.19
Maximum Moment (Start)	0.77	1.28
Maximum Moment (End)	0.80	1.33
	Inventory	Operating
Maximum Shear Force	16.9	28.19

Location	Member	Axial Load Case						Moment (Start)						Moment (End)						Controlling Tonnages		Maximum Shear Force			
		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss				Inventory		Operating	
		Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Tonnage	Operating Tonnage	Rating	Tonnage	Rating	Tonnage
Truss - Lower Chord	Structure 1																								
	L_2 - L_1	9.50	15.92	7.07	11.74	11.99	20.09	13.22	22.06	12.80	21.23	6.55	10.90	11.56	19.19	10.93	18.30	8.99	11.37	235.85	392.47	37.7	1356	62.76	2259
	L_1 - L_2	1.51	2.53	1.99	3.30	2.08	3.47	2.23	3.71	2.73	4.55	2.25	3.77	1.80	3.00	1.96	3.29	2.08	3.47	54.34	91.24	37.1	1335	61.82	2225
	L_2 - L_3	1.52	2.51	2.21	3.65	2.31	3.85	1.50	2.53	2.21	3.68	2.31	3.85	1.52	2.53	2.21	3.65	2.36	3.92	54.18	90.42	101.1	3638	168.45	6064
	L_3 - L_4	1.56	2.59	2.02	3.37	2.26	3.78	1.56	2.59	2.02	3.38	2.30	3.82	1.96	3.26	3.21	5.33	2.81	4.66	56.06	93.19	61.3	2208	102.22	3680
	L_4 - L_5	1.61	2.70	2.76	4.59	1.85	3.06	1.62	2.69	2.24	3.76	1.84	3.07	2.19	3.65	3.03	5.07	1.91	3.15	58.12	96.87	35.9	1292	59.81	2153
	L_5 - L_6	1.68	2.80	2.64	4.39	1.78	2.98	1.68	2.80	2.57	4.27	1.78	2.97	1.74	2.90	2.65	4.43	1.78	2.97	60.42	100.78	91.5	3295	152.53	5491
	L_6 - L_7	2.39	4.01	3.05	5.14	2.78	4.66	2.33	3.88	3.26	5.47	2.74	4.57	4.25	7.14	9.26	15.34	6.45	8.20	83.90	139.67	117.8	4239	196.27	7066
	L_7 - L_8	2.23	3.70	3.27	5.45	2.42	3.01	2.85	4.75	5.65	9.41	4.49	5.76	2.48	4.12	4.07	6.77	2.67	3.53	80.11	108.49	66.5	2392	110.75	3987
	L_8 - L_9	2.53	4.16	3.22	5.40	1.80	2.25	3.61	5.99	4.85	8.07	2.29	2.98	2.95	4.87	5.88	9.83	3.30	4.13	64.87	81.02	89.3	3213	148.77	5356
	L_9 - L_{10}	3.07	5.17	4.57	7.69	4.17	5.27	6.53	10.87	8.33	13.87	6.22	9.79	2.95	4.88	4.95	8.25	5.11	8.58	106.30	175.79	129.3	4654	215.44	7756
	L_{10} - L_{11}	2.09	3.49	3.34	5.58	3.53	5.89	2.09	3.50	3.56	5.88	3.53	5.89	2.04	3.39	3.30	5.54	3.03	5.04	73.58	121.90	49.6	1787	82.74	2979
	L_{11} - L_{12}	1.92	3.19	2.16	3.59	2.03	3.38	2.29	3.79	2.52	4.22	2.01	3.34	1.92	3.17	2.15	3.58	2.79	4.66	69.13	114.29	54.8	1972	91.29	3286
	L_{12} - L_{13}	2.02	3.33	2.41	4.02	2.21	3.67	2.25	3.77	2.53	4.19	2.59	4.30	2.01	3.35	2.46	4.09	2.21	3.67	72.30	119.86	145.7	5247	242.90	8744
	L_{13} - L_{14}	1.84	3.06	2.20	3.67	2.07	3.45	1.78	2.95	2.30	3.81	2.41	4.06	1.71	2.88	2.20	3.67	2.01	3.36	61.68	103.83	79.1	2846	131.75	4743
	L_{14} - L_{15}	1.85	3.08	2.36	3.94	2.41	4.01	1.85	3.08	2.35	3.90	2.55	4.25	2.09	3.48	2.83	4.77	2.82	4.70	66.46	111.03	146.6	5277	244.30	8795
	L_{15} - L_{16}	2.33	3.90	2.79	4.62	3.22	5.34	2.34	3.91	2.79	4.62	3.29	5.51	2.42	4.06	2.86	4.78	3.44	5.73	84.05	140.29	227.3	8184	378.91	13641
	L_{16} - L_{17}	2.22	3.70	2.54	4.23	3.11	5.19	2.22	3.70	2.47	4.08	3.09	5.20	2.57	4.27	2.76	4.56	3.57	5.94	79.75	133.14	104.5	3763	174.21	6271
	L_{17} - L_{18}	2.85	4.74	2.70	4.51	4.68	7.83	2.84	4.74	2.70	4.48	3.96	6.58	4.40	7.27	4.11	6.82	4.64	7.72	97.26	161.46	96.7	3482	161.22	5804
	L_{18} - L_{19}	3.25	5.42	2.31	3.81	3.16	5.24	4.22	7.03	3.10	5.18	4.62	7.64	3.76	6.23	2.77	4.61	4.59	7.62	83.06	137.17	38.0	1367	63.27	2278
	L_{19} - L_{20}	2.61	4.34	7.64	12.64	4.95	7.84	3.66	6.07	8.01	13.36	9.54	12.00	3.65	6.11	5.28	8.83	10.12	13.87	94.01	156.21	41.1	1480	68.52	2467
	Structure 2																								
	L_2 - L_1	11.88	19.79	11.95	19.92	11.29	18.88	11.34	18.92	8.01	13.32	8.78	14.53	11.26	18.87	12.50	20.99	11.02	14.40	288.28	479.36	54.7	1969	91.17	3282
	L_1 - L_2	2.96	4.93	2.70	4.50	3.14	5.25	3.38	5.71	3.86	6.49	3.84	6.39	3.42	5.68	2.70	4.50	3.14	5.27	97.21	161.93	52.3	1882	87.13	3137
	L_2 - L_3	2.61	4.36	2.75	4.58	2.92	4.86	3.57	5.93	3.00	5.00	3.38	5.61	2.63	4.36	2.96	4.94	2.92	4.86	93.92	156.87	98.8	3555	164.61	5926
	L_3 - L_4	2.22	3.69	2.56	4.28	2.48	4.13	2.48	4.14	2.99	4.97	2.59	4.33	2.21	3.67	2.69	4.50	2.48	4.13	79.45	132.29	153.0	5509	255.05	9182
	L_4 - L_5	2.49	4.13	2.88	4.81	2.67	4.48	2.46	4.08	3.00	5.01	2.79	4.66	2.43	4.03	3.04	5.05	2.67	4.48	87.42	145.26	170.3	6132	283.91	10221
	L_5 - L_6	2.22	3.69	2.96	5.00	2.54	4.26	2.42	4.08	3.13	5.23	2.54	4.26	2.22	3.69	2.82	4.71	2.53	4.20	79.90	132.71	186.7	6722	311.18	11203
	L_6 - L_7	2.12	3.52	2.78	4.65	2.51	4.17	2.11	3.53	2.78	4.65	2.51	4.17	2.13	3.58	2.90	4.86	3.06	5.12	75.94	126.82	213.9	7699	356.44	12832
	L_7 - L_8	1.91	3.16	2.49	4.16	2.59	4.32	1.91	3.16	2.51	4.17	2.54	4.23	2.17	3.66	2.97	4.93	3.01	5.03	68.65	113.58	104.7	3771	174.56	6284
	L_8 - L_9	2.15	3.58	2.86	4.76	3.01	5.04	2.15	3.58	2.86	4.76	3.01	5.04	2.34	3.93	3.29	5.44	3.67	6.05	77.29	128.79	96.9	3490	161.58	5817
	L_9 - L_{10}	2.62	4.38	3.48	5.78	3.35	5.58	2.62	4.38	3.48	5.78	3.47	5.77	3.35	5.58	4.43	7.37	3.67	6.11	94.49	157.80	75.4	2715	125.71	4526
	L_{10} - L_{11}	2.12	3.47	2.71	4.49	2.98	3.47	2.03	3.39	2.72	4.52	2.09	3.47	4.73	7.91	6.34	10.59	12.57	20.94	73.24	121.99	58.6	2108	97.60	3513
	L_{11} - L_{12}	2.68	4.43	3.46	5.76	2.25	3.75	2.59	4.34	3.32	5.56	2.28	3.76	6.16	10.27	8.11	13.36	2.27	3.74	81.07	134.70	106.6	3837	177.63	6395
	L_{12} - L_{13}	4.03	6.76	4.21	6.99	3.40	5.69	3.19	5.26	4.02	6.69	3.41	5.64	3.28	5.47	5.45	9.17	5.50	6.91	114.78	189.54	184.9	6655	308.12	11092
	L_{13} - L_{14}	2.65	4.40	3.67	6.11	2.81	3.53	3.95	6.59	5.56	9.24	5.22	6.48	3.00	5.00	4.82	8.00	3.64	4.88	95.24	127.21	57.6	2073	95.95	3454
	L_{14} - L_{15}	3.43	5.72	3.30	5.51	2.44	4.06	4.87	8.16	4.36	7.33	2.78	3.81	3.34	5.58	4.37	7.26	3.08	3.91	87.69	137.24	63.9	2300	106.50	3834
	L_{15} - L_{16}	3.31	5.55	4.77	7.87	3.58	4.48	3.19	5.32	4.24	7.11	7.42	9.31	3.15	5.27	4.97	8.27	4.43	7.36	113.46	161.13	166.0	5974	276.59	9957
	L_{16} - L_{17}	2.74	4.55	3.95	6.62	2.82	3.53	7.19	11.98	8.11	13.38	3.70	4.82	2.74	4.55	4.31	7.22	3.44	5.79	98.60	127.13	109.1	3929	181.88	6548
	L_{17} - L_{18}	2.14	3.55	2.95	4.94	2.57	4.28	8.02	13.36	8.85	14.69	8.00	11.78	1.99	3.32	2.85	4.74	2.58	4.34	71.73	119.59	72.1	2595	120.16	4326
	L_{18} - L_{19}	1.99	3.32	2.95	4.94	2.88	4.80	2.01	3.35	4.55	7.58	2.88	4.80	1.95	3.22	2.75	4.58	2.70	4.49	70.12	116.00	60.1	2164	100.19	3607
	L_{19} - L_{20}	2.64	4.41	3.46	5.77	3.10	5.17	2.78	4.63	3.42	5.71	3.58	5.96	2.50	4.19	3.38	5.64	3.08	5.13	89.83	150.90	62.4	2245	103.95	3742
	L_{20} - L_{21}	2.98	4.97	3.57	5.92	3.42	5.74	3.12	5.21	3.58	6.00	3.42	5.74	2.93	4.92	3.39	5.62	3.25	5.42	105.57	177.03	109.5	3941	182.43	6568
	L_{21} - L_{22}	2.27	3.79	2.85	4.77	2.52	4.20	2.29	3.80	2.62	4.39	2.52	4.20	2.12	3.51	2.57	4.29	2.79	4.21	76.25	126.47	70.8	2548	117.96	4247
	L_{22} - L_{23}	2.15	3.61	2.59	4.33	2.57	4.25	2.46	4.08	3.07	5.11	2.88	4.40	2.48	4.13	2.77	4.63	2.87	4.82	77.52	130.05	67.0	2411	111.64	4019
	L_{23} - L_{24}	2.82	4.69	3.14	5.21	3.65	6.08	2.82	4.69	3.14	5.21	3.65	6.08	2.99	4.98	3.42	5.68	4.76	7.98	101.63	168.90	102.0	3672	170.00	6120
	L_{24} - L_{25}	2.81	4.70	3.11	5.21	3.79	6.29	2.81	4.68	3.03	5.07	3.88	6.45	3.68	6.12	3.83	6.39	3.82	6.36	101.15	168.50	74.7	2688	124.46	4480
	L_{25} - L_{26}	3.10	5.19	3.09	5.17	2.85	4.74	2.80	4.66	3.00	5.02	2.87	4.77	4.79	7.99	5.23	8.68	2.84	4.76	100.80	167.78	63.3	2278	105.47	3797
	L_{26} - L_{27}	2.75	4.60	3.44	5.72	3.09	5.11	3.02	5.02	3.02	5.00	2.84	4.72	3.48	5.79	8.73	14.54	6.74	8.76	98.83	165.49	62.8	2259	104.59	3765
	L_{27} - L_{28}	2.70	4.51	4.52	7.54	3.54	4.45	4.31	7.17	4.14	6.89	3.85	6.28	3.08	5.14	5.78	9.62	4.57	6.04	97.29	160.21	113.2	4076	188.72	6794
	L_{28} - L_{29}	2.92	4.87	5.22	8.64	4.62	5.76	4.86	8.14	4.30	7.13	5.65	7.07	2.37	3.93	5.72	9.54	3.85	6.34	85.43	141.56	199.4	7177	332.26	11961
	L_{29} - L_{30}	2.46	4.08	3.38	5.56	3.21	4.04	7.78	12.94	6.22	10.32	4.86	6.15	3.28	5.49	4.20	7.11	4.41	5.89	88.68	145.56	57.1	2057	95.22	3428
	L_{30} - L_{31}	3.85	6.39	3.72	6.23	1.79	2.89	6.37	10.73	4.91	8.15	2.21	2.99	4.46	7.43	4.66	7.72	2.23	2.89	64.40	103.88	64.6	2325	107.65	3876
	L_{31} - L_{32}	5.01	8.34	4.94	8.23	3.07	5.16	3.96	6.60	4.72	7.92	7.49	9.50	6.40	10.73	4.28	7.09	3.42	5.60	110.54	185.74	163.9	5900	273.15	9834
	L_{32} - L_{33}	3.86	6.44	3.52	5.81	2.57	4.29	6.14	10.24	9.62	16.00	2.98	3.85	3.71	6.13	3.60	6.01	2.55	4.28	91.97	138.77	117.9	4243	196.46	7072
	L_{33} - L_{34}	3.09	5.15	2.96	4.93	2.49	4.16	6.53	10.91	6.13	10.22	7.57	11.56	2.86	4.76	2.76	4.64	2.26	3.77	81.37	135.83	72.3	2601	120.43	4336
	L_{34} - L_{35}	3.31	5.52	3.90	6.48	4.26	7.12	3.71	6.19	3.94	6.61	4.22	7.04	3.80	6.33	4.01	6.63	3.95	6.61	119.08	198.55	66.4	2391	110.71	3985
	L_{35} - L_{36}	2.60	4.35	3.13	5.21	3.16	5.25	2.89	4.82	3.53	5.94	3.17	5.28	2.60	4.32	3.13	5.21	3.20	5.33	93.44	155.63	111.6	4018	186.03	6697
	L_{36} - L_{37}	2.20	3.70	2.63	4.40	2.80	4.64	2.81	4.69	2.93	4.86	2.91	4.85	2.22	3.68	2.63	4.40	2.74	4.62	79.24	132.39	63.7	2295	106.23	3824
	L_{37} - L_{38}	2.35	3.93	2.93	4.89	2.68	4.48	2.80	4.67	3.47	5.80	3.10	5.16	2.32	3.86	2.83	4.69	2.78	4.62	83.35	138.92	125.3	4512	208.87	7519
	L_{38} - L_{39}	2.33	3.89	2.84	4.74	2.96	4.93	2.33	3.89	2.83	4.71	2.82	4.74	2.57	4.26	3.09	5.15	3.59	5.98	83.90	139.87	180.2	6488	300.38	10814
	L_{39} - L_{40}	2.40	4.01	2.87	4.75	3.37	5.62	2.40	4.01	2.87	4.78	3.37	5.62	2.73	4.55	3.21	5.35	3.82	6.34	86.30	144.23	232.8	8382	388.06	13970
	L_{40} - L_{41}	2.27	3.78	2.56	4.26	3.33	5.55	2.27	3.78	2.71	4.56	3.37	5.62	2.84	4.70	3.21	5.37	4.02	6.70	81.88	135.96	119.1	4287	198.48	7145
	L_{41} - L_{42}	2.80	4.69	2.99	4.96	4.52	7.52	2.78	4.64	3.00	4.95	4.31	7.18	3.42	5.71	3.63	6.05	5.10	8.46	100.21	167.11	86.3	3107	143.86	5179
	L_{42} - L_{43}	2.98	4.96	3.09	5.14	5.29	8.87	2.98	4.96	3.00	5.02	5.03	8.43	4.56	7.60	3.23	5.32	5.27	8.79	107.25	178.69	24.9	897	41.52	1495
	L_{43} - L_{44}	7.10	11.82	14.72	24.49	18.63	23.69	7.26	12.15	11.71	19.51	13.18	16.73	7.67	12.76	10.71	17.72	22.54	28.15	255.49	425.70	49.9	1797	83.20	2995
	Structure 3																								
	L_2 - L_1	4.70	7.82	7.23	12.11	3.79	6.34	6.11	10.19	7.32	12.23	6.20	8.89	6.13	10.23	8.92	14.88	7.18	9.02	136.37	228.39	44.3	1596	73.89	2660
	L_1 - L_2	3.55	5.92	2.12	3.53	3.14	5.19	5.18	8.64	3.29	5.46	4.31	7.19	3.23	5.36	2.12	3.53	4.19	5.98	76.19	127.20	45.4	1633	75.59	2721
	L_2 - L_3	3.02	5.05	2.61	4.35	3.55	5.86	3.51	5.84	3.46	5.77	3.99	6.65	3.01	5.04	3.04	5.09	3.33	5.60	93.99	156.73	94.0	3386	156.74	5643
	L_3 - L_4	2.31	3.84	2.60	4.35	2.90	4.81	2.94	4.89	3.28	5.47	2.85	4.75	2.30	3.82	2.61	4.37	2.86	4.79	82.73	137.70	138.8	4998	231.41	8331
	L_4 - L_5	2.52	4.24	3.00	5.01	3.13	5.26	2.66	4.43	3.00	4.99	3.07	5.12	2.53	4.23	3.06	5.09	3.18	5.30	90.69	152.30	256.2	9223	426.99	15372
	L_5 - L_6	2.03	3.42	2.79	4.64	2.59	4.33	1.95	3.24	2.50	4.18	2.90	4.84	1.95	3.25	2.50	4.18	2.50	4.15	70.13	116.76	110.0	3960	183.33	6600
	L_6 - L_7	1.67	2.81	2.27	3.84	2.39	4.00	1.67	2.81	2.27	3.84	2.58	4.32	1.94	3.26	2.40	4.01	2.80	4.67	60.27	101.03	83.2	2995	138.66	4992
	L_7 - L_8	1.78	2.97	2.31	3.85	2.94	4.87	1.78	2.97	2.31	3.85	3.07	5.10	2.27	3.77	2.74	4.55	3.40	5.70	64.09	107.05	214.3	7714	357.12	12856
	L_8 - L_9	1.60	2.67	2.06	3.42	3.06	5.09	1.94	3.24	2.75	4.59	3.34	5.61	1.76	2.95	2.47	4.14	4.55	7.62	57.57	95.97	51.0	1835	84.95	3058
	L_9 - L_{10}	2.42	3.99	3.53	5.83	2.74	4.58	2.38	3.96	3.11	5.21	2.73	4.55	2.64	4.40	3.53	5.83	2.74	4.57	85.50	142.60	46.4	1671	77.34	2784
	L_{10} - L_{11}	3.85	6.42	4.19	7.02	4.80	6.06	3.67	6.12	4.37	7.29	4.49	7.50	4.77	7.93	6.69	11.18	7.80	9.78	132.01	218.25	121.8	4384	202.95	7306
	L_{11} - L_{12}	2.23	3.70	3.32	5.55	3.23	4.06	3.77	6.33	4.50	7.56	5.91	7.35	2.47	4.13	4.61	7.75	3.42	4.49	80.13	133.02	70.2	2528	117.06	4214
	L_{12} - L_{13}	2.39	3.96	3.19	5.33	2.23	2.81	4.36	7.25	4.11	6.92	3.29	4.39	3.96	6.63	4.39	7.35	2.40	2.98	80.23	101.19	86.9	3128	144.83	5214
	L_{13} - L_{14}	2.27	3.79	3.17	5.32	3.64	4.64	6.54	10.89	7.67	12.79	6.35	7.94	2.32	3.85	3.66	6.11	3.08	5.13	81.54	136.36	140.0	5041	233.37	8401
	L_{14} - L_{15}	1.63	2.72	2.69	4.47	2.39	3.99	1.64	2.72	7.32	12.17	2.39	3.99	1.63	2.72	2.85	4.76	2.13	3.53	58.53	97.83	78.8	2838	131.40	4730
	L_{15} - L_{16}	1.47	2.45	2.71	4.55	2.27	3.78	3.08	5.10	3.57	5.95	2.27	3.78	1.47	2.46	2.31	3.86	2.40	4.00	52.92	88.28	46.8	1685	78.03	2809
	L_{16} - L_{17}	1.60	2.66	2.15	3.59	2.40	4.01	2.02	3.36	2.83	4.71	2.56	4.24	1.89	3.15	2.22	3.72	2.58	4.08	57.46	95.85	70.8	2550	118.05	4250
	L_{17} - L_{18}	1.67	2.78	2.10	3.49	2.62	4.37	1.94	3.25	2.24	3.73	2.64	4.40	1.94	3.21	2.31	3.85	2.85	4.74	60.09	100.15	83.4	3004	139.07	5007
	L_{18} - L_{19}	1.80	2.99	2.18	3.62	3.06	5.11	1.77	2.97	2.19	3.63	3.19	5.32	2.58	4.28	2.34	3.90	3.17	5.26	63.78	106.91	35.2	1267	58.67	2112
	L_{19} - L_{20}	8.94	14.92	10.57	17.51	21.30	33.28	7.61	12.73	7.99	13.36	22.44	28.90	8.57	14.34	10.12	16.97	16.25	26.96	273.95	458.31	39.4	1418	65.66	2364

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating Summary: **HS20 Truck**

Controlling As-Built Ratings

	Inventory	Operating
Maximum Axial Force	0.71	1.19
Maximum Moment (Start)	0.77	1.28
Maximum Moment (End)	0.80	1.33
	Inventory	Operating
Maximum Shear Force	16.9	28.19

Location	Member	Axial Load Case						Moment (Start)						Moment (End)						Controlling Tonnages		Maximum Shear Force			
		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss				Inventory		Operating	
		Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Tonnage	Operating Tonnage	Rating	Tonnage	Rating	Tonnage
Truss - Verticals	Structure 1	U_0 - L_0	0.83	1.39	0.71	1.19	0.87	1.46	0.88	1.48	0.93	1.55	0.87	1.46	0.89	1.47	0.82	1.35	0.87	1.46	25.69	42.78	37.6	1352	62.60	2254
		U_1 - L_1	1.58	2.63	1.84	3.05	1.96	3.27	1.70	2.85	2.29	3.84	2.63	4.39	1.72	2.85	1.84	3.05	1.98	3.29	56.84	94.62	39.0	1406	65.08	2343
		U_2 - L_2	2.40	4.01	2.73	4.55	2.30	3.82	3.02	5.01	3.66	6.09	4.39	7.31	2.51	4.18	3.66	6.09	4.39	7.31	82.91	137.66	54.5	1961	90.80	3269
		U_3 - L_3	3.86	6.46	3.58	5.97	2.84	4.75	4.54	7.54	4.07	6.77	4.67	7.79	4.52	7.54	4.07	6.77	4.67	7.79	102.09	170.97	73.6	2649	122.64	4415
		U_4 - L_4	2.33	3.88	2.50	4.19	2.88	4.80	4.38	7.26	7.36	12.22	5.33	8.19	4.37	7.27	7.36	12.22	6.18	7.96	83.86	139.69	64.1	2307	106.80	3845
		U_5 - L_5	1.40	2.35	1.90	3.18	2.05	3.42	1.46	2.43	2.06	3.43	2.17	3.59	1.46	2.43	2.06	3.43	1.83	3.07	50.39	84.49	60.1	2163	100.14	3605
		U_6 - L_6	1.38	2.30	1.76	2.94	1.71	2.89	1.43	2.39	2.09	3.50	2.00	3.37	1.43	2.37	1.99	3.34	1.90	3.15	49.69	82.94	53.7	1932	89.43	3219
		U_7 - L_7	0.95	1.58	1.13	1.87	1.72	2.88	0.97	1.63	1.33	2.21	1.75	2.91	0.97	1.62	1.13	1.87	1.75	2.90	34.03	56.79	63.2	2276	105.37	3793
		U_8 - L_8	2.17	3.62	2.45	4.08	2.76	3.43	2.34	3.90	2.75	4.55	3.35	5.59	2.35	3.92	2.75	4.55	3.32	5.62	78.11	123.40	109.8	3953	183.02	6589
		U_9 - L_9	1.50	2.51	1.49	2.48	1.42	2.37	1.69	2.82	1.74	2.91	1.63	2.74	1.51	2.52	1.49	2.48	1.64	2.74	51.24	85.33	68.7	2472	114.46	4121
		U_{10} - L_{10}	1.89	3.15	2.36	3.90	2.00	3.33	1.97	3.26	2.82	4.67	2.70	4.50	1.96	3.27	2.36	3.90	2.62	4.28	67.99	113.43	104.9	3775	174.75	6291
		U_{11} - L_{11}	1.83	3.05	2.20	3.71	1.85	3.09	2.00	3.35	2.66	4.41	2.44	4.08	1.83	3.05	2.28	3.79	2.47	4.10	65.87	109.76	64.5	2324	107.58	3873
		U_{12} - L_{12}	1.63	2.72	2.01	3.36	1.75	2.91	1.72	2.88	2.24	3.68	2.70	4.51	1.73	2.90	2.24	3.68	2.26	3.76	58.68	97.84	60.7	2185	101.16	3642
		U_{13} - L_{13}	1.29	2.13	1.60	2.67	1.83	3.05	1.37	2.26	1.76	2.95	2.34	3.91	1.37	2.28	1.76	2.95	2.32	3.87	46.35	76.74	68.6	2470	114.35	4117
		U_{14} - L_{14}	2.58	4.30	2.60	4.34	2.34	3.92	5.81	9.72	7.03	11.65	6.25	9.18	5.81	9.71	7.03	11.65	8.76	11.28	84.36	141.16	104.6	3766	174.37	6277
		U_{15} - L_{15}	2.45	4.08	2.76	4.63	2.97	4.94	2.38	3.96	2.95	4.94	3.70	6.12	2.38	3.94	2.95	4.94	3.70	6.12	85.56	141.76	86.9	3129	144.84	5214
		U_{16} - L_{16}	1.60	2.66	2.13	3.56	2.59	4.33	1.60	2.66	2.16	3.60	2.55	4.25	1.60	2.65	2.16	3.60	2.55	4.25	57.50	95.48	82.5	2969	137.44	4948
		U_{17} - L_{17}	1.24	2.08	1.72	2.87	1.75	2.93	1.23	2.04	1.78	2.97	1.79	2.97	1.22	2.04	1.78	2.97	1.79	2.97	43.92	73.31	88.2	3176	147.04	5293
		U_{18} - L_{18}	1.35	2.25	1.82	3.01	2.39	4.02	1.35	2.23	1.99	3.32	2.47	4.10	1.34	2.24	1.99	3.32	2.36	3.95	48.27	80.28	66.1	2381	110.21	3968
		U_{19} - L_{19}	1.49	2.48	1.89	3.16	2.94	4.95	1.50	2.51	2.14	3.54	2.95	4.91	1.49	2.50	2.12	3.52	2.95	4.93	53.65	89.39	90.3	3250	150.47	5417
		U_{20} - L_{20}	1.10	1.84	1.46	2.44	2.52	4.19	1.10	1.82	1.46	2.44	2.63	4.35	1.19	1.98	1.71	2.85	2.52	4.19	39.47	65.63	152.5	5490	254.16	9150
	Structure 2	U_0 - L_0	1.59	2.63	1.53	2.56	1.14	1.90	1.59	2.63	1.47	2.46	1.14	1.91	1.59	2.64	1.47	2.46	1.15	1.91	41.17	68.51	155.8	5607	259.60	9346
		U_1 - L_1	1.96	3.27	2.18	3.65	1.75	2.93	2.09	3.50	2.39	3.97	2.26	3.74	2.08	3.46	2.39	3.97	2.14	3.55	63.16	105.58	114.5	4120	190.76	6867
		U_2 - L_2	1.67	2.79	2.01	3.35	1.77	2.96	1.78	3.00	2.31	3.87	2.04	3.39	1.78	2.99	2.31	3.87	2.04	3.39	60.17	100.31	79.5	2862	132.52	4771
		U_3 - L_3	1.50	2.52	1.84	3.07	1.39	2.31	1.68	2.80	2.14	3.58	1.67	2.80	1.52	2.53	2.14	3.58	1.67	2.77	49.96	83.27	123.9	4460	206.50	7434
		U_4 - L_4	1.52	2.56	1.80	3.01	1.62	2.71	1.63	2.72	2.02	3.34	2.35	3.91	1.62	2.72	2.02	3.34	2.09	3.50	54.84	92.02	82.5	2969	137.44	4948
		U_5 - L_5	1.94	3.22	2.36	3.95	2.60	4.31	2.11	3.55	2.66	4.42	4.01	6.69	2.11	3.51	2.66	4.42	4.02	6.71	70.01	115.90	98.7	3555	164.57	5925
		U_6 - L_6	3.06	5.10	3.26	5.43	2.35	3.94	3.32	5.55	3.29	5.52	4.03	6.74	3.32	5.56	3.44	5.72	4.03	6.74	84.63	141.70	119.9	4318	199.88	7196
		U_7 - L_7	2.46	4.07	2.67	4.42	2.77	4.60	5.13	8.56	6.22	10.36	7.12	11.91	5.18	8.63	7.04	11.79	7.47	12.45	88.40	146.45	141.4	5092	235.73	8486
		U_8 - L_8	1.83	3.06	2.19	3.64	2.09	3.48	1.75	2.92	2.06	3.44	2.08	3.52	1.75	2.89	2.06	3.44	2.09	3.48	62.93	104.03	65.4	2356	109.08	3927
		U_9 - L_9	2.10	3.48	2.71	4.50	2.69	4.52	2.10	3.49	2.67	4.44	2.73	4.53	2.09	3.50	2.67	4.44	2.72	4.49	75.26	125.25	68.0	2448	113.33	4080
		U_{10} - L_{10}	2.16	3.62	2.71	4.51	2.63	4.39	2.16	3.63	2.80	4.64	2.63	4.39	2.16	3.63	2.80	4.64	2.63	4.39	77.77	130.21	102.6	3693	170.99	6156
		U_{11} - L_{11}	1.93	3.22	2.33	3.89	2.18	3.64	1.91	3.20	2.45	4.13	2.18	3.64	1.91	3.20	2.45	4.13	2.18	3.64	68.63	115.03	123.7	4452	206.13	7421
		U_{12} - L_{12}	1.96	3.27	2.46	4.10	2.15	3.59	1.97	3.28	2.46	4.14	2.15	3.58	1.97	3.26	2.48	4.14	2.15	3.58	70.58	117.27	157.4	5667	262.35	9445
		U_{13} - L_{13}	1.89	2.81	1.81	3.01	2.08	3.46	1.68	2.80	1.93	3.22	2.27	3.79	1.69	2.82	1.88	3.13	2.26	3.76	60.54	100.79	171.7	6180	286.10	10300
		U_{14} - L_{14}	2.33	3.86	2.55	4.21	2.98	4.97	2.74	4.56	2.90	4.86	4.17	7.00	2.75	4.59	2.90	4.86	4.16	7.00	84.02	138.99	245.4	8834	409.00	14724
		U_{15} - L_{15}	2.58	4.28	2.27	3.78	1.90	3.14	2.58	4.32	2.25	3.75	2.38	3.84	2.58	4.30	2.25	3.75	2.30	3.84	68.49	113.00	149.1	5366	248.43	8943
		U_{16} - L_{16}	2.12	3.52	2.13	3.55	1.83	3.03	2.11	3.51	2.40	3.98	2.43	4.09	2.11	3.53	2.13	3.55	2.27	3.70	65.78	108.94	127.3	4582	212.14	7637
		U_{17} - L_{17}	1.84	3.07	2.05	3.42	2.00	3.33	2.01	3.32	2.37	3.95	2.29	3.82	1.99	3.34	2.21	3.68	2.29	3.82	66.38	110.59	95.2	3426	158.62	5710
		U_{18} - L_{18}	1.81	3.04	2.08	3.45	1.75	2.95	2.00	3.31	2.38	3.96	2.19	3.65	1.81	3.02	2.38	3.96	2.19	3.65	63.06	106.05	74.1	2669	123.58	4449
		U_{19} - L_{19}	1.56	2.63	1.82	3.03	1.82	3.01	1.68	2.78	2.05	3.40	2.23	3.75	1.67	2.79	2.04	3.40	2.11	3.47	56.31	94.70	91.4	3292	152.41	5487
		U_{20} - L_{20}	1.57	2.60	1.80	3.00	1.83	3.06	1.65	2.75	2.04	3.40	2.43	4.05	1.65	2.75	2.04	3.40	2.43	4.05	56.54	93.47	90.1	3244	150.19	5407
		U_{21} - L_{21}	1.78	2.99	2.05	3.45	2.06	3.43	2.00	3.34	2.40	3.99	3.20	5.29	1.80	2.99	2.40	3.99	3.21	5.33	64.17	107.53	93.2	3355	155.33	5592
		U_{22} - L_{22}	2.55	4.25	3.02	5.03	2.60	4.34	6.05	10.07	7.89	13.07	10.42	14.79	6.04	10.08	7.89	13.07	7.69	12.85	91.83	153.16	131.2	4723	218.67	7872
		U_{23} - L_{23}	2.07	3.45	2.46	4.09	2.61	4.34	1.97	3.30	2.41	4.03	2.63	4.38	1.99	3.29	2.41	4.03	2.63	4.38	71.04	118.41	88.8	3198	148.07	5330
		U_{24} - L_{24}	1.82	2.73	2.26	3.77	2.10	3.48	1.63	2.72	2.17	3.60	2.12	3.54	1.63	2.72	2.17	3.60	2.12	3.54	58.28	97.99	84.1	3027	140.15	5045
		U_{25} - L_{25}	1.63	2.72	2.01	3.33	2.10	3.54	1.64	2.70	2.09	3.50	2.07	3.46	1.63	2.72	2.09	3.50	2.07	3.46	58.77	97.36	85.0	3058	141.58	5097
		U_{26} - L_{26}	1.84	3.07	2.11	3.53	2.35	3.89	1.81	3.00	2.21	3.65	2.35	3.89	1.80	3.00	2.21	3.65	2.35	3.89	64.98	108.00	62.7	2258	104.52	3763
		U_{27} - L_{27}	1.90	3.16	2.15	3.58	2.30	3.87	1.90	3.17	2.18	3.61	2.61	4.34	1.89	3.16	2.18	3.61	2.61	4.34	68.21	113.72	78.5	2826	130.84	4710
		U_{28} - L_{28}	2.04	3.41	2.15	3.56	2.40	3.97	2.05	3.39	2.25	3.75	2.40	3.97	2.05	3.41	2.25	3.75	2.40	3.97	73.52	121.93	106.3	3826	177.12	6376
		U_{29} - L_{29}	2.01	3.38	2.10	3.50	3.30	5.47	2.24	3.76	2.28	3.81	3.30	5.47	2.23	3.71	2.23	3.70	3.30	5.47	72.36	121.63	115.2	4148	192.02	6913
		U_{30} - L_{30}	2.89	4.80	2.65	4.45	2.70	4.45	3.23	5.45	3.09	5.14	3.59	6.05	3.24	5.41	3.09	5.14	3.59	6.05	95.37	160.19	218.6	7869	364.31	13115
		U_{31} - L_{31}	2.29	3.82	1.95	3.24	1.81	3.00	2.36	3.93	2.23	3.73	1.80	3.02	2.28	3.79	1.95	3.24	1.81	2.99	64.98	107.50	221.7	7980	369.42	13299
		U_{32} - L_{32}	2.27	3.80	2.50	4.17	1.86	3.13	2.34	3.91	2.88	4.84	2.27	3.81	2.36	3.95	2.70	4.49	2.27	3.83	67.71	112.84	198.4	7143	330.67	11904
		U_{33} - L_{33}	2.32	3.90	2.46	4.13	1.97	3.29	2.42	4.00	2.85	4.72	2.42	4.01	2.34	3.90	2.46	4.13	2.42	4.00	70.83	118.45	147.8	5322	246.37	8869
		U_{34} - L_{34}	2.45	4.07	2.62	4.35	2.36	3.93	2.58	4.30	2.94	4.91	2.86	4.76	2.58	4.31	2.94	4.90	2.38	3.96	85.02	141.64	110.1	3964	183.53	6607
		U_{35} - L_{35}	2.17	3.60	2.47	4.09	2.15	3.58	2.30	3.83	2.80	4.67	2.73	4.58	2.30	3.82	2.80	4.67	2.73	4.58	77.44	129.05	73.6	2648	122.59	4413
		U_{36} - L_{36}	1.79	2.98	2.02	3.36	2.05	3.42	1.95	3.24	2.22	3.71	2.26	3.77	1.78	2.97	2.22	3.71	2.26	3.77	64.21	106.94	69.9	2515	116.45	4192
		U_{37} - L_{37}	2.66	4.44	2.45	4.08	2.59	4.30	4.72	7.87	5.85	9.70	6.58	9.42	4.71	7.93	6.44	10.81	9.42	13.08	88.22	146.82	114.4	4118	190.63	6863
		U_{38} - L_{38}	2.29	3.83	2.83	4.38	4.28	7.13	2.79	4.66	2.57	4.28	4.28	7.13	2.79	4.66	2.57	4.28	4.28	7.13	82.31	138.00	116.5	4195	194.22	6992
		U_{39} - L_{39}	2.38	3.97	2.88	4.84	3.20	5.32	2.37	3.96	2.95	4.94	3.58	6.00	2.39	3.97	2.95	4.94	3.58	6.00	85.45	142.71	102.3	3683	170.53	6139
		U_{40} - L_{40}	1.75	2.89	2.17	3.61	2.21	3.67	1.74	2.91	2.22	3.71	2.26	3.75	1.75	2.92	2.22	3.71	2.26	3.75	62.74	104.05	83.7	3014	139.54	5024
		U_{41} - L_{41}	1.62	2.69	1.96	3.29	1.88	3.15	1.66	2.76	2.04	3.44	1.88	3.15	1.64	2.76	2.04	3.42	1.88	3.15	58.22	96.82	104.5	3764	174.25	6273
		U_{42} - L_{42}	1.82	3.04	2.16	3.62	2.47	4.10	1.76	2.94	2.16	3.60	2.47	4.10	1.77	2.96	2.16	3.60	2.47	4.10	63.43	105.74	67.1	2415	111.81	4025
		U_{43} - L_{43}	1.96	3.24	2.22	3.67	2.97	5.04	1.95	3.25	2.28	3.80	2.97	5.04	1.95	3.22	2.28	3.80	2.97	5.04	70.15	115.96	92.8	3342	154.71	5570
		U_{44} - L_{44}	1.55	2.60	1.45	2.42	2.55	4.19	1.56	2.60	1.52	2.51	2.47	4.11	1.70	2.80	1.75	2.92	2.61	4.33	52.22	87.08	156.5	5635	260.88	9392
	Structure 3	U_0 - L_0	1.24	2.06	1.24	2.06	1.22	2.02	1.24	2.06	1.53	2.55	1.22	2.02	1.24	2.05	1.50	2.50	1.22	2.02	43.87	72.70	138.8	4996	231.28	8326
		U_1 - L_1	1.88	3.14	1.83	3.04	1.66	2.78	2.06	3.45	2.41	3.99	2.09	3.48	1.94	3.23	2.41	3.99	2.09	3.48	59.85	100.04	117.8	4234	196.02	7057
		U_2 - L_2	1.57	2.59	1.80	3.02	1.52	2.54	1.70	2.85	2.12	3.57	2.01	3.35	1.69	2.84	2.12	3.57	1.82	3.06	54.63	91.53	73.4	2642	122.30	4403
		U_3 - L_3	1.26	2.10	1.64	2.72	1.37	2.30	1.41	2.37	1.94	3.24	1.56	2.60	1.42	2.36	1.94	3.24	1.56	2.60	45.49	75.78	107.4	3865	178.94	6442
		U_4 - L_4	1.62	2.68	2.00	3.33	1.80	2.98	1.80	3.01	2.34	3.89	2.48	4.09	1.81	3.00	2.34	3.89	2.48	4.09	58.27	96.54	87.6	3155	146.07	5259
		U_5 - L_5	2.03	3.39	2.35	3.92	2.73	4.57	2.24	3.73	2.94	4.92	3.07	5.14	2.25	3.75	2.94	4.92	2.99	5.01	72.92	122.12	79.3	2855	132.19	4759
		U_6 - L_6	2.27	3.76	2.92	4.87	2.53	4.22	5.76	9.65	8.04	13.29	6.83	10.49	5.78	9.65	8.04	13.29	7.94	11.00	81.65	135.24	116.3	4188	193.88	6980
		U_7 - L_7	1.67	2.78	1.95	3.22	1.84	3.06	1.56	2.59	1.90	3.18	2.01	3.35	1.57	2.61	1.90	3.18	2.01	3.35	56.21	93.40	68.9	2479	114.75	4131
		U_8 - L_8	1.88	3.15	2.31	3.87	2.43	4.09	1.86	3.10	2.32	3.90	2.43	4.09	1.85	3.10	2.32	3.90	2.43	4.09	66.52	111.46	61.0	2194	101.58	3657
		U_9 - L_9	1.92	3.21	2.38	3.97	2.52	4.23	1.89	3.17	2.48	4.15	2.52	4.17	1.92	3.19	2.48	4.15	2.52	4.17	68.18	114.23	54.5	1961	90.79	3268
		U_{10} - L_{10}	2.01	3.37	2.60	4.33	2.06	3.40	2.02	3.38	2.62	4.38	2.25	3.78	2.02	3.39	2.62	4.38	2.24	3.70	72.38	121.31	85.3	3072	142.20	5119
		U_{11} - L_{11}	1.43	2.39	1.51	2.52	1.85	3.10	1.44	2.39	1.65	2.75	1.87	3.10	1.43	2.40	1.55	2.59	1.87	3.10	51.40	86.21	53.1	1911	88.46	3184
		U_{12} - L_{12}	2.28	3.77	2.46	4.08	2.96	3.65	2.65	4.42	2.69	4.50	3.47	5.82	2.64	4.42	2.69	4.50	3.49	5.77	81.93	131.58	140.1	5043	233.48	8405
		U_{13} - L_{13}	1.46	2.44	1.28	2.13	1.14	1.91	1.48	2.46	1.28	2.12	1.35	2.27	1.48	2.48	1.28	2.12	1.14	1.92	41.06	68.88	83.1	2992	138.51	4986
		U_{14} - L_{14}	1.65	2.75	1.76	2.95	1.47	2.45	1.73	2.92	2.17	3.64	1.84	3.10	1.75	2.89	1.76	2.95	1.77	2.59	52.95	88.29	61.7	2221	102.83	3702
		U_{15} - L_{15}	1.90	2.52	1.72	2.88	1.79	2.97	1.75	2.92	2.17	3.62	2.75	4.56	1.46	2.44	1.78	2.99	1.83	3.05	52.67	87.86	71.6	2577	119.30	4295
		U_{16} - L_{16}	2.72	4.56	2.66	4.44	2.19	3.63	5.66	9.41	6.55	10.95	5.02	8.39	3.56	5.96	6.08	10.08	5.02	8.41	78.66	130.75	66.2	2385	110.40	3974
		U_{17} - L_{17}	2.94	4.93	3.22	5.39	4.16	6.94	3.23	5.38	3.19	5.35	6.34	10.47	3.23	5.38	3.19	5.35	5.73	9.54	105.92	177.59	75.4	2714	125.66	4524
		U_{18} - L_{18}	2.42	4.03	2.96	4.92	4.01	6.69	2.51	4.18	3.16	5.28	4.51	7.48	2.51	4.17	3.16	5.28	4.51	7.48	87.24	145.04	48.0	1726	79.93	2877
		U_{19} - L_{19}	1.98	2.63	1.99	3.30	3.02	5.03	1.61	2.67	2.16	3.57	3.05	5.06	1.61	2.69	2.16	3.57	3.05	5.03	56.79	94.55	31.7	1142	52.88	1904
		U_{20} - L_{20}	0.91	1.50	0.77	1.29	1.65	2.76	0.77	1.28	0.82	1.36	1.73	2.87	0.90	1.50	0.80	1.33	1.72	2.90	27.54	46.09	44.5	1600	74.09	2667

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating Summary: **HS20 Truck**

Controlling As-Built Ratings

	Inventory	Operating
Maximum Axial Force	0.71	1.19
Maximum Moment (Start)	0.77	1.28
Maximum Moment (End)	0.80	1.33
	Inventory	Operating
Maximum Shear Force	16.9	28.19

Location	Member	Axial Load Case						Moment (Start)						Moment (End)						Controlling Tonnages		Maximum Shear Force			
		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss				Inventory		Operating	
		Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Tonnage	Operating Tonnage	Rating	Tonnage	Rating	Tonnage
Truss - Diagonals	Structure 1	U_0 - L_1	1.90	3.17	2.25	3.76	2.74	4.60	1.84	3.07	2.43	4.05	2.78	4.08	1.84	3.07	4.18	7.00	2.44	4.04	66.37	110.40	78.3	2819	130.53	4699
		U_1 - L_2	1.90	3.15	2.36	3.94	2.70	4.52	2.06	3.43	3.69	6.13	2.48	4.12	2.34	3.88	2.88	4.79	2.35	3.90	68.49	113.31	364.4	13118	607.31	21863
		U_2 - L_3	3.00	5.02	2.71	4.49	4.46	7.43	3.84	6.38	5.71	9.58	3.23	5.36	4.07	6.77	3.96	6.62	3.12	5.18	97.67	161.55	509.5	18341	849.12	30568
		U_3 - L_4	1.67	2.79	1.53	2.56	2.06	3.48	1.62	6.04	2.30	3.83	2.64	4.37	3.58	5.96	1.98	3.30	2.34	3.92	55.02	92.31	780.3	28091	1300.52	46819
		U_4 - L_5	1.52	2.53	2.11	3.51	2.46	4.10	1.53	2.56	2.11	3.51	3.06	5.13	2.76	4.58	2.54	4.21	5.74	8.21	54.88	91.19	452.1	16274	753.44	27124
		U_5 - L_6	1.60	2.67	2.44	4.04	3.02	5.01	1.67	2.77	2.37	3.96	3.07	4.89	1.64	2.76	2.67	4.47	2.61	4.31	57.43	96.14	162.4	5845	270.62	9742
		U_6 - L_7	1.38	2.30	1.56	2.60	2.61	4.33	1.34	2.23	2.81	4.67	2.59	4.36	1.40	2.34	1.97	3.27	2.71	4.52	48.22	80.44	116.3	4187	193.86	6979
		U_7 - L_8	1.37	2.31	1.67	2.76	3.25	5.43	1.38	2.31	1.67	2.78	3.32	5.56	1.46	2.43	1.67	2.76	3.23	5.40	49.50	83.15	184.5	6641	307.46	11069
		U_8 - L_9	2.35	3.90	2.37	3.95	2.70	4.51	2.34	3.90	2.34	3.93	2.68	4.47	2.35	3.91	2.37	3.95	2.74	4.53	84.24	140.44	273.8	9858	456.37	16429
		U_9 - L_{10}	2.21	3.66	2.50	4.14	2.56	4.27	2.69	4.49	3.53	5.89	2.54	4.26	2.55	4.26	3.26	5.46	2.90	4.87	79.53	131.73	190.2	6847	316.97	11411
		U_{10} - L_{11}	2.16	3.60	2.71	4.48	2.59	4.26	2.15	3.60	2.68	4.51	2.58	4.26	2.41	3.99	3.45	5.76	2.57	4.28	77.38	129.43	204.2	7351	340.33	12252
		U_{11} - L_{12}	1.89	3.14	2.33	3.91	2.30	3.82	2.18	3.63	3.13	5.25	2.29	3.81	2.17	3.59	2.81	4.71	2.43	4.02	68.03	113.15	236.6	8518	394.35	14197
		U_{12} - L_{13}	1.57	2.63	1.87	3.14	2.36	3.95	1.57	2.63	1.87	3.14	2.42	4.02	1.76	2.94	2.21	3.73	2.48	4.15	56.51	94.68	190.3	6852	317.20	11419
		U_{13} - L_{14}	1.55	2.58	1.62	2.69	2.25	3.76	1.52	2.52	1.62	2.69	2.25	3.75	1.82	3.01	2.04	3.40	2.35	3.89	54.61	90.60	412.1	14834	686.78	24724
		U_{14} - L_{15}	1.95	3.24	1.92	3.22	3.08	5.13	2.37	3.94	2.36	3.93	5.28	8.81	2.54	4.23	2.40	3.99	3.97	6.62	69.10	115.85	415.6	14961	692.64	24935
		U_{15} - L_{16}	1.72	2.88	2.35	3.89	2.95	4.93	1.88	3.16	2.38	3.97	3.15	5.26	1.95	3.28	2.62	4.34	3.26	5.43	61.81	103.58	282.1	10154	470.12	16924
		U_{16} - L_{17}	1.26	2.10	1.86	3.09	2.12	3.58	1.26	2.10	1.89	3.14	2.12	3.58	1.33	2.22	2.15	3.56	2.15	3.61	45.28	75.68	243.4	8762	405.66	14604
		U_{17} - L_{18}	1.39	2.32	2.12	3.52	2.43	4.05	1.39	2.32	2.12	3.56	2.50	4.14	1.45	2.41	2.34	3.92	2.43	4.05	49.99	83.57	136.6	4919	227.73	8198
		U_{18} - L_{19}	1.37	2.25	2.04	3.40	2.61	4.33	1.38	2.31	2.04	3.40	2.61	4.33	1.36	2.26	2.20	3.66	2.61	4.33	49.03	81.10	149.5	5380	249.09	8967
		U_{19} - L_{18}	1.45	2.40	1.96	3.24	2.89	4.87	1.48	2.47	1.98	3.29	3.04	5.15	1.50	2.47	1.98	3.29	2.89	4.83	52.14	86.28	206.8	7446	344.72	12410
	Structure 2	U_0 - L_1	2.09	3.50	2.31	3.85	2.02	3.42	2.00	3.32	2.25	3.74	2.19	3.16	2.00	3.32	2.25	3.74	1.98	3.30	71.43	113.73	181.0	6517	301.70	10861
		U_1 - L_2	1.93	3.24	2.31	3.85	1.93	3.18	1.92	3.24	2.31	3.85	1.93	3.18	1.99	3.34	2.31	3.85	2.16	3.59	69.19	114.54	163.9	5899	273.10	9832
		U_2 - L_3	1.78	2.96	2.06	3.43	1.76	2.95	1.80	2.99	2.06	3.43	1.76	2.95	1.78	2.96	2.08	3.47	2.03	3.39	63.39	106.21	144.6	5204	240.93	8674
		U_3 - L_4	1.67	2.76	1.88	3.16	1.90	3.19	1.67	2.76	1.88	3.16	1.90	3.19	1.84	3.10	2.23	3.71	2.06	3.47	60.00	99.31	249.1	8966	415.09	14943
		U_4 - L_5	1.75	2.92	2.00	3.31	2.82	4.67	1.75	2.92	2.09	3.47	2.82	4.67	1.99	3.29	2.36	3.90	2.90	4.84	63.17	105.22	255.7	9203	426.08	15339
		U_5 - L_6	2.59	4.34	2.79	4.67	4.19	7.01	2.70	4.49	2.79	4.61	4.19	7.01	2.61	4.32	2.78	4.63	3.84	6.40	93.16	155.58	323.5	11645	539.12	19408
		U_6 - L_7	1.69	2.82	1.77	2.95	1.86	3.09	1.70	2.82	1.81	3.03	2.12	3.50	1.69	2.84	1.82	3.01	1.81	3.02	60.76	101.42	423.7	15252	706.10	25420
		U_7 - L_7	1.85	3.08	2.30	3.84	2.23	3.75	2.16	3.61	2.34	3.89	2.68	4.45	2.05	3.40	2.57	4.25	2.76	4.54	66.48	111.05	239.3	8614	398.82	14357
		U_8 - L_8	1.68	2.78	2.24	3.71	2.15	3.58	1.70	2.82	2.24	3.71	2.13	3.54	1.69	2.81	2.34	3.90	2.25	3.76	60.35	100.25	168.0	6049	280.05	10082
		U_9 - L_9	1.81	3.02	2.43	4.07	2.41	4.08	1.80	3.02	2.43	4.07	2.52	3.91	1.81	3.02	2.55	4.21	2.52	4.23	64.69	108.58	188.7	6792	314.44	11320
		U_{11} - L_{10}	1.80	3.00	2.35	3.91	2.40	3.99	1.77	2.95	2.30	3.84	2.43	4.00	1.80	3.00	2.55	4.27	2.47	4.13	63.71	106.14	186.8	6726	311.41	11211
		U_{12} - L_{11}	1.67	2.79	1.87	3.12	2.34	3.91	1.68	2.79	2.11	3.54	2.36	3.95	1.73	2.84	2.34	3.91	2.29	3.82	60.23	100.50	186.8	6725	311.36	11209
		U_{13} - L_{12}	1.48	2.44	1.73	2.88	2.45	4.13	1.46	2.44	1.72	2.88	2.48	4.13	1.46	2.46	1.66	2.77	2.45	4.13	52.51	87.96	164.2	5911	273.66	9852
		U_{14} - L_{13}	1.82	3.03	1.86	3.06	3.55	5.91	1.85	3.09	2.00	3.32	3.61	6.01	1.82	3.03	2.04	3.34	3.54	5.92	65.38	109.10	246.7	8880	411.12	14800
		U_{15} - L_{15}	2.39	3.98	2.13	3.56	2.17	3.61	2.41	4.01	2.13	3.55	2.17	3.61	2.40	4.00	2.13	3.56	2.15	3.59	76.64	127.88	269.4	9697	448.96	16182
		U_{16} - L_{16}	2.02	3.37	1.82	3.04	1.59	2.66	2.29	3.80	1.82	3.04	1.59	2.66	2.04	3.39	1.82	3.04	1.70	2.83	57.12	95.90	176.4	6350	293.99	10584
		U_{17} - L_{17}	1.84	3.06	2.18	3.62	2.09	3.48	1.84	3.07	2.18	3.62	2.09	3.48	1.84	3.05	2.18	3.62	2.09	3.48	66.19	109.96	167.1	6017	278.58	10029
		U_{18} - L_{18}	1.81	3.02	2.14	3.57	1.89	3.15	1.79	2.96	2.14	3.57	1.89	3.15	1.82	3.03	2.17	3.65	2.11	3.47	64.35	106.41	159.7	5749	266.15	9581
		U_{19} - L_{19}	1.83	3.06	2.14	3.58	2.21	3.66	1.83	3.06	2.14	3.58	2.20	3.68	2.09	3.47	2.14	3.58	2.36	3.96	66.01	110.02	161.3	5805	268.76	9675
		U_{19} - L_{20}	1.80	2.97	2.16	3.63	2.45	4.08	1.80	2.97	2.23	3.72	2.45	4.08	2.05	3.42	2.58	4.29	2.63	4.40	64.66	107.04	162.2	5838	270.27	9730
		U_{20} - L_{21}	1.78	2.97	1.91	3.19	2.41	4.01	1.80	3.00	1.91	3.19	2.41	4.01	1.78	2.97	2.05	3.44	2.74	4.57	63.99	107.07	256.1	9220	426.83	15366
		U_{21} - L_{22}	2.35	3.92	2.48	4.13	4.06	6.76	2.35	3.92	2.48	4.13	3.89	6.52	2.66	4.43	2.98	4.95	4.46	7.45	84.62	141.10	406.9	14647	678.11	24412
		U_{22} - L_{21}	2.36	3.90	2.54	4.24	2.93	4.89	2.70	4.48	3.09	5.14	3.65	6.12	3.07	5.10	3.36	5.57	3.99	6.67	84.94	140.51	468.6	16869	780.97	28115
		U_{24} - L_{23}	1.76	2.93	2.26	3.79	2.37	3.96	1.79	2.97	2.26	3.79	2.37	4.00	1.78	2.96	2.40	4.03	2.51	4.18	63.26	105.50	281.5	10135	469.19	16891
		U_{25} - L_{24}	1.82	3.04	2.62	4.38	2.51	4.17	1.87	3.12	2.62	4.38	2.52	4.21	1.90	3.17	2.73	4.54	2.57	4.33	65.67	109.48	175.1	6303	291.82	10506
		U_{26} - L_{25}	1.97	3.28	2.29	3.83	2.55	4.22	1.95	3.26	2.27	3.79	2.47	4.11	1.97	3.28	2.56	4.25	2.55	4.22	70.17	117.38	164.6	5924	274.27	9874
		U_{27} - L_{26}	1.75	2.93	2.05	3.41	2.22	3.72	1.75	2.93	2.04	3.40	2.19	3.66	1.82	3.04	2.28	3.81	2.25	3.71	63.18	105.36	160.2	5768	267.06	9614
		U_{28} - L_{27}	1.96	3.27	2.16	3.62	2.34	3.90	1.97	3.27	2.14	3.57	2.44	4.07	1.96	3.27	2.22	3.71	2.36	3.94	70.52	117.55	161.4	5810	268.98	9683
		U_{29} - L_{28}	1.81	3.00	1.69	2.81	2.60	4.34	1.80	3.00	1.69	2.81	2.58	4.32	1.81	3.00	1.69	2.81	2.60	4.34	60.67	101.14	157.9	5683	263.10	9472
		U_{30} - L_{29}	2.08	3.48	1.73	2.87	3.86	6.46	2.13	3.54	1.94	3.23	3.94	6.53	2.13	3.59	1.94	3.25	3.86	6.46	62.11	103.27	248.3	8939	413.85	14899
		U_{31} - L_{31}	2.63	4.36	2.24	3.73	2.27	3.76	2.54	4.27	2.20	3.68	2.30	3.83	2.62	4.37	2.24	3.73	2.31	3.86	79.30	132.63	280.1	10082	466.77	16804
		U_{31} - L_{32}	2.15	3.58	2.03	3.40	1.65	2.74	2.15	3.58	2.03	3.40	1.62	2.69	2.15	3.58	2.03	3.40	1.63	2.72	58.21	96.88	186.5	6716	310.91	11193
		U_{32} - L_{33}	2.32	3.87	2.44	4.06	1.96	3.25	2.29	3.81	2.42	4.02	1.96	3.26	2.32	3.85	2.44	4.06	2.20	3.65	70.71	117.13	203.3	7320	338.90	12200
		U_{33} - L_{34}	2.15	3.61	2.37	3.93	2.03	3.40	2.15	3.60	2.37	3.93	2.04	3.36	2.45	4.09	2.82	4.67	2.18	3.63	72.92	121.05	187.8	6762	313.05	11270
		U_{34} - L_{35}	2.03	3.40	2.21	3.71	2.10	3.51	2.03	3.38	2.24	3.73	2.17	3.63	2.28	3.80	2.61	4.36	2.28	3.81	73.24	121.84	178.2	6416	297.03	10693
		U_{35} - L_{36}	2.04	3.40	2.11	3.52	1.97	3.27	2.04	3.40	2.11	3.52	1.97	3.27	2.06	3.43	2.54	4.22	2.15	3.59	70.83	117.70	156.8	5646	261.40	9410
		U_{36} - L_{37}	2.00	3.38	2.02	3.37	2.60	4.34	2.03	3.38	2.02	3.38	2.40	4.00	2.19	3.69	2.42	4.00	2.91	4.84	72.14	121.43	198.8	7157	331.36	11929
		U_{38} - L_{37}	1.29	2.15	1.42	2.39	1.92	3.21	1.57	2.60	1.68	2.80	2.65	4.44	1.56	2.60	1.68	2.81	2.48	4.13	46.52	77.56	396.6	14277	660.99	23796
		U_{39} - L_{38}	2.40	4.01	2.26	3.78	3.24	5.41	2.82	4.71	2.90	4.84	4.79	7.98	2.39	4.01	2.47	4.15	4.76	7.99	81.44	136.08	399.5	14383	665.86	23971
		U_{40} - L_{39}	1.97	3.28	2.66	4.42	2.84	4.74	2.15	3.61	2.70	4.52	2.96	4.93	2.12	3.53	2.70	4.48	2.84	4.74	70.86	118.18	297.0	10692	494.99	17820
		U_{41} - L_{40}	1.74	2.90	2.17	3.63	2.12	3.56	1.77	2.95	2.23	3.72	2.12	3.54	1.81	3.04	2.40	4.00	2.12	3.56	62.54	104.41	259.3	9333	432.10	15556
		U_{42} - L_{41}	1.70	2.85	2.14	3.53	2.22	3.69	1.70	2.85	2.14	3.53	2.24	3.70	1.75	2.91	2.39	4.00	2.22	3.69	61.37	102.57	139.6	5025	232.65	8375
		U_{43} - L_{42}	1.89	3.16	2.34	3.88	2.81	4.68	1.84	3.08	2.34	3.88	2.82	4.67	1.89	3.16	2.54	4.25	2.81	4.68	66.32	110.86	150.7	5426	251.20	9043
		U_{44} - L_{43}	1.96	3.26	2.23	3.74	3.14	5.22	2.17	3.62	2.45	4.07	3.38	5.71	1.93	3.24	2.16	3.60	3.24	5.40	69.42	116.56	214.3	7716	357.22	12860
	Structure 3	U_0 - L_1	1.86	3.11	2.05	3.44	2.00	3.35	1.72	2.87	2.11	3.52	1.88	3.13	1.72	2.87	2.11	3.52	1.87	3.13	61.79	103.16	152.7	5497	254.50	9162
		U_1 - L_2	1.84	3.08	2.11	3.52	1.81	3.05	1.84	3.05	2.11	3.52	1.81	3.05	1.84	3.07	2.11	3.52	1.94	3.22	65.24	109.68	169.2	6092	282.02	10153
		U_2 - L_3	1.63	2.72	2.07	3.43	1.97	3.29	1.63	2.72	2.08	3.47	2.01	3.32	1.62	2.71	2.08	3.47	1.97	3.29	58.40	97.57	135.3	4871	225.52	8119
		U_3 - L_4	1.64	2.72	1.92	3.18	1.79	2.99	1.67	2.78	1.93	3.22	1.79	2.99	1.63	2.72	1.92	3.18	2.15	3.58	58.61	97.95	241.8	8697	402.65	14495
		U_4 - L_5	1.85	3.11	2.01	3.38	2.78	4.62	1.85	3.11	2.01	3.38	2.98	4.95	2.18	3.64	2.51	4.19	2.66	4.46	66.77	112.11	254.2	9153	423.74	15255
		U_5 - L_6	2.53	4.21	2.16	3.61	3.78	6.31	2.52	4.21	2.42	4.05	2.99	4.99	2.90	4.85	2.34	3.88	3.20	5.36	77.82	129.93	456.0	16415	759.96	27359
		U_6 - L_6	1.73	2.89	2.02	3.38	1.90	3.17	1.77	2.94	1.99	3.35	2.36	3.93	1.90	3.15	2.02	3.39	2.38	3.95	62.13	104.01	505.0	18180	841.66	30300
		U_8 - L_7	1.71	2.85	2.37	3.98	2.48	4.17	1.82	3.03	2.37	3.94	2.52	4.19	1.84	3.08	2.40	4.03	2.56	4.29	61.64	102.55	206.5	7433	344.12	12388
		U_8 - L_8	1.78	2.96	2.56	4.23	2.62	4.38	1.90	3.17	2.58	4.29	2.91	4.67	1.82	3.07	2.80	4.65	2.62	4.38	64.09	106.63	242.7	8737	404.47	14561
		U_9 - L_9	2.07	3.41	2.45	4.07	2.79	4.70	2.07	3.41	2.66	4.43	3.52	5.55	2.02	3.37	3.12	5.19	2.80	4.66	72.83	121.20	192.6	6935	321.07	11558
		U_{11} - L_{10}	2.09	3.48	2.28	3.81	3.43	5.73	2.01	3.36	2.58	4.31	3.48	5.76	2.09	3.48	2.70	4.48	3.45	5.71	72.42	120.98	169.3	6095	282.15	10158
		U_{12} - L_{11}	2.15	3.58	2.34	3.87	3.83	6.43	2.23	3.73	2.33	3.90	4.08	6.85	2.19	3.61	2.46	4.10	3.84	6.40	77.47	128.76	245.5	8839	409.21	14732
		U_{12} - L_{13}	2.06	3.44	1.91	3.19	1.89	3.15	2.08	3.47	1.91	3.20	1.84	3.10	2.07	3.47	2.02	3.37	1.89	3.15	66.12	111.73	204.1	7349	340.24	12249
		U_{13} - L_{14}	1.96	3.25	1.91	3.18	1.78	2.97	2.21	3.68	2.41	4.01	1.76	2.91	1.95	3.24	1.91	3.18	1.93	3.21	63.23	104.67	130.2	4686	216.93	7810
		U_{14} - L_{15}	1.89	3.15	2.24	3.73	2.71	4.50	1.89	3.15	3.62	6.08	2.49	4.15	2.23	3.70	2.80	4.64	2.95	4.90	67.93	113.30	162.7	5857	271.15	9761
		U_{15} - L_{16}	1.93	3.22	2.15	3.58	2.59	4.33	2.89	4.84	3.94	6.56	2.43	4.10	7.68	12.82	3.03	5.03	3.61	5.56	69.48	115.78	413.1	14872	688.52	24787
		U_{17} - L_{16}	1.60	2.67	1.57	2.62	2.44	4.07	2.71	4.52	2.54	4.22	4.83	8.08	1.84	3.06	1.95	3.25	4.05	6.81	56.55	94.34	616.0	22174	1026.59	36957
		U_{18} - L_{17}	2.18	3.61	2.43	4.05	5.51	9.22	3.38	5.61	3.57	5.92	5.42	9.00	3.49	5.80	4.37	7.33	5.95	9.52	78.32	129.84	539.1	19407	898.47	32345
		U_{19} - L_{18}	1.74	2.89	2.21	3.69	3.50	5.81	1.74	2.89	2.35	3.88	3.50	5.81	1.95	3.25	2.82	4.69	2.93	4.86	62.76	103.94	302.9	10904	504.83	18174
		U_{20} - L_{19}	1.84	3.06	2.27	3.80	3.65	6.10	4.16	6.90	2.48	4.12	3.84	5.97	1.88	3.12	2.48	4.12	3.84	6.38	66.23	110.30	139.2	5010	231.93	8349

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating Summary: **HS20 Truck**

Controlling As-Inspected Ratings

	Inventory	Operating
Maximum Axial Force	0.70	1.18
Maximum Moment (Start)	0.75	1.25
Maximum Moment (End)	0.75	1.25
	Inventory	Operating
Maximum Shear Force	16.9	28.19

Location	Member	Axial Load Case						Moment (Start)						Moment (End)						Controlling Tonnages		Maximum Shear Force			
		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss				Inventory		Operating	
		Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Tonnage	Operating Tonnage	Rating	Tonnage	Rating	Tonnage
Truss - Upper Chord	Structure 1																								
		$U_0 - U_1$	2.08	3.47	2.34	3.89	3.49	5.82	2.00	3.34	2.60	4.33	4.27	7.12	1.93	3.23	2.34	3.89	3.52	5.84	69.64	116.27	27.5	989	45.78	1648
		$U_1 - U_2$	1.19	1.98	1.69	2.80	1.93	3.21	1.34	2.24	1.76	2.94	1.93	3.21	1.18	1.96	1.69	2.80	1.91	3.20	42.50	70.72	32.3	1164	53.90	1941
		$U_2 - U_3$	1.24	2.05	1.69	2.82	2.09	3.48	1.19	1.98	2.63	4.36	2.74	4.56	1.34	2.25	1.87	3.12	2.16	3.60	42.86	71.29	46.9	1688	78.13	2813
		$U_3 - U_4$	1.49	2.48	2.06	3.42	2.96	4.95	1.97	3.30	3.08	5.10	2.99	4.99	1.58	2.62	2.17	3.59	3.20	5.34	53.60	89.27	43.1	1552	71.85	2587
		$U_4 - U_5$	1.53	2.54	2.13	3.56	3.01	5.04	1.54	2.56	2.13	3.56	3.08	5.12	2.24	3.72	3.46	5.79	3.39	5.63	55.20	91.45	34.3	1235	57.17	2058
		$U_5 - U_6$	2.34	3.90	2.84	4.74	2.90	4.83	2.25	3.74	2.89	4.84	2.88	4.80	2.25	3.71	6.10	10.14	3.16	5.30	80.97	133.66	32.7	1178	54.55	1964
		$U_6 - U_7$	2.18	3.64	2.72	4.53	2.93	4.88	2.18	3.64	2.76	4.61	2.94	4.91	2.36	3.94	5.73	9.52	2.91	4.84	78.38	130.96	105.5	3798	175.84	6330
		$U_7 - U_8$	1.84	3.05	2.37	3.94	2.83	4.73	1.94	3.23	2.78	4.63	5.54	6.93	4.35	7.21	5.95	9.91	4.95	6.41	66.27	109.91	33.8	1216	56.29	2026
		$U_8 - U_9$	2.02	3.39	3.07	5.12	3.36	5.57	6.85	11.41	6.96	11.54	4.99	6.52	5.75	9.58	3.95	6.64	3.14	5.27	72.58	122.17	21.7	780	36.10	1300
		$U_9 - U_{10}$	2.50	4.17	3.60	6.00	4.31	7.16	10.30	17.17	10.03	16.79	12.12	20.16	2.34	3.93	3.91	6.48	4.21	7.00	84.40	141.41	39.8	1433	66.36	2389
		$U_{10} - U_{11}$	1.76	2.94	2.18	3.64	2.19	3.65	3.76	6.32	3.98	6.57	3.05	5.08	1.76	2.93	2.13	3.51	2.12	3.53	63.35	105.64	27.3	983	45.52	1639
		$U_{11} - U_{12}$	1.32	2.20	1.75	2.93	1.55	2.58	2.38	3.96	2.69	4.48	2.00	3.35	1.41	2.35	1.75	2.93	1.55	2.58	47.65	79.37	44.9	1616	74.80	2693
		$U_{12} - U_{13}$	1.37	2.27	2.00	3.35	1.78	3.01	1.83	3.02	2.57	4.25	2.33	3.87	1.36	2.28	1.90	3.17	1.78	3.01	48.97	81.70	106.8	3844	177.94	6406
		$U_{13} - U_{14}$	1.26	2.09	1.92	3.21	1.65	2.76	1.72	2.87	2.61	4.35	1.75	2.93	1.25	2.07	1.89	3.16	1.64	2.76	45.18	74.68	106.5	3832	177.43	6387
		$U_{14} - U_{15}$	1.23	2.04	1.84	3.08	1.62	2.67	1.23	2.04	1.86	3.10	1.62	2.67	1.23	2.04	1.91	3.15	1.74	2.88	44.15	73.27	174.4	6280	290.74	10467
		$U_{15} - U_{16}$	1.31	2.18	1.85	3.09	1.86	3.16	1.31	2.18	1.94	3.23	1.87	3.12	1.80	2.99	1.84	3.07	2.22	3.72	47.20	78.58	117.2	4220	195.37	7033
		$U_{16} - U_{17}$	1.41	2.35	1.91	3.19	2.20	3.67	1.41	2.35	1.91	3.19	2.30	3.83	2.17	3.63	2.94	4.88	2.53	4.25	50.70	84.54	109.6	3946	182.66	6576
		$U_{17} - U_{18}$	1.43	2.39	1.78	2.96	2.21	3.70	1.48	2.45	1.77	2.96	2.23	3.67	1.74	2.90	2.44	4.06	2.51	4.19	51.37	85.90	95.8	3450	159.70	5749
		$U_{18} - U_{19}$	1.42	2.34	1.62	2.67	2.47	4.13	1.42	2.34	1.62	2.67	2.41	4.01	1.60	2.66	1.93	3.22	2.49	4.13	51.02	84.27	45.3	1630	75.45	2716
		$U_{19} - U_{20}$	3.05	5.09	3.40	5.67	7.17	11.89	3.05	5.08	3.37	5.59	7.04	11.72	3.69	6.17	4.93	8.27	7.58	12.60	109.92	183.01	20.7	746	34.52	1243
	Structure 2																								
		$U_0 - U_1$	3.37	5.58	3.38	5.61	4.03	6.69	3.35	5.60	4.53	7.54	6.02	9.93	3.39	5.63	3.27	5.50	4.02	6.70	117.79	197.89	29.5	1061	49.12	1768
		$U_1 - U_2$	1.77	2.94	1.84	3.05	2.17	3.58	2.16	3.60	2.24	3.74	2.30	3.79	1.76	2.94	1.84	3.05	2.12	3.54	63.45	105.84	63.1	2272	105.17	3786
		$U_2 - U_3$	1.71	2.85	2.07	3.44	1.91	3.19	2.24	3.77	2.76	4.61	2.55	4.22	1.71	2.85	2.06	3.43	2.05	3.43	61.48	102.46	42.1	1516	70.21	2527
		$U_3 - U_4$	1.46	2.44	2.05	3.38	1.67	2.81	1.45	2.42	2.00	3.33	2.26	3.80	1.45	2.42	1.85	3.08	1.69	2.83	52.10	87.03	129.5	4662	215.82	7770
		$U_4 - U_5$	1.46	2.43	1.96	3.23	1.77	2.92	1.86	3.11	2.44	4.10	1.84	3.08	1.47	2.43	1.96	3.31	1.77	2.92	52.43	87.34	83.1	2991	138.49	4986
		$U_5 - U_6$	1.43	2.40	1.95	3.28	1.85	3.05	1.43	2.40	1.95	3.28	1.94	3.20	1.51	2.53	2.13	3.58	2.00	3.34	51.36	86.52	122.9	4423	204.77	7372
		$U_6 - U_7$	1.34	2.24	1.81	3.02	2.01	3.35	1.34	2.24	1.83	3.08	1.99	3.31	1.35	2.24	1.81	3.02	1.98	3.33	48.09	80.74	115.9	4172	193.14	6953
		$U_7 - U_8$	1.42	2.33	1.88	3.11	2.03	3.35	1.42	2.33	1.88	3.11	1.98	3.35	1.93	3.21	1.95	3.21	2.02	3.38	50.95	83.94	102.2	3679	170.31	6131
		$U_8 - U_9$	1.42	2.38	2.00	3.34	2.18	3.67	1.46	2.43	2.00	3.34	2.21	3.68	1.91	3.20	2.67	4.45	2.30	3.82	51.10	85.81	88.9	3199	148.11	5332
		$U_9 - U_{10}$	1.62	2.67	2.17	3.63	2.76	4.61	1.65	2.73	2.15	3.56	2.74	4.60	1.63	2.71	2.27	3.79	4.05	6.72	58.14	96.29	36.2	1303	60.33	2172
		$U_{10} - U_{11}$	2.14	3.56	2.96	4.96	3.96	6.61	2.14	3.56	2.91	4.82	4.04	6.71	3.70	6.22	3.08	5.14	3.93	6.57	77.20	128.07	40.4	1454	67.30	2423
		$U_{11} - U_{12}$	2.62	4.37	3.28	5.45	3.27	5.47	2.62	4.37	3.35	5.58	3.23	5.39	6.85	11.42	9.06	15.14	12.96	21.69	94.37	157.22	33.3	1198	55.44	1996
		$U_{12} - U_{13}$	3.25	5.44	3.95	6.59	3.93	6.50	3.15	5.24	3.85	6.48	3.64	6.10	3.23	5.41	6.32	10.60	9.50	11.87	113.58	188.71	151.7	5461	252.80	9101
		$U_{13} - U_{14}$	3.95	6.61	4.03	6.70	3.24	5.44	2.90	4.80	3.51	5.85	6.35	7.90	4.73	8.00	8.20	13.84	5.70	7.33	104.46	172.95	45.6	1642	76.00	2736
		$U_{14} - U_{15}$	3.30	5.48	4.56	7.57	3.92	6.46	7.21	12.00	5.99	10.03	4.57	5.98	5.95	9.89	5.89	8.56	3.04	4.60	109.27	165.51	52.4	1886	87.30	3143
		$U_{15} - U_{16}$	3.47	5.82	4.30	7.10	4.29	7.14	5.06	8.42	5.31	8.93	6.57	9.11	3.58	5.94	4.77	7.99	4.14	6.89	125.09	209.50	134.3	4834	223.79	8056
		$U_{16} - U_{17}$	3.07	5.09	3.94	6.55	3.69	6.19	10.78	17.95	12.16	20.24	11.36	17.72	2.88	4.81	4.08	6.79	3.76	6.25	103.78	173.05	39.1	1407	65.14	2345
		$U_{17} - U_{18}$	2.37	3.95	3.73	6.25	3.03	5.03	5.51	9.19	6.45	10.75	3.38	5.62	2.27	3.76	3.67	6.12	3.04	5.07	81.59	135.40	36.9	1328	61.46	2213
		$U_{18} - U_{19}$	2.33	3.89	2.86	4.79	3.36	5.60	3.88	6.48	4.31	7.17	4.11	6.85	2.32	3.87	2.86	4.78	3.31	5.50	83.57	139.41	31.5	1135	52.53	1891
		$U_{19} - U_{20}$	1.79	3.00	2.42	4.06	2.33	3.85	2.20	3.66	3.12	5.23	2.45	4.09	1.82	3.02	2.35	3.92	2.33	3.85	64.51	107.82	42.0	1510	69.92	2517
		$U_{20} - U_{21}$	1.77	2.92	2.32	3.88	2.28	3.80	2.26	3.75	3.21	5.36	2.63	4.41	1.80	3.02	2.51	4.18	2.43	4.01	63.58	105.26	91.4	3289	152.28	5482
		$U_{21} - U_{22}$	1.46	2.44	2.07	3.45	2.13	3.54	1.46	2.44	2.12	3.52	2.13	3.54	1.46	2.44	2.07	3.45	2.14	3.58	52.60	87.83	94.3	3395	157.19	5659
		$U_{22} - U_{23}$	1.49	2.48	2.10	3.52	2.14	3.58	1.49	2.48	2.08	3.49	2.13	3.57	1.51	2.51	2.16	3.61	2.16	3.61	53.76	89.35	94.0	3385	156.71	5642
		$U_{23} - U_{24}$	1.73	2.89	2.25	3.77	2.54	4.21	1.70	2.83	2.27	3.77	2.53	4.21	2.15	3.58	3.05	5.09	3.57	5.95	61.32	101.96	85.0	3059	141.62	5098
		$U_{24} - U_{25}$	1.71	2.85	2.29	3.80	2.75	4.59	1.64	2.74	2.11	3.54	2.75	4.59	1.66	2.74	2.23	3.71	3.67	6.10	59.22	98.53	57.4	2067	95.71	3445
		$U_{25} - U_{26}$	2.14	3.55	2.73	4.56	4.01	6.70	2.14	3.57	2.65	4.40	4.04	6.71	3.34	5.60	4.65	7.74	4.41	7.36	77.01	127.80	34.5	1241	57.45	2068
		$U_{26} - U_{27}$	2.64	4.40	3.97	6.60	3.14	5.23	2.43	4.06	3.53	5.88	3.17	5.28	4.72	7.82	6.10	10.19	14.79	24.75	87.33	145.99	29.8	1071	49.59	1785
		$U_{27} - U_{28}$	3.34	5.59	4.23	7.07	4.18	7.01	3.31	5.53	4.30	7.16	4.04	6.75	6.13	10.19	15.40	25.70	11.35	14.85	119.07	198.90	51.4	1849	85.61	3082
		$U_{28} - U_{29}$	3.84	6.41	4.38	7.30	5.21	8.75	3.61	6.03	8.29	13.73	11.61	15.97	5.49	9.11	5.97	9.96	5.99	8.16	129.89	217.18	121.2	4363	202.01	7272
		$U_{29} - U_{30}$	4.41	7.35	4.69	7.92	3.34	4.17	4.24	5.41	3.78	6.30	7.43	11.12	7.49	12.53	7.31	12.15	4.19	5.42	116.69	150.24	43.4	1562	72.30	2603
		$U_{30} - U_{31}$	3.86	6.41	4.40	7.29	3.89	6.49	7.93	13.22	4.67	7.84	4.79	6.26	6.49	10.86	3.93	6.55	3.03	5.04	109.01	181.57	53.7	1932	89.44	3220
		$U_{31} - U_{32}$	3.24	5.41	3.58	5.93	3.81	6.31	5.78	9.64	4.29	7.21	3.93	6.51	3.07	5.15	4.10	6.84	3.81	6.34	110.58	185.22	116.3	4187	193.84	6978
		$U_{32} - U_{33}$	2.86	4.77	3.42	5.71	3.35	5.62	5.29	8.81	9.85	16.42	9.35	15.53	2.66	4.44	3.53	5.89	3.21	5.34	95.81	159.98	37.5	1348	62.43	2247
		$U_{33} - U_{34}$	2.78	4.65	3.16	5.28	3.37	5.63	2.69	4.48	3.39	5.63	4.30	7.19	3.01	5.01	3.40	5.66	3.36	5.64	96.78	161.27	42.2	1518	70.28	2530
		$U_{34} - U_{35}$	1.98	3.30	2.32	3.88	2.21	3.68	2.76	4.66	3.45	5.75	2.36	3.99	2.00	3.30	2.32	3.88	2.34	3.88	71.23	118.64	28.5	1027	47.56	1712
		$U_{35} - U_{36}$	1.84	3.07	2.22	3.74	1.88	3.14	2.44	4.08	2.93	4.89	2.11	3.52	1.84	3.07	2.49	4.18	1.84	3.08	66.23	110.43	101.7	3661	169.48	6101
		$U_{36} - U_{37}$	1.82	3.03	1.96	3.29	1.80	3.00	1.71	2.85	2.08	3.46	2.06	3.47	1.70	2.85	1.96	3.29	1.78	2.98	61.27	102.48	116.6	4197	194.30	6995
		$U_{37} - U_{38}$	1.74	2.89	1.99	3.33	1.76	2.94	1.72	2.86	2.00	3.33	1.77	2.94	1.74	2.90	2.15	3.62	1.78	2.97	62.05	103.08	100.9	3632	168.17	6054
		$U_{38} - U_{39}$	1.78	2.95	2.32	3.84	1.85	3.06	1.77	2.95	2.41	3.99	1.84	3.07	2.14	3.55	2.10	3.50	1.82	3.03	63.87	106.09	126.2	4544	210.37	7573
		$U_{39} - U_{40}$	1.75	2.91	2.00	3.38	1.87	3.12	1.69	2.83	1.89	3.14	1.82	3.05	1.69	2.83	2.02	3.36	2.46	4.08	60.72	101.89	142.8	5142	238.07	8570
		$U_{40} - U_{41}$	1.65	2.77	1.95	3.23	2.01	3.35	1.65	2.77	1.88	3.16	2.10	3.49	1.72	2.88	1.93	3.21	2.30	3.80	59.30	99.77	118.4	4264	197.41	7107
		$U_{41} - U_{42}$	1.83	3.05	1.93	3.23	2.43	4.05	2.09	3.49	1.93	3.23	2.59	4.34	2.46	4.11	2.71	4.53	2.72	4.51	65.76	109.65	36.4	1309	60.61	2182
		$U_{42} - U_{43}$	1.99	3.30	2.07	3.44	2.83	4.72	1.99	3.30	2.36	3.93	2.96	4.90	2.30	3.85	2.52	4.20	3.02	5.04	71.79	118.74	87.4	3145	145.59	5241
		$U_{43} - U_{44}$	3.24	5.40	3.36	5.61	6.02	10.09	3.24	5.40	3.26	5.39	6.02	10.09	3.64	6.05	4.70	7.83	6.20	10.39	116.75	194.00	19.2	691	31.98	1151
	Structure 3																								
		$U_0 - U_1$	3.65	6.08	3.37	5.61	4.55	7.58	3.91	6.51	3.88	6.43	6.03	10.07	3.66	6.13	3.37	5.61	4.52	7.57	121.48	201.88	38.2	1373	63.59	2289
		$U_1 - U_2$	1.61	2.67	1.65	2.72	1.87	3.12	1.61	2.68	1.64	2.73	2.07	3.46	1.59	2.65	1.65	2.72	1.91	3.23	57.30	95.57	37.6	1355	62.74	2258
		$U_2 - U_3$	1.51	2.52	1.83	3.05	1.91	3.23	1.53	2.54	1.89	3.16	2.38	3.96	1.49	2.48	1.89	3.16	1.94	3.25	53.76	89.29	76.7	2725	126.15	4541
		$U_3 - U_4$	1.59	2.64	2.12	3.51	2.08	3.44	1.62	2.71	2.09	3.51	2.56	4.27	1.64	2.70	2.29	3.84	2.04	3.41	57.14	94.98	163.9	5900	273.14	9833
		$U_4 - U_5$	1.39	2.33	1.94	3.25	1.86	3.11	1.42	2.38	2.37	3.95	2.18	3.61	1.52	2.55	2.04	3.40	1.92	3.23	49.93	84.02	134.5	4843	224.22	8072
		$U_5 - U_6$	1.35	2.23	1.99	3.32	1.81	3.02	1.35	2.23	1.99	3.32	1.89	3.10	1.36	2.27	2.08	3.47	1.81	3.01	48.49	80.14	98.9	3562	164.91	5937
		$U_6 - U_7$	1.39	2.29	2.07	3.45	1.80	3.00	1.35	2.27	1.95	3.28	1.83	3.03	1.86	3.11	2.85	4.71	1.97	3.28	48.77	81.73	107.5	3869	179.11	6448
		$U_7 - U_8$	1.44	2.44	2.02	3.35	2.08	3.43	1.43	2.39	1.97	3.28	2.05	3.42	2.27	3.80	2.59	4.33	2.94	4.95	51.63	86.09	163.2	5877	272.08	9795
		$U_8 - U_9$	1.22	2.01	1.79	3.00	2.12	3.54	1.22	2.01	1.80	2.99	2.16	3.61	2.15	3.58	3.12	5.19	2.78	3.47	43.75	72.43	40.2	1449	67.08	2415
		$U_9 - U_{10}$	1.44	2.41	1.97	3.28	3.30	5.46	1.44	2.41	1.99	3.29	3.35	5.56	2.84	4.70	3.84	6.44	6.37	10.62	51.72	86.89	25.3	912	42.20	1519
		$U_{10} - U_{11}$	2.83	4.72	3.71	6.17	4.09	6.83	2.79	4.67	3.80	6.31	4.14	6.87	3.95	6.61	20.79	34.68	13.99	20.24	100.30	168.25	42.3	1522	70.45	2536
		$U_{11} - U_{12}$	2.37	3.96	2.84	4.73	3.07	5.05	2.43	4.04	3.43	5.78	6.84	8.44	4.85	8.07	7.87	13.05	4.68	6.14	85.40	142.52	17.9	645	29.86	1075
		$U_{12} - U_{13}$	2.51	4.17	2.85	4.76	3.22	5.26	5.67	9.45	6.74	11.19	5.60	7.05	2.44	4.12	3.12	5.21	2.58	4.31	87.83	148.26	43.9	1579	73.10	2631
		$U_{13} - U_{14}$	2.30	3.84	2.98	5.00	3.14	5.25	2.37	3.94	10.10	16.76	3.11	5.18	2.32	3.88	3.17	5.28	3.14	5.25	82.66	138.33	94.9	3415	158.12	5692
		$U_{14} - U_{15}$	2.08	3.49	3.18	5.31	3.04	5.08	2.54	4.21	5.27	8.78	3.24	5.40	2.09	3.47	2.91	4.87	3.06	5.12	75.00	125.08	25.5	956	44.24	1593
		$U_{15} - U_{16}$	1.81	3.01	2.13	3.54	2.42	4.03	1.80	2.99	3.40	5.66	2.71	4.53	1.85	3.09	2.13	3.54	2.39	3.99	64.67	107.79	49.7	1791	82.90	2985
		$U_{16} - U_{17}$	1.76	2.93	2.13	3.53	2.47	4.09	2.12	3.55	2.23	3.73	2.36	3.92	1.76	2.93	2.25	3.77	3.55	5.93	63.25	105.40	40.4	1454	67.31	2423
		$U_{17} - U_{18}$	1.35	2.25	1.68	2.81	2.02	3.39	1.35	2.25	1.68	2.79	2.07	3.47	2.47	4.11	3.18	5.34	2.42	4.03	48.66	80.99	37.2	1340	62.03	2233
		$U_{18} - U_{19}$	1.32	2.21	1.60	2.67	2.23	3.72	1.32	2.21	1.58	2.63	2.37	3.93	1.53	2.55	1.87	3.12	2.74	4.56	47.49	79.70	35.9	1293	59.86	2155
		$U_{19} - U_{20}$	2.31	3.83	2.45	4.11	4.75	7.91	2.31	3.83	2.46	4.09	4.06	6.80	2.67	4.46	3.17	5.27	4.17	6.95	83.01	137.75	16.9	609	28.19	1015

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating Summary: **HS20 Truck**

Controlling As-Inspected Ratings

	Inventory	Operating
Maximum Axial Force	0.70	1.18
Maximum Moment (Start)	0.75	1.25
Maximum Moment (End)	0.75	1.25
	Inventory	Operating
Maximum Shear Force	16.9	28.19

Location	Member	Axial Load Case						Moment (Start)						Moment (End)						Controlling Tonnages		Maximum Shear Force			
		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss				Inventory		Operating	
		Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Tonnage	Operating Tonnage	Rating	Tonnage	Rating	Tonnage
Truss - Lower Chord	Structure 1																								
	L_2 - L_1	9.39	15.62	7.07	11.77	12.05	20.09	12.91	21.57	13.02	21.73	6.53	10.91	11.23	18.80	10.88	18.16	8.96	11.38	235.14	392.61	37.7	1356	62.76	2259
	L_1 - L_2	1.51	2.52	2.00	3.30	2.06	3.44	2.24	3.72	2.75	4.57	2.26	3.78	1.80	3.01	1.96	3.29	2.06	3.44	54.53	90.54	37.1	1335	61.82	2225
	L_2 - L_3	1.52	2.53	2.18	3.66	2.29	3.84	1.52	2.53	2.20	3.65	2.31	3.82	1.51	2.53	2.18	3.66	2.36	3.91	54.20	90.95	101.1	3638	168.45	6064
	L_3 - L_4	1.56	2.60	2.02	3.37	2.26	3.77	1.55	2.59	2.02	3.38	2.30	3.85	1.56	3.27	2.01	3.37	2.21	5.33	2.81	4.70	55.90	93.11	61.3	2208	102.22	3680
	L_4 - L_5	1.61	2.71	2.76	4.63	1.84	3.08	1.61	2.69	2.24	3.76	1.84	3.08	2.18	3.63	3.04	5.05	1.91	3.15	58.02	96.95	35.9	1292	59.81	2153
	L_5 - L_6	1.69	2.82	2.63	4.37	1.77	2.97	1.68	2.82	2.53	4.22	1.77	2.94	1.75	2.91	2.63	4.38	1.77	2.96	60.33	101.50	91.5	3295	152.53	5491
	L_6 - L_7	2.39	4.00	3.05	5.13	2.78	4.64	2.32	3.87	3.16	5.25	2.73	4.55	4.29	7.06	9.19	15.32	6.45	8.14	83.58	139.20	117.8	4239	196.27	7066
	L_7 - L_8	2.22	3.68	3.27	5.45	2.40	3.01	2.83	4.73	5.63	9.41	4.45	5.72	2.49	4.11	4.07	6.78	2.64	3.54	79.84	108.40	66.5	2392	110.75	3987
	L_8 - L_9	2.50	4.21	3.22	5.37	1.81	2.25	3.63	6.01	3.71	6.15	2.24	2.98	2.93	4.88	5.26	8.87	3.32	4.10	65.31	81.07	89.3	3213	148.77	5356
	L_9 - L_{10}	3.08	5.14	4.57	7.63	4.18	5.22	6.51	10.94	8.33	13.87	6.28	9.81	2.95	4.91	4.76	7.96	5.12	8.54	106.05	176.74	129.3	4654	215.44	7756
	L_{10} - L_{11}	2.09	3.48	3.34	5.53	3.51	5.84	2.09	3.51	3.50	5.84	3.51	5.84	2.04	3.37	3.25	5.40	3.02	5.03	73.30	121.49	49.6	1787	82.74	2979
	L_{11} - L_{12}	1.92	3.19	2.16	3.60	2.03	3.38	2.27	3.82	2.53	4.22	1.99	3.34	1.90	3.20	2.15	3.59	2.79	4.66	68.39	114.74	54.8	1972	91.29	3286
	L_{12} - L_{13}	2.01	3.35	2.41	4.00	2.23	3.68	2.26	3.75	2.53	4.19	2.59	4.30	2.00	3.38	2.42	4.09	2.23	3.68	71.93	120.50	145.7	5247	242.90	8744
	L_{13} - L_{14}	1.84	3.07	2.20	3.67	2.06	3.47	1.77	2.96	2.30	3.79	2.44	4.07	1.71	2.86	2.20	3.67	2.00	3.36	61.65	102.90	79.1	2846	131.75	4743
	L_{14} - L_{15}	1.84	3.07	2.35	3.91	2.41	4.01	1.84	3.07	2.35	3.90	2.56	4.27	2.09	3.50	2.83	4.76	2.81	4.68	66.12	110.58	146.6	5277	244.30	8795
	L_{15} - L_{16}	2.35	3.91	2.79	4.62	3.23	5.39	2.34	3.91	2.79	4.62	3.31	5.53	2.41	4.06	2.86	4.76	3.42	5.69	84.08	140.71	227.3	8184	378.91	13641
	L_{16} - L_{17}	2.21	3.67	2.54	4.23	3.10	5.15	2.21	3.67	2.44	4.08	3.10	5.17	2.56	4.30	2.73	4.57	3.59	5.94	79.55	131.94	104.5	3763	174.21	6271
	L_{17} - L_{18}	2.85	4.74	2.70	4.51	4.66	7.83	2.85	4.74	2.70	4.49	3.93	6.58	4.39	7.27	4.11	6.82	4.65	7.79	97.26	161.54	96.7	3482	161.22	5804
	L_{18} - L_{19}	3.25	5.38	2.30	3.83	3.16	5.30	4.19	7.01	3.09	5.18	4.59	7.64	3.73	6.24	2.82	4.70	4.63	7.62	82.69	138.00	38.0	1367	63.27	2278
	L_{19} - L_{20}	2.80	4.33	7.55	12.60	4.47	7.10	3.64	6.05	7.95	13.26	8.42	10.48	3.64	6.06	5.29	8.78	9.03	12.44	93.49	155.77	41.1	1480	68.52	2467
	Structure 2																								
	L_2 - L_1	11.72	19.43	9.17	15.26	11.35	18.90	11.06	18.49	6.60	11.08	8.73	14.63	11.16	18.56	9.31	15.63	11.00	14.34	237.60	398.87	54.7	1969	91.17	3282
	L_1 - L_2	2.94	4.95	2.68	4.49	3.15	5.22	3.39	5.65	3.89	6.49	3.83	6.38	3.40	5.69	2.68	4.49	3.15	5.24	96.48	161.55	52.3	1882	87.13	3137
	L_2 - L_3	2.58	4.30	2.75	4.59	2.93	4.91	3.50	5.85	2.97	4.98	3.36	5.60	2.57	4.31	2.94	4.93	2.93	4.91	92.56	154.96	98.8	3555	164.61	5926
	L_3 - L_4	2.19	3.66	2.57	4.27	2.47	4.12	2.44	4.07	2.99	4.91	2.60	4.31	2.19	3.64	2.69	4.49	2.47	4.12	78.67	131.14	153.0	5509	255.05	9182
	L_4 - L_5	2.48	4.15	2.88	4.79	2.68	4.44	2.44	4.09	3.00	5.01	2.80	4.65	2.44	4.01	3.03	5.05	2.68	4.44	87.77	144.53	170.3	6132	283.91	10221
	L_5 - L_6	2.22	3.69	2.99	4.95	2.55	4.25	2.44	4.04	3.14	5.23	2.55	4.25	2.21	3.67	2.82	4.71	2.54	4.22	79.72	132.16	186.7	6722	311.18	11203
	L_6 - L_7	2.11	3.51	2.78	4.63	2.50	4.17	2.12	3.51	2.78	4.63	2.50	4.17	2.14	3.57	2.90	4.84	3.07	5.13	75.89	126.49	213.9	7699	356.44	12832
	L_7 - L_8	1.91	3.17	2.51	4.16	2.57	4.29	1.91	3.17	2.51	4.17	2.55	4.24	2.17	3.64	2.98	4.93	3.01	5.03	68.65	114.25	104.7	3771	174.56	6284
	L_8 - L_9	2.16	3.58	2.86	4.76	3.05	5.02	2.16	3.58	2.86	4.76	3.05	5.02	2.36	3.90	3.29	5.44	3.66	6.06	77.67	128.73	96.9	3490	161.58	5817
	L_9 - L_{10}	2.64	4.36	3.48	5.78	3.35	5.59	2.64	4.36	3.48	5.78	3.45	5.81	3.33	5.58	4.43	7.37	3.65	6.09	94.89	156.90	75.4	2715	125.71	4526
	L_{10} - L_{11}	2.11	3.50	2.71	4.49	2.07	3.47	2.04	3.39	2.75	4.58	2.11	3.51	4.74	7.87	6.35	10.61	12.51	20.91	73.43	122.16	58.6	2108	97.60	3513
	L_{11} - L_{12}	2.67	4.43	3.46	5.78	2.21	3.75	2.61	4.35	3.32	5.56	2.30	3.81	6.17	10.27	8.11	13.36	2.27	3.79	79.67	135.11	106.6	3837	177.63	6395
	L_{12} - L_{13}	4.02	6.69	4.20	7.00	3.33	5.63	3.16	5.30	4.01	6.64	3.42	5.58	3.25	5.47	5.27	8.71	5.41	6.81	113.73	190.67	184.9	6655	308.12	11092
	L_{13} - L_{14}	2.63	4.40	3.67	6.11	2.83	3.52	3.96	6.69	5.56	9.23	5.22	6.51	2.97	4.95	4.82	8.00	3.64	4.90	94.62	126.71	57.6	2073	95.95	3454
	L_{14} - L_{15}	3.43	5.71	3.28	5.48	2.45	4.07	4.88	8.15	4.38	7.36	2.79	3.81	3.33	5.58	4.64	7.80	3.09	3.92	88.27	137.12	63.9	2300	106.50	3834
	L_{15} - L_{16}	3.33	5.53	4.77	7.87	3.52	4.47	3.19	5.33	4.24	7.03	7.43	9.32	3.16	5.24	4.97	8.27	4.42	7.38	113.71	160.94	166.0	5974	276.59	9957
	L_{16} - L_{17}	2.73	4.57	3.95	6.62	2.83	3.52	7.16	11.97	8.06	13.38	3.67	4.82	2.72	4.51	4.13	6.90	3.41	5.79	97.87	126.79	109.1	3929	181.88	6548
	L_{17} - L_{18}	2.14	3.55	2.95	4.90	2.56	4.30	8.03	13.40	8.84	14.73	8.01	11.88	1.99	3.35	2.85	4.71	2.58	4.36	71.61	120.72	72.1	2595	120.16	4326
	L_{18} - L_{19}	2.00	3.31	2.95	4.94	2.89	4.81	2.02	3.37	4.54	7.58	2.89	4.81	1.95	3.23	2.73	4.58	2.69	4.50	70.13	116.12	60.1	2164	100.19	3607
	L_{19} - L_{20}	2.65	4.40	3.46	5.77	3.10	5.20	2.78	4.63	3.42	5.72	3.58	5.96	2.50	4.16	3.36	5.63	3.08	5.12	89.95	149.84	62.4	2245	103.95	3742
	L_{20} - L_{21}	2.95	4.91	3.55	5.92	3.43	5.74	3.08	5.16	3.58	6.00	3.43	5.74	2.90	4.88	3.36	5.62	3.25	5.41	104.52	175.68	109.5	3941	182.43	6568
	L_{21} - L_{22}	2.25	3.77	2.86	4.77	2.52	4.19	2.26	3.76	2.62	4.39	2.52	4.19	2.10	3.49	2.55	4.27	2.79	4.22	75.52	125.48	70.8	2548	117.96	4247
	L_{22} - L_{23}	2.14	3.57	2.59	4.31	2.58	4.29	2.44	4.05	3.08	5.11	2.87	4.43	2.46	4.10	2.77	4.63	2.87	4.79	76.98	128.61	67.0	2411	111.64	4019
	L_{23} - L_{24}	2.79	4.63	3.14	5.21	3.65	6.08	2.79	4.63	3.14	5.21	3.65	6.08	2.95	4.94	3.39	5.68	4.79	7.95	100.57	166.58	102.0	3672	170.00	6120
	L_{24} - L_{25}	2.81	4.71	3.11	5.21	3.78	6.29	2.82	4.69	3.03	5.08	3.87	6.45	3.68	6.14	3.83	6.42	3.81	6.38	101.10	168.67	74.7	2688	124.46	4480
	L_{25} - L_{26}	3.12	5.19	3.09	5.17	2.85	4.76	2.81	4.69	2.97	4.98	2.86	4.76	4.75	7.97	5.19	8.64	2.85	4.72	101.31	168.71	63.3	2278	105.47	3797
	L_{26} - L_{27}	2.78	4.60	3.44	5.71	3.05	5.18	3.03	5.05	3.02	5.00	2.83	4.73	3.46	5.79	8.75	14.54	6.67	8.68	99.93	165.65	62.8	2259	104.59	3765
	L_{27} - L_{28}	2.71	4.49	4.52	7.48	3.53	4.42	4.34	7.23	4.12	6.85	3.84	6.19	3.07	5.11	5.78	9.65	4.54	6.03	97.52	158.99	113.2	4076	188.72	6794
	L_{28} - L_{29}	2.92	4.85	5.17	8.64	4.58	5.72	4.89	8.16	4.41	7.38	5.61	7.00	2.35	3.92	5.18	8.69	3.85	6.42	84.69	141.24	199.4	7177	332.26	11961
	L_{29} - L_{30}	2.46	4.11	3.38	5.63	3.21	4.01	7.71	12.81	6.22	10.43	4.79	6.09	3.28	5.47	4.20	7.01	4.35	5.81	88.44	144.45	57.1	2057	95.22	3428
	L_{30} - L_{31}	3.82	6.40	3.71	6.19	1.77	2.95	6.40	10.67	4.57	7.63	2.26	3.02	4.45	7.42	4.40	7.35	2.21	2.82	63.67	101.48	64.6	2325	107.65	3876
	L_{31} - L_{32}	4.93	8.17	4.94	8.23	3.06	5.15	3.99	6.59	4.74	7.92	7.31	9.27	6.32	10.55	4.26	7.09	3.39	5.63	110.22	185.49	163.9	5900	273.15	9834
	L_{32} - L_{33}	3.88	6.43	3.51	5.82	2.55	4.31	6.26	10.41	9.65	16.22	3.13	4.04	3.70	6.16	3.50	5.84	2.55	4.25	91.88	145.58	117.9	4243	196.46	7072
	L_{33} - L_{34}	3.09	5.14	2.96	4.93	2.49	4.16	6.52	10.90	6.13	10.24	7.59	11.46	2.87	4.77	2.73	4.53	2.26	3.77	81.43	135.81	72.3	2601	120.43	4336
	L_{34} - L_{35}	3.31	5.53	3.91	6.48	4.27	7.10	3.74	6.22	3.93	6.60	4.22	7.01	3.79	6.33	4.00	6.70	3.97	6.63	119.09	199.13	66.4	2391	110.71	3985
	L_{35} - L_{36}	2.60	4.35	3.12	5.21	3.17	5.26	2.89	4.83	3.53	5.90	3.17	5.27	2.60	4.34	3.12	5.21	3.19	5.33	93.49	156.27	111.6	4018	186.03	6697
	L_{36} - L_{37}	2.21	3.69	2.63	4.40	2.80	4.64	2.83	4.68	2.93	4.86	2.91	4.83	2.22	3.69	2.63	4.40	2.75	4.57	79.68	132.70	63.7	2295	106.23	3824
	L_{37} - L_{38}	2.35	3.90	2.93	4.87	2.69	4.45	2.80	4.67	3.46	5.80	3.09	5.16	2.31	3.86	2.80	4.69	2.78	4.64	83.19	139.10	125.3	4512	208.87	7519
	L_{38} - L_{39}	2.32	3.88	2.84	4.73	2.96	4.89	2.32	3.88	2.82	4.68	2.82	4.72	2.56	4.24	3.09	5.15	3.60	6.01	83.64	139.68	180.2	6488	300.38	10814
	L_{39} - L_{40}	2.41	4.01	2.86	4.78	3.37	5.62	2.41	4.04	2.86	4.78	3.37	5.62	2.73	4.56	3.20	5.33	3.80	6.34	86.67	144.53	232.8	8382	388.06	13970
	L_{40} - L_{41}	2.28	3.79	2.56	4.25	3.26	5.46	2.28	3.79	2.75	4.56	3.29	5.53	2.82	4.72	3.22	5.39	3.95	6.59	81.95	136.42	119.1	4287	198.48	7145
	L_{41} - L_{42}	2.82	4.71	2.96	4.95	4.42	7.36	2.77	4.62	3.00	4.99	4.21	7.04	3.43	5.68	3.60	6.00	5.02	8.32	99.87	166.22	86.3	3107	143.86	5179
	L_{42} - L_{43}	2.78	4.63	3.09	5.14	5.32	8.81	2.78	4.63	3.00	4.95	5.01	8.42	4.25	7.06	4.53	7.59	5.27	8.77	99.95	166.74	24.9	897	41.52	1495
	L_{43} - L_{44}	7.09	11.76	14.72	24.49	18.63	23.84	7.36	12.24	11.98	20.07	13.20	16.67	7.65	12.78	10.86	18.14	22.48	28.10	255.39	423.33	49.9	1797	83.20	2995
	Structure 3																								
	L_2 - L_1	4.56	7.59	7.21	12.02	3.75	6.22	5.95	9.91	7.33	12.19	6.05	8.72	5.96	9.91	8.89	14.80	6.97	8.68	135.15	223.91	44.3	1596	73.89	2660
	L_1 - L_2	3.56	5.95	2.11	3.51	3.13	5.21	5.01	8.38	3.25	5.44	4.32	7.23	3.22	5.34	2.11	3.51	4.20	6.00	75.92	126.51	45.4	1633	75.59	2721
	L_2 - L_3	3.03	5.04	2.61	4.35	3.55	5.88	3.51	5.85	3.45	5.75	3.98	6.62	3.03	5.02	3.02	5.04	3.34	5.58	93.99	156.73	94.0	3386	156.74	5643
	L_3 - L_4	2.29	3.81	2.60	4.33	2.88	4.76	2.94	4.86	3.26	5.46	2.85	4.79	2.29	3.82	2.62	4.36	2.87	4.83	82.50	137.17	138.8	4998	231.41	8331
	L_4 - L_5	2.53	4.23	3.00	5.01	3.12	5.23	2.65	4.40	3.00	4.94	3.09	5.15	2.53	4.20	3.04	5.09	3.18	5.35	91.11	151.24	256.2	9223	426.99	15372
	L_5 - L_6	2.05	3.40	2.77	4.61	2.56	4.29	1.95	3.25	2.50	4.16	2.90	4.86	1.96	3.28	2.51	4.17	2.50	4.15	70.22	117.15	110.0	3960	183.33	6600
	L_6 - L_7	1.68	2.79	2.27	3.84	2.38	3.98	1.68	2.79	2.27	3.84	2.59	4.26	1.95	3.26	2.72	4.56	2.81	4.72	60.60	100.30	83.2	2995	138.66	4992
	L_7 - L_8	1.79	2.97	2.31	3.85	2.94	4.87	1.79	2.97	2.31	3.85	3.07	5.09	2.28	3.80	2.75	4.55	3.40	5.70	64.50	107.02	214.3	7714	357.12	12856
	L_8 - L_9	1.60	2.66	2.06	3.42	3.03	5.10	1.95	3.26	2.77	4.61	3.36	5.59	1.77	2.93	2.47	4.14	4.56	7.58	57.76	95.85	51.0	1835	84.95	3058
	L_9 - L_{10}	2.41	3.99	3.54	5.90	2.76	4.58	2.40	4.00	3.11	5.20	2.73	4.55	2.64	4.41	3.54	5.90	2.74	4.56	86.33	143.81	46.4	1671	77.34	2784
	L_{10} - L_{11}	3.85	6.40	4.16	6.94	4.83	6.05	3.68	6.12	4.32	7.20	4.48	7.47	4.78	7.94	6.82	11.10	7.73	9.67	132.48	217.86	121.8	4384	202.95	7306
	L_{11} - L_{12}	2.20	3.70	3.32	5.55	3.24	4.09	3.77	6.33	4.50	7.46	5.89	7.38	2.48	4.15	4.61	7.65	3.41	4.56	79.35	133.33	70.2	2528	117.06	4214
	L_{12} - L_{13}	2.39	3.96	3.19	5.33	2.19	2.80	4.35	7.27	4.11	6.91	3.29	4.38	3.94	6.60	4.19	7.03	2.39	2.99	79.01	100.88	86.9	3128	144.83	5214
	L_{13} - L_{14}	2.26	3.78	3.18	5.28	3.63	4.67	6.50	10.89	7.67	12.76	6.18	8.33	2.30	3.87	3.65	6.09	3.09	5.14	82.21	135.92	140.0	5041	233.37	8401
	L_{14} - L_{15}	1.62	2.74	2.69	4.49	2.33	3.88	1.62	2.70	7.30	12.20	2.33	3.88	1.62	2.71	2.86	4.78	2.05	3.40	58.18	97.20	78.8	2838	131.40	4730
	L_{15} - L_{16}	1.47	2.45	2.71	4.53	2.28	3.79	3.06	5.11	3.58	5.97	2.28	3.79	1.47	2.45	2.31	3.86	2.41	4.00	53.00	88.18	46.8	1685	78.03	2809
	L_{16} - L_{17}	1.60	2.66	2.15	3.60	2.41	4.01	2.02	3.36	2.83	4.70	2.56	4.24	1.89	3.14	2.22	3.72	2.59	4.08	57.46	95.85	70.8	2550	118.05	4250
	L_{17} - L_{18}	1.67	2.78	2.10	3.47	2.62	4.37	1.94	3.25	2.24	3.74	2.63	4.39	1.94	3.22	2.30	3.87	2.85	4.73	60.07	100.19	83.4	3004	139.07	5007
	L_{18} - L_{19}	1.78	2.97	2.17	3.61	3.04	5.06	1.79	2.97	2.17	3.64	3.18	5.31	2.58	4.30	2.33	3.90	3.15	5.26	64.10	106.87	35.2	1267	58.67	2112
	L_{19} - L_{20}	8.94	14.82	10.54	17.51	21.19	33.22	7.66	12.69	7.94	13.19	22.43	28.90	8.60	14.27	10.16	16.90	16.17	26.96	275.70	456.91	39.4	1418	65.66	2364

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating Summary: **HS20 Truck**

Controlling As-Inspected Ratings

	Inventory	Operating
Maximum Axial Force	0.70	1.18
Maximum Moment (Start)	0.75	1.25
Maximum Moment (End)	0.75	1.25
	Inventory	Operating
Maximum Shear Force	16.9	28.19

Location	Member	Axial Load Case						Moment (Start)						Moment (End)						Controlling Tonnages		Maximum Shear Force			
		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss				Inventory		Operating	
		Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Tonnage	Operating Tonnage	Rating	Tonnage	Rating	Tonnage
Truss - Verticals	Structure 1	U_0 - L_0	0.70	1.18	0.71	1.19	0.88	1.46	0.75	1.25	0.93	1.55	0.88	1.46	0.75	1.25	0.82	1.36	0.88	1.46	25.33	42.30	37.6	1352	62.60	2254
		U_1 - L_1	1.57	2.63	1.84	3.05	1.98	3.29	1.70	2.84	2.30	3.82	2.62	4.37	1.71	2.85	1.84	3.05	1.96	3.29	56.45	94.62	39.0	1406	65.08	2343
		U_2 - L_2	2.41	4.01	2.73	4.56	2.29	3.83	3.01	5.01	3.64	6.09	4.39	7.33	2.51	4.19	3.64	6.09	4.39	7.33	82.61	137.74	54.5	1961	90.80	3269
		U_3 - L_3	3.85	6.39	3.58	5.97	2.86	4.73	4.51	7.53	4.06	6.77	4.66	7.83	4.51	7.53	4.06	6.77	4.66	7.83	102.79	170.11	73.6	2649	122.64	4415
		U_4 - L_4	2.32	3.88	2.51	4.17	2.88	4.78	4.38	7.31	7.36	12.20	5.32	8.18	4.36	7.30	7.36	12.20	6.12	7.99	83.40	139.86	64.1	2307	106.80	3845
		U_5 - L_5	1.40	2.34	1.89	3.16	2.03	3.42	1.46	2.43	2.06	3.40	2.16	3.60	1.46	2.41	2.06	3.40	1.85	3.07	50.32	84.22	60.1	2163	100.14	3605
		U_6 - L_6	1.26	2.10	1.76	2.91	1.72	2.88	1.30	2.17	2.09	3.47	2.01	3.30	1.30	2.17	1.99	3.33	1.89	3.17	45.39	75.77	53.7	1932	89.43	3219
		U_7 - L_7	0.86	1.40	1.13	1.88	1.72	2.88	0.87	1.46	1.33	2.23	1.73	2.93	0.87	1.46	1.13	1.88	1.77	2.90	30.80	50.44	63.2	2276	105.37	3793
		U_8 - L_8	2.17	3.61	2.46	4.08	2.77	3.46	2.35	3.91	2.72	4.55	3.32	5.60	2.34	3.90	2.72	4.55	3.36	5.60	78.00	124.43	109.8	3953	183.02	6589
		U_9 - L_9	1.42	2.38	1.48	2.47	1.40	2.38	1.61	2.66	1.75	2.91	1.63	2.74	1.43	2.36	1.48	2.47	1.63	2.75	50.58	85.08	68.7	2472	114.46	4121
		U_{10} - L_{10}	1.73	2.88	2.35	3.90	2.00	3.34	1.77	2.96	2.82	4.67	2.68	4.50	1.76	2.98	2.35	3.90	2.65	4.28	62.16	103.79	104.9	3775	174.75	6291
		U_{11} - L_{11}	1.83	3.05	2.21	3.66	1.86	3.09	2.00	3.33	2.66	4.41	2.46	4.11	1.82	3.03	2.28	3.79	2.44	4.11	65.59	109.10	64.5	2324	107.58	3873
		U_{12} - L_{12}	1.63	2.75	2.01	3.36	1.75	2.91	1.72	2.88	2.24	3.70	2.68	4.48	1.73	2.90	2.24	3.70	2.27	3.77	58.86	98.85	60.7	2185	101.16	3642
		U_{13} - L_{13}	1.28	2.14	1.60	2.65	1.82	3.04	1.36	2.28	1.76	2.95	2.34	3.88	1.37	2.27	1.76	2.95	2.32	3.89	45.94	77.08	68.6	2470	114.35	4117
		U_{14} - L_{14}	2.58	4.29	2.60	4.34	2.35	3.92	5.85	9.72	7.05	11.74	6.30	9.17	5.84	9.68	7.05	11.74	8.81	11.29	84.68	141.17	104.6	3766	174.37	6277
		U_{15} - L_{15}	2.43	4.08	2.78	4.61	2.96	4.94	2.38	3.96	2.95	4.93	3.70	6.17	2.38	3.96	2.95	4.93	3.70	6.17	85.55	142.63	86.9	3129	144.84	5214
		U_{16} - L_{16}	1.60	2.67	2.13	3.53	2.61	4.34	1.59	2.66	2.16	3.61	2.55	4.25	1.59	2.65	2.16	3.61	2.55	4.25	57.17	95.31	82.5	2969	137.44	4948
		U_{17} - L_{17}	1.24	2.08	1.72	2.87	1.74	2.93	1.23	2.05	1.78	2.97	1.79	2.97	1.22	2.05	1.78	2.97	1.79	2.97	44.01	73.64	88.2	3176	147.04	5293
		U_{18} - L_{18}	1.34	2.25	1.80	3.02	2.41	3.98	1.34	2.24	1.99	3.32	2.48	4.12	1.34	2.24	1.99	3.32	2.37	3.92	48.36	80.52	66.1	2381	110.21	3968
		U_{19} - L_{19}	1.49	2.49	1.90	3.17	2.94	4.94	1.49	2.48	2.14	3.54	2.95	4.92	1.50	2.50	2.13	3.52	2.96	4.95	53.47	89.15	90.3	3250	150.47	5417
		U_{20} - L_{20}	1.03	1.72	1.46	2.44	1.96	3.22	1.01	1.69	1.46	2.44	2.00	3.34	1.11	1.84	1.70	2.85	1.96	3.24	36.51	60.80	152.5	5490	254.16	9150
	Structure 2	U_0 - L_0	1.46	2.44	1.52	2.55	1.14	1.90	1.46	2.44	1.47	2.45	1.15	1.90	1.46	2.43	1.47	2.45	1.15	1.92	41.05	68.31	155.8	5607	259.60	9346
		U_1 - L_1	1.96	3.28	2.19	3.67	1.75	2.92	2.09	3.48	2.39	3.97	2.26	3.74	2.08	3.48	2.39	3.97	2.14	3.55	63.05	104.97	114.5	4120	190.76	6867
		U_2 - L_2	1.67	2.78	2.00	3.32	1.77	2.95	1.79	3.00	2.31	3.85	2.03	3.40	1.79	2.99	2.31	3.85	2.03	3.40	60.20	100.24	79.5	2862	132.52	4771
		U_3 - L_3	1.51	2.52	1.84	3.07	1.39	2.33	1.67	2.80	2.14	3.56	1.67	2.79	1.52	2.54	2.14	3.56	1.67	2.79	49.97	83.99	123.9	4460	206.50	7434
		U_4 - L_4	1.53	2.56	1.80	3.00	1.64	2.72	1.62	2.69	2.02	3.34	2.35	3.92	1.62	2.71	2.02	3.34	2.09	3.48	54.90	92.07	82.5	2969	137.44	4948
		U_5 - L_5	1.93	3.23	2.36	3.95	2.59	4.34	2.12	3.55	2.66	4.42	4.01	6.70	2.11	3.54	2.66	4.42	4.02	6.67	69.44	116.29	98.7	3555	164.57	5925
		U_6 - L_6	3.09	5.11	3.31	5.52	2.35	3.92	3.32	5.57	3.29	5.49	4.05	6.72	3.32	5.57	3.44	5.72	4.05	6.72	84.47	141.03	119.9	4318	199.88	7196
		U_7 - L_7	2.46	4.07	2.67	4.46	2.76	4.61	5.13	8.56	6.22	10.38	7.15	11.89	5.18	8.62	7.04	11.79	7.48	12.40	88.43	146.44	141.4	5092	235.73	8486
		U_8 - L_8	1.83	3.07	2.19	3.64	2.09	3.50	1.75	2.92	2.07	3.44	2.10	3.47	1.75	2.92	2.07	3.44	2.09	3.52	62.82	105.00	65.4	2356	109.08	3927
		U_9 - L_9	2.09	3.51	2.71	4.50	2.72	4.52	2.10	3.51	2.67	4.44	2.69	4.53	2.09	3.51	2.67	4.44	2.72	4.49	75.15	126.20	68.0	2448	113.33	4080
		U_{10} - L_{10}	2.19	3.62	2.72	4.51	2.63	4.37	2.18	3.63	2.80	4.63	2.65	4.39	2.17	3.63	2.80	4.63	2.65	4.39	78.20	130.34	102.6	3693	170.99	6156
		U_{11} - L_{11}	1.94	3.22	2.33	3.89	2.19	3.64	1.92	3.18	2.46	4.12	2.19	3.64	1.92	3.18	2.46	4.12	2.19	3.64	69.17	114.34	123.7	4452	206.13	7421
		U_{12} - L_{12}	1.96	3.26	2.46	4.10	2.16	3.57	1.96	3.28	2.46	4.14	2.15	3.57	1.97	3.28	2.48	4.11	2.15	3.57	70.44	117.38	157.4	5667	262.35	9445
		U_{13} - L_{13}	1.89	2.80	1.81	3.01	2.08	3.44	1.88	2.80	1.93	3.22	2.27	3.77	1.89	2.82	1.88	3.13	2.26	3.78	60.54	100.79	171.7	6180	286.10	10300
		U_{14} - L_{14}	2.32	3.86	2.54	4.24	2.94	4.96	2.74	4.57	2.90	4.86	4.15	6.93	2.74	4.58	2.90	4.86	4.15	6.93	83.37	138.94	245.4	8834	409.00	14724
		U_{15} - L_{15}	2.57	4.29	2.27	3.78	1.90	3.14	2.60	4.34	2.25	3.77	2.38	3.84	2.60	4.30	2.25	3.77	2.30	3.84	68.39	112.95	149.1	5366	248.43	8943
		U_{16} - L_{16}	2.11	3.52	2.13	3.56	1.81	3.02	2.10	3.50	2.40	3.98	2.43	4.07	2.11	3.52	2.13	3.56	2.24	3.67	65.13	106.81	127.3	4582	212.14	7637
		U_{17} - L_{17}	1.84	3.07	2.05	3.39	2.00	3.37	2.01	3.34	2.36	3.95	2.29	3.81	1.99	3.33	2.21	3.68	2.29	3.81	66.38	110.66	95.2	3426	158.62	5710
		U_{18} - L_{18}	1.82	3.02	2.08	3.47	1.77	2.94	2.00	3.33	2.38	3.96	2.19	3.64	1.81	3.03	2.38	3.96	2.19	3.64	63.76	105.91	74.1	2669	123.58	4449
		U_{19} - L_{19}	1.57	2.62	1.82	3.01	1.82	3.03	1.68	2.80	2.05	3.40	2.24	3.73	1.67	2.80	2.04	3.40	2.09	3.48	56.66	94.42	91.4	3292	152.41	5487
		U_{20} - L_{20}	1.56	2.61	1.80	3.00	1.83	3.06	1.66	2.75	2.04	3.40	2.45	4.06	1.65	2.76	2.04	3.40	2.45	4.06	56.28	94.03	90.1	3244	150.19	5407
		U_{21} - L_{21}	1.79	2.99	2.05	3.45	2.05	3.43	2.00	3.33	2.40	3.99	3.20	5.34	1.80	2.99	2.40	3.99	3.20	5.34	64.55	107.55	93.2	3355	155.33	5592
		U_{22} - L_{22}	2.55	4.25	3.04	5.02	2.60	4.34	6.03	10.07	7.90	13.07	10.40	14.78	6.02	10.07	7.90	13.07	7.70	12.84	91.82	153.13	131.2	4723	218.67	7872
		U_{23} - L_{23}	2.07	3.47	2.46	4.08	2.61	4.36	1.97	3.29	2.41	4.03	2.63	4.36	1.97	3.32	2.41	4.03	2.63	4.36	71.02	118.55	88.8	3198	148.07	5330
		U_{24} - L_{24}	1.64	2.73	2.26	3.77	2.10	3.47	1.63	2.71	2.16	3.60	2.12	3.52	1.63	2.72	2.16	3.60	2.12	3.52	58.79	97.72	84.1	3027	140.15	5045
		U_{25} - L_{25}	1.63	2.72	2.01	3.33	2.12	3.54	1.64	2.73	2.09	3.50	2.08	3.46	1.64	2.72	2.09	3.50	2.08	3.46	58.84	97.94	85.0	3058	141.58	5097
		U_{26} - L_{26}	1.84	3.07	2.11	3.52	2.36	3.91	1.80	3.01	2.18	3.66	2.36	3.91	1.80	3.02	2.18	3.66	2.36	3.91	64.83	108.48	62.7	2258	104.52	3763
		U_{27} - L_{27}	1.90	3.17	2.15	3.58	2.30	3.87	1.90	3.15	2.18	3.61	2.61	4.34	1.89	3.17	2.18	3.61	2.61	4.34	68.21	113.55	78.5	2826	130.84	4710
		U_{28} - L_{28}	2.03	3.40	2.15	3.56	2.38	3.97	2.03	3.42	2.25	3.75	2.38	3.99	2.03	3.39	2.25	3.75	2.38	3.99	72.93	121.94	106.3	3826	177.12	6376
		U_{29} - L_{29}	2.01	3.38	2.09	3.48	3.29	5.47	2.24	3.76	2.28	3.81	3.29	5.47	2.23	3.71	2.23	3.70	3.29	5.47	72.36	121.63	115.2	4148	192.02	6913
		U_{30} - L_{30}	2.82	4.69	2.67	4.41	2.52	4.16	3.20	5.31	3.09	5.10	3.37	5.62	3.19	5.31	3.08	5.10	3.37	5.62	90.61	149.93	218.6	7869	364.31	13115
		U_{31} - L_{31}	2.29	3.79	1.94	3.24	1.81	3.00	2.36	3.93	2.24	3.73	1.82	3.00	2.29	3.78	1.94	3.24	1.81	3.02	65.16	108.07	221.7	7980	369.42	13299
		U_{32} - L_{32}	2.28	3.80	2.50	4.17	1.89	3.15	2.34	3.90	2.88	4.79	2.28	3.78	2.35	3.95	2.69	4.48	2.29	3.82	68.05	113.38	198.4	7143	330.67	11904
		U_{33} - L_{33}	2.32	3.83	2.46	4.13	1.97	3.29	2.40	3.99	2.81	4.70	2.41	4.05	2.32	3.88	2.46	4.13	2.40	4.00	70.76	118.39	147.8	5322	246.37	8869
		U_{34} - L_{34}	2.45	4.04	2.62	4.36	2.35	3.92	2.58	4.30	2.94	4.90	2.88	4.79	2.58	4.31	2.94	4.90	2.37	3.95	84.62	141.04	110.1	3964	183.53	6607
		U_{35} - L_{35}	2.16	3.57	2.47	4.09	2.16	3.61	2.29	3.82	2.80	4.67	2.73	4.56	2.29	3.82	2.80	4.67	2.73	4.56	77.64	128.45	73.6	2648	122.59	4413
		U_{36} - L_{36}	1.78	3.01	2.00	3.36	2.05	3.42	1.93	3.22	2.22	3.71	2.25	3.76	1.79	2.99	2.22	3.71	2.24	3.75	64.17	107.76	69.9	2515	116.45	4192
		U_{37} - L_{37}	2.66	4.45	2.45	4.08	2.59	4.30	4.76	7.85	5.85	9.70	6.56	9.44	4.71	7.93	6.44	10.81	9.47	13.04	88.22	146.97	114.4	4118	190.63	6863
		U_{38} - L_{38}	2.30	3.81	2.83	4.40	4.29	7.12	2.79	4.66	2.57	4.27	4.29	7.12	2.79	4.66	2.57	4.27	4.29	7.12	82.66	137.07	116.5	4195	194.22	6992
		U_{39} - L_{39}	2.38	3.98	2.88	4.84	3.20	5.33	2.37	3.96	2.95	4.94	3.58	5.98	2.39	3.95	2.95	4.94	3.58	5.98	85.45	142.25	102.3	3683	170.53	6139
		U_{40} - L_{40}	1.74	2.91	2.17	3.64	2.22	3.67	1.74	2.90	2.22	3.71	2.26	3.76	1.75	2.92	2.22	3.71	2.26	3.76	62.70	104.48	83.7	3014	139.54	5024
		U_{41} - L_{41}	1.62	2.68	1.96	3.25	1.88	3.15	1.66	2.76	2.04	3.44	1.88	3.15	1.64	2.76	2.06	3.42	1.88	3.15	58.34	96.50	104.5	3764	174.25	6273
		U_{42} - L_{42}	1.76	2.95	2.15	3.62	2.47	4.10	1.77	2.95	2.16	3.61	2.47	4.10	1.77	2.93	2.16	3.61	2.47	4.10	63.30	105.63	67.1	2415	111.81	4025
		U_{43} - L_{43}	1.94	3.26	2.20	3.67	2.97	4.99	1.95	3.23	2.28	3.77	2.97	4.99	1.95	3.23	2.28	3.77	2.97	4.99	69.87	116.13	92.8	3342	154.71	5570
		U_{44} - L_{44}	1.56	2.59	1.45	2.42	2.55	4.20	1.56	2.60	1.51	2.52	2.44	4.10	1.70	2.81	1.76	2.93	2.61	4.34	52.26	87.08	156.5	5635	260.88	9392
	Structure 3	U_0 - L_0	1.18	1.97	1.24	2.06	1.03	1.72	1.18	1.97	1.52	2.56	1.03	1.72	1.19	1.98	1.49	2.48	1.03	1.72	37.10	61.83	138.8	4996	231.28	8326
		U_1 - L_1	1.88	3.12	1.83	3.05	1.66	2.75	2.07	3.47	2.38	3.99	2.09	3.48	1.94	3.23	2.38	3.99	2.09	3.48	59.69	99.14	117.8	4234	196.02	7057
		U_2 - L_2	1.55	2.59	1.81	3.02	1.52	2.54	1.70	2.85	2.12	3.57	2.01	3.36	1.69	2.84	2.12	3.57	1.82	3.04	54.73	91.32	73.4	2642	122.30	4403
		U_3 - L_3	1.28	2.11	1.64	2.72	1.37	2.27	1.42	2.36	1.94	3.24	1.56	2.61	1.42	2.37	1.94	3.25	1.56	2.61	46.08	75.99	107.4	3865	178.94	6442
		U_4 - L_4	1.62	2.71	1.99	3.33	1.79	2.98	1.80	2.99	2.34	3.89	2.47	4.12	1.81	3.01	2.34	3.89	2.47	4.12	58.32	97.60	87.6	3155	146.07	5259
		U_5 - L_5	2.04	3.40	2.34	3.92	2.72	4.56	2.24	3.73	2.94	4.92	3.07	5.14	2.25	3.75	2.94	4.92	3.01	5.00	73.34	122.34	79.3	2855	132.19	4759
		U_6 - L_6	2.27	3.78	2.91	4.88	2.52	4.22	5.76	9.60	8.04	13.29	6.83	10.49	5.75	9.61	8.04	13.29	7.93	10.93	81.60	135.96	116.3	4188	193.88	6980
		U_7 - L_7	1.66	2.78	1.94	3.24	1.84	3.05	1.56	2.60	1.92	3.17	2.03	3.39	1.56	2.61	1.92	3.17	2.03	3.39	56.16	93.48	68.9	2479	114.75	4131
		U_8 - L_8	1.87	3.15	2.31	3.86	2.41	4.05	1.86	3.10	2.32	3.90	2.41	4.05	1.86	3.10	2.32	3.90	2.41	4.05	66.93	111.50	61.0	2194	101.58	3657
		U_9 - L_9	1.92	3.20	2.38	3.94	2.54	4.23	1.92	3.19	2.48	4.12	2.52	4.19	1.92	3.19	2.48	4.12	2.52	4.19	69.01	114.84	54.5	1961	90.79	3268
		U_{10} - L_{10}	2.03	3.37	2.60	4.33	2.07	3.41	2.03	3.37	2.62	4.38	2.26	3.77	2.01	3.37	2.62	4.38	2.23	3.76	72.44	121.28	85.3	3072	142.20	5119
		U_{11} - L_{11}	1.43	2.39	1.51	2.52	1.85	3.08	1.44	2.39	1.65	2.75	1.84	3.10	1.43	2.40	1.55	2.59	1.85	3.10	51.40	86.03	53.1	1911	88.46	3184
		U_{12} - L_{12}	2.28	3.78	2.44	4.07	2.95	3.66	2.65	4.39	2.69	4.52	3.47	5.80	2.64	4.41	2.69	4.52	3.47	5.77	82.14	131.70	140.1	5043	233.48	8405
		U_{13} - L_{13}	1.47	2.45	1.28	2.13	1.14	1.92	1.47	2.47	1.28	2.12	1.37	2.26	1.49	2.46	1.28	2.12	1.14	1.89	41.08	68.22	83.1	2992	138.51	4986
		U_{14} - L_{14}	1.65	2.76	1.76	2.95	1.48	2.43	1.75	2.92	2.17	3.64	1.85	3.08	1.75	2.92	1.76	2.95	1.78	2.58	53.19	87.63	61.7	2221	102.83	3702
		U_{15} - L_{15}	1.50	2.52	1.72	2.88	1.79	2.98	1.75	2.92	2.17	3.62	2.75	4.59	1.46	2.45	1.78	2.99	1.83	3.05	52.67	88.05	71.6	2577	119.30	4295
		U_{16} - L_{16}	2.72	4.54	2.65	4.42	2.17	3.63	5.65	9.38	6.60	10.98	5.06	8.39	3.56	5.90	6.06	10.11	5.06	8.38	78.20	130.66	66.2	2385	110.40	3974
		U_{17} - L_{17}	2.96	4.91	3.22	5.39	4.14	6.94	3.23	5.37	3.19	5.31	6.36	10.47	3.23	5.37	3.19	5.31	5.74	9.56	106.61	176.78	75.4	2714	125.66	4524
		U_{18} - L_{18}	2.42	4.03	2.96	4.94	4.02	6.66	2.51	4.19	3.16	5.26	4.48	7.50	2.51	4.19	3.16	5.26	4.48	7.50	87.23	144.94	48.0	1726	79.93	2877
		U_{19} - L_{19}	1.98	2.62	1.99	3.30	3.04	5.06	1.60	2.67	2.16	3.57	3.05	5.08	1.60	2.67	2.16	3.57	3.03	5.09	56.83	94.49	31.7	1142	52.88	1904
		U_{20} - L_{20}	0.91	1.50	0.77	1.29	1.64	2.71	0.77	1.28	0.82	1.36	1.73	2.87	0.90	1.50	0.80	1.33	1.72	2.90	27.54	46.12	44.5	1600	74.09	2667

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating Summary: **HS20 Truck**

Controlling As-Inspected Ratings

	Inventory	Operating
Maximum Axial Force	0.70	1.18
Maximum Moment (Start)	0.75	1.25
Maximum Moment (End)	0.75	1.25
	Inventory	Operating
Maximum Shear Force	16.9	28.19

Location	Member	Axial Load Case						Moment (Start)						Moment (End)						Controlling Tonnages		Maximum Shear Force			
		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss		North Truss		Center Truss		South Truss				Inventory		Operating	
		Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Rating	Operating Rating	Inventory Tonnage	Operating Tonnage	Rating	Tonnage	Rating	Tonnage
Truss - Diagonals	**Structure 1**																								
	U_0 - L_1	1.90	3.16	2.25	3.72	2.75	4.60	1.83	3.05	2.43	4.05	2.78	4.09	1.83	3.05	4.18	7.00	2.42	4.08	65.91	109.85	78.3	2819	130.53	4699
	U_1 - L_2	1.90	3.16	2.36	3.94	2.69	4.49	2.07	3.46	3.69	6.14	2.50	4.15	2.34	3.91	2.86	4.79	2.36	3.92	68.55	113.64	364.4	13118	607.31	21863
	U_2 - L_3	3.01	5.02	2.71	4.49	4.46	7.45	3.84	6.40	5.60	9.36	3.23	5.36	4.05	6.77	3.96	6.62	3.13	5.21	97.67	161.55	509.5	18341	849.12	30568
	U_3 - L_4	1.67	2.78	1.53	2.56	2.06	3.46	3.61	6.00	2.30	3.81	2.64	4.38	3.56	5.97	1.98	3.31	2.35	3.91	55.02	92.31	780.3	28091	1300.52	46819
	U_4 - L_5	1.50	2.50	2.11	3.51	2.46	4.10	1.52	2.52	2.11	3.51	3.06	5.13	2.72	4.55	2.54	4.21	5.71	8.25	54.16	90.12	452.1	16274	753.44	27124
	U_5 - L_6	1.60	2.66	2.44	4.04	3.01	5.03	1.65	2.77	2.37	3.96	3.07	4.91	1.74	2.89	2.68	4.43	2.59	4.34	57.45	95.90	162.4	5845	270.62	9742
	U_6 - L_7	1.37	2.30	1.56	2.60	2.59	4.32	1.33	2.22	2.79	4.65	2.59	4.36	1.39	2.32	1.97	3.28	2.71	4.52	47.98	79.80	116.3	4187	193.86	6979
	U_7 - L_8	1.38	2.30	1.67	2.76	3.25	5.43	1.39	2.30	1.67	2.78	3.36	5.58	1.46	2.42	1.67	2.76	3.26	5.45	49.59	82.86	184.5	6641	307.46	11069
	U_8 - L_9	2.34	3.88	2.37	3.97	2.71	4.53	2.35	3.90	2.36	3.93	2.70	4.48	2.34	3.91	2.37	3.97	2.74	4.57	84.21	139.60	273.8	9858	456.37	16429
	U_9 - L_{10}	2.19	3.66	2.50	4.14	2.57	4.28	2.69	4.48	3.51	5.89	2.55	4.26	2.56	4.26	3.26	5.46	2.92	4.85	78.97	131.73	190.2	6847	316.97	11411
	U_{10} - L_{11}	2.16	3.56	2.71	4.48	2.57	4.30	2.16	3.60	2.71	4.51	2.57	4.29	2.41	4.01	3.45	5.76	2.55	4.28	77.73	128.20	204.2	7351	340.33	12252
	U_{11} - L_{12}	1.90	3.17	2.33	3.90	2.30	3.83	2.17	3.63	3.13	5.25	2.27	3.80	2.17	3.59	2.82	4.71	2.42	4.05	68.36	114.02	236.6	8518	394.35	14197
	U_{12} - L_{13}	1.58	2.63	1.87	3.14	2.36	3.90	1.58	2.63	1.87	3.14	2.42	4.01	1.78	2.96	2.21	3.71	2.48	4.15	56.77	94.81	190.3	6852	317.20	11419
	U_{13} - L_{14}	1.54	2.56	1.62	2.69	2.25	3.76	1.51	2.51	1.62	2.69	2.25	3.77	1.82	3.02	2.04	3.40	2.34	3.89	54.36	90.53	412.1	14834	686.78	24724
	U_{14} - L_{15}	1.94	3.24	1.92	3.22	3.07	5.12	2.37	3.92	2.36	3.94	5.30	8.81	2.55	4.25	2.40	3.99	3.97	6.64	69.11	115.76	415.6	14961	692.64	24935
	U_{15} - L_{16}	1.72	2.88	2.35	3.89	2.96	4.95	1.88	3.15	2.38	3.97	3.19	5.25	1.95	3.28	2.61	4.37	3.26	5.44	61.81	103.78	282.1	10154	470.12	16924
	U_{17} - L_{18}	1.26	2.10	1.86	3.10	2.12	3.53	1.26	2.10	1.89	3.15	2.12	3.53	1.33	2.22	2.15	3.56	2.15	3.61	45.28	75.68	243.4	8762	405.66	14604
	U_{18} - L_{17}	1.39	2.32	2.12	3.52	2.44	4.05	1.39	2.32	2.13	3.56	2.49	4.14	1.45	2.41	2.34	3.92	2.44	4.05	49.99	83.57	136.6	4919	227.73	8198
	U_{19} - L_{19}	1.37	2.26	2.04	3.39	2.61	4.33	1.37	2.28	2.04	3.39	2.61	4.33	1.36	2.28	2.20	3.63	2.61	4.33	49.09	81.34	149.5	5380	249.09	8967
	U_{20} - L_{19}	1.43	2.40	1.95	3.25	2.88	4.76	1.47	2.47	1.97	3.29	3.04	5.10	1.48	2.47	1.97	3.29	2.90	4.80	51.61	86.57	206.8	7446	344.72	12410
	Structure 2																								
	U_0 - L_1	2.08	3.47	2.31	3.86	2.03	3.39	2.00	3.32	2.27	3.76	2.19	3.18	2.00	3.32	2.27	3.76	1.97	3.33	70.83	114.44	181.0	6517	301.70	10861
	U_1 - L_2	1.95	3.22	2.31	3.85	1.92	3.18	1.95	3.24	2.31	3.85	1.92	3.18	1.99	3.32	2.31	3.85	2.16	3.59	68.99	114.41	163.9	5899	273.10	9832
	U_2 - L_3	1.78	2.94	2.07	3.43	1.78	2.95	1.80	2.98	2.07	3.43	1.78	2.95	1.78	2.94	2.08	3.47	2.03	3.40	63.95	105.84	144.6	5204	240.93	8674
	U_3 - L_4	1.67	2.79	1.90	3.13	1.90	3.18	1.67	2.79	1.90	3.13	1.90	3.18	1.86	3.07	2.23	3.71	2.07	3.48	59.94	100.40	249.1	8966	415.09	14943
	U_4 - L_5	1.76	2.92	2.01	3.31	2.80	4.70	1.76	2.92	2.09	3.47	2.80	4.70	1.99	3.29	2.36	3.92	2.90	4.81	63.50	105.22	255.7	9203	426.08	15339
	U_5 - L_6	2.60	4.34	2.79	4.67	4.19	6.98	2.71	4.51	2.79	4.63	4.18	7.00	2.59	4.33	2.78	4.63	3.83	6.41	93.14	156.03	323.5	11645	539.12	19408
	U_6 - L_7	1.69	2.82	1.77	2.95	1.87	3.09	1.69	2.82	1.81	3.00	2.10	3.52	1.70	2.81	1.82	3.03	1.81	3.01	60.79	101.29	423.7	15252	706.10	25420
	U_7 - L_7	1.85	3.08	2.30	3.84	2.25	3.74	2.16	3.61	2.34	3.89	2.69	4.45	2.05	3.40	2.57	4.25	2.71	4.54	66.48	111.05	239.3	8614	398.82	14357
	U_8 - L_8	1.66	2.78	2.23	3.74	2.15	3.58	1.70	2.83	2.23	3.74	2.10	3.53	1.70	2.81	2.34	3.90	2.24	3.73	59.92	100.25	168.0	6049	280.05	10082
	U_9 - L_9	1.81	3.02	2.43	4.07	2.41	4.08	1.80	3.02	2.43	4.07	2.52	3.91	1.81	3.02	2.55	4.21	2.52	4.23	64.69	108.58	188.7	6792	314.44	11320
	U_{11} - L_{10}	1.79	3.00	2.35	3.91	2.40	3.99	1.77	2.92	2.30	3.83	2.43	4.01	1.79	3.00	2.55	4.26	2.47	4.13	63.71	105.24	186.8	6726	311.41	11211
	U_{12} - L_{11}	1.67	2.79	1.87	3.12	2.34	3.91	1.68	2.79	2.11	3.54	2.36	3.95	1.73	2.85	2.34	3.91	2.29	3.82	60.23	100.31	186.8	6725	311.36	11209
	U_{13} - L_{12}	1.46	2.45	1.73	2.88	2.48	4.07	1.46	2.43	1.72	2.88	2.48	4.13	1.46	2.46	1.66	2.75	2.48	4.07	52.61	87.43	164.2	5911	273.66	9852
	U_{14} - L_{13}	1.81	3.05	1.86	3.06	3.55	5.93	1.86	3.11	2.00	3.32	3.60	5.99	1.82	3.02	2.04	3.38	3.57	5.92	65.13	108.86	246.7	8880	411.12	14800
	U_{15} - L_{15}	2.40	3.98	2.13	3.56	2.17	3.61	2.40	4.02	2.13	3.55	2.15	3.61	2.38	3.99	2.13	3.56	2.17	3.62	76.64	127.88	269.4	9697	448.96	16182
	U_{15} - L_{16}	2.04	3.37	1.82	3.04	1.59	2.65	2.29	3.79	1.82	3.04	1.59	2.65	2.04	3.38	1.82	3.04	1.70	2.81	57.34	95.45	176.4	6350	293.99	10584
	U_{16} - L_{17}	1.84	3.07	2.18	3.62	2.09	3.46	1.84	3.07	2.18	3.62	2.09	3.46	1.84	3.05	2.18	3.62	2.09	3.46	66.19	109.96	167.1	6017	278.58	10029
	U_{17} - L_{18}	1.83	3.02	2.15	3.58	1.91	3.15	1.79	2.98	2.15	3.58	1.91	3.15	1.83	3.04	2.18	3.63	2.09	3.45	64.30	107.31	159.7	5749	266.15	9581
	U_{18} - L_{19}	1.85	3.08	2.14	3.58	2.19	3.68	1.85	3.06	2.14	3.58	2.22	3.70	2.08	3.48	2.14	3.58	2.36	3.93	66.44	110.26	161.3	5805	268.76	9675
	U_{19} - L_{20}	1.79	3.00	2.16	3.63	2.44	4.06	1.79	3.00	2.23	3.72	2.44	4.06	2.05	3.42	2.58	4.29	2.65	4.41	64.27	108.00	162.2	5838	270.27	9730
	U_{20} - L_{21}	1.78	2.96	1.91	3.19	2.41	4.00	1.80	3.00	1.91	3.19	2.41	4.03	1.78	2.96	2.05	3.44	2.74	4.55	63.97	106.68	256.1	9220	426.83	15366
	U_{21} - L_{22}	2.36	3.93	2.48	4.13	4.08	6.78	2.36	3.93	2.48	4.13	3.90	6.50	2.65	4.45	2.98	4.97	4.47	7.43	94.93	141.34	406.9	14647	678.11	24412
	U_{21} - L_{22}	2.34	3.90	2.53	4.23	2.93	4.88	2.70	4.48	3.09	5.16	3.65	6.12	3.07	5.10	3.36	5.59	4.00	6.67	84.09	140.51	468.6	16869	780.97	28115
	U_{24} - L_{23}	1.75	2.91	2.26	3.79	2.37	3.96	1.79	2.98	2.26	3.79	2.37	3.96	1.78	2.97	2.40	4.03	2.51	4.18	63.13	104.91	281.5	10135	469.19	16891
	U_{25} - L_{24}	1.82	3.03	2.62	4.38	2.51	4.17	1.87	3.13	2.62	4.38	2.54	4.23	1.90	3.16	2.73	4.54	2.57	4.33	65.54	109.18	175.1	6303	291.82	10506
	U_{26} - L_{25}	1.97	3.28	2.29	3.85	2.55	4.21	1.95	3.26	2.27	3.79	2.47	4.11	1.97	3.28	2.56	4.25	2.55	4.21	70.17	117.38	164.6	5924	274.27	9874
	U_{27} - L_{26}	1.77	2.93	2.03	3.41	2.24	3.72	1.77	2.93	2.04	3.38	2.19	3.66	1.82	3.04	2.27	3.81	2.25	3.71	63.57	105.42	160.2	5768	267.06	9614
	U_{28} - L_{27}	1.96	3.25	2.16	3.59	2.35	3.90	1.97	3.27	2.14	3.57	2.43	4.07	1.96	3.25	2.22	3.71	2.36	3.94	70.51	116.93	161.4	5810	268.98	9683
	U_{29} - L_{28}	1.80	3.00	1.67	2.80	2.58	4.34	1.81	3.01	1.67	2.80	2.56	4.32	1.80	3.00	1.67	2.80	2.58	4.34	60.07	100.87	157.9	5683	263.10	9472
	U_{30} - L_{29}	2.08	3.48	1.73	2.87	3.87	6.49	2.13	3.55	1.94	3.23	3.90	6.54	2.14	3.57	1.94	3.25	3.87	6.49	62.11	103.27	248.3	8939	413.85	14899
	U_{31} - L_{31}	2.62	4.36	2.24	3.73	2.25	3.73	2.56	4.23	2.20	3.68	2.28	3.78	2.62	4.36	2.24	3.73	2.30	3.84	79.30	132.63	280.1	10082	466.77	16804
	U_{31} - L_{32}	2.02	3.38	2.04	3.40	1.63	2.75	2.02	3.37	2.04	3.40	1.61	2.66	2.02	3.38	2.04	3.40	1.65	2.74	58.10	95.71	186.5	6716	310.91	11193
	U_{32} - L_{33}	2.30	3.81	2.44	4.06	1.96	3.26	2.30	3.83	2.41	4.02	1.97	3.26	2.30	3.81	2.44	4.06	2.19	3.70	70.40	117.31	203.3	7320	338.90	12200
	U_{33} - L_{34}	2.16	3.60	2.37	3.93	2.03	3.39	2.16	3.59	2.37	3.93	2.04	3.40	2.46	4.09	2.82	4.67	2.19	3.62	72.92	122.13	187.8	6762	313.05	11270
	U_{34} - L_{35}	2.01	3.40	2.21	3.67	2.10	3.47	2.02	3.40	2.24	3.73	2.18	3.63	2.28	3.77	2.62	4.36	2.28	3.79	72.50	122.22	178.2	6416	297.03	10693
	U_{35} - L_{36}	2.04	3.40	2.11	3.52	1.97	3.27	2.04	3.39	2.11	3.52	1.97	3.24	2.06	3.43	2.54	4.22	2.15	3.54	70.82	116.61	156.8	5646	261.40	9410
	U_{36} - L_{37}	2.02	3.34	2.02	3.37	2.60	4.32	2.02	3.35	2.02	3.38	2.39	3.99	2.21	3.69	2.42	4.01	2.89	4.84	72.72	120.35	198.8	7157	331.36	11929
	U_{37} - L_{37}	1.29	2.15	1.43	2.39	1.92	3.20	1.56	2.60	1.68	2.80	2.66	4.47	1.56	2.59	1.68	2.82	2.51	4.17	46.46	77.26	396.6	14277	660.99	23796
	U_{38} - L_{38}	2.40	4.01	2.26	3.77	3.24	5.41	2.82	4.71	2.90	4.86	4.82	8.02	2.41	4.01	2.47	4.14	4.77	7.98	81.42	135.76	399.5	14383	665.86	23971
	U_{38} - L_{39}	1.97	3.28	2.66	4.41	2.85	4.72	2.18	3.61	2.70	4.53	2.96	4.96	2.13	3.54	2.70	4.48	2.85	4.72	71.09	118.13	297.0	10692	494.99	17820
	U_{41} - L_{40}	1.74	2.90	2.17	3.63	2.12	3.56	1.77	2.95	2.24	3.72	2.12	3.53	1.81	3.04	2.40	4.00	2.12	3.56	62.54	104.41	259.3	9333	432.10	15556
	U_{42} - L_{41}	1.70	2.85	2.14	3.53	2.22	3.69	1.70	2.85	2.14	3.53	2.24	3.70	1.75	2.92	2.39	4.00	2.22	3.69	61.37	102.56	139.6	5025	232.65	8375
	U_{43} - L_{42}	1.90	3.16	2.34	3.88	2.81	4.68	1.84	3.08	2.34	3.88	2.82	4.67	1.90	3.16	2.54	4.25	2.81	4.68	66.34	110.86	150.7	5426	251.20	9043
	U_{44} - L_{43}	1.96	3.26	2.23	3.73	3.13	5.18	2.18	3.65	2.45	4.07	3.40	5.63	1.95	3.24	2.16	3.60	3.24	5.36	70.05	116.64	214.3	7716	357.22	12860
	Structure 3																								
	U_0 - L_1	1.86	3.11	2.05	3.42	2.00	3.34	1.72	2.85	2.10	3.50	1.86	3.10	1.72	2.85	2.10	3.50	1.87	3.10	61.79	102.45	152.7	5497	254.50	9162
	U_1 - L_2	1.85	3.08	2.11	3.54	1.83	3.03	1.84	3.07	2.11	3.54	1.83	3.03	1.84	3.07	2.11	3.54	1.92	3.22	65.85	109.02	169.2	6092	282.02	10153
	U_2 - L_3	1.63	2.72	2.07	3.43	1.97	3.29	1.63	2.72	2.08	3.49	2.01	3.37	1.62	2.71	2.08	3.49	1.97	3.29	58.35	97.40	135.3	4871	225.52	8119
	U_3 - L_4	1.63	2.72	1.92	3.18	1.80	3.00	1.69	2.78	1.93	3.22	1.80	3.00	1.63	2.72	1.92	3.18	2.15	3.57	58.61	98.06	241.6	8697	402.65	14495
	U_4 - L_5	1.86	3.09	2.01	3.38	2.77	4.62	1.86	3.09	2.01	3.38	2.98	4.97	2.18	3.62	2.53	4.19	2.67	4.46	66.81	111.31	254.2	9153	423.74	15255
	U_5 - L_6	2.52	4.23	2.16	3.61	3.75	6.28	2.53	4.20	2.42	4.05	3.00	4.99	2.91	4.82	2.34	3.90	3.19	5.32	77.82	129.93	456.0	16415	759.96	27359
	U_6 - L_6	1.73	2.91	2.02	3.38	1.91	3.17	1.78	2.94	2.01	3.35	2.37	3.95	1.90	3.14	2.02	3.38	2.38	3.96	62.13	104.79	505.0	18180	841.66	30300
	U_8 - L_7	1.71	2.85	2.37	3.98	2.49	4.16	1.82	3.05	2.37	3.94	2.53	4.19	1.84	3.06	2.40	4.03	2.58	4.28	61.60	102.55	206.5	7433	344.12	12388
	U_9 - L_8	1.78	2.97	2.54	4.23	2.61	4.40	1.89	3.16	2.58	4.29	2.91	4.64	1.82	3.06	2.80	4.64	2.62	4.38	64.04	106.95	242.7	8737	404.47	14561
	U_{10} - L_9	2.07	3.41	2.45	4.07	2.79	4.70	2.07	3.41	2.66	4.44	3.52	5.59	2.02	3.37	3.12	5.19	2.79	4.70	72.83	121.20	192.6	6935	321.07	11558
	U_{11} - L_{10}	2.09	3.46	2.31	3.85	3.43	5.69	2.01	3.35	2.58	4.31	3.45	5.79	2.09	3.46	2.70	4.48	3.45	5.71	72.42	120.43	169.3	6095	282.15	10158
	U_{12} - L_{11}	2.16	3.60	2.34	3.87	3.83	6.43	2.24	3.71	2.33	3.88	4.06	6.84	2.18	3.63	2.45	4.10	3.86	6.39	77.59	129.55	245.5	8839	409.21	14732
	U_{12} - L_{13}	2.07	3.46	1.91	3.20	1.89	3.15	2.07	3.47	1.91	3.20	1.84	3.06	2.07	3.45	2.04	3.37	1.88	3.16	66.27	110.17	204.1	7349	340.24	12249
	U_{13} - L_{14}	1.94	3.26	1.91	3.17	1.77	2.96	2.22	3.69	2.40	4.03	1.76	2.93	1.95	3.25	1.91	3.17	1.92	3.20	63.20	105.61	130.2	4686	216.93	7810
	U_{14} - L_{15}	1.88	3.13	2.24	3.74	2.71	4.51	1.88	3.13	3.64	6.05	2.50	4.16	2.23	3.71	2.79	4.64	2.95	4.92	67.60	112.74	162.7	5857	271.15	9761
	U_{15} - L_{16}	1.92	3.22	2.15	3.58	2.59	4.33	2.90	4.85	3.95	6.54	2.44	4.06	7.66	12.80	3.03	5.03	3.63	5.55	69.27	115.84	413.1	14872	688.52	24787
	U_{17} - L_{16}	1.60	2.67	1.57	2.61	2.45	4.08	2.74	4.56	2.54	4.24	4.86	8.05	1.85	3.08	1.95	3.26	4.05	6.80	56.55	93.89	616.0	22174	1026.59	36957
	U_{19} - L_{17}	2.17	3.61	2.44	4.03	5.52	9.18	3.38	5.62	3.57	5.92	5.42	9.00	3.48	5.81	4.37	7.33	5.95	9.52	78.22	129.84	539.1	19407	898.47	32345
	U_{19} - L_{18}	1.73	2.90	2.21	3.69	3.48	5.80	1.73	2.90	2.35	3.91	3.48	5.80	1.94	3.24	2.82	4.69	2.93	4.86	62.35	104.50	302.9	10904	504.83	18174
	U_{20} - L_{19}	1.84	3.07	2.28	3.78	3.68	6.13	4.15	6.90	2.46	4.11	3.86	5.96	1.86	3.12	2.46	4.11	3.86	6.35	66.22	110.40	139.2	5010	231.93	8349