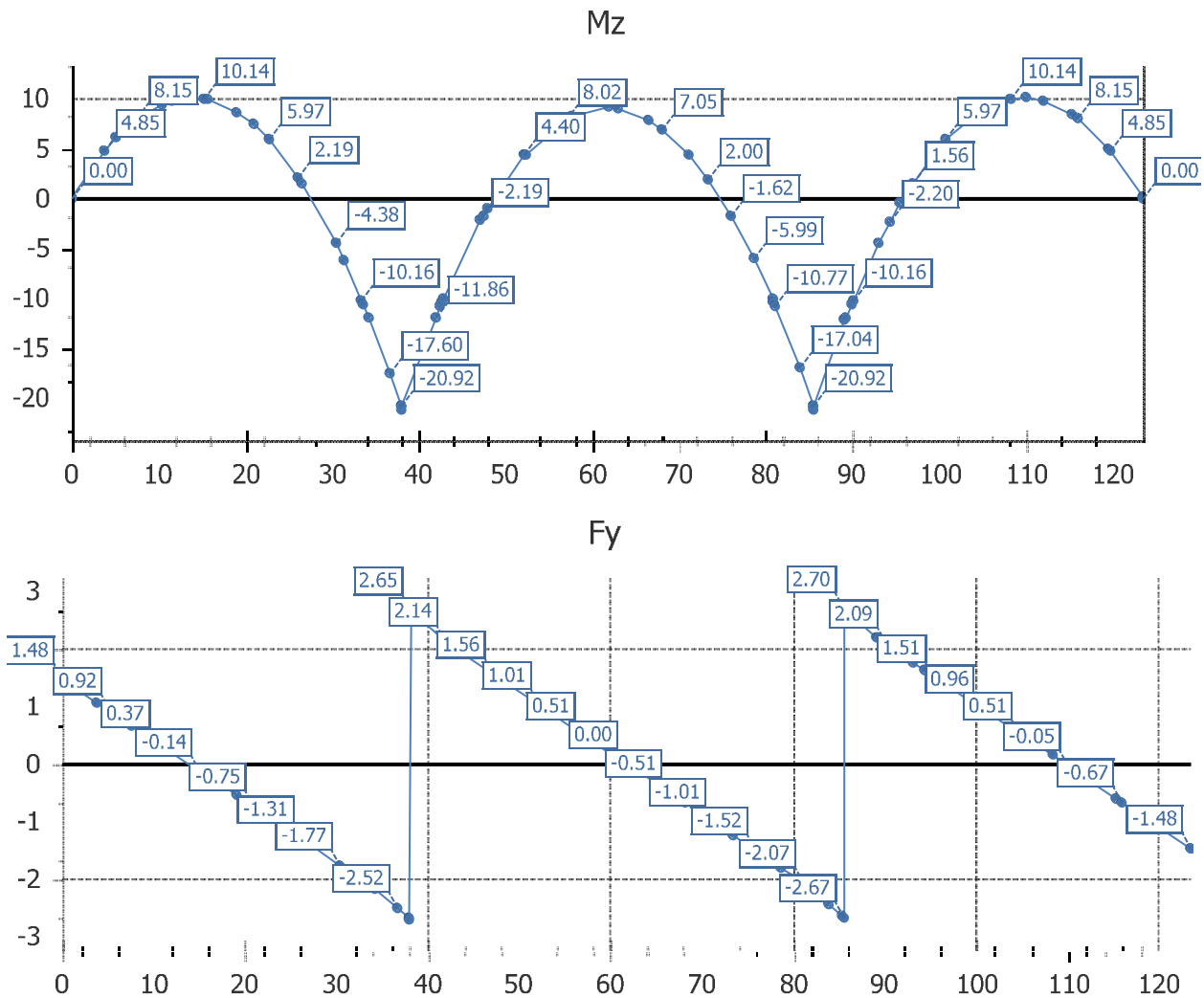


Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

Member Forces

Group01 Member 01

Dead Load Initial - Initial - Self Weight Steel

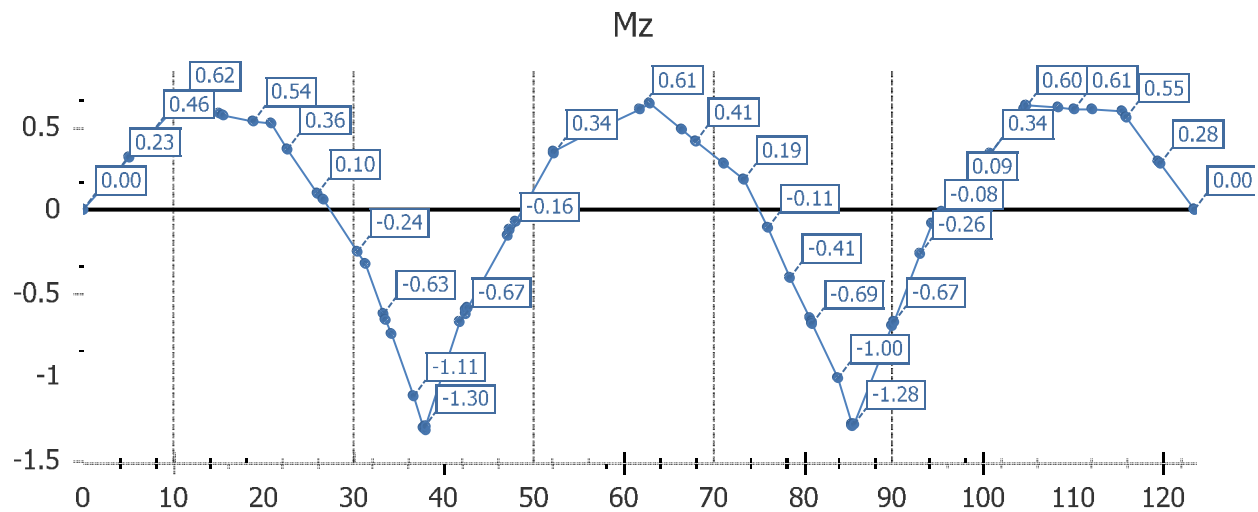


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-2.09	0.00	0.00	0.00	-10.16	0.00
33.6000	1.8842	0.00	-2.11	0.00	0.00	0.00	-10.58	0.00

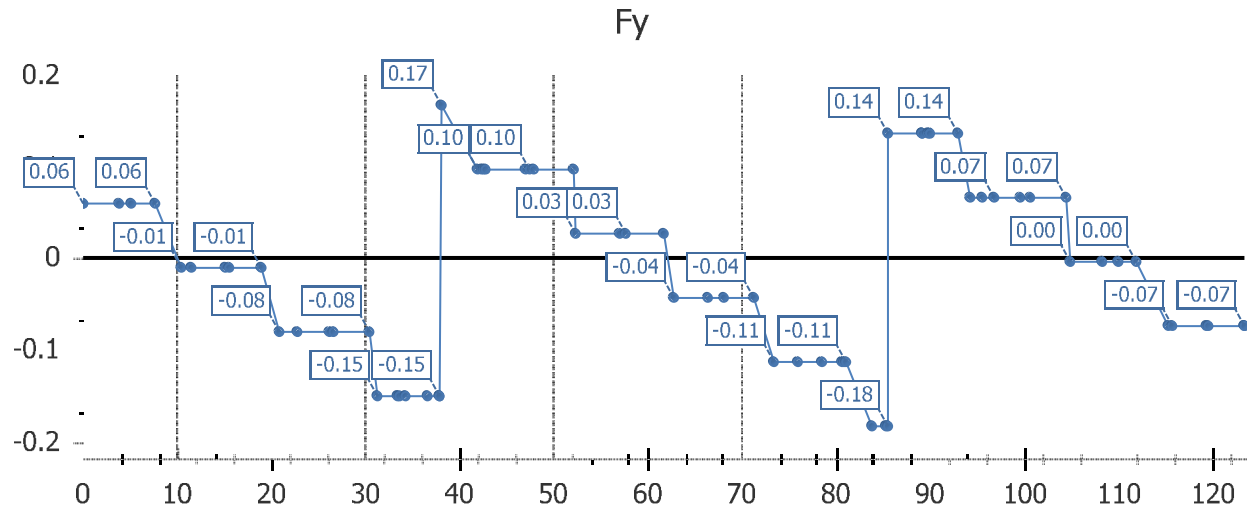
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
37.9000	1.9974	0.00	-2.70	0.00	0.00	0.00	-20.92	0.00
38.1000	2.0021	0.00	2.65	0.00	0.00	0.00	-20.92	0.00
42.4000	2.0926	0.00	2.07	0.00	0.00	0.00	-10.77	0.00
42.6000	2.0968	0.00	2.04	0.00	0.00	0.00	-10.35	0.00
80.9000	2.9032	0.00	-2.04	0.00	0.00	0.00	-10.35	0.00
81.1000	2.9074	0.00	-2.07	0.00	0.00	0.00	-10.77	0.00
85.4000	2.9979	0.00	-2.65	0.00	0.00	0.00	-20.92	0.00
85.6000	3.0026	0.00	2.70	0.00	0.00	0.00	-20.92	0.00
89.9000	3.1158	0.00	2.11	0.00	0.00	0.00	-10.58	0.00
90.1000	3.1211	0.00	2.09	0.00	0.00	0.00	-10.16	0.00

Dead Load Initial - Initial - Self Weight X-Frames



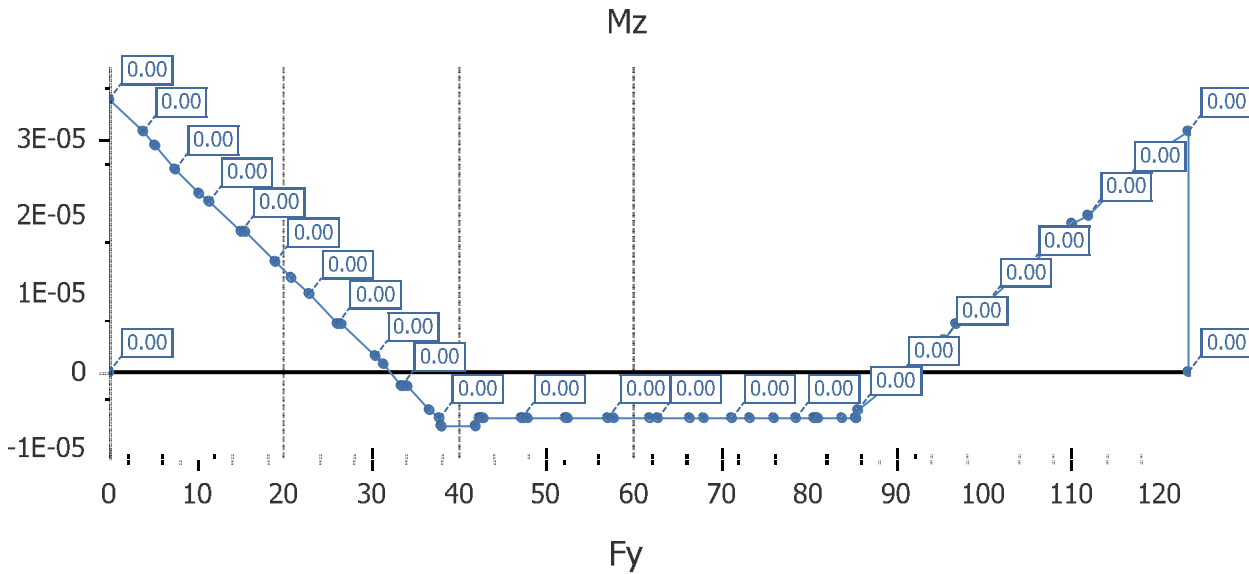
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-0.15	0.00	0.00	0.00	-0.63	0.00
33.6000	1.8842	0.00	-0.15	0.00	0.00	0.00	-0.66	0.00
37.9000	1.9974	0.00	-0.15	0.00	0.00	0.00	-1.30	0.00
38.1000	2.0021	0.00	0.17	0.00	0.00	0.00	-1.30	0.00
42.4000	2.0926	0.00	0.10	0.00	0.00	0.00	-0.62	0.00
42.6000	2.0968	0.00	0.10	0.00	0.00	0.00	-0.60	0.00
80.9000	2.9032	0.00	-0.11	0.00	0.00	0.00	-0.66	0.00
81.1000	2.9074	0.00	-0.11	0.00	0.00	0.00	-0.69	0.00
85.4000	2.9979	0.00	-0.18	0.00	0.00	0.00	-1.28	0.00
85.6000	3.0026	0.00	0.14	0.00	0.00	0.00	-1.28	0.00
89.9000	3.1158	0.00	0.14	0.00	0.00	0.00	-0.69	0.00
90.1000	3.1211	0.00	0.14	0.00	0.00	0.00	-0.67	0.00

Dead Load Stage 01 - Stage 01 - Concrete Diaphragm

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

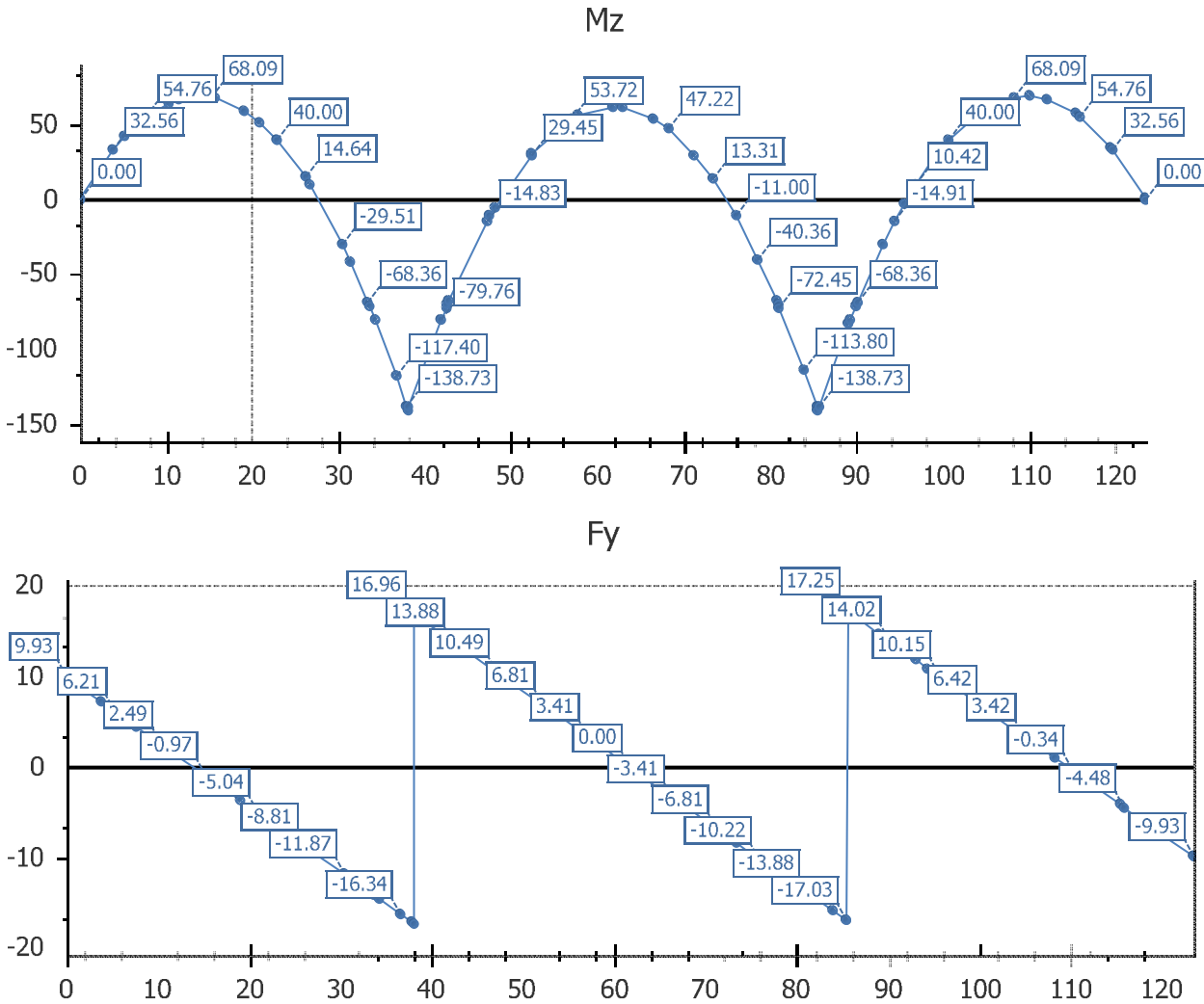


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Dead Load Stage 01 - Stage 01 - Self Weight Slab

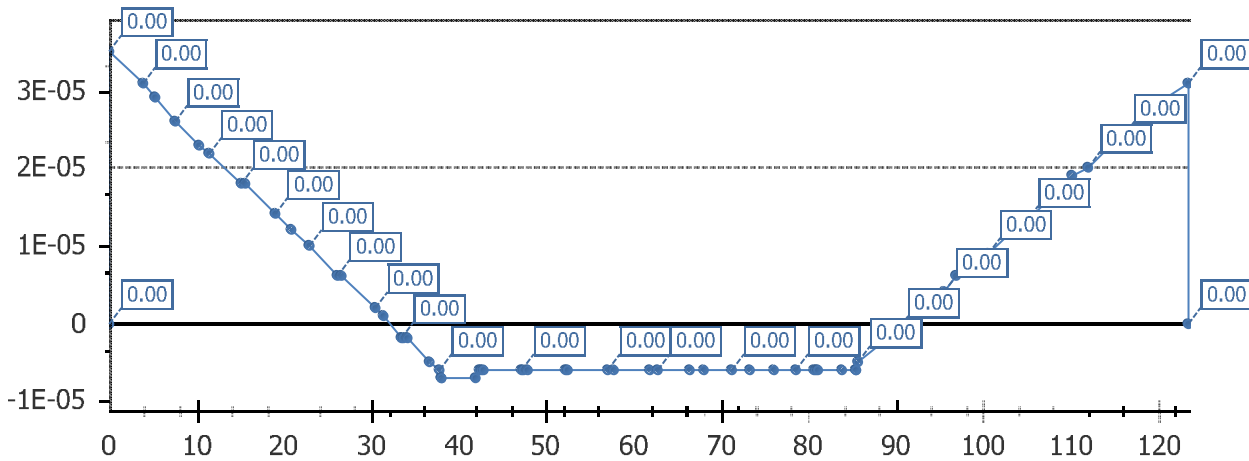


Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	F _x (kip)	F _y (kip)	F _z (kip)	M _x (kip-ft)	M _y (kip-ft)	M _z (kip-ft)	M _z Lat. (kip-ft)
33.4000	1.8789	0.00	-14.02	0.00	0.00	0.00	-68.36	0.00
33.6000	1.8842	0.00	-14.17	0.00	0.00	0.00	-71.18	0.00
37.9000	1.9974	0.00	-17.25	0.00	0.00	0.00	-138.73	0.00
38.1000	2.0021	0.00	16.96	0.00	0.00	0.00	-138.76	0.00
42.4000	2.0926	0.00	13.88	0.00	0.00	0.00	-72.45	0.00
42.6000	2.0968	0.00	13.73	0.00	0.00	0.00	-69.69	0.00
80.9000	2.9032	0.00	-13.73	0.00	0.00	0.00	-69.69	0.00
81.1000	2.9074	0.00	-13.88	0.00	0.00	0.00	-72.45	0.00
85.4000	2.9979	0.00	-16.96	0.00	0.00	0.00	-138.76	0.00
85.6000	3.0026	0.00	17.25	0.00	0.00	0.00	-138.73	0.00
89.9000	3.1158	0.00	14.17	0.00	0.00	0.00	-71.18	0.00
90.1000	3.1211	0.00	14.02	0.00	0.00	0.00	-68.36	0.00

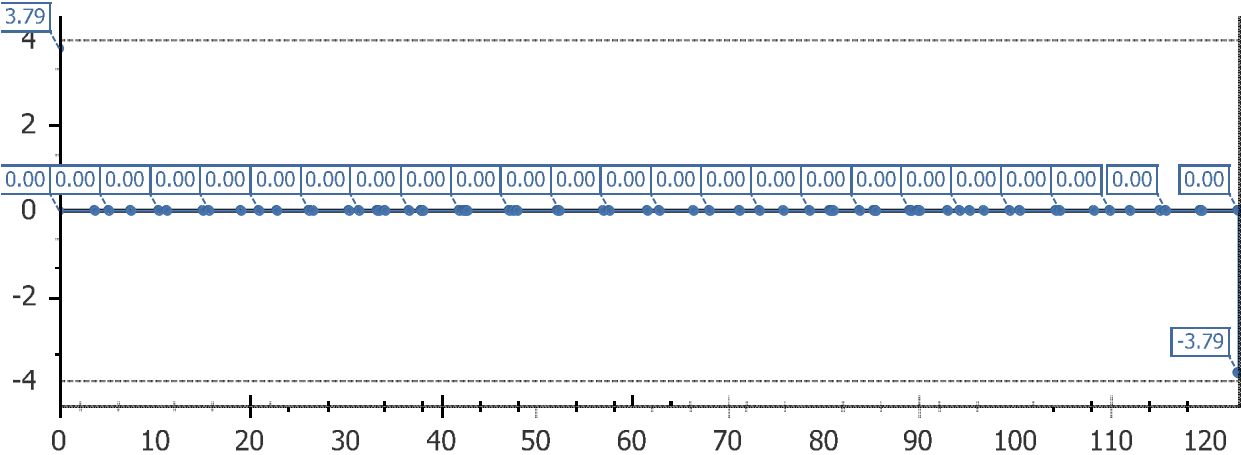
Dead Load Final - Final - Concrete Diaphragm

Mz



Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

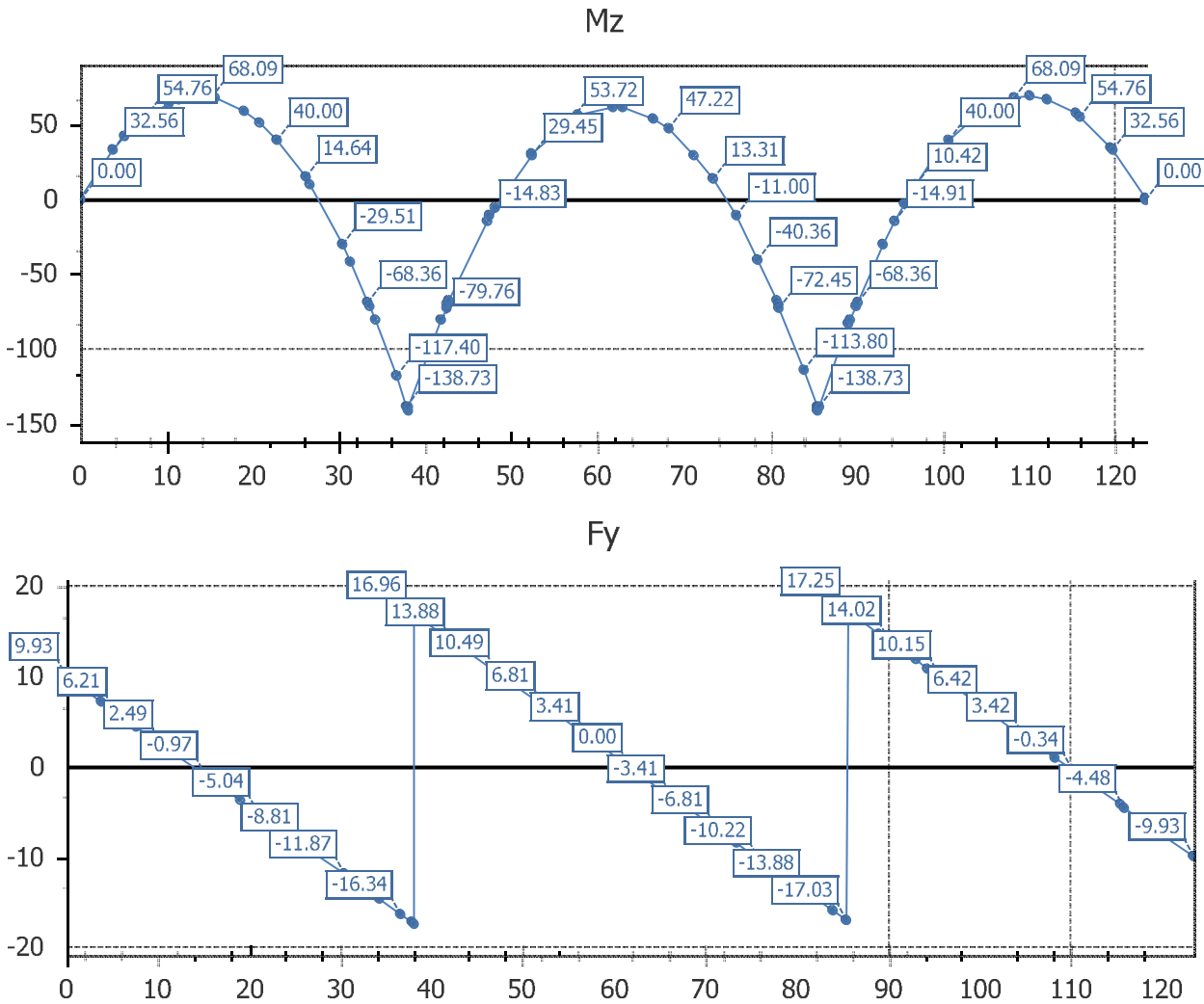
Fy



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Dead Load Final - Final - Self Weight Slab

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

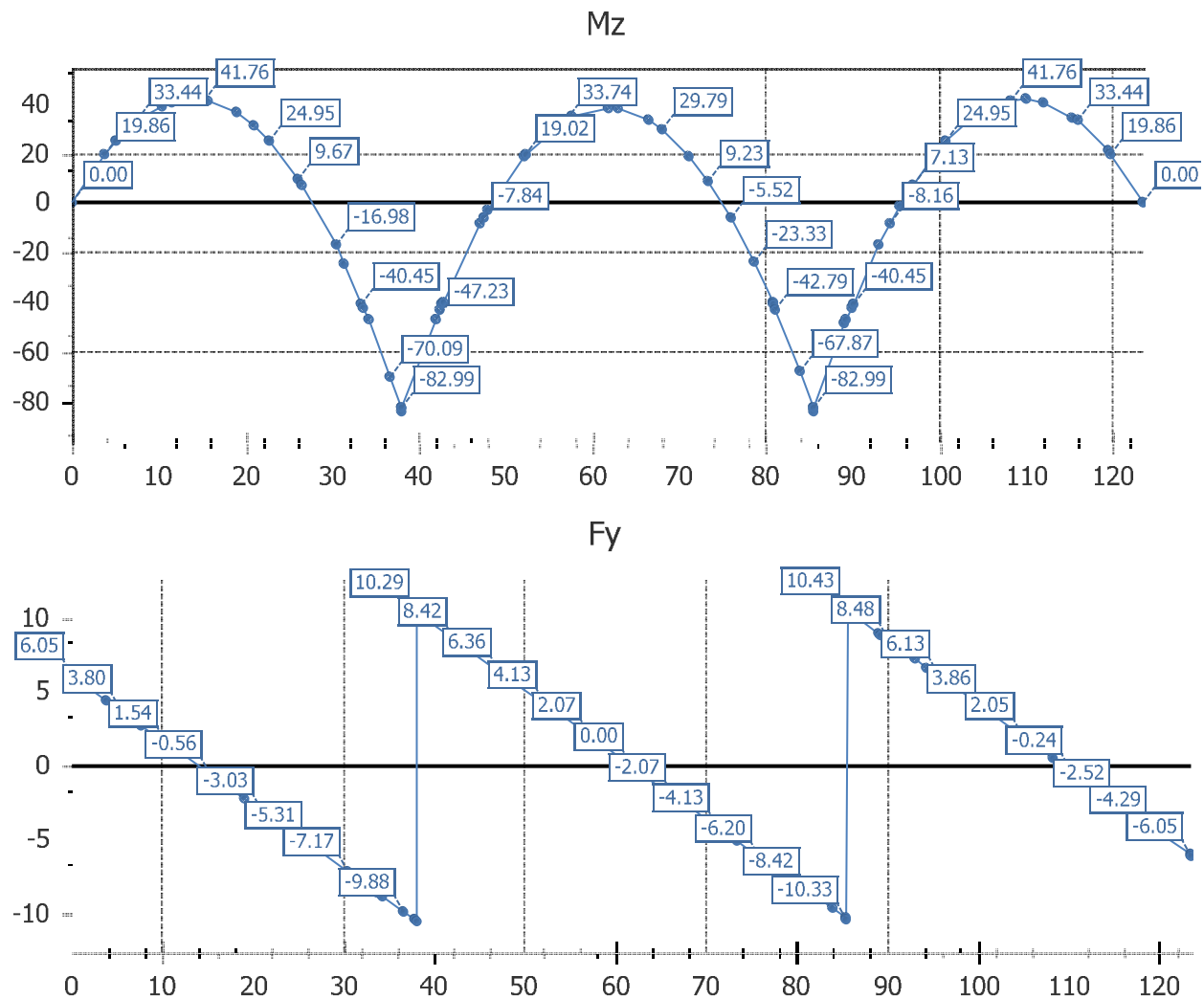


POI Loc. (ft)	Span Fraction	F _x (kip)	F _y (kip)	F _z (kip)	M _x (kip-ft)	M _y (kip-ft)	M _z (kip-ft)	M _z Lat. (kip-ft)
33.4000	1.8789	0.00	-14.02	0.00	0.00	0.00	-68.36	0.00
33.6000	1.8842	0.00	-14.17	0.00	0.00	0.00	-71.18	0.00
37.9000	1.9974	0.00	-17.25	0.00	0.00	0.00	-138.73	0.00
38.1000	2.0021	0.00	16.96	0.00	0.00	0.00	-138.76	0.00
42.4000	2.0926	0.00	13.88	0.00	0.00	0.00	-72.45	0.00
42.6000	2.0968	0.00	13.73	0.00	0.00	0.00	-69.69	0.00
80.9000	2.9032	0.00	-13.73	0.00	0.00	0.00	-69.69	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-13.88	0.00	0.00	0.00	-72.45	0.00
85.4000	2.9979	0.00	-16.96	0.00	0.00	0.00	-138.76	0.00
85.6000	3.0026	0.00	17.25	0.00	0.00	0.00	-138.73	0.00
89.9000	3.1158	0.00	14.17	0.00	0.00	0.00	-71.18	0.00
90.1000	3.1211	0.00	14.02	0.00	0.00	0.00	-68.36	0.00

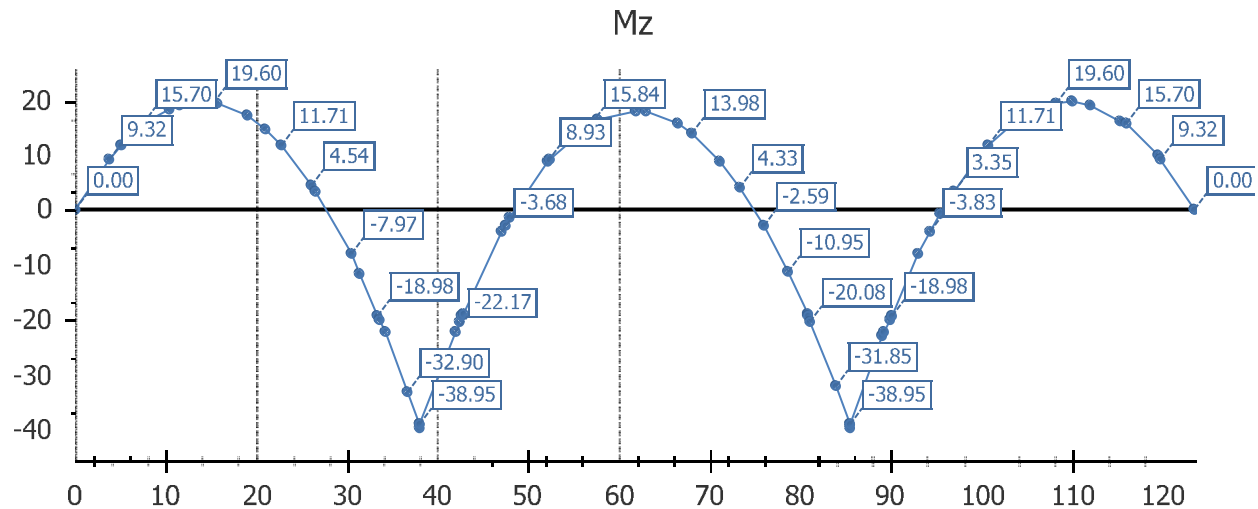
Utilities Load Final3N - Final - Wearing Surface



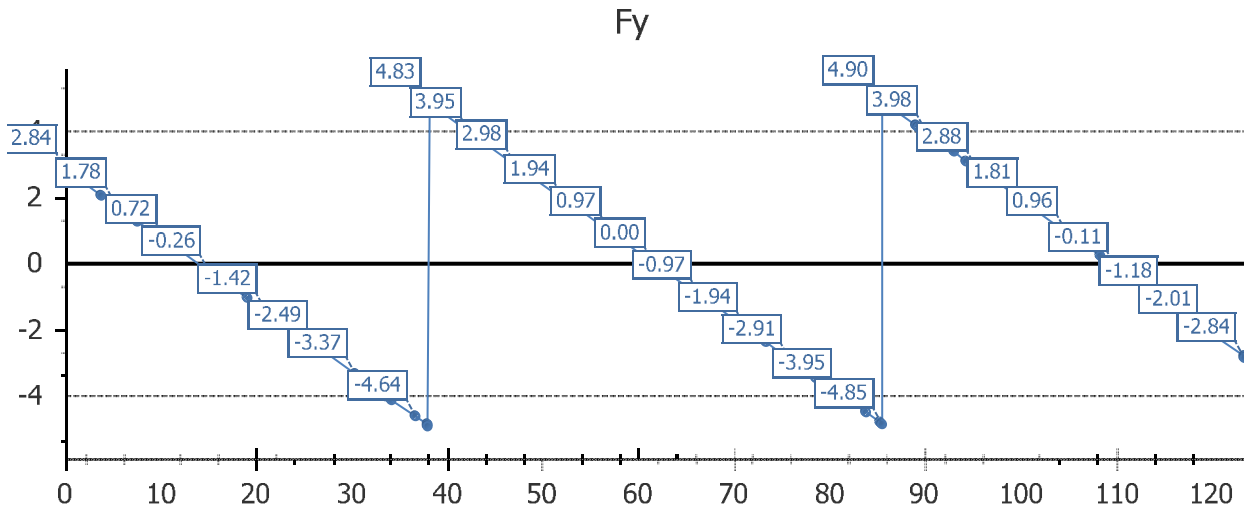
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-8.48	0.00	0.00	0.00	-40.45	0.00
33.6000	1.8842	0.00	-8.56	0.00	0.00	0.00	-42.15	0.00
37.9000	1.9974	0.00	-10.43	0.00	0.00	0.00	-82.99	0.00
38.1000	2.0021	0.00	10.29	0.00	0.00	0.00	-83.01	0.00
42.4000	2.0926	0.00	8.42	0.00	0.00	0.00	-42.79	0.00
42.6000	2.0968	0.00	8.33	0.00	0.00	0.00	-41.11	0.00
80.9000	2.9032	0.00	-8.33	0.00	0.00	0.00	-41.12	0.00
81.1000	2.9074	0.00	-8.42	0.00	0.00	0.00	-42.79	0.00
85.4000	2.9979	0.00	-10.29	0.00	0.00	0.00	-83.01	0.00
85.6000	3.0026	0.00	10.43	0.00	0.00	0.00	-82.99	0.00
89.9000	3.1158	0.00	8.56	0.00	0.00	0.00	-42.15	0.00
90.1000	3.1211	0.00	8.48	0.00	0.00	0.00	-40.45	0.00

Superimposed Dead Load Final3N - Final - Self Weight Appurtenance - Parapets



Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

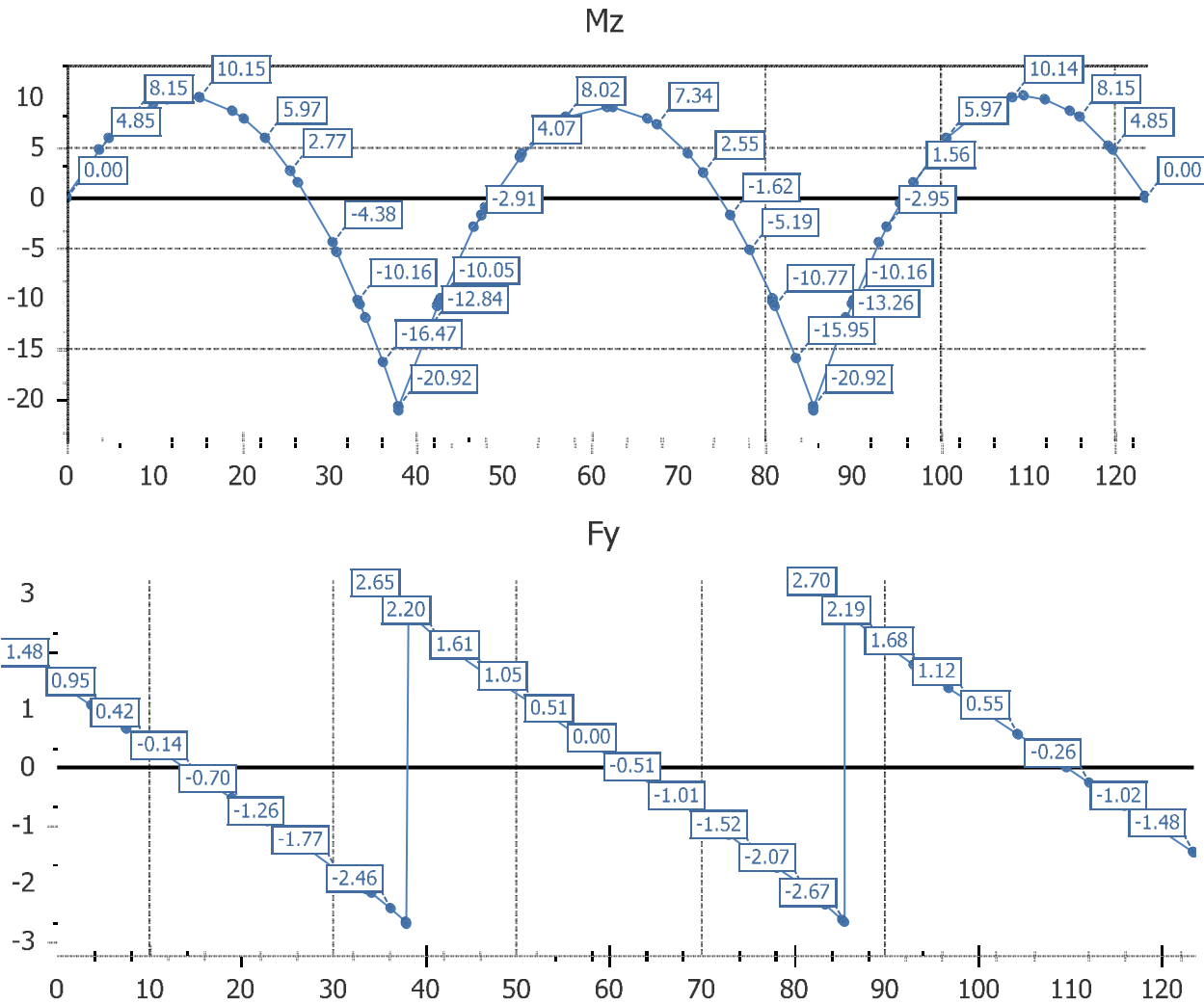


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-3.98	0.00	0.00	0.00	-18.98	0.00
33.6000	1.8842	0.00	-4.02	0.00	0.00	0.00	-19.78	0.00
37.9000	1.9974	0.00	-4.90	0.00	0.00	0.00	-38.95	0.00
38.1000	2.0021	0.00	4.83	0.00	0.00	0.00	-38.96	0.00
42.4000	2.0926	0.00	3.95	0.00	0.00	0.00	-20.08	0.00
42.6000	2.0968	0.00	3.91	0.00	0.00	0.00	-19.30	0.00
80.9000	2.9032	0.00	-3.91	0.00	0.00	0.00	-19.30	0.00
81.1000	2.9074	0.00	-3.95	0.00	0.00	0.00	-20.08	0.00
85.4000	2.9979	0.00	-4.83	0.00	0.00	0.00	-38.96	0.00
85.6000	3.0026	0.00	4.90	0.00	0.00	0.00	-38.95	0.00
89.9000	3.1158	0.00	4.02	0.00	0.00	0.00	-19.78	0.00
90.1000	3.1211	0.00	3.98	0.00	0.00	0.00	-18.98	0.00

Group01 Member 02

Dead Load Initial - Initial - Self Weight Steel

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

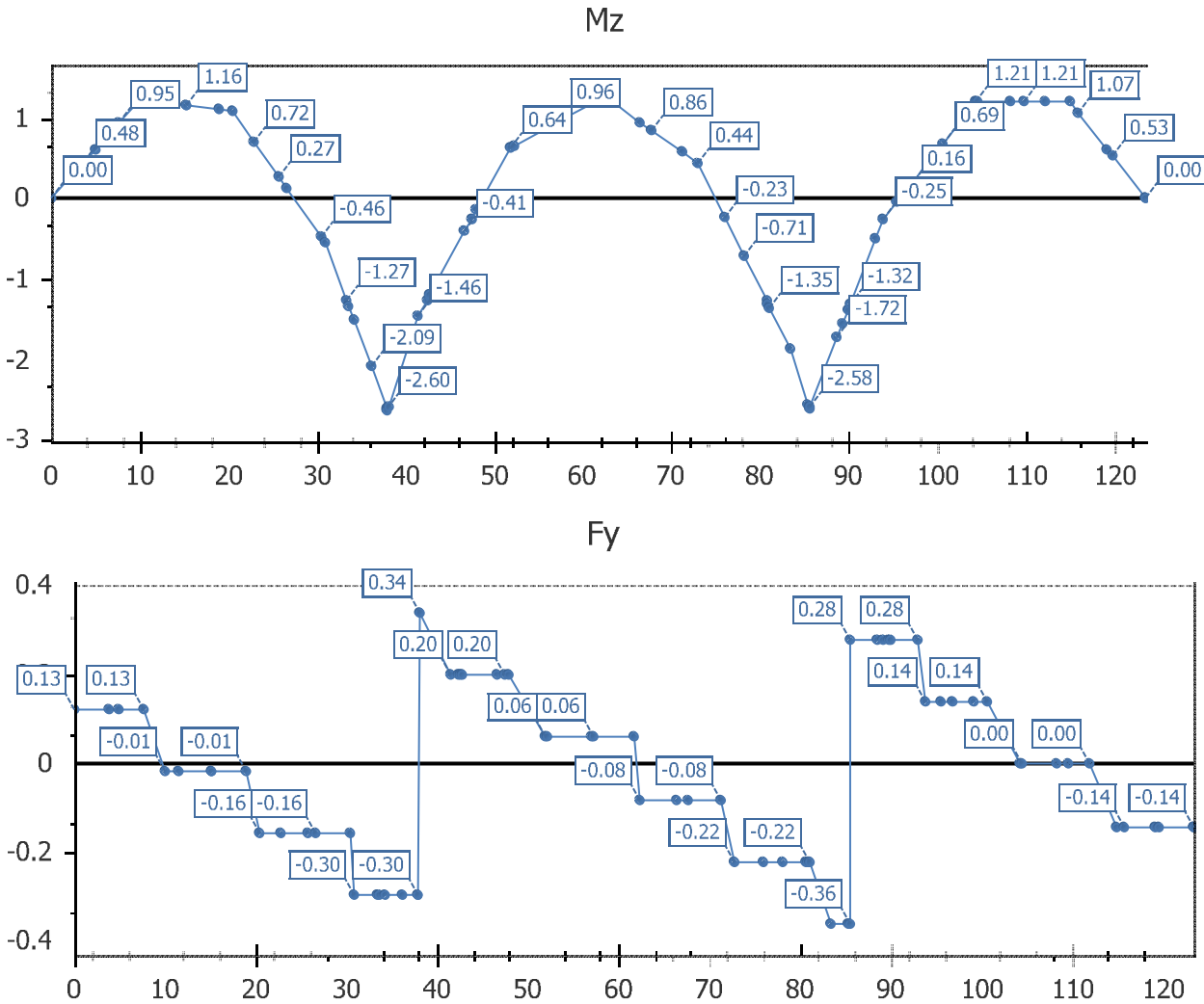


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-2.09	0.00	0.00	0.00	-10.16	0.00
33.6000	1.8842	0.00	-2.11	0.00	0.00	0.00	-10.58	0.00
37.9000	1.9974	0.00	-2.70	0.00	0.00	0.00	-20.92	0.00
38.1000	2.0021	0.00	2.65	0.00	0.00	0.00	-20.92	0.00
42.4000	2.0926	0.00	2.07	0.00	0.00	0.00	-10.77	0.00
42.6000	2.0968	0.00	2.04	0.00	0.00	0.00	-10.35	0.00
80.9000	2.9032	0.00	-2.04	0.00	0.00	0.00	-10.35	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-2.07	0.00	0.00	0.00	-10.77	0.00
85.4000	2.9979	0.00	-2.65	0.00	0.00	0.00	-20.92	0.00
85.6000	3.0026	0.00	2.70	0.00	0.00	0.00	-20.92	0.00
89.9000	3.1158	0.00	2.11	0.00	0.00	0.00	-10.58	0.00
90.1000	3.1211	0.00	2.09	0.00	0.00	0.00	-10.16	0.00

Dead Load Initial - Initial - Self Weight X-Frames

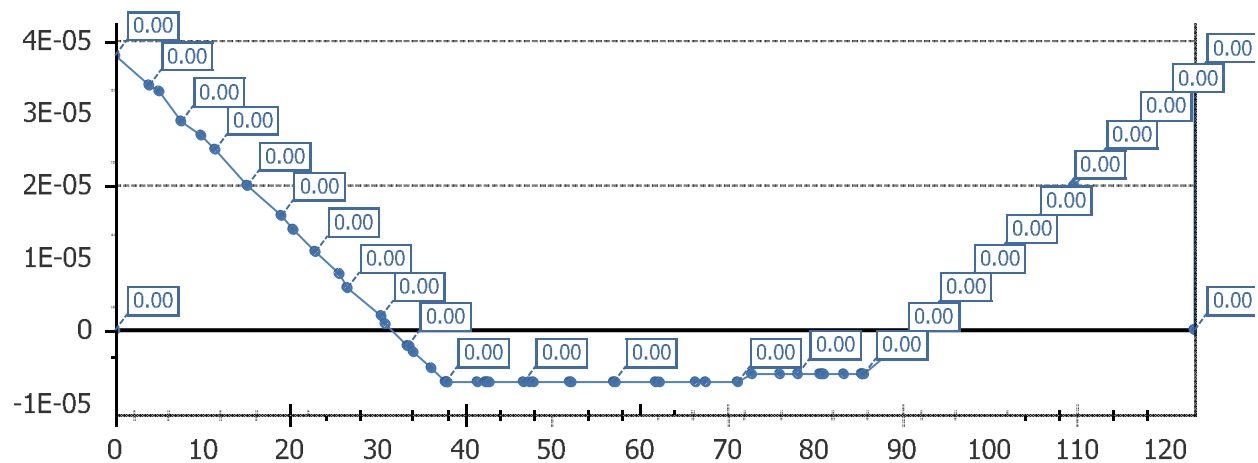


Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-0.30	0.00	0.00	0.00	-1.27	0.00
33.6000	1.8842	0.00	-0.30	0.00	0.00	0.00	-1.33	0.00
37.9000	1.9974	0.00	-0.30	0.00	0.00	0.00	-2.60	0.00
38.1000	2.0021	0.00	0.34	0.00	0.00	0.00	-2.60	0.00
42.4000	2.0926	0.00	0.20	0.00	0.00	0.00	-1.27	0.00
42.6000	2.0968	0.00	0.20	0.00	0.00	0.00	-1.23	0.00
80.9000	2.9032	0.00	-0.22	0.00	0.00	0.00	-1.31	0.00
81.1000	2.9074	0.00	-0.22	0.00	0.00	0.00	-1.35	0.00
85.4000	2.9979	0.00	-0.36	0.00	0.00	0.00	-2.57	0.00
85.6000	3.0026	0.00	0.28	0.00	0.00	0.00	-2.58	0.00
89.9000	3.1158	0.00	0.28	0.00	0.00	0.00	-1.38	0.00
90.1000	3.1211	0.00	0.28	0.00	0.00	0.00	-1.32	0.00

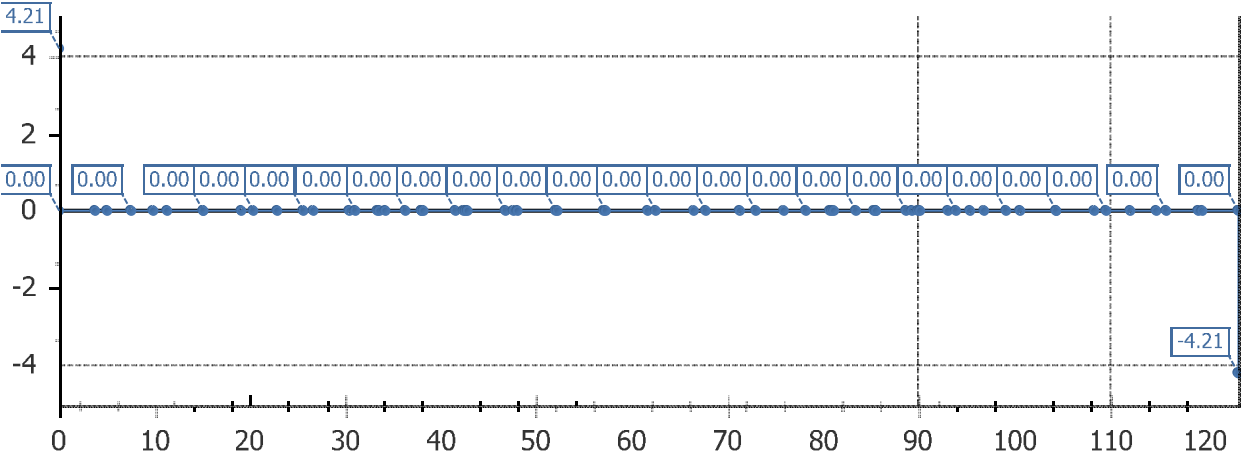
Dead Load Stage 01 - Stage 01 - Concrete Diaphragm

Mz



Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

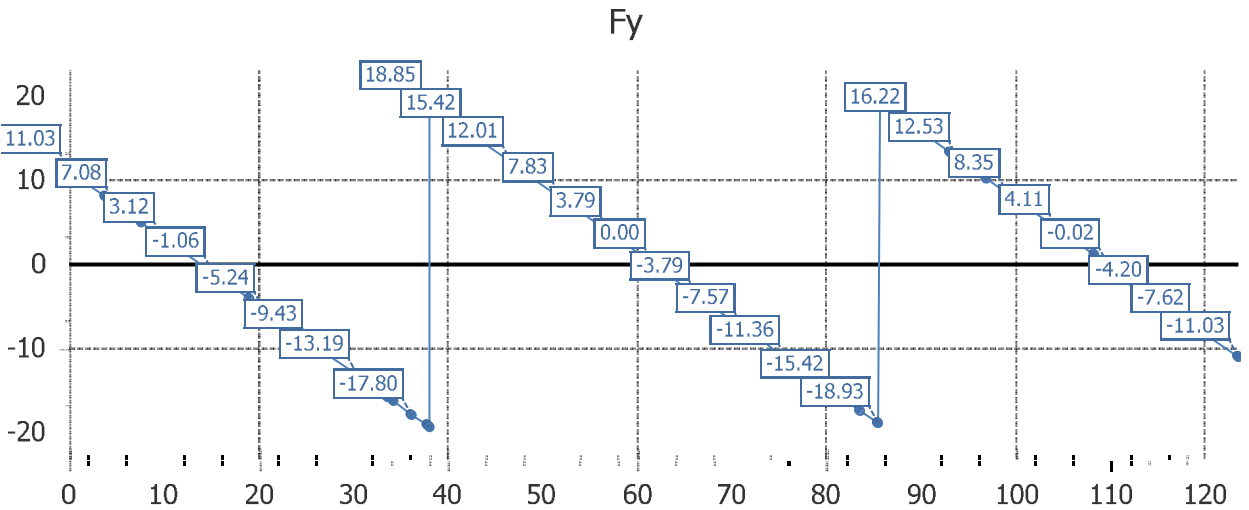
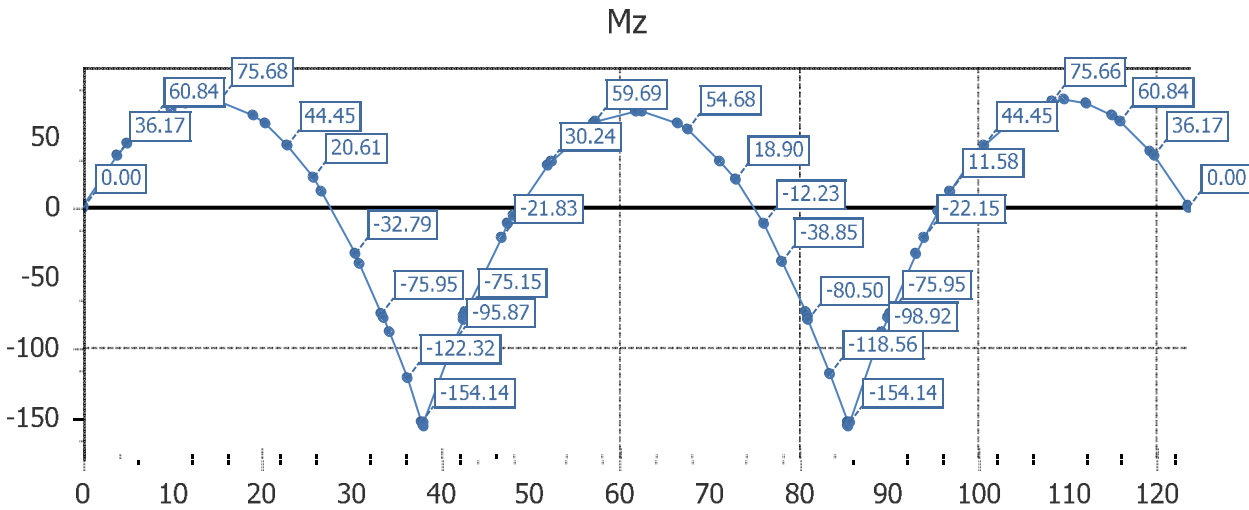
Fy



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Dead Load Stage 01 - Stage 01 - Self Weight Slab

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

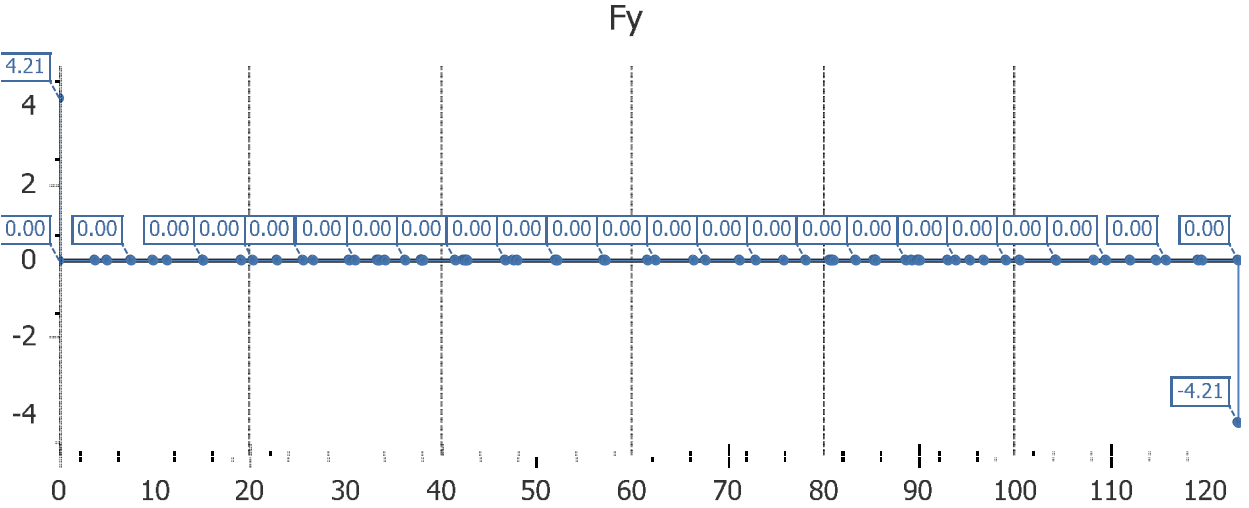
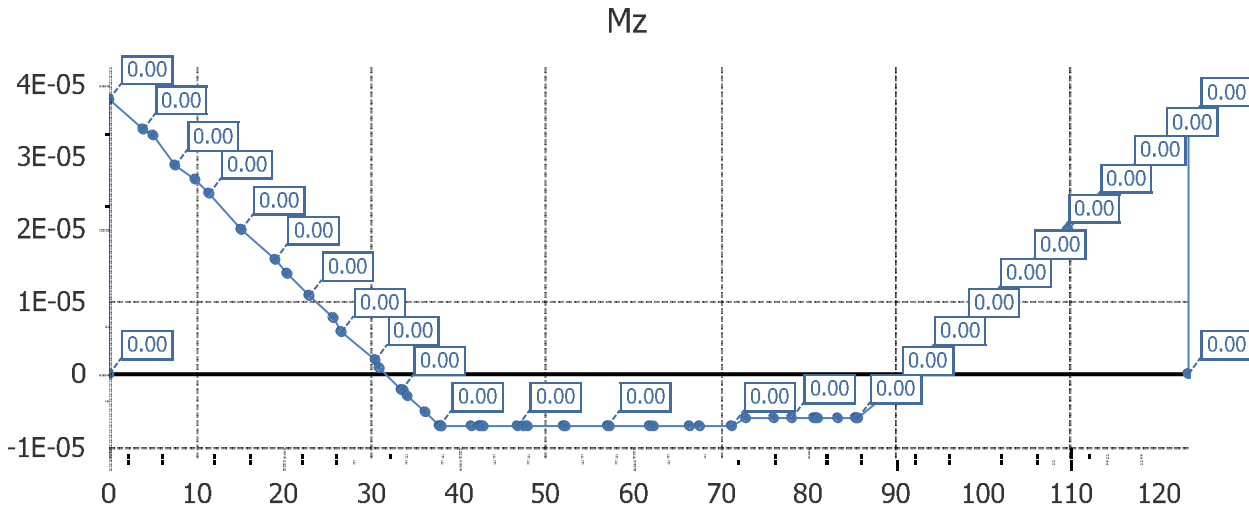


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-15.58	0.00	0.00	0.00	-75.95	0.00
33.6000	1.8842	0.00	-15.74	0.00	0.00	0.00	-79.09	0.00
37.9000	1.9974	0.00	-19.17	0.00	0.00	0.00	-154.14	0.00
38.1000	2.0021	0.00	18.85	0.00	0.00	0.00	-154.17	0.00
42.4000	2.0926	0.00	15.42	0.00	0.00	0.00	-80.50	0.00
42.6000	2.0968	0.00	15.26	0.00	0.00	0.00	-77.43	0.00
80.9000	2.9032	0.00	-15.26	0.00	0.00	0.00	-77.43	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-15.42	0.00	0.00	0.00	-80.50	0.00
85.4000	2.9979	0.00	-18.85	0.00	0.00	0.00	-154.17	0.00
85.6000	3.0026	0.00	19.17	0.00	0.00	0.00	-154.14	0.00
89.9000	3.1158	0.00	15.74	0.00	0.00	0.00	-79.09	0.00
90.1000	3.1211	0.00	15.58	0.00	0.00	0.00	-75.95	0.00

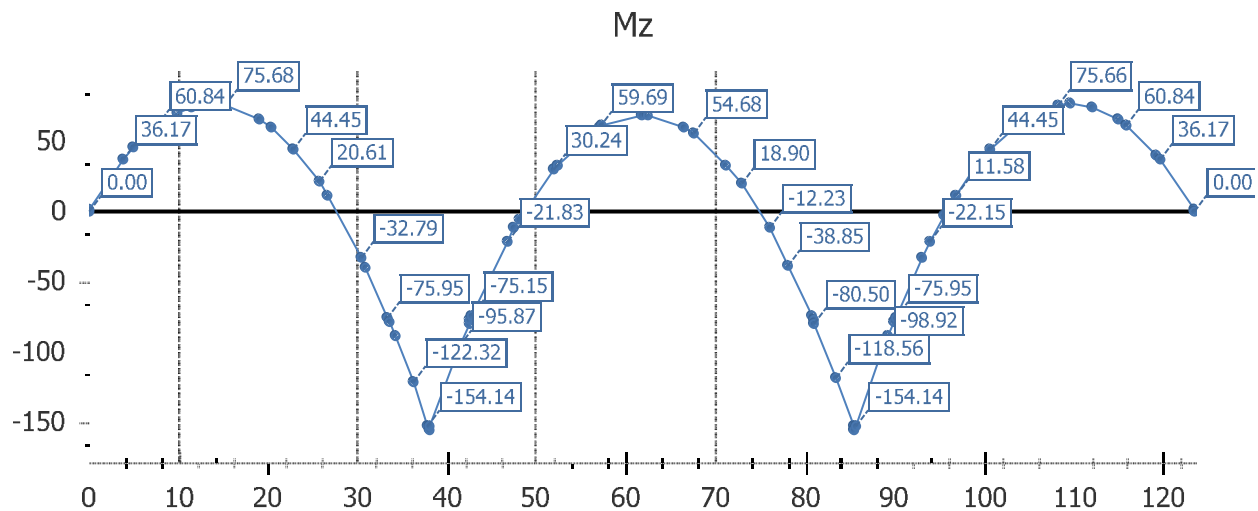
Dead Load Final - Final - Concrete Diaphragm



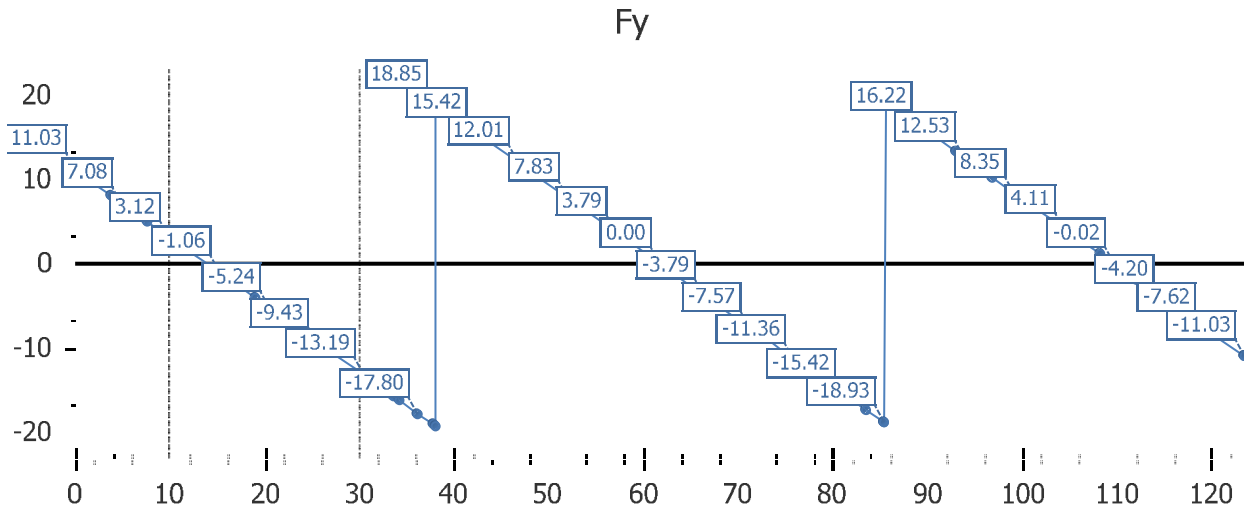
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Dead Load Final - Final - Self Weight Slab



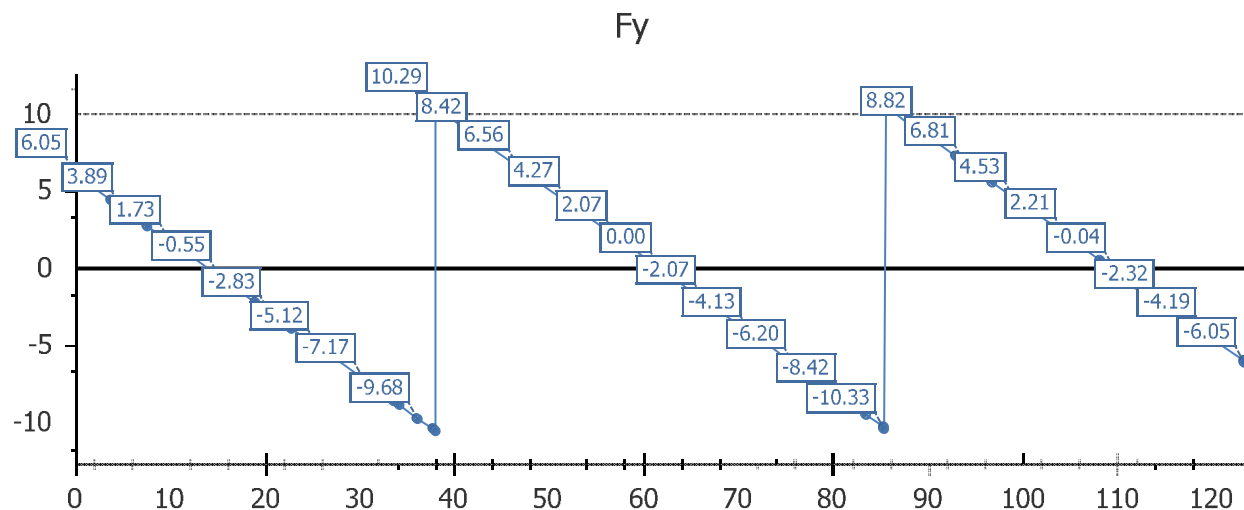
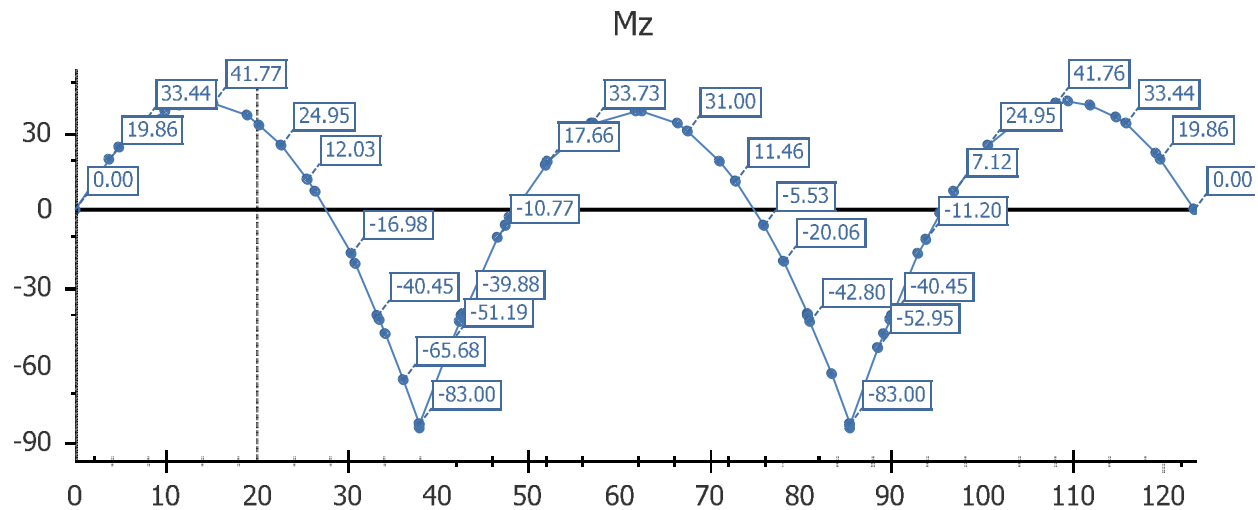
Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-15.58	0.00	0.00	0.00	-75.95	0.00
33.6000	1.8842	0.00	-15.74	0.00	0.00	0.00	-79.09	0.00
37.9000	1.9974	0.00	-19.17	0.00	0.00	0.00	-154.14	0.00
38.1000	2.0021	0.00	18.85	0.00	0.00	0.00	-154.17	0.00
42.4000	2.0926	0.00	15.42	0.00	0.00	0.00	-80.50	0.00
42.6000	2.0968	0.00	15.26	0.00	0.00	0.00	-77.43	0.00
80.9000	2.9032	0.00	-15.26	0.00	0.00	0.00	-77.43	0.00
81.1000	2.9074	0.00	-15.42	0.00	0.00	0.00	-80.50	0.00
85.4000	2.9979	0.00	-18.85	0.00	0.00	0.00	-154.17	0.00
85.6000	3.0026	0.00	19.17	0.00	0.00	0.00	-154.14	0.00
89.9000	3.1158	0.00	15.74	0.00	0.00	0.00	-79.09	0.00
90.1000	3.1211	0.00	15.58	0.00	0.00	0.00	-75.95	0.00

Utilities Load Final3N - Final - Wearing Surface

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

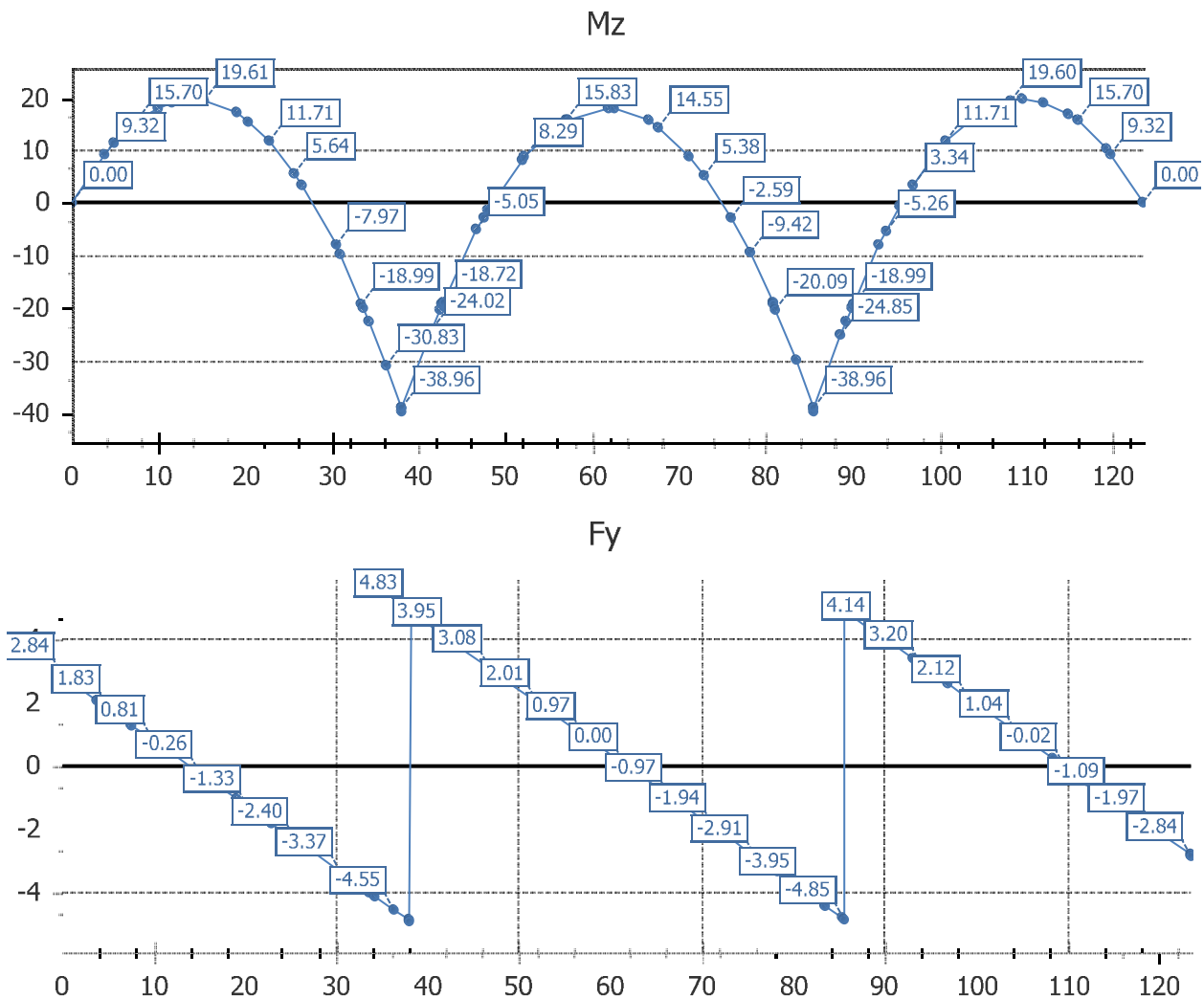


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-8.48	0.00	0.00	0.00	-40.45	0.00
33.6000	1.8842	0.00	-8.56	0.00	0.00	0.00	-42.16	0.00
37.9000	1.9974	0.00	-10.43	0.00	0.00	0.00	-83.00	0.00
38.1000	2.0021	0.00	10.29	0.00	0.00	0.00	-83.01	0.00
42.4000	2.0926	0.00	8.42	0.00	0.00	0.00	-42.80	0.00
42.6000	2.0968	0.00	8.33	0.00	0.00	0.00	-41.12	0.00
80.9000	2.9032	0.00	-8.33	0.00	0.00	0.00	-41.12	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-8.42	0.00	0.00	0.00	-42.80	0.00
85.4000	2.9979	0.00	-10.29	0.00	0.00	0.00	-83.01	0.00
85.6000	3.0026	0.00	10.43	0.00	0.00	0.00	-83.00	0.00
89.9000	3.1158	0.00	8.56	0.00	0.00	0.00	-42.16	0.00
90.1000	3.1211	0.00	8.48	0.00	0.00	0.00	-40.45	0.00

Superimposed Dead Load Final3N - Final - Self Weight Appurtenance - Parapets

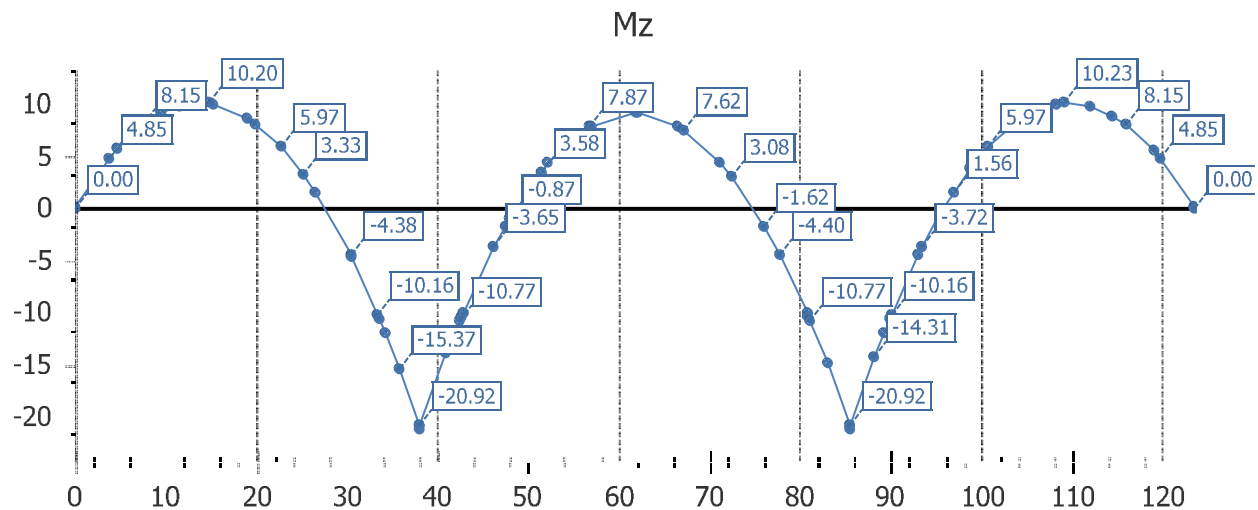


Date:	2/5/2024	US33 over CR191.lbsx	
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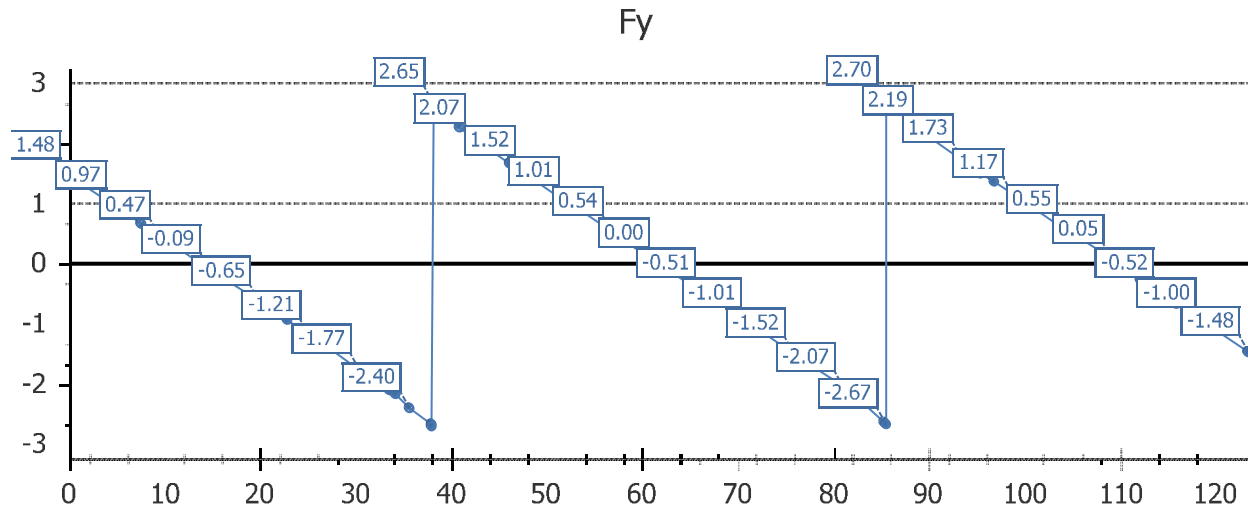
POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-3.98	0.00	0.00	0.00	-18.99	0.00
33.6000	1.8842	0.00	-4.02	0.00	0.00	0.00	-19.79	0.00
37.9000	1.9974	0.00	-4.90	0.00	0.00	0.00	-38.96	0.00
38.1000	2.0021	0.00	4.83	0.00	0.00	0.00	-38.96	0.00
42.4000	2.0926	0.00	3.95	0.00	0.00	0.00	-20.09	0.00
42.6000	2.0968	0.00	3.91	0.00	0.00	0.00	-19.30	0.00
80.9000	2.9032	0.00	-3.91	0.00	0.00	0.00	-19.30	0.00
81.1000	2.9074	0.00	-3.95	0.00	0.00	0.00	-20.09	0.00
85.4000	2.9979	0.00	-4.83	0.00	0.00	0.00	-38.96	0.00
85.6000	3.0026	0.00	4.90	0.00	0.00	0.00	-38.96	0.00
89.9000	3.1158	0.00	4.02	0.00	0.00	0.00	-19.79	0.00
90.1000	3.1211	0.00	3.98	0.00	0.00	0.00	-18.99	0.00

Group01 Member 03

Dead Load Initial - Initial - Self Weight Steel



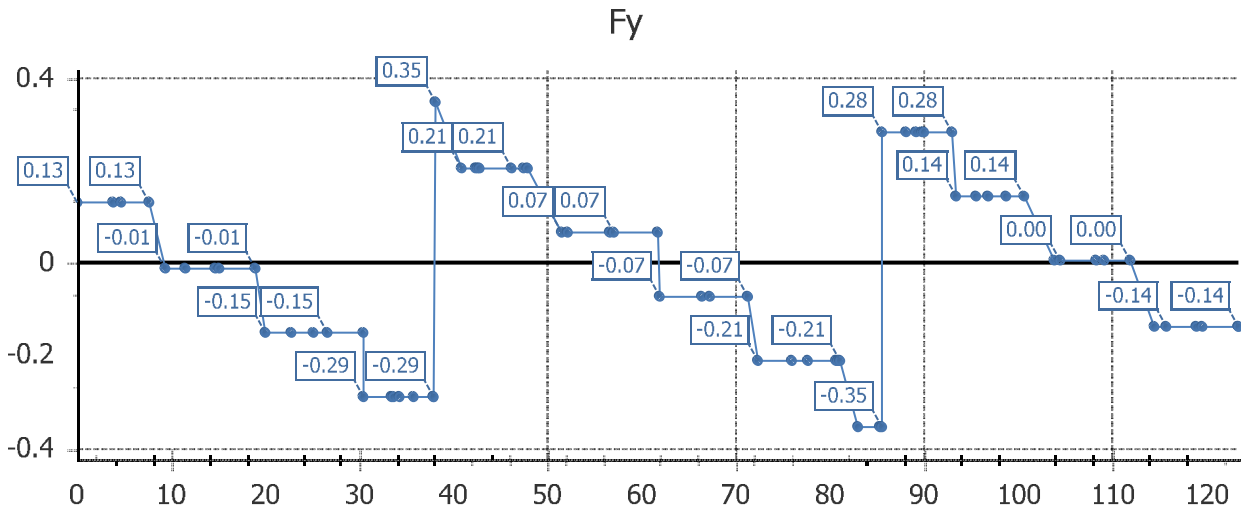
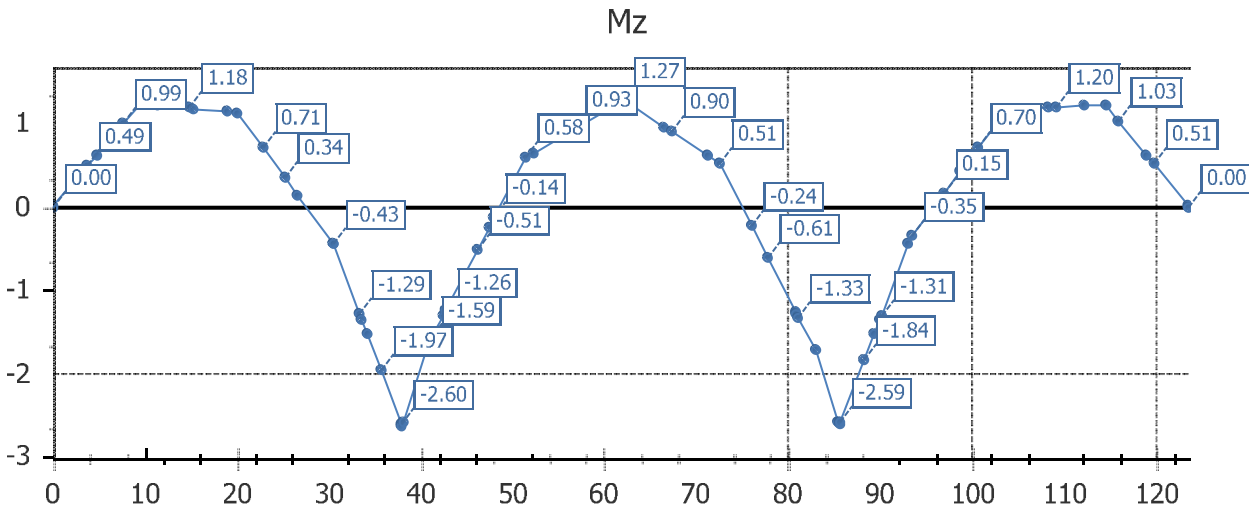
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-2.09	0.00	0.00	0.00	-10.16	0.00
33.6000	1.8842	0.00	-2.11	0.00	0.00	0.00	-10.58	0.00
37.9000	1.9974	0.00	-2.70	0.00	0.00	0.00	-20.92	0.00
38.1000	2.0021	0.00	2.65	0.00	0.00	0.00	-20.92	0.00
42.4000	2.0926	0.00	2.07	0.00	0.00	0.00	-10.77	0.00
42.6000	2.0968	0.00	2.04	0.00	0.00	0.00	-10.35	0.00
80.9000	2.9032	0.00	-2.04	0.00	0.00	0.00	-10.35	0.00
81.1000	2.9074	0.00	-2.07	0.00	0.00	0.00	-10.77	0.00
85.4000	2.9979	0.00	-2.65	0.00	0.00	0.00	-20.92	0.00
85.6000	3.0026	0.00	2.70	0.00	0.00	0.00	-20.92	0.00
89.9000	3.1158	0.00	2.11	0.00	0.00	0.00	-10.58	0.00
90.1000	3.1211	0.00	2.09	0.00	0.00	0.00	-10.16	0.00

Dead Load Initial - Initial - Self Weight X-Frames

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

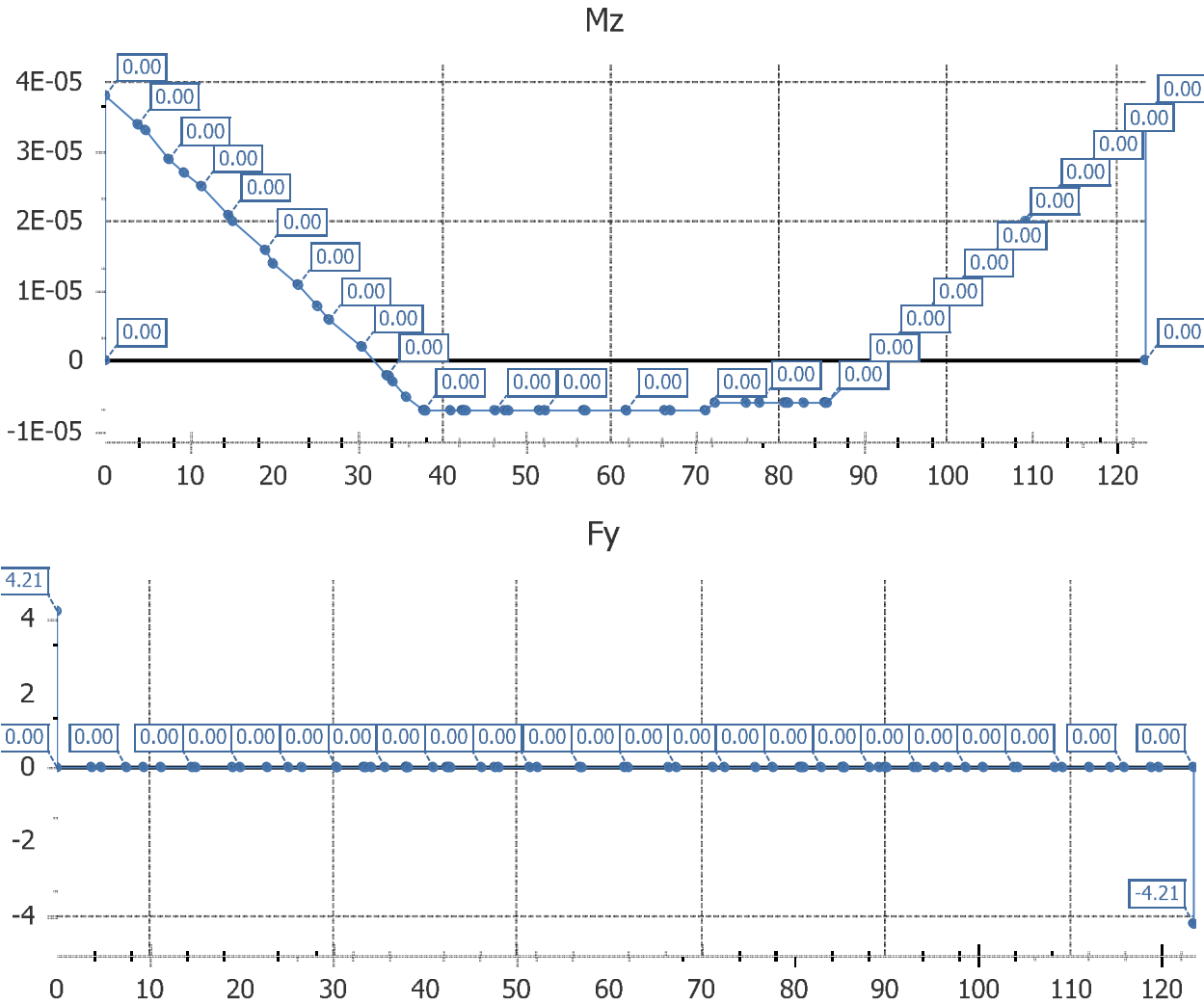


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-0.29	0.00	0.00	0.00	-1.29	0.00
33.6000	1.8842	0.00	-0.29	0.00	0.00	0.00	-1.35	0.00
37.9000	1.9974	0.00	-0.29	0.00	0.00	0.00	-2.60	0.00
38.1000	2.0021	0.00	0.35	0.00	0.00	0.00	-2.59	0.00
42.4000	2.0926	0.00	0.21	0.00	0.00	0.00	-1.30	0.00
42.6000	2.0968	0.00	0.21	0.00	0.00	0.00	-1.26	0.00
80.9000	2.9032	0.00	-0.21	0.00	0.00	0.00	-1.28	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-0.21	0.00	0.00	0.00	-1.33	0.00
85.4000	2.9979	0.00	-0.35	0.00	0.00	0.00	-2.58	0.00
85.6000	3.0026	0.00	0.28	0.00	0.00	0.00	-2.59	0.00
89.9000	3.1158	0.00	0.28	0.00	0.00	0.00	-1.37	0.00
90.1000	3.1211	0.00	0.28	0.00	0.00	0.00	-1.31	0.00

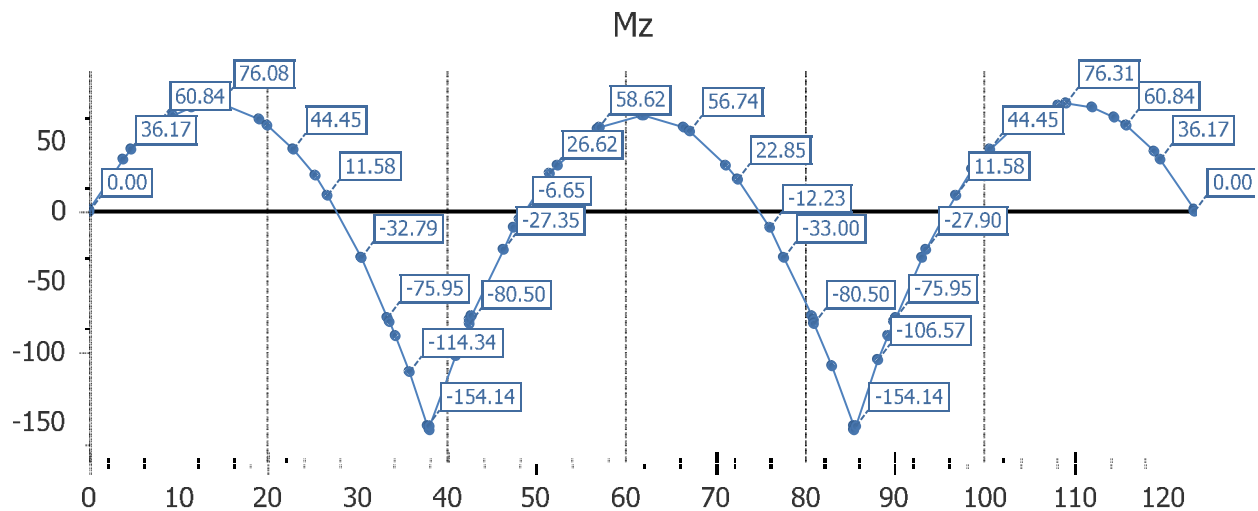
Dead Load Stage 01 - Stage 01 - Concrete Diaphragm



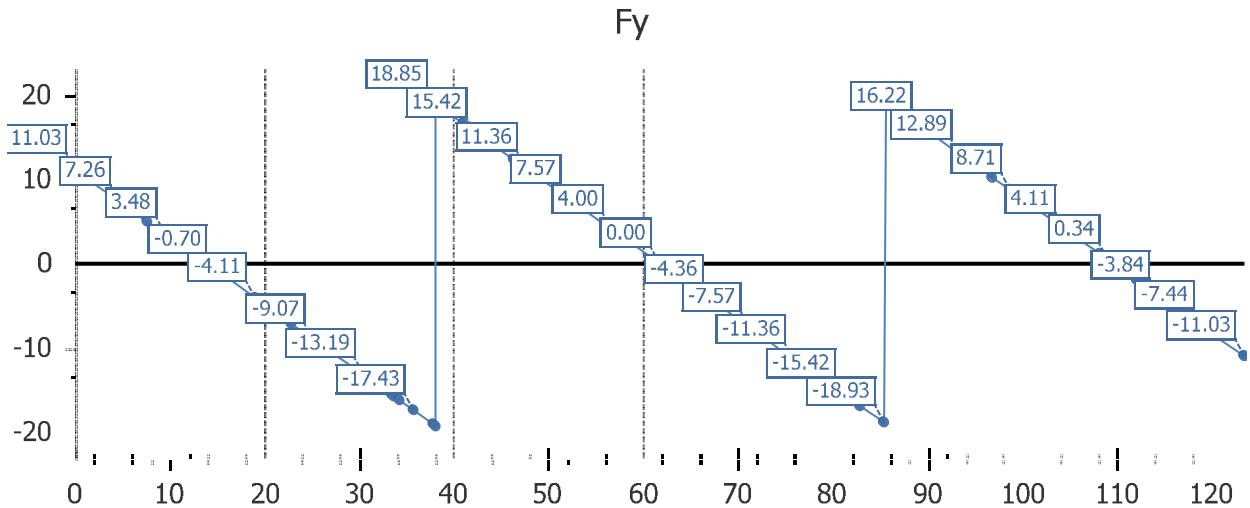
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Dead Load Stage 01 - Stage 01 - Self Weight Slab



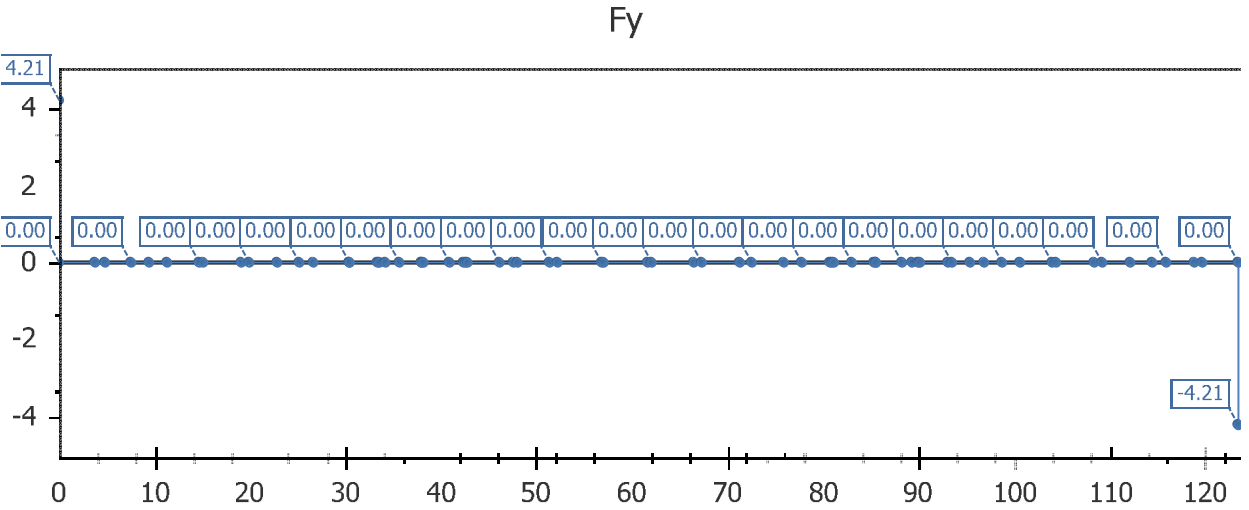
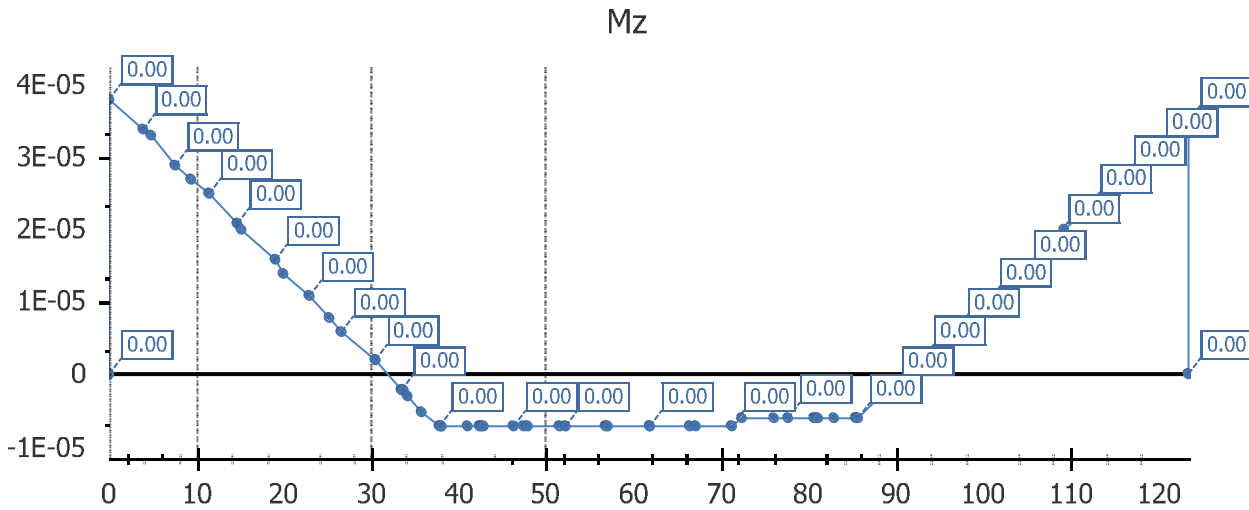
Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-15.58	0.00	0.00	0.00	-75.95	0.00
33.6000	1.8842	0.00	-15.74	0.00	0.00	0.00	-79.09	0.00
37.9000	1.9974	0.00	-19.17	0.00	0.00	0.00	-154.14	0.00
38.1000	2.0021	0.00	18.85	0.00	0.00	0.00	-154.17	0.00
42.4000	2.0926	0.00	15.42	0.00	0.00	0.00	-80.50	0.00
42.6000	2.0968	0.00	15.26	0.00	0.00	0.00	-77.43	0.00
80.9000	2.9032	0.00	-15.26	0.00	0.00	0.00	-77.43	0.00
81.1000	2.9074	0.00	-15.42	0.00	0.00	0.00	-80.50	0.00
85.4000	2.9979	0.00	-18.85	0.00	0.00	0.00	-154.17	0.00
85.6000	3.0026	0.00	19.17	0.00	0.00	0.00	-154.14	0.00
89.9000	3.1158	0.00	15.74	0.00	0.00	0.00	-79.09	0.00
90.1000	3.1211	0.00	15.58	0.00	0.00	0.00	-75.95	0.00

Dead Load Final - Final - Concrete Diaphragm

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

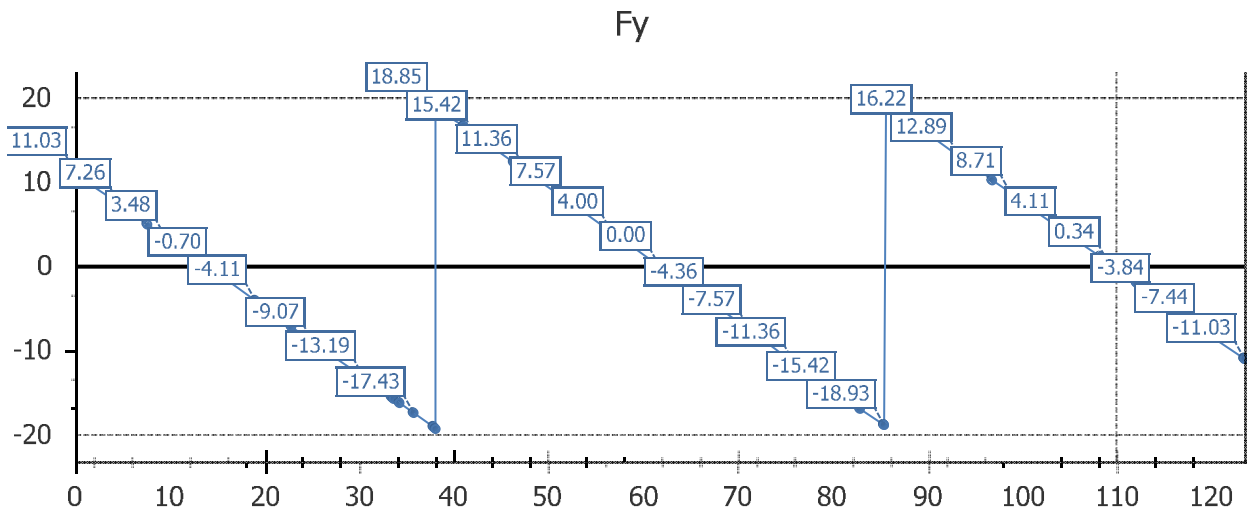
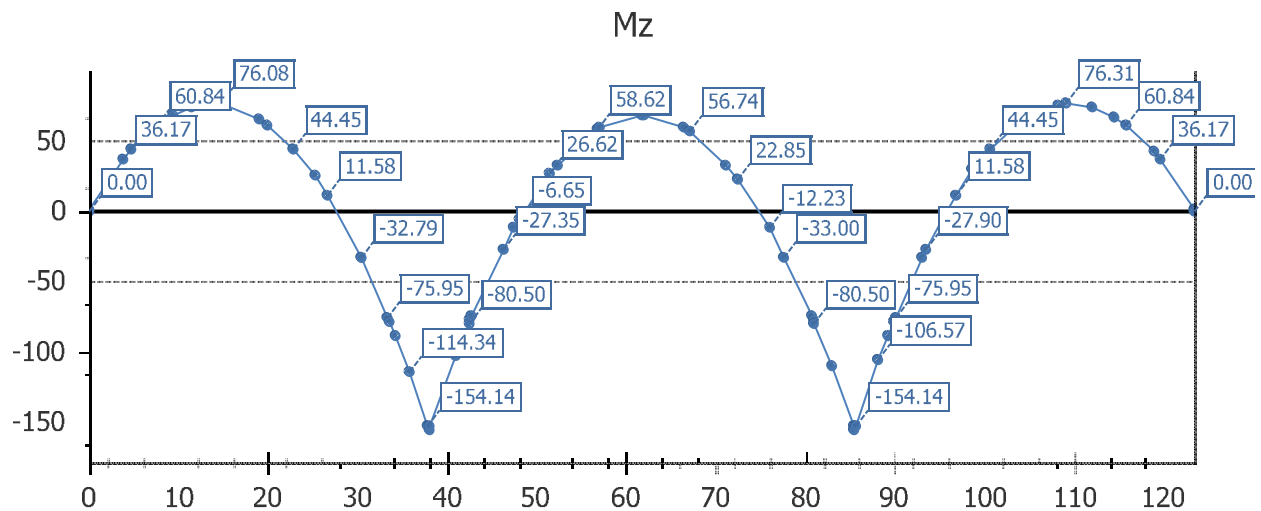


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

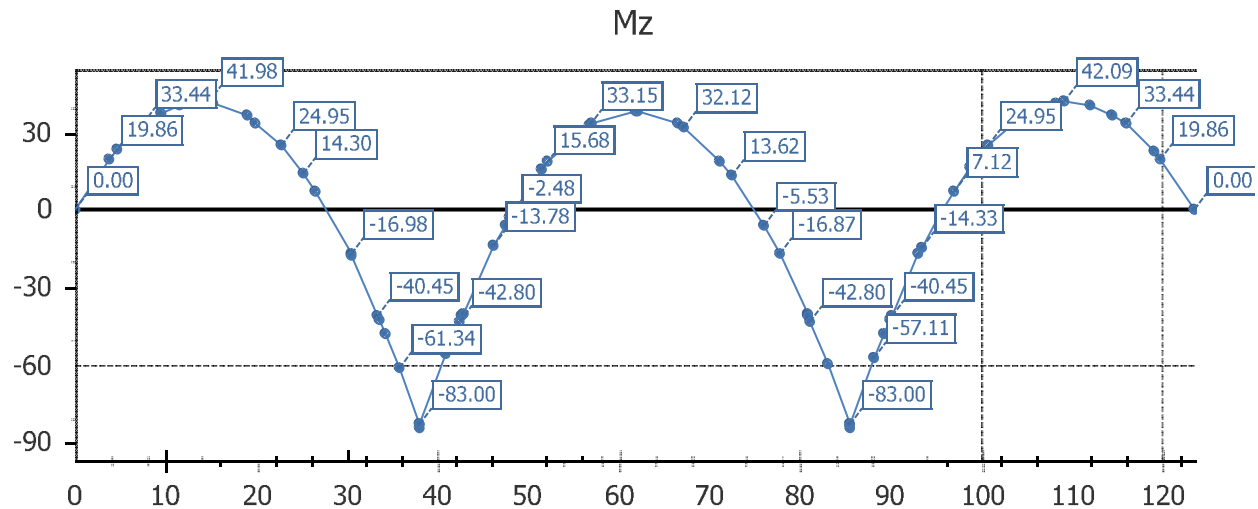
Dead Load Final - Final - Self Weight Slab



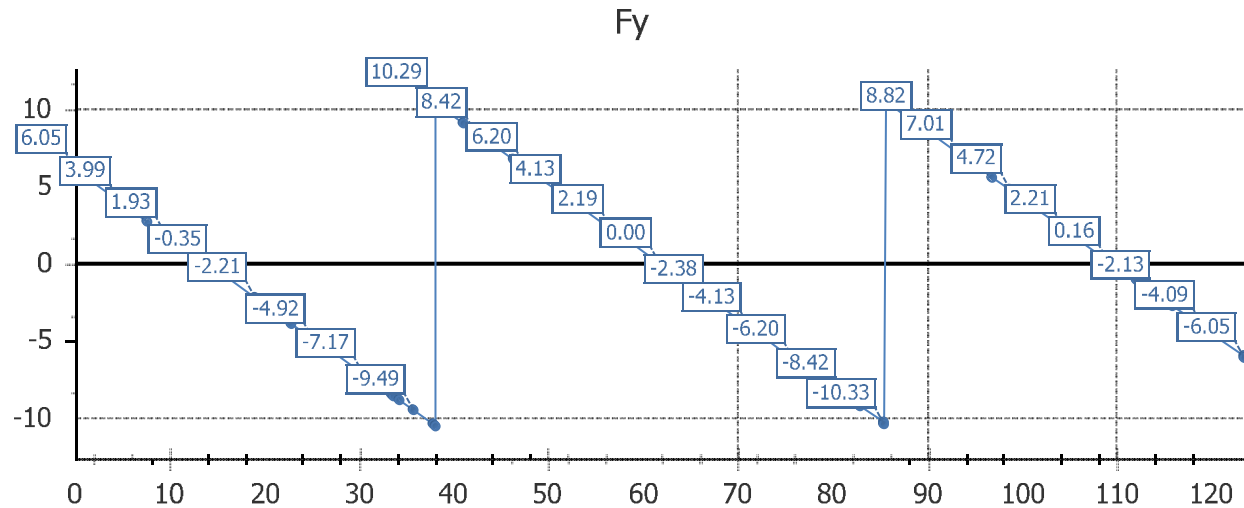
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-15.58	0.00	0.00	0.00	-75.95	0.00
33.6000	1.8842	0.00	-15.74	0.00	0.00	0.00	-79.09	0.00
37.9000	1.9974	0.00	-19.17	0.00	0.00	0.00	-154.14	0.00
38.1000	2.0021	0.00	18.85	0.00	0.00	0.00	-154.17	0.00
42.4000	2.0926	0.00	15.42	0.00	0.00	0.00	-80.50	0.00
42.6000	2.0968	0.00	15.26	0.00	0.00	0.00	-77.43	0.00
80.9000	2.9032	0.00	-15.26	0.00	0.00	0.00	-77.43	0.00
81.1000	2.9074	0.00	-15.42	0.00	0.00	0.00	-80.50	0.00
85.4000	2.9979	0.00	-18.85	0.00	0.00	0.00	-154.17	0.00
85.6000	3.0026	0.00	19.17	0.00	0.00	0.00	-154.14	0.00
89.9000	3.1158	0.00	15.74	0.00	0.00	0.00	-79.09	0.00
90.1000	3.1211	0.00	15.58	0.00	0.00	0.00	-75.95	0.00

Utilities Load Final3N - Final - Wearing Surface



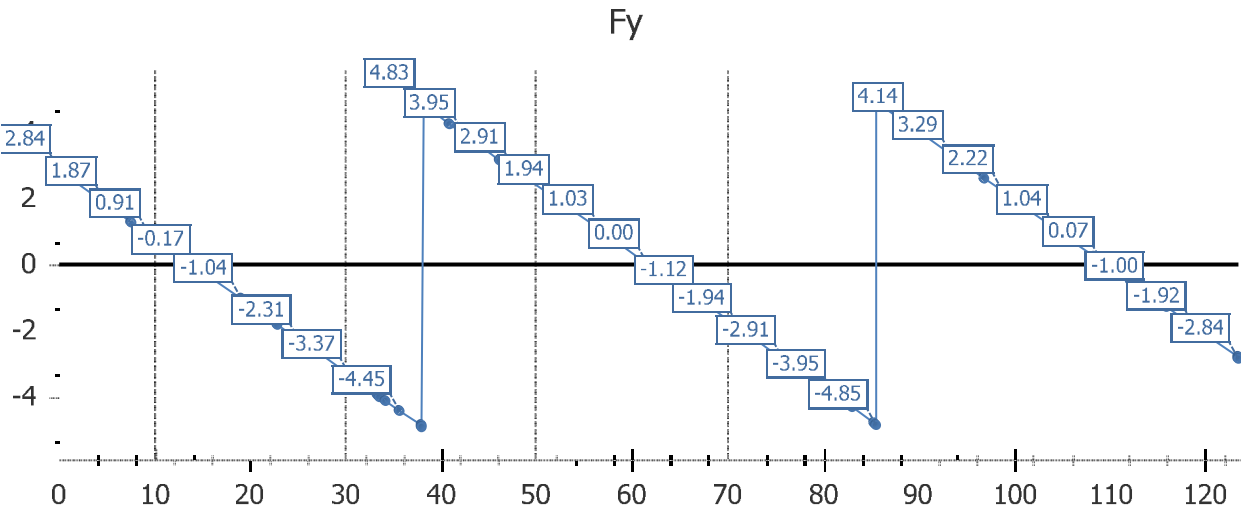
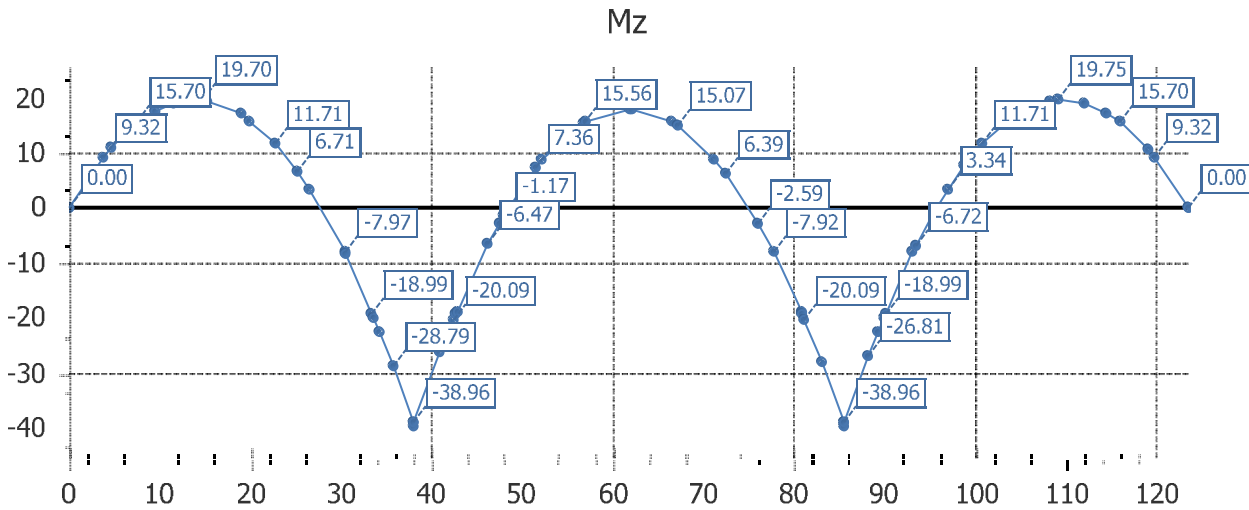
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-8.48	0.00	0.00	0.00	-40.45	0.00
33.6000	1.8842	0.00	-8.56	0.00	0.00	0.00	-42.16	0.00
37.9000	1.9974	0.00	-10.43	0.00	0.00	0.00	-83.00	0.00
38.1000	2.0021	0.00	10.29	0.00	0.00	0.00	-83.01	0.00
42.4000	2.0926	0.00	8.42	0.00	0.00	0.00	-42.80	0.00
42.6000	2.0968	0.00	8.33	0.00	0.00	0.00	-41.12	0.00
80.9000	2.9032	0.00	-8.33	0.00	0.00	0.00	-41.12	0.00
81.1000	2.9074	0.00	-8.42	0.00	0.00	0.00	-42.80	0.00
85.4000	2.9979	0.00	-10.29	0.00	0.00	0.00	-83.01	0.00
85.6000	3.0026	0.00	10.43	0.00	0.00	0.00	-83.00	0.00
89.9000	3.1158	0.00	8.56	0.00	0.00	0.00	-42.16	0.00
90.1000	3.1211	0.00	8.48	0.00	0.00	0.00	-40.45	0.00

Superimposed Dead Load Final3N - Final - Self Weight Appurtenance - Parapets

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



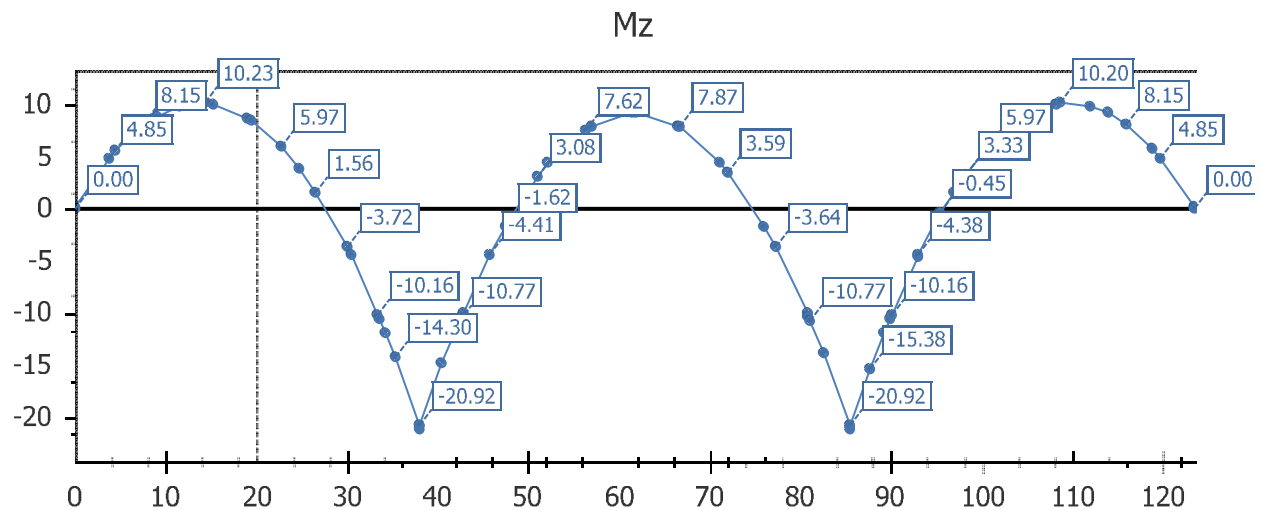
POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-3.98	0.00	0.00	0.00	-18.99	0.00
33.6000	1.8842	0.00	-4.02	0.00	0.00	0.00	-19.79	0.00
37.9000	1.9974	0.00	-4.90	0.00	0.00	0.00	-38.96	0.00
38.1000	2.0021	0.00	4.83	0.00	0.00	0.00	-38.96	0.00
42.4000	2.0926	0.00	3.95	0.00	0.00	0.00	-20.09	0.00
42.6000	2.0968	0.00	3.91	0.00	0.00	0.00	-19.30	0.00
80.9000	2.9032	0.00	-3.91	0.00	0.00	0.00	-19.30	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

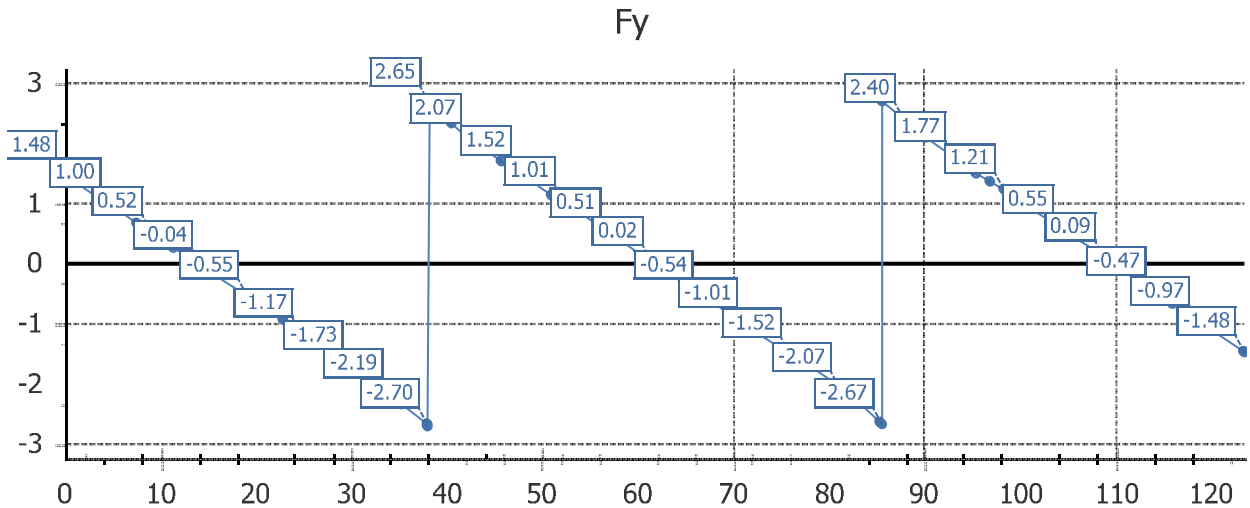
POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-3.95	0.00	0.00	0.00	-20.09	0.00
85.4000	2.9979	0.00	-4.83	0.00	0.00	0.00	-38.96	0.00
85.6000	3.0026	0.00	4.90	0.00	0.00	0.00	-38.96	0.00
89.9000	3.1158	0.00	4.02	0.00	0.00	0.00	-19.79	0.00
90.1000	3.1211	0.00	3.98	0.00	0.00	0.00	-18.99	0.00

Group01 Member 04

Dead Load Initial - Initial - Self Weight Steel



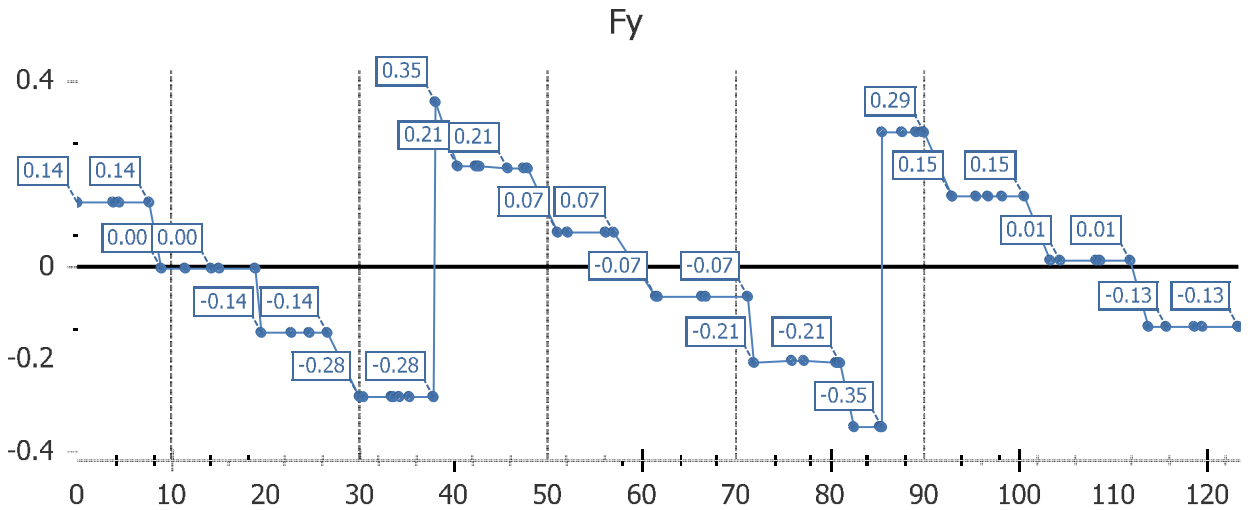
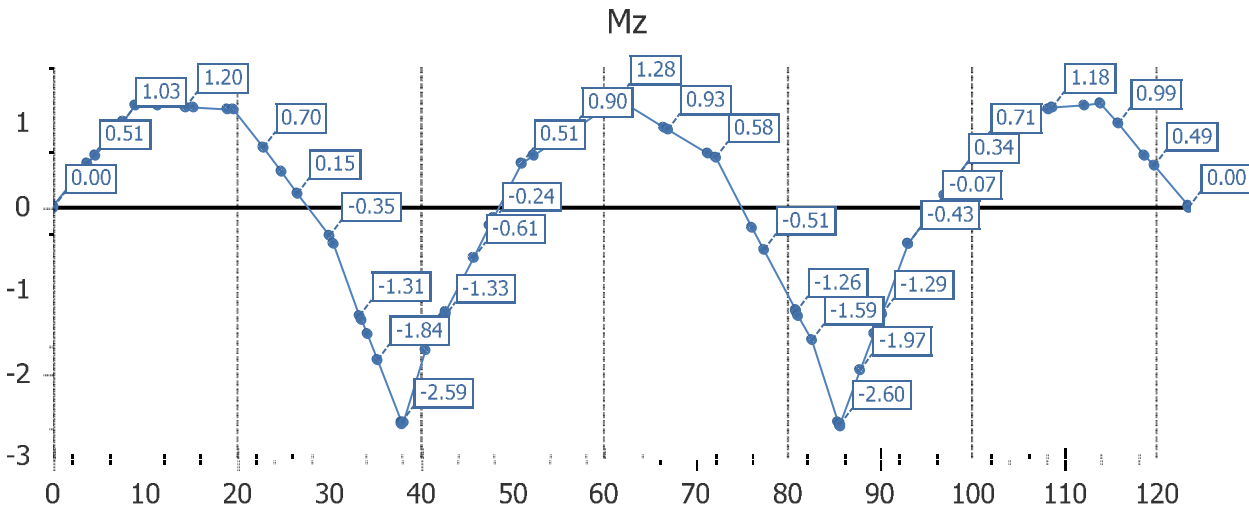
Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-2.09	0.00	0.00	0.00	-10.16	0.00
33.6000	1.8842	0.00	-2.11	0.00	0.00	0.00	-10.58	0.00
37.9000	1.9974	0.00	-2.70	0.00	0.00	0.00	-20.92	0.00
38.1000	2.0021	0.00	2.65	0.00	0.00	0.00	-20.92	0.00
42.4000	2.0926	0.00	2.07	0.00	0.00	0.00	-10.77	0.00
42.6000	2.0968	0.00	2.04	0.00	0.00	0.00	-10.35	0.00
80.9000	2.9032	0.00	-2.04	0.00	0.00	0.00	-10.35	0.00
81.1000	2.9074	0.00	-2.07	0.00	0.00	0.00	-10.77	0.00
85.4000	2.9979	0.00	-2.65	0.00	0.00	0.00	-20.92	0.00
85.6000	3.0026	0.00	2.70	0.00	0.00	0.00	-20.92	0.00
89.9000	3.1158	0.00	2.11	0.00	0.00	0.00	-10.58	0.00
90.1000	3.1211	0.00	2.09	0.00	0.00	0.00	-10.16	0.00

Dead Load Initial - Initial - Self Weight X-Frames

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

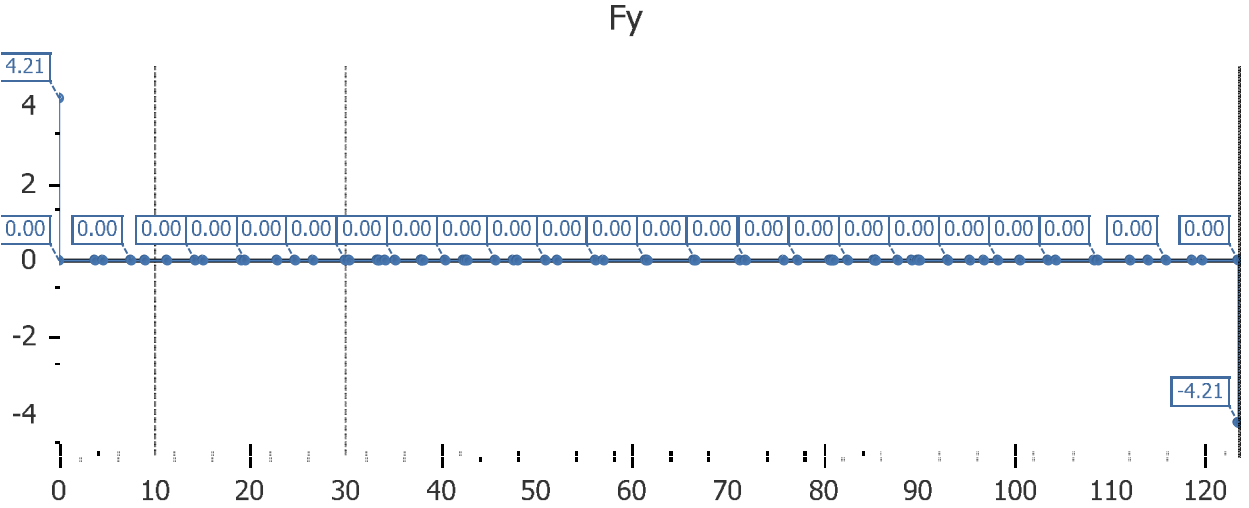
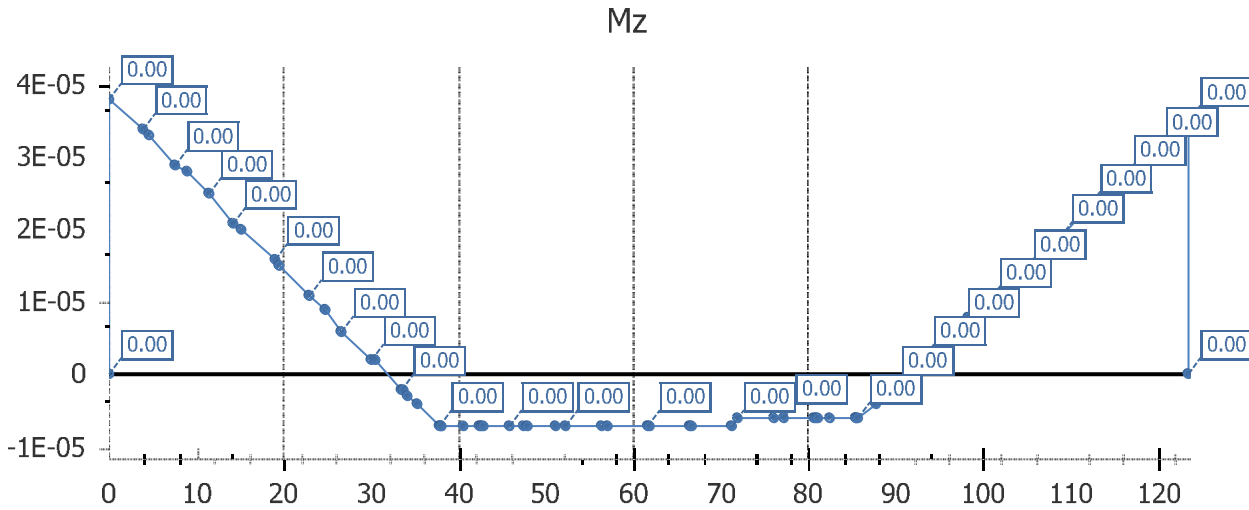


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-0.28	0.00	0.00	0.00	-1.31	0.00
33.6000	1.8842	0.00	-0.28	0.00	0.00	0.00	-1.37	0.00
37.9000	1.9974	0.00	-0.28	0.00	0.00	0.00	-2.59	0.00
38.1000	2.0021	0.00	0.35	0.00	0.00	0.00	-2.58	0.00
42.4000	2.0926	0.00	0.21	0.00	0.00	0.00	-1.33	0.00
42.6000	2.0968	0.00	0.21	0.00	0.00	0.00	-1.28	0.00
80.9000	2.9032	0.00	-0.21	0.00	0.00	0.00	-1.26	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-0.21	0.00	0.00	0.00	-1.30	0.00
85.4000	2.9979	0.00	-0.35	0.00	0.00	0.00	-2.59	0.00
85.6000	3.0026	0.00	0.29	0.00	0.00	0.00	-2.60	0.00
89.9000	3.1158	0.00	0.29	0.00	0.00	0.00	-1.35	0.00
90.1000	3.1211	0.00	0.29	0.00	0.00	0.00	-1.29	0.00

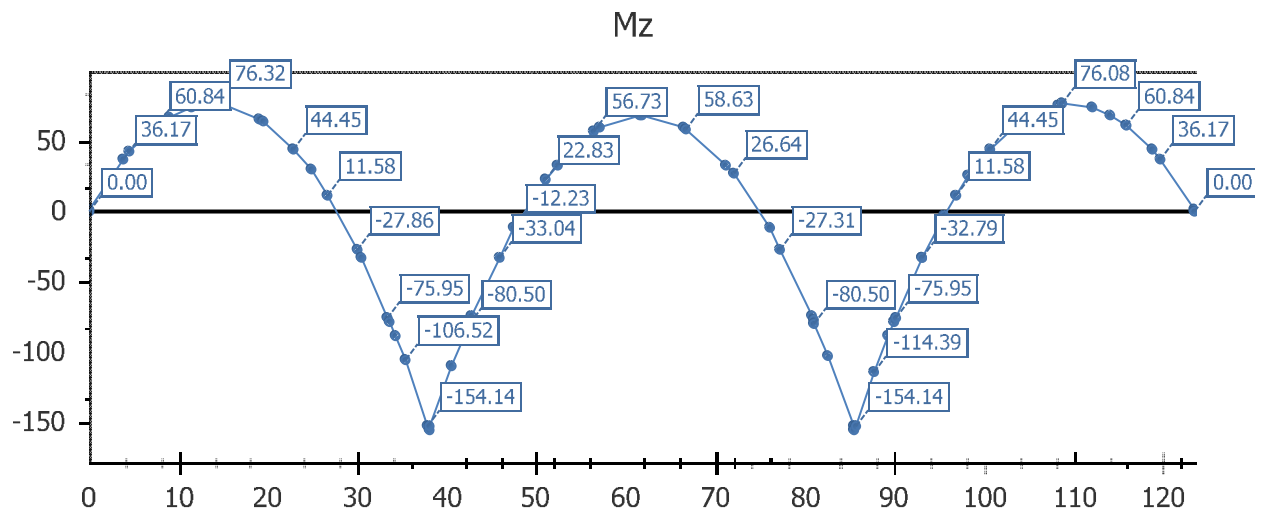
Dead Load Stage 01 - Stage 01 - Concrete Diaphragm



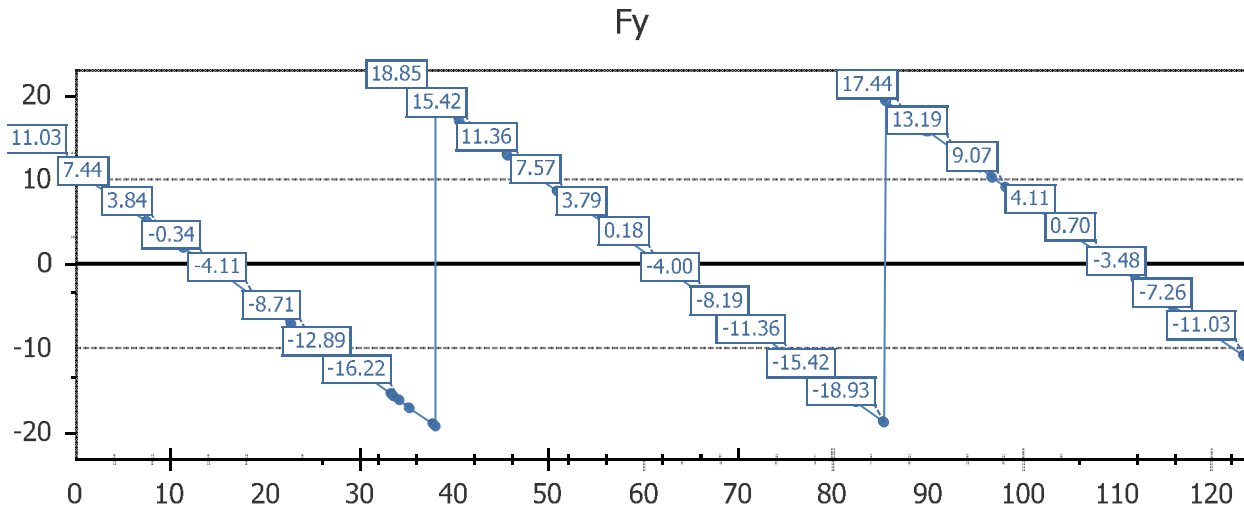
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Dead Load Stage 01 - Stage 01 - Self Weight Slab



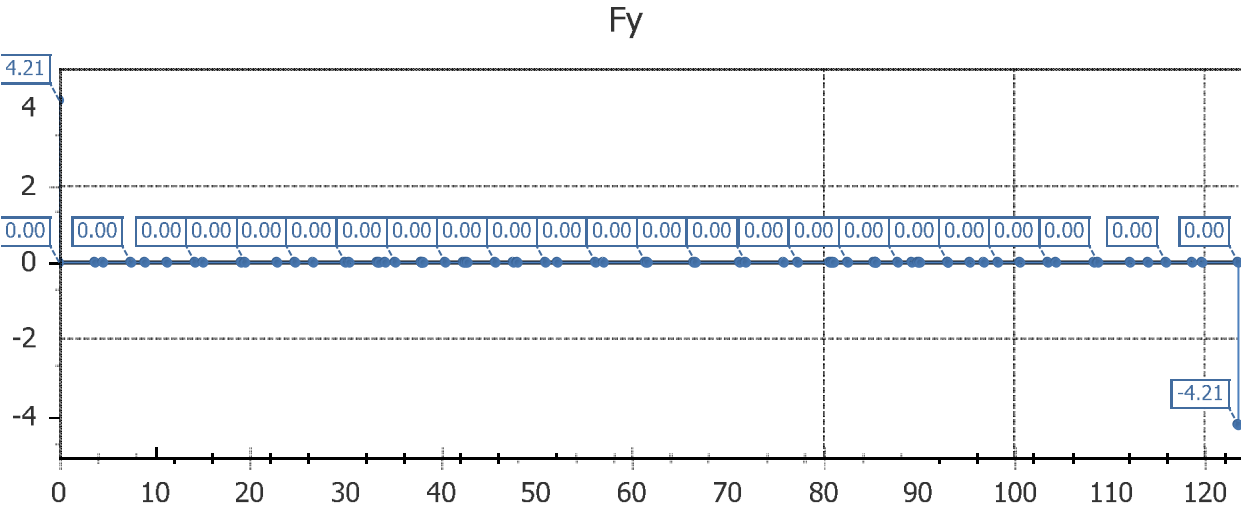
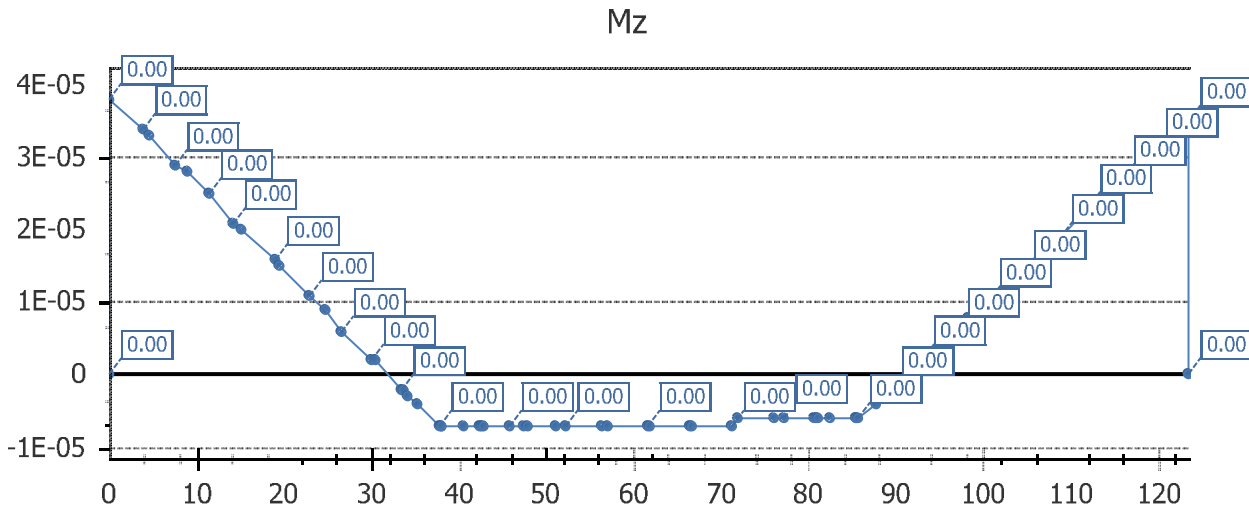
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-15.58	0.00	0.00	0.00	-75.95	0.00
33.6000	1.8842	0.00	-15.74	0.00	0.00	0.00	-79.09	0.00
37.9000	1.9974	0.00	-19.17	0.00	0.00	0.00	-154.14	0.00
38.1000	2.0021	0.00	18.85	0.00	0.00	0.00	-154.17	0.00
42.4000	2.0926	0.00	15.42	0.00	0.00	0.00	-80.50	0.00
42.6000	2.0968	0.00	15.26	0.00	0.00	0.00	-77.43	0.00
80.9000	2.9032	0.00	-15.26	0.00	0.00	0.00	-77.43	0.00
81.1000	2.9074	0.00	-15.42	0.00	0.00	0.00	-80.50	0.00
85.4000	2.9979	0.00	-18.85	0.00	0.00	0.00	-154.17	0.00
85.6000	3.0026	0.00	19.17	0.00	0.00	0.00	-154.14	0.00
89.9000	3.1158	0.00	15.74	0.00	0.00	0.00	-79.09	0.00
90.1000	3.1211	0.00	15.58	0.00	0.00	0.00	-75.95	0.00

Dead Load Final - Final - Concrete Diaphragm

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

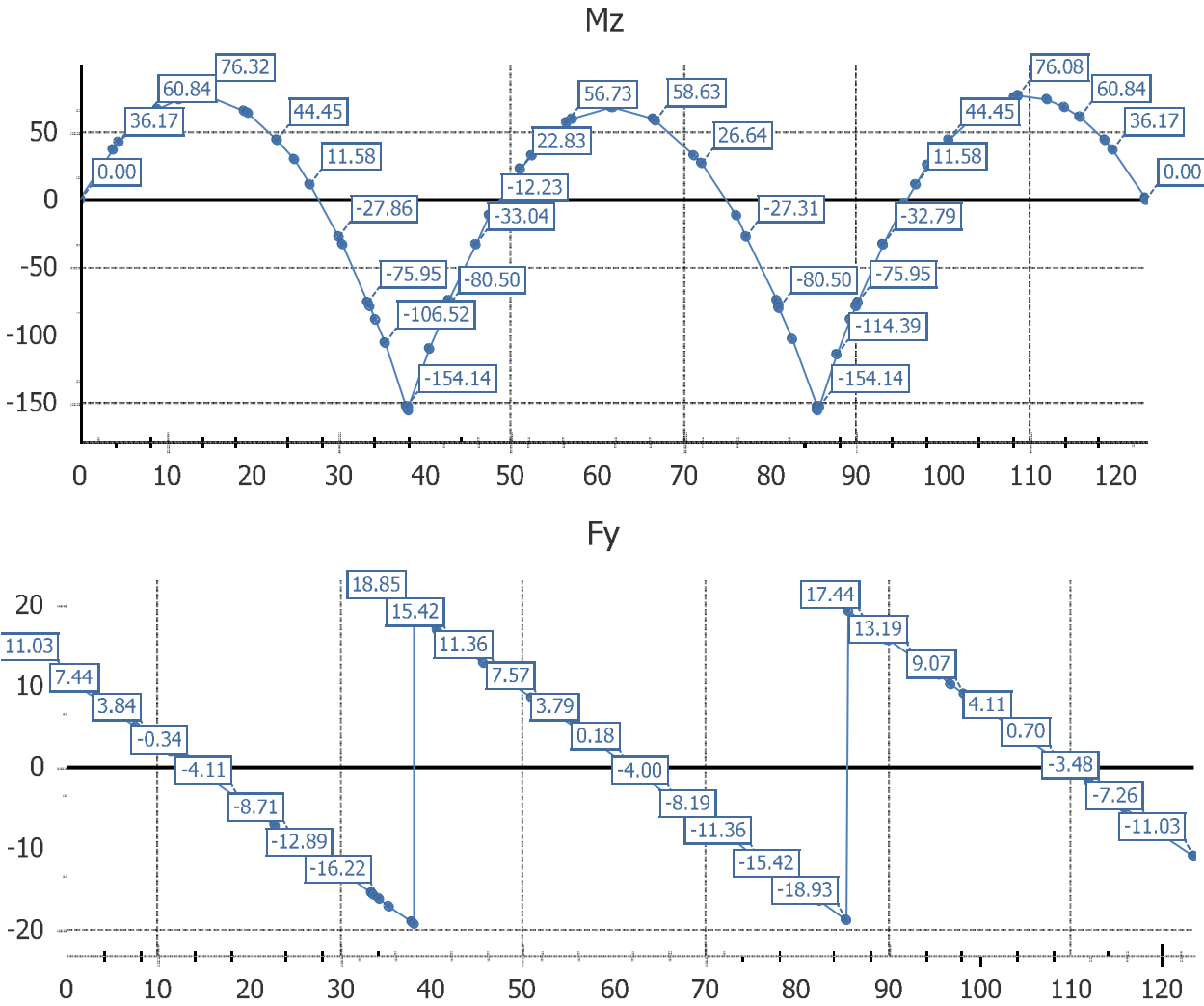


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

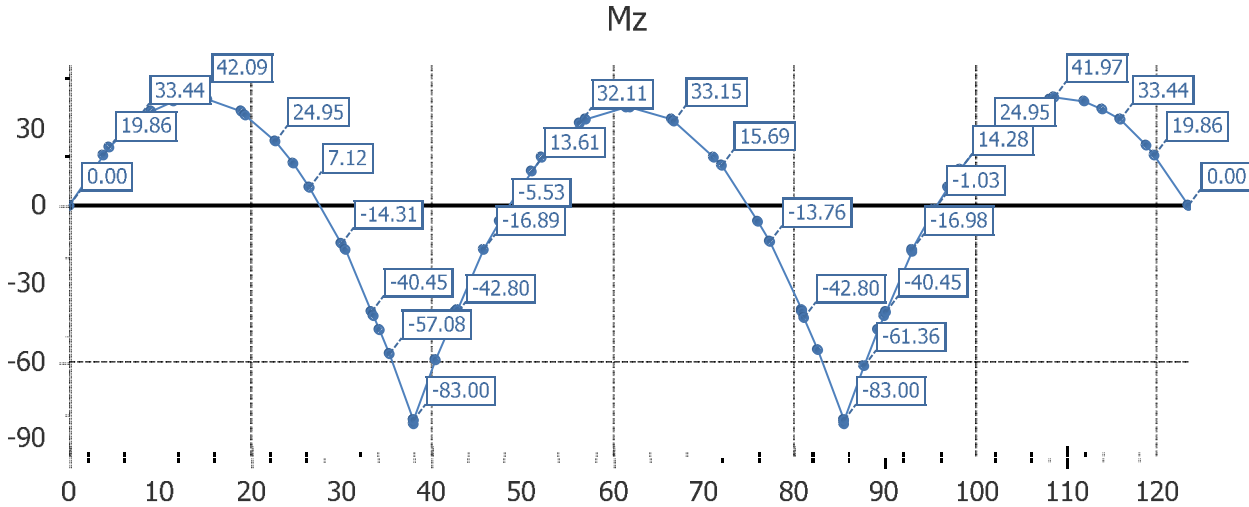
Dead Load Final - Final - Self Weight Slab



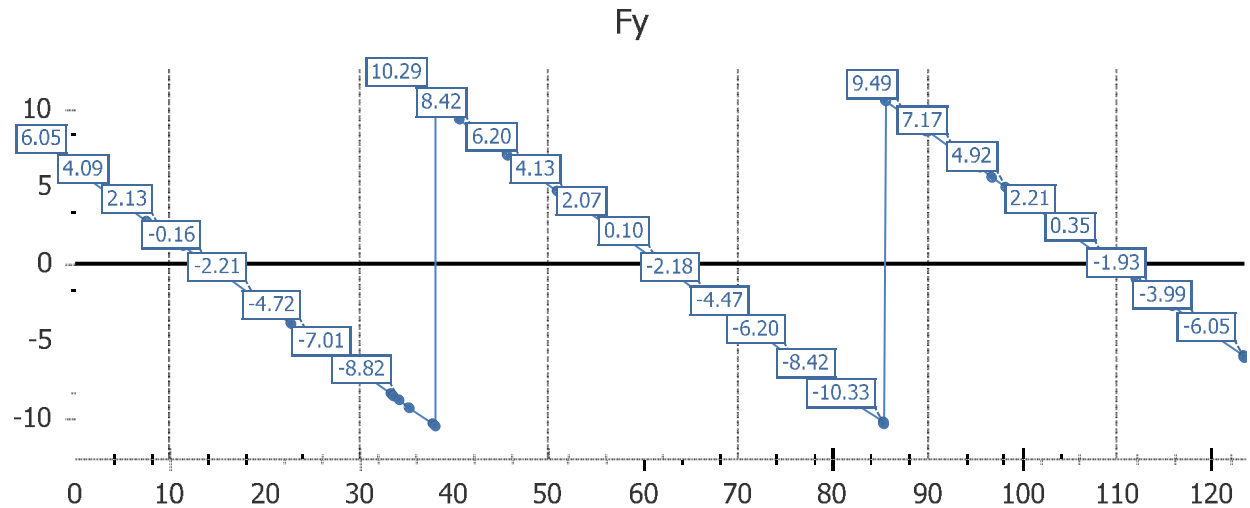
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-15.58	0.00	0.00	0.00	-75.95	0.00
33.6000	1.8842	0.00	-15.74	0.00	0.00	0.00	-79.09	0.00
37.9000	1.9974	0.00	-19.17	0.00	0.00	0.00	-154.14	0.00
38.1000	2.0021	0.00	18.85	0.00	0.00	0.00	-154.17	0.00
42.4000	2.0926	0.00	15.42	0.00	0.00	0.00	-80.50	0.00
42.6000	2.0968	0.00	15.26	0.00	0.00	0.00	-77.43	0.00
80.9000	2.9032	0.00	-15.26	0.00	0.00	0.00	-77.43	0.00
81.1000	2.9074	0.00	-15.42	0.00	0.00	0.00	-80.50	0.00
85.4000	2.9979	0.00	-18.85	0.00	0.00	0.00	-154.17	0.00
85.6000	3.0026	0.00	19.17	0.00	0.00	0.00	-154.14	0.00
89.9000	3.1158	0.00	15.74	0.00	0.00	0.00	-79.09	0.00
90.1000	3.1211	0.00	15.58	0.00	0.00	0.00	-75.95	0.00

Utilities Load Final3N - Final - Wearing Surface



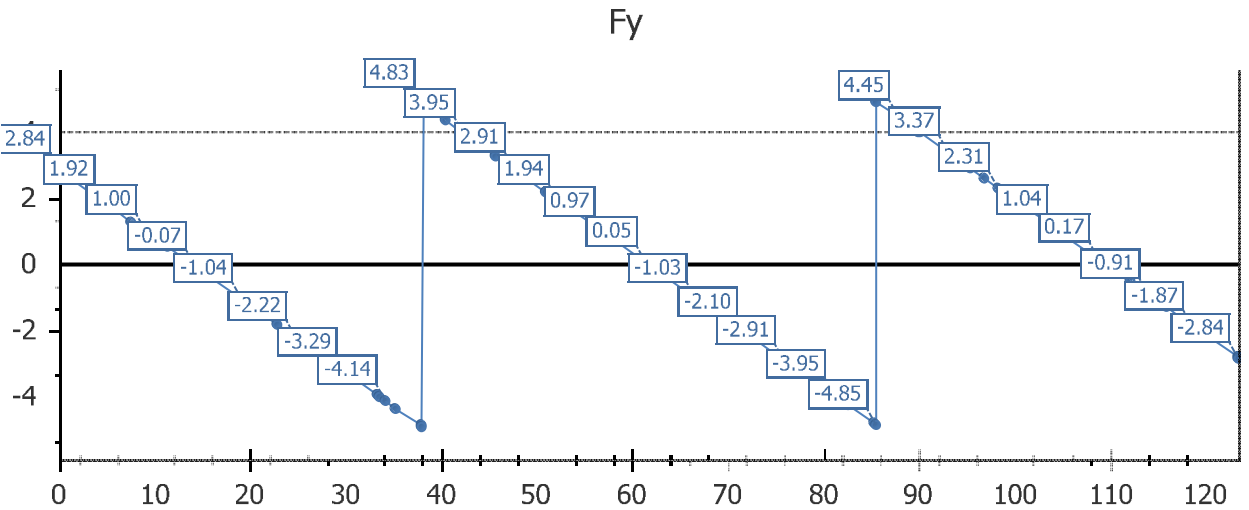
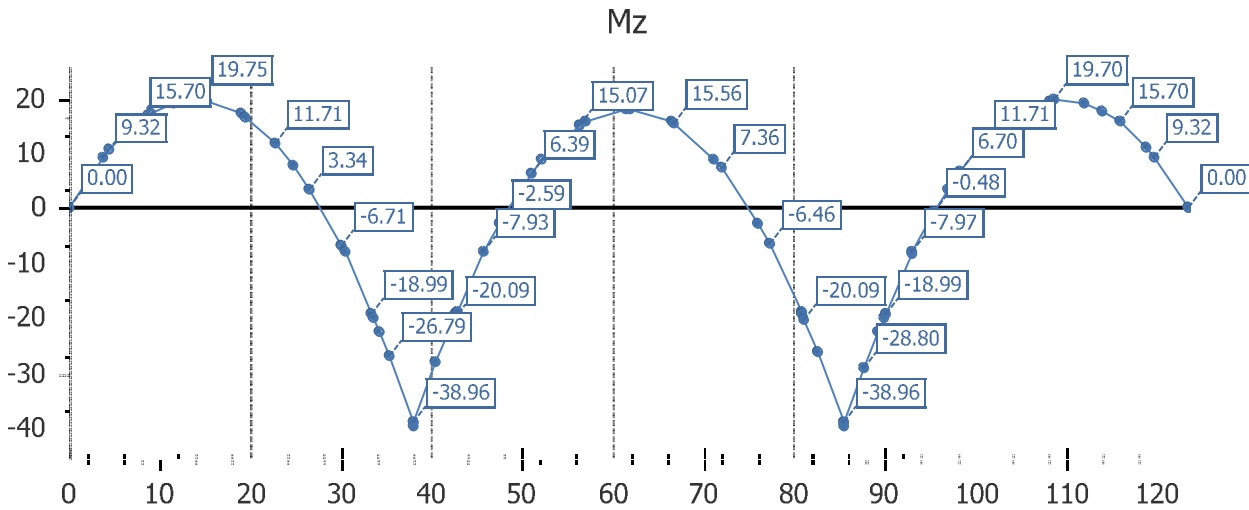
Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-8.48	0.00	0.00	0.00	-40.45	0.00
33.6000	1.8842	0.00	-8.56	0.00	0.00	0.00	-42.16	0.00
37.9000	1.9974	0.00	-10.43	0.00	0.00	0.00	-83.00	0.00
38.1000	2.0021	0.00	10.29	0.00	0.00	0.00	-83.01	0.00
42.4000	2.0926	0.00	8.42	0.00	0.00	0.00	-42.80	0.00
42.6000	2.0968	0.00	8.33	0.00	0.00	0.00	-41.12	0.00
80.9000	2.9032	0.00	-8.33	0.00	0.00	0.00	-41.12	0.00
81.1000	2.9074	0.00	-8.42	0.00	0.00	0.00	-42.80	0.00
85.4000	2.9979	0.00	-10.29	0.00	0.00	0.00	-83.01	0.00
85.6000	3.0026	0.00	10.43	0.00	0.00	0.00	-83.00	0.00
89.9000	3.1158	0.00	8.56	0.00	0.00	0.00	-42.16	0.00
90.1000	3.1211	0.00	8.48	0.00	0.00	0.00	-40.45	0.00

Superimposed Dead Load Final3N - Final - Self Weight Appurtenance - Parapets

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



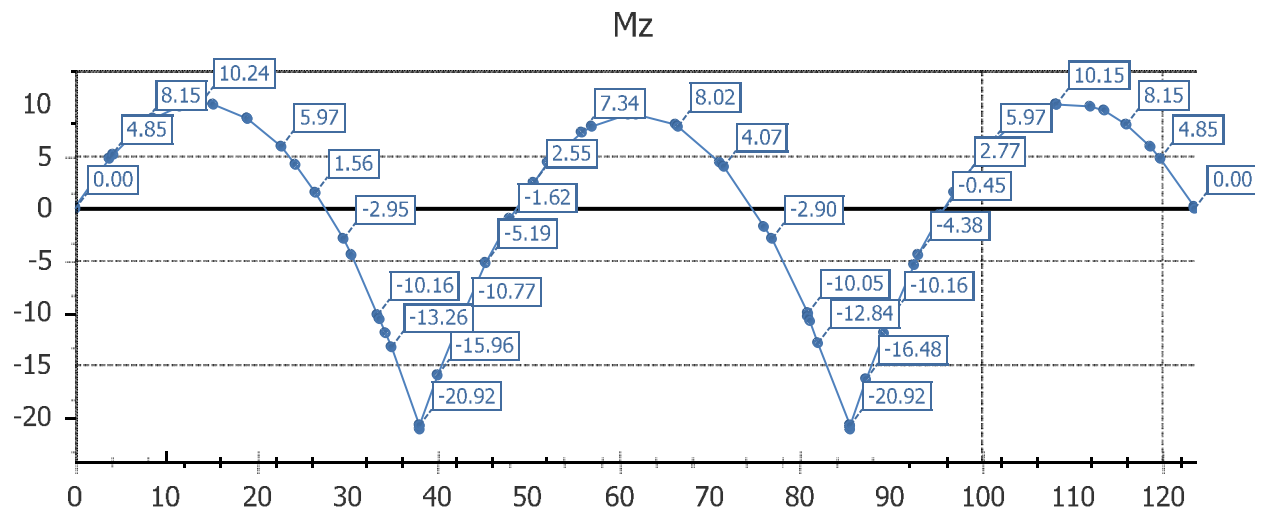
POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-3.98	0.00	0.00	0.00	-18.99	0.00
33.6000	1.8842	0.00	-4.02	0.00	0.00	0.00	-19.79	0.00
37.9000	1.9974	0.00	-4.90	0.00	0.00	0.00	-38.96	0.00
38.1000	2.0021	0.00	4.83	0.00	0.00	0.00	-38.96	0.00
42.4000	2.0926	0.00	3.95	0.00	0.00	0.00	-20.09	0.00
42.6000	2.0968	0.00	3.91	0.00	0.00	0.00	-19.30	0.00
80.9000	2.9032	0.00	-3.91	0.00	0.00	0.00	-19.30	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

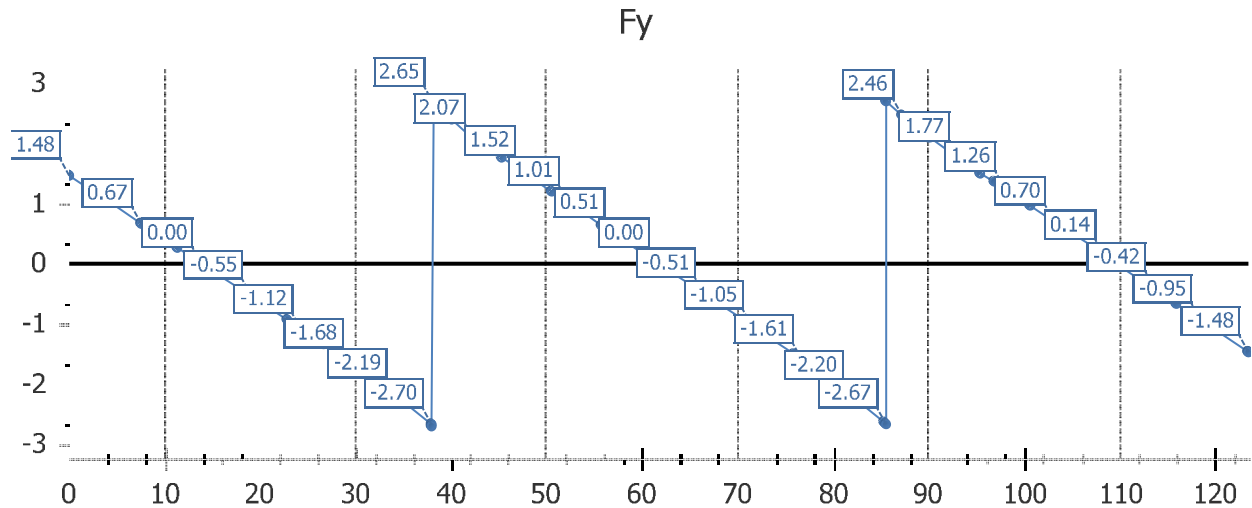
POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-3.95	0.00	0.00	0.00	-20.09	0.00
85.4000	2.9979	0.00	-4.83	0.00	0.00	0.00	-38.96	0.00
85.6000	3.0026	0.00	4.90	0.00	0.00	0.00	-38.96	0.00
89.9000	3.1158	0.00	4.02	0.00	0.00	0.00	-19.79	0.00
90.1000	3.1211	0.00	3.98	0.00	0.00	0.00	-18.99	0.00

Group01 Member 05

Dead Load Initial - Initial - Self Weight Steel



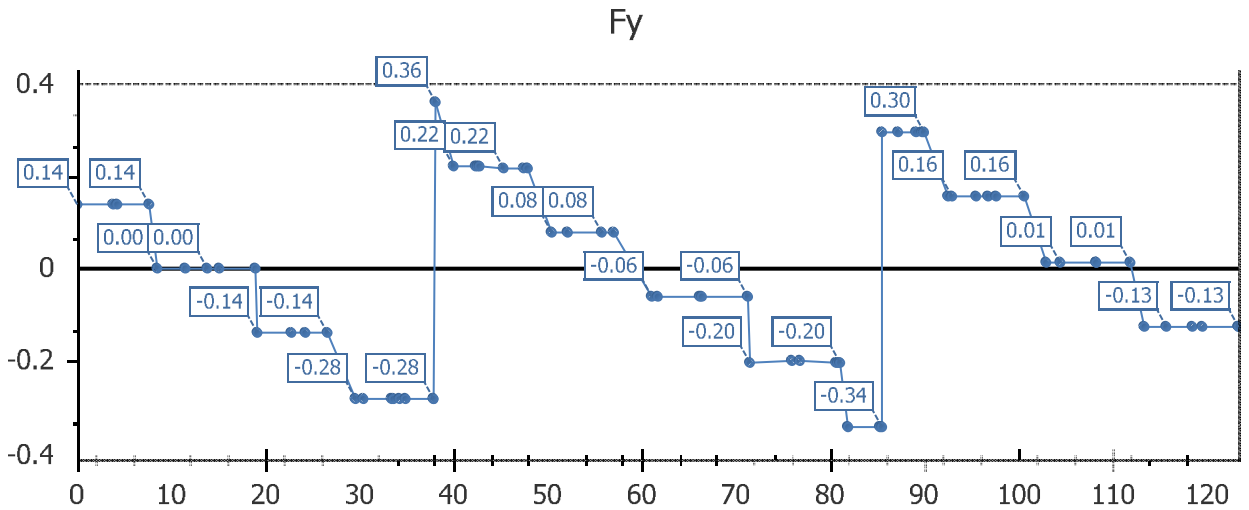
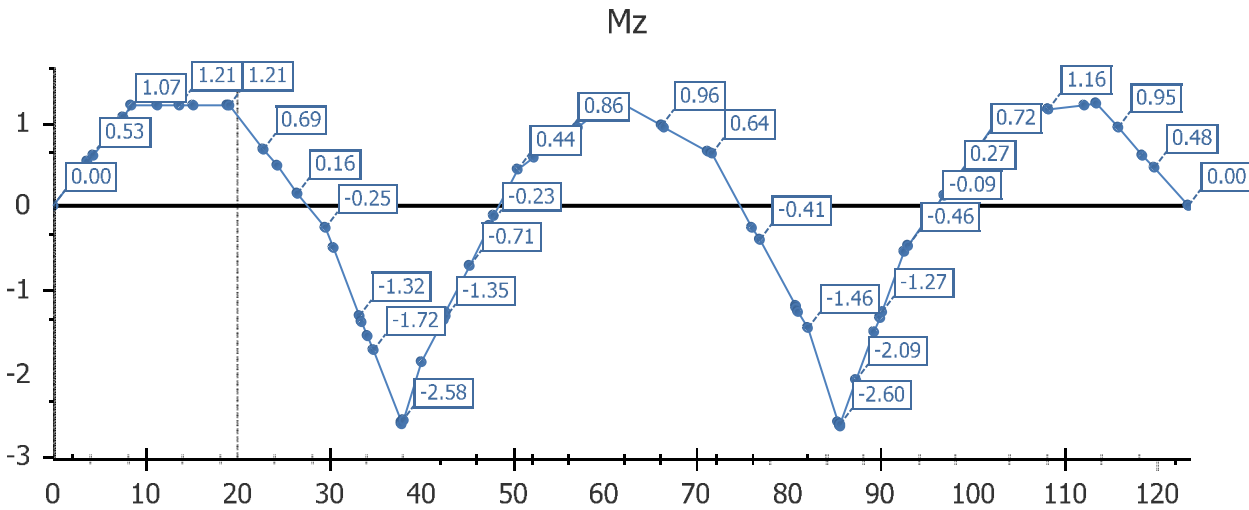
Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-2.09	0.00	0.00	0.00	-10.16	0.00
33.6000	1.8842	0.00	-2.11	0.00	0.00	0.00	-10.58	0.00
37.9000	1.9974	0.00	-2.70	0.00	0.00	0.00	-20.92	0.00
38.1000	2.0021	0.00	2.65	0.00	0.00	0.00	-20.92	0.00
42.4000	2.0926	0.00	2.07	0.00	0.00	0.00	-10.77	0.00
42.6000	2.0968	0.00	2.04	0.00	0.00	0.00	-10.35	0.00
80.9000	2.9032	0.00	-2.04	0.00	0.00	0.00	-10.35	0.00
81.1000	2.9074	0.00	-2.07	0.00	0.00	0.00	-10.77	0.00
85.4000	2.9979	0.00	-2.65	0.00	0.00	0.00	-20.92	0.00
85.6000	3.0026	0.00	2.70	0.00	0.00	0.00	-20.92	0.00
89.9000	3.1158	0.00	2.11	0.00	0.00	0.00	-10.58	0.00
90.1000	3.1211	0.00	2.09	0.00	0.00	0.00	-10.16	0.00

Dead Load Initial - Initial - Self Weight X-Frames

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

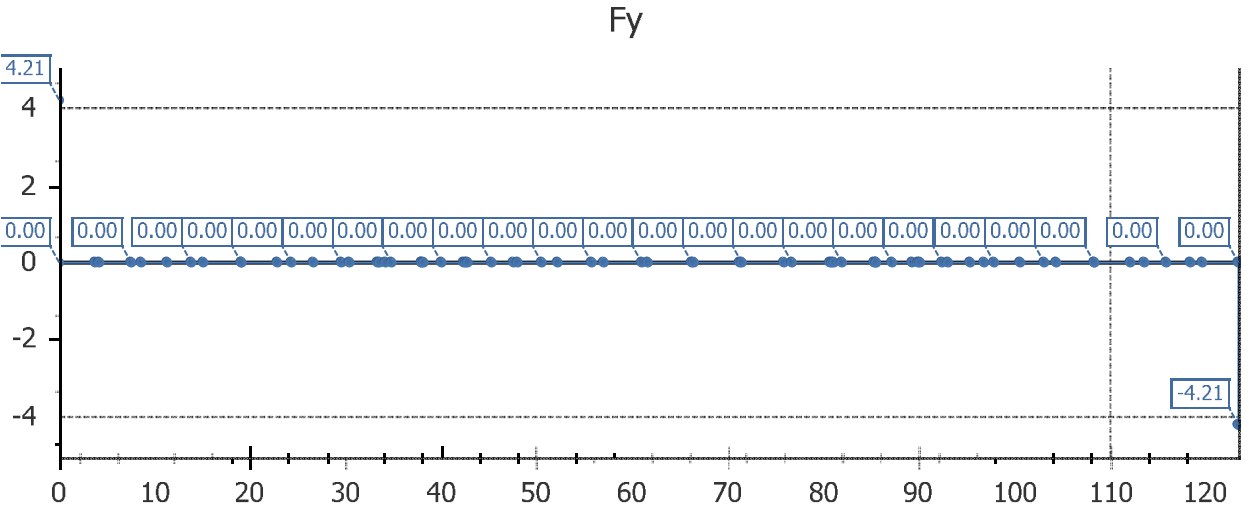
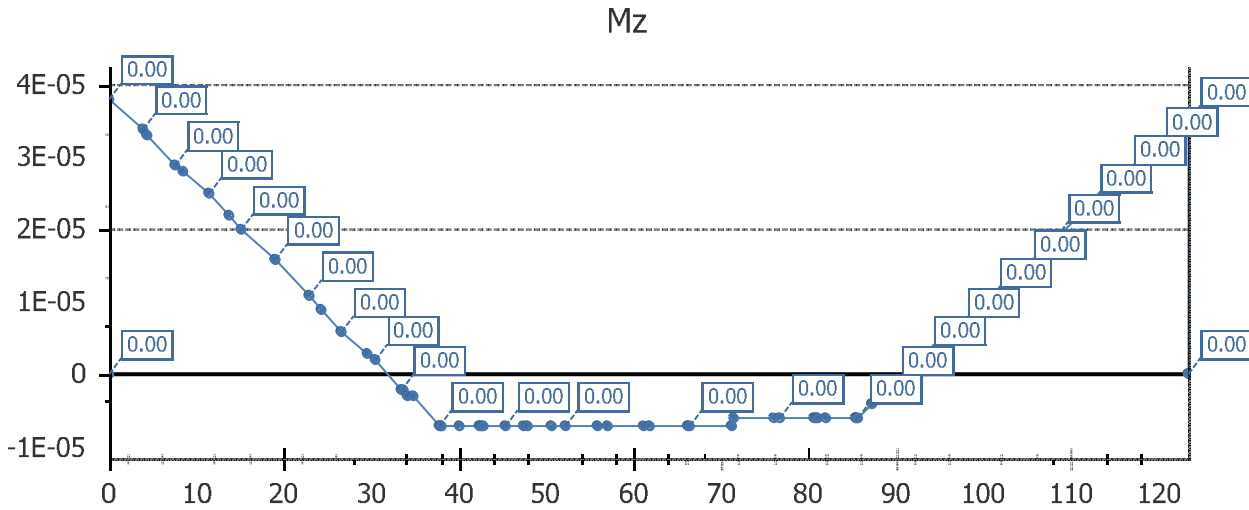


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-0.28	0.00	0.00	0.00	-1.32	0.00
33.6000	1.8842	0.00	-0.28	0.00	0.00	0.00	-1.38	0.00
37.9000	1.9974	0.00	-0.28	0.00	0.00	0.00	-2.58	0.00
38.1000	2.0021	0.00	0.36	0.00	0.00	0.00	-2.57	0.00
42.4000	2.0926	0.00	0.22	0.00	0.00	0.00	-1.35	0.00
42.6000	2.0968	0.00	0.22	0.00	0.00	0.00	-1.31	0.00
80.9000	2.9032	0.00	-0.20	0.00	0.00	0.00	-1.23	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-0.20	0.00	0.00	0.00	-1.27	0.00
85.4000	2.9979	0.00	-0.34	0.00	0.00	0.00	-2.60	0.00
85.6000	3.0026	0.00	0.30	0.00	0.00	0.00	-2.60	0.00
89.9000	3.1158	0.00	0.30	0.00	0.00	0.00	-1.33	0.00
90.1000	3.1211	0.00	0.30	0.00	0.00	0.00	-1.27	0.00

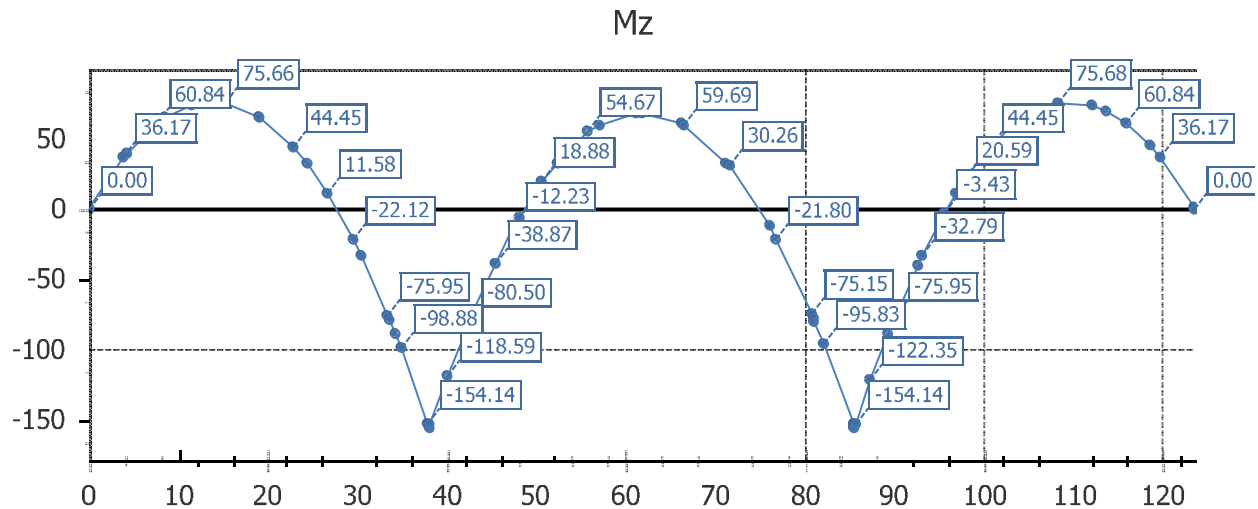
Dead Load Stage 01 - Stage 01 - Concrete Diaphragm



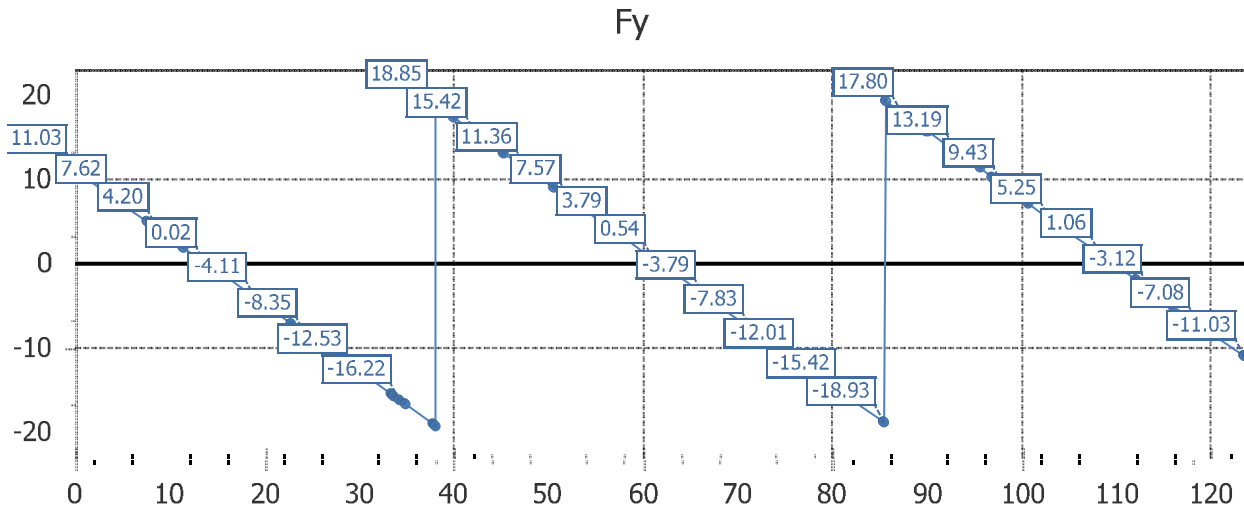
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Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Dead Load Stage 01 - Stage 01 - Self Weight Slab



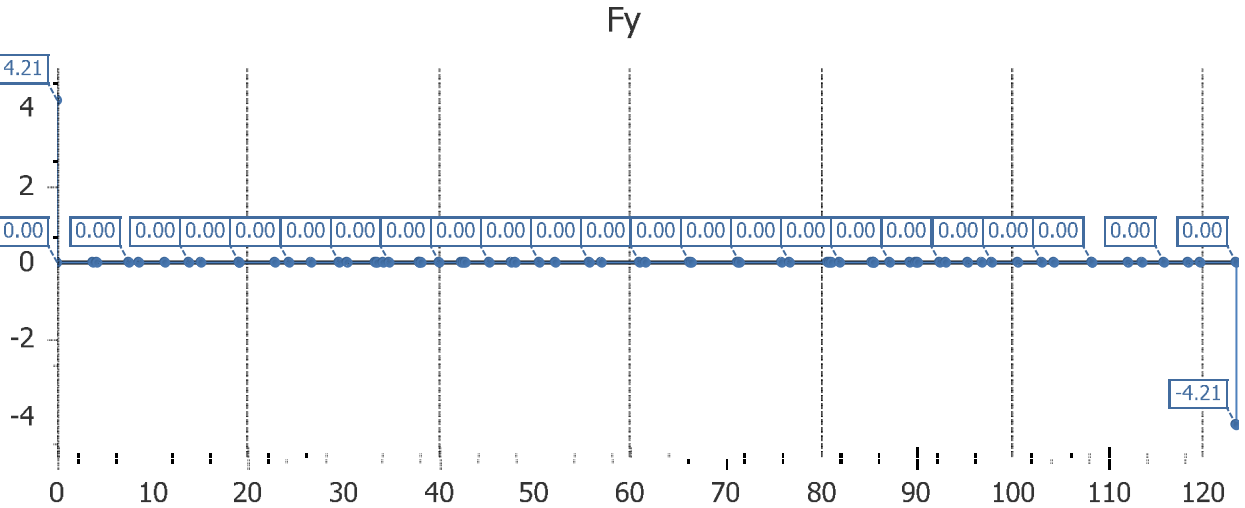
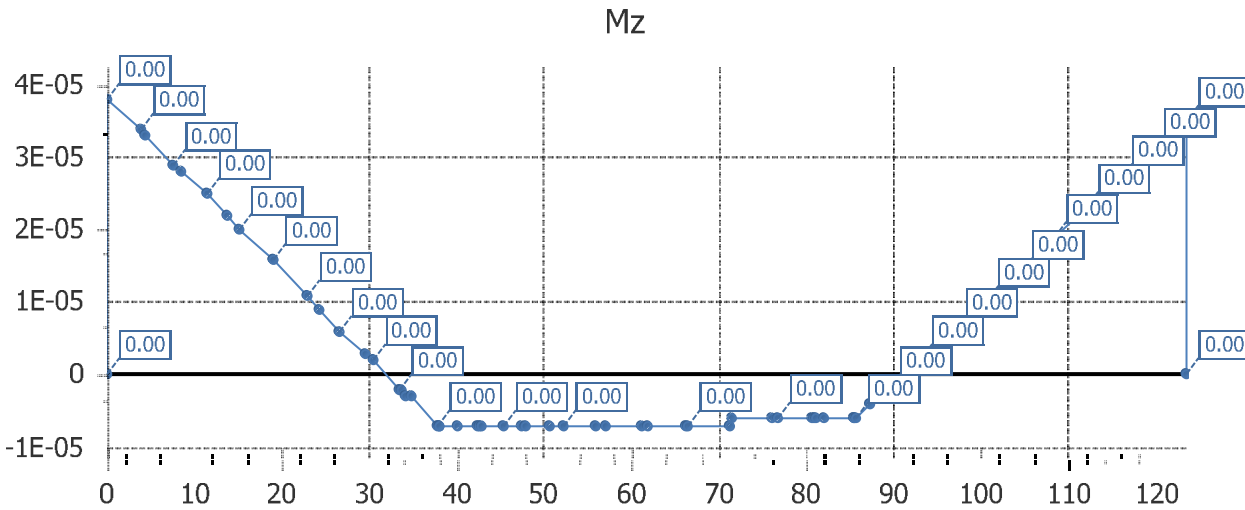
Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-15.58	0.00	0.00	0.00	-75.95	0.00
33.6000	1.8842	0.00	-15.74	0.00	0.00	0.00	-79.09	0.00
37.9000	1.9974	0.00	-19.17	0.00	0.00	0.00	-154.14	0.00
38.1000	2.0021	0.00	18.85	0.00	0.00	0.00	-154.17	0.00
42.4000	2.0926	0.00	15.42	0.00	0.00	0.00	-80.50	0.00
42.6000	2.0968	0.00	15.26	0.00	0.00	0.00	-77.43	0.00
80.9000	2.9032	0.00	-15.26	0.00	0.00	0.00	-77.43	0.00
81.1000	2.9074	0.00	-15.42	0.00	0.00	0.00	-80.50	0.00
85.4000	2.9979	0.00	-18.85	0.00	0.00	0.00	-154.17	0.00
85.6000	3.0026	0.00	19.17	0.00	0.00	0.00	-154.14	0.00
89.9000	3.1158	0.00	15.74	0.00	0.00	0.00	-79.09	0.00
90.1000	3.1211	0.00	15.58	0.00	0.00	0.00	-75.95	0.00

Dead Load Final - Final - Concrete Diaphragm

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

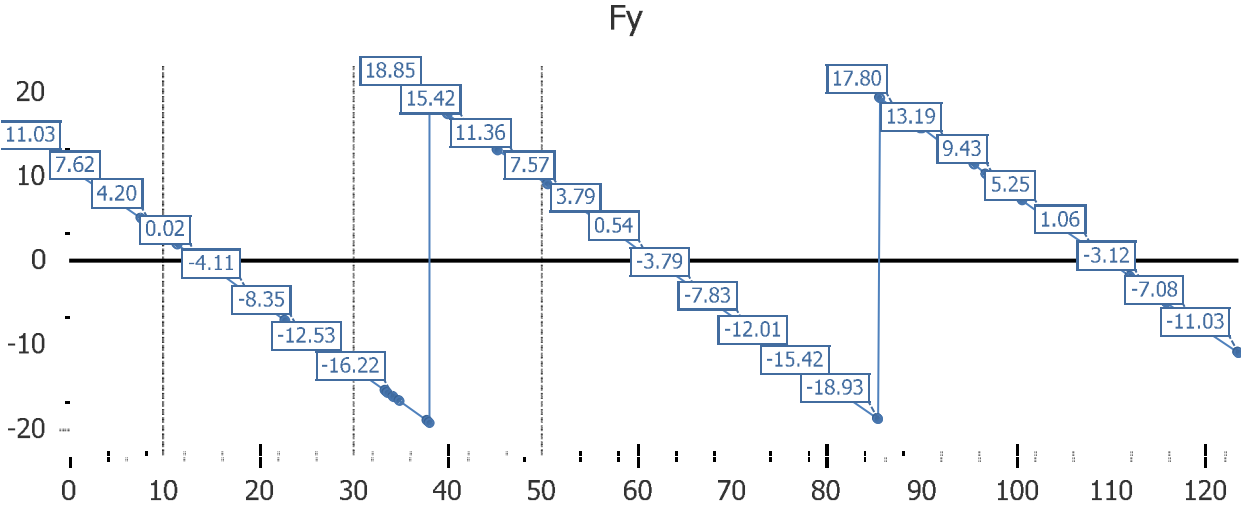
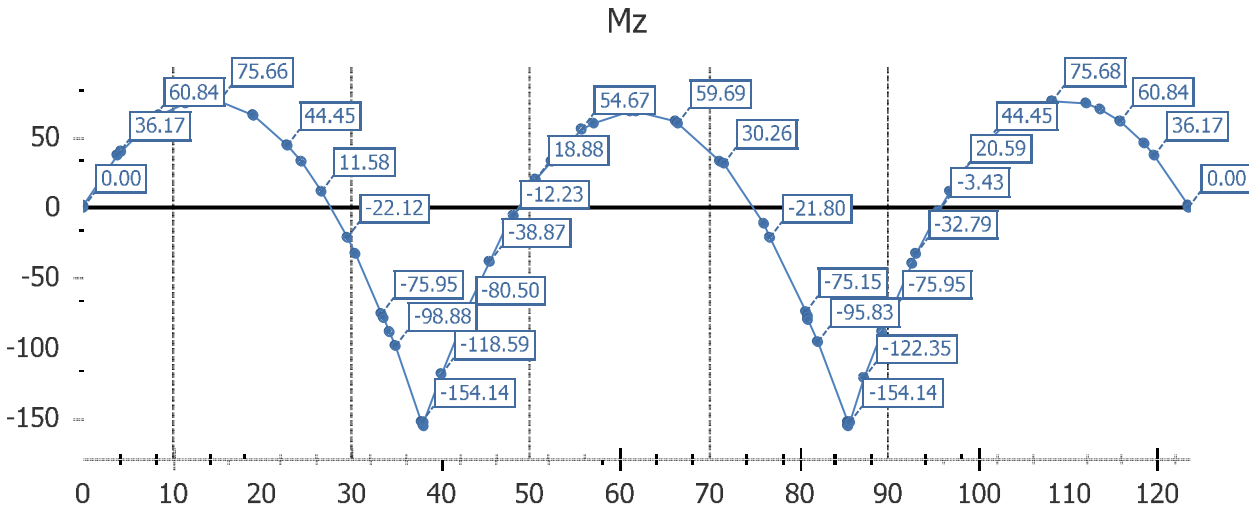


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

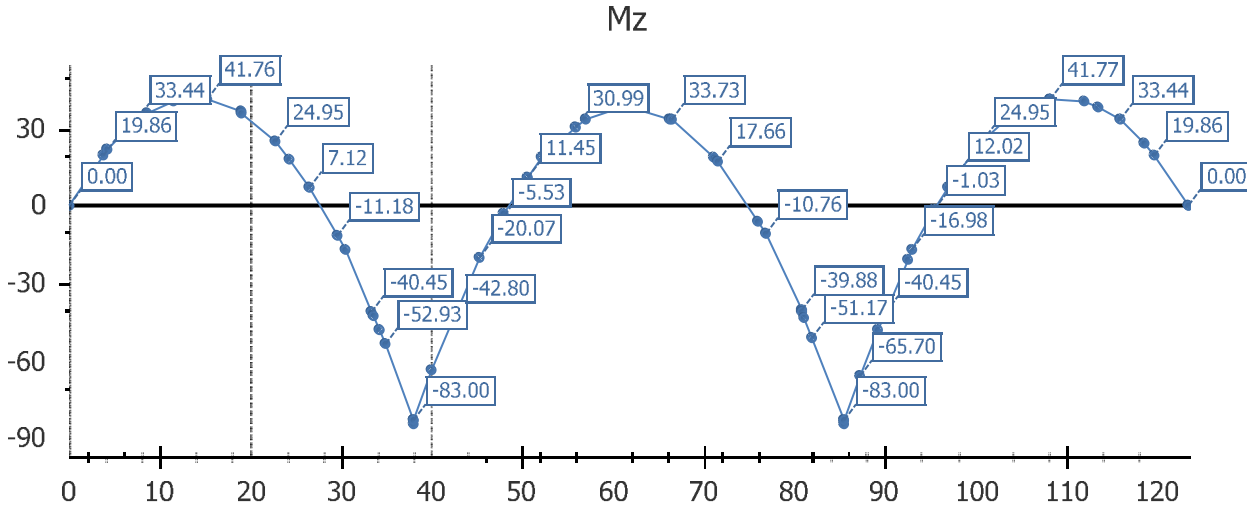
Dead Load Final - Final - Self Weight Slab



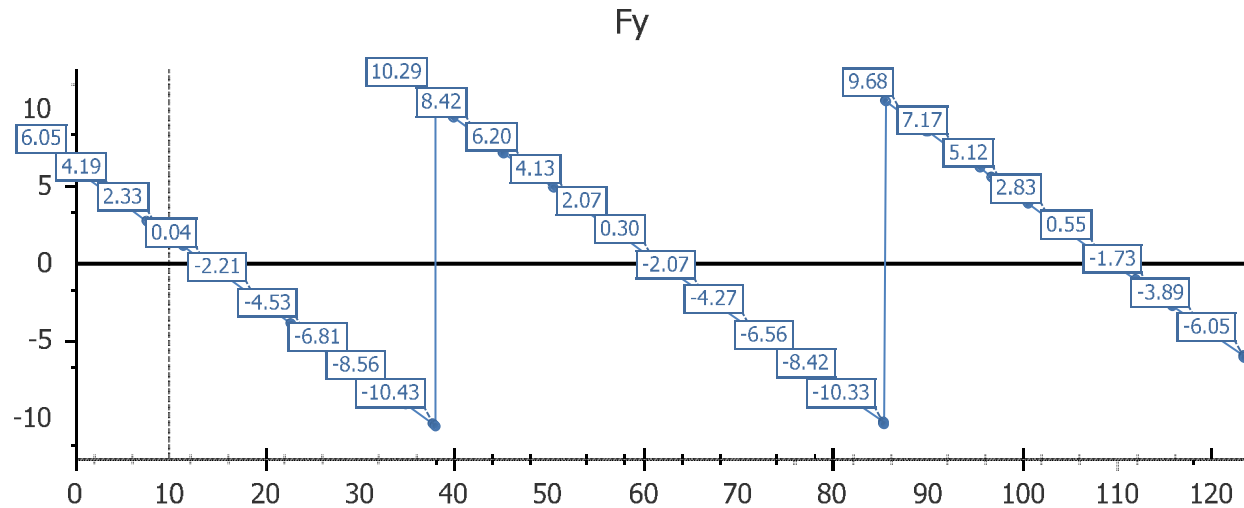
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-15.58	0.00	0.00	0.00	-75.95	0.00
33.6000	1.8842	0.00	-15.74	0.00	0.00	0.00	-79.09	0.00
37.9000	1.9974	0.00	-19.17	0.00	0.00	0.00	-154.14	0.00
38.1000	2.0021	0.00	18.85	0.00	0.00	0.00	-154.17	0.00
42.4000	2.0926	0.00	15.42	0.00	0.00	0.00	-80.50	0.00
42.6000	2.0968	0.00	15.26	0.00	0.00	0.00	-77.43	0.00
80.9000	2.9032	0.00	-15.26	0.00	0.00	0.00	-77.43	0.00
81.1000	2.9074	0.00	-15.42	0.00	0.00	0.00	-80.50	0.00
85.4000	2.9979	0.00	-18.85	0.00	0.00	0.00	-154.17	0.00
85.6000	3.0026	0.00	19.17	0.00	0.00	0.00	-154.14	0.00
89.9000	3.1158	0.00	15.74	0.00	0.00	0.00	-79.09	0.00
90.1000	3.1211	0.00	15.58	0.00	0.00	0.00	-75.95	0.00

Utilities Load Final3N - Final - Wearing Surface



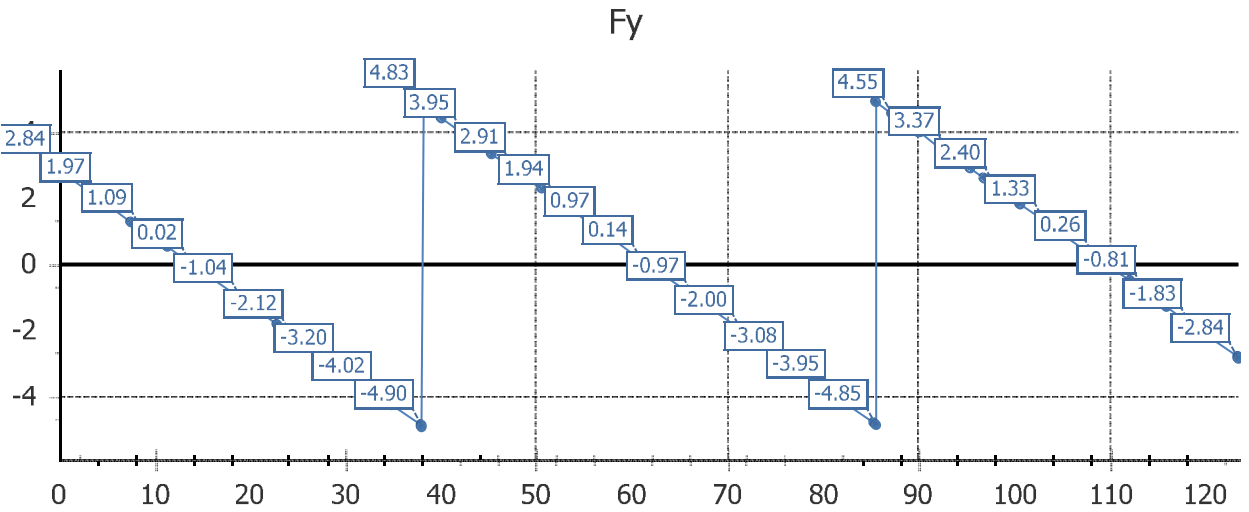
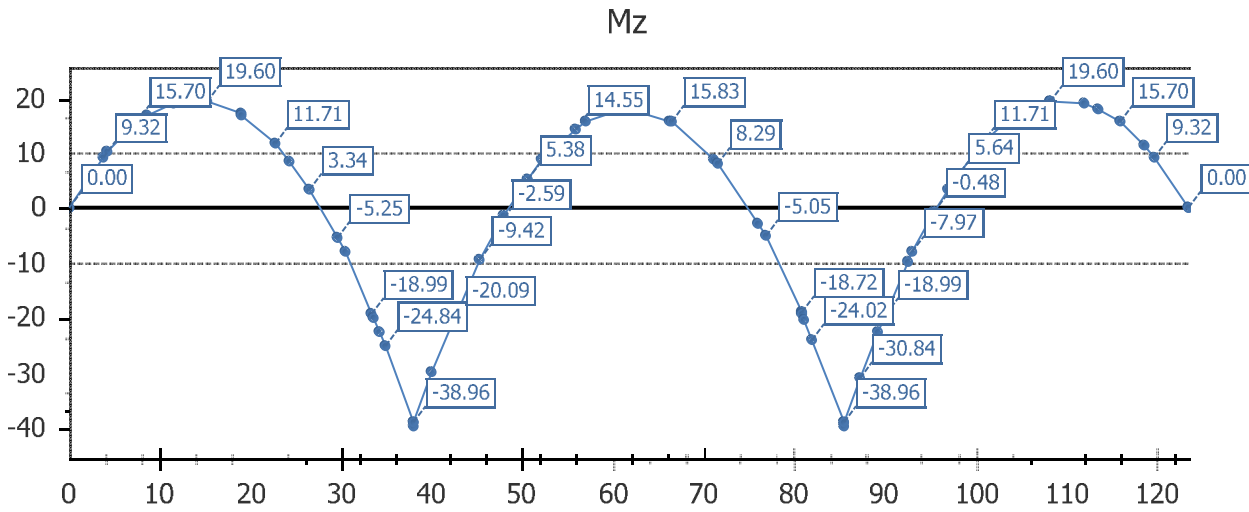
Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-8.48	0.00	0.00	0.00	-40.45	0.00
33.6000	1.8842	0.00	-8.56	0.00	0.00	0.00	-42.16	0.00
37.9000	1.9974	0.00	-10.43	0.00	0.00	0.00	-83.00	0.00
38.1000	2.0021	0.00	10.29	0.00	0.00	0.00	-83.01	0.00
42.4000	2.0926	0.00	8.42	0.00	0.00	0.00	-42.80	0.00
42.6000	2.0968	0.00	8.33	0.00	0.00	0.00	-41.12	0.00
80.9000	2.9032	0.00	-8.33	0.00	0.00	0.00	-41.12	0.00
81.1000	2.9074	0.00	-8.42	0.00	0.00	0.00	-42.80	0.00
85.4000	2.9979	0.00	-10.29	0.00	0.00	0.00	-83.01	0.00
85.6000	3.0026	0.00	10.43	0.00	0.00	0.00	-83.00	0.00
89.9000	3.1158	0.00	8.56	0.00	0.00	0.00	-42.16	0.00
90.1000	3.1211	0.00	8.48	0.00	0.00	0.00	-40.45	0.00

Superimposed Dead Load Final3N - Final - Self Weight Appurtenance - Parapets

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



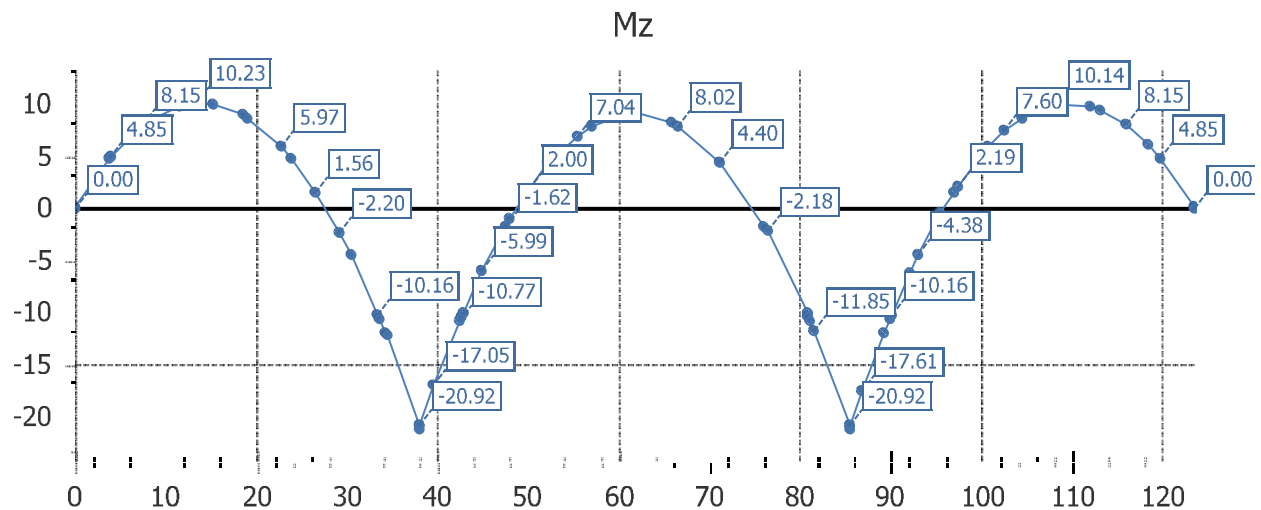
POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-3.98	0.00	0.00	0.00	-18.99	0.00
33.6000	1.8842	0.00	-4.02	0.00	0.00	0.00	-19.79	0.00
37.9000	1.9974	0.00	-4.90	0.00	0.00	0.00	-38.96	0.00
38.1000	2.0021	0.00	4.83	0.00	0.00	0.00	-38.96	0.00
42.4000	2.0926	0.00	3.95	0.00	0.00	0.00	-20.09	0.00
42.6000	2.0968	0.00	3.91	0.00	0.00	0.00	-19.30	0.00
80.9000	2.9032	0.00	-3.91	0.00	0.00	0.00	-19.30	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

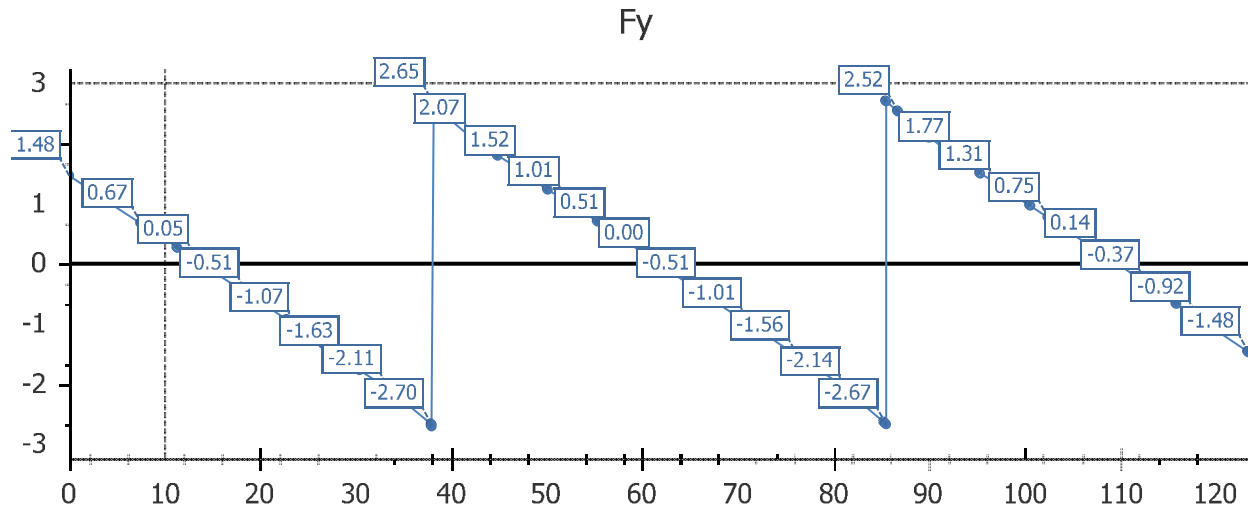
POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-3.95	0.00	0.00	0.00	-20.09	0.00
85.4000	2.9979	0.00	-4.83	0.00	0.00	0.00	-38.96	0.00
85.6000	3.0026	0.00	4.90	0.00	0.00	0.00	-38.96	0.00
89.9000	3.1158	0.00	4.02	0.00	0.00	0.00	-19.79	0.00
90.1000	3.1211	0.00	3.98	0.00	0.00	0.00	-18.99	0.00

Group01 Member 06

Dead Load Initial - Initial - Self Weight Steel



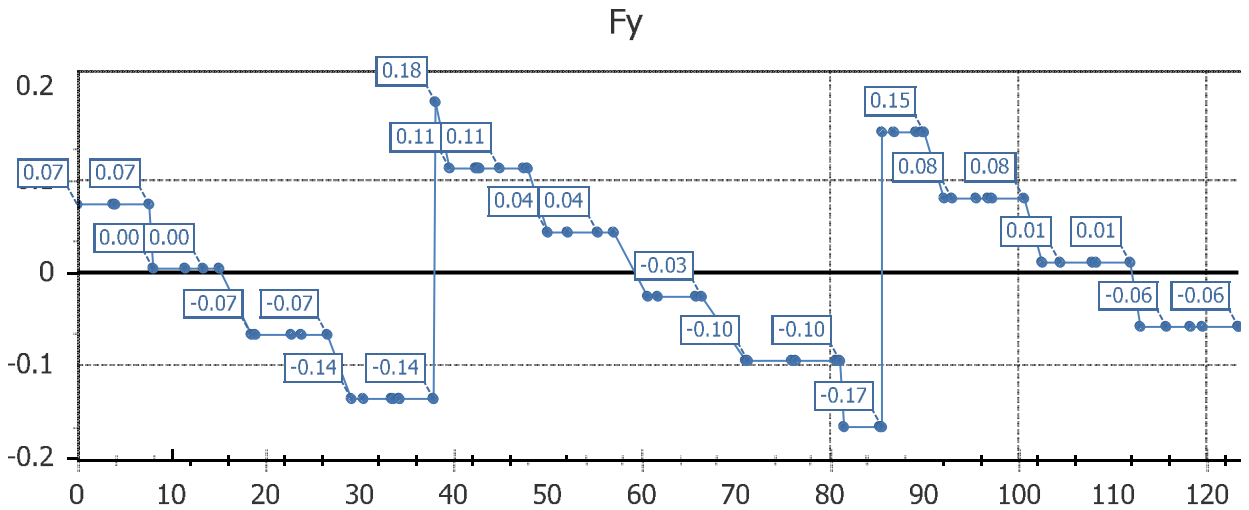
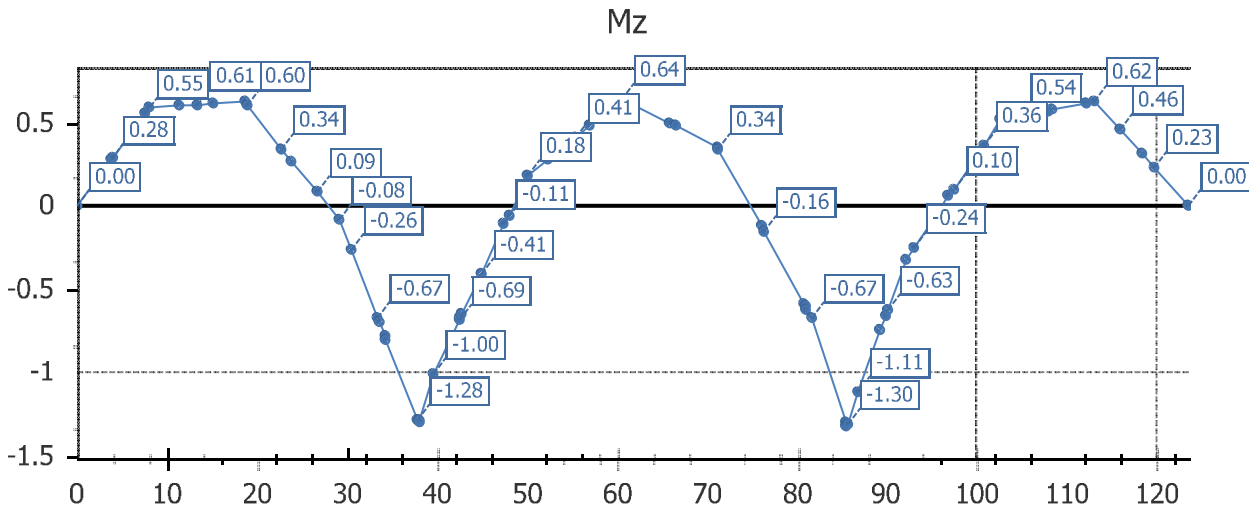
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-2.09	0.00	0.00	0.00	-10.16	0.00
33.6000	1.8842	0.00	-2.11	0.00	0.00	0.00	-10.58	0.00
37.9000	1.9974	0.00	-2.70	0.00	0.00	0.00	-20.92	0.00
38.1000	2.0021	0.00	2.65	0.00	0.00	0.00	-20.92	0.00
42.4000	2.0926	0.00	2.07	0.00	0.00	0.00	-10.77	0.00
42.6000	2.0968	0.00	2.04	0.00	0.00	0.00	-10.35	0.00
80.9000	2.9032	0.00	-2.04	0.00	0.00	0.00	-10.35	0.00
81.1000	2.9074	0.00	-2.07	0.00	0.00	0.00	-10.77	0.00
85.4000	2.9979	0.00	-2.65	0.00	0.00	0.00	-20.92	0.00
85.6000	3.0026	0.00	2.70	0.00	0.00	0.00	-20.92	0.00
89.9000	3.1158	0.00	2.11	0.00	0.00	0.00	-10.58	0.00
90.1000	3.1211	0.00	2.09	0.00	0.00	0.00	-10.16	0.00

Dead Load Initial - Initial - Self Weight X-Frames

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

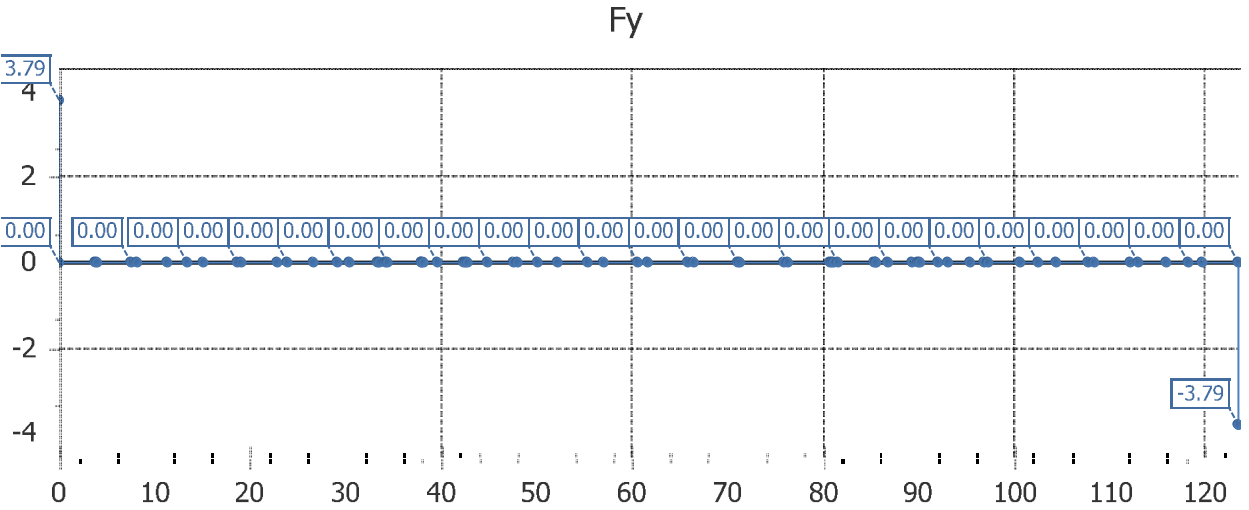
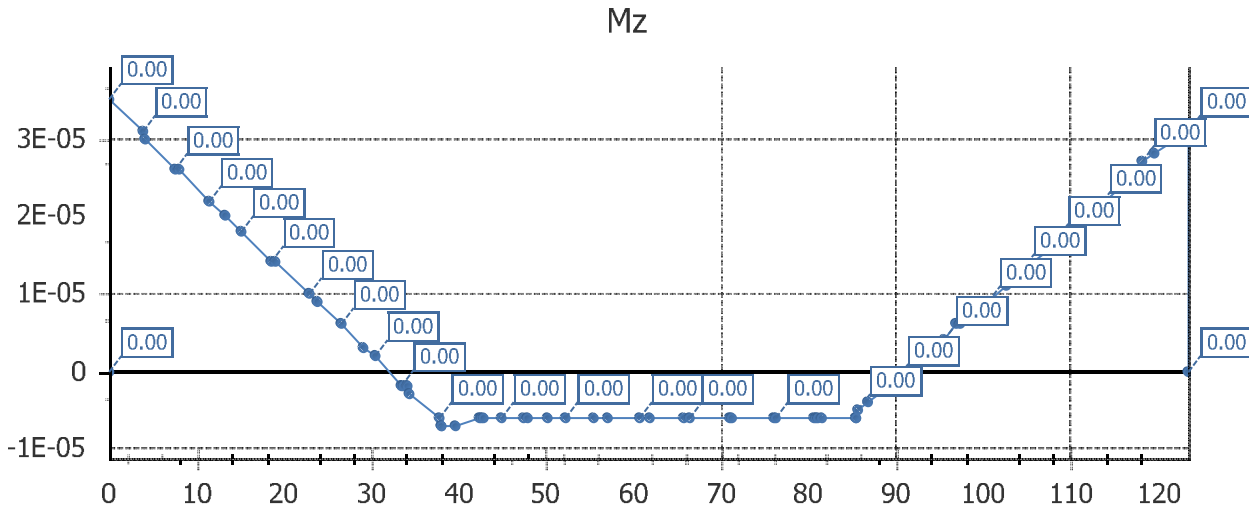


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-0.14	0.00	0.00	0.00	-0.67	0.00
33.6000	1.8842	0.00	-0.14	0.00	0.00	0.00	-0.69	0.00
37.9000	1.9974	0.00	-0.14	0.00	0.00	0.00	-1.28	0.00
38.1000	2.0021	0.00	0.18	0.00	0.00	0.00	-1.28	0.00
42.4000	2.0926	0.00	0.11	0.00	0.00	0.00	-0.69	0.00
42.6000	2.0968	0.00	0.11	0.00	0.00	0.00	-0.66	0.00
80.9000	2.9032	0.00	-0.10	0.00	0.00	0.00	-0.60	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	-0.10	0.00	0.00	0.00	-0.62	0.00
85.4000	2.9979	0.00	-0.17	0.00	0.00	0.00	-1.30	0.00
85.6000	3.0026	0.00	0.15	0.00	0.00	0.00	-1.30	0.00
89.9000	3.1158	0.00	0.15	0.00	0.00	0.00	-0.66	0.00
90.1000	3.1211	0.00	0.15	0.00	0.00	0.00	-0.63	0.00

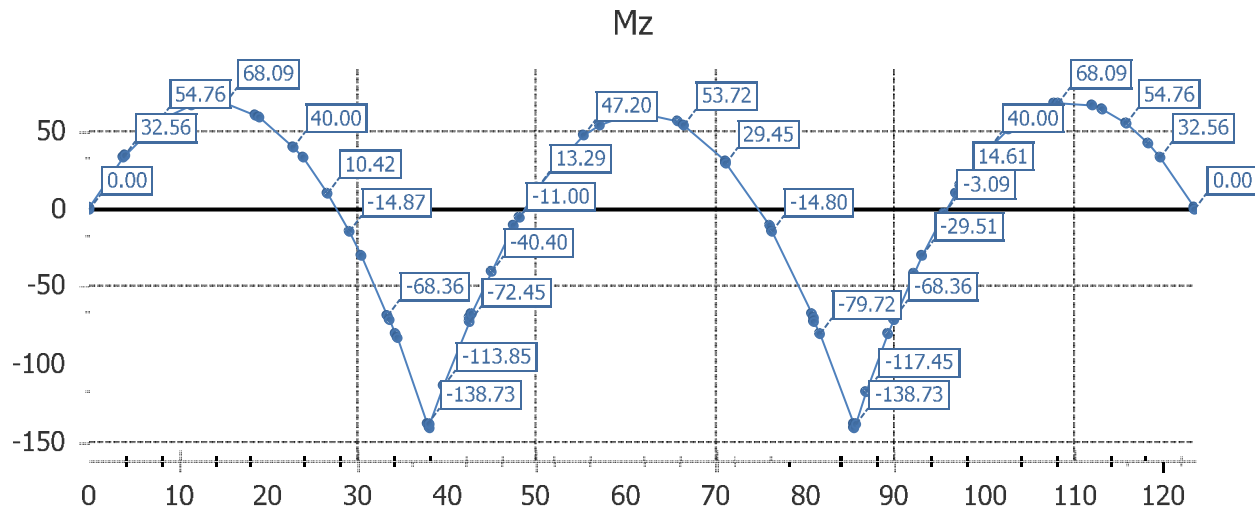
Dead Load Stage 01 - Stage 01 - Concrete Diaphragm



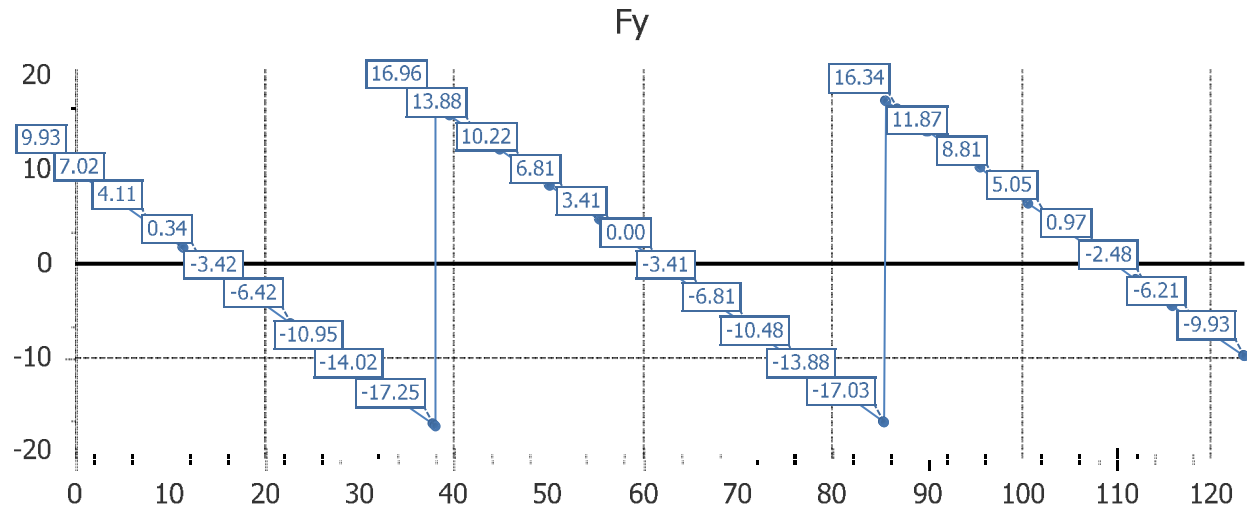
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Dead Load Stage 01 - Stage 01 - Self Weight Slab



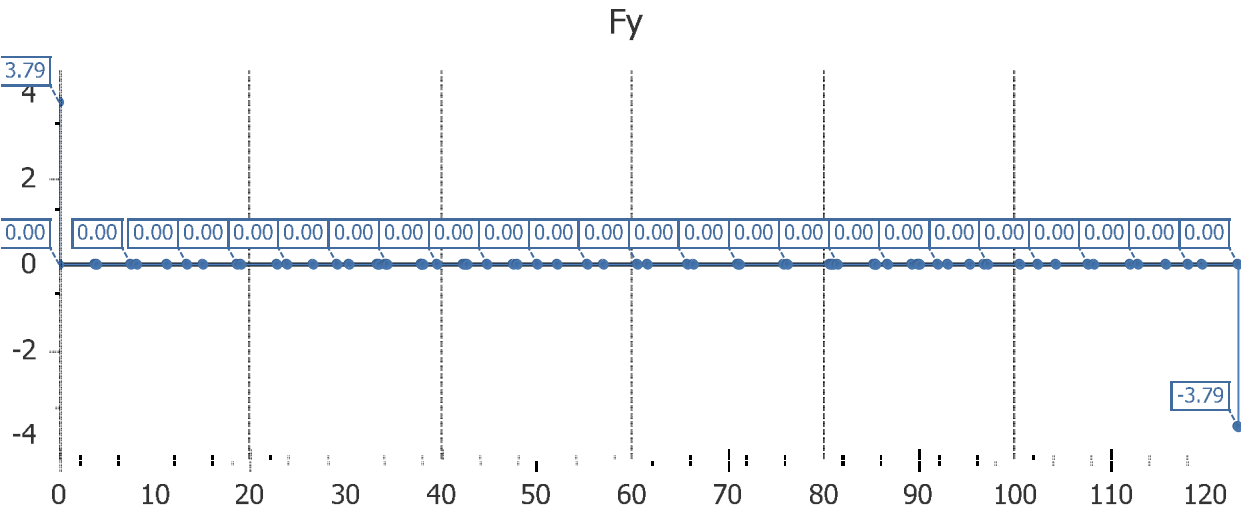
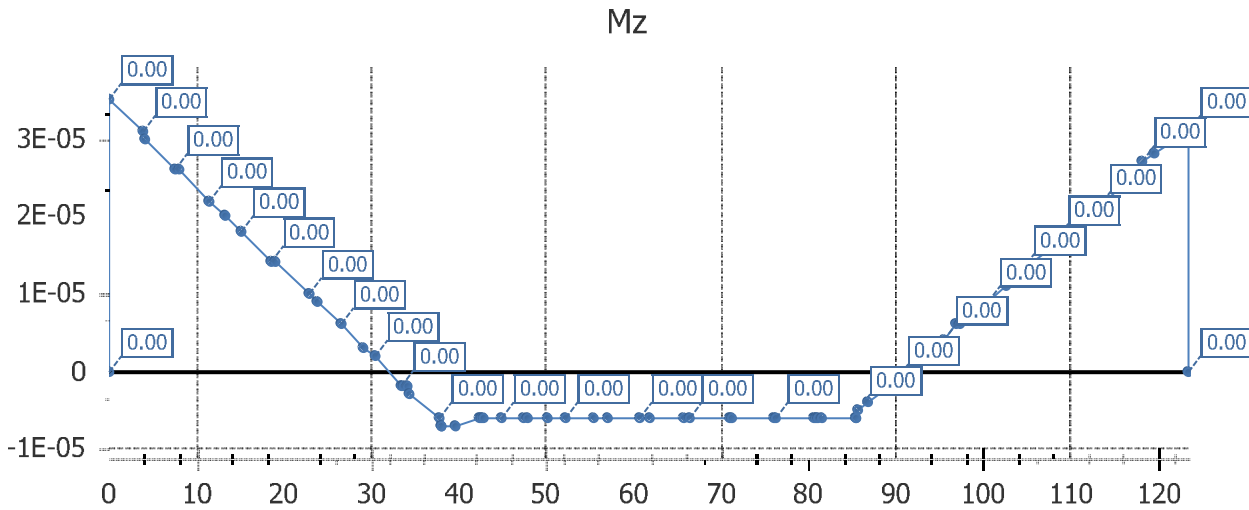
Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-14.02	0.00	0.00	0.00	-68.36	0.00
33.6000	1.8842	0.00	-14.17	0.00	0.00	0.00	-71.18	0.00
37.9000	1.9974	0.00	-17.25	0.00	0.00	0.00	-138.73	0.00
38.1000	2.0021	0.00	16.96	0.00	0.00	0.00	-138.76	0.00
42.4000	2.0926	0.00	13.88	0.00	0.00	0.00	-72.45	0.00
42.6000	2.0968	0.00	13.73	0.00	0.00	0.00	-69.69	0.00
80.9000	2.9032	0.00	-13.73	0.00	0.00	0.00	-69.69	0.00
81.1000	2.9074	0.00	-13.88	0.00	0.00	0.00	-72.45	0.00
85.4000	2.9979	0.00	-16.96	0.00	0.00	0.00	-138.76	0.00
85.6000	3.0026	0.00	17.25	0.00	0.00	0.00	-138.73	0.00
89.9000	3.1158	0.00	14.17	0.00	0.00	0.00	-71.18	0.00
90.1000	3.1211	0.00	14.02	0.00	0.00	0.00	-68.36	0.00

Dead Load Final - Final - Concrete Diaphragm

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

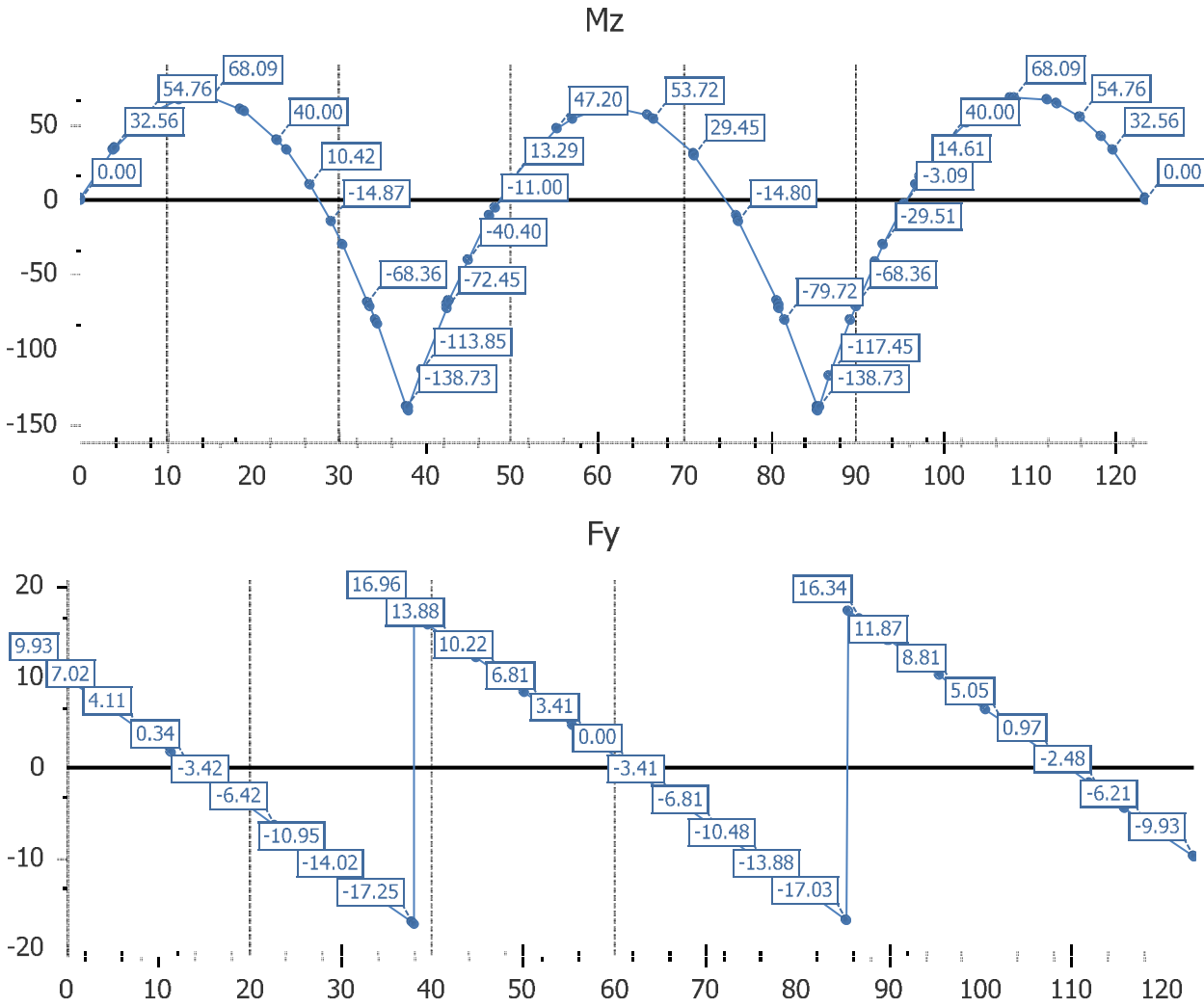


POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33.6000	1.8842	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.9000	1.9974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38.1000	2.0021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.4000	2.0926	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42.6000	2.0968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.9000	2.9032	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
81.1000	2.9074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.4000	2.9979	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.6000	3.0026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89.9000	3.1158	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.1000	3.1211	0.00	0.00	0.00	0.00	0.00	0.00	0.00

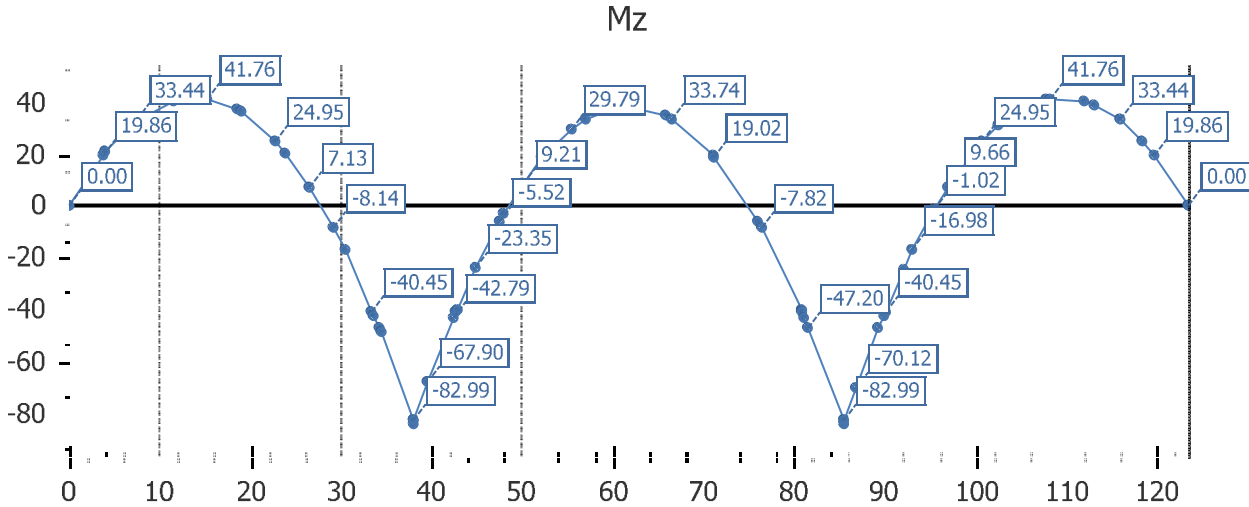
Dead Load Final - Final - Self Weight Slab



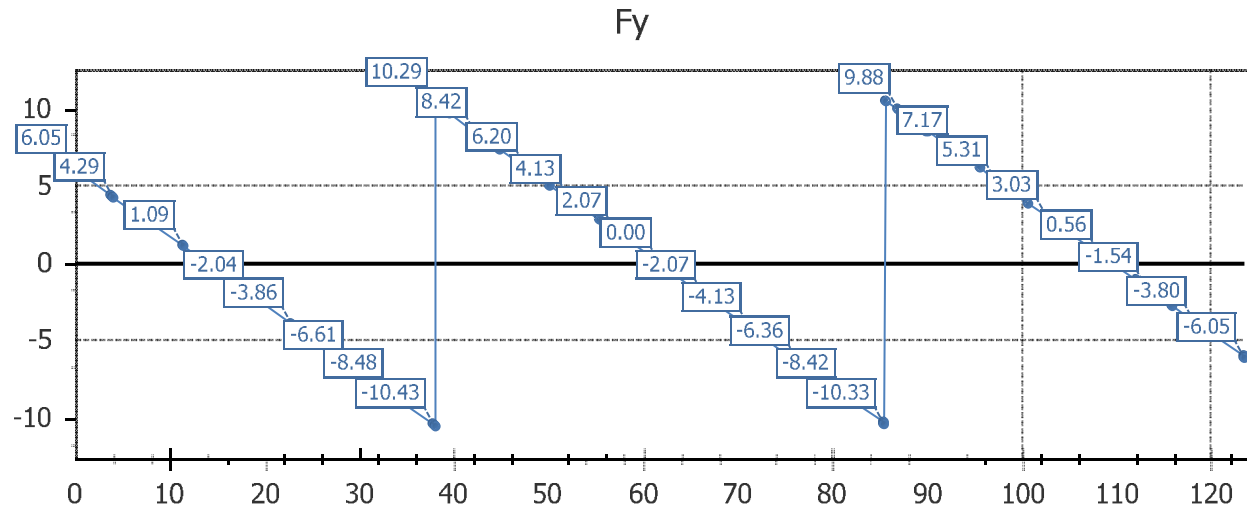
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	

POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-14.02	0.00	0.00	0.00	-68.36	0.00
33.6000	1.8842	0.00	-14.17	0.00	0.00	0.00	-71.18	0.00
37.9000	1.9974	0.00	-17.25	0.00	0.00	0.00	-138.73	0.00
38.1000	2.0021	0.00	16.96	0.00	0.00	0.00	-138.76	0.00
42.4000	2.0926	0.00	13.88	0.00	0.00	0.00	-72.45	0.00
42.6000	2.0968	0.00	13.73	0.00	0.00	0.00	-69.69	0.00
80.9000	2.9032	0.00	-13.73	0.00	0.00	0.00	-69.69	0.00
81.1000	2.9074	0.00	-13.88	0.00	0.00	0.00	-72.45	0.00
85.4000	2.9979	0.00	-16.96	0.00	0.00	0.00	-138.76	0.00
85.6000	3.0026	0.00	17.25	0.00	0.00	0.00	-138.73	0.00
89.9000	3.1158	0.00	14.17	0.00	0.00	0.00	-71.18	0.00
90.1000	3.1211	0.00	14.02	0.00	0.00	0.00	-68.36	0.00

Utilities Load Final3N - Final - Wearing Surface



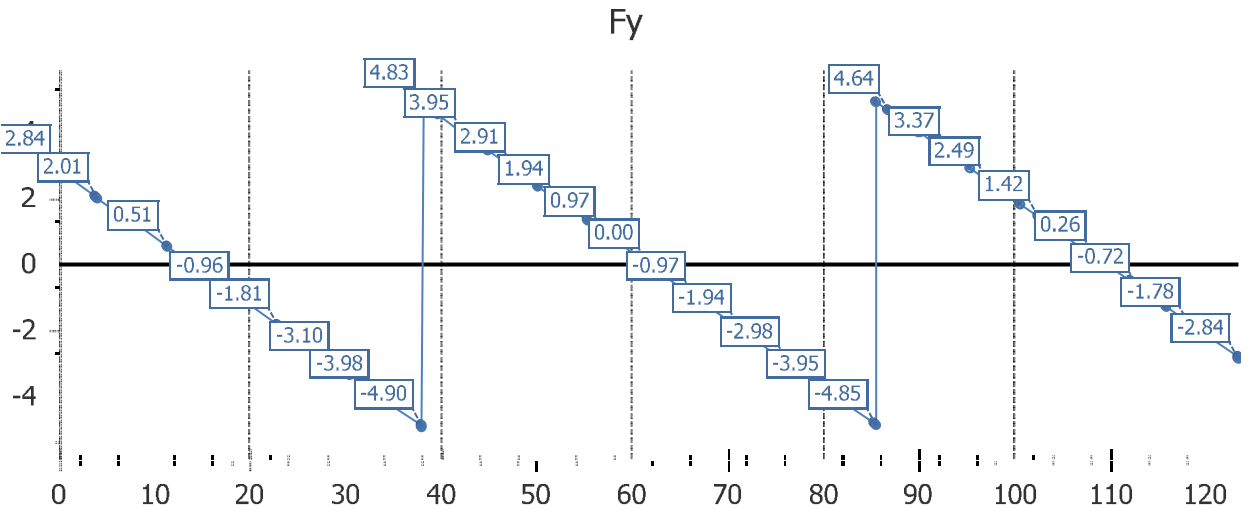
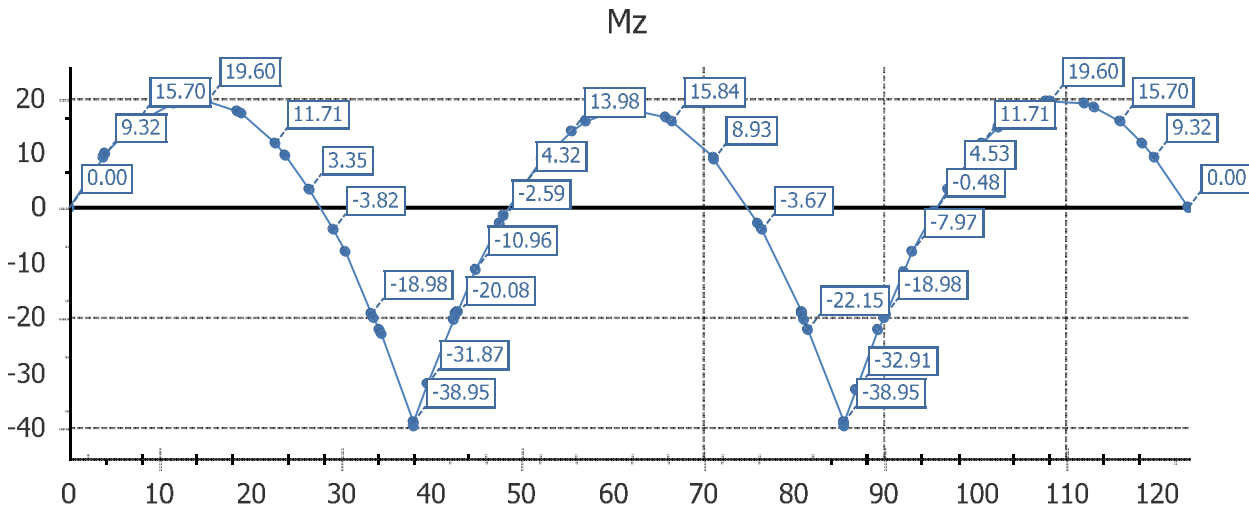
Date:	2/5/2024	US33 over CR191.lbsx		
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31	



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-8.48	0.00	0.00	0.00	-40.45	0.00
33.6000	1.8842	0.00	-8.56	0.00	0.00	0.00	-42.15	0.00
37.9000	1.9974	0.00	-10.43	0.00	0.00	0.00	-82.99	0.00
38.1000	2.0021	0.00	10.29	0.00	0.00	0.00	-83.01	0.00
42.4000	2.0926	0.00	8.42	0.00	0.00	0.00	-42.79	0.00
42.6000	2.0968	0.00	8.33	0.00	0.00	0.00	-41.11	0.00
80.9000	2.9032	0.00	-8.33	0.00	0.00	0.00	-41.11	0.00
81.1000	2.9074	0.00	-8.42	0.00	0.00	0.00	-42.79	0.00
85.4000	2.9979	0.00	-10.29	0.00	0.00	0.00	-83.01	0.00
85.6000	3.0026	0.00	10.43	0.00	0.00	0.00	-82.99	0.00
89.9000	3.1158	0.00	8.56	0.00	0.00	0.00	-42.15	0.00
90.1000	3.1211	0.00	8.48	0.00	0.00	0.00	-40.45	0.00

Superimposed Dead Load Final3N - Final - Self Weight Appurtenance - Parapets

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31



POI Loc. (ft)	Span Fraction	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)	Mz Lat. (kip-ft)
33.4000	1.8789	0.00	-3.98	0.00	0.00	0.00	-18.98	0.00
33.6000	1.8842	0.00	-4.02	0.00	0.00	0.00	-19.78	0.00
37.9000	1.9974	0.00	-4.90	0.00	0.00	0.00	-38.95	0.00
38.1000	2.0021	0.00	4.83	0.00	0.00	0.00	-38.96	0.00
42.4000	2.0926	0.00	3.95	0.00	0.00	0.00	-20.08	0.00
42.6000	2.0968	0.00	3.91	0.00	0.00	0.00	-19.30	0.00
80.9000	2.9032	0.00	-3.91	0.00	0.00	0.00	-19.30	0.00

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:41 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

POI Loc. (ft)	Span Fraction	F _x (kip)	F _y (kip)	F _z (kip)	M _x (kip-ft)	M _y (kip-ft)	M _z (kip-ft)	M _z Lat. (kip-ft)
81.1000	2.9074	0.00	-3.95	0.00	0.00	0.00	-20.08	0.00
85.4000	2.9979	0.00	-4.83	0.00	0.00	0.00	-38.96	0.00
85.6000	3.0026	0.00	4.90	0.00	0.00	0.00	-38.95	0.00
89.9000	3.1158	0.00	4.02	0.00	0.00	0.00	-19.78	0.00
90.1000	3.1211	0.00	3.98	0.00	0.00	0.00	-18.98	0.00

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:43 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

Live Load Results

Group01 Member 01

HL-93

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-262.41	115.82	-52.86	3.19	0.000	0.000
33.60	1.884	-264.87	110.65	-53.08	1.73	0.000	0.000
37.90	1.997	-331.68	65.62	-61.60	1.73	0.000	0.000
38.10	2.002	-329.35	65.18	-6.12	61.54	0.000	0.000
42.40	2.093	-221.92	81.44	-6.14	54.79	0.000	0.000
42.60	2.097	-219.42	81.57	-6.14	54.79	0.000	0.000
80.90	2.903	-214.36	111.24	-56.25	6.24	0.000	0.000
81.10	2.907	-216.82	105.82	-62.39	6.26	0.000	0.000
85.40	2.998	-330.84	66.73	-63.31	6.26	0.000	0.000
85.60	3.003	-334.35	67.18	-1.77	56.23	0.000	0.000
89.90	3.116	-270.05	110.47	-1.85	51.91	0.000	0.000
90.10	3.121	-267.56	114.98	-1.85	51.91	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.075	0.063
33.60	1.884	-0.072	0.061
37.90	1.997	-0.002	0.002
38.10	2.002	-0.002	0.002
42.40	2.093	-0.080	0.062
42.60	2.097	-0.084	0.065
80.90	2.903	-0.085	0.065
81.10	2.907	-0.081	0.062
85.40	2.998	-0.002	0.002
85.60	3.003	-0.002	0.002
89.90	3.116	-0.071	0.062
90.10	3.121	-0.075	0.064

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:43 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

Fatigue Load

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-97.04	30.84	-21.71	0.61	0.000	0.000
33.60	1.884	-99.87	28.45	-21.71	0.61	0.000	0.000
37.90	1.997	-164.63	22.96	-23.10	0.61	0.000	0.000
38.10	2.002	-164.39	22.80	-2.14	24.24	0.000	0.000
42.40	2.093	-99.24	13.60	-2.14	21.38	0.000	0.000
42.60	2.097	-96.59	13.17	-2.14	21.38	0.000	0.000
80.90	2.903	-96.69	15.61	-21.70	2.14	0.000	0.000
81.10	2.907	-99.39	13.61	-24.66	2.14	0.000	0.000
85.40	2.998	-164.71	22.83	-24.66	2.14	0.000	0.000
85.60	3.003	-164.81	22.98	-0.61	22.24	0.000	0.000
89.90	3.116	-99.73	28.94	-0.61	21.38	0.000	0.000
90.10	3.121	-96.78	31.12	-0.61	21.38	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.024	0.023
33.60	1.884	-0.023	0.022
37.90	1.997	0.000	0.001
38.10	2.002	-0.001	0.000
42.40	2.093	-0.029	0.018
42.60	2.097	-0.030	0.019
80.90	2.903	-0.030	0.019
81.10	2.907	-0.028	0.018
85.40	2.998	-0.001	0.000
85.60	3.003	0.000	0.001
89.90	3.116	-0.023	0.022
90.10	3.121	-0.024	0.022

HL-93 (Deflection per AASHTO)

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
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POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.058	0.051
33.60	1.884	-0.055	0.049
37.90	1.997	-0.001	0.001
38.10	2.002	-0.001	0.001
42.40	2.093	-0.064	0.043
42.60	2.097	-0.068	0.045
80.90	2.903	-0.069	0.044
81.10	2.907	-0.066	0.042
85.40	2.998	-0.001	0.001
85.60	3.003	-0.001	0.001
89.90	3.116	-0.054	0.050
90.10	3.121	-0.057	0.052

Group01 Member 02

HL-93

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-254.11	115.05	-60.64	3.58	0.000	0.000
33.60	1.884	-256.49	109.87	-60.90	1.84	0.000	0.000
37.90	1.997	-321.19	60.83	-70.64	1.84	0.000	0.000
38.10	2.002	-318.94	56.94	-6.50	70.62	0.000	0.000
42.40	2.093	-214.89	72.58	-6.53	62.91	0.000	0.000
42.60	2.097	-212.47	73.77	-6.53	62.91	0.000	0.000
80.90	2.903	-193.68	104.76	-64.43	7.16	0.000	0.000
81.10	2.907	-195.98	99.66	-71.48	7.18	0.000	0.000
85.40	2.998	-317.95	62.88	-72.54	7.18	0.000	0.000
85.60	3.003	-321.33	67.17	-2.03	64.73	0.000	0.000
89.90	3.116	-261.21	115.57	-2.12	57.24	0.000	0.000
90.10	3.121	-258.97	119.25	-2.37	56.46	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
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POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.083	0.071
33.60	1.884	-0.079	0.068
37.90	1.997	-0.002	0.002
38.10	2.002	-0.002	0.002
42.40	2.093	-0.089	0.068
42.60	2.097	-0.094	0.071
80.90	2.903	-0.096	0.069
81.10	2.907	-0.091	0.066
85.40	2.998	-0.002	0.002
85.60	3.003	-0.002	0.002
89.90	3.116	-0.075	0.069
90.10	3.121	-0.078	0.072

Fatigue Load

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-78.93	26.33	-23.37	0.64	0.000	0.000
33.60	1.884	-81.25	24.15	-23.37	0.64	0.000	0.000
37.90	1.997	-134.30	19.28	-24.85	0.64	0.000	0.000
38.10	2.002	-134.13	17.70	-2.28	26.08	0.000	0.000
42.40	2.093	-80.93	10.56	-2.28	23.01	0.000	0.000
42.60	2.097	-78.77	10.23	-2.28	23.01	0.000	0.000
80.90	2.903	-67.53	12.24	-23.34	2.31	0.000	0.000
81.10	2.907	-70.46	10.71	-26.45	2.31	0.000	0.000
85.40	2.998	-133.46	17.94	-26.45	2.31	0.000	0.000
85.60	3.003	-133.71	19.54	-0.65	23.94	0.000	0.000
89.90	3.116	-81.31	34.37	-0.65	20.72	0.000	0.000
90.10	3.121	-78.98	35.42	-1.34	20.72	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.025	0.024

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POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.60	1.884	-0.024	0.023
37.90	1.997	-0.001	0.001
38.10	2.002	-0.001	0.000
42.40	2.093	-0.030	0.019
42.60	2.097	-0.032	0.020
80.90	2.903	-0.031	0.019
81.10	2.907	-0.030	0.019
85.40	2.998	-0.001	0.000
85.60	3.003	-0.001	0.001
89.90	3.116	-0.024	0.023
90.10	3.121	-0.025	0.024

HL-93 (Deflection per AASHTO)

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.065	0.057
33.60	1.884	-0.062	0.055
37.90	1.997	-0.001	0.001
38.10	2.002	-0.001	0.001
42.40	2.093	-0.072	0.048
42.60	2.097	-0.076	0.050
80.90	2.903	-0.077	0.045
81.10	2.907	-0.074	0.044
85.40	2.998	-0.002	0.001
85.60	3.003	-0.001	0.001
89.90	3.116	-0.056	0.056
90.10	3.121	-0.059	0.058

Group01 Member 03

HL-93

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:43 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-248.67	115.04	-60.58	3.58	0.000	0.000
33.60	1.884	-251.02	109.87	-60.84	1.84	0.000	0.000
37.90	1.997	-318.30	60.84	-70.56	1.84	0.000	0.000
38.10	2.002	-316.29	56.95	-6.51	70.74	0.000	0.000
42.40	2.093	-214.28	98.75	-6.53	64.07	0.000	0.000
42.60	2.097	-212.01	104.45	-6.53	54.97	0.000	0.000
80.90	2.903	-193.04	104.77	-64.26	7.15	0.000	0.000
81.10	2.907	-195.31	99.66	-71.32	7.17	0.000	0.000
85.40	2.998	-316.75	62.81	-72.38	7.17	0.000	0.000
85.60	3.003	-320.12	67.10	-2.03	64.70	0.000	0.000
89.90	3.116	-260.15	115.57	-2.05	57.21	0.000	0.000
90.10	3.121	-257.91	119.22	-2.37	56.44	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.083	0.069
33.60	1.884	-0.079	0.066
37.90	1.997	-0.002	0.002
38.10	2.002	-0.002	0.002
42.40	2.093	-0.088	0.068
42.60	2.097	-0.092	0.071
80.90	2.903	-0.095	0.069
81.10	2.907	-0.091	0.066
85.40	2.998	-0.002	0.002
85.60	3.003	-0.002	0.002
89.90	3.116	-0.075	0.069
90.10	3.121	-0.078	0.072

Fatigue Load

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-78.12	26.33	-23.37	0.64	0.000	0.000

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POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.60	1.884	-80.61	24.12	-23.37	0.64	0.000	0.000
37.90	1.997	-134.14	19.28	-24.85	0.64	0.000	0.000
38.10	2.002	-134.12	17.70	-2.28	26.07	0.000	0.000
42.40	2.093	-80.94	23.82	-2.28	23.57	0.000	0.000
42.60	2.097	-78.78	25.84	-2.28	19.05	0.000	0.000
80.90	2.903	-67.58	23.27	-23.33	2.31	0.000	0.000
81.10	2.907	-70.51	20.39	-26.46	2.31	0.000	0.000
85.40	2.998	-133.49	17.94	-26.46	2.31	0.000	0.000
85.60	3.003	-133.73	19.54	-0.65	23.94	0.000	0.000
89.90	3.116	-81.34	34.37	-0.65	20.72	0.000	0.000
90.10	3.121	-78.95	35.42	-1.34	20.72	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.025	0.024
33.60	1.884	-0.024	0.023
37.90	1.997	-0.001	0.001
38.10	2.002	-0.001	0.000
42.40	2.093	-0.030	0.019
42.60	2.097	-0.032	0.020
80.90	2.903	-0.031	0.019
81.10	2.907	-0.030	0.019
85.40	2.998	-0.001	0.000
85.60	3.003	-0.001	0.001
89.90	3.116	-0.024	0.023
90.10	3.121	-0.025	0.024

HL-93 (Deflection per AASHTO)

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.065	0.056
33.60	1.884	-0.062	0.054

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POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
37.90	1.997	-0.001	0.001
38.10	2.002	-0.001	0.001
42.40	2.093	-0.071	0.048
42.60	2.097	-0.074	0.050
80.90	2.903	-0.077	0.045
81.10	2.907	-0.074	0.044
85.40	2.998	-0.002	0.001
85.60	3.003	-0.001	0.001
89.90	3.116	-0.056	0.056
90.10	3.121	-0.059	0.058

Group01 Member 04

HL-93

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-248.67	115.05	-60.56	3.58	0.000	0.000
33.60	1.884	-251.02	109.88	-60.82	1.84	0.000	0.000
37.90	1.997	-318.29	60.84	-70.57	1.84	0.000	0.000
38.10	2.002	-316.29	56.95	-6.51	70.75	0.000	0.000
42.40	2.093	-214.46	98.74	-6.53	64.05	0.000	0.000
42.60	2.097	-212.19	104.44	-6.53	54.95	0.000	0.000
80.90	2.903	-193.04	104.76	-64.29	7.16	0.000	0.000
81.10	2.907	-195.31	99.65	-71.38	7.18	0.000	0.000
85.40	2.998	-316.62	62.87	-72.44	7.18	0.000	0.000
85.60	3.003	-320.00	67.16	-2.03	64.72	0.000	0.000
89.90	3.116	-260.03	115.54	-2.05	57.23	0.000	0.000
90.10	3.121	-257.80	119.22	-2.36	56.45	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.082	0.069
33.60	1.884	-0.079	0.067

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POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
37.90	1.997	-0.002	0.002
38.10	2.002	-0.002	0.002
42.40	2.093	-0.088	0.068
42.60	2.097	-0.092	0.071
80.90	2.903	-0.095	0.069
81.10	2.907	-0.091	0.066
85.40	2.998	-0.002	0.002
85.60	3.003	-0.002	0.002
89.90	3.116	-0.075	0.069
90.10	3.121	-0.078	0.072

Fatigue Load

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-78.15	26.33	-23.37	0.64	0.000	0.000
33.60	1.884	-80.64	24.20	-23.37	0.64	0.000	0.000
37.90	1.997	-134.18	19.29	-24.85	0.64	0.000	0.000
38.10	2.002	-134.12	17.72	-2.28	26.07	0.000	0.000
42.40	2.093	-80.90	23.82	-2.28	23.57	0.000	0.000
42.60	2.097	-78.74	25.84	-2.28	19.02	0.000	0.000
80.90	2.903	-67.36	23.27	-23.33	2.31	0.000	0.000
81.10	2.907	-70.29	20.39	-26.51	2.31	0.000	0.000
85.40	2.998	-133.40	17.94	-26.51	2.31	0.000	0.000
85.60	3.003	-133.65	19.54	-0.65	23.94	0.000	0.000
89.90	3.116	-81.29	34.37	-0.65	20.72	0.000	0.000
90.10	3.121	-78.91	35.42	-1.34	20.72	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.025	0.024
33.60	1.884	-0.024	0.023
37.90	1.997	-0.001	0.001

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POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
38.10	2.002	-0.001	0.000
42.40	2.093	-0.030	0.019
42.60	2.097	-0.032	0.020
80.90	2.903	-0.031	0.019
81.10	2.907	-0.030	0.019
85.40	2.998	-0.001	0.000
85.60	3.003	-0.001	0.001
89.90	3.116	-0.024	0.023
90.10	3.121	-0.025	0.024

HL-93 (Deflection per AASHTO)

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.065	0.056
33.60	1.884	-0.062	0.054
37.90	1.997	-0.001	0.001
38.10	2.002	-0.001	0.001
42.40	2.093	-0.071	0.048
42.60	2.097	-0.074	0.050
80.90	2.903	-0.077	0.045
81.10	2.907	-0.074	0.044
85.40	2.998	-0.002	0.001
85.60	3.003	-0.001	0.001
89.90	3.116	-0.056	0.056
90.10	3.121	-0.059	0.058

Group01 Member 05

HL-93

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-248.21	115.14	-60.53	3.60	0.000	0.000

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POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.60	1.884	-250.56	109.97	-60.79	1.85	0.000	0.000
37.90	1.997	-317.78	60.96	-70.64	1.85	0.000	0.000
38.10	2.002	-315.78	57.06	-6.52	70.74	0.000	0.000
42.40	2.093	-214.14	98.79	-6.55	64.02	0.000	0.000
42.60	2.097	-211.88	104.49	-6.55	54.92	0.000	0.000
80.90	2.903	-193.38	75.98	-63.64	7.22	0.000	0.000
81.10	2.907	-195.65	71.88	-63.64	7.22	0.000	0.000
85.40	2.998	-309.85	62.87	-71.77	7.18	0.000	0.000
85.60	3.003	-312.34	67.00	-2.03	64.89	0.000	0.000
89.90	3.116	-251.07	115.94	-2.71	57.19	0.000	0.000
90.10	3.121	-248.89	119.62	-2.71	56.41	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.083	0.069
33.60	1.884	-0.079	0.066
37.90	1.997	-0.002	0.002
38.10	2.002	-0.002	0.002
42.40	2.093	-0.087	0.068
42.60	2.097	-0.092	0.071
80.90	2.903	-0.092	0.069
81.10	2.907	-0.088	0.066
85.40	2.998	-0.002	0.002
85.60	3.003	-0.002	0.002
89.90	3.116	-0.075	0.067
90.10	3.121	-0.079	0.069

Fatigue Load

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-78.16	26.33	-23.37	0.65	0.000	0.000
33.60	1.884	-80.65	24.28	-23.37	0.65	0.000	0.000

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:43 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
37.90	1.997	-134.19	19.33	-24.85	0.65	0.000	0.000
38.10	2.002	-134.11	17.75	-2.28	26.11	0.000	0.000
42.40	2.093	-80.84	23.82	-2.28	23.56	0.000	0.000
42.60	2.097	-78.68	25.84	-2.28	19.03	0.000	0.000
80.90	2.903	-67.89	23.27	-23.33	2.31	0.000	0.000
81.10	2.907	-70.81	20.39	-23.33	2.31	0.000	0.000
85.40	2.998	-133.65	17.94	-26.40	2.31	0.000	0.000
85.60	3.003	-133.90	19.54	-0.65	23.94	0.000	0.000
89.90	3.116	-81.61	34.37	-0.65	20.72	0.000	0.000
90.10	3.121	-79.17	35.42	-1.34	20.72	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.025	0.021
33.60	1.884	-0.024	0.020
37.90	1.997	-0.001	0.001
38.10	2.002	-0.001	0.000
42.40	2.093	-0.026	0.019
42.60	2.097	-0.028	0.020
80.90	2.903	-0.028	0.019
81.10	2.907	-0.026	0.019
85.40	2.998	-0.001	0.000
85.60	3.003	-0.001	0.001
89.90	3.116	-0.024	0.020
90.10	3.121	-0.025	0.021

HL-93 (Deflection per AASHTO)

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.065	0.056
33.60	1.884	-0.062	0.054
37.90	1.997	-0.001	0.001

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:43 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
38.10	2.002	-0.001	0.001
42.40	2.093	-0.071	0.048
42.60	2.097	-0.074	0.050
80.90	2.903	-0.074	0.045
81.10	2.907	-0.071	0.044
85.40	2.998	-0.001	0.001
85.60	3.003	-0.001	0.001
89.90	3.116	-0.056	0.054
90.10	3.121	-0.059	0.056

Group01 Member 06

HL-93

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-256.23	97.80	-52.66	2.74	0.000	0.000
33.60	1.884	-258.65	95.58	-52.66	2.05	0.000	0.000
37.90	1.997	-321.30	60.95	-60.52	1.61	0.000	0.000
38.10	2.002	-318.52	60.54	-5.68	61.77	0.000	0.000
42.40	2.093	-216.35	104.98	-5.71	55.79	0.000	0.000
42.60	2.097	-214.05	111.03	-5.71	47.85	0.000	0.000
80.90	2.903	-199.69	80.54	-55.43	6.12	0.000	0.000
81.10	2.907	-202.03	76.19	-55.43	6.12	0.000	0.000
85.40	2.998	-319.51	65.14	-62.58	6.12	0.000	0.000
85.60	3.003	-322.09	65.42	-1.73	56.60	0.000	0.000
89.90	3.116	-259.00	115.81	-2.27	49.89	0.000	0.000
90.10	3.121	-256.75	119.49	-2.27	49.21	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.073	0.061
33.60	1.884	-0.070	0.059
37.90	1.997	-0.002	0.002

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:43 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
38.10	2.002	-0.002	0.001
42.40	2.093	-0.078	0.060
42.60	2.097	-0.082	0.063
80.90	2.903	-0.082	0.061
81.10	2.907	-0.078	0.059
85.40	2.998	-0.002	0.001
85.60	3.003	-0.001	0.002
89.90	3.116	-0.067	0.059
90.10	3.121	-0.070	0.062

Fatigue Load

POI Loc. (ft)	Span Fraction	Max. neg. moment Mz (kip-ft)	Max. pos. moment Mz (kip-ft)	Max. neg. shear Fy (kip)	Max. pos. shear Fy (kip)	Flange lateral moment neg. (kip-ft)	Flange lateral moment pos. (kip-ft)
33.40	1.879	-95.83	31.02	-21.71	0.60	0.000	0.000
33.60	1.884	-98.89	28.96	-21.71	0.60	0.000	0.000
37.90	1.997	-164.78	22.68	-23.25	0.60	0.000	0.000
38.10	2.002	-164.76	22.53	-2.12	24.23	0.000	0.000
42.40	2.093	-99.03	30.34	-2.12	21.90	0.000	0.000
42.60	2.097	-96.39	32.91	-2.12	17.68	0.000	0.000
80.90	2.903	-82.85	28.92	-21.68	2.14	0.000	0.000
81.10	2.907	-86.45	25.23	-21.68	2.14	0.000	0.000
85.40	2.998	-163.71	22.81	-24.54	2.14	0.000	0.000
85.60	3.003	-164.02	22.96	-0.61	22.25	0.000	0.000
89.90	3.116	-99.96	40.47	-0.61	19.26	0.000	0.000
90.10	3.121	-96.98	41.71	-1.25	19.26	0.000	0.000

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.024	0.020
33.60	1.884	-0.023	0.019
37.90	1.997	0.000	0.001
38.10	2.002	-0.001	0.000

Date:	2/5/2024	US33 over CR191.lbsx	
Time:	12:43 PM	Bentley LEAP Bridge Steel [AASHTO LRFD 9th Ed. with 2020 Interims]	v21.02.00.31

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
42.40	2.093	-0.025	0.018
42.60	2.097	-0.026	0.019
80.90	2.903	-0.026	0.018
81.10	2.907	-0.025	0.018
85.40	2.998	-0.001	0.000
85.60	3.003	0.000	0.000
89.90	3.116	-0.023	0.019
90.10	3.121	-0.024	0.020

HL-93 (Deflection per AASHTO)

POI Loc. (ft)	Span Fraction	Max. neg. deflection Y Disp-Y (in)	Max. pos. deflection Y Disp-Y (in)
33.40	1.879	-0.057	0.050
33.60	1.884	-0.054	0.048
37.90	1.997	-0.001	0.001
38.10	2.002	-0.001	0.001
42.40	2.093	-0.063	0.042
42.60	2.097	-0.066	0.043
80.90	2.903	-0.066	0.040
81.10	2.907	-0.063	0.039
85.40	2.998	-0.001	0.001
85.60	3.003	-0.001	0.001
89.90	3.116	-0.050	0.048
90.10	3.121	-0.052	0.050

INTERIOR GIRDER - SELF WEIGHT		
Item	Qty	Unit
Left Side of Moment Plate 1:	10.16	k-ft
Right Side of Moment Plate 1:	10.35	k-ft
Left Side of Moment Plate 2:	10.35	k-ft
Right Side of Moment Plate 2:	10.16	k-ft
Max Moment for Design:	10.35	k-ft

INTERIOR GIRDER - CROSS FRAMES		
Item	Qty	Unit
Left Side of Moment Plate 1:	1.27	k-ft
Right Side of Moment Plate 1:	1.23	k-ft
Left Side of Moment Plate 2:	1.31	k-ft
Right Side of Moment Plate 2:	1.32	k-ft
Max Moment for Design:	1.32	k-ft

INTERIOR GIRDER - DECK SLAB		
Item	Qty	Unit
Left Side of Moment Plate 1:	75.95	k-ft
Right Side of Moment Plate 1:	77.43	k-ft
Left Side of Moment Plate 2:	77.43	k-ft
Right Side of Moment Plate 2:	75.95	k-ft
Max Moment for Design:	77.43	k-ft

INTERIOR GIRDER - PARAPETS		
Item	Qty	Unit
Left Side of Moment Plate 1:	18.99	k-ft
Right Side of Moment Plate 1:	19.30	k-ft
Left Side of Moment Plate 2:	19.30	k-ft
Right Side of Moment Plate 2:	18.99	k-ft
Max Moment for Design:	19.30	k-ft

INTERIOR GIRDER - WEARING SURFACE		
Item	Qty	Unit
Left Side of Moment Plate 1:	40.45	k-ft
Right Side of Moment Plate 1:	41.12	k-ft
Left Side of Moment Plate 2:	41.12	k-ft
Right Side of Moment Plate 2:	40.45	k-ft
Max Moment for Design:	41.12	k-ft

INTERIOR GIRDER - LIVE LOAD		
Item	Qty	Unit
Left Side of Moment Plate 1:	254.11	k-ft
Right Side of Moment Plate 1:	212.47	k-ft
Left Side of Moment Plate 2:	193.68	k-ft
Right Side of Moment Plate 2:	258.97	k-ft
Max Moment for Design:	258.97	k-ft

INTERIOR GIRDER - MAX POSITIVE LIVE LOAD		
Item	Qty	Unit
Left Side of Moment Plate 1:	115.05	k-ft
Right Side of Moment Plate 1:	73.77	k-ft
Left Side of Moment Plate 2:	104.76	k-ft
Right Side of Moment Plate 2:	119.25	k-ft
Max Moment for Design:	119.25	k-ft

CHECK FOR STRESS REVERSAL AT END OF PLATES		
Item	Qty	Unit
Max Positive Live Load Moment:	119.25	k-ft
Sum of Negative Dead Load Moments:	108.40	k-ft
Combined Moments:	10.85	k-ft
Net Tension or Net Compression?	TENS	

FASCIA GIRDER - SELF WEIGHT		
Item	Qty	Unit
Left Side of Moment Plate 1:	10.16	k-ft
Right Side of Moment Plate 1:	10.35	k-ft
Left Side of Moment Plate 2:	10.35	k-ft
Right Side of Moment Plate 2:	10.16	k-ft
Max Moment for Design:	10.35	k-ft

FASCIA GIRDER - CROSS FRAMES		
Item	Qty	Unit
Left Side of Moment Plate 1:	0.63	k-ft
Right Side of Moment Plate 1:	0.60	k-ft
Left Side of Moment Plate 2:	0.66	k-ft
Right Side of Moment Plate 2:	0.67	k-ft
Max Moment for Design:	0.67	k-ft

FASCIA GIRDER - DECK SLAB		
Item	Qty	Unit
Left Side of Moment Plate 1:	68.36	k-ft
Right Side of Moment Plate 1:	69.69	k-ft
Left Side of Moment Plate 2:	69.69	k-ft
Right Side of Moment Plate 2:	68.36	k-ft
Max Moment for Design:	69.69	k-ft

FASCIA GIRDER - PARAPETS		
Item	Qty	Unit
Left Side of Moment Plate 1:	18.98	k-ft
Right Side of Moment Plate 1:	19.30	k-ft
Left Side of Moment Plate 2:	19.30	k-ft
Right Side of Moment Plate 2:	18.98	k-ft
Max Moment for Design:	19.30	k-ft

FASCIA GIRDER - WEARING SURFACE		
Item	Qty	Unit
Left Side of Moment Plate 1:	40.45	k-ft
Right Side of Moment Plate 1:	41.11	k-ft
Left Side of Moment Plate 2:	41.12	k-ft
Right Side of Moment Plate 2:	40.45	k-ft
Max Moment for Design:	41.12	k-ft

FASCIA GIRDER - LIVE LOAD		
Item	Qty	Unit
Left Side of Moment Plate 1:	262.41	k-ft
Right Side of Moment Plate 1:	219.42	k-ft
Left Side of Moment Plate 2:	214.36	k-ft
Right Side of Moment Plate 2:	267.56	k-ft
Max Moment for Design:	267.56	k-ft

FASCIA GIRDER - MAX POSITIVE LIVE LOAD		
Item	Qty	Unit
Left Side of Moment Plate 1:	115.82	k-ft
Right Side of Moment Plate 1:	81.57	k-ft
Left Side of Moment Plate 2:	111.24	k-ft
Right Side of Moment Plate 2:	114.98	k-ft
Max Moment for Design:	115.82	k-ft

CHECK FOR STRESS REVERSAL AT END OF PLATES		
Item	Qty	Unit
Max Positive Live Load Moment:	115.82	k-ft
Sum of Negative Dead Load Moments:	100.01	k-ft
Combined Moments:	15.81	k-ft
Net Tension or Net Compression?	TENS	

Conservatively Exclude Wearing Surface

=> Use Bottom Flange Retrofits on all Girders

INTERIOR GIRDER - SELF WEIGHT		
Item	Qty	Unit
Left Side of Moment Plate 1:	2.09	kip
Right Side of Moment Plate 1:	2.04	kip
Left Side of Moment Plate 2:	2.04	kip
Right Side of Moment Plate 2:	2.09	kip
Max Shear for Design:	2.09	kip

INTERIOR GIRDER - CROSS FRAMES		
Item	Qty	Unit
Left Side of Moment Plate 1:	0.30	kip
Right Side of Moment Plate 1:	0.20	kip
Left Side of Moment Plate 2:	0.22	kip
Right Side of Moment Plate 2:	0.28	kip
Max Shear for Design:	0.30	kip

INTERIOR GIRDER - DECK SLAB		
Item	Qty	Unit
Left Side of Moment Plate 1:	15.58	kip
Right Side of Moment Plate 1:	15.26	kip
Left Side of Moment Plate 2:	15.26	kip
Right Side of Moment Plate 2:	15.58	kip
Max Shear for Design:	15.58	kip

INTERIOR GIRDER - PARAPETS		
Item	Qty	Unit
Left Side of Moment Plate 1:	3.98	kip
Right Side of Moment Plate 1:	3.91	kip
Left Side of Moment Plate 2:	3.91	kip
Right Side of Moment Plate 2:	3.98	kip
Max Shear for Design:	3.98	kip

INTERIOR GIRDER - WEARING SURFACE		
Item	Qty	Unit
Left Side of Moment Plate 1:	8.48	kip
Right Side of Moment Plate 1:	8.33	kip
Left Side of Moment Plate 2:	8.33	kip
Right Side of Moment Plate 2:	8.48	kip
Max Shear for Design:	8.48	kip

INTERIOR GIRDER - LIVE LOAD		
Item	Qty	Unit
Left Side of Moment Plate 1:	60.64	kip
Right Side of Moment Plate 1:	62.91	kip
Left Side of Moment Plate 2:	64.43	kip
Right Side of Moment Plate 2:	56.46	kip
Max Shear for Design:	64.43	kip

FASCIA GIRDER - SELF WEIGHT		
Item	Qty	Unit
Left Side of Moment Plate 1:	2.09	kip
Right Side of Moment Plate 1:	2.04	kip
Left Side of Moment Plate 2:	2.04	kip
Right Side of Moment Plate 2:	2.09	kip
Max Shear for Design:	2.09	kip

FASCIA GIRDER - CROSS FRAMES		
Item	Qty	Unit
Left Side of Moment Plate 1:	0.15	kip
Right Side of Moment Plate 1:	0.10	kip
Left Side of Moment Plate 2:	0.11	kip
Right Side of Moment Plate 2:	0.14	kip
Max Shear for Design:	0.15	kip

FASCIA GIRDER - DECK SLAB		
Item	Qty	Unit
Left Side of Moment Plate 1:	14.02	kip
Right Side of Moment Plate 1:	13.73	kip
Left Side of Moment Plate 2:	13.73	kip
Right Side of Moment Plate 2:	14.02	kip
Max Shear for Design:	14.02	kip

FASCIA GIRDER - PARAPETS		
Item	Qty	Unit
Left Side of Moment Plate 1:	3.98	kip
Right Side of Moment Plate 1:	3.91	kip
Left Side of Moment Plate 2:	3.91	kip
Right Side of Moment Plate 2:	3.98	kip
Max Shear for Design:	3.98	kip

FASCIA GIRDER - WEARING SURFACE		
Item	Qty	Unit
Left Side of Moment Plate 1:	8.48	kip
Right Side of Moment Plate 1:	8.33	kip
Left Side of Moment Plate 2:	8.33	kip
Right Side of Moment Plate 2:	8.48	kip
Max Shear for Design:	8.48	kip

FASCIA GIRDER - LIVE LOAD		
Item	Qty	Unit
Left Side of Moment Plate 1:	52.86	kip
Right Side of Moment Plate 1:	54.79	kip
Left Side of Moment Plate 2:	56.25	kip
Right Side of Moment Plate 2:	51.91	kip
Max Shear for Design:	56.25	kip



NSBA Bolted Splice Designer - Plate Girder

Cell Fill Color
User Input Field
Spreadsheet Status Field
Spreadsheet Calculated Field

Design Input

Unfactored Loads - Splice Centerline

	Moment (kip-ft)	Shear (kip)
Noncomposite Dead Load (DC ₁)	11.67	2.39
Superimposed Composite Dead Load (DC ₂)	19.30	3.98
Future Wearing Surface (DW)	41.12	8.48
Positive Live Load plus Impact (LL' + I)	119.25	64.43
Negative Live Load plus Impact (LL' + I)	0.00	0.00
Deck Casting	77.43	15.58

Girder Properties

	Left	Right
Top Flange Material	Grade 36	Grade 36
Top Flange Thickness (in)	3/4	1 1/8
Top Flange Width (in)	9	9
Longitudinal Stiffener	No	No
Transverse Stiffener Spacing (d _s) (ft)	0	0
Transverse Stiffener Status	Unstiffened	Unstiffened
Web Material	Grade 36	Grade 36
Web Thickness (in)	9/16	9/16
Web Depth (in)	28 3/10	
Bottom Flange Material	Grade 36	Grade 36
Bottom Flange Thickness (in)	3/4	1 3/16
Bottom Flange Width (in)	9	9

Bolt Properties

Bolt Type	A325	
Bolt Diameter (in)	7/8	
Web Threads	Included	
Flange Threads	Included	
Surface Condition Factor (K _s)	A	
Hole Size Factor (K _h)	Standard	
Top Flange Rows	2	OK
Web Rows	2	OK
Bottom Flange Rows	2	OK

Concrete Deck Properties

Composite	Composite
Thickness (in)	8 1/2

Spacing and Clearance Values

Bolt Spacing (in)	3	OK
Edge Distance - Flange (in)	1 1/2	OK
End Distance - Flange (in)	1 1/2	OK
Edge Distance - Web (in)	1 1/2	OK
End Distance - Web (in)	1 1/2	OK
Web Weld Size (in)	1 1/4	

Haunch Properties

	Left	Right
Haunch (in)	2	2
Haunch Status	OK	

Splice Plate Properties

	Inner	Outer
Top Flange Splice Plate Material	Grade 50	
Top Flange Splice Plate Thickness (in)	1/2	1/2
Top Flange Splice Plate Width (in)	3	9
Total Agross (sq-in)	3.0000	4.5000
% Difference Ag Inner/Outer Area	40.00%	
Shear Planes per Bolt (N _s)	1	

Web Splice Plate Material	Grade 50
Web Splice Plate Thickness (in)	1/2

	Inner	Outer
Bottom Flange Splice Plate Material	Grade 50	
Bottom Flange Splice Plate Thickness (in)	1/2	1/2
Bottom Flange Splice Plate Width (in)	3	9
Total Agross (sq-in)	3.0000	4.5000
% Difference A _g Inner/Outer Area	40.00%	
Shear Planes per Bolt (N _s)	1	

Web Weld Clearance (in)	0	
Web Gap (in)	1	
Entering & Tightening Clearance (in)	3	OK

Miscellaneous Properties

Splice Plate Hole Method	Drilled - Full Size
Alignment Mode	Web Center

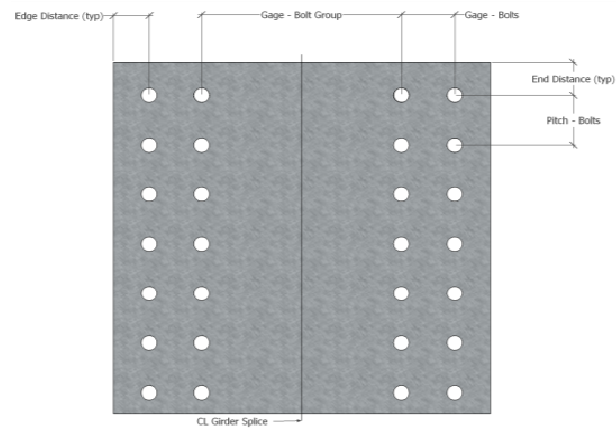
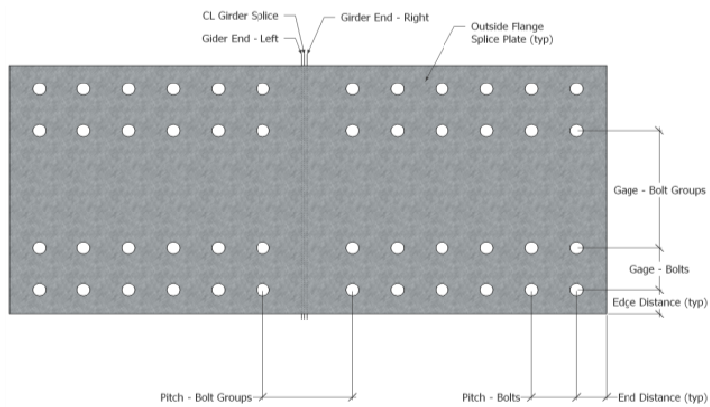
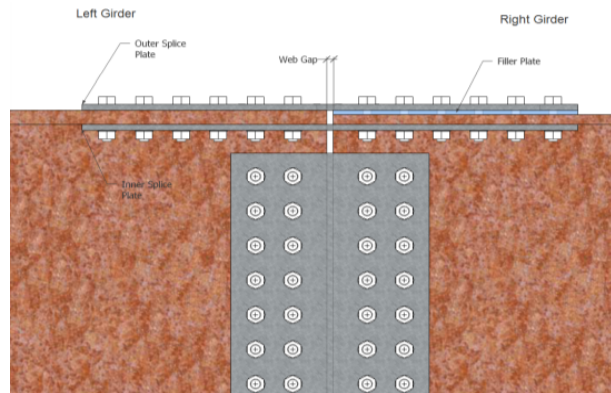
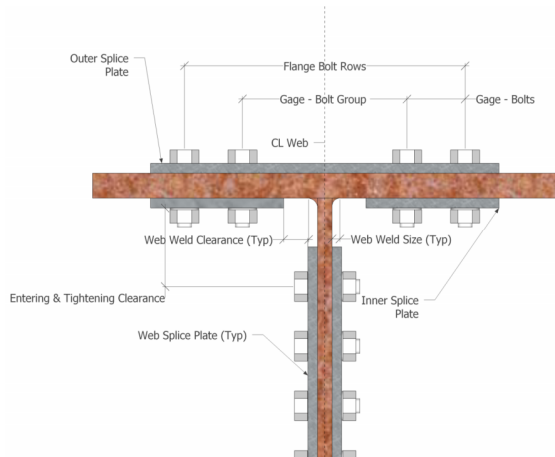
Bolt Count Overrides

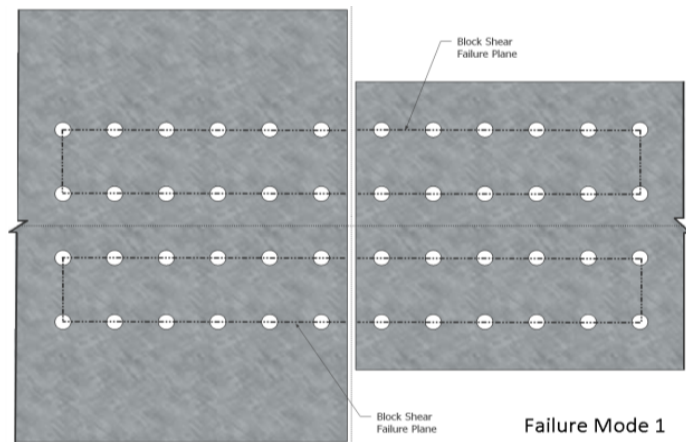
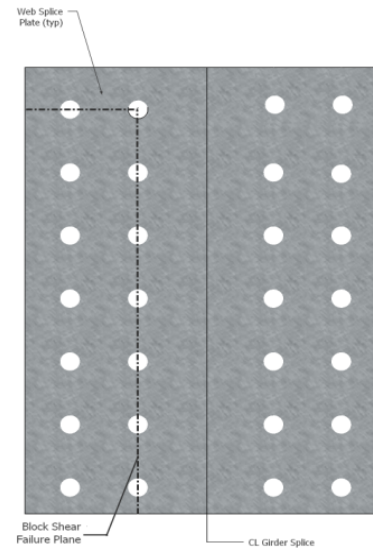
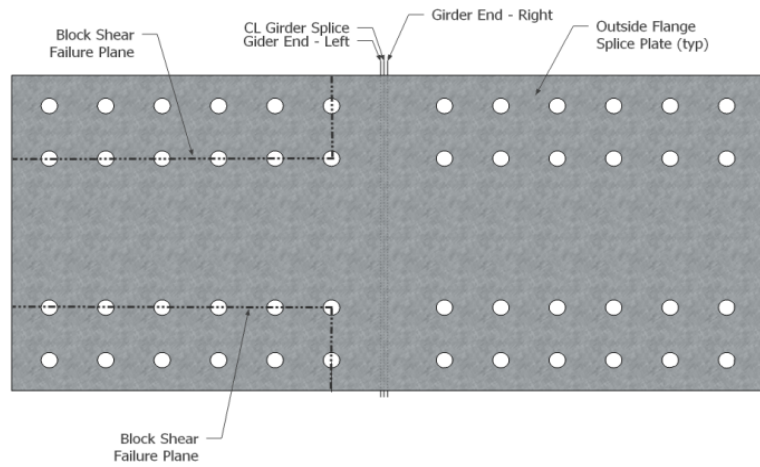
	Count Override Status	Bolt Count - Calculated	Bolt Count - User Specified	Valid Override
Top Flange Bolt Count Override	Spreadsheet Calculated	8		DNA
Web Bolt Count Override	Spreadsheet Calculated	10		DNA
Bottom Flange Bolt Count Override	Spreadsheet Calculated	8		DNA

Status - Error Count

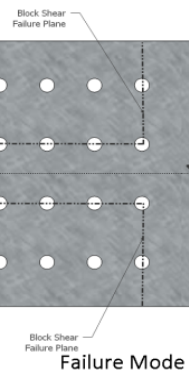
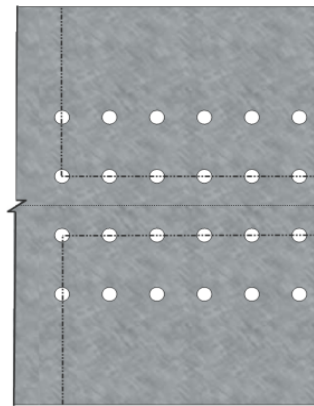
Design Status - Flange	0
Bolt Layout Status - Flange	0

Design Status - Web	0
Bolt Layout Status - Web	0





Failure Mode 1



Failure Mode 2



NSBA Bolted Splice Designer - Plate Girder

Design Result Summary

Cell Fill Color
 User Input Field
 Spreadsheet Status Field
 Spreadsheet Calculated Field

Bolts Arrangement

NOTICE: DO NOT MODIFY THIS SHEET

	Bolt Rows (Per Side)	Total Bolts (Per Side)	Design Basis
Top Flange	2	8	Spreadsheet Calculated
Web	2	10	Spreadsheet Calculated
Bottom Flange	2	8	Spreadsheet Calculated

	Gage - Bolts (in)	Edge Distance (in)	Pitch - Bolts (in)	End Distance (in)	Gage - Bolt Groups (in)	Pitch - Bolt Groups (in)
Top Flange	0	1 1/2	3	1 1/2	6	4
Web	3	1 1/2	5 1/4	1 1/2	4	DNA
Bottom Flange	0	1 1/2	3	1 1/2	6	4

Splice Plate Dimensions

	Thickness (in)	Width (in)	Length (in)
Top Flange - Outer	1/2	9	25
Top Flange - Inner (Each)	1/2	3	
Web	1/2	13	24
Bottom Flange - Inner (Each)	1/2	3	25
Bottom Flange - Outer	1/2	9	

Filler Plate Dimensions

	Thickness (in)	Width (in)	Length (in)
Top Flange - Left Outer	3/8	9	12
Top Flange - Left Inner (Each)	0	0	0
Top Flange - Right Outer	0	0	0
Top Flange - Right Inner (Each)	0	0	0

	Thickness (in)	Width (in)	Length (in)	Quantity
Web Filler (Each)	0	0	0	0

	Thickness (in)	Width (in)	Length (in)
Bottom Flange - Left Outer	7/16	9	12
Bottom Flange - Left Inner (Each)	0	0	0
Bottom Flange - Right Outer	0	0	0
Bottom Flange - Right Inner (Each)	0	0	0



NSBA Bolted Splice Designer - Plate Girder

Cell Fill Color



User Input Field



Spreadsheet Status Field



Spreadsheet Calculated Field

Design Check Summary

Design Check Status

NOTICE: DO NOT MODIFY THIS SHEET

Flange Splice

	Factored Yield Resistance Check - Tension	Net Section Fracture Check - Tension	Check $A_n \leq 0.85 A_g$ AASHTO 6.13.5.2	Block Shear Rupture Resistance	Bearing Resistance
Top Flange - Outer Splice Plate	OK	OK	OK	OK	OK
Top Flange - Inner Splice Plate	OK	OK	OK	OK	OK
Bottom Flange - Inner Splice Plate	OK	OK	OK	OK	OK
Bottom Flange - Outer Splice Plate	OK	OK	OK	OK	OK

	Block Shear Rupture Resistance - Mode 1	Block Shear Rupture Resistance - Mode 2	Bearing Resistance
Top Flange - Left	OK	OK	OK
Top Flange - Right	OK	OK	
Bottom Flange - Left	OK	OK	OK
Bottom Flange - Right	OK	OK	

Shear Planes per Bolt (Ns) - Top Flange	1
Shear Planes per Bolt (Ns) - Bottom Flange	1
M_{flange} Check - Positive	OK
M_{flange} Check - Negative	OK
Service II Moment Slip Check - Positive	OK
Service II Moment Slip Check - Negative	OK
Deck Casting Slip Check	OK

Web Splice

	Factored Yield Check	Factored Rupture Check	Block Shear Rupture Resistance
Web Splice Plate	OK	OK	OK

Bearing Resistance

Web	OK
Deck Casting Slip Check	OK
Service II Shear Slip Check - Positive	OK
Service II Shear Slip Check - Negative	OK
Transverse Stiffener Check - Left	OK
Transverse Stiffener Check - Right	OK

Bolt Spacing Check Status

Flange Splice

	Gage - Bolts Check	Gage - Bolt Group Check - Outer	Edge Distance Check - Inner	Pitch - Bolt Group Check - Outer	Transverse Dimension Check - Outer	Transverse Dimension Check - Inner
Top Flange Splice Plates	OK	OK	OK	OK	OK	OK
Bottom Flange Splice Plates	OK	OK	OK	OK	OK	OK

Web Splice

	Pitch - Bolt Check	End Distance Check	Pitch - Bolt Group Check	Diagonal Edge Distance - Check	Splice Plate Height Check	Gage - Bolt Group Check
Web Splice Plates	OK	OK	OK	OK	OK	OK



NSBA Bolted Splice Designer - Plate Girder

NOTICE: DO NOT MODIFY THIS SHEET

Flange Calculations

Load Combinations - Factored Moment

Load Combination	Moment (kip-ft)						Factored (kip-ft)
	Noncomposite Dead Load (DC1)	Superimposed Composite Dead Load (DC2)	Future Wearing Surface (DW)	Positive Live Load plus Impact (LL+ + I)	Negative Live Load plus Impact (LL- + I)	Deck Casting	
Load Combination	11.67	19.30	41.12	119.25	0.00	77.43	
Deck Casting	0.00	0.00	0.00	0.00	0.00	1.40	108.40
Strength I - Positive	1.25	1.25	1.50	1.75	0.00	0.00	309.08
Strength I - Negative	0.90	0.90	0.65	0.00	1.75	0.00	54.60
Service II - Positive	1.00	1.00	1.00	1.30	0.00	0.00	227.12
Service II - Negative	1.00	1.00	1.00	0.00	1.30	0.00	72.09

Bolt Factored Shear Resistance

Location	Bolt Type	Bolt Area (sq-in)	K_b	ϕ_s	F_u (ksi)	P_t (kip)	R_s - Single Shear (kip)	R_s - Double Shear (kip)
Flange	A325 - Included	0.6013	Standard	0.80	120	39.00	25.98	51.95

Bolt Nominal Slip Resistance

Surface Condition Factor (K_s)	Hole Size Factor (K_h)	P_t (kip)	R_s - Double Shear (kip)
0.30	1.00	39.00	23.40

Strength Limit State Design

Location	Width (in)	Thickness (in)	Total A_{g2015} (sq-in)	% Difference A_g Inner/Outer Area	Equally Divide P_u ?	Design Force Ratio for Splice Plates
Top Flange - Outer Splice Plate	9	1/2	4.50	40.00%	NG	0.60
Top Flange - Inner Splice Plate	3	1/2	3.00			0.40
Bottom Flange - Inner Splice Plate	3	1/2	3.00	40.00%	NG	0.40
Bottom Flange - Outer Splice Plate	9	1/2	4.50			0.60

$$A_e = \left(\frac{\phi_u F_u}{\phi_v F_{yf}} \right) A_n = 0.84 \left(\frac{F_u}{F_{yf}} \right) A_n \leq A_g$$

Location	0.84 (F _y /F _u)	Flange A _{gross} (sq-in)	Flange A _{net} (sq-in)	A _v (sq-in)	A _e ≤ A _{gross} (Eq. 2.1.1.1-3)	P _u = F _y ' A _t P _u (kip)	Controlling Flange	Max. Design Force for Splice Plates (kip) AASHTO C6.13.6.1.3b
Top Flange - Left	1.35	6.75	5.34	6.75	OK	243.00	CONTROLS	145.80
Top Flange - Right	1.35	10.13	8.02	10.13	OK	364.50		218.70
Bottom Flange - Left	1.35	6.75	5.34	6.75	OK	243.00	CONTROLS	145.80
Bottom Flange - Right	1.35	10.69	8.46	10.69	OK	384.75		230.85

Filler Plate - Sizing and Reduction Factor

Location	Alignment Mode	Web Depth (in)	Top Flange Thickness (in)	Bottom Flange Thickness (in)	Height (in)
Left Girder	Web Center	28 3/10	3/4	3/4	29 4/5
Right Girder			1 1/8	1 3/16	30 49/80

Location	Flange Width (in)	Flange Thickness (in)	Filler Thickness - Outer (in)	Filler Width - Outer (in)	Filler Length - Outer (in)	Filler Thickness - Inner (in)	Filler Width - Inner (in)	Filler Length - Inner (in)
Top Flange - Left	9	3/4	3/8	9	12	0	0	0
Top Flange - Right	9	1 1/8	0	0	0	0	0	0
Bottom Flange - Left	9	3/4	7/16	9	12	0	0	0
Bottom Flange - Right	9	1 3/16	0	0	0	0	0	0

Location	Filler Thickness - Total (in)	Area Filler A _f (sq-in)	Area Splice Plate A _p (sq-in)	Area Connection Plate A _c (sq-in)	$\gamma = \frac{A_{fL}}{A_p}$
Top Flange - Left	3/8	3.38	7.50	6.75	0.50
Top Flange - Right	0	0.00		10.13	0.00
Bottom Flange - Left	7/16	3.94	7.50	6.75	0.58
Bottom Flange - Right	0	0.00		10.69	0.00

Bolt Count - Summary

Location	P _u (kip)	$R = \left[\frac{1+\gamma}{1+2\gamma} \right]$ Filler Reduction - R	Total Bolt - Initial	Bolt Rows (Per Side)	Total Bolts (Per Side) - Calculated
Top Flange - Left	145.80	0.75	7.48	2	8
Top Flange - Right					
Bottom Flange - Left	145.80	0.73	7.68	2	8
Bottom Flange - Right					

Slip Resistance Design

Bolt Count - Summary (Initial)

	Moment (kip)	Moment Arm (in)	Per Bolt Pt (kip)	Total Bolt - Initial	Bolt Rows (Per Side)	Total Bolts (Per Side) - Calculated	Max Total Bolts (Per Side) - Calculated
Service II - Positive (kip-ft)	227.12	34.93	23.40	3.33	2	4	4
Service II - Negative (kip-ft)	72.09	29.05		1.27	2	2	2
Deck Casting Moment (kip-ft)	108.40	29.05		1.91	2	2	

Bolt Count - Final

	Strength	Slip	Override	Controlling	Bolt Count Override
Top Flange	8	2	DNA	8	FALSE
Bottom Flange	8	4	DNA	8	FALSE

Bolt and Plate Geometric Layout

Maximum Bolt Spacing - Sealing

Location	Splice Plate Thickness (in)	Controlling Plate t (in)	Pitch - Bolts (in)	(4.0 + 4.0t)	$s \leq (4.0 + 4.0t) \leq 7.0 \text{ in.}$ S_{max} (in)
Top Flange - Outer Splice Plate	1/2	1/2	3	6	6
Top Flange - Inner Splice Plate	1/2				
Bottom Flange - Inner Splice Plate	1/2	1/2		6	6
Bottom Flange - Outer Splice Plate	1/2				

Bolt Layout - Transverse Gage

Location	Width - Inner Plate (in)	Bolt Spacing (in)	Bolt Spacing - Minimum (in)	Edge Distance - Initial (in)	Edge Distance - Minimum (in)	Transverse Spacing Check	Edge Distance Inner - Final (in)	Gage - Bolts (in)
Top Flange	3	3	2 5/8	1 1/2	1 1/8	OK	1 1/2	0
Bottom Flange	3					OK	1 1/2	0

Location	Width - Outer Plate (in)	Edge Distance - Final (in)	Transverse Gage - Bolt Groups (in)
Top Flange	9	1 1/2	6
Bottom Flange	9	1 1/2	6

Location	Final Gage - Bolts Check	Final Gage - Bolt Group Check - Outer	Final Edge Distance Check - Inner Plate	Final Transverse Dimension Check - Outer	Final Transverse Dimension Check - Inner
Top Flange	OK	OK	OK	OK	OK
Bottom Flange	OK	OK	OK	OK	OK

Bolt Layout - Longitudinal Pitch

Location	Web Gap (in)	Bolt Spacing (in)	Minimum Pitch - Bolts (in)	End Distance (in)	Pitch - Bolt Groups (in)	Longitudinal Pitch - Bolt Group Check - Outer
Top Flange	1	3	2 5/8	1 1/2	4	OK
Bottom Flange						OK

Splice Plate Geometry - Plate Sizes

Location	Bolts Per Row - Calculated	Total Bolts - Calculated	Pitch - Bolts (in)	Pitch - Bolt Groups (in)	End Distance (in)	Splice Plate Width (in)	Splice Plate Thickness (in)	Splice Plate Length (in)			
Top Flange - Outer Splice Plate	2	8	3	4	1 1/2	9	1/2	25			
Top Flange - Inner Splice Plate						3	1/2				
Bottom Flange - Inner Splice Plate	2	8				3	4	1 1/2	3	1/2	25
Bottom Flange - Outer Splice Plate									9	1/2	

Bolt Layout - Diagonal Edge

Location	End Distance (in) - Final	Edge Distance (in)	Diagonal Edge Distance (in)	Final Diagonal Edge Distance - Check
Top Flange Splice	1.50	1.50	2.12	OK
Bottom Flange Splice				

Splice Plate - Bolt Shear Resistance Joint Length Reduction Check

Location	Bolt Shear Resistance Joint Length Reduction Factor
Top Flange Splice	1.00
Bottom Flange Splice	1.00

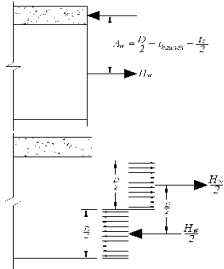
Moment Resistance

Positive Moment

Moment Arm (in)	34.93
Bottom Flange Force (k)	243.00
M _{range} (kip-ft)	707.23
Strength I - Positive (kip-ft)	309.08
Check M _{range}	OK
Hw (kip)	DNA

Negative Moment

Moment Arm (in)	29.05
Minimum Flange Force(k)	243.00
M _{range} (kip-ft)	588.26
Strength I - Negative (kip-ft)	54.60
Check M _{range}	OK
Hw (kip)	DNA



Splice Plates

Location	Width (in)	Thickness (in)	Total A _{gross} (sq-in)
Top Flange - Outer Splice Plate	9	1/2	4.50
Top Flange - Inner Splice Plate	3	1/2	3.00
Bottom Flange - Inner Splice Plate	3	1/2	3.00
Bottom Flange - Outer Splice Plate	9	1/2	4.50

Factored Yield Resistance - Tension

Location	Design Force in Splice Plate (kip)	ϕ_y	F_y (ksi)	A_g (sq-in)	$R_r = \phi_y F_y A_g$ Rr (kip)	Factored Yield Check Tension
Top Flange - Outer Splice Plate	145.80	0.95	50	4.50	213.75	OK
Top Flange - Inner Splice Plate	97.20			3.00	142.50	OK
Bottom Flange - Inner Splice Plate	97.20		50	3.00	142.50	OK
Bottom Flange - Outer Splice Plate	145.80			4.50	213.75	OK

Net Section to Gross Section Check - Tension

Location	A_n (sq-in)	A_g (sq-in)	$0.85 * A_g$ (sq-in)	Check $A_n \leq 0.85 A_g$ AASHTO 6.13.5.2	Controlling Section (sq-in)
Top Flange - Outer Splice Plate	3.56	4.50	3.83	OK	3.56
Top Flange - Inner Splice Plate	2.06	3.00	2.55	OK	2.06
Bottom Flange - Inner Splice Plate	2.06	3.00	2.55	OK	2.06
Bottom Flange - Outer Splice Plate	3.56	4.50	3.83	OK	3.56

Net Section Fracture Resistance - Tension

Location	Design Force in Splice Plate (kip)	ϕ_u	F_u (ksi)	Controlling Section (sq-in)	R_p	U	$R_r = \phi_u F_u A_n R_p U$ Rr (kip)	Net Section Fracture Check - Tension
Top Flange - Outer Splice Plate	145.80	0.80	65	3.56	1.00	1.00	185.25	OK
Top Flange - Inner Splice Plate	97.20			2.06			107.25	OK
Bottom Flange - Inner Splice Plate	97.20		65	2.06			107.25	OK
Bottom Flange - Outer Splice Plate	145.80			3.56			185.25	OK

Block Shear Rupture Resistance - Splice Plates

Location	Gross Path Length per Failure Plane - Tension (in)	Hole Count / Path	Hole Diameter (in)	Path Count	Net Path Length - Tension (in)	Splice Plate Thickness (in)	Net Area A_{nt} (sq-in)
Top Flange - Outer Splice Plate	1.50	0.5	0.9375	2	2.06	1/2	1.03
Top Flange - Inner Splice Plate	1.50	0.5			2.06	1/2	1.03
Bottom Flange - Inner Splice Plate	1.50	0.5			2.06	1/2	1.03
Bottom Flange - Outer Splice Plate	1.50	0.5			2.06	1/2	1.03

Location	Gross Path Length per Failure Plane - Shear (in)	Hole Count / Path	Hole Diameter (in)	Path Count	Net Path Length - Shear (in)	Splice Plate Thickness (in)	Net Area A_{nv} (sq-in)
Top Flange - Outer Splice Plate	10.50	3.5	0.9375	2	14.44	1/2	7.22
Top Flange - Inner Splice Plate	10.50	3.5			14.44	1/2	7.22
Bottom Flange - Inner Splice Plate	10.50	3.5			14.44	1/2	7.22
Bottom Flange - Outer Splice Plate	10.50	3.5			14.44	1/2	7.22

Location	Gross Path Length per Failure Plane - Shear (in)	Splice Plate Thickness (in)	Path Count	Gross Area A_g (sq-in)
Top Flange - Outer Splice Plate	10.50	1/2	2	10.50
Top Flange - Inner Splice Plate	10.50	1/2		10.50
Bottom Flange - Inner Splice Plate	10.50	1/2		10.50
Bottom Flange - Outer Splice Plate	10.50	1/2		10.50

Location	ϕ_{bs}	R_p	F_u (ksi)	U_{bs}	$R_r = \phi_{bs} R_p (0.58 F_u A_{vn} + U_{bs} F_u A_{tn})$ R_r (kip)
Top Flange - Outer Splice Plate	0.80	1.00	65	1.00	271.34
Top Flange - Inner Splice Plate					271.34
Bottom Flange - Inner Splice Plate			65		271.34
Bottom Flange - Outer Splice Plate					271.34

Location	ϕ_{bs}	R_p	F _y (ksi)	F _u (ksi)	U _{bs}	$\phi_{bs} R_p (0.58 F_y A_{gv} + U_{bs} F_u A_{tn})$	
Top Flange - Outer Splice Plate	0.80	1.00	50	65	1.00	297.23	
Top Flange - Inner Splice Plate						297.23	
Bottom Flange - Inner Splice Plate			50	65		297.23	
Bottom Flange - Outer Splice Plate						297.23	

Location	$R_r = \phi_{bs} R_p (0.58 F_y A_{vm} + U_{bs} F_u A_{tn})$ $\leq \phi_{bs} R_p (0.58 F_y A_{vg} + U_{bs} F_u A_{tn})$	Max. Design Force for Splice Plates (kip)	Block Shear Rupture Resistance Check
Top Flange - Outer Splice Plate	271.34	145.80	OK
Top Flange - Inner Splice Plate	271.34		OK
Bottom Flange - Inner Splice Plate	271.34	145.80	OK
Bottom Flange - Outer Splice Plate	271.34		OK

Block Shear Rupture Resistance - Girder (Mode 1)

Location	Gross Path Length per Failure Plane - Tension (in)	Hole Count / Path	Hole Diameter (in)	Path Count	Net Path Length - Tension (in)	Flange Thickness (in)	Net Area A_{nt} (sq-in)
Top Flange - Left	0.00	0	0.9375	2	0.00	3/4	0.00
Top Flange - Right	0.00	0			0.00	1 1/8	0.00
Bottom Flange - Left	0.00	0			0.00	3/4	0.00
Bottom Flange - Right	0.00	0			0.00	1 1/5	0.00

Location	Gross Path Length per Failure Plane - Shear (in)	Hole Count / Path	Hole Diameter (in)	Path Count	Net Path Length - Shear (in)	Flange Thickness (in)	Net Area A_{nv} (sq-in)
Top Flange - Left	10.50	3.5	0.9375	4	28.88	3/4	21.66
Top Flange - Right	10.50	3.5			28.88	1 1/8	32.48
Bottom Flange - Left	10.50	3.5			28.88	3/4	21.66
Bottom Flange - Right	10.50	3.5			28.88	1 1/5	34.29

Location	Gross Path Length per Failure Plane - Shear (in)	Flange Thickness (in)	Path Count	Gross Area A_{gv} (sq-in)
Top Flange - Left	10.50	3/4	4	31.50
Top Flange - Right	10.50	1 1/8		47.25
Bottom Flange - Left	10.50	3/4		31.50
Bottom Flange - Right	10.50	1 1/5		49.88

Location	ϕ_{bs}	R_p	F_u (ksi)	U_{bs}	$R_r = \phi_{bs} R_p (0.58 F_u A_{vn} + U_{bs} F_u A_{tn})$ R_r (kip)
Top Flange - Left	0.80	1.00	58	1.00	582.81
Top Flange - Right			58		874.22
Bottom Flange - Left			58		582.81
Bottom Flange - Right			58		922.79

Location	ϕ_{bs}	R_p	F_y (ksi)	F_u (ksi)	U_{bs}	$\phi_{bs} R_p (0.58 F_y A_{vg} + U_{bs} F_u A_{tn})$
Top Flange - Left	0.80	1.00	36	58	1.00	526.18
Top Flange - Right			36	58		789.26
Bottom Flange - Left			36	58		526.18
Bottom Flange - Right			36	58		833.11

Location	$R_r = \phi_{bs} R_p (0.58 F_y A_{vm} + U_{bs} F_u A_{tn})$ $\leq \phi_{bs} R_p (0.58 F_y A_{vg} + U_{bs} F_u A_{tn})$	P_y (kip)	Block Shear Rupture Resistance Check
Top Flange - Left	526.18	243.00	OK
Top Flange - Right	789.26		OK
Bottom Flange - Left	526.18		OK
Bottom Flange - Right	833.11		OK

Block Shear Rupture Resistance - Girder (Mode 2)

Location	Gross Path Length per Failure Plane - Tension (in)	Hole Count / Path	Hole Diameter (in)	Path Count	Net Path Length - Tension (in)	Flange Thickness (in)	Net Area A_{nt} (sq-in)
Top Flange - Left	1.50	0.5	0.9375	2	2.06	3/4	1.55
Top Flange - Right	1.50	0.5			2.06	1 1/8	2.32
Bottom Flange - Left	1.50	0.5			2.06	3/4	1.55
Bottom Flange - Right	1.50	0.5			2.06	1 1/5	2.45

Location	Gross Path Length per Failure Plane - Shear (in)	Hole Count / Path	Hole Diameter (in)	Path Count	Net Path Length - Shear (in)	Flange Thickness (in)	Net Area A_{nv} (sq-in)
Top Flange - Left	10.50	3.5	0.9375	2	14.44	3/4	10.83
Top Flange - Right	10.50	3.5			14.44	1 1/8	16.24
Bottom Flange - Left	10.50	3.5			14.44	3/4	10.83
Bottom Flange - Right	10.50	3.5			14.44	1 1/5	17.14

Location	Gross Path Length per Failure Plane - Shear (in)	Flange Thickness (in)	Path Count	Gross Area A_g (sq-in)
Top Flange - Left	10.50	3/4	2	15.75
Top Flange - Right	10.50	1 1/8		23.63
Bottom Flange - Left	10.50	3/4		15.75
Bottom Flange - Right	10.50	1 1/5		24.94

Location	ϕ_{bs}	R_p	F_u (ksi)	U_{bs}	$R_f = \phi_{bs} R_p (0.58 F_u A_{vm} + U_{bs} F_u A_{tn})$ R_f (kip)
Top Flange - Left	0.80	1.00	58	1.00	363.18
Top Flange - Right			58		544.77
Bottom Flange - Left			58		363.18
Bottom Flange - Right			58		575.04

Location	ϕ_{bs}	R_p	F_y (ksi)	F_u (ksi)	U_{bs}	$\phi_{bs} R_p (0.58 F_y A_{vg} + U_{bs} F_u A_{tn})$
Top Flange - Left	0.80	1.00	36	58	1.00	334.86
Top Flange - Right			36	58		502.29
Bottom Flange - Left			36	58		334.86
Bottom Flange - Right			36	58		530.20

Location	$R_f = \phi_{bs} R_p (0.58 F_u A_{vm} + U_{bs} F_u A_{tn})$ $\leq \phi_{bs} R_p (0.58 F_y A_{vg} + U_{bs} F_u A_{tn})$	P_{ty} (kip)	Block Shear Rupture Resistance Check
Top Flange - Left	334.86	243.00	OK
Top Flange - Right	502.29		OK
Bottom Flange - Left	334.86	243.00	OK
Bottom Flange - Right	530.20		OK

[Bearing Resistance Check](#)

Location	Thickness (in)	F_u (ksi)	(kip/in)	Controlling
Top Flange - Splice Plates	1.00	65	65.00	
Top Flange - Left	0.75	58	43.50	CONTROLS
Top Flange - Right	1.13	58	65.25	
Bottom Flange - Splice Plates	1.00	65	65.00	
Bottom Flange - Left	0.75	58	43.50	CONTROLS
Bottom Flange - Right	1.19	58	68.88	

Location	Hole Diameter (in)	Bolt Diameter - d (in)	2d (in)	End Distance (in)	Pitch - Bolts (in)	Total Bolts (Per Side) Calculated	Bolt Rows (Per Side)
Top Flange - Left	15/16	7/8	1.75	1 1/2	3	8	2
Top Flange - Right							
Bottom Flange - Left						8	2
Bottom Flange - Right							

				End Holes			
Location	Thickness (in)	F _u (ksi)	Φ _{bb}	Clear Distance - L _c (in)	R _n = 2.4dtF _u R _n (kip)	R _n = 1.2L _c tF _u R _n (kip)	R _r = Φ _{bb} R _n R _r (kip)
Top Flange - Outer Splice Plate	0.50	65	0.80	1.03	DNA	80.44	64.35
Top Flange - Left	0.75	58			DNA	107.66	86.13
Top Flange - Right							
Top Flange - Inner Splice Plate	0.50	65			DNA	80.44	64.35
Bottom Flange - Inner Splice Plate	0.50	65			DNA	80.44	64.35
Bottom Flange - Left	0.75	58			DNA	107.66	86.13
Bottom Flange - Right							
Bottom Flange - Outer Splice Plate	0.50	65			DNA	80.44	64.35

				Interior Holes			
Location	Thickness (in)	F _u (ksi)	ϕ _{bb}	Clear Distance - L _c (in)	R _n = 2.4dF _u R _n (kip)	R _n = 1.2L _c tF _u R _n (kip)	R _r = ϕ _{bb} R _n R _r (kip)
Top Flange - Outer Splice Plate	0.50	65	0.80	2.06	409.50	DNA	327.60
Top Flange - Left	0.75	58			548.10	DNA	438.48
Top Flange - Right							
Top Flange - Inner Splice Plate	0.50	65			409.50	DNA	327.60
Bottom Flange - Inner Splice Plate	0.50	65			409.50	DNA	327.60
Bottom Flange - Left	0.75	58			548.10	DNA	438.48
Bottom Flange - Right							
Bottom Flange - Outer Splice Plate	0.50	65			409.50	DNA	327.60

Location	End		Controlling R _c (kip)
	Bolt Capacity R _b (kip)	Bearing Resistance R _b (kip)	
Top Flange - Outer Splice Plate	51.95	64.35	51.95
Top Flange - Left	103.91	86.13	86.13
Top Flange - Right			
Top Flange - Inner Splice Plate	51.95	64.35	51.95
Bottom Flange - Inner Splice Plate	51.95	64.35	51.95
Bottom Flange - Left	103.91	86.13	86.13
Bottom Flange - Right			
Bottom Flange - Outer Splice Plate	51.95	64.35	51.95

Location	Interior		Controlling R _c (kip)
	Bolt Capacity R _b (kip)	Bearing Resistance R _b (kip)	
Top Flange - Outer Splice Plate	155.86	327.60	155.86
Top Flange - Left	311.72	438.48	311.72
Top Flange - Right			
Top Flange - Inner Splice Plate	155.86	327.60	155.86
Bottom Flange - Inner Splice Plate	155.86	327.60	155.86
Bottom Flange - Left	311.72	438.48	311.72
Bottom Flange - Right			
Bottom Flange - Outer Splice Plate	155.86	327.60	155.86

Location	Total Bearing Resistance - R _b (kip)	Design Force (kip)	Bearing Resistance Check
Top Flange - Outer Splice Plate	207.82	145.80	OK
Top Flange - Left	397.85	243.00	OK
Top Flange - Right			
Top Flange - Inner Splice Plate	207.82	97.20	OK
Bottom Flange - Inner Splice Plate	207.82	97.20	OK
Bottom Flange - Left	397.85	243.00	OK
Bottom Flange - Right			
Bottom Flange - Outer Splice Plate	207.82	145.80	OK

Slip Resistance Check

Service II - Positive Moment Check

Moment Arm (in)	34.93
Service II - Positive (kip-ft)	227.12
Total Bolts - Calculated	8
Per Bolt P_t (kip)	23.40
Total P_t (kip)	187.20
Moment (kip-ft)	544.83
Slip Check	OK
H_u (kip)	DNA

Service II - Negative Moment Check

Moment Arm (in)	29.05
Service II - Negative (kip-ft)	72.09
Total Bolts - Calculated	8
Per Bolt P_t (kip)	23.40
Total P_t (kip)	187.20
Moment (kip-ft)	453.18
Slip Check	OK
H_u (kip)	DNA

Deck Casting Check

Moment Arm (in)	29.05
Deck Casting Moment (kip-ft)	108.40
Total Bolts - Calculated	8
Per Bolt P_t (kip)	23.40
Total P_t (kip)	187.20
Moment (kip-ft)	453.18
Slip Check	OK
H_u (kip)	DNA



Web Calculations

Load Combinations - Factored Shear

Load Combination	Shear (kip)						Factored Shear (kip)
	Noncomposite Dead Load (DC1)	Superimposed Composite Dead Load (DC2)	Future Wearing Surface (DW)	Positive Live Load plus Impact (LL+ I)	Negative Live Load plus Impact (LL- + I)	Deck Casting	
Deck Casting	0.00	0.00	0.00	0.00	0.00	1.40	21.81
Service II - Positive	1.00	1.00	1.00	1.30	0.00	0.00	98.61
Service II - Negative	1.00	1.00	1.00	0.00	1.30	0.00	14.85

CONTROLS

Bolt Factored Shear Resistance

Location	Bolt Type	Bolt Area (sq-in)	K_s	ϕ_s	F_u (ksi)	P_t (kip)	R_s - Single Shear (kip)	R_s - Double Shear (kip)
Web	A325 - Included	0.6013	Standard	0.80	120	39.00	25.98	51.95

Bolt Nominal Slip Resistance

Faying Surface Class (K_s)	Hole Size Factor (K_h)	P_t (kip)	Slip Capacity - Double (kip)
0.30	1.00	39.00	23.40

Flange Design Results

Flange Moment Resistance Check Results

	H_{ex} (kip)	Controlling
Positive	DNA	
Negative	DNA	

Flange Moment Slip Resistance Check Results

	H_{ex} (kip)	Controlling
Positive	DNA	
Negative	DNA	
Deck Casting	DNA	

Strength Limit State Design

Web Shear Strength

Location	F_y (ksi)	E (ksi)	F_u (ksi)	$0.84 (F_u/F_y)$
Web - Left	36	29000	58	1.35
Web - Right	36	29000	58	1.35

Location	Depth (in)	Thickness (in)	A_{web} (sq-in)	Filler Plate Thickness - Total (in)	Filler Plate Thickness - Each (in)	Filler Plate Quantity
Web - Left	28 1/3	9/16	15.92	0	0	0
Web - Right	28 1/3	9/16	15.92			

Location	Transverse Stiffener Status	D_w/t_w	d_w/D_w	Shear Buckling Coefficient - k	Web Slenderness Lower Limit	Web Slenderness Upper Limit	Shear Buckling to Yield Strength Ratio - C
Web - Left	Unstiffened	50.31	DNA	5.00	71.08	88.85	1.00
Web - Right	Unstiffened	50.31	DNA	5.00	71.08	88.85	1.00

Location	V_n (kip)	V_u (kip)	$\frac{2Dt_w}{(b_{fc}t_{fc} + b_{fs}t_{fs})} \leq 2.5$	V_n (kip)
Web - Left	332.38	332.38	DNA	332.38
Web - Right	332.38	332.38	DNA	332.38

Bolt Count - Summary (Initial)

Location	Controlling H_u (kip)	V_u (kip)	ϕ_v	V_r (kip)
Web	0.00	332.38	1.00	332.38

Location	R (kip)	Total Bolt - Initial	Bolt Rows (Per Side)	Total Bolts (Per Side) - Calculated
Web	332.38	6.40	2	8

Slip Resistance Design

Bolt Count - Summary (Initial)

	Shear (kip)	H_u (kip)	Controlling H_u (kip)	Resultant R (kip)	Per Bolt P_t (kip)	Total Bolt - Initial	Bolt Rows (Per Side)	Total Bolts (Per Side) - Calculated	Max Total Bolts (Per Side) - Calculated
Deck Casting (kip)	21.81	DNA	DNA	21.81	23.40	0.93	2	2	6
Service II – Positive (kip)	98.61	DNA	DNA	98.61		4.21		6	
Service II – Negative (kip)	14.85	DNA		14.85		0.63		2	

Bolt and Plate Geometric Layout

Maximum Bolt Spacing - Seal

Location	Thickness - Initial (in)	(4.0 + 4.0t)	$s \leq (4.0 + 4.0t) \leq 7.0 \text{ in.}$ S_{max} (in)
Web	1/2	6	6

Web Splice Plate End Distance - Splice Plate Height Adjustment

Location	End Distance (in)	Web Weld Size (in)	Web Weld Clearance (in)	Entering & Tightening Clearance (in)	End Distance - Calculated (in)	End Adjustment (in)
Web - Top	1 1/2	1 1/4	0	3	2 1/4	- 3/4
Web - Bottom					2 1/4	- 3/4

Web Splice Plate Height - Maximum

Location	Web Depth (in)	Splice Plate Height - Maximum (in)	Max End Adjustment (in)	Splice Plate Height - Estimated (in)
Web - Top	28 3/10	25 4/5	- 3/4	24 3/10
Web - Bottom				

Bolt Count - Summary (Initial)

Location	Bolt Rows (Per Side)	Splice Plate Height - Maximum (in)	End Distance (in)	S_{max} (in)	Total Bolts (Per Side) - Calculated at Max Spacing
Web	2	24 3/10	1 1/2	6	10

Bolt Count - Final

	Strength	Slip	Pitch	Override	Controlling	Bolt Count Override
Web	8	6	10	DNA	10	FALSE

Layout Checks

Pitch and End Distance Verification

Location	End Distance - Final (in)	Pitch - Bolts (in) - Final	Splice Plate Height - Final (in)
Web	1 1/2	5 1/4	24

Location	Final Pitch Check	Final End Distance Check	Final Splice Plate Height Check
Web	OK	OK	OK

Bolt Layout - Gage

Location	Web Gap (in)	Gage - Bolts (in)	Edge Distance (in)	Gage - Bolt Groups (in)	Gage - Bolt Group Check
Web	1	3	1 1/2	4	OK

Bolt Layout - Diagonal Edge

Location	End Distance (in)	Edge Distance (in)	Diagonal Edge Distance (in)	Final Diagonal Edge Distance - Check
Web	1.5000	1.5000	2.1213	OK

Splice Plate Geometry - Plate Sizes

Location	Bolt Per Row - Calculated	Total Bolts - Calculated	Gage - Bolts (in)	Gage - Bolt Groups (in)	Edge Distance (in)	Splice Plate Height (in)	Splice Plate Thickness (in)	Splice Plate Width (in)
Web Splice Plate	2	10	3	4	1 1/2	24	1/2	13
Web - Filler						0	0	0

Splice Plates

Factored Shear Yielding Resistance

Location	ϕ_v	F_y (ksi)	Height - Final (in)	Thickness - Initial (in)	A_{vg} (sq-in)	$R_r = \phi_v 0.58 F_y A_{vg}$ Rr (kip)	Factored Shear Yield Check
Web Splice Plate	1.00	50	24	0.5000	24.00	696.00	OK

Factored Shear Rupture Resistance

Location	Height - Final (in)	Thickness - Initial (in)	Total Bolts - Calculated	Bolt Rows (Per Side)	Hole Diameter (in)	A_{vn} (sq-in)
Web Splice Plate	24	0.5000	10	2	0.9375	19.31

Location	ϕ_{vu}	R_p	F_u (ksi)	$R_r = \phi_{vu} 0.58 R_p F_u A_{vn}$ Rr (kip)	V_r (kip)	Factored Shear Rupture Check Rr > Vr
Web Splice Plate	0.80	1.00	65	582.47	332.38	OK

Block Shear Rupture Resistance - Splice Plates

Location	Gross Path Length per Failure Plane - Tension (in)	Hole Count / Path	Hole Diameter (in)	Path Count	Net Path Length - Tension (in)	Splice Plate Thickness (in)	Net Area A_{nt} (sq-in)
Web Splice Plate	4.50	1.5	0.9375	2	6.19	1/2	3.09

Location	Gross Path Length per Failure Plane - Shear (in)	Hole Count / Path	Hole Diameter (in)	Path Count	Net Path Length - Shear (in)	Splice Plate Thickness (in)	Net Area A_{nv} (sq-in)
Web Splice Plate	22.50	4.5	0.9375	2	36.56	1/2	18.28

Location	Gross Path Length per Failure Plane - Shear (in)	Splice Plate Thickness (in)	Path Count	Gross Area A_{gv} (sq-in)
Web Splice Plate	22.50	1/2	2	22.50

Location	ϕ_{bs}	R_p	F_u (ksi)	U_{bs}	$R_t = \phi_{bs} R_p (0.58 F_u A_{nv} + U_{bs} F_u A_{tn})$ R_t (kip)
Web Splice Plate	0.80	1.00	65	1.00	712.24

Location	ϕ_{bs}	R_p	F_y (ksi)	F_u (ksi)	U_{bs}	$\phi_{bs} R_p (0.58 F_y A_{nv} + U_{bs} F_u A_{tn})$
Web Splice Plate	0.80	1.00	50	65	1.00	682.88

Location	$R_t = \phi_{bs} R_p (0.58 F_u A_{nv} + U_{bs} F_u A_{tn})$ $\leq \phi_{bs} R_p (0.58 F_y A_{nv} + U_{bs} F_u A_{tn})$	V_r (kip)	$R_v > V_r$
Web Splice Plate	682.88	332.38	OK

Bearing Resistance Check

Location	Thickness t_w (in)	F_u (ksi)	$t_w * F_u$ (kip/in)	Controlling Web
Web - Left	9/16	58	32.63	CONTROLS
Web - Right	9/16	58	32.63	CONTROLS

Location	Web Splice Plate Thickness - t_{sp} (in)	Splice Plate - F_u (ksi)	$2t_{sp} * F_u$ (kip/in)
Web	1/2	65	65.00

Location	V_r (kip)	R (kip)
Web	332.38	332.38

Location	Bolt Diameter - d (in)	2d (in)	Total Bolts (Per Side) - Calculated	Bolt Rows (Per Side)
Web Splice	7/8	1.75	10	2

Location	$V_r == R$	$(2t_{sp} * F_u) < (t_w * F_u)$
Web	TRUE	FALSE

Location	Controlling t (in)	Controlling F_u (ksi)
Web	9/16	58

Location	Hole Diameter (in)	Web End Clear Distance (in)	End Clear Distance (in)	Edge Clear Distance (in)	Clear Pitch - Bolts (in)	End Holes	Interior Holes
						Clear Distance - L_c (in)	
Web	15/16	3.18	1.03	1.03	4.31	3.18	4.31

Location	Controlling Web Thickness (in)	Controlling F_u (ksi)	ϕ_{bb}	Clear Distance - L_c (in)	End Holes		
					$R_n = 2.4dtF_u$ Rn (kip)	$R_n = 1.2L_c tF_u$ Rn (kip)	$R_r = \phi_{bb} R_n$ Rr (kip)
Web Splice	9/16	58	0.80	3.18	137.03	DNA	109.6

Location	Controlling Web Thickness (in)	Controlling F_u (ksi)	ϕ_{bb}	Clear Distance - L_c (in)	Interior Holes		
					$R_n = 2.4dtF_u$ Rn (kip)	$R_n = 1.2L_c tF_u$ Rn (kip)	$R_r = \phi_{bb} R_n$ Rr (kip)
Web Splice	9/16	58	0.80	4.31	548.10	DNA	438.48

End			
Location	Bolt Capacity (kip)	Web Capacity R _r (kip)	Controlling R _r (kip)
Web Splice	103.91	109.62	103.91

Interior			
Location	Bolt Capacity (kip)	Web Capacity R _r (kip)	Controlling R _r (kip)
Web Splice	415.63	438.48	415.63

Location	Total Bearing Resistance - R _r (kip)	R (kip)	R _r > R
Web Splice	519.54	332.38	OK

Slip Resistance Check

Deck Casting - Shear Check

Deck Casting (kip)	21.81
H _w (kip)	DNA
Resultant R (kip)	0.00
Total Bolts - Calculated	10
Per Bolt P _t (kip)	23.40
Total P _t (kip)	234.00
Slip Check	OK

Service II - Positive Shear Check

Service II – Positive (kip)	98.61
H _w (kip)	DNA
Controlling H _w (kip)	DNA
Resultant R (kip)	98.61
Total Bolts - Calculated	10
Per Bolt P _t (kip)	23.40
Total P _t (kip)	234.00
Slip Check	OK

Service II - Negative Shear Check

Service II – Negative (kip)	14.85
H _w (kip)	DNA
Controlling H _w (kip)	DNA
Resultant R (kip)	14.85
Total Bolts - Calculated	10
Per Bolt P _t (kip)	23.40
Total P _t (kip)	234.00
Slip Check	OK