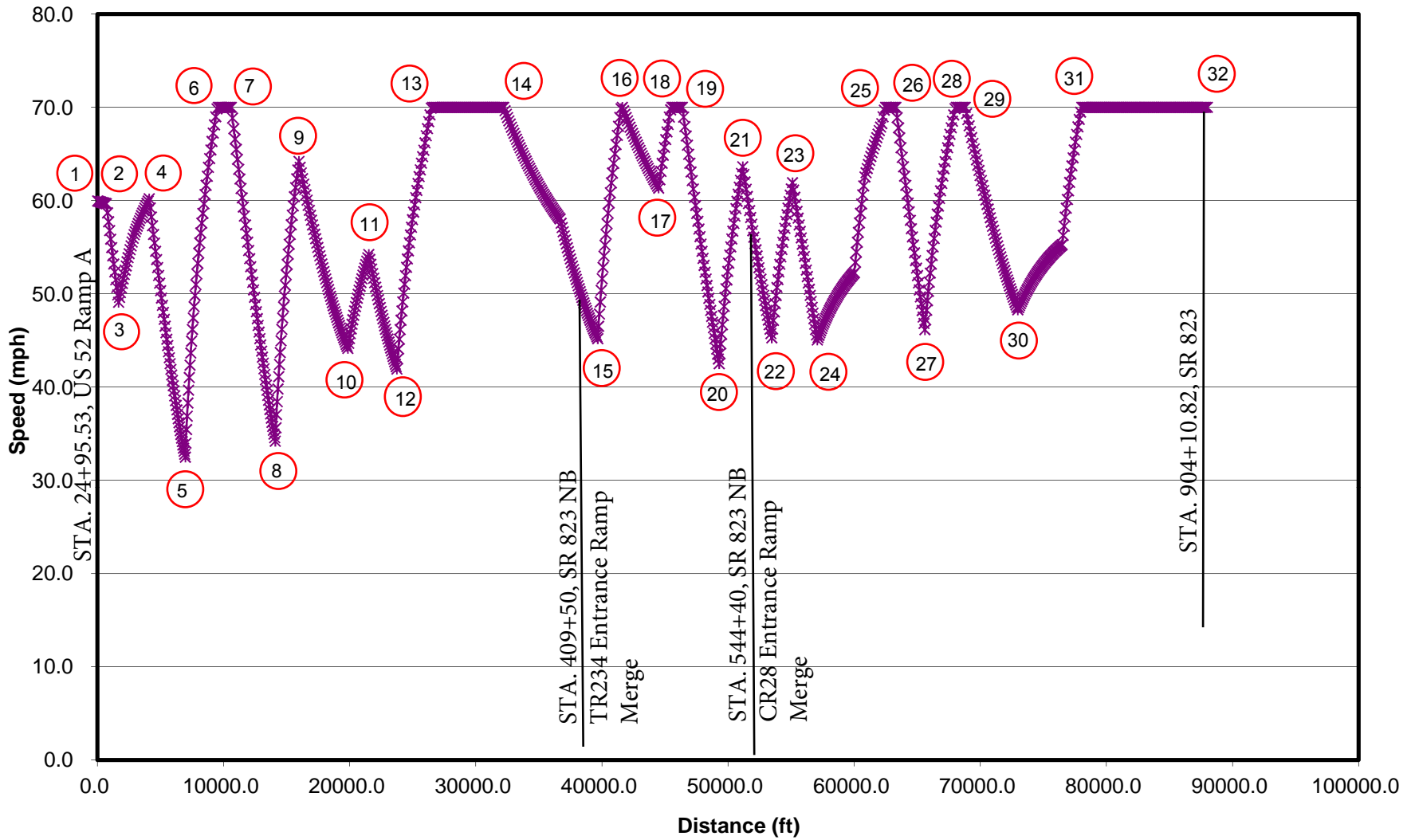


TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014



TRUCK SPEED PERFORMANCE MODEL

Desired speed (mph) = 70.0
 Initial speed (mph) = 60.0
 Weight/power ratio (lb/hp) = 200.0
 Weight/frontal area ratio (lb/ft²) = 0.0 ← enter value or enter zero to use default estimate
 Elevation (ft) = 800.0
 Location (legend) = SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Vertical Profile

(Beginning of first segment must equal 0)

Position (ft)		Percent Grade
Begin	End	
0	704	0.84
704	1674	5.01
1674	2915	-0.88
2915	4154	-0.5
4154	7004	5
7004	10604	-4.1
10604	14104	5
14104	16054	-4
16054	19854	3.1
19854	21554	-0.5
21554	23754	3.5
23754	25944	-3
25944	27454	-3.5
27454	30804	-1
30804	32254	-4.7
32254	36704	1.5
36704	39704	2.9
39704	41704	-4.5
41704	44524	1.5
44524	46444	-3.75
46444	49304	4.5
49304	51159	-2.99
51159	53504	4
53504	55104	-2.6
55104	56104	4
56104	57129	4.4
57129	60029	0.8
60029	60904	-4
60904	62204	-1.71
62204	63354	-3.47
63354	65666	4.8
65666	68884	-3.25
68884	73004	2.84
73004	76504	0.62
76504	83854	-3.75
83854	87915	-3



Stationing from Reference Plans

Sta. 24+95.53 to	Sta. 32+00.00	0.84
Sta. 32+00.00 to	Sta. 41+70.00	5.01
Sta. 41+70.00 to	Sta. 54+11.25	-0.88
Sta. 54+11.25 to	Sta. 66+50.00	-0.5
Sta. 66+50.00 to	Sta. 95+00.00	5
Sta. 95+00.00 to	Sta. 131+00.00	-4.1
Sta. 131+00.00 to	Sta. 166+00.00	5
Sta. 166+00.00 to	Sta. 185+50.00	-4
Sta. 185+50.00 to	Sta. 223+50.00	3.1
Sta. 223+50.00 to	Sta. 240+50.00	-0.5
Sta. 240+50.00 to	Sta. 262+50.00	3.5
Sta. 262+50.00 to	Sta. 284+40.00	-3
Sta. 284+40.00 to	Sta. 299+50.00	-3.5
Sta. 299+50.00 to	Sta. 333+00.00	-1
Sta. 333+00.00 to	Sta. 347+50.00	-4.7
Sta. 347+50.00 to	Sta. 392+00.00	1.5
Sta. 392+00.00 to	Sta. 422+00.00	2.9
Sta. 422+00.00 to	Sta. 442+00.00	-4.5
Sta. 442+00.00 to	Sta. 470+20.00	1.5
Sta. 470+20.00 to	Sta. 489+40.00	-3.75
Sta. 489+40.00 to	Sta. 518+00.00	4.5
Sta. 518+00.00 to	Sta. 536+55.00	-2.99
Sta. 536+55.00 to	Sta. 560+00.00	4
Sta. 560+00.00 to	Sta. 576+00.00	-2.6
Sta. 576+00.00 to	Sta. 586+00.00	4
Sta. 586+00.00 to	Sta. 596+25.00	4.4
Sta. 596+25.00 to	Sta. 625+25.00	0.8
Sta. 625+25.00 to	Sta. 634+00.00	-4
Sta. 634+00.00 to	Sta. 647+00.00	-1.71
Sta. 647+00.00 to	Sta. 658+50.00	-3.47
Sta. 658+50.00 to	Sta. 681+62.00	4.8
Sta. 681+62.00 to	Sta. 713+80.00	-3.25
Sta. 713+80.00 to	Sta. 755+00.00	2.84
Sta. 755+00.00 to	Sta. 790+00.00	0.62
Sta. 790+00.00 to	Sta. 863+50.00	-3.75
Sta. 863+50.00 to	Sta. 904+10.82	-3

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2) Desired speed		(3) Start of 1-sec Interval			(4) Local grade (%)	(5) Limiting acceleration (ft/sec ²)			(6) New speed based on vehicle performance		(7) Limiting acceleration and speed based on driver preferences				(8) Actual acceleration (ft/sec ²)	(9) End of 1-sec Interval		
	(mph)	(ft/sec)	Speed		Position (ft)		Coasting	Power	Effective	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)	New speed		New position (ft)		
			(mph)	(ft/sec)								(mph)	(ft/sec)		(mph)			(ft/sec)	
	(sec)	(mph)	(ft/sec)	(mph)	(ft/sec)		(ft)				(mph)	(ft/sec)	(mph)	(ft/sec)	(ft/sec ²)		(mph)	(ft/sec)	(ft)
1	0.0	70.0	102.7	60.0	88.0	0.0	0.8	-0.93	-0.06	-0.06	60.0	87.9	61.9	90.8	2.78	-0.06	60.0	87.9	88.0
2	1.0	70.0	102.7	60.0	87.9	88.0	0.8	-0.93	-0.06	-0.06	59.9	87.9	61.9	90.7	2.79	-0.06	59.9	87.9	175.9
2	2.0	70.0	102.7	59.9	87.9	175.9	0.8	-0.93	-0.05	-0.06	59.9	87.8	61.8	90.7	2.80	-0.06	59.9	87.8	263.7
2	3.0	70.0	102.7	59.9	87.8	263.7	0.8	-0.93	-0.05	-0.06	59.8	87.8	61.8	90.6	2.80	-0.06	59.8	87.8	351.5
2	4.0	70.0	102.7	59.8	87.8	351.5	0.8	-0.93	-0.05	-0.05	59.8	87.7	61.8	90.6	2.81	-0.05	59.8	87.7	439.3
2	5.0	70.0	102.7	59.8	87.7	439.3	0.8	-0.93	-0.05	-0.05	59.8	87.7	61.7	90.5	2.81	-0.05	59.8	87.7	527.0
2	6.0	70.0	102.7	59.8	87.7	527.0	0.8	-0.93	-0.05	-0.05	59.7	87.6	61.7	90.5	2.82	-0.05	59.7	87.6	614.6
2	7.0	70.0	102.7	59.7	87.6	614.6	0.8	-0.93	-0.05	-0.05	59.7	87.6	61.7	90.4	2.83	-0.05	59.7	87.6	702.2
2	8.0	70.0	102.7	59.7	87.6	702.2	0.8	-0.93	-0.05	-0.05	59.7	87.5	61.6	90.4	2.83	-0.05	59.7	87.5	789.7
2	9.0	70.0	102.7	59.7	87.5	789.7	5.0	-2.27	-1.38	-1.43	58.7	86.1	61.6	90.3	2.84	-1.43	58.7	86.1	876.5
2	10.0	70.0	102.7	58.7	86.1	876.5	5.0	-2.26	-1.35	-1.41	57.7	84.7	60.7	89.1	2.99	-1.41	57.7	84.7	961.9
2	11.0	70.0	102.7	57.7	84.7	961.9	5.0	-2.24	-1.32	-1.38	56.8	83.3	59.9	87.8	3.14	-1.38	56.8	83.3	1045.8
2	12.0	70.0	102.7	56.8	83.3	1045.8	5.0	-2.23	-1.30	-1.35	55.9	81.9	59.0	86.6	3.29	-1.35	55.9	81.9	1128.5
2	13.0	70.0	102.7	55.9	81.9	1128.5	5.0	-2.22	-1.27	-1.33	55.0	80.6	58.2	85.4	3.44	-1.33	55.0	80.6	1209.7
2	14.0	70.0	102.7	55.0	80.6	1209.7	5.0	-2.21	-1.24	-1.30	54.1	79.3	57.4	84.2	3.58	-1.30	54.1	79.3	1289.7
2	15.0	70.0	102.7	54.1	79.3	1289.7	5.0	-2.20	-1.22	-1.28	53.2	78.0	56.6	83.0	3.72	-1.28	53.2	78.0	1368.3
2	16.0	70.0	102.7	53.2	78.0	1368.3	5.0	-2.19	-1.19	-1.25	52.3	76.8	55.8	81.9	3.86	-1.25	52.3	76.8	1445.7
2	17.0	70.0	102.7	52.3	76.8	1445.7	5.0	-2.18	-1.17	-1.23	51.5	75.5	55.1	80.8	4.00	-1.23	51.5	75.5	1521.9
2	18.0	70.0	102.7	51.5	75.5	1521.9	5.0	-2.17	-1.14	-1.20	50.7	74.3	54.3	79.7	4.13	-1.20	50.7	74.3	1596.8
2	19.0	70.0	102.7	50.7	74.3	1596.8	5.0	-2.16	-1.12	-1.18	49.9	73.2	53.6	78.6	4.26	-1.18	49.9	73.2	1670.6
2	20.0	70.0	102.7	49.9	73.2	1670.6	5.0	-2.16	-1.09	-1.15	49.1	72.0	52.9	77.5	4.39	-1.15	49.1	72.0	1743.2
3	21.0	70.0	102.7	49.1	72.0	1743.2	-0.9	-0.25	0.80	0.76	49.6	72.8	52.2	76.5	4.51	0.76	49.6	72.8	1815.6
2	22.0	70.0	102.7	49.6	72.8	1815.6	-0.9	-0.26	0.79	0.75	50.1	73.5	52.6	77.2	4.43	0.75	50.1	73.5	1888.7
2	23.0	70.0	102.7	50.1	73.5	1888.7	-0.9	-0.26	0.77	0.73	50.6	74.3	53.1	77.9	4.35	0.73	50.6	74.3	1962.6
2	24.0	70.0	102.7	50.6	74.3	1962.6	-0.9	-0.27	0.76	0.72	51.1	75.0	53.5	78.5	4.27	0.72	51.1	75.0	2037.2
2	25.0	70.0	102.7	51.1	75.0	2037.2	-0.9	-0.27	0.74	0.71	51.6	75.7	54.0	79.2	4.19	0.71	51.6	75.7	2112.6
2	26.0	70.0	102.7	51.6	75.7	2112.6	-0.9	-0.28	0.73	0.69	52.1	76.4	54.4	79.8	4.11	0.69	52.1	76.4	2188.6
2	27.0	70.0	102.7	52.1	76.4	2188.6	-0.9	-0.28	0.71	0.68	52.5	77.1	54.8	80.4	4.04	0.68	52.5	77.1	2265.3
2	28.0	70.0	102.7	52.5	77.1	2265.3	-0.9	-0.29	0.70	0.67	53.0	77.7	55.2	81.0	3.97	0.67	53.0	77.7	2342.7
2	29.0	70.0	102.7	53.0	77.7	2342.7	-0.9	-0.29	0.69	0.66	53.4	78.4	55.6	81.6	3.89	0.66	53.4	78.4	2420.7
2	30.0	70.0	102.7	53.4	78.4	2420.7	-0.9	-0.30	0.67	0.64	53.9	79.0	56.0	82.2	3.82	0.64	53.9	79.0	2499.4
2	31.0	70.0	102.7	53.9	79.0	2499.4	-0.9	-0.30	0.66	0.63	54.3	79.7	56.4	82.8	3.75	0.63	54.3	79.7	2578.8
2	32.0	70.0	102.7	54.3	79.7	2578.8	-0.9	-0.31	0.65	0.62	54.7	80.3	56.8	83.3	3.69	0.62	54.7	80.3	2658.7
2	33.0	70.0	102.7	54.7	80.3	2658.7	-0.9	-0.31	0.64	0.61	55.1	80.9	57.2	83.9	3.62	0.61	55.1	80.9	2739.3
2	34.0	70.0	102.7	55.1	80.9	2739.3	-0.9	-0.32	0.62	0.60	55.6	81.5	57.6	84.4	3.55	0.60	55.6	81.5	2820.5
2	35.0	70.0	102.7	55.6	81.5	2820.5	-0.9	-0.32	0.61	0.59	56.0	82.1	57.9	85.0	3.49	0.59	56.0	82.1	2902.3
2	36.0	70.0	102.7	56.0	82.1	2902.3	-0.9	-0.33	0.60	0.58	56.3	82.6	58.3	85.5	3.42	0.58	56.3	82.6	2984.6
2	37.0	70.0	102.7	56.3	82.6	2984.6	-0.5	-0.45	0.47	0.45	56.7	83.1	58.6	86.0	3.36	0.45	56.7	83.1	3067.5
2	38.0	70.0	102.7	56.7	83.1	3067.5	-0.5	-0.46	0.46	0.44	57.0	83.5	58.9	86.4	3.31	0.44	57.0	83.5	3150.8
2	39.0	70.0	102.7	57.0	83.5	3150.8	-0.5	-0.46	0.45	0.44	57.3	84.0	59.2	86.8	3.27	0.44	57.3	84.0	3234.6
2	40.0	70.0	102.7	57.3	84.0	3234.6	-0.5	-0.47	0.44	0.43	57.5	84.4	59.5	87.2	3.22	0.43	57.5	84.4	3318.7
2	41.0	70.0	102.7	57.5	84.4	3318.7	-0.5	-0.47	0.44	0.42	57.8	84.8	59.7	87.6	3.17	0.42	57.8	84.8	3403.4
2	42.0	70.0	102.7	57.8	84.8	3403.4	-0.5	-0.47	0.43	0.41	58.1	85.2	60.0	87.9	3.13	0.41	58.1	85.2	3488.4
2	43.0	70.0	102.7	58.1	85.2	3488.4	-0.5	-0.48	0.42	0.41	58.4	85.6	60.2	88.3	3.08	0.41	58.4	85.6	3573.8

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(9)	(10)	(11)	(12)	(13)			(14)	(15)	(16)	(17)		(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval							
			Speed	Position	Coasting		Power	Effective	Speed			Acceleration	New speed			New position							
	(mph)	(ft/sec)	(mph)	(ft/sec)					(ft)	(mph)	(ft/sec)		(ft/sec ²)	(mph)			(ft/sec)	(ft)					
44.0	70.0	102.7	58.4	85.6	3573.8	-0.5	-0.48	0.41	0.40	58.7	86.0	60.5	88.7	3.04	0.40	58.7	86.0	3659.7					

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

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(1) Elapsed time (sec)	(2) Desired speed		(3) Start of 1-sec Interval			(4) Local grade (%)	(5) Limiting acceleration (ft/sec ²)			(6) New speed based on vehicle performance		(7) Limiting acceleration and speed based on driver preferences				(8) Actual acceleration (ft/sec ²)	(9) End of 1-sec Interval	
	(mph)	(ft/sec)	Speed		Position (ft)		Coasting	Power	Effective	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)	(mph)		(ft/sec)	New position (ft)
			(mph)	(ft/sec)								(mph)	(ft/sec)					
	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)		(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)		(ft/sec)	(ft/sec)
45.0	70.0	102.7	58.7	86.0	3659.7	-0.5	-0.48	0.41	0.39	58.9	86.4	60.7	89.0	3.00	0.39	58.9	86.4	3745.9
46.0	70.0	102.7	58.9	86.4	3745.9	-0.5	-0.49	0.40	0.38	59.2	86.8	60.9	89.4	2.95	0.38	59.2	86.8	3832.5
47.0	70.0	102.7	59.2	86.8	3832.5	-0.5	-0.49	0.39	0.38	59.4	87.2	61.2	89.7	2.91	0.38	59.4	87.2	3919.5
48.0	70.0	102.7	59.4	87.2	3919.5	-0.5	-0.49	0.38	0.37	59.7	87.6	61.4	90.1	2.87	0.37	59.7	87.6	4006.9
49.0	70.0	102.7	59.7	87.6	4006.9	-0.5	-0.50	0.38	0.36	59.9	87.9	61.6	90.4	2.83	0.36	59.9	87.9	4094.6
50.0	70.0	102.7	59.9	87.9	4094.6	-0.5	-0.50	0.37	0.36	60.2	88.3	61.9	90.7	2.79	0.36	60.2	88.3	4182.7
51.0	70.0	102.7	60.2	88.3	4182.7	5.0	-2.27	-1.39	-1.44	59.2	86.8	62.1	91.0	2.75	-1.44	59.2	86.8	4270.3
52.0	70.0	102.7	59.2	86.8	4270.3	5.0	-2.26	-1.36	-1.42	58.2	85.4	61.2	89.8	2.91	-1.42	58.2	85.4	4356.4
53.0	70.0	102.7	58.2	85.4	4356.4	5.0	-2.25	-1.33	-1.39	57.3	84.0	60.3	88.5	3.06	-1.39	57.3	84.0	4441.2
54.0	70.0	102.7	57.3	84.0	4441.2	5.0	-2.24	-1.31	-1.36	56.4	82.7	59.5	87.2	3.21	-1.36	56.4	82.7	4524.5
55.0	70.0	102.7	56.4	82.7	4524.5	5.0	-2.22	-1.28	-1.34	55.5	81.3	58.7	86.0	3.36	-1.34	55.5	81.3	4606.5
56.0	70.0	102.7	55.5	81.3	4606.5	5.0	-2.21	-1.26	-1.31	54.6	80.0	57.8	84.8	3.50	-1.31	54.6	80.0	4687.2
57.0	70.0	102.7	54.6	80.0	4687.2	5.0	-2.20	-1.23	-1.29	53.7	78.7	57.0	83.7	3.65	-1.29	53.7	78.7	4766.6
58.0	70.0	102.7	53.7	78.7	4766.6	5.0	-2.19	-1.20	-1.26	52.8	77.5	56.3	82.5	3.79	-1.26	52.8	77.5	4844.7
59.0	70.0	102.7	52.8	77.5	4844.7	5.0	-2.18	-1.18	-1.24	52.0	76.2	55.5	81.4	3.92	-1.24	52.0	76.2	4921.5
60.0	70.0	102.7	52.0	76.2	4921.5	5.0	-2.17	-1.15	-1.21	51.1	75.0	54.7	80.3	4.06	-1.21	51.1	75.0	4997.1
61.0	70.0	102.7	51.1	75.0	4997.1	5.0	-2.17	-1.13	-1.19	50.3	73.8	54.0	79.2	4.19	-1.19	50.3	73.8	5071.6
62.0	70.0	102.7	50.3	73.8	5071.6	5.0	-2.16	-1.10	-1.16	49.5	72.7	53.3	78.1	4.31	-1.16	49.5	72.7	5144.8
63.0	70.0	102.7	49.5	72.7	5144.8	5.0	-2.15	-1.08	-1.14	48.8	71.5	52.6	77.1	4.44	-1.14	48.8	71.5	5216.9
64.0	70.0	102.7	48.8	71.5	5216.9	5.0	-2.14	-1.05	-1.12	48.0	70.4	51.9	76.1	4.56	-1.12	48.0	70.4	5287.9
65.0	70.0	102.7	48.0	70.4	5287.9	5.0	-2.13	-1.03	-1.09	47.3	69.3	51.2	75.1	4.68	-1.09	47.3	69.3	5357.7
66.0	70.0	102.7	47.3	69.3	5357.7	5.0	-2.13	-1.00	-1.07	46.5	68.2	50.5	74.1	4.80	-1.07	46.5	68.2	5426.5
67.0	70.0	102.7	46.5	68.2	5426.5	5.0	-2.12	-0.98	-1.04	45.8	67.2	49.9	73.2	4.92	-1.04	45.8	67.2	5494.2
68.0	70.0	102.7	45.8	67.2	5494.2	5.0	-2.11	-0.95	-1.02	45.1	66.2	49.3	72.2	5.03	-1.02	45.1	66.2	5560.9
69.0	70.0	102.7	45.1	66.2	5560.9	5.0	-2.10	-0.93	-0.99	44.4	65.2	48.6	71.3	5.14	-0.99	44.4	65.2	5626.6
70.0	70.0	102.7	44.4	65.2	5626.6	5.0	-2.10	-0.90	-0.97	43.8	64.2	48.0	70.4	5.25	-0.97	43.8	64.2	5691.3
71.0	70.0	102.7	43.8	64.2	5691.3	5.0	-2.09	-0.88	-0.95	43.1	63.3	47.4	69.6	5.35	-0.95	43.1	63.3	5755.1
72.0	70.0	102.7	43.1	63.3	5755.1	5.0	-2.09	-0.86	-0.92	42.5	62.3	46.9	68.7	5.45	-0.92	42.5	62.3	5817.9
73.0	70.0	102.7	42.5	62.3	5817.9	5.0	-2.08	-0.83	-0.90	41.9	61.4	46.3	67.9	5.55	-0.90	41.9	61.4	5879.8
74.0	70.0	102.7	41.9	61.4	5879.8	5.0	-2.08	-0.81	-0.88	41.3	60.6	45.8	67.1	5.65	-0.88	41.3	60.6	5940.8
75.0	70.0	102.7	41.3	60.6	5940.8	5.0	-2.07	-0.79	-0.85	40.7	59.7	45.2	66.3	5.75	-0.85	40.7	59.7	6000.9
76.0	70.0	102.7	40.7	59.7	6000.9	5.0	-2.07	-0.76	-0.83	40.1	58.9	44.7	65.6	5.84	-0.83	40.1	58.9	6060.2
77.0	70.0	102.7	40.1	58.9	6060.2	5.0	-2.06	-0.74	-0.81	39.6	58.1	44.2	64.8	5.93	-0.81	39.6	58.1	6118.7
78.0	70.0	102.7	39.6	58.1	6118.7	5.0	-2.06	-0.72	-0.79	39.1	57.3	43.7	64.1	6.02	-0.79	39.1	57.3	6176.4
79.0	70.0	102.7	39.1	57.3	6176.4	5.0	-2.05	-0.70	-0.76	38.5	56.5	43.2	63.4	6.10	-0.76	38.5	56.5	6233.3
80.0	70.0	102.7	38.5	56.5	6233.3	5.0	-2.05	-0.67	-0.74	38.0	55.8	42.8	62.7	6.18	-0.74	38.0	55.8	6289.5
81.0	70.0	102.7	38.0	55.8	6289.5	5.0	-2.04	-0.65	-0.72	37.5	55.1	42.3	62.1	6.26	-0.72	37.5	55.1	6344.9
82.0	70.0	102.7	37.5	55.1	6344.9	5.0	-2.04	-0.63	-0.70	37.1	54.4	41.9	61.4	6.34	-0.70	37.1	54.4	6399.6
83.0	70.0	102.7	37.1	54.4	6399.6	5.0	-2.04	-0.61	-0.67	36.6	53.7	41.4	60.8	6.42	-0.67	36.6	53.7	6453.7
84.0	70.0	102.7	36.6	53.7	6453.7	5.0	-2.03	-0.59	-0.65	36.2	53.0	41.0	60.2	6.49	-0.65	36.2	53.0	6507.0
85.0	70.0	102.7	36.2	53.0	6507.0	5.0	-2.03	-0.57	-0.63	35.7	52.4	40.6	59.6	6.56	-0.63	35.7	52.4	6559.8
86.0	70.0	102.7	35.7	52.4	6559.8	5.0	-2.03	-0.55	-0.61	35.3	51.8	40.3	59.0	6.63	-0.61	35.3	51.8	6611.9
87.0	70.0	102.7	35.3	51.8	6611.9	5.0	-2.02	-0.53	-0.59	34.9	51.2	39.9	58.5	6.69	-0.59	34.9	51.2	6663.4
88.0	70.0	102.7	34.9	51.2	6663.4	5.0	-2.02	-0.51	-0.57	34.5	50.6	39.5	58.0	6.76	-0.57	34.5	50.6	6714.3

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(4)		(5)	(6)	(7) Local grade (%)	(8)			(11) New speed based on vehicle performance (mph)	(12) (ft/sec)	(13)		(15) Acceleration (ft/sec ²)	(16) Actual acceleration (ft/sec ²)	(17)			(19) New position (ft)
	Desired speed		Start of 1-sec Interval		Speed (ft/sec)	Position (ft)		Limiting acceleration (ft/sec ²)					Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
	(mph)	(ft/sec)	(mph)	(ft/sec)				Coasting	Power	Effective			Speed				Acceleration (ft/sec ²)	New speed (mph)	(ft/sec)	
					(mph)	(ft/sec)							(mph)	(ft/sec)						
89.0	70.0	102.7	34.5	50.6	6714.3	5.0	-2.02	-0.49	-0.55	34.2	50.1	39.2	57.5	6.82	-0.55	34.2	50.1	6764.7		
90.0	70.0	102.7	34.2	50.1	6764.7	5.0	-2.01	-0.47	-0.53	33.8	49.6	38.8	57.0	6.88	-0.53	33.8	49.6	6814.5		
91.0	70.0	102.7	33.8	49.6	6814.5	5.0	-2.01	-0.45	-0.51	33.4	49.1	38.5	56.5	6.93	-0.51	33.4	49.1	6863.8		
92.0	70.0	102.7	33.4	49.1	6863.8	5.0	-2.01	-0.43	-0.49	33.1	48.6	38.2	56.0	6.99	-0.49	33.1	48.6	6912.7		
93.0	70.0	102.7	33.1	48.6	6912.7	5.0	-2.01	-0.41	-0.47	32.8	48.1	37.9	55.6	7.04	-0.47	32.8	48.1	6961.0		
94.0	70.0	102.7	32.8	48.1	6961.0	5.0	-2.01	-0.40	-0.45	32.5	47.6	37.6	55.2	7.09	-0.45	32.5	47.6	7008.9		
5 95.0	70.0	102.7	32.5	47.6	7008.9	-4.1	0.92	2.46	2.20	34.0	49.8	37.4	54.8	7.14	2.20	34.0	49.8	7057.6		
96.0	70.0	102.7	34.0	49.8	7057.6	-4.1	0.91	2.39	2.15	35.4	52.0	38.7	56.7	6.91	2.15	35.4	52.0	7108.5		
97.0	70.0	102.7	35.4	52.0	7108.5	-4.1	0.90	2.32	2.11	36.9	54.1	40.0	58.7	6.67	2.11	36.9	54.1	7161.6		
98.0	70.0	102.7	36.9	54.1	7161.6	-4.1	0.89	2.26	2.06	38.3	56.2	41.3	60.5	6.45	2.06	38.3	56.2	7216.7		
99.0	70.0	102.7	38.3	56.2	7216.7	-4.1	0.88	2.20	2.02	39.7	58.2	42.5	62.4	6.22	2.02	39.7	58.2	7273.9		
100.0	70.0	102.7	39.7	58.2	7273.9	-4.1	0.87	2.15	1.98	41.0	60.2	43.8	64.2	6.00	1.98	41.0	60.2	7333.0		
101.0	70.0	102.7	41.0	60.2	7333.0	-4.1	0.86	2.10	1.95	42.3	62.1	45.0	66.0	5.79	1.95	42.3	62.1	7394.2		
102.0	70.0	102.7	42.3	62.1	7394.2	-4.1	0.85	2.05	1.91	43.7	64.0	46.2	67.7	5.58	1.91	43.7	64.0	7457.2		
103.0	70.0	102.7	43.7	64.0	7457.2	-4.1	0.84	2.00	1.87	44.9	65.9	47.3	69.4	5.37	1.87	44.9	65.9	7522.2		
104.0	70.0	102.7	44.9	65.9	7522.2	-4.1	0.82	1.96	1.84	46.2	67.7	48.5	71.1	5.17	1.84	46.2	67.7	7589.0		
105.0	70.0	102.7	46.2	67.7	7589.0	-4.1	0.81	1.92	1.81	47.4	69.5	49.6	72.7	4.97	1.81	47.4	69.5	7657.7		
106.0	70.0	102.7	47.4	69.5	7657.7	-4.1	0.80	1.88	1.78	48.6	71.3	50.7	74.3	4.78	1.78	48.6	71.3	7728.1		
107.0	70.0	102.7	48.6	71.3	7728.1	-4.1	0.79	1.84	1.74	49.8	73.1	51.8	75.9	4.59	1.74	49.8	73.1	7800.3		
108.0	70.0	102.7	49.8	73.1	7800.3	-4.1	0.78	1.80	1.71	51.0	74.8	52.8	77.5	4.40	1.71	51.0	74.8	7874.2		
109.0	70.0	102.7	51.0	74.8	7874.2	-4.1	0.76	1.77	1.68	52.1	76.5	53.9	79.0	4.21	1.68	52.1	76.5	7949.8		
110.0	70.0	102.7	52.1	76.5	7949.8	-4.1	0.75	1.74	1.66	53.3	78.1	54.9	80.5	4.03	1.66	53.3	78.1	8027.1		
111.0	70.0	102.7	53.3	78.1	8027.1	-4.1	0.74	1.70	1.63	54.4	79.7	55.9	82.0	3.85	1.63	54.4	79.7	8106.0		
112.0	70.0	102.7	54.4	79.7	8106.0	-4.1	0.73	1.67	1.60	55.5	81.3	56.9	83.4	3.68	1.60	55.5	81.3	8186.6		
113.0	70.0	102.7	55.5	81.3	8186.6	-4.1	0.71	1.64	1.57	56.5	82.9	57.9	84.8	3.50	1.57	56.5	82.9	8268.7		
114.0	70.0	102.7	56.5	82.9	8268.7	-4.1	0.70	1.61	1.55	57.6	84.5	58.8	86.3	3.33	1.55	57.6	84.5	8352.4		
115.0	70.0	102.7	57.6	84.5	8352.4	-4.1	0.69	1.58	1.52	58.6	86.0	59.7	87.6	3.17	1.52	58.6	86.0	8437.6		
116.0	70.0	102.7	58.6	86.0	8437.6	-4.1	0.68	1.55	1.50	59.6	87.5	60.7	89.0	3.00	1.50	59.6	87.5	8524.4		
117.0	70.0	102.7	59.6	87.5	8524.4	-4.1	0.66	1.53	1.47	60.7	89.0	61.6	90.3	2.84	1.47	60.7	89.0	8612.6		
118.0	70.0	102.7	60.7	89.0	8612.6	-4.1	0.65	1.50	1.45	61.6	90.4	62.5	91.6	2.68	1.45	61.6	90.4	8702.3		
119.0	70.0	102.7	61.6	90.4	8702.3	-4.1	0.64	1.47	1.43	62.6	91.8	63.4	92.9	2.52	1.43	62.6	91.8	8793.4		
120.0	70.0	102.7	62.6	91.8	8793.4	-4.1	0.62	1.45	1.40	63.6	93.2	64.2	94.2	2.37	1.40	63.6	93.2	8885.9		
121.0	70.0	102.7	63.6	93.2	8885.9	-4.1	0.61	1.42	1.38	64.5	94.6	65.1	95.5	2.22	1.38	64.5	94.6	8979.8		
122.0	70.0	102.7	64.5	94.6	8979.8	-4.1	0.60	1.40	1.36	65.4	96.0	65.9	96.7	2.07	1.36	65.4	96.0	9075.1		
123.0	70.0	102.7	65.4	96.0	9075.1	-4.1	0.59	1.38	1.34	66.3	97.3	66.7	97.9	1.92	1.34	66.3	97.3	9171.8		
124.0	70.0	102.7	66.3	97.3	9171.8	-4.1	0.57	1.35	1.31	67.2	98.6	67.6	99.1	1.78	1.31	67.2	98.6	9269.7		
125.0	70.0	102.7	67.2	98.6	9269.7	-4.1	0.56	1.33	1.29	68.1	99.9	68.4	100.3	1.64	1.29	68.1	99.9	9369.0		
126.0	70.0	102.7	68.1	99.9	9369.0	-4.1	0.55	1.31	1.27	69.0	101.2	69.1	101.4	1.50	1.27	69.0	101.2	9469.6		
127.0	70.0	102.7	69.0	101.2	9469.6	-4.1	0.54	1.29	1.25	69.8	102.4	69.9	102.5	1.36	1.25	69.8	102.4	9571.4		
128.0	70.0	102.7	69.8	102.4	9571.4	-4.1	0.52	1.27	1.23	70.7	103.7	70.0	102.7	0.23	0.23	70.0	102.7	9673.9		
6 129.0	70.0	102.7	70.0	102.7	9673.9	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	9776.6		
130.0	70.0	102.7	70.0	102.7	9776.6	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	9879.3		
131.0	70.0	102.7	70.0	102.7	9879.3	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	9981.9		
132.0	70.0	102.7	70.0	102.7	9981.9	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	10084.6		

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/frontal area ratio (lb/ft²) = 431.4
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(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11) New speed based on vehicle performance (mph)	(12) (ft/sec)	(13)		(15) Actual acceleration (ft/sec ²)	(16)		(17)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)					Limiting acceleration and speed based on driver preferences			End of 1-sec Interval					
	(mph)	(ft/sec)	Speed			Coasting	Power	Effective			Speed			Acceleration (ft/sec ²)	New speed (mph)	(ft/sec)	New speed		
			(mph)	(ft/sec)							(ft/sec)	(ft/sec)					(mph)		(ft/sec)
133.0	70.0	102.7	70.0	102.7	10084.6	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	10187.3	
134.0	70.0	102.7	70.0	102.7	10187.3	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	10289.9	
135.0	70.0	102.7	70.0	102.7	10289.9	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	10392.6	
136.0	70.0	102.7	70.0	102.7	10392.6	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	10495.3	
137.0	70.0	102.7	70.0	102.7	10495.3	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	10597.9	
138.0	70.0	102.7	70.0	102.7	10597.9	-4.1	0.52	1.26	1.23	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	10700.6	
139.0	70.0	102.7	70.0	102.7	10700.6	5.0	-2.41	-1.65	-1.69	68.8	101.0	70.0	102.7	0.00	-1.69	68.8	101.0	10802.4	
140.0	70.0	102.7	68.8	101.0	10802.4	5.0	-2.39	-1.62	-1.66	67.7	99.3	69.8	102.4	1.38	-1.66	67.7	99.3	10902.5	
141.0	70.0	102.7	67.7	99.3	10902.5	5.0	-2.37	-1.59	-1.64	66.6	97.7	68.8	100.9	1.56	-1.64	66.6	97.7	11001.0	
142.0	70.0	102.7	66.6	97.7	11001.0	5.0	-2.36	-1.56	-1.61	65.5	96.1	67.8	99.4	1.74	-1.61	65.5	96.1	11097.9	
143.0	70.0	102.7	65.5	96.1	11097.9	5.0	-2.34	-1.53	-1.58	64.4	94.5	66.8	98.0	1.91	-1.58	64.4	94.5	11193.2	
144.0	70.0	102.7	64.4	94.5	11193.2	5.0	-2.33	-1.50	-1.55	63.4	92.9	65.8	96.6	2.08	-1.55	63.4	92.9	11286.9	
145.0	70.0	102.7	63.4	92.9	11286.9	5.0	-2.31	-1.47	-1.53	62.3	91.4	64.9	95.2	2.25	-1.53	62.3	91.4	11379.1	
146.0	70.0	102.7	62.3	91.4	11379.1	5.0	-2.30	-1.45	-1.50	61.3	89.9	64.0	93.8	2.42	-1.50	61.3	89.9	11469.7	
147.0	70.0	102.7	61.3	89.9	11469.7	5.0	-2.29	-1.42	-1.47	60.3	88.4	63.1	92.5	2.58	-1.47	60.3	88.4	11558.9	
148.0	70.0	102.7	60.3	88.4	11558.9	5.0	-2.27	-1.39	-1.45	59.3	87.0	62.2	91.2	2.74	-1.45	59.3	87.0	11646.6	
149.0	70.0	102.7	59.3	87.0	11646.6	5.0	-2.26	-1.36	-1.42	58.3	85.6	61.3	89.9	2.89	-1.42	58.3	85.6	11732.9	
150.0	70.0	102.7	58.3	85.6	11732.9	5.0	-2.25	-1.34	-1.39	57.4	84.2	60.4	88.6	3.05	-1.39	57.4	84.2	11817.7	
151.0	70.0	102.7	57.4	84.2	11817.7	5.0	-2.24	-1.31	-1.37	56.5	82.8	59.6	87.4	3.20	-1.37	56.5	82.8	11901.2	
152.0	70.0	102.7	56.5	82.8	11901.2	5.0	-2.23	-1.28	-1.34	55.5	81.5	58.7	86.2	3.34	-1.34	55.5	81.5	11983.4	
153.0	70.0	102.7	55.5	81.5	11983.4	5.0	-2.21	-1.26	-1.32	54.6	80.2	57.9	85.0	3.49	-1.32	54.6	80.2	12064.2	
154.0	70.0	102.7	54.6	80.2	12064.2	5.0	-2.20	-1.23	-1.29	53.8	78.9	57.1	83.8	3.63	-1.29	53.8	78.9	12143.7	
155.0	70.0	102.7	53.8	78.9	12143.7	5.0	-2.19	-1.21	-1.27	52.9	77.6	56.3	82.6	3.77	-1.27	52.9	77.6	12221.9	
156.0	70.0	102.7	52.9	77.6	12221.9	5.0	-2.18	-1.18	-1.24	52.1	76.4	55.6	81.5	3.91	-1.24	52.1	76.4	12298.9	
157.0	70.0	102.7	52.1	76.4	12298.9	5.0	-2.18	-1.15	-1.22	51.2	75.1	54.8	80.4	4.04	-1.22	51.2	75.1	12374.6	
158.0	70.0	102.7	51.2	75.1	12374.6	5.0	-2.17	-1.13	-1.19	50.4	73.9	54.1	79.3	4.17	-1.19	50.4	73.9	12449.2	
159.0	70.0	102.7	50.4	73.9	12449.2	5.0	-2.16	-1.10	-1.17	49.6	72.8	53.4	78.2	4.30	-1.17	49.6	72.8	12522.6	
160.0	70.0	102.7	49.6	72.8	12522.6	5.0	-2.15	-1.08	-1.14	48.8	71.6	52.6	77.2	4.43	-1.14	48.8	71.6	12594.8	
161.0	70.0	102.7	48.8	71.6	12594.8	5.0	-2.14	-1.05	-1.12	48.1	70.5	51.9	76.2	4.55	-1.12	48.1	70.5	12665.8	
162.0	70.0	102.7	48.1	70.5	12665.8	5.0	-2.13	-1.03	-1.09	47.3	69.4	51.3	75.2	4.67	-1.09	47.3	69.4	12735.8	
163.0	70.0	102.7	47.3	69.4	12735.8	5.0	-2.13	-1.00	-1.07	46.6	68.4	50.6	74.2	4.79	-1.07	46.6	68.4	12804.7	
164.0	70.0	102.7	46.6	68.4	12804.7	5.0	-2.12	-0.98	-1.05	45.9	67.3	50.0	73.3	4.91	-1.05	45.9	67.3	12872.5	
165.0	70.0	102.7	45.9	67.3	12872.5	5.0	-2.11	-0.96	-1.02	45.2	66.3	49.3	72.3	5.02	-1.02	45.2	66.3	12939.3	
166.0	70.0	102.7	45.2	66.3	12939.3	5.0	-2.11	-0.93	-1.00	44.5	65.3	48.7	71.4	5.13	-1.00	44.5	65.3	13005.1	
167.0	70.0	102.7	44.5	65.3	13005.1	5.0	-2.10	-0.91	-0.97	43.9	64.3	48.1	70.5	5.24	-0.97	43.9	64.3	13069.9	
168.0	70.0	102.7	43.9	64.3	13069.9	5.0	-2.09	-0.88	-0.95	43.2	63.4	47.5	69.7	5.34	-0.95	43.2	63.4	13133.8	
169.0	70.0	102.7	43.2	63.4	13133.8	5.0	-2.09	-0.86	-0.93	42.6	62.4	46.9	68.8	5.44	-0.93	42.6	62.4	13196.7	
170.0	70.0	102.7	42.6	62.4	13196.7	5.0	-2.08	-0.84	-0.90	42.0	61.5	46.4	68.0	5.54	-0.90	42.0	61.5	13258.7	
171.0	70.0	102.7	42.0	61.5	13258.7	5.0	-2.08	-0.81	-0.88	41.4	60.7	45.8	67.2	5.64	-0.88	41.4	60.7	13319.8	
172.0	70.0	102.7	41.4	60.7	13319.8	5.0	-2.07	-0.79	-0.86	40.8	59.8	45.3	66.4	5.74	-0.86	40.8	59.8	13380.0	
173.0	70.0	102.7	40.8	59.8	13380.0	5.0	-2.07	-0.77	-0.83	40.2	59.0	44.8	65.6	5.83	-0.83	40.2	59.0	13439.4	
174.0	70.0	102.7	40.2	59.0	13439.4	5.0	-2.06	-0.74	-0.81	39.7	58.2	44.2	64.9	5.92	-0.81	39.7	58.2	13498.0	
175.0	70.0	102.7	39.7	58.2	13498.0	5.0	-2.06	-0.72	-0.79	39.1	57.4	43.8	64.2	6.01	-0.79	39.1	57.4	13555.7	
176.0	70.0	102.7	39.1	57.4	13555.7	5.0	-2.05	-0.70	-0.77	38.6	56.6	43.3	63.5	6.09	-0.77	38.6	56.6	13612.7	

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)								
177.0	70.0	102.7	38.6	56.6	13612.7	5.0	-2.05	-0.68	-0.74	38.1	55.9	42.8	62.8	6.17	-0.74	38.1	55.9	13669.0
178.0	70.0	102.7	38.1	55.9	13669.0	5.0	-2.04	-0.65	-0.72	37.6	55.1	42.4	62.1	6.25	-0.72	37.6	55.1	13724.5
179.0	70.0	102.7	37.6	55.1	13724.5	5.0	-2.04	-0.63	-0.70	37.1	54.4	41.9	61.5	6.33	-0.70	37.1	54.4	13779.3
180.0	70.0	102.7	37.1	54.4	13779.3	5.0	-2.04	-0.61	-0.68	36.7	53.8	41.5	60.9	6.41	-0.68	36.7	53.8	13833.4
181.0	70.0	102.7	36.7	53.8	13833.4	5.0	-2.03	-0.59	-0.66	36.2	53.1	41.1	60.2	6.48	-0.66	36.2	53.1	13886.8
182.0	70.0	102.7	36.2	53.1	13886.8	5.0	-2.03	-0.57	-0.63	35.8	52.5	40.7	59.7	6.55	-0.63	35.8	52.5	13939.6
183.0	70.0	102.7	35.8	52.5	13939.6	5.0	-2.03	-0.55	-0.61	35.4	51.9	40.3	59.1	6.62	-0.61	35.4	51.9	13991.8
184.0	70.0	102.7	35.4	51.9	13991.8	5.0	-2.02	-0.53	-0.59	35.0	51.3	39.9	58.6	6.69	-0.59	35.0	51.3	14043.4
185.0	70.0	102.7	35.0	51.3	14043.4	5.0	-2.02	-0.51	-0.57	34.6	50.7	39.6	58.0	6.75	-0.57	34.6	50.7	14094.3
186.0	70.0	102.7	34.6	50.7	14094.3	5.0	-2.02	-0.49	-0.55	34.2	50.2	39.2	57.5	6.81	-0.55	34.2	50.2	14144.8
187.0	70.0	102.7	34.2	50.2	14144.8	-4.0	0.88	2.35	2.11	35.6	52.3	38.9	57.0	6.87	2.11	35.6	52.3	14196.0
188.0	70.0	102.7	35.6	52.3	14196.0	-4.0	0.87	2.28	2.07	37.0	54.3	40.2	58.9	6.64	2.07	37.0	54.3	14249.3
189.0	70.0	102.7	37.0	54.3	14249.3	-4.0	0.86	2.22	2.03	38.4	56.4	41.4	60.8	6.42	2.03	38.4	56.4	14304.6
190.0	70.0	102.7	38.4	56.4	14304.6	-4.0	0.85	2.16	1.99	39.8	58.4	42.7	62.6	6.20	1.99	39.8	58.4	14362.0
191.0	70.0	102.7	39.8	58.4	14362.0	-4.0	0.84	2.11	1.95	41.1	60.3	43.9	64.3	5.99	1.95	41.1	60.3	14421.3
192.0	70.0	102.7	41.1	60.3	14421.3	-4.0	0.83	2.06	1.91	42.4	62.2	45.1	66.1	5.77	1.91	42.4	62.2	14482.6
193.0	70.0	102.7	42.4	62.2	14482.6	-4.0	0.82	2.01	1.88	43.7	64.1	46.2	67.8	5.57	1.88	43.7	64.1	14545.8
194.0	70.0	102.7	43.7	64.1	14545.8	-4.0	0.80	1.97	1.84	45.0	65.9	47.4	69.5	5.36	1.84	45.0	65.9	14610.8
195.0	70.0	102.7	45.0	65.9	14610.8	-4.0	0.79	1.93	1.81	46.2	67.8	48.5	71.1	5.17	1.81	46.2	67.8	14677.6
196.0	70.0	102.7	46.2	67.8	14677.6	-4.0	0.78	1.89	1.78	47.4	69.5	49.6	72.7	4.97	1.78	47.4	69.5	14746.3
197.0	70.0	102.7	47.4	69.5	14746.3	-4.0	0.77	1.85	1.75	48.6	71.3	50.7	74.3	4.78	1.75	48.6	71.3	14816.7
198.0	70.0	102.7	48.6	71.3	14816.7	-4.0	0.76	1.81	1.71	49.8	73.0	51.7	75.9	4.59	1.71	49.8	73.0	14888.8
199.0	70.0	102.7	49.8	73.0	14888.8	-4.0	0.74	1.77	1.68	50.9	74.7	52.8	77.4	4.40	1.68	50.9	74.7	14962.7
200.0	70.0	102.7	50.9	74.7	14962.7	-4.0	0.73	1.74	1.66	52.0	76.3	53.8	78.9	4.22	1.66	52.0	76.3	15038.2
201.0	70.0	102.7	52.0	76.3	15038.2	-4.0	0.72	1.71	1.63	53.2	78.0	54.8	80.4	4.04	1.63	53.2	78.0	15115.3
202.0	70.0	102.7	53.2	78.0	15115.3	-4.0	0.71	1.67	1.60	54.2	79.6	55.8	81.8	3.87	1.60	54.2	79.6	15194.1
203.0	70.0	102.7	54.2	79.6	15194.1	-4.0	0.70	1.64	1.57	55.3	81.1	56.8	83.3	3.70	1.57	55.3	81.1	15274.4
204.0	70.0	102.7	55.3	81.1	15274.4	-4.0	0.68	1.61	1.55	56.4	82.7	57.7	84.7	3.53	1.55	56.4	82.7	15356.3
205.0	70.0	102.7	56.4	82.7	15356.3	-4.0	0.67	1.58	1.52	57.4	84.2	58.7	86.0	3.36	1.52	57.4	84.2	15439.8
206.0	70.0	102.7	57.4	84.2	15439.8	-4.0	0.66	1.56	1.50	58.4	85.7	59.6	87.4	3.19	1.50	58.4	85.7	15524.7
207.0	70.0	102.7	58.4	85.7	15524.7	-4.0	0.65	1.53	1.47	59.4	87.2	60.5	88.7	3.03	1.47	59.4	87.2	15611.1
208.0	70.0	102.7	59.4	87.2	15611.1	-4.0	0.63	1.50	1.45	60.4	88.6	61.4	90.0	2.87	1.45	60.4	88.6	15699.0
209.0	70.0	102.7	60.4	88.6	15699.0	-4.0	0.62	1.47	1.42	61.4	90.0	62.3	91.3	2.72	1.42	61.4	90.0	15788.4
210.0	70.0	102.7	61.4	90.0	15788.4	-4.0	0.61	1.45	1.40	62.3	91.4	63.1	92.6	2.56	1.40	62.3	91.4	15879.1
211.0	70.0	102.7	62.3	91.4	15879.1	-4.0	0.60	1.42	1.38	63.3	92.8	64.0	93.9	2.41	1.38	63.3	92.8	15971.2
212.0	70.0	102.7	63.3	92.8	15971.2	-4.0	0.58	1.40	1.36	64.2	94.2	64.8	95.1	2.26	1.36	64.2	94.2	16064.7
213.0	70.0	102.7	64.2	94.2	16064.7	3.1	-1.71	-0.89	-0.92	63.6	93.3	65.7	96.3	2.12	-0.92	63.6	93.3	16158.4
214.0	70.0	102.7	63.6	93.3	16158.4	3.1	-1.70	-0.87	-0.90	63.0	92.3	65.1	95.5	2.22	-0.90	63.0	92.3	16251.2
215.0	70.0	102.7	63.0	92.3	16251.2	3.1	-1.70	-0.86	-0.89	62.4	91.5	64.5	94.7	2.31	-0.89	62.4	91.5	16343.1
216.0	70.0	102.7	62.4	91.5	16343.1	3.1	-1.69	-0.84	-0.87	61.8	90.6	64.0	93.9	2.41	-0.87	61.8	90.6	16434.2
217.0	70.0	102.7	61.8	90.6	16434.2	3.1	-1.68	-0.83	-0.86	61.2	89.7	63.5	93.1	2.50	-0.86	61.2	89.7	16524.3
218.0	70.0	102.7	61.2	89.7	16524.3	3.1	-1.67	-0.81	-0.84	60.6	88.9	63.0	92.3	2.60	-0.84	60.6	88.9	16613.6
219.0	70.0	102.7	60.6	88.9	16613.6	3.1	-1.67	-0.79	-0.82	60.0	88.1	62.4	91.6	2.69	-0.82	60.0	88.1	16702.1
220.0	70.0	102.7	60.0	88.1	16702.1	3.1	-1.66	-0.78	-0.81	59.5	87.3	61.9	90.8	2.78	-0.81	59.5	87.3	16789.8

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

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(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)				(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences					End of 1-sec Interval		
			Speed			Coasting	Power	Effective			Speed		Acceleration			New speed (mph)	New position (ft)	
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(mph)	(ft/sec)	(ft/sec ²)					
221.0	70.0	102.7	59.5	87.3	16789.8	3.1	-1.65	-0.76	-0.79	59.0	86.5	61.4	90.1	2.86	-0.79	59.0	86.5	16876.6
222.0	70.0	102.7	59.0	86.5	16876.6	3.1	-1.64	-0.75	-0.78	58.4	85.7	61.0	89.4	2.95	-0.78	58.4	85.7	16962.7
223.0	70.0	102.7	58.4	85.7	16962.7	3.1	-1.64	-0.73	-0.76	57.9	84.9	60.5	88.7	3.03	-0.76	57.9	84.9	17048.0
224.0	70.0	102.7	57.9	84.9	17048.0	3.1	-1.63	-0.72	-0.75	57.4	84.2	60.0	88.0	3.12	-0.75	57.4	84.2	17132.6
225.0	70.0	102.7	57.4	84.2	17132.6	3.1	-1.63	-0.71	-0.74	56.9	83.4	59.6	87.4	3.20	-0.74	56.9	83.4	17216.4
226.0	70.0	102.7	56.9	83.4	17216.4	3.1	-1.62	-0.69	-0.72	56.4	82.7	59.1	86.7	3.28	-0.72	56.4	82.7	17299.4
227.0	70.0	102.7	56.4	82.7	17299.4	3.1	-1.61	-0.68	-0.71	55.9	82.0	58.7	86.1	3.35	-0.71	55.9	82.0	17381.8
228.0	70.0	102.7	55.9	82.0	17381.8	3.1	-1.61	-0.66	-0.69	55.4	81.3	58.3	85.4	3.43	-0.69	55.4	81.3	17463.5
229.0	70.0	102.7	55.4	81.3	17463.5	3.1	-1.60	-0.65	-0.68	55.0	80.6	57.8	84.8	3.51	-0.68	55.0	80.6	17544.4
230.0	70.0	102.7	55.0	80.6	17544.4	3.1	-1.60	-0.64	-0.67	54.5	80.0	57.4	84.2	3.58	-0.67	54.5	80.0	17624.7
231.0	70.0	102.7	54.5	80.0	17624.7	3.1	-1.59	-0.62	-0.65	54.1	79.3	57.0	83.6	3.65	-0.65	54.1	79.3	17704.4
232.0	70.0	102.7	54.1	79.3	17704.4	3.1	-1.59	-0.61	-0.64	53.6	78.7	56.6	83.0	3.72	-0.64	53.6	78.7	17783.4
233.0	70.0	102.7	53.6	78.7	17783.4	3.1	-1.58	-0.60	-0.63	53.2	78.0	56.2	82.5	3.79	-0.63	53.2	78.0	17861.7
234.0	70.0	102.7	53.2	78.0	17861.7	3.1	-1.58	-0.59	-0.61	52.8	77.4	55.8	81.9	3.86	-0.61	52.8	77.4	17939.5
235.0	70.0	102.7	52.8	77.4	17939.5	3.1	-1.57	-0.57	-0.60	52.4	76.8	55.5	81.4	3.93	-0.60	52.4	76.8	18016.6
236.0	70.0	102.7	52.4	76.8	18016.6	3.1	-1.57	-0.56	-0.59	52.0	76.2	55.1	80.8	3.99	-0.59	52.0	76.2	18093.1
237.0	70.0	102.7	52.0	76.2	18093.1	3.1	-1.56	-0.55	-0.58	51.6	75.7	54.7	80.3	4.05	-0.58	51.6	75.7	18169.1
238.0	70.0	102.7	51.6	75.7	18169.1	3.1	-1.56	-0.54	-0.57	51.2	75.1	54.4	79.8	4.12	-0.57	51.2	75.1	18244.5
239.0	70.0	102.7	51.2	75.1	18244.5	3.1	-1.55	-0.52	-0.55	50.8	74.5	54.0	79.3	4.18	-0.55	50.8	74.5	18319.3
240.0	70.0	102.7	50.8	74.5	18319.3	3.1	-1.55	-0.51	-0.54	50.5	74.0	53.7	78.8	4.24	-0.54	50.5	74.0	18393.5
241.0	70.0	102.7	50.5	74.0	18393.5	3.1	-1.55	-0.50	-0.53	50.1	73.5	53.4	78.3	4.30	-0.53	50.1	73.5	18467.3
242.0	70.0	102.7	50.1	73.5	18467.3	3.1	-1.54	-0.49	-0.52	49.7	73.0	53.1	77.8	4.35	-0.52	49.7	73.0	18540.5
243.0	70.0	102.7	49.7	73.0	18540.5	3.1	-1.54	-0.48	-0.51	49.4	72.4	52.7	77.4	4.41	-0.51	49.4	72.4	18613.2
244.0	70.0	102.7	49.4	72.4	18613.2	3.1	-1.54	-0.47	-0.50	49.1	71.9	52.4	76.9	4.46	-0.50	49.1	71.9	18685.4
245.0	70.0	102.7	49.1	71.9	18685.4	3.1	-1.53	-0.46	-0.49	48.7	71.5	52.1	76.5	4.52	-0.49	48.7	71.5	18757.1
246.0	70.0	102.7	48.7	71.5	18757.1	3.1	-1.53	-0.45	-0.47	48.4	71.0	51.8	76.0	4.57	-0.47	48.4	71.0	18828.3
247.0	70.0	102.7	48.4	71.0	18828.3	3.1	-1.53	-0.44	-0.46	48.1	70.5	51.6	75.6	4.62	-0.46	48.1	70.5	18899.1
248.0	70.0	102.7	48.1	70.5	18899.1	3.1	-1.52	-0.43	-0.45	47.8	70.1	51.3	75.2	4.67	-0.45	47.8	70.1	18969.4
249.0	70.0	102.7	47.8	70.1	18969.4	3.1	-1.52	-0.42	-0.44	47.5	69.6	51.0	74.8	4.72	-0.44	47.5	69.6	19039.2
250.0	70.0	102.7	47.5	69.6	19039.2	3.1	-1.52	-0.41	-0.43	47.2	69.2	50.7	74.4	4.77	-0.43	47.2	69.2	19108.6
251.0	70.0	102.7	47.2	69.2	19108.6	3.1	-1.51	-0.40	-0.42	46.9	68.8	50.5	74.0	4.81	-0.42	46.9	68.8	19177.6
252.0	70.0	102.7	46.9	68.8	19177.6	3.1	-1.51	-0.39	-0.41	46.6	68.4	50.2	73.6	4.86	-0.41	46.6	68.4	19246.2
253.0	70.0	102.7	46.6	68.4	19246.2	3.1	-1.51	-0.38	-0.40	46.3	68.0	50.0	73.3	4.90	-0.40	46.3	68.0	19314.3
254.0	70.0	102.7	46.3	68.0	19314.3	3.1	-1.50	-0.37	-0.39	46.1	67.6	49.7	72.9	4.95	-0.39	46.1	67.6	19382.1
255.0	70.0	102.7	46.1	67.6	19382.1	3.1	-1.50	-0.36	-0.38	45.8	67.2	49.5	72.6	4.99	-0.38	45.8	67.2	19449.5
256.0	70.0	102.7	45.8	67.2	19449.5	3.1	-1.50	-0.35	-0.37	45.6	66.8	49.2	72.2	5.03	-0.37	45.6	66.8	19516.5
257.0	70.0	102.7	45.6	66.8	19516.5	3.1	-1.50	-0.34	-0.37	45.3	66.4	49.0	71.9	5.07	-0.37	45.3	66.4	19583.1
258.0	70.0	102.7	45.3	66.4	19583.1	3.1	-1.49	-0.33	-0.36	45.1	66.1	48.8	71.6	5.11	-0.36	45.1	66.1	19649.4
259.0	70.0	102.7	45.1	66.1	19649.4	3.1	-1.49	-0.32	-0.35	44.8	65.7	48.6	71.2	5.15	-0.35	44.8	65.7	19715.3
260.0	70.0	102.7	44.8	65.7	19715.3	3.1	-1.49	-0.32	-0.34	44.6	65.4	48.4	70.9	5.19	-0.34	44.6	65.4	19780.8
261.0	70.0	102.7	44.6	65.4	19780.8	3.1	-1.49	-0.31	-0.33	44.4	65.1	48.2	70.6	5.22	-0.33	44.4	65.1	19846.1
262.0	70.0	102.7	44.4	65.1	19846.1	3.1	-1.49	-0.30	-0.32	44.1	64.7	48.0	70.3	5.26	-0.32	44.1	64.7	19911.0
263.0	70.0	102.7	44.1	64.7	19911.0	-0.5	-0.33	0.85	0.79	44.7	65.5	47.8	70.0	5.30	0.79	44.7	65.5	19976.1
264.0	70.0	102.7	44.7	65.5	19976.1	-0.5	-0.33	0.83	0.78	45.2	66.3	48.2	70.7	5.21	0.78	45.2	66.3	20042.0

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2) Desired speed		(3)-(6) Start of 1-sec Interval			(7) Local grade (%)	(8)-(10) Limiting acceleration (ft/sec ²)			(11)-(12) New speed based on vehicle performance		(13)-(15) Limiting acceleration and speed based on driver preferences			(16) Actual acceleration (ft/sec ²)	(17)-(19) End of 1-sec Interval		
			(3) Speed		(6) Position		Coasting	Power	Effective	(11) Speed		(13) Speed		Acceleration (ft/sec ²)		(17) New speed		New position (ft)
	(mph)	(ft/sec)	(mph)	(ft/sec)	(ft)					(mph)	(ft/sec)	(mph)	(ft/sec)			(mph)	(ft/sec)	
265.0	70.0	102.7	45.2	66.3	20042.0	-0.5	-0.34	0.81	0.76	45.7	67.1	48.7	71.4	5.13	0.76	45.7	67.1	20108.7
266.0	70.0	102.7	45.7	67.1	20108.7	-0.5	-0.34	0.79	0.75	46.2	67.8	49.2	72.1	5.04	0.75	46.2	67.8	20176.2
267.0	70.0	102.7	46.2	67.8	20176.2	-0.5	-0.35	0.78	0.73	46.7	68.5	49.6	72.8	4.96	0.73	46.7	68.5	20244.4
268.0	70.0	102.7	46.7	68.5	20244.4	-0.5	-0.35	0.76	0.72	47.2	69.3	50.1	73.4	4.88	0.72	47.2	69.3	20313.3
269.0	70.0	102.7	47.2	69.3	20313.3	-0.5	-0.36	0.74	0.70	47.7	70.0	50.5	74.1	4.81	0.70	47.7	70.0	20382.9
270.0	70.0	102.7	47.7	70.0	20382.9	-0.5	-0.36	0.73	0.69	48.2	70.7	50.9	74.7	4.73	0.69	48.2	70.7	20453.2
271.0	70.0	102.7	48.2	70.7	20453.2	-0.5	-0.37	0.71	0.67	48.6	71.3	51.3	75.3	4.66	0.67	48.6	71.3	20524.2
272.0	70.0	102.7	48.6	71.3	20524.2	-0.5	-0.37	0.70	0.66	49.1	72.0	51.8	75.9	4.58	0.66	49.1	72.0	20595.9
273.0	70.0	102.7	49.1	72.0	20595.9	-0.5	-0.37	0.68	0.65	49.5	72.6	52.2	76.5	4.51	0.65	49.5	72.6	20668.2
274.0	70.0	102.7	49.5	72.6	20668.2	-0.5	-0.38	0.67	0.64	50.0	73.3	52.6	77.1	4.44	0.64	50.0	73.3	20741.1
275.0	70.0	102.7	50.0	73.3	20741.1	-0.5	-0.38	0.66	0.62	50.4	73.9	52.9	77.6	4.37	0.62	50.4	73.9	20814.7
276.0	70.0	102.7	50.4	73.9	20814.7	-0.5	-0.39	0.64	0.61	50.8	74.5	53.3	78.2	4.31	0.61	50.8	74.5	20888.9
277.0	70.0	102.7	50.8	74.5	20888.9	-0.5	-0.39	0.63	0.60	51.2	75.1	53.7	78.7	4.24	0.60	51.2	75.1	20963.7
278.0	70.0	102.7	51.2	75.1	20963.7	-0.5	-0.40	0.62	0.59	51.6	75.7	54.1	79.3	4.18	0.59	51.6	75.7	21039.1
279.0	70.0	102.7	51.6	75.7	21039.1	-0.5	-0.40	0.61	0.58	52.0	76.3	54.4	79.8	4.11	0.58	52.0	76.3	21115.1
280.0	70.0	102.7	52.0	76.3	21115.1	-0.5	-0.41	0.59	0.57	52.4	76.8	54.8	80.3	4.05	0.57	52.4	76.8	21191.7
281.0	70.0	102.7	52.4	76.8	21191.7	-0.5	-0.41	0.58	0.56	52.8	77.4	55.1	80.8	3.99	0.56	52.8	77.4	21268.8
282.0	70.0	102.7	52.8	77.4	21268.8	-0.5	-0.41	0.57	0.55	53.1	77.9	55.4	81.3	3.93	0.55	53.1	77.9	21346.5
283.0	70.0	102.7	53.1	77.9	21346.5	-0.5	-0.42	0.56	0.54	53.5	78.5	55.8	81.8	3.87	0.54	53.5	78.5	21424.7
284.0	70.0	102.7	53.5	78.5	21424.7	-0.5	-0.42	0.55	0.53	53.9	79.0	56.1	82.3	3.81	0.53	53.9	79.0	21503.4
285.0	70.0	102.7	53.9	79.0	21503.4	-0.5	-0.43	0.54	0.52	54.2	79.5	56.4	82.8	3.76	0.52	54.2	79.5	21582.7
286.0	70.0	102.7	54.2	79.5	21582.7	3.5	-1.72	-0.74	-0.78	53.7	78.7	56.7	83.2	3.70	-0.78	53.7	78.7	21661.8
287.0	70.0	102.7	53.7	78.7	21661.8	3.5	-1.71	-0.73	-0.76	53.2	78.0	56.3	82.5	3.78	-0.76	53.2	78.0	21740.2
288.0	70.0	102.7	53.2	78.0	21740.2	3.5	-1.71	-0.71	-0.75	52.7	77.2	55.8	81.8	3.87	-0.75	52.7	77.2	21817.8
289.0	70.0	102.7	52.7	77.2	21817.8	3.5	-1.70	-0.70	-0.73	52.2	76.5	55.4	81.2	3.95	-0.73	52.2	76.5	21894.6
290.0	70.0	102.7	52.2	76.5	21894.6	3.5	-1.69	-0.68	-0.72	51.7	75.8	54.9	80.5	4.03	-0.72	51.7	75.8	21970.8
291.0	70.0	102.7	51.7	75.8	21970.8	3.5	-1.69	-0.67	-0.70	51.2	75.1	54.5	79.9	4.10	-0.70	51.2	75.1	22046.2
292.0	70.0	102.7	51.2	75.1	22046.2	3.5	-1.68	-0.65	-0.69	50.7	74.4	54.0	79.3	4.18	-0.69	50.7	74.4	22121.0
293.0	70.0	102.7	50.7	74.4	22121.0	3.5	-1.68	-0.64	-0.67	50.3	73.7	53.6	78.7	4.25	-0.67	50.3	73.7	22195.0
294.0	70.0	102.7	50.3	73.7	22195.0	3.5	-1.67	-0.62	-0.66	49.8	73.1	53.2	78.1	4.33	-0.66	49.8	73.1	22268.4
295.0	70.0	102.7	49.8	73.1	22268.4	3.5	-1.67	-0.61	-0.64	49.4	72.4	52.8	77.5	4.40	-0.64	49.4	72.4	22341.2
296.0	70.0	102.7	49.4	72.4	22341.2	3.5	-1.66	-0.60	-0.63	48.9	71.8	52.4	76.9	4.47	-0.63	48.9	71.8	22413.3
297.0	70.0	102.7	48.9	71.8	22413.3	3.5	-1.66	-0.58	-0.62	48.5	71.2	52.0	76.3	4.53	-0.62	48.5	71.2	22484.8
298.0	70.0	102.7	48.5	71.2	22484.8	3.5	-1.66	-0.57	-0.60	48.1	70.6	51.7	75.8	4.60	-0.60	48.1	70.6	22555.6
299.0	70.0	102.7	48.1	70.6	22555.6	3.5	-1.65	-0.55	-0.59	47.7	70.0	51.3	75.2	4.67	-0.59	47.7	70.0	22625.9
300.0	70.0	102.7	47.7	70.0	22625.9	3.5	-1.65	-0.54	-0.58	47.3	69.4	50.9	74.7	4.73	-0.58	47.3	69.4	22695.6
301.0	70.0	102.7	47.3	69.4	22695.6	3.5	-1.64	-0.53	-0.56	46.9	68.8	50.6	74.2	4.79	-0.56	46.9	68.8	22764.7
302.0	70.0	102.7	46.9	68.8	22764.7	3.5	-1.64	-0.52	-0.55	46.6	68.3	50.2	73.7	4.85	-0.55	46.6	68.3	22833.3
303.0	70.0	102.7	46.6	68.3	22833.3	3.5	-1.64	-0.50	-0.54	46.2	67.8	49.9	73.2	4.91	-0.54	46.2	67.8	22901.3
304.0	70.0	102.7	46.2	67.8	22901.3	3.5	-1.63	-0.49	-0.52	45.8	67.2	49.6	72.7	4.97	-0.52	45.8	67.2	22968.8
305.0	70.0	102.7	45.8	67.2	22968.8	3.5	-1.63	-0.48	-0.51	45.5	66.7	49.3	72.3	5.03	-0.51	45.5	66.7	23035.8
306.0	70.0	102.7	45.5	66.7	23035.8	3.5	-1.63	-0.47	-0.50	45.2	66.2	49.0	71.8	5.08	-0.50	45.2	66.2	23102.3
307.0	70.0	102.7	45.2	66.2	23102.3	3.5	-1.62	-0.45	-0.49	44.8	65.7	48.7	71.4	5.14	-0.49	44.8	65.7	23168.3
308.0	70.0	102.7	44.8	65.7	23168.3	3.5	-1.62	-0.44	-0.47	44.5	65.3	48.4	70.9	5.19	-0.47	44.5	65.3	23233.8

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)								
309.0	70.0	102.7	44.5	65.3	23233.8	3.5	-1.62	-0.43	-0.46	44.2	64.8	48.1	70.5	5.24	-0.46	44.2	64.8	23298.8
310.0	70.0	102.7	44.2	64.8	23298.8	3.5	-1.61	-0.42	-0.45	43.9	64.3	47.8	70.1	5.29	-0.45	43.9	64.3	23363.4
311.0	70.0	102.7	43.9	64.3	23363.4	3.5	-1.61	-0.41	-0.44	43.6	63.9	47.5	69.7	5.34	-0.44	43.6	63.9	23427.5
312.0	70.0	102.7	43.6	63.9	23427.5	3.5	-1.61	-0.40	-0.43	43.3	63.5	47.2	69.3	5.39	-0.43	43.3	63.5	23491.2
313.0	70.0	102.7	43.3	63.5	23491.2	3.5	-1.60	-0.39	-0.42	43.0	63.1	47.0	68.9	5.43	-0.42	43.0	63.1	23554.5
314.0	70.0	102.7	43.0	63.1	23554.5	3.5	-1.60	-0.38	-0.41	42.7	62.7	46.7	68.5	5.48	-0.41	42.7	62.7	23617.3
315.0	70.0	102.7	42.7	62.7	23617.3	3.5	-1.60	-0.37	-0.40	42.4	62.3	46.5	68.2	5.52	-0.40	42.4	62.3	23679.8
316.0	70.0	102.7	42.4	62.3	23679.8	3.5	-1.60	-0.36	-0.39	42.2	61.9	46.2	67.8	5.56	-0.39	42.2	61.9	23741.9
317.0	70.0	102.7	42.2	61.9	23741.9	3.5	-1.60	-0.35	-0.38	41.9	61.5	46.0	67.5	5.61	-0.38	41.9	61.5	23803.6
318.0	70.0	102.7	41.9	61.5	23803.6	-3.0	0.50	1.72	1.60	43.0	63.1	45.8	67.1	5.65	1.60	43.0	63.1	23865.9
319.0	70.0	102.7	43.0	63.1	23865.9	-3.0	0.49	1.68	1.57	44.1	64.7	46.8	68.6	5.47	1.57	44.1	64.7	23929.7
320.0	70.0	102.7	44.1	64.7	23929.7	-3.0	0.48	1.64	1.54	45.1	66.2	47.7	70.0	5.30	1.54	45.1	66.2	23995.2
321.0	70.0	102.7	45.1	66.2	23995.2	-3.0	0.47	1.60	1.51	46.2	67.7	48.6	71.3	5.14	1.51	46.2	67.7	24062.1
322.0	70.0	102.7	46.2	67.7	24062.1	-3.0	0.46	1.57	1.48	47.2	69.2	49.6	72.7	4.98	1.48	47.2	69.2	24130.6
323.0	70.0	102.7	47.2	69.2	24130.6	-3.0	0.45	1.54	1.45	48.2	70.6	50.5	74.0	4.82	1.45	48.2	70.6	24200.5
324.0	70.0	102.7	48.2	70.6	24200.5	-3.0	0.44	1.51	1.43	49.1	72.1	51.3	75.3	4.66	1.43	49.1	72.1	24271.8
325.0	70.0	102.7	49.1	72.1	24271.8	-3.0	0.43	1.48	1.40	50.1	73.5	52.2	76.6	4.51	1.40	50.1	73.5	24344.6
326.0	70.0	102.7	50.1	73.5	24344.6	-3.0	0.42	1.45	1.37	51.0	74.8	53.1	77.8	4.35	1.37	51.0	74.8	24418.7
327.0	70.0	102.7	51.0	74.8	24418.7	-3.0	0.41	1.42	1.35	51.9	76.2	53.9	79.0	4.21	1.35	51.9	76.2	24494.2
328.0	70.0	102.7	51.9	76.2	24494.2	-3.0	0.40	1.39	1.33	52.8	77.5	54.7	80.2	4.06	1.33	52.8	77.5	24571.1
329.0	70.0	102.7	52.8	77.5	24571.1	-3.0	0.39	1.36	1.30	53.7	78.8	55.5	81.4	3.92	1.30	53.7	78.8	24649.2
330.0	70.0	102.7	53.7	78.8	24649.2	-3.0	0.38	1.34	1.28	54.6	80.1	56.3	82.6	3.78	1.28	54.6	80.1	24728.7
331.0	70.0	102.7	54.6	80.1	24728.7	-3.0	0.37	1.31	1.26	55.5	81.4	57.1	83.7	3.64	1.26	55.5	81.4	24809.4
332.0	70.0	102.7	55.5	81.4	24809.4	-3.0	0.36	1.29	1.24	56.3	82.6	57.9	84.9	3.50	1.24	56.3	82.6	24891.4
333.0	70.0	102.7	56.3	82.6	24891.4	-3.0	0.35	1.27	1.22	57.1	83.8	58.6	86.0	3.37	1.22	57.1	83.8	24974.6
334.0	70.0	102.7	57.1	83.8	24974.6	-3.0	0.34	1.24	1.20	58.0	85.0	59.3	87.0	3.24	1.20	58.0	85.0	25059.0
335.0	70.0	102.7	58.0	85.0	25059.0	-3.0	0.33	1.22	1.18	58.8	86.2	60.1	88.1	3.11	1.18	58.8	86.2	25144.6
336.0	70.0	102.7	58.8	86.2	25144.6	-3.0	0.32	1.20	1.16	59.5	87.3	60.8	89.2	2.98	1.16	59.5	87.3	25231.4
337.0	70.0	102.7	59.5	87.3	25231.4	-3.0	0.31	1.18	1.14	60.3	88.5	61.5	90.2	2.86	1.14	60.3	88.5	25319.3
338.0	70.0	102.7	60.3	88.5	25319.3	-3.0	0.30	1.16	1.12	61.1	89.6	62.2	91.2	2.73	1.12	61.1	89.6	25408.3
339.0	70.0	102.7	61.1	89.6	25408.3	-3.0	0.29	1.14	1.10	61.8	90.7	62.9	92.2	2.61	1.10	61.8	90.7	25498.4
340.0	70.0	102.7	61.8	90.7	25498.4	-3.0	0.28	1.12	1.08	62.6	91.8	63.5	93.2	2.49	1.08	62.6	91.8	25589.7
341.0	70.0	102.7	62.6	91.8	25589.7	-3.0	0.27	1.10	1.06	63.3	92.8	64.2	94.1	2.38	1.06	63.3	92.8	25682.0
342.0	70.0	102.7	63.3	92.8	25682.0	-3.0	0.26	1.08	1.05	64.0	93.9	64.8	95.1	2.26	1.05	64.0	93.9	25775.3
343.0	70.0	102.7	64.0	93.9	25775.3	-3.0	0.25	1.06	1.03	64.7	94.9	65.5	96.0	2.15	1.03	64.7	94.9	25869.7
344.0	70.0	102.7	64.7	94.9	25869.7	-3.0	0.24	1.04	1.01	65.4	95.9	66.1	96.9	2.04	1.01	65.4	95.9	25965.1
345.0	70.0	102.7	65.4	95.9	25965.1	-3.5	0.39	1.19	1.15	66.2	97.1	66.7	97.9	1.93	1.15	66.2	97.1	26061.6
346.0	70.0	102.7	66.2	97.1	26061.6	-3.5	0.38	1.17	1.13	67.0	98.2	67.4	98.9	1.80	1.13	67.0	98.2	26159.3
347.0	70.0	102.7	67.0	98.2	26159.3	-3.5	0.37	1.15	1.11	67.7	99.3	68.1	99.9	1.68	1.11	67.7	99.3	26258.0
348.0	70.0	102.7	67.7	99.3	26258.0	-3.5	0.36	1.13	1.10	68.5	100.4	68.8	100.9	1.56	1.10	68.5	100.4	26357.9
349.0	70.0	102.7	68.5	100.4	26357.9	-3.5	0.35	1.11	1.08	69.2	101.5	69.4	101.9	1.44	1.08	69.2	101.5	26458.9
350.0	70.0	102.7	69.2	101.5	26458.9	-3.5	0.34	1.09	1.06	69.9	102.6	70.0	102.7	1.18	1.06	69.9	102.6	26560.9
351.0	70.0	102.7	69.9	102.6	26560.9	-3.5	0.33	1.07	1.04	70.6	103.6	70.0	102.7	0.12	0.12	70.0	102.7	26663.5
352.0	70.0	102.7	70.0	102.7	26663.5	-3.5	0.33	1.07	1.04	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	26766.2

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(17)		
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval		
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft)	
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)							
353.0	70.0	102.7	70.0	102.7	-3.5	0.33	1.07	1.04	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	26868.8
354.0	70.0	102.7	70.0	102.7	-3.5	0.33	1.07	1.04	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	26971.5
355.0	70.0	102.7	70.0	102.7	-3.5	0.33	1.07	1.04	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	27074.2
356.0	70.0	102.7	70.0	102.7	-3.5	0.33	1.07	1.04	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	27176.8
357.0	70.0	102.7	70.0	102.7	-3.5	0.33	1.07	1.04	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	27279.5
358.0	70.0	102.7	70.0	102.7	-3.5	0.33	1.07	1.04	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	27382.2
359.0	70.0	102.7	70.0	102.7	-3.5	0.33	1.07	1.04	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	27484.8
360.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	27587.5
361.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	27690.2
362.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	27792.8
363.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	27895.5
364.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	27998.2
365.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	28100.8
366.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	28203.5
367.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	28306.2
368.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	28408.8
369.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	28511.5
370.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	28614.2
371.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	28716.8
372.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	28819.5
373.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	28922.2
374.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29024.8
375.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29127.5
376.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29230.2
377.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29332.8
378.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29435.5
379.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29538.2
380.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29640.8
381.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29743.5
382.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29846.2
383.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	29948.8
384.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	30051.5
385.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	30154.2
386.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	30256.8
387.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	30359.5
388.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	30462.2
389.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	30564.8
390.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	30667.5
391.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	30770.2
392.0	70.0	102.7	70.0	102.7	-1.0	-0.48	0.27	0.26	70.2	102.9	70.0	102.7	0.00	0.00	70.0	102.7	30872.8
393.0	70.0	102.7	70.0	102.7	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	30975.5
394.0	70.0	102.7	70.0	102.7	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	31078.2
395.0	70.0	102.7	70.0	102.7	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	31180.8
396.0	70.0	102.7	70.0	102.7	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	31283.5

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(9)	(10)	(11)	(12)	(13)		(14)	(15)	(16)	(17)		(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval						
			Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft)					
	(mph)	(ft/sec)	(mph)	(ft/sec)						(mph)	(ft/sec)											
397.0	70.0	102.7	70.0	102.7	31283.5	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	31386.2				
398.0	70.0	102.7	70.0	102.7	31386.2	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	31488.8				
399.0	70.0	102.7	70.0	102.7	31488.8	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	31591.5				
400.0	70.0	102.7	70.0	102.7	31591.5	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	31694.2				
401.0	70.0	102.7	70.0	102.7	31694.2	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	31796.8				
402.0	70.0	102.7	70.0	102.7	31796.8	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	31899.5				
403.0	70.0	102.7	70.0	102.7	31899.5	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	32002.2				
404.0	70.0	102.7	70.0	102.7	32002.2	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	32104.8				
405.0	70.0	102.7	70.0	102.7	32104.8	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	32207.5				
406.0	70.0	102.7	70.0	102.7	32207.5	-4.7	0.71	1.45	1.41	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	32310.2				
407.0	70.0	102.7	70.0	102.7	32310.2	1.5	-1.28	-0.53	-0.54	69.6	102.1	70.0	102.7	0.00	-0.54	69.6	102.1	32412.5				
408.0	70.0	102.7	69.6	102.1	32412.5	1.5	-1.27	-0.52	-0.53	69.3	101.6	70.0	102.7	0.54	-0.53	69.3	101.6	32514.4				
409.0	70.0	102.7	69.3	101.6	32514.4	1.5	-1.27	-0.51	-0.52	68.9	101.1	70.0	102.7	1.08	-0.52	68.9	101.1	32615.7				
410.0	70.0	102.7	68.9	101.1	32615.7	1.5	-1.26	-0.50	-0.51	68.6	100.6	69.8	102.4	1.37	-0.51	68.6	100.6	32716.5				
411.0	70.0	102.7	68.6	100.6	32716.5	1.5	-1.26	-0.49	-0.51	68.2	100.0	69.5	102.0	1.43	-0.51	68.2	100.0	32816.8				
412.0	70.0	102.7	68.2	100.0	32816.8	1.5	-1.25	-0.48	-0.50	67.9	99.5	69.2	101.5	1.48	-0.50	67.9	99.5	32916.6				
413.0	70.0	102.7	67.9	99.5	32916.6	1.5	-1.25	-0.47	-0.49	67.5	99.1	68.9	101.1	1.54	-0.49	67.5	99.1	33015.9				
414.0	70.0	102.7	67.5	99.1	33015.9	1.5	-1.24	-0.47	-0.48	67.2	98.6	68.6	100.6	1.59	-0.48	67.2	98.6	33114.8				
415.0	70.0	102.7	67.2	98.6	33114.8	1.5	-1.24	-0.46	-0.47	66.9	98.1	68.3	100.2	1.64	-0.47	66.9	98.1	33213.1				
416.0	70.0	102.7	66.9	98.1	33213.1	1.5	-1.24	-0.45	-0.46	66.6	97.6	68.0	99.8	1.69	-0.46	66.6	97.6	33311.0				
417.0	70.0	102.7	66.6	97.6	33311.0	1.5	-1.23	-0.44	-0.45	66.3	97.2	67.8	99.4	1.74	-0.45	66.3	97.2	33408.4				
418.0	70.0	102.7	66.3	97.2	33408.4	1.5	-1.23	-0.43	-0.45	66.0	96.7	67.5	99.0	1.79	-0.45	66.0	96.7	33505.4				
419.0	70.0	102.7	66.0	96.7	33505.4	1.5	-1.22	-0.42	-0.44	65.7	96.3	67.2	98.6	1.84	-0.44	65.7	96.3	33601.9				
420.0	70.0	102.7	65.7	96.3	33601.9	1.5	-1.22	-0.42	-0.43	65.4	95.9	67.0	98.2	1.89	-0.43	65.4	95.9	33698.0				
421.0	70.0	102.7	65.4	95.9	33698.0	1.5	-1.21	-0.41	-0.42	65.1	95.5	66.7	97.8	1.93	-0.42	65.1	95.5	33793.7				
422.0	70.0	102.7	65.1	95.5	33793.7	1.5	-1.21	-0.40	-0.42	64.8	95.0	66.4	97.4	1.98	-0.42	64.8	95.0	33888.9				
423.0	70.0	102.7	64.8	95.0	33888.9	1.5	-1.21	-0.39	-0.41	64.5	94.6	66.2	97.1	2.02	-0.41	64.5	94.6	33983.7				
424.0	70.0	102.7	64.5	94.6	33983.7	1.5	-1.20	-0.39	-0.40	64.2	94.2	65.9	96.7	2.07	-0.40	64.2	94.2	34078.2				
425.0	70.0	102.7	64.2	94.2	34078.2	1.5	-1.20	-0.38	-0.39	64.0	93.8	65.7	96.3	2.11	-0.39	64.0	93.8	34172.2				
426.0	70.0	102.7	64.0	93.8	34172.2	1.5	-1.20	-0.37	-0.39	63.7	93.5	65.4	96.0	2.15	-0.39	63.7	93.5	34265.8				
427.0	70.0	102.7	63.7	93.5	34265.8	1.5	-1.19	-0.37	-0.38	63.5	93.1	65.2	95.6	2.20	-0.38	63.5	93.1	34359.1				
428.0	70.0	102.7	63.5	93.1	34359.1	1.5	-1.19	-0.36	-0.37	63.2	92.7	65.0	95.3	2.24	-0.37	63.2	92.7	34452.0				
429.0	70.0	102.7	63.2	92.7	34452.0	1.5	-1.18	-0.35	-0.37	63.0	92.3	64.8	95.0	2.28	-0.37	63.0	92.3	34544.5				
430.0	70.0	102.7	63.0	92.3	34544.5	1.5	-1.18	-0.35	-0.36	62.7	92.0	64.5	94.7	2.32	-0.36	62.7	92.0	34636.7				
431.0	70.0	102.7	62.7	92.0	34636.7	1.5	-1.18	-0.34	-0.35	62.5	91.6	64.3	94.3	2.35	-0.35	62.5	91.6	34728.5				
432.0	70.0	102.7	62.5	91.6	34728.5	1.5	-1.17	-0.33	-0.35	62.2	91.3	64.1	94.0	2.39	-0.35	62.2	91.3	34819.9				
433.0	70.0	102.7	62.2	91.3	34819.9	1.5	-1.17	-0.33	-0.34	62.0	90.9	63.9	93.7	2.43	-0.34	62.0	90.9	34911.0				
434.0	70.0	102.7	62.0	90.9	34911.0	1.5	-1.17	-0.32	-0.33	61.8	90.6	63.7	93.4	2.47	-0.33	61.8	90.6	35001.8				
435.0	70.0	102.7	61.8	90.6	35001.8	1.5	-1.17	-0.32	-0.33	61.6	90.3	63.5	93.1	2.50	-0.33	61.6	90.3	35092.3				
436.0	70.0	102.7	61.6	90.3	35092.3	1.5	-1.16	-0.31	-0.32	61.3	90.0	63.3	92.8	2.54	-0.32	61.3	90.0	35182.4				
437.0	70.0	102.7	61.3	90.0	35182.4	1.5	-1.16	-0.30	-0.31	61.1	89.6	63.1	92.5	2.57	-0.31	61.1	89.6	35272.2				
438.0	70.0	102.7	61.1	89.6	35272.2	1.5	-1.16	-0.30	-0.31	60.9	89.3	62.9	92.3	2.61	-0.31	60.9	89.3	35361.7				
439.0	70.0	102.7	60.9	89.3	35361.7	1.5	-1.15	-0.29	-0.30	60.7	89.0	62.7	92.0	2.64	-0.30	60.7	89.0	35450.9				
440.0	70.0	102.7	60.7	89.0	35450.9	1.5	-1.15	-0.29	-0.30	60.5	88.7	62.5	91.7	2.67	-0.30	60.5	88.7	35539.7				

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)				(16) Actual acceleration (ft/sec ²)	(17)		
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences					End of 1-sec Interval		
			Speed			Coasting	Power	Effective			Speed		Acceleration			New speed (mph)	New position (ft)	
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(ft/sec ²)	(ft/sec ²)						
441.0	70.0	102.7	60.5	88.7	35539.7	1.5	-1.15	-0.28	-0.29	60.3	88.4	62.3	91.4	2.70	-0.29	60.3	88.4	35628.3
442.0	70.0	102.7	60.3	88.4	35628.3	1.5	-1.15	-0.28	-0.29	60.1	88.2	62.2	91.2	2.74	-0.29	60.1	88.2	35716.6
443.0	70.0	102.7	60.1	88.2	35716.6	1.5	-1.14	-0.27	-0.28	59.9	87.9	62.0	90.9	2.77	-0.28	59.9	87.9	35804.7
444.0	70.0	102.7	59.9	87.9	35804.7	1.5	-1.14	-0.27	-0.28	59.7	87.6	61.8	90.7	2.80	-0.28	59.7	87.6	35892.4
445.0	70.0	102.7	59.7	87.6	35892.4	1.5	-1.14	-0.26	-0.27	59.5	87.3	61.7	90.4	2.83	-0.27	59.5	87.3	35979.9
446.0	70.0	102.7	59.5	87.3	35979.9	1.5	-1.14	-0.26	-0.27	59.4	87.1	61.5	90.2	2.86	-0.27	59.4	87.1	36067.1
447.0	70.0	102.7	59.4	87.1	36067.1	1.5	-1.14	-0.25	-0.26	59.2	86.8	61.3	90.0	2.88	-0.26	59.2	86.8	36154.0
448.0	70.0	102.7	59.2	86.8	36154.0	1.5	-1.13	-0.25	-0.26	59.0	86.6	61.2	89.7	2.91	-0.26	59.0	86.6	36240.7
449.0	70.0	102.7	59.0	86.6	36240.7	1.5	-1.13	-0.24	-0.25	58.8	86.3	61.0	89.5	2.94	-0.25	58.8	86.3	36327.1
450.0	70.0	102.7	58.8	86.3	36327.1	1.5	-1.13	-0.24	-0.25	58.7	86.1	60.9	89.3	2.97	-0.25	58.7	86.1	36413.3
451.0	70.0	102.7	58.7	86.1	36413.3	1.5	-1.13	-0.23	-0.24	58.5	85.8	60.7	89.0	2.99	-0.24	58.5	85.8	36499.2
452.0	70.0	102.7	58.5	85.8	36499.2	1.5	-1.12	-0.23	-0.24	58.3	85.6	60.6	88.8	3.02	-0.24	58.3	85.6	36584.9
453.0	70.0	102.7	58.3	85.6	36584.9	1.5	-1.12	-0.22	-0.23	58.2	85.3	60.4	88.6	3.05	-0.23	58.2	85.3	36670.4
454.0	70.0	102.7	58.2	85.3	36670.4	1.5	-1.12	-0.22	-0.23	58.0	85.1	60.3	88.4	3.07	-0.23	58.0	85.1	36755.6
455.0	70.0	102.7	58.0	85.1	36755.6	2.9	-1.57	-0.66	-0.69	57.6	84.4	60.1	88.2	3.10	-0.69	57.6	84.4	36840.4
456.0	70.0	102.7	57.6	84.4	36840.4	2.9	-1.56	-0.65	-0.67	57.1	83.8	59.7	87.6	3.17	-0.67	57.1	83.8	36924.5
457.0	70.0	102.7	57.1	83.8	36924.5	2.9	-1.56	-0.63	-0.66	56.7	83.1	59.3	87.0	3.24	-0.66	56.7	83.1	37007.9
458.0	70.0	102.7	56.7	83.1	37007.9	2.9	-1.55	-0.62	-0.65	56.2	82.4	58.9	86.4	3.31	-0.65	56.2	82.4	37090.7
459.0	70.0	102.7	56.2	82.4	37090.7	2.9	-1.55	-0.61	-0.64	55.8	81.8	58.5	85.8	3.38	-0.64	55.8	81.8	37172.8
460.0	70.0	102.7	55.8	81.8	37172.8	2.9	-1.54	-0.60	-0.62	55.4	81.2	58.1	85.3	3.45	-0.62	55.4	81.2	37254.3
461.0	70.0	102.7	55.4	81.2	37254.3	2.9	-1.54	-0.58	-0.61	54.9	80.6	57.8	84.7	3.52	-0.61	54.9	80.6	37335.2
462.0	70.0	102.7	54.9	80.6	37335.2	2.9	-1.53	-0.57	-0.60	54.5	80.0	57.4	84.2	3.59	-0.60	54.5	80.0	37415.5
463.0	70.0	102.7	54.5	80.0	37415.5	2.9	-1.53	-0.56	-0.59	54.1	79.4	57.0	83.6	3.65	-0.59	54.1	79.4	37495.2
464.0	70.0	102.7	54.1	79.4	37495.2	2.9	-1.52	-0.55	-0.58	53.7	78.8	56.7	83.1	3.71	-0.58	53.7	78.8	37574.3
465.0	70.0	102.7	53.7	78.8	37574.3	2.9	-1.52	-0.54	-0.56	53.4	78.3	56.3	82.6	3.78	-0.56	53.4	78.3	37652.8
466.0	70.0	102.7	53.4	78.3	37652.8	2.9	-1.51	-0.53	-0.55	53.0	77.7	56.0	82.1	3.84	-0.55	53.0	77.7	37730.8
467.0	70.0	102.7	53.0	77.7	37730.8	2.9	-1.51	-0.51	-0.54	52.6	77.2	55.6	81.6	3.90	-0.54	52.6	77.2	37808.2
468.0	70.0	102.7	52.6	77.2	37808.2	2.9	-1.51	-0.50	-0.53	52.2	76.6	55.3	81.1	3.95	-0.53	52.2	76.6	37885.1
469.0	70.0	102.7	52.2	76.6	37885.1	2.9	-1.50	-0.49	-0.52	51.9	76.1	55.0	80.6	4.01	-0.52	51.9	76.1	37961.5
470.0	70.0	102.7	51.9	76.1	37961.5	2.9	-1.50	-0.48	-0.51	51.5	75.6	54.7	80.2	4.07	-0.51	51.5	75.6	38037.3
471.0	70.0	102.7	51.5	75.6	38037.3	2.9	-1.49	-0.47	-0.50	51.2	75.1	54.4	79.7	4.12	-0.50	51.2	75.1	38112.7
472.0	70.0	102.7	51.2	75.1	38112.7	2.9	-1.49	-0.46	-0.49	50.9	74.6	54.1	79.3	4.18	-0.49	50.9	74.6	38187.5
473.0	70.0	102.7	50.9	74.6	38187.5	2.9	-1.49	-0.45	-0.48	50.6	74.1	53.8	78.8	4.23	-0.48	50.6	74.1	38261.9
474.0	70.0	102.7	50.6	74.1	38261.9	2.9	-1.48	-0.44	-0.47	50.2	73.7	53.5	78.4	4.28	-0.47	50.2	73.7	38335.8
475.0	70.0	102.7	50.2	73.7	38335.8	2.9	-1.48	-0.43	-0.46	49.9	73.2	53.2	78.0	4.33	-0.46	49.9	73.2	38409.3
476.0	70.0	102.7	49.9	73.2	38409.3	2.9	-1.48	-0.42	-0.45	49.6	72.8	52.9	77.6	4.38	-0.45	49.6	72.8	38482.3
477.0	70.0	102.7	49.6	72.8	38482.3	2.9	-1.47	-0.41	-0.44	49.3	72.3	52.6	77.2	4.43	-0.44	49.3	72.3	38554.8
478.0	70.0	102.7	49.3	72.3	38554.8	2.9	-1.47	-0.40	-0.43	49.0	71.9	52.4	76.8	4.48	-0.43	49.0	71.9	38627.0
479.0	70.0	102.7	49.0	71.9	38627.0	2.9	-1.47	-0.39	-0.42	48.7	71.5	52.1	76.4	4.52	-0.42	48.7	71.5	38698.7
480.0	70.0	102.7	48.7	71.5	38698.7	2.9	-1.46	-0.38	-0.41	48.5	71.1	51.9	76.1	4.57	-0.41	48.5	71.1	38770.0
481.0	70.0	102.7	48.5	71.1	38770.0	2.9	-1.46	-0.38	-0.40	48.2	70.7	51.6	75.7	4.61	-0.40	48.2	70.7	38840.9
482.0	70.0	102.7	48.2	70.7	38840.9	2.9	-1.46	-0.37	-0.39	47.9	70.3	51.4	75.3	4.65	-0.39	47.9	70.3	38911.3
483.0	70.0	102.7	47.9	70.3	38911.3	2.9	-1.46	-0.36	-0.38	47.7	69.9	51.1	75.0	4.70	-0.38	47.7	69.9	38981.5
484.0	70.0	102.7	47.7	69.9	38981.5	2.9	-1.45	-0.35	-0.37	47.4	69.5	50.9	74.7	4.74	-0.37	47.4	69.5	39051.2

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

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(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval		
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft)	
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)							
485.0	70.0	102.7	47.4	69.5	2.9	-1.45	-0.34	-0.36	47.2	69.2	50.7	74.3	4.78	-0.36	47.2	69.2	39120.6
486.0	70.0	102.7	47.2	69.2	2.9	-1.45	-0.33	-0.35	46.9	68.8	50.5	74.0	4.82	-0.35	46.9	68.8	39189.6
487.0	70.0	102.7	46.9	68.8	2.9	-1.45	-0.33	-0.35	46.7	68.5	50.2	73.7	4.85	-0.35	46.7	68.5	39258.2
488.0	70.0	102.7	46.7	68.5	2.9	-1.44	-0.32	-0.34	46.5	68.1	50.0	73.4	4.89	-0.34	46.5	68.1	39326.5
489.0	70.0	102.7	46.5	68.1	2.9	-1.44	-0.31	-0.33	46.2	67.8	49.8	73.1	4.93	-0.33	46.2	67.8	39394.5
490.0	70.0	102.7	46.2	67.8	2.9	-1.44	-0.30	-0.32	46.0	67.5	49.6	72.8	4.96	-0.32	46.0	67.5	39462.2
491.0	70.0	102.7	46.0	67.5	2.9	-1.44	-0.29	-0.31	45.8	67.2	49.4	72.5	5.00	-0.31	45.8	67.2	39529.5
492.0	70.0	102.7	45.8	67.2	2.9	-1.44	-0.29	-0.31	45.6	66.9	49.2	72.2	5.03	-0.31	45.6	66.9	39596.5
493.0	70.0	102.7	45.6	66.9	2.9	-1.43	-0.28	-0.30	45.4	66.6	49.0	71.9	5.07	-0.30	45.4	66.6	39663.3
494.0	70.0	102.7	45.4	66.6	2.9	-1.43	-0.27	-0.29	45.2	66.3	48.9	71.7	5.10	-0.29	45.2	66.3	39729.7
15 495.0	70.0	102.7	45.2	66.3	2.9	-1.43	-0.27	-0.29	45.2	66.3	48.9	71.7	5.10	-0.29	45.2	66.3	39729.7
496.0	70.0	102.7	46.5	68.2	-4.5	0.94	2.03	1.92	47.8	70.2	49.9	73.2	4.92	1.92	47.8	70.2	39796.9
497.0	70.0	102.7	47.8	70.2	-4.5	0.93	1.99	1.88	49.1	72.0	51.0	74.9	4.71	1.88	49.1	72.0	39866.1
498.0	70.0	102.7	49.1	72.0	-4.5	0.91	1.95	1.85	50.4	73.9	52.2	76.5	4.51	1.85	50.4	73.9	39937.2
499.0	70.0	102.7	50.4	73.9	-4.5	0.90	1.91	1.82	51.6	75.7	53.3	78.2	4.31	1.82	51.6	75.7	40010.2
500.0	70.0	102.7	51.6	75.7	-4.5	0.89	1.88	1.79	52.8	77.5	54.4	79.8	4.11	1.79	52.8	77.5	40085.0
501.0	70.0	102.7	52.8	77.5	-4.5	0.87	1.84	1.76	54.0	79.3	55.5	81.4	3.92	1.76	54.0	79.3	40161.6
502.0	70.0	102.7	54.0	79.3	-4.5	0.86	1.81	1.73	55.2	81.0	56.6	83.0	3.73	1.73	55.2	81.0	40240.0
503.0	70.0	102.7	55.2	81.0	-4.5	0.85	1.77	1.70	56.4	82.7	57.6	84.5	3.54	1.70	56.4	82.7	40320.1
504.0	70.0	102.7	56.4	82.7	-4.5	0.83	1.74	1.67	57.5	84.4	58.7	86.0	3.36	1.67	57.5	84.4	40401.9
505.0	70.0	102.7	57.5	84.4	-4.5	0.82	1.71	1.65	58.6	86.0	59.7	87.5	3.18	1.65	58.6	86.0	40485.5
506.0	70.0	102.7	58.6	86.0	-4.5	0.80	1.68	1.62	59.7	87.6	60.7	89.0	3.00	1.62	59.7	87.6	40570.6
507.0	70.0	102.7	59.7	87.6	-4.5	0.79	1.65	1.59	60.8	89.2	61.7	90.5	2.82	1.59	60.8	89.2	40657.5
508.0	70.0	102.7	60.8	89.2	-4.5	0.78	1.62	1.57	61.9	90.8	62.6	91.9	2.65	1.57	61.9	90.8	40745.9
509.0	70.0	102.7	61.9	90.8	-4.5	0.76	1.60	1.54	63.0	92.3	63.6	93.3	2.48	1.54	63.0	92.3	40835.9
510.0	70.0	102.7	63.0	92.3	-4.5	0.75	1.57	1.52	64.0	93.8	64.5	94.6	2.32	1.52	64.0	93.8	40927.4
511.0	70.0	102.7	64.0	93.8	-4.5	0.73	1.54	1.49	65.0	95.3	65.5	96.0	2.15	1.49	65.0	95.3	41020.5
512.0	70.0	102.7	65.0	95.3	-4.5	0.72	1.52	1.47	66.0	96.8	66.4	97.3	1.99	1.47	66.0	96.8	41115.1
513.0	70.0	102.7	66.0	96.8	-4.5	0.71	1.49	1.45	67.0	98.3	67.3	98.6	1.83	1.45	67.0	98.3	41211.2
514.0	70.0	102.7	67.0	98.3	-4.5	0.69	1.46	1.42	68.0	99.7	68.1	99.9	1.68	1.42	68.0	99.7	41308.7
515.0	70.0	102.7	68.0	99.7	-4.5	0.68	1.44	1.40	68.9	101.1	69.0	101.2	1.52	1.40	68.9	101.1	41407.7
516.0	70.0	102.7	68.9	101.1	-4.5	0.67	1.42	1.38	69.9	102.5	69.9	102.5	1.37	1.37	69.9	102.5	41508.1
517.0	70.0	102.7	69.9	102.5	-4.5	0.65	1.39	1.36	70.8	103.8	70.0	102.7	0.21	0.21	70.0	102.7	41609.9
16 518.0	70.0	102.7	70.0	102.7	1.5	-1.28	-0.53	-0.54	69.6	102.1	70.0	102.7	0.00	-0.54	69.6	102.1	41712.4
519.0	70.0	102.7	69.6	102.1	1.5	-1.27	-0.52	-0.53	69.3	101.6	70.0	102.7	0.54	-0.53	69.3	101.6	41814.8
520.0	70.0	102.7	69.3	101.6	1.5	-1.27	-0.51	-0.52	68.9	101.1	70.0	102.7	1.08	-0.52	68.9	101.1	41916.7
521.0	70.0	102.7	68.9	101.1	1.5	-1.26	-0.50	-0.51	68.6	100.6	69.8	102.4	1.37	-0.51	68.6	100.6	42018.0
522.0	70.0	102.7	68.6	100.6	1.5	-1.26	-0.49	-0.51	68.2	100.0	69.5	102.0	1.43	-0.51	68.2	100.0	42118.8
523.0	70.0	102.7	68.2	100.0	1.5	-1.25	-0.48	-0.50	67.9	99.5	69.2	101.5	1.48	-0.50	67.9	99.5	42219.1
524.0	70.0	102.7	67.9	99.5	1.5	-1.25	-0.47	-0.49	67.5	99.1	68.9	101.1	1.54	-0.49	67.5	99.1	42318.9
525.0	70.0	102.7	67.5	99.1	1.5	-1.24	-0.47	-0.48	67.2	98.6	68.6	100.6	1.59	-0.48	67.2	98.6	42418.2
526.0	70.0	102.7	67.2	98.6	1.5	-1.24	-0.46	-0.47	66.9	98.1	68.3	100.2	1.64	-0.47	66.9	98.1	42517.0
527.0	70.0	102.7	66.9	98.1	1.5	-1.24	-0.45	-0.46	66.6	97.6	68.0	99.8	1.69	-0.46	66.6	97.6	42615.4
528.0	70.0	102.7	66.6	97.6	1.5	-1.23	-0.44	-0.45	66.3	97.2	67.8	99.4	1.74	-0.45	66.3	97.2	42713.3

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2) Desired speed		(3) Start of 1-sec Interval		(4) Local grade (%)	(5) Limiting acceleration (ft/sec ²)			(6) New speed based on vehicle performance		(7) Limiting acceleration and speed based on driver preferences				(8) Actual acceleration (ft/sec ²)	(9) End of 1-sec Interval		
	(mph)	(ft/sec)	Speed			Coasting	Power	Effective	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)	New speed		New position (ft)		
			(mph)	(ft/sec)							(mph)	(ft/sec)		(mph)			(ft/sec)	
	(ft/sec)	(ft/sec)	(ft/sec)	(ft)		(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)		(ft)		
529.0	70.0	102.7	66.3	97.2	42810.7	1.5	-1.23	-0.43	-0.45	66.0	96.7	67.5	99.0	1.79	-0.45	66.0	96.7	42907.6
530.0	70.0	102.7	66.0	96.7	42907.6	1.5	-1.22	-0.42	-0.44	65.7	96.3	67.2	98.6	1.84	-0.44	65.7	96.3	43004.2
531.0	70.0	102.7	65.7	96.3	43004.2	1.5	-1.22	-0.42	-0.43	65.4	95.9	67.0	98.2	1.89	-0.43	65.4	95.9	43100.3
532.0	70.0	102.7	65.4	95.9	43100.3	1.5	-1.21	-0.41	-0.42	65.1	95.5	66.7	97.8	1.93	-0.42	65.1	95.5	43195.9
533.0	70.0	102.7	65.1	95.5	43195.9	1.5	-1.21	-0.40	-0.42	64.8	95.0	66.4	97.4	1.98	-0.42	64.8	95.0	43291.2
534.0	70.0	102.7	64.8	95.0	43291.2	1.5	-1.21	-0.39	-0.41	64.5	94.6	66.2	97.1	2.02	-0.41	64.5	94.6	43386.0
535.0	70.0	102.7	64.5	94.6	43386.0	1.5	-1.20	-0.39	-0.40	64.2	94.2	65.9	96.7	2.07	-0.40	64.2	94.2	43480.4
536.0	70.0	102.7	64.2	94.2	43480.4	1.5	-1.20	-0.38	-0.39	64.0	93.8	65.7	96.3	2.11	-0.39	64.0	93.8	43574.5
537.0	70.0	102.7	64.0	93.8	43574.5	1.5	-1.20	-0.37	-0.39	63.7	93.5	65.4	96.0	2.15	-0.39	63.7	93.5	43668.1
538.0	70.0	102.7	63.7	93.5	43668.1	1.5	-1.19	-0.37	-0.38	63.5	93.1	65.2	95.6	2.20	-0.38	63.5	93.1	43761.4
539.0	70.0	102.7	63.5	93.1	43761.4	1.5	-1.19	-0.36	-0.37	63.2	92.7	65.0	95.3	2.24	-0.37	63.2	92.7	43854.3
540.0	70.0	102.7	63.2	92.7	43854.3	1.5	-1.18	-0.35	-0.37	63.0	92.3	64.8	95.0	2.28	-0.37	63.0	92.3	43946.8
541.0	70.0	102.7	63.0	92.3	43946.8	1.5	-1.18	-0.35	-0.36	62.7	92.0	64.5	94.7	2.32	-0.36	62.7	92.0	44038.9
542.0	70.0	102.7	62.7	92.0	44038.9	1.5	-1.18	-0.34	-0.35	62.5	91.6	64.3	94.3	2.35	-0.35	62.5	91.6	44130.7
543.0	70.0	102.7	62.5	91.6	44130.7	1.5	-1.17	-0.33	-0.35	62.2	91.3	64.1	94.0	2.39	-0.35	62.2	91.3	44222.2
544.0	70.0	102.7	62.2	91.3	44222.2	1.5	-1.17	-0.33	-0.34	62.0	90.9	63.9	93.7	2.43	-0.34	62.0	90.9	44313.3
545.0	70.0	102.7	62.0	90.9	44313.3	1.5	-1.17	-0.32	-0.33	61.8	90.6	63.7	93.4	2.47	-0.33	61.8	90.6	44404.1
546.0	70.0	102.7	61.8	90.6	44404.1	1.5	-1.17	-0.32	-0.33	61.6	90.3	63.5	93.1	2.50	-0.33	61.6	90.3	44494.5
547.0	70.0	102.7	61.6	90.3	44494.5	1.5	-1.16	-0.31	-0.32	61.3	90.0	63.3	92.8	2.54	-0.32	61.3	90.0	44584.6
548.0	70.0	102.7	61.3	90.0	44584.6	-3.8	0.53	1.37	1.32	62.2	91.3	63.1	92.5	2.57	1.32	62.2	91.3	44675.3
549.0	70.0	102.7	62.2	91.3	44675.3	-3.8	0.52	1.35	1.30	63.1	92.6	63.9	93.7	2.43	1.30	63.1	92.6	44767.2
550.0	70.0	102.7	63.1	92.6	44767.2	-3.8	0.51	1.32	1.28	64.0	93.9	64.7	94.9	2.29	1.28	64.0	93.9	44860.4
551.0	70.0	102.7	64.0	93.9	44860.4	-3.8	0.49	1.30	1.26	64.9	95.1	65.5	96.0	2.15	1.26	64.9	95.1	44954.9
552.0	70.0	102.7	64.9	95.1	44954.9	-3.8	0.48	1.28	1.24	65.7	96.4	66.2	97.1	2.01	1.24	65.7	96.4	45050.7
553.0	70.0	102.7	65.7	96.4	45050.7	-3.8	0.47	1.26	1.22	66.5	97.6	67.0	98.3	1.88	1.22	66.5	97.6	45147.7
554.0	70.0	102.7	66.5	97.6	45147.7	-3.8	0.46	1.24	1.20	67.4	98.8	67.7	99.3	1.75	1.20	67.4	98.8	45245.9
555.0	70.0	102.7	67.4	98.8	45245.9	-3.8	0.45	1.22	1.18	68.2	100.0	68.5	100.4	1.62	1.18	68.2	100.0	45345.2
556.0	70.0	102.7	68.2	100.0	45345.2	-3.8	0.44	1.20	1.16	69.0	101.1	69.2	101.5	1.49	1.16	69.0	101.1	45445.8
557.0	70.0	102.7	69.0	101.1	45445.8	-3.8	0.42	1.18	1.14	69.7	102.3	69.9	102.5	1.37	1.14	69.7	102.3	45547.5
558.0	70.0	102.7	69.7	102.3	45547.5	-3.8	0.41	1.16	1.13	70.5	103.4	70.0	102.7	0.39	0.39	70.0	102.7	45650.0
559.0	70.0	102.7	70.0	102.7	45650.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	45752.7
560.0	70.0	102.7	70.0	102.7	45752.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	45855.3
561.0	70.0	102.7	70.0	102.7	45855.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	45958.0
562.0	70.0	102.7	70.0	102.7	45958.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	46060.7
563.0	70.0	102.7	70.0	102.7	46060.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	46163.3
564.0	70.0	102.7	70.0	102.7	46163.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	46266.0
565.0	70.0	102.7	70.0	102.7	46266.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	46368.7
566.0	70.0	102.7	70.0	102.7	46368.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	46471.3
567.0	70.0	102.7	70.0	102.7	46471.3	4.5	-2.25	-1.49	-1.53	69.0	101.1	70.0	102.7	0.00	-1.53	69.0	101.1	46573.2
568.0	70.0	102.7	69.0	101.1	46573.2	4.5	-2.23	-1.46	-1.50	67.9	99.6	69.9	102.5	1.37	-1.50	67.9	99.6	46673.6
569.0	70.0	102.7	67.9	99.6	46673.6	4.5	-2.22	-1.43	-1.48	66.9	98.2	69.0	101.2	1.53	-1.48	66.9	98.2	46772.5
570.0	70.0	102.7	66.9	98.2	46772.5	4.5	-2.20	-1.41	-1.45	65.9	96.7	68.1	99.8	1.69	-1.45	65.9	96.7	46869.9
571.0	70.0	102.7	65.9	96.7	46869.9	4.5	-2.19	-1.38	-1.43	65.0	95.3	67.2	98.5	1.84	-1.43	65.0	95.3	46965.9
572.0	70.0	102.7	65.0	95.3	46965.9	4.5	-2.17	-1.36	-1.40	64.0	93.9	66.3	97.3	2.00	-1.40	64.0	93.9	47060.5

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)				(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences					End of 1-sec Interval		
			Speed			Coasting	Power	Effective			Speed		Acceleration			New speed (mph)	New position (ft)	
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(mph)	(ft/sec)	(ft/sec ²)					
573.0	70.0	102.7	64.0	93.9	47060.5	4.5	-2.16	-1.33	-1.38	63.1	92.5	65.5	96.0	2.15	-1.38	63.1	92.5	47153.7
574.0	70.0	102.7	63.1	92.5	47153.7	4.5	-2.15	-1.31	-1.35	62.1	91.1	64.6	94.8	2.30	-1.35	62.1	91.1	47245.5
575.0	70.0	102.7	62.1	91.1	47245.5	4.5	-2.14	-1.28	-1.33	61.2	89.8	63.8	93.6	2.44	-1.33	61.2	89.8	47336.0
576.0	70.0	102.7	61.2	89.8	47336.0	4.5	-2.12	-1.26	-1.30	60.4	88.5	63.0	92.4	2.59	-1.30	60.4	88.5	47425.2
577.0	70.0	102.7	60.4	88.5	47425.2	4.5	-2.11	-1.23	-1.28	59.5	87.2	62.2	91.2	2.73	-1.28	59.5	87.2	47513.0
578.0	70.0	102.7	59.5	87.2	47513.0	4.5	-2.10	-1.21	-1.26	58.6	86.0	61.4	90.1	2.87	-1.26	58.6	86.0	47599.6
579.0	70.0	102.7	58.6	86.0	47599.6	4.5	-2.09	-1.19	-1.23	57.8	84.7	60.7	89.0	3.00	-1.23	57.8	84.7	47685.0
580.0	70.0	102.7	57.8	84.7	47685.0	4.5	-2.08	-1.16	-1.21	57.0	83.5	59.9	87.9	3.14	-1.21	57.0	83.5	47769.1
581.0	70.0	102.7	57.0	83.5	47769.1	4.5	-2.07	-1.14	-1.19	56.1	82.3	59.2	86.8	3.27	-1.19	56.1	82.3	47852.1
582.0	70.0	102.7	56.1	82.3	47852.1	4.5	-2.06	-1.12	-1.17	55.3	81.2	58.5	85.7	3.40	-1.17	55.3	81.2	47933.8
583.0	70.0	102.7	55.3	81.2	47933.8	4.5	-2.05	-1.09	-1.14	54.6	80.0	57.7	84.7	3.52	-1.14	54.6	80.0	48014.4
584.0	70.0	102.7	54.6	80.0	48014.4	4.5	-2.04	-1.07	-1.12	53.8	78.9	57.1	83.7	3.64	-1.12	53.8	78.9	48093.9
585.0	70.0	102.7	53.8	78.9	48093.9	4.5	-2.03	-1.05	-1.10	53.1	77.8	56.4	82.7	3.77	-1.10	53.1	77.8	48172.3
586.0	70.0	102.7	53.1	77.8	48172.3	4.5	-2.03	-1.03	-1.08	52.3	76.7	55.7	81.7	3.88	-1.08	52.3	76.7	48249.5
587.0	70.0	102.7	52.3	76.7	48249.5	4.5	-2.02	-1.00	-1.06	51.6	75.7	55.0	80.7	4.00	-1.06	51.6	75.7	48325.7
588.0	70.0	102.7	51.6	75.7	48325.7	4.5	-2.01	-0.98	-1.03	50.9	74.6	54.4	79.8	4.12	-1.03	50.9	74.6	48400.9
589.0	70.0	102.7	50.9	74.6	48400.9	4.5	-2.00	-0.96	-1.01	50.2	73.6	53.8	78.9	4.23	-1.01	50.2	73.6	48475.0
590.0	70.0	102.7	50.2	73.6	48475.0	4.5	-1.99	-0.94	-0.99	49.5	72.6	53.2	78.0	4.34	-0.99	49.5	72.6	48548.2
591.0	70.0	102.7	49.5	72.6	48548.2	4.5	-1.99	-0.92	-0.97	48.9	71.7	52.6	77.1	4.44	-0.97	48.9	71.7	48620.3
592.0	70.0	102.7	48.9	71.7	48620.3	4.5	-1.98	-0.90	-0.95	48.2	70.7	52.0	76.2	4.55	-0.95	48.2	70.7	48691.5
593.0	70.0	102.7	48.2	70.7	48691.5	4.5	-1.97	-0.87	-0.93	47.6	69.8	51.4	75.4	4.65	-0.93	47.6	69.8	48761.7
594.0	70.0	102.7	47.6	69.8	48761.7	4.5	-1.97	-0.85	-0.91	47.0	68.9	50.8	74.5	4.75	-0.91	47.0	68.9	48831.1
595.0	70.0	102.7	47.0	68.9	48831.1	4.5	-1.96	-0.83	-0.89	46.4	68.0	50.3	73.7	4.85	-0.89	46.4	68.0	48899.5
596.0	70.0	102.7	46.4	68.0	48899.5	4.5	-1.96	-0.81	-0.87	45.8	67.1	49.7	72.9	4.95	-0.87	45.8	67.1	48967.1
597.0	70.0	102.7	45.8	67.1	48967.1	4.5	-1.95	-0.79	-0.85	45.2	66.3	49.2	72.2	5.04	-0.85	45.2	66.3	49033.8
598.0	70.0	102.7	45.2	66.3	49033.8	4.5	-1.94	-0.77	-0.83	44.6	65.4	48.7	71.4	5.13	-0.83	44.6	65.4	49099.6
599.0	70.0	102.7	44.6	65.4	49099.6	4.5	-1.94	-0.75	-0.81	44.1	64.6	48.2	70.7	5.22	-0.81	44.1	64.6	49164.7
600.0	70.0	102.7	44.1	64.6	49164.7	4.5	-1.93	-0.73	-0.79	43.5	63.9	47.7	69.9	5.31	-0.79	43.5	63.9	49228.9
601.0	70.0	102.7	43.5	63.9	49228.9	4.5	-1.93	-0.71	-0.77	43.0	63.1	47.2	69.2	5.39	-0.77	43.0	63.1	49292.4
602.0	70.0	102.7	43.0	63.1	49292.4	4.5	-1.92	-0.69	-0.75	42.5	62.3	46.7	68.6	5.48	-0.75	42.5	62.3	49355.1
603.0	70.0	102.7	42.5	62.3	49355.1	-3.0	0.49	1.69	1.58	43.6	63.9	46.3	67.9	5.56	1.58	43.6	63.9	49418.2
604.0	70.0	102.7	43.6	63.9	49418.2	-3.0	0.48	1.65	1.55	44.6	65.5	47.2	69.3	5.39	1.55	44.6	65.5	49482.9
605.0	70.0	102.7	44.6	65.5	49482.9	-3.0	0.47	1.62	1.52	45.7	67.0	48.2	70.7	5.22	1.52	45.7	67.0	49549.1
606.0	70.0	102.7	45.7	67.0	49549.1	-3.0	0.46	1.58	1.49	46.7	68.5	49.1	72.0	5.05	1.49	46.7	68.5	49616.8
607.0	70.0	102.7	46.7	68.5	49616.8	-3.0	0.45	1.55	1.46	47.7	69.9	50.0	73.4	4.89	1.46	47.7	69.9	49686.0
608.0	70.0	102.7	47.7	69.9	49686.0	-3.0	0.44	1.52	1.44	48.7	71.4	50.9	74.7	4.74	1.44	48.7	71.4	49756.7
609.0	70.0	102.7	48.7	71.4	49756.7	-3.0	0.43	1.49	1.41	49.6	72.8	51.8	75.9	4.58	1.41	49.6	72.8	49828.7
610.0	70.0	102.7	49.6	72.8	49828.7	-3.0	0.42	1.46	1.38	50.6	74.2	52.6	77.2	4.43	1.38	50.6	74.2	49902.2
611.0	70.0	102.7	50.6	74.2	49902.2	-3.0	0.41	1.43	1.36	51.5	75.5	53.5	78.4	4.28	1.36	51.5	75.5	49977.0
612.0	70.0	102.7	51.5	75.5	49977.0	-3.0	0.40	1.40	1.34	52.4	76.9	54.3	79.6	4.13	1.34	52.4	76.9	50053.2
613.0	70.0	102.7	52.4	76.9	50053.2	-3.0	0.39	1.37	1.31	53.3	78.2	55.1	80.8	3.99	1.31	53.3	78.2	50130.7
614.0	70.0	102.7	53.3	78.2	50130.7	-3.0	0.38	1.35	1.29	54.2	79.5	55.9	82.0	3.85	1.29	54.2	79.5	50209.5
615.0	70.0	102.7	54.2	79.5	50209.5	-3.0	0.37	1.32	1.27	55.0	80.7	56.7	83.2	3.71	1.27	55.0	80.7	50289.6
616.0	70.0	102.7	55.0	80.7	50289.6	-3.0	0.36	1.30	1.25	55.9	82.0	57.5	84.3	3.57	1.25	55.9	82.0	50371.0

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(4)		(5)	(7) Local grade (%)	(8)			(11) New speed based on vehicle performance (mph)	(12) (ft/sec)	(13)		(15) Acceleration (ft/sec ²)	(16) Actual acceleration (ft/sec ²)	(17)		(18) New speed (mph)	(19) New position (ft)
	Desired speed		Start of 1-sec Interval		Position (ft)		Limiting acceleration (ft/sec ²)					Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
	(mph)	(ft/sec)	(mph)	(ft/sec)			Coasting	Power	Effective			Speed				New speed (mph)	(ft/sec)		
					Speed (mph)							Position (ft)							
617.0	70.0	102.7	55.9	82.0	50371.0	-3.0	0.35	1.28	1.22	56.7	83.2	58.2	85.4	3.44	1.22	56.7	83.2	50453.5	
618.0	70.0	102.7	56.7	83.2	50453.5	-3.0	0.34	1.25	1.20	57.5	84.4	59.0	86.5	3.30	1.20	57.5	84.4	50537.3	
619.0	70.0	102.7	57.5	84.4	50537.3	-3.0	0.33	1.23	1.18	58.3	85.6	59.7	87.6	3.17	1.18	58.3	85.6	50622.3	
620.0	70.0	102.7	58.3	85.6	50622.3	-3.0	0.32	1.21	1.16	59.1	86.7	60.4	88.6	3.05	1.16	59.1	86.7	50708.5	
621.0	70.0	102.7	59.1	86.7	50708.5	-3.0	0.31	1.19	1.14	59.9	87.9	61.1	89.7	2.92	1.14	59.9	87.9	50795.8	
622.0	70.0	102.7	59.9	87.9	50795.8	-3.0	0.30	1.17	1.12	60.7	89.0	61.8	90.7	2.80	1.12	60.7	89.0	50884.2	
623.0	70.0	102.7	60.7	89.0	50884.2	-3.0	0.29	1.15	1.11	61.4	90.1	62.5	91.7	2.68	1.11	61.4	90.1	50973.8	
624.0	70.0	102.7	61.4	90.1	50973.8	-3.0	0.28	1.13	1.09	62.2	91.2	63.2	92.7	2.56	1.09	62.2	91.2	51064.4	
625.0	70.0	102.7	62.2	91.2	51064.4	-3.0	0.27	1.11	1.07	62.9	92.3	63.8	93.6	2.44	1.07	62.9	92.3	51156.2	
626.0	70.0	102.7	62.9	92.3	51156.2	-3.0	0.26	1.09	1.05	63.6	93.3	64.5	94.6	2.32	1.05	63.6	93.3	51249.0	
21 627.0	70.0	102.7	63.6	93.3	51249.0	4.0	-1.99	-1.16	-1.20	62.8	92.1	65.1	95.5	2.21	-1.20	62.8	92.1	51341.7	
628.0	70.0	102.7	62.8	92.1	51341.7	4.0	-1.98	-1.14	-1.18	62.0	90.9	64.4	94.5	2.34	-1.18	62.0	90.9	51433.2	
629.0	70.0	102.7	62.0	90.9	51433.2	4.0	-1.97	-1.12	-1.16	61.2	89.8	63.7	93.4	2.47	-1.16	61.2	89.8	51523.6	
630.0	70.0	102.7	61.2	89.8	51523.6	4.0	-1.96	-1.10	-1.14	60.4	88.6	63.0	92.4	2.59	-1.14	60.4	88.6	51612.8	
631.0	70.0	102.7	60.4	88.6	51612.8	4.0	-1.95	-1.08	-1.12	59.7	87.5	62.3	91.4	2.71	-1.12	59.7	87.5	51700.9	
632.0	70.0	102.7	59.7	87.5	51700.9	4.0	-1.94	-1.06	-1.10	58.9	86.4	61.6	90.4	2.84	-1.10	58.9	86.4	51787.8	
633.0	70.0	102.7	58.9	86.4	51787.8	4.0	-1.93	-1.04	-1.08	58.2	85.3	60.9	89.4	2.95	-1.08	58.2	85.3	51873.7	
634.0	70.0	102.7	58.2	85.3	51873.7	4.0	-1.92	-1.01	-1.06	57.5	84.3	60.3	88.4	3.07	-1.06	57.5	84.3	51958.6	
635.0	70.0	102.7	57.5	84.3	51958.6	4.0	-1.92	-0.99	-1.04	56.8	83.3	59.6	87.5	3.18	-1.04	56.8	83.3	52042.3	
636.0	70.0	102.7	56.8	83.3	52042.3	4.0	-1.91	-0.97	-1.02	56.1	82.2	59.0	86.6	3.30	-1.02	56.1	82.2	52125.1	
637.0	70.0	102.7	56.1	82.2	52125.1	4.0	-1.90	-0.95	-1.00	55.4	81.2	58.4	85.6	3.41	-1.00	55.4	81.2	52206.8	
638.0	70.0	102.7	55.4	81.2	52206.8	4.0	-1.89	-0.94	-0.98	54.7	80.3	57.8	84.8	3.51	-0.98	54.7	80.3	52287.6	
639.0	70.0	102.7	54.7	80.3	52287.6	4.0	-1.88	-0.92	-0.96	54.1	79.3	57.2	83.9	3.62	-0.96	54.1	79.3	52367.3	
640.0	70.0	102.7	54.1	79.3	52367.3	4.0	-1.88	-0.90	-0.94	53.4	78.4	56.6	83.0	3.72	-0.94	53.4	78.4	52446.2	
641.0	70.0	102.7	53.4	78.4	52446.2	4.0	-1.87	-0.88	-0.92	52.8	77.4	56.0	82.2	3.83	-0.92	52.8	77.4	52524.1	
642.0	70.0	102.7	52.8	77.4	52524.1	4.0	-1.86	-0.86	-0.90	52.2	76.5	55.5	81.4	3.92	-0.90	52.2	76.5	52601.1	
643.0	70.0	102.7	52.2	76.5	52601.1	4.0	-1.85	-0.84	-0.88	51.6	75.7	54.9	80.6	4.02	-0.88	51.6	75.7	52677.2	
644.0	70.0	102.7	51.6	75.7	52677.2	4.0	-1.85	-0.82	-0.87	51.0	74.8	54.4	79.8	4.12	-0.87	51.0	74.8	52752.4	
645.0	70.0	102.7	51.0	74.8	52752.4	4.0	-1.84	-0.80	-0.85	50.4	73.9	53.9	79.0	4.21	-0.85	50.4	73.9	52826.7	
646.0	70.0	102.7	50.4	73.9	52826.7	4.0	-1.84	-0.79	-0.83	49.8	73.1	53.3	78.2	4.30	-0.83	49.8	73.1	52900.2	
647.0	70.0	102.7	49.8	73.1	52900.2	4.0	-1.83	-0.77	-0.81	49.3	72.3	52.8	77.5	4.39	-0.81	49.3	72.3	52972.9	
648.0	70.0	102.7	49.3	72.3	52972.9	4.0	-1.82	-0.75	-0.80	48.7	71.5	52.3	76.8	4.48	-0.80	48.7	71.5	53044.8	
649.0	70.0	102.7	48.7	71.5	53044.8	4.0	-1.82	-0.73	-0.78	48.2	70.7	51.9	76.1	4.57	-0.78	48.2	70.7	53115.9	
650.0	70.0	102.7	48.2	70.7	53115.9	4.0	-1.81	-0.72	-0.76	47.7	70.0	51.4	75.4	4.65	-0.76	47.7	70.0	53186.3	
651.0	70.0	102.7	47.7	70.0	53186.3	4.0	-1.81	-0.70	-0.74	47.2	69.2	50.9	74.7	4.73	-0.74	47.2	69.2	53255.9	
652.0	70.0	102.7	47.2	69.2	53255.9	4.0	-1.80	-0.68	-0.73	46.7	68.5	50.5	74.0	4.81	-0.73	46.7	68.5	53324.7	
653.0	70.0	102.7	46.7	68.5	53324.7	4.0	-1.80	-0.67	-0.71	46.2	67.8	50.0	73.4	4.89	-0.71	46.2	67.8	53392.9	
654.0	70.0	102.7	46.2	67.8	53392.9	4.0	-1.79	-0.65	-0.69	45.7	67.1	49.6	72.7	4.97	-0.69	45.7	67.1	53460.3	
655.0	70.0	102.7	45.7	67.1	53460.3	4.0	-1.79	-0.63	-0.68	45.3	66.4	49.2	72.1	5.04	-0.68	45.3	66.4	53527.0	
22 656.0	70.0	102.7	45.3	66.4	53527.0	-2.6	0.34	1.47	1.38	46.2	67.8	48.8	71.5	5.12	1.38	46.2	67.8	53594.1	
657.0	70.0	102.7	46.2	67.8	53594.1	-2.6	0.33	1.44	1.36	47.1	69.1	49.6	72.8	4.97	1.36	47.1	69.1	53662.6	
658.0	70.0	102.7	47.1	69.1	53662.6	-2.6	0.32	1.41	1.33	48.1	70.5	50.4	74.0	4.82	1.33	48.1	70.5	53732.4	
659.0	70.0	102.7	48.1	70.5	53732.4	-2.6	0.31	1.38	1.31	48.9	71.8	51.2	75.2	4.68	1.31	48.9	71.8	53803.6	
660.0	70.0	102.7	48.9	71.8	53803.6	-2.6	0.30	1.35	1.28	49.8	73.1	52.0	76.3	4.53	1.28	49.8	73.1	53876.0	

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft/sec)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)								
661.0	70.0	102.7	49.8	73.1	53876.0	-2.6	0.29	1.33	1.26	50.7	74.3	52.8	77.5	4.40	1.26	50.7	74.3	53949.7
662.0	70.0	102.7	50.7	74.3	53949.7	-2.6	0.28	1.30	1.24	51.5	75.6	53.6	78.6	4.26	1.24	51.5	75.6	54024.6
663.0	70.0	102.7	51.5	75.6	54024.6	-2.6	0.28	1.28	1.22	52.4	76.8	54.3	79.7	4.13	1.22	52.4	76.8	54100.8
664.0	70.0	102.7	52.4	76.8	54100.8	-2.6	0.27	1.25	1.19	53.2	78.0	55.1	80.8	3.99	1.19	53.2	78.0	54178.2
665.0	70.0	102.7	53.2	78.0	54178.2	-2.6	0.26	1.23	1.17	54.0	79.2	55.8	81.8	3.87	1.17	54.0	79.2	54256.8
666.0	70.0	102.7	54.0	79.2	54256.8	-2.6	0.25	1.21	1.15	54.8	80.3	56.5	82.9	3.74	1.15	54.8	80.3	54336.5
667.0	70.0	102.7	54.8	80.3	54336.5	-2.6	0.24	1.18	1.13	55.5	81.4	57.2	83.9	3.61	1.13	55.5	81.4	54417.4
668.0	70.0	102.7	55.5	81.4	54417.4	-2.6	0.23	1.16	1.11	56.3	82.6	57.9	84.9	3.49	1.11	56.3	82.6	54499.4
669.0	70.0	102.7	56.3	82.6	54499.4	-2.6	0.22	1.14	1.09	57.0	83.7	58.6	85.9	3.37	1.09	57.0	83.7	54582.5
670.0	70.0	102.7	57.0	83.7	54582.5	-2.6	0.21	1.12	1.08	57.8	84.7	59.3	86.9	3.25	1.08	57.8	84.7	54666.7
671.0	70.0	102.7	57.8	84.7	54666.7	-2.6	0.20	1.10	1.06	58.5	85.8	59.9	87.9	3.14	1.06	58.5	85.8	54751.9
672.0	70.0	102.7	58.5	85.8	54751.9	-2.6	0.19	1.08	1.04	59.2	86.8	60.6	88.8	3.02	1.04	59.2	86.8	54838.2
673.0	70.0	102.7	59.2	86.8	54838.2	-2.6	0.19	1.06	1.02	59.9	87.8	61.2	89.7	2.91	1.02	59.9	87.8	54925.6
674.0	70.0	102.7	59.9	87.8	54925.6	-2.6	0.18	1.04	1.01	60.6	88.9	61.8	90.6	2.80	1.01	60.6	88.9	55013.9
675.0	70.0	102.7	60.6	88.9	55013.9	-2.6	0.17	1.02	0.99	61.3	89.8	62.4	91.5	2.69	0.99	61.3	89.8	55103.3
676.0	70.0	102.7	61.3	89.8	55103.3	-2.6	0.16	1.01	0.97	61.9	90.8	63.0	92.4	2.59	0.97	61.9	90.8	55193.6
677.0	70.0	102.7	61.9	90.8	55193.6	4.0	-1.97	-1.12	-1.16	61.1	89.7	63.6	93.3	2.48	-1.16	61.1	89.7	55283.8
678.0	70.0	102.7	61.1	89.7	55283.8	4.0	-1.96	-1.10	-1.14	60.4	88.5	62.9	92.3	2.61	-1.14	60.4	88.5	55372.9
679.0	70.0	102.7	60.4	88.5	55372.9	4.0	-1.95	-1.07	-1.12	59.6	87.4	62.2	91.2	2.73	-1.12	59.6	87.4	55460.9
680.0	70.0	102.7	59.6	87.4	55460.9	4.0	-1.94	-1.05	-1.10	58.8	86.3	61.5	90.3	2.85	-1.10	58.8	86.3	55547.7
681.0	70.0	102.7	58.8	86.3	55547.7	4.0	-1.93	-1.03	-1.07	58.1	85.2	60.9	89.3	2.97	-1.07	58.1	85.2	55633.5
682.0	70.0	102.7	58.1	85.2	55633.5	4.0	-1.92	-1.01	-1.05	57.4	84.2	60.2	88.3	3.08	-1.05	57.4	84.2	55718.2
683.0	70.0	102.7	57.4	84.2	55718.2	4.0	-1.92	-0.99	-1.03	56.7	83.1	59.6	87.4	3.20	-1.03	56.7	83.1	55801.9
684.0	70.0	102.7	56.7	83.1	55801.9	4.0	-1.91	-0.97	-1.02	56.0	82.1	58.9	86.5	3.31	-1.02	56.0	82.1	55884.5
685.0	70.0	102.7	56.0	82.1	55884.5	4.0	-1.90	-0.95	-1.00	55.3	81.1	58.3	85.5	3.42	-1.00	55.3	81.1	55966.1
686.0	70.0	102.7	55.3	81.1	55966.1	4.0	-1.89	-0.93	-0.98	54.7	80.2	57.7	84.7	3.53	-0.98	54.7	80.2	56046.8
687.0	70.0	102.7	54.7	80.2	56046.8	4.0	-1.88	-0.91	-0.96	54.0	79.2	57.1	83.8	3.63	-0.96	54.0	79.2	56126.5
688.0	70.0	102.7	54.0	79.2	56126.5	4.4	-2.00	-1.02	-1.07	53.3	78.1	56.5	82.9	3.73	-1.07	53.3	78.1	56205.1
689.0	70.0	102.7	53.3	78.1	56205.1	4.4	-2.00	-1.00	-1.05	52.6	77.1	55.9	82.0	3.85	-1.05	52.6	77.1	56282.7
690.0	70.0	102.7	52.6	77.1	56282.7	4.4	-1.99	-0.98	-1.03	51.8	76.0	55.3	81.0	3.96	-1.03	51.8	76.0	56359.3
691.0	70.0	102.7	51.8	76.0	56359.3	4.4	-1.98	-0.96	-1.01	51.2	75.0	54.6	80.1	4.07	-1.01	51.2	75.0	56434.8
692.0	70.0	102.7	51.2	75.0	56434.8	4.4	-1.97	-0.94	-0.99	50.5	74.0	54.0	79.2	4.18	-0.99	50.5	74.0	56509.4
693.0	70.0	102.7	50.5	74.0	56509.4	4.4	-1.97	-0.92	-0.97	49.8	73.1	53.4	78.3	4.29	-0.97	49.8	73.1	56582.9
694.0	70.0	102.7	49.8	73.1	56582.9	4.4	-1.96	-0.90	-0.95	49.2	72.1	52.8	77.5	4.40	-0.95	49.2	72.1	56655.6
695.0	70.0	102.7	49.2	72.1	56655.6	4.4	-1.95	-0.87	-0.93	48.6	71.2	52.2	76.6	4.50	-0.93	48.6	71.2	56727.2
696.0	70.0	102.7	48.6	71.2	56727.2	4.4	-1.95	-0.85	-0.91	47.9	70.3	51.7	75.8	4.60	-0.91	47.9	70.3	56798.0
697.0	70.0	102.7	47.9	70.3	56798.0	4.4	-1.94	-0.83	-0.89	47.3	69.4	51.1	75.0	4.70	-0.89	47.3	69.4	56867.8
698.0	70.0	102.7	47.3	69.4	56867.8	4.4	-1.93	-0.81	-0.87	46.7	68.6	50.6	74.2	4.79	-0.87	46.7	68.6	56936.8
699.0	70.0	102.7	46.7	68.6	56936.8	4.4	-1.93	-0.79	-0.85	46.2	67.7	50.1	73.4	4.88	-0.85	46.2	67.7	57004.9
700.0	70.0	102.7	46.2	67.7	57004.9	4.4	-1.92	-0.77	-0.83	45.6	66.9	49.6	72.7	4.98	-0.83	45.6	66.9	57072.2
701.0	70.0	102.7	45.6	66.9	57072.2	4.4	-1.92	-0.76	-0.81	45.0	66.1	49.1	71.9	5.07	-0.81	45.0	66.1	57138.7
702.0	70.0	102.7	45.0	66.1	57138.7	0.8	-0.75	0.40	0.38	45.3	66.4	48.6	71.2	5.15	0.38	45.3	66.4	57205.0
703.0	70.0	102.7	45.3	66.4	57205.0	0.8	-0.76	0.39	0.37	45.6	66.8	48.8	71.6	5.11	0.37	45.6	66.8	57271.6
704.0	70.0	102.7	45.6	66.8	57271.6	0.8	-0.76	0.39	0.36	45.8	67.2	49.0	71.9	5.07	0.36	45.8	67.2	57338.6

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval		Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval			
			Speed	Position		Coasting	Power	Effective			Speed		Acceleration		New speed		New position	
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(ft/sec ²)	(mph)			(ft/sec)			
705.0	70.0	102.7	45.8	67.2	57338.6	0.8	-0.76	0.38	0.36	46.0	67.5	49.2	72.2	5.03	0.36	46.0	67.5	57406.0
706.0	70.0	102.7	46.0	67.5	57406.0	0.8	-0.76	0.37	0.35	46.3	67.9	49.5	72.5	4.99	0.35	46.3	67.9	57473.7
707.0	70.0	102.7	46.3	67.9	57473.7	0.8	-0.76	0.36	0.34	46.5	68.2	49.7	72.8	4.96	0.34	46.5	68.2	57541.7
708.0	70.0	102.7	46.5	68.2	57541.7	0.8	-0.77	0.35	0.33	46.7	68.6	49.9	73.1	4.92	0.33	46.7	68.6	57610.1
709.0	70.0	102.7	46.7	68.6	57610.1	0.8	-0.77	0.35	0.33	47.0	68.9	50.1	73.4	4.88	0.33	47.0	68.9	57678.8
710.0	70.0	102.7	47.0	68.9	57678.8	0.8	-0.77	0.34	0.32	47.2	69.2	50.3	73.7	4.85	0.32	47.2	69.2	57747.9
711.0	70.0	102.7	47.2	69.2	57747.9	0.8	-0.77	0.33	0.31	47.4	69.5	50.5	74.0	4.81	0.31	47.4	69.5	57817.3
712.0	70.0	102.7	47.4	69.5	57817.3	0.8	-0.78	0.33	0.31	47.6	69.8	50.7	74.3	4.78	0.31	47.6	69.8	57886.9
713.0	70.0	102.7	47.6	69.8	57886.9	0.8	-0.78	0.32	0.30	47.8	70.1	50.8	74.6	4.75	0.30	47.8	70.1	57956.9
714.0	70.0	102.7	47.8	70.1	57956.9	0.8	-0.78	0.31	0.29	48.0	70.4	51.0	74.8	4.71	0.29	48.0	70.4	58027.2
715.0	70.0	102.7	48.0	70.4	58027.2	0.8	-0.78	0.31	0.29	48.2	70.7	51.2	75.1	4.68	0.29	48.2	70.7	58097.7
716.0	70.0	102.7	48.2	70.7	58097.7	0.8	-0.78	0.30	0.28	48.4	71.0	51.4	75.4	4.65	0.28	48.4	71.0	58168.6
717.0	70.0	102.7	48.4	71.0	58168.6	0.8	-0.79	0.29	0.28	48.6	71.3	51.6	75.6	4.62	0.28	48.6	71.3	58239.7
718.0	70.0	102.7	48.6	71.3	58239.7	0.8	-0.79	0.29	0.27	48.8	71.5	51.7	75.9	4.59	0.27	48.8	71.5	58311.1
719.0	70.0	102.7	48.8	71.5	58311.1	0.8	-0.79	0.28	0.27	49.0	71.8	51.9	76.1	4.56	0.27	49.0	71.8	58382.8
720.0	70.0	102.7	49.0	71.8	58382.8	0.8	-0.79	0.28	0.26	49.1	72.1	52.0	76.3	4.53	0.26	49.1	72.1	58454.7
721.0	70.0	102.7	49.1	72.1	58454.7	0.8	-0.79	0.27	0.26	49.3	72.3	52.2	76.6	4.50	0.26	49.3	72.3	58526.9
722.0	70.0	102.7	49.3	72.3	58526.9	0.8	-0.79	0.26	0.25	49.5	72.6	52.4	76.8	4.48	0.25	49.5	72.6	58599.4
723.0	70.0	102.7	49.5	72.6	58599.4	0.8	-0.80	0.26	0.25	49.6	72.8	52.5	77.0	4.45	0.25	49.6	72.8	58672.1
724.0	70.0	102.7	49.6	72.8	58672.1	0.8	-0.80	0.25	0.24	49.8	73.1	52.7	77.2	4.42	0.24	49.8	73.1	58745.0
725.0	70.0	102.7	49.8	73.1	58745.0	0.8	-0.80	0.25	0.24	50.0	73.3	52.8	77.5	4.40	0.24	50.0	73.3	58818.2
726.0	70.0	102.7	50.0	73.3	58818.2	0.8	-0.80	0.24	0.23	50.1	73.5	53.0	77.7	4.37	0.23	50.1	73.5	58891.6
727.0	70.0	102.7	50.1	73.5	58891.6	0.8	-0.80	0.24	0.23	50.3	73.8	53.1	77.9	4.35	0.23	50.3	73.8	58965.2
728.0	70.0	102.7	50.3	73.8	58965.2	0.8	-0.81	0.23	0.22	50.4	74.0	53.2	78.1	4.32	0.22	50.4	74.0	59039.1
729.0	70.0	102.7	50.4	74.0	59039.1	0.8	-0.81	0.23	0.22	50.6	74.2	53.4	78.3	4.30	0.22	50.6	74.2	59113.2
730.0	70.0	102.7	50.6	74.2	59113.2	0.8	-0.81	0.22	0.21	50.7	74.4	53.5	78.5	4.28	0.21	50.7	74.4	59187.5
731.0	70.0	102.7	50.7	74.4	59187.5	0.8	-0.81	0.22	0.21	50.9	74.6	53.6	78.7	4.25	0.21	50.9	74.6	59262.0
732.0	70.0	102.7	50.9	74.6	59262.0	0.8	-0.81	0.22	0.21	51.0	74.8	53.8	78.8	4.23	0.21	51.0	74.8	59336.7
733.0	70.0	102.7	51.0	74.8	59336.7	0.8	-0.81	0.21	0.20	51.2	75.0	53.9	79.0	4.21	0.20	51.2	75.0	59411.6
734.0	70.0	102.7	51.2	75.0	59411.6	0.8	-0.81	0.21	0.20	51.3	75.2	54.0	79.2	4.19	0.20	51.3	75.2	59486.7
735.0	70.0	102.7	51.3	75.2	59486.7	0.8	-0.82	0.20	0.19	51.4	75.4	54.1	79.4	4.16	0.19	51.4	75.4	59562.1
736.0	70.0	102.7	51.4	75.4	59562.1	0.8	-0.82	0.20	0.19	51.5	75.6	54.2	79.6	4.14	0.19	51.5	75.6	59637.6
737.0	70.0	102.7	51.5	75.6	59637.6	0.8	-0.82	0.20	0.19	51.7	75.8	54.4	79.7	4.12	0.19	51.7	75.8	59713.3
738.0	70.0	102.7	51.7	75.8	59713.3	0.8	-0.82	0.19	0.18	51.8	76.0	54.5	79.9	4.10	0.18	51.8	76.0	59789.1
739.0	70.0	102.7	51.8	76.0	59789.1	0.8	-0.82	0.19	0.18	51.9	76.1	54.6	80.1	4.08	0.18	51.9	76.1	59865.2
740.0	70.0	102.7	51.9	76.1	59865.2	0.8	-0.82	0.18	0.18	52.0	76.3	54.7	80.2	4.06	0.18	52.0	76.3	59941.4
741.0	70.0	102.7	52.0	76.3	59941.4	0.8	-0.82	0.18	0.17	52.2	76.5	54.8	80.4	4.04	0.17	52.2	76.5	60017.8
742.0	70.0	102.7	52.2	76.5	60017.8	0.8	-0.83	0.18	0.17	52.3	76.7	54.9	80.5	4.03	0.17	52.3	76.7	60094.4
743.0	70.0	102.7	52.3	76.7	60094.4	-4.0	0.72	1.70	1.62	53.4	78.3	55.0	80.7	4.01	1.62	53.4	78.3	60171.9
744.0	70.0	102.7	53.4	78.3	60171.9	-4.0	0.71	1.67	1.59	54.5	79.9	56.0	82.1	3.83	1.59	54.5	79.9	60251.0
745.0	70.0	102.7	54.5	79.9	60251.0	-4.0	0.69	1.64	1.57	55.5	81.4	57.0	83.5	3.66	1.57	55.5	81.4	60331.6
746.0	70.0	102.7	55.5	81.4	60331.6	-4.0	0.68	1.61	1.54	56.6	83.0	57.9	84.9	3.49	1.54	56.6	83.0	60413.9
747.0	70.0	102.7	56.6	83.0	60413.9	-4.0	0.67	1.58	1.52	57.6	84.5	58.9	86.3	3.33	1.52	57.6	84.5	60497.6
748.0	70.0	102.7	57.6	84.5	60497.6	-4.0	0.66	1.55	1.49	58.6	86.0	59.8	87.7	3.16	1.49	58.6	86.0	60582.9

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)				(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences					End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)	mph		ft/sec	mph		ft/sec
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)									
749.0	70.0	102.7	58.6	86.0	60582.9	-4.0	0.64	1.52	1.47	59.6	87.5	60.7	89.0	3.00	1.47	59.6	87.5	60669.6	
750.0	70.0	102.7	59.6	87.5	60669.6	-4.0	0.63	1.50	1.44	60.6	88.9	61.6	90.3	2.84	1.44	60.6	88.9	60757.8	
751.0	70.0	102.7	60.6	88.9	60757.8	-4.0	0.62	1.47	1.42	61.6	90.3	62.4	91.6	2.69	1.42	61.6	90.3	60847.4	
752.0	70.0	102.7	61.6	90.3	60847.4	-4.0	0.61	1.44	1.40	62.5	91.7	63.3	92.9	2.53	1.40	62.5	91.7	60938.4	
753.0	70.0	102.7	62.5	91.7	60938.4	-1.7	-0.14	0.69	0.67	63.0	92.4	64.2	94.1	2.38	0.67	63.0	92.4	61030.5	
754.0	70.0	102.7	63.0	92.4	61030.5	-1.7	-0.15	0.68	0.65	63.4	93.0	64.6	94.7	2.31	0.65	63.4	93.0	61123.2	
755.0	70.0	102.7	63.4	93.0	61123.2	-1.7	-0.16	0.67	0.64	63.9	93.7	65.0	95.3	2.24	0.64	63.9	93.7	61216.5	
756.0	70.0	102.7	63.9	93.7	61216.5	-1.7	-0.16	0.65	0.63	64.3	94.3	65.4	95.9	2.17	0.63	64.3	94.3	61310.5	
757.0	70.0	102.7	64.3	94.3	61310.5	-1.7	-0.17	0.64	0.62	64.7	94.9	65.7	96.4	2.10	0.62	64.7	94.9	61405.2	
758.0	70.0	102.7	64.7	94.9	61405.2	-1.7	-0.17	0.63	0.61	65.1	95.6	66.1	97.0	2.03	0.61	65.1	95.6	61500.4	
759.0	70.0	102.7	65.1	95.6	61500.4	-1.7	-0.18	0.62	0.60	65.6	96.2	66.5	97.5	1.97	0.60	65.6	96.2	61596.3	
760.0	70.0	102.7	65.6	96.2	61596.3	-1.7	-0.18	0.61	0.59	66.0	96.7	66.9	98.1	1.90	0.59	66.0	96.7	61692.7	
761.0	70.0	102.7	66.0	96.7	61692.7	-1.7	-0.19	0.60	0.58	66.4	97.3	67.2	98.6	1.84	0.58	66.4	97.3	61789.8	
762.0	70.0	102.7	66.4	97.3	61789.8	-1.7	-0.20	0.59	0.57	66.8	97.9	67.6	99.1	1.78	0.57	66.8	97.9	61887.4	
763.0	70.0	102.7	66.8	97.9	61887.4	-1.7	-0.20	0.58	0.56	67.1	98.5	67.9	99.6	1.71	0.56	67.1	98.5	61985.6	
764.0	70.0	102.7	67.1	98.5	61985.6	-1.7	-0.21	0.57	0.55	67.5	99.0	68.3	100.1	1.65	0.55	67.5	99.0	62084.3	
765.0	70.0	102.7	67.5	99.0	62084.3	-1.7	-0.21	0.56	0.54	67.9	99.6	68.6	100.6	1.59	0.54	67.9	99.6	62183.6	
766.0	70.0	102.7	67.9	99.6	62183.6	-1.7	-0.22	0.55	0.54	68.2	100.1	68.9	101.1	1.54	0.54	68.2	100.1	62283.4	
767.0	70.0	102.7	68.2	100.1	62283.4	-3.5	0.34	1.10	1.07	69.0	101.2	69.3	101.6	1.48	1.07	69.0	101.2	62384.1	
768.0	70.0	102.7	69.0	101.2	62384.1	-3.5	0.33	1.09	1.06	69.7	102.2	69.9	102.5	1.36	1.06	69.7	102.2	62485.8	
769.0	70.0	102.7	69.7	102.2	62485.8	-3.5	0.32	1.07	1.04	70.4	103.3	70.0	102.7	0.44	0.44	70.0	102.7	62588.2	
770.0	70.0	102.7	70.0	102.7	62588.2	-3.5	0.32	1.06	1.03	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	62690.9	
771.0	70.0	102.7	70.0	102.7	62690.9	-3.5	0.32	1.06	1.03	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	62793.5	
772.0	70.0	102.7	70.0	102.7	62793.5	-3.5	0.32	1.06	1.03	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	62896.2	
773.0	70.0	102.7	70.0	102.7	62896.2	-3.5	0.32	1.06	1.03	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	62998.9	
774.0	70.0	102.7	70.0	102.7	62998.9	-3.5	0.32	1.06	1.03	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	63101.5	
775.0	70.0	102.7	70.0	102.7	63101.5	-3.5	0.32	1.06	1.03	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	63204.2	
776.0	70.0	102.7	70.0	102.7	63204.2	-3.5	0.32	1.06	1.03	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	63306.9	
777.0	70.0	102.7	70.0	102.7	63306.9	-3.5	0.32	1.06	1.03	70.7	103.7	70.0	102.7	0.00	0.00	70.0	102.7	63409.5	
778.0	70.0	102.7	70.0	102.7	63409.5	4.8	-2.34	-1.58	-1.63	68.9	101.0	70.0	102.7	0.00	-1.63	68.9	101.0	63511.4	
779.0	70.0	102.7	68.9	101.0	63511.4	4.8	-2.33	-1.55	-1.60	67.8	99.4	69.8	102.4	1.38	-1.60	67.8	99.4	63611.6	
780.0	70.0	102.7	67.8	99.4	63611.6	4.8	-2.31	-1.53	-1.57	66.7	97.9	68.9	101.0	1.55	-1.57	66.7	97.9	63710.3	
781.0	70.0	102.7	66.7	97.9	63710.3	4.8	-2.29	-1.50	-1.55	65.7	96.3	67.9	99.6	1.72	-1.55	65.7	96.3	63807.4	
782.0	70.0	102.7	65.7	96.3	63807.4	4.8	-2.28	-1.47	-1.52	64.6	94.8	67.0	98.2	1.89	-1.52	64.6	94.8	63902.9	
783.0	70.0	102.7	64.6	94.8	63902.9	4.8	-2.27	-1.44	-1.49	63.6	93.3	66.0	96.9	2.05	-1.49	63.6	93.3	63997.0	
784.0	70.0	102.7	63.6	93.3	63997.0	4.8	-2.25	-1.42	-1.47	62.6	91.8	65.1	95.5	2.21	-1.47	62.6	91.8	64089.6	
785.0	70.0	102.7	62.6	91.8	64089.6	4.8	-2.24	-1.39	-1.44	61.6	90.4	64.2	94.2	2.37	-1.44	61.6	90.4	64180.7	
786.0	70.0	102.7	61.6	90.4	64180.7	4.8	-2.23	-1.36	-1.41	60.7	89.0	63.4	92.9	2.52	-1.41	60.7	89.0	64270.4	
787.0	70.0	102.7	60.7	89.0	64270.4	4.8	-2.21	-1.34	-1.39	59.7	87.6	62.5	91.7	2.68	-1.39	59.7	87.6	64358.7	
788.0	70.0	102.7	59.7	87.6	64358.7	4.8	-2.20	-1.31	-1.36	58.8	86.2	61.7	90.4	2.83	-1.36	58.8	86.2	64445.6	
789.0	70.0	102.7	58.8	86.2	64445.6	4.8	-2.19	-1.29	-1.34	57.9	84.9	60.8	89.2	2.97	-1.34	57.9	84.9	64531.2	
790.0	70.0	102.7	57.9	84.9	64531.2	4.8	-2.18	-1.26	-1.31	57.0	83.6	60.0	88.0	3.12	-1.31	57.0	83.6	64615.4	
791.0	70.0	102.7	57.0	83.6	64615.4	4.8	-2.17	-1.24	-1.29	56.1	82.3	59.2	86.8	3.26	-1.29	56.1	82.3	64698.3	
792.0	70.0	102.7	56.1	82.3	64698.3	4.8	-2.16	-1.21	-1.27	55.2	81.0	58.4	85.7	3.40	-1.27	55.2	81.0	64780.0	

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(17)		(18)		(19) New position (ft)
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval				
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft/sec)			
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)									
793.0	70.0	102.7	55.2	81.0	64780.0	4.8	-2.15	-1.19	-1.24	54.4	79.8	57.7	84.6	3.54	-1.24	54.4	79.8	64860.4	
794.0	70.0	102.7	54.4	79.8	64860.4	4.8	-2.14	-1.16	-1.22	53.6	78.6	56.9	83.5	3.67	-1.22	53.6	78.6	64939.6	
795.0	70.0	102.7	53.6	78.6	64939.6	4.8	-2.13	-1.14	-1.19	52.8	77.4	56.2	82.4	3.80	-1.19	52.8	77.4	65017.6	
796.0	70.0	102.7	52.8	77.4	65017.6	4.8	-2.12	-1.11	-1.17	52.0	76.2	55.4	81.3	3.93	-1.17	52.0	76.2	65094.4	
797.0	70.0	102.7	52.0	76.2	65094.4	4.8	-2.11	-1.09	-1.15	51.2	75.1	54.7	80.3	4.06	-1.15	51.2	75.1	65170.0	
798.0	70.0	102.7	51.2	75.1	65170.0	4.8	-2.10	-1.06	-1.12	50.4	73.9	54.0	79.2	4.18	-1.12	50.4	73.9	65244.5	
799.0	70.0	102.7	50.4	73.9	65244.5	4.8	-2.09	-1.04	-1.10	49.7	72.8	53.3	78.2	4.30	-1.10	49.7	72.8	65317.9	
800.0	70.0	102.7	49.7	72.8	65317.9	4.8	-2.09	-1.02	-1.08	48.9	71.8	52.7	77.3	4.42	-1.08	48.9	71.8	65390.2	
801.0	70.0	102.7	48.9	71.8	65390.2	4.8	-2.08	-0.99	-1.05	48.2	70.7	52.0	76.3	4.54	-1.05	48.2	70.7	65461.4	
802.0	70.0	102.7	48.2	70.7	65461.4	4.8	-2.07	-0.97	-1.03	47.5	69.7	51.4	75.4	4.65	-1.03	47.5	69.7	65531.6	
803.0	70.0	102.7	47.5	69.7	65531.6	4.8	-2.06	-0.95	-1.01	46.8	68.7	50.8	74.4	4.76	-1.01	46.8	68.7	65600.8	
804.0	70.0	102.7	46.8	68.7	65600.8	4.8	-2.06	-0.92	-0.98	46.2	67.7	50.1	73.5	4.87	-0.98	46.2	67.7	65669.0	
27	805.0	70.0	102.7	46.2	67.7	65669.0	-3.3	0.54	1.65	1.55	47.2	69.2	49.5	72.7	4.98	1.55	47.2	69.2	65737.4
806.0	70.0	102.7	47.2	69.2	65737.4	-3.3	0.53	1.62	1.53	48.3	70.8	50.5	74.1	4.81	1.53	48.3	70.8	65807.4	
807.0	70.0	102.7	48.3	70.8	65807.4	-3.3	0.52	1.58	1.50	49.3	72.3	51.4	75.4	4.65	1.50	49.3	72.3	65878.9	
808.0	70.0	102.7	49.3	72.3	65878.9	-3.3	0.51	1.55	1.47	50.3	73.7	52.3	76.7	4.48	1.47	50.3	73.7	65951.9	
809.0	70.0	102.7	50.3	73.7	65951.9	-3.3	0.50	1.52	1.45	51.3	75.2	53.2	78.1	4.32	1.45	51.3	75.2	66026.4	
810.0	70.0	102.7	51.3	75.2	66026.4	-3.3	0.49	1.49	1.42	52.2	76.6	54.1	79.3	4.17	1.42	52.2	76.6	66102.3	
811.0	70.0	102.7	52.2	76.6	66102.3	-3.3	0.48	1.46	1.40	53.2	78.0	55.0	80.6	4.02	1.40	53.2	78.0	66179.6	
812.0	70.0	102.7	53.2	78.0	66179.6	-3.3	0.47	1.43	1.37	54.1	79.4	55.8	81.9	3.86	1.37	54.1	79.4	66258.3	
813.0	70.0	102.7	54.1	79.4	66258.3	-3.3	0.46	1.41	1.35	55.0	80.7	56.6	83.1	3.72	1.35	55.0	80.7	66338.3	
814.0	70.0	102.7	55.0	80.7	66338.3	-3.3	0.45	1.38	1.32	55.9	82.0	57.5	84.3	3.57	1.32	55.9	82.0	66419.7	
815.0	70.0	102.7	55.9	82.0	66419.7	-3.3	0.43	1.36	1.30	56.8	83.3	58.3	85.5	3.43	1.30	56.8	83.3	66502.4	
816.0	70.0	102.7	56.8	83.3	66502.4	-3.3	0.42	1.33	1.28	57.7	84.6	59.1	86.6	3.29	1.28	57.7	84.6	66586.4	
817.0	70.0	102.7	57.7	84.6	66586.4	-3.3	0.41	1.31	1.26	58.6	85.9	59.8	87.8	3.15	1.26	58.6	85.9	66671.6	
818.0	70.0	102.7	58.6	85.9	66671.6	-3.3	0.40	1.29	1.24	59.4	87.1	60.6	88.9	3.01	1.24	59.4	87.1	66758.1	
819.0	70.0	102.7	59.4	87.1	66758.1	-3.3	0.39	1.26	1.22	60.2	88.3	61.4	90.0	2.88	1.22	60.2	88.3	66845.8	
820.0	70.0	102.7	60.2	88.3	66845.8	-3.3	0.38	1.24	1.20	61.0	89.5	62.1	91.1	2.75	1.20	61.0	89.5	66934.8	
821.0	70.0	102.7	61.0	89.5	66934.8	-3.3	0.37	1.22	1.18	61.8	90.7	62.8	92.2	2.62	1.18	61.8	90.7	67024.9	
822.0	70.0	102.7	61.8	90.7	67024.9	-3.3	0.36	1.20	1.16	62.6	91.9	63.5	93.2	2.49	1.16	62.6	91.9	67116.2	
823.0	70.0	102.7	62.6	91.9	67116.2	-3.3	0.35	1.18	1.14	63.4	93.0	64.3	94.2	2.37	1.14	63.4	93.0	67208.6	
824.0	70.0	102.7	63.4	93.0	67208.6	-3.3	0.34	1.16	1.12	64.2	94.1	64.9	95.3	2.24	1.12	64.2	94.1	67302.2	
825.0	70.0	102.7	64.2	94.1	67302.2	-3.3	0.33	1.14	1.10	64.9	95.2	65.6	96.3	2.12	1.10	64.9	95.2	67396.9	
826.0	70.0	102.7	64.9	95.2	67396.9	-3.3	0.32	1.12	1.08	65.7	96.3	66.3	97.2	2.00	1.08	65.7	96.3	67492.6	
827.0	70.0	102.7	65.7	96.3	67492.6	-3.3	0.31	1.10	1.07	66.4	97.4	67.0	98.2	1.89	1.07	66.4	97.4	67589.5	
828.0	70.0	102.7	66.4	97.4	67589.5	-3.3	0.30	1.08	1.05	67.1	98.4	67.6	99.2	1.77	1.05	67.1	98.4	67687.4	
829.0	70.0	102.7	67.1	98.4	67687.4	-3.3	0.29	1.06	1.03	67.8	99.5	68.2	100.1	1.66	1.03	67.8	99.5	67786.3	
830.0	70.0	102.7	67.8	99.5	67786.3	-3.3	0.28	1.04	1.02	68.5	100.5	68.9	101.0	1.55	1.02	68.5	100.5	67886.3	
831.0	70.0	102.7	68.5	100.5	67886.3	-3.3	0.27	1.03	1.00	69.2	101.5	69.5	101.9	1.44	1.00	69.2	101.5	67987.3	
832.0	70.0	102.7	69.2	101.5	67987.3	-3.3	0.26	1.01	0.98	69.9	102.5	70.0	102.7	1.19	0.98	69.9	102.5	68089.3	
833.0	70.0	102.7	69.9	102.5	68089.3	-3.3	0.25	0.99	0.97	70.5	103.4	70.0	102.7	0.21	0.21	70.0	102.7	68191.8	
28	834.0	70.0	102.7	70.0	102.7	68191.8	-3.3	0.25	0.99	0.96	70.7	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68294.5
835.0	70.0	102.7	70.0	102.7	68294.5	-3.3	0.25	0.99	0.96	70.7	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68397.2	
836.0	70.0	102.7	70.0	102.7	68397.2	-3.3	0.25	0.99	0.96	70.7	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68499.8	

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

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(1) Elapsed time (sec)	(2) Desired speed		(3)-(6) Start of 1-sec Interval				(7) Local grade (%)	(8)-(10) Limiting acceleration (ft/sec ²)			(11)-(12) New speed based on vehicle performance		(13)-(15) Limiting acceleration and speed based on driver preferences				(16) Actual acceleration (ft/sec ²)	(17)-(19) End of 1-sec Interval		
			Speed		Position (ft)	Coasting		Power	Effective			Speed		Acceleration (ft/sec ²)	New speed			New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)							
837.0	70.0	102.7	70.0	102.7	68499.8	-3.3	0.25	0.99	0.96	70.7	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68602.5		
838.0	70.0	102.7	70.0	102.7	68602.5	-3.3	0.25	0.99	0.96	70.7	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68705.2		
839.0	70.0	102.7	70.0	102.7	68705.2	-3.3	0.25	0.99	0.96	70.7	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68807.8		
840.0	70.0	102.7	70.0	102.7	68807.8	-3.3	0.25	0.99	0.96	70.7	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68910.5		
841.0	70.0	102.7	70.0	102.7	68910.5	2.8	-1.71	-0.96	-0.98	69.3	101.7	70.0	102.7	0.00	-0.98	69.3	101.7	69012.7		
842.0	70.0	102.7	69.3	101.7	69012.7	2.8	-1.70	-0.94	-0.97	68.7	100.7	70.0	102.7	0.98	-0.97	68.7	100.7	69113.9		
843.0	70.0	102.7	68.7	100.7	69113.9	2.8	-1.69	-0.92	-0.95	68.0	99.8	69.6	102.1	1.41	-0.95	68.0	99.8	69214.1		
844.0	70.0	102.7	68.0	99.8	69214.1	2.8	-1.68	-0.91	-0.93	67.4	98.8	69.1	101.3	1.51	-0.93	67.4	98.8	69313.4		
845.0	70.0	102.7	67.4	98.8	69313.4	2.8	-1.67	-0.89	-0.92	66.8	97.9	68.5	100.4	1.61	-0.92	66.8	97.9	69411.8		
846.0	70.0	102.7	66.8	97.9	69411.8	2.8	-1.66	-0.87	-0.90	66.1	97.0	67.9	99.6	1.71	-0.90	66.1	97.0	69509.3		
847.0	70.0	102.7	66.1	97.0	69509.3	2.8	-1.66	-0.86	-0.88	65.5	96.1	67.4	98.8	1.81	-0.88	65.5	96.1	69605.8		
848.0	70.0	102.7	65.5	96.1	69605.8	2.8	-1.65	-0.84	-0.87	65.0	95.3	66.8	98.0	1.91	-0.87	65.0	95.3	69701.5		
849.0	70.0	102.7	65.0	95.3	69701.5	2.8	-1.64	-0.83	-0.85	64.4	94.4	66.3	97.3	2.00	-0.85	64.4	94.4	69796.4		
850.0	70.0	102.7	64.4	94.4	69796.4	2.8	-1.63	-0.81	-0.84	63.8	93.6	65.8	96.5	2.09	-0.84	63.8	93.6	69890.3		
851.0	70.0	102.7	63.8	93.6	69890.3	2.8	-1.62	-0.80	-0.82	63.2	92.7	65.3	95.8	2.18	-0.82	63.2	92.7	69983.5		
852.0	70.0	102.7	63.2	92.7	69983.5	2.8	-1.62	-0.78	-0.81	62.7	91.9	64.8	95.0	2.27	-0.81	62.7	91.9	70075.9		
853.0	70.0	102.7	62.7	91.9	70075.9	2.8	-1.61	-0.77	-0.79	62.1	91.1	64.3	94.3	2.36	-0.79	62.1	91.1	70167.4		
854.0	70.0	102.7	62.1	91.1	70167.4	2.8	-1.60	-0.75	-0.78	61.6	90.4	63.8	93.6	2.44	-0.78	61.6	90.4	70258.1		
855.0	70.0	102.7	61.6	90.4	70258.1	2.8	-1.59	-0.74	-0.77	61.1	89.6	63.3	92.9	2.53	-0.77	61.1	89.6	70348.1		
856.0	70.0	102.7	61.1	89.6	70348.1	2.8	-1.59	-0.72	-0.75	60.6	88.8	62.9	92.2	2.61	-0.75	60.6	88.8	70437.4		
857.0	70.0	102.7	60.6	88.8	70437.4	2.8	-1.58	-0.71	-0.74	60.1	88.1	62.4	91.5	2.69	-0.74	60.1	88.1	70525.8		
858.0	70.0	102.7	60.1	88.1	70525.8	2.8	-1.58	-0.70	-0.72	59.6	87.4	62.0	90.9	2.77	-0.72	59.6	87.4	70613.6		
859.0	70.0	102.7	59.6	87.4	70613.6	2.8	-1.57	-0.68	-0.71	59.1	86.7	61.5	90.2	2.85	-0.71	59.1	86.7	70700.6		
860.0	70.0	102.7	59.1	86.7	70700.6	2.8	-1.56	-0.67	-0.70	58.6	86.0	61.1	89.6	2.93	-0.70	58.6	86.0	70786.9		
861.0	70.0	102.7	58.6	86.0	70786.9	2.8	-1.56	-0.66	-0.68	58.2	85.3	60.7	89.0	3.00	-0.68	58.2	85.3	70872.6		
862.0	70.0	102.7	58.2	85.3	70872.6	2.8	-1.55	-0.64	-0.67	57.7	84.6	60.3	88.4	3.08	-0.67	57.7	84.6	70957.5		
863.0	70.0	102.7	57.7	84.6	70957.5	2.8	-1.55	-0.63	-0.66	57.3	84.0	59.8	87.8	3.15	-0.66	57.3	84.0	71041.8		
864.0	70.0	102.7	57.3	84.0	71041.8	2.8	-1.54	-0.62	-0.65	56.8	83.3	59.4	87.2	3.22	-0.65	56.8	83.3	71125.5		
865.0	70.0	102.7	56.8	83.3	71125.5	2.8	-1.53	-0.61	-0.63	56.4	82.7	59.1	86.6	3.29	-0.63	56.4	82.7	71208.5		
866.0	70.0	102.7	56.4	82.7	71208.5	2.8	-1.53	-0.59	-0.62	56.0	82.1	58.7	86.0	3.36	-0.62	56.0	82.1	71290.9		
867.0	70.0	102.7	56.0	82.1	71290.9	2.8	-1.52	-0.58	-0.61	55.5	81.5	58.3	85.5	3.42	-0.61	55.5	81.5	71372.6		
868.0	70.0	102.7	55.5	81.5	71372.6	2.8	-1.52	-0.57	-0.60	55.1	80.9	57.9	84.9	3.49	-0.60	55.1	80.9	71453.8		
869.0	70.0	102.7	55.1	80.9	71453.8	2.8	-1.52	-0.56	-0.58	54.7	80.3	57.6	84.4	3.55	-0.58	54.7	80.3	71534.4		
870.0	70.0	102.7	54.7	80.3	71534.4	2.8	-1.51	-0.55	-0.57	54.3	79.7	57.2	83.9	3.62	-0.57	54.3	79.7	71614.4		
871.0	70.0	102.7	54.3	79.7	71614.4	2.8	-1.51	-0.54	-0.56	54.0	79.1	56.9	83.4	3.68	-0.56	54.0	79.1	71693.8		
872.0	70.0	102.7	54.0	79.1	71693.8	2.8	-1.50	-0.52	-0.55	53.6	78.6	56.5	82.9	3.74	-0.55	53.6	78.6	71772.6		
873.0	70.0	102.7	53.6	78.6	71772.6	2.8	-1.50	-0.51	-0.54	53.2	78.1	56.2	82.4	3.80	-0.54	53.2	78.1	71851.0		
874.0	70.0	102.7	53.2	78.1	71851.0	2.8	-1.49	-0.50	-0.53	52.9	77.5	55.8	81.9	3.86	-0.53	52.9	77.5	71928.8		
875.0	70.0	102.7	52.9	77.5	71928.8	2.8	-1.49	-0.49	-0.52	52.5	77.0	55.5	81.4	3.92	-0.52	52.5	77.0	72006.0		
876.0	70.0	102.7	52.5	77.0	72006.0	2.8	-1.49	-0.48	-0.51	52.2	76.5	55.2	81.0	3.97	-0.51	52.2	76.5	72082.8		
877.0	70.0	102.7	52.2	76.5	72082.8	2.8	-1.48	-0.47	-0.50	51.8	76.0	54.9	80.5	4.03	-0.50	51.8	76.0	72159.0		
878.0	70.0	102.7	51.8	76.0	72159.0	2.8	-1.48	-0.46	-0.49	51.5	75.5	54.6	80.1	4.08	-0.49	51.5	75.5	72234.8		
879.0	70.0	102.7	51.5	75.5	72234.8	2.8	-1.47	-0.45	-0.48	51.2	75.0	54.3	79.7	4.13	-0.48	51.2	75.0	72310.1		
880.0	70.0	102.7	51.2	75.0	72310.1	2.8	-1.47	-0.44	-0.47	50.8	74.6	54.0	79.2	4.18	-0.47	50.8	74.6	72384.9		

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)		
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval		
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed		New position (ft)
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(mph)	(ft/sec)			(mph)	(ft/sec)	
881.0	70.0	102.7	50.8	74.6	2.8	-1.47	-0.43	-0.46	50.5	74.1	53.7	78.8	4.23	-0.46	50.5	74.1	72459.2
882.0	70.0	102.7	50.5	74.1	2.8	-1.46	-0.42	-0.45	50.2	73.7	53.5	78.4	4.28	-0.45	50.2	73.7	72533.1
883.0	70.0	102.7	50.2	73.7	2.8	-1.46	-0.41	-0.44	49.9	73.2	53.2	78.0	4.33	-0.44	49.9	73.2	72606.6
884.0	70.0	102.7	49.9	73.2	2.8	-1.46	-0.40	-0.43	49.6	72.8	52.9	77.6	4.38	-0.43	49.6	72.8	72679.6
885.0	70.0	102.7	49.6	72.8	2.8	-1.45	-0.39	-0.42	49.4	72.4	52.7	77.2	4.42	-0.42	49.4	72.4	72752.2
886.0	70.0	102.7	49.4	72.4	2.8	-1.45	-0.39	-0.41	49.1	72.0	52.4	76.9	4.47	-0.41	49.1	72.0	72824.4
887.0	70.0	102.7	49.1	72.0	2.8	-1.45	-0.38	-0.40	48.8	71.6	52.2	76.5	4.51	-0.40	48.8	71.6	72896.2
888.0	70.0	102.7	48.8	71.6	2.8	-1.45	-0.37	-0.39	48.5	71.2	51.9	76.1	4.56	-0.39	48.5	71.2	72967.6
889.0	70.0	102.7	48.5	71.2	2.8	-1.44	-0.36	-0.38	48.3	70.8	51.7	75.8	4.60	-0.38	48.3	70.8	73038.6
890.0	70.0	102.7	48.3	70.8	0.6	-0.73	0.35	0.33	48.5	71.2	51.5	75.5	4.64	0.33	48.5	71.2	73109.6
891.0	70.0	102.7	48.5	71.2	0.6	-0.73	0.35	0.33	48.7	71.5	51.7	75.8	4.60	0.33	48.7	71.5	73181.0
892.0	70.0	102.7	48.7	71.5	0.6	-0.73	0.34	0.32	49.0	71.8	51.9	76.1	4.57	0.32	49.0	71.8	73252.6
893.0	70.0	102.7	49.0	71.8	0.6	-0.73	0.33	0.31	49.2	72.1	52.0	76.3	4.53	0.31	49.2	72.1	73324.6
894.0	70.0	102.7	49.2	72.1	0.6	-0.74	0.33	0.31	49.4	72.4	52.2	76.6	4.50	0.31	49.4	72.4	73396.8
895.0	70.0	102.7	49.4	72.4	0.6	-0.74	0.32	0.30	49.6	72.7	52.4	76.9	4.47	0.30	49.6	72.7	73469.4
896.0	70.0	102.7	49.6	72.7	0.6	-0.74	0.31	0.30	49.8	73.0	52.6	77.2	4.43	0.30	49.8	73.0	73542.3
897.0	70.0	102.7	49.8	73.0	0.6	-0.74	0.31	0.29	50.0	73.3	52.8	77.4	4.40	0.29	50.0	73.3	73615.5
898.0	70.0	102.7	50.0	73.3	0.6	-0.74	0.30	0.28	50.2	73.6	53.0	77.7	4.37	0.28	50.2	73.6	73688.9
899.0	70.0	102.7	50.2	73.6	0.6	-0.75	0.29	0.28	50.4	73.9	53.1	77.9	4.34	0.28	50.4	73.9	73762.7
900.0	70.0	102.7	50.4	73.9	0.6	-0.75	0.29	0.27	50.6	74.2	53.3	78.2	4.31	0.27	50.6	74.2	73836.7
901.0	70.0	102.7	50.6	74.2	0.6	-0.75	0.28	0.27	50.7	74.4	53.5	78.4	4.28	0.27	50.7	74.4	73911.0
902.0	70.0	102.7	50.7	74.4	0.6	-0.75	0.28	0.26	50.9	74.7	53.6	78.7	4.25	0.26	50.9	74.7	73985.5
903.0	70.0	102.7	50.9	74.7	0.6	-0.75	0.27	0.26	51.1	74.9	53.8	78.9	4.22	0.26	51.1	74.9	74060.4
904.0	70.0	102.7	51.1	74.9	0.6	-0.76	0.27	0.25	51.3	75.2	54.0	79.1	4.19	0.25	51.3	75.2	74135.4
905.0	70.0	102.7	51.3	75.2	0.6	-0.76	0.26	0.25	51.4	75.4	54.1	79.4	4.17	0.25	51.4	75.4	74210.8
906.0	70.0	102.7	51.4	75.4	0.6	-0.76	0.26	0.24	51.6	75.7	54.3	79.6	4.14	0.24	51.6	75.7	74286.3
907.0	70.0	102.7	51.6	75.7	0.6	-0.76	0.25	0.24	51.8	75.9	54.4	79.8	4.11	0.24	51.8	75.9	74362.1
908.0	70.0	102.7	51.8	75.9	0.6	-0.76	0.25	0.23	51.9	76.2	54.6	80.0	4.09	0.23	51.9	76.2	74438.2
909.0	70.0	102.7	51.9	76.2	0.6	-0.76	0.24	0.23	52.1	76.4	54.7	80.2	4.06	0.23	52.1	76.4	74514.5
910.0	70.0	102.7	52.1	76.4	0.6	-0.77	0.24	0.23	52.2	76.6	54.8	80.4	4.04	0.23	52.2	76.6	74591.0
911.0	70.0	102.7	52.2	76.6	0.6	-0.77	0.23	0.22	52.4	76.8	55.0	80.6	4.01	0.22	52.4	76.8	74667.7
912.0	70.0	102.7	52.4	76.8	0.6	-0.77	0.23	0.22	52.5	77.1	55.1	80.8	3.99	0.22	52.5	77.1	74744.7
913.0	70.0	102.7	52.5	77.1	0.6	-0.77	0.22	0.21	52.7	77.3	55.2	81.0	3.97	0.21	52.7	77.3	74821.8
914.0	70.0	102.7	52.7	77.3	0.6	-0.77	0.22	0.21	52.8	77.5	55.4	81.2	3.94	0.21	52.8	77.5	74899.2
915.0	70.0	102.7	52.8	77.5	0.6	-0.77	0.21	0.20	53.0	77.7	55.5	81.4	3.92	0.20	53.0	77.7	74976.8
916.0	70.0	102.7	53.0	77.7	0.6	-0.78	0.21	0.20	53.1	77.9	55.6	81.6	3.90	0.20	53.1	77.9	75054.6
917.0	70.0	102.7	53.1	77.9	0.6	-0.78	0.21	0.20	53.2	78.1	55.7	81.8	3.88	0.20	53.2	78.1	75132.5
918.0	70.0	102.7	53.2	78.1	0.6	-0.78	0.20	0.19	53.4	78.3	55.9	81.9	3.86	0.19	53.4	78.3	75210.7
919.0	70.0	102.7	53.4	78.3	0.6	-0.78	0.20	0.19	53.5	78.5	56.0	82.1	3.83	0.19	53.5	78.5	75289.1
920.0	70.0	102.7	53.5	78.5	0.6	-0.78	0.19	0.19	53.6	78.7	56.1	82.3	3.81	0.19	53.6	78.7	75367.6
921.0	70.0	102.7	53.6	78.7	0.6	-0.78	0.19	0.18	53.7	78.8	56.2	82.4	3.79	0.18	53.7	78.8	75446.4
922.0	70.0	102.7	53.7	78.8	0.6	-0.79	0.19	0.18	53.9	79.0	56.3	82.6	3.77	0.18	53.9	79.0	75525.3
923.0	70.0	102.7	53.9	79.0	0.6	-0.79	0.18	0.18	54.0	79.2	56.4	82.8	3.75	0.18	54.0	79.2	75604.4
924.0	70.0	102.7	54.0	79.2	0.6	-0.79	0.18	0.17	54.1	79.4	56.5	82.9	3.74	0.17	54.1	79.4	75683.7

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2) Desired speed		(3) Start of 1-sec Interval			(7) Local grade (%)	(8) Limiting acceleration (ft/sec ²)			(11) New speed based on vehicle performance		(13) Limiting acceleration and speed based on driver preferences				(16) Actual acceleration (ft/sec ²)	(17) End of 1-sec Interval		
	(mph)	(ft/sec)	Speed		Position (ft)		Coasting	Power	Effective	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)	New speed		New position (ft)		
			(mph)	(ft/sec)								(mph)	(ft/sec)		(mph)			(ft/sec)	
	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)		(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)	(ft/sec)		(ft/sec)	(ft/sec)	
925.0	70.0	102.7	54.1	79.4	75683.7	0.6	-0.79	0.18	0.17	54.2	79.5	56.6	83.1	3.72	0.17	54.2	79.5	75763.1	
926.0	70.0	102.7	54.2	79.5	75763.1	0.6	-0.79	0.17	0.17	54.3	79.7	56.7	83.2	3.70	0.17	54.3	79.7	75842.7	
927.0	70.0	102.7	54.3	79.7	75842.7	0.6	-0.79	0.17	0.16	54.4	79.9	56.8	83.4	3.68	0.16	54.4	79.9	75922.5	
928.0	70.0	102.7	54.4	79.9	75922.5	0.6	-0.79	0.17	0.16	54.6	80.0	56.9	83.5	3.66	0.16	54.6	80.0	76002.5	
929.0	70.0	102.7	54.6	80.0	76002.5	0.6	-0.79	0.16	0.16	54.7	80.2	57.0	83.7	3.65	0.16	54.7	80.2	76082.6	
930.0	70.0	102.7	54.7	80.2	76082.6	0.6	-0.80	0.16	0.15	54.8	80.3	57.1	83.8	3.63	0.15	54.8	80.3	76162.8	
931.0	70.0	102.7	54.8	80.3	76162.8	0.6	-0.80	0.16	0.15	54.9	80.5	57.2	83.9	3.61	0.15	54.9	80.5	76243.2	
932.0	70.0	102.7	54.9	80.5	76243.2	0.6	-0.80	0.16	0.15	55.0	80.6	57.3	84.1	3.60	0.15	55.0	80.6	76323.8	
933.0	70.0	102.7	55.0	80.6	76323.8	0.6	-0.80	0.15	0.15	55.1	80.8	57.4	84.2	3.58	0.15	55.1	80.8	76404.5	
934.0	70.0	102.7	55.1	80.8	76404.5	0.6	-0.80	0.15	0.14	55.2	80.9	57.5	84.3	3.56	0.14	55.2	80.9	76485.3	
935.0	70.0	102.7	55.2	80.9	76485.3	0.6	-0.80	0.15	0.14	55.3	81.1	57.6	84.5	3.55	0.14	55.3	81.1	76566.3	
936.0	70.0	102.7	55.3	81.1	76566.3	-3.8	0.60	1.53	1.47	56.3	82.5	57.7	84.6	3.53	1.47	56.3	82.5	76648.1	
937.0	70.0	102.7	56.3	82.5	76648.1	-3.8	0.59	1.51	1.45	57.3	84.0	58.6	85.9	3.37	1.45	57.3	84.0	76731.4	
938.0	70.0	102.7	57.3	84.0	76731.4	-3.8	0.58	1.48	1.42	58.2	85.4	59.5	87.2	3.22	1.42	58.2	85.4	76816.1	
939.0	70.0	102.7	58.2	85.4	76816.1	-3.8	0.57	1.45	1.40	59.2	86.8	60.3	88.5	3.06	1.40	59.2	86.8	76902.2	
940.0	70.0	102.7	59.2	86.8	76902.2	-3.8	0.56	1.43	1.38	60.1	88.2	61.2	89.7	2.91	1.38	60.1	88.2	76989.6	
941.0	70.0	102.7	60.1	88.2	76989.6	-3.8	0.54	1.40	1.35	61.0	89.5	62.0	90.9	2.76	1.35	61.0	89.5	77078.5	
942.0	70.0	102.7	61.0	89.5	77078.5	-3.8	0.53	1.38	1.33	62.0	90.9	62.8	92.1	2.62	1.33	62.0	90.9	77168.7	
943.0	70.0	102.7	62.0	90.9	77168.7	-3.8	0.52	1.35	1.31	62.8	92.2	63.6	93.3	2.47	1.31	62.8	92.2	77260.2	
944.0	70.0	102.7	62.8	92.2	77260.2	-3.8	0.51	1.33	1.29	63.7	93.5	64.4	94.5	2.33	1.29	63.7	93.5	77353.0	
945.0	70.0	102.7	63.7	93.5	77353.0	-3.8	0.50	1.31	1.27	64.6	94.7	65.2	95.7	2.19	1.27	64.6	94.7	77447.1	
946.0	70.0	102.7	64.6	94.7	77447.1	-3.8	0.49	1.29	1.25	65.4	96.0	66.0	96.8	2.06	1.25	65.4	96.0	77542.5	
947.0	70.0	102.7	65.4	96.0	77542.5	-3.8	0.47	1.26	1.23	66.3	97.2	66.7	97.9	1.92	1.23	66.3	97.2	77639.1	
948.0	70.0	102.7	66.3	97.2	77639.1	-3.8	0.46	1.24	1.21	67.1	98.4	67.5	99.0	1.79	1.21	67.1	98.4	77736.9	
949.0	70.0	102.7	67.1	98.4	77736.9	-3.8	0.45	1.22	1.19	67.9	99.6	68.2	100.1	1.66	1.19	67.9	99.6	77835.9	
950.0	70.0	102.7	67.9	99.6	77835.9	-3.8	0.44	1.20	1.17	68.7	100.8	69.0	101.1	1.53	1.17	68.7	100.8	77936.0	
951.0	70.0	102.7	68.7	100.8	77936.0	-3.8	0.43	1.18	1.15	69.5	101.9	69.7	102.2	1.41	1.15	69.5	101.9	78037.4	
952.0	70.0	102.7	69.5	101.9	78037.4	-3.8	0.42	1.16	1.13	70.3	103.0	70.0	102.7	0.75	0.75	70.0	102.7	78139.7	
953.0	70.0	102.7	70.0	102.7	78139.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	78242.3	
954.0	70.0	102.7	70.0	102.7	78242.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	78345.0	
955.0	70.0	102.7	70.0	102.7	78345.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	78447.7	
956.0	70.0	102.7	70.0	102.7	78447.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	78550.3	
957.0	70.0	102.7	70.0	102.7	78550.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	78653.0	
958.0	70.0	102.7	70.0	102.7	78653.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	78755.7	
959.0	70.0	102.7	70.0	102.7	78755.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	78858.3	
960.0	70.0	102.7	70.0	102.7	78858.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	78961.0	
961.0	70.0	102.7	70.0	102.7	78961.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79063.7	
962.0	70.0	102.7	70.0	102.7	79063.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79166.3	
963.0	70.0	102.7	70.0	102.7	79166.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79269.0	
964.0	70.0	102.7	70.0	102.7	79269.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79371.7	
965.0	70.0	102.7	70.0	102.7	79371.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79474.3	
966.0	70.0	102.7	70.0	102.7	79474.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79577.0	
967.0	70.0	102.7	70.0	102.7	79577.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79679.7	
968.0	70.0	102.7	70.0	102.7	79679.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79782.3	

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TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 60.0 Minimum speed (mph) = 32.5
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(9)	(10)	(11)	(12)	(13)		(14)	(15)	(16)	(17)		(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				Actual acceleration (ft/sec ²)	End of 1-sec Interval					
			Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)	New speed		New position (ft)					
	(mph)	(ft/sec)	(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)									
969.0	70.0	102.7	70.0	102.7	79782.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79885.0				
970.0	70.0	102.7	70.0	102.7	79885.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	79987.7				
971.0	70.0	102.7	70.0	102.7	79987.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	80090.3				
972.0	70.0	102.7	70.0	102.7	80090.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	80193.0				
973.0	70.0	102.7	70.0	102.7	80193.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	80295.7				
974.0	70.0	102.7	70.0	102.7	80295.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	80398.3				
975.0	70.0	102.7	70.0	102.7	80398.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	80501.0				
976.0	70.0	102.7	70.0	102.7	80501.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	80603.7				
977.0	70.0	102.7	70.0	102.7	80603.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	80706.3				
978.0	70.0	102.7	70.0	102.7	80706.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	80809.0				
979.0	70.0	102.7	70.0	102.7	80809.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	80911.7				
980.0	70.0	102.7	70.0	102.7	80911.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81014.3				
981.0	70.0	102.7	70.0	102.7	81014.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81117.0				
982.0	70.0	102.7	70.0	102.7	81117.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81219.7				
983.0	70.0	102.7	70.0	102.7	81219.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81322.3				
984.0	70.0	102.7	70.0	102.7	81322.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81425.0				
985.0	70.0	102.7	70.0	102.7	81425.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81527.7				
986.0	70.0	102.7	70.0	102.7	81527.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81630.3				
987.0	70.0	102.7	70.0	102.7	81630.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81733.0				
988.0	70.0	102.7	70.0	102.7	81733.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81835.7				
989.0	70.0	102.7	70.0	102.7	81835.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	81938.3				
990.0	70.0	102.7	70.0	102.7	81938.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82041.0				
991.0	70.0	102.7	70.0	102.7	82041.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82143.7				
992.0	70.0	102.7	70.0	102.7	82143.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82246.3				
993.0	70.0	102.7	70.0	102.7	82246.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82349.0				
994.0	70.0	102.7	70.0	102.7	82349.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82451.7				
995.0	70.0	102.7	70.0	102.7	82451.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82554.3				
996.0	70.0	102.7	70.0	102.7	82554.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82657.0				
997.0	70.0	102.7	70.0	102.7	82657.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82759.7				
998.0	70.0	102.7	70.0	102.7	82759.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82862.3				
999.0	70.0	102.7	70.0	102.7	82862.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	82965.0				
1000.0	70.0	102.7	70.0	102.7	82965.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	83067.7				
1001.0	70.0	102.7	70.0	102.7	83067.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	83170.3				
1002.0	70.0	102.7	70.0	102.7	83170.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	83273.0				
1003.0	70.0	102.7	70.0	102.7	83273.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	83375.7				
1004.0	70.0	102.7	70.0	102.7	83375.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	83478.3				
1005.0	70.0	102.7	70.0	102.7	83478.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	83581.0				
1006.0	70.0	102.7	70.0	102.7	83581.0	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	83683.7				
1007.0	70.0	102.7	70.0	102.7	83683.7	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	83786.3				
1008.0	70.0	102.7	70.0	102.7	83786.3	-3.8	0.41	1.15	1.12	70.8	103.8	70.0	102.7	0.00	0.00	70.0	102.7	83889.0				
1009.0	70.0	102.7	70.0	102.7	83889.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	83991.7				
1010.0	70.0	102.7	70.0	102.7	83991.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	84094.3				
1011.0	70.0	102.7	70.0	102.7	84094.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	84197.0				
1012.0	70.0	102.7	70.0	102.7	84197.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	84299.7				

TRUCK SPEED PROFILE FOR SR823 Northbound, Phase3, Phase1 and Phase2 - Reference Plans, 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

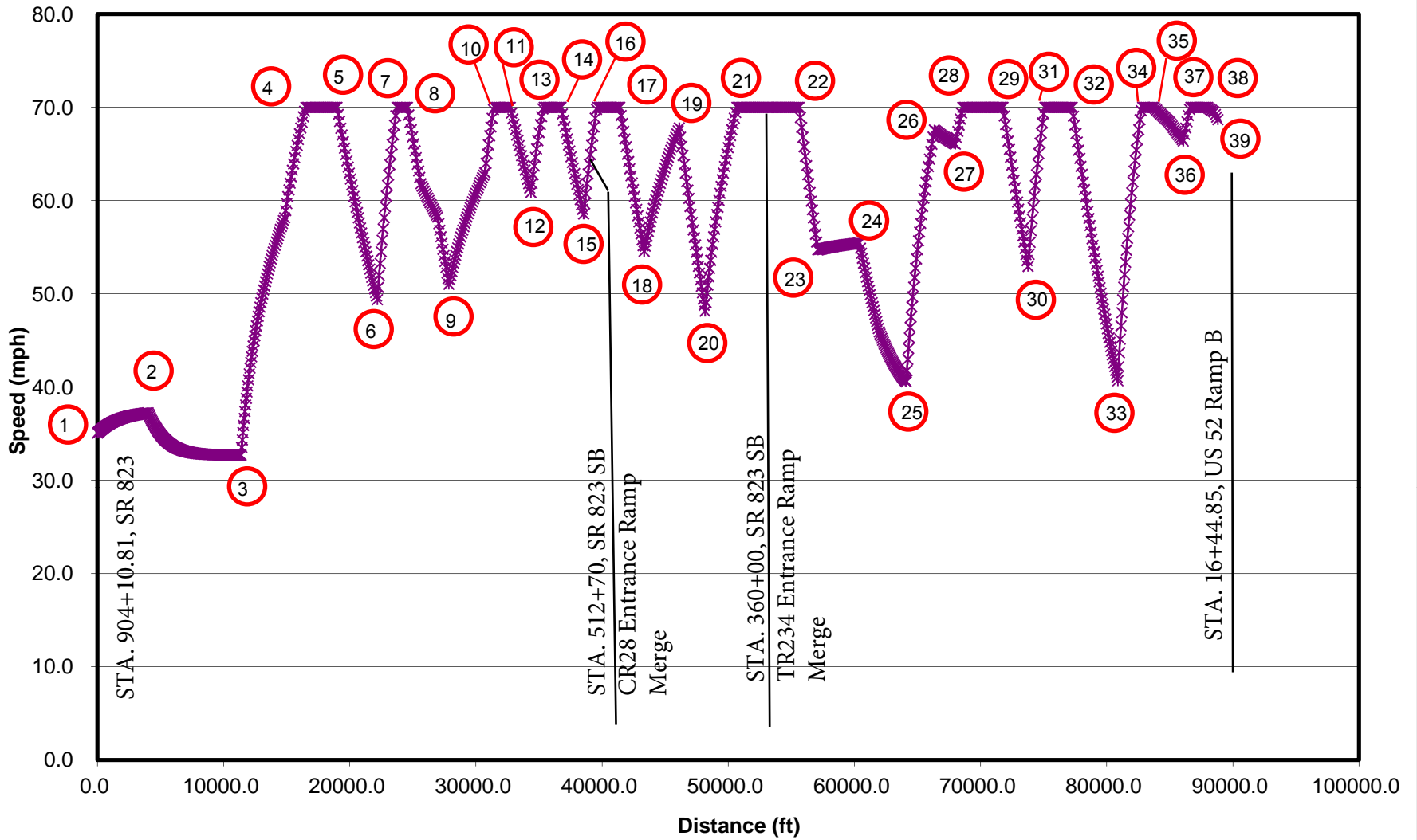
(1) Elapsed time (sec)	(2) Desired speed		(3) Start of 1-sec Interval			(4) Local grade (%)	(5) Limiting acceleration (ft/sec ²)			(6) New speed based on vehicle performance		(7) Limiting acceleration and speed based on driver preferences			(8) Actual acceleration (ft/sec ²)	(9) End of 1-sec Interval		
	Speed		Position		Coasting		Power	Effective	Speed		Acceleration		New speed			New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(ft/sec ²)	(ft/sec ²)	(mph)	(ft/sec)				
1013.0	70.0	102.7	70.0	102.7	84299.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	84402.3
1014.0	70.0	102.7	70.0	102.7	84402.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	84505.0
1015.0	70.0	102.7	70.0	102.7	84505.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	84607.7
1016.0	70.0	102.7	70.0	102.7	84607.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	84710.3
1017.0	70.0	102.7	70.0	102.7	84710.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	84813.0
1018.0	70.0	102.7	70.0	102.7	84813.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	84915.7
1019.0	70.0	102.7	70.0	102.7	84915.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85018.3
1020.0	70.0	102.7	70.0	102.7	85018.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85121.0
1021.0	70.0	102.7	70.0	102.7	85121.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85223.7
1022.0	70.0	102.7	70.0	102.7	85223.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85326.3
1023.0	70.0	102.7	70.0	102.7	85326.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85429.0
1024.0	70.0	102.7	70.0	102.7	85429.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85531.7
1025.0	70.0	102.7	70.0	102.7	85531.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85634.3
1026.0	70.0	102.7	70.0	102.7	85634.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85737.0
1027.0	70.0	102.7	70.0	102.7	85737.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85839.7
1028.0	70.0	102.7	70.0	102.7	85839.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	85942.3
1029.0	70.0	102.7	70.0	102.7	85942.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86045.0
1030.0	70.0	102.7	70.0	102.7	86045.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86147.7
1031.0	70.0	102.7	70.0	102.7	86147.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86250.3
1032.0	70.0	102.7	70.0	102.7	86250.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86353.0
1033.0	70.0	102.7	70.0	102.7	86353.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86455.7
1034.0	70.0	102.7	70.0	102.7	86455.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86558.3
1035.0	70.0	102.7	70.0	102.7	86558.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86661.0
1036.0	70.0	102.7	70.0	102.7	86661.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86763.7
1037.0	70.0	102.7	70.0	102.7	86763.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86866.3
1038.0	70.0	102.7	70.0	102.7	86866.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86969.0
1039.0	70.0	102.7	70.0	102.7	86969.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87071.7
1040.0	70.0	102.7	70.0	102.7	87071.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87174.3
1041.0	70.0	102.7	70.0	102.7	87174.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87277.0
1042.0	70.0	102.7	70.0	102.7	87277.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87379.7
1043.0	70.0	102.7	70.0	102.7	87379.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87482.3
1044.0	70.0	102.7	70.0	102.7	87482.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87585.0
1045.0	70.0	102.7	70.0	102.7	87585.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87687.7
1046.0	70.0	102.7	70.0	102.7	87687.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87790.3
1047.0	70.0	102.7	70.0	102.7	87790.3	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87893.0
1048.0	70.0	102.7	70.0	102.7	87893.0	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87995.7
1049.0	70.0	102.7	70.0	102.7	87995.7	-3.0	0.17	0.91	0.89	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	88098.3

SCI-823, PORTSMOUTH BYPASS - TRUCK SPEED PROFILES - NORTHBOUND - 02/17/2014

SECTION		Position	Speed MPH	Avg. Speed MPH	Distance FT	Avg.Speed x Distance	Average Speed for the Section MPH	Min. Speed for the Section MPH	Comments
Section 1 - Sta. 24+95.53, US52, Ramp A to Sta. 904+10.82	1	0.0	60.0						Minimum Speed from Point 4 through Point 9 is 32.5 mph, for the rest of the project the Minimum Speed is 40 mph
	2	88.0	60.0	60.0	88.0	5276.4			
	3	1743.2	49.1	54.5	1655.2	90256.9			
	4	4182.7	60.2	54.6	2439.6	133312.0			
	5	7008.9	32.5	46.3	2826.1	130961.2			
	6	9673.9	70.0	51.2	2665.1	136564.7			
	7	10700.6	70.0	70.0	1026.7	71866.7			
	8	14144.8	34.2	52.1	3444.2	179433.0			
	9	16065.0	64.2	49.2	1920.2	94470.4			
	10	19911.0	44.1	54.2	3846.0	208345.5			
	11	21582.7	54.2	49.2	1671.7	82217.7			
	12	23803.6	41.9	48.1	2220.9	106770.1			
	13	26663.5	70.0	56.0	2859.9	160057.5			
	14	32310.2	70.0	70.0	5646.7	395266.7			
	15	39729.7	45.2	57.6	7419.5	427332.5			
	16	41712.4	70.0	57.6	1982.7	114197.8			
	17	44584.6	61.3	65.7	2872.2	188614.2			
	18	45650.0	70.0	65.7	1065.3	69958.9			
	19	46471.3	70.0	70.0	821.3	57493.3			
	20	49355.1	42.5	56.3	2883.8	162212.3			
	21	51249.0	63.6	53.1	1893.9	100498.4			
	22	53527.0	45.3	54.5	2278.1	124047.3			
	23	55193.6	61.9	53.6	1666.6	89324.1			
	24	57138.7	45.0	53.5	1945.1	104029.2			
	25	62588.2	70.0	57.5	5449.5	313473.2			
	26	63409.5	70.0	70.0	821.3	57493.3			
	27	65669.0	46.2	58.1	2259.4	131216.3			
	28	68191.8	70.0	58.1	2522.9	146515.8			
	29	68910.5	70.0	70.0	718.7	50306.7			
	30	73038.6	48.3	59.1	4128.2	244156.5			
	31	78139.7	70.0	59.1	5101.0	301696.7			
	32	87915.3	70.0	70.0	9775.6	684292.7			
							58.7	32.5	

Use 55 mph

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014



TRUCK SPEED PERFORMANCE MODEL

Desired speed (mph) = **70.0**
 Initial speed (mph) = **35.0**
 Weight/power ratio (lb/hp) = **200.0**
 Weight/frontal area ratio (lb/ft²) = **0.0** ← enter value or enter zero to use default estimate
 Elevation (ft) = **800.0**
 Location (legend) = **SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014**

Vertical Profile

(Beginning of first segment must equal 0)

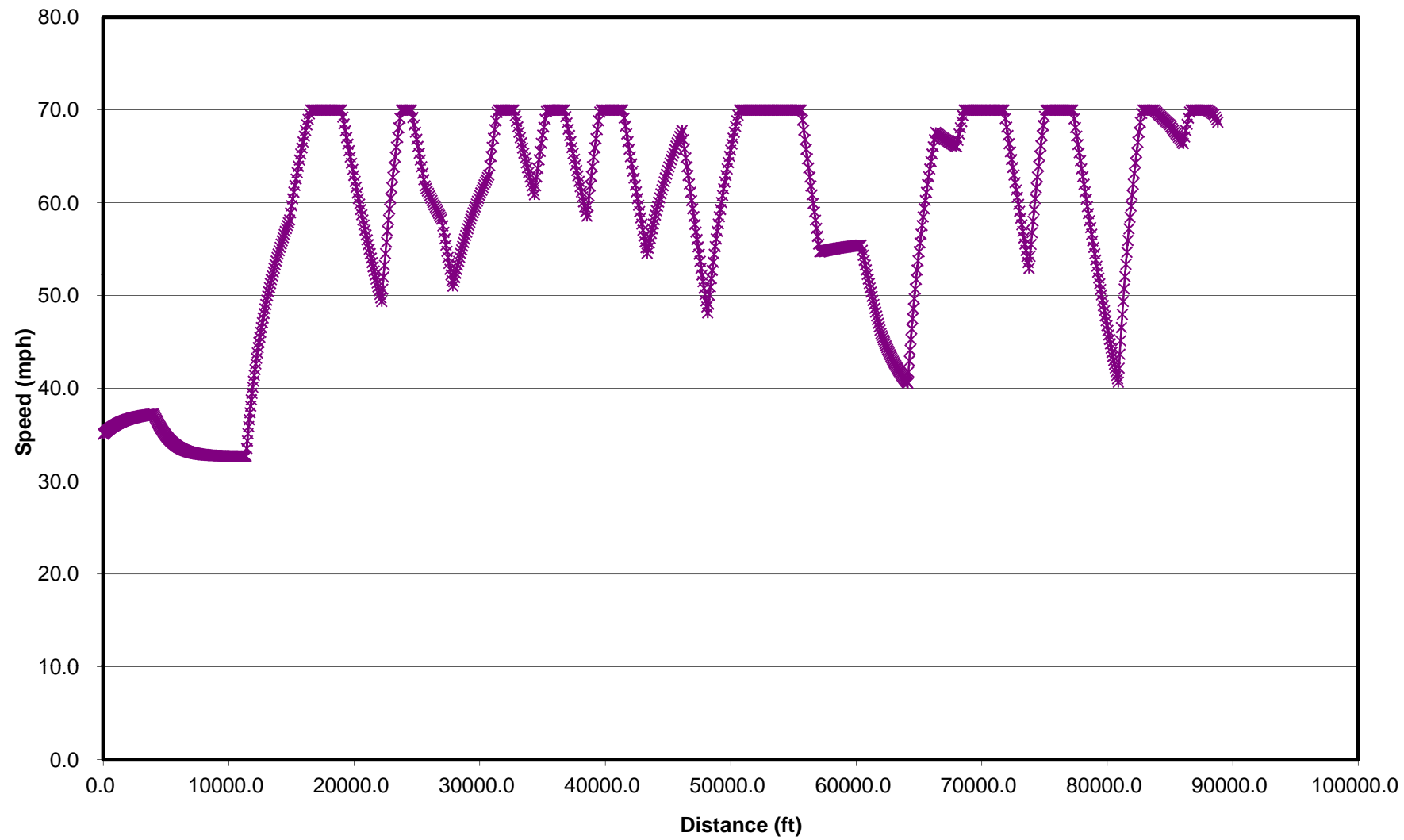
Position (ft)		Percent Grade
Begin	End	
0	4061	3
4061	11411	3.75
11411	14911	-0.62
14911	19031	-2.84
19031	22249	3.25
22249	24561	-4.8
24561	25711	3.47
25711	27011	1.71
27011	27886	4
27886	30786	-0.8
30786	31811	-4.4
31811	32811	-4
32811	34411	2.6
34411	36756	-4
36756	38611	2.99
38611	41471	-4.5
41471	43391	3.75
43391	46211	-1.5
46211	48211	4.5
48211	51211	-2.9
51211	55661	-1.5
55661	57111	4.7
57111	60,461	1
60461	61,971	3.5
61971	64,161	3
64161	66,361	-3.5
66361	68,061	0.5
68061	71861	-3.1
71861	73811	4
73811	77311	-5
77311	80911	4.1
80911	83761	-5
83761	85000	0.5
85000	86091	0.87
86091	88011	-3.19
88011	88594	0.3
88594	88766	1.14



Stationing from Reference Design

Sta. 904+10.82	to Sta. 863+50.00	3
Sta. 863+50.00	to Sta. 790+00.00	3.75
Sta. 790+00.00	to Sta. 755+00.00	-0.62
Sta. 755+00.00	to Sta. 713+80.00	-2.84
Sta. 713+80.00	to Sta. 681+62.00	3.25
Sta. 681+62.00	to Sta. 658+50.00	-4.8
Sta. 658+50.00	to Sta. 647+00.00	3.47
Sta. 647+00.00	to Sta. 634+00.00	1.71
Sta. 634+00.00	to Sta. 625+25.00	4
Sta. 625+25.00	to Sta. 596+25.00	-0.80
Sta. 596+25.00	to Sta. 586+00.00	-4.4
Sta. 586+00.00	to Sta. 576+00.00	-4
Sta. 576+00.00	to Sta. 560+00.00	2.6
Sta. 560+00.00	to Sta. 536+55.00	-4
Sta. 536+55.00	to Sta. 518+00.00	2.99
Sta. 518+00.00	to Sta. 489+40.00	-4.5
Sta. 489+40.00	to Sta. 470+20.00	3.75
Sta. 470+20.00	to Sta. 442+00.00	-1.5
Sta. 442+00.00	to Sta. 422+00.00	4.5
Sta. 422+00.00	to Sta. 392+00.00	-2.9
Sta. 392+00.00	to Sta. 347+50.00	-1.5
Sta. 347+50.00	to Sta. 333+00.00	4.7
Sta. 333+00.00	to Sta. 299+50.00	1
Sta. 299+50.00	to Sta. 284+40.00	3.5
Sta. 284+40.00	to Sta. 262+50.00	3
Sta. 262+50.00	to Sta. 240+50.00	-3.5
Sta. 240+50.00	to Sta. 223+50.00	0.5
Sta. 223+50.00	to Sta. 185+50.00	-3.1
Sta. 185+50.00	to Sta. 166+00.00	4
Sta. 166+00.00	to Sta. 131+00.00	-5
Sta. 131+00.00	to Sta. 95+00.00	4.1
Sta. 95+00.00	to Sta. 66+50.00	-5
Sta. 66+50.00	to Sta. 54+11.25	0.5
Sta. 54+11.25	to Sta. 43+20.00	0.87
Sta. 43+20.00	to Sta. 24+00.00	-3.19
Sta. 24+00.00	to Sta. 18+17.00	0.3
Sta. 18+17.00	to Sta. 16+44.85	1.14

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2
- Reference Plans - 02/17/2014



TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(4)		(5)	(6)	(7) Local grade (%)	(8)			(11) New speed based on vehicle performance (mph)	(12) (ft/sec)	(13)		(15) Acceleration (ft/sec ²)	(16) Actual acceleration (ft/sec ²)	(17)			(18)		(19) New position (ft)
	Desired speed		Start of 1-sec Interval		Position (ft)	Speed (mph)		Limiting acceleration (ft/sec ²)					Limiting acceleration and speed based on driver preferences				End of 1-sec Interval					
	(mph)	(ft/sec)	(mph)	(ft/sec)				Coasting	Power	Effective			Speed				New speed (mph)	(ft/sec)	New speed (mph)	(ft/sec)		
					(mph)	(ft/sec)																
0.0	70.0	102.7	35.0	51.3	0.0	3.0	-1.38	0.12	0.11	35.1	51.4	39.6	58.1	6.74	0.11	35.1	51.4	51.4				
1.0	70.0	102.7	35.1	51.4	51.4	3.0	-1.38	0.11	0.10	35.1	51.5	39.7	58.2	6.73	0.10	35.1	51.5	102.9				
2.0	70.0	102.7	35.1	51.5	102.9	3.0	-1.38	0.11	0.10	35.2	51.6	39.7	58.3	6.72	0.10	35.2	51.6	154.5				
3.0	70.0	102.7	35.2	51.6	154.5	3.0	-1.38	0.11	0.10	35.3	51.7	39.8	58.4	6.71	0.10	35.3	51.7	206.2				
4.0	70.0	102.7	35.3	51.7	206.2	3.0	-1.38	0.10	0.09	35.3	51.8	39.8	58.4	6.70	0.09	35.3	51.8	257.9				
5.0	70.0	102.7	35.3	51.8	257.9	3.0	-1.38	0.10	0.09	35.4	51.9	39.9	58.5	6.69	0.09	35.4	51.9	309.8				
6.0	70.0	102.7	35.4	51.9	309.8	3.0	-1.38	0.10	0.09	35.5	52.0	40.0	58.6	6.68	0.09	35.5	52.0	361.8				
7.0	70.0	102.7	35.5	52.0	361.8	3.0	-1.38	0.09	0.09	35.5	52.1	40.0	58.7	6.67	0.09	35.5	52.1	413.8				
8.0	70.0	102.7	35.5	52.1	413.8	3.0	-1.38	0.09	0.08	35.6	52.2	40.1	58.8	6.66	0.08	35.6	52.2	466.0				
9.0	70.0	102.7	35.6	52.2	466.0	3.0	-1.38	0.09	0.08	35.6	52.3	40.1	58.8	6.65	0.08	35.6	52.3	518.2				
10.0	70.0	102.7	35.6	52.3	518.2	3.0	-1.38	0.09	0.08	35.7	52.3	40.2	58.9	6.64	0.08	35.7	52.3	570.5				
11.0	70.0	102.7	35.7	52.3	570.5	3.0	-1.38	0.08	0.08	35.7	52.4	40.2	59.0	6.64	0.08	35.7	52.4	622.8				
12.0	70.0	102.7	35.7	52.4	622.8	3.0	-1.38	0.08	0.07	35.8	52.5	40.3	59.0	6.63	0.07	35.8	52.5	675.3				
13.0	70.0	102.7	35.8	52.5	675.3	3.0	-1.38	0.08	0.07	35.8	52.6	40.3	59.1	6.62	0.07	35.8	52.6	727.8				
14.0	70.0	102.7	35.8	52.6	727.8	3.0	-1.38	0.08	0.07	35.9	52.6	40.3	59.2	6.61	0.07	35.9	52.6	780.4				
15.0	70.0	102.7	35.9	52.6	780.4	3.0	-1.38	0.07	0.07	35.9	52.7	40.4	59.2	6.60	0.07	35.9	52.7	833.1				
16.0	70.0	102.7	35.9	52.7	833.1	3.0	-1.38	0.07	0.07	36.0	52.8	40.4	59.3	6.60	0.07	36.0	52.8	885.8				
17.0	70.0	102.7	36.0	52.8	885.8	3.0	-1.38	0.07	0.06	36.0	52.8	40.5	59.4	6.59	0.06	36.0	52.8	938.6				
18.0	70.0	102.7	36.0	52.8	938.6	3.0	-1.38	0.07	0.06	36.1	52.9	40.5	59.4	6.58	0.06	36.1	52.9	991.4				
19.0	70.0	102.7	36.1	52.9	991.4	3.0	-1.38	0.07	0.06	36.1	52.9	40.5	59.5	6.58	0.06	36.1	52.9	1044.4				
20.0	70.0	102.7	36.1	52.9	1044.4	3.0	-1.39	0.06	0.06	36.1	53.0	40.6	59.5	6.57	0.06	36.1	53.0	1097.3				
21.0	70.0	102.7	36.1	53.0	1097.3	3.0	-1.39	0.06	0.06	36.2	53.1	40.6	59.6	6.56	0.06	36.2	53.1	1150.4				
22.0	70.0	102.7	36.2	53.1	1150.4	3.0	-1.39	0.06	0.06	36.2	53.1	40.6	59.6	6.56	0.06	36.2	53.1	1203.5				
23.0	70.0	102.7	36.2	53.1	1203.5	3.0	-1.39	0.06	0.05	36.3	53.2	40.7	59.7	6.55	0.05	36.3	53.2	1256.6				
24.0	70.0	102.7	36.3	53.2	1256.6	3.0	-1.39	0.06	0.05	36.3	53.2	40.7	59.7	6.55	0.05	36.3	53.2	1309.8				
25.0	70.0	102.7	36.3	53.2	1309.8	3.0	-1.39	0.06	0.05	36.3	53.3	40.7	59.8	6.54	0.05	36.3	53.3	1363.1				
26.0	70.0	102.7	36.3	53.3	1363.1	3.0	-1.39	0.05	0.05	36.4	53.3	40.8	59.8	6.53	0.05	36.4	53.3	1416.3				
27.0	70.0	102.7	36.4	53.3	1416.3	3.0	-1.39	0.05	0.05	36.4	53.4	40.8	59.9	6.53	0.05	36.4	53.4	1469.7				
28.0	70.0	102.7	36.4	53.4	1469.7	3.0	-1.39	0.05	0.05	36.4	53.4	40.8	59.9	6.52	0.05	36.4	53.4	1523.1				
29.0	70.0	102.7	36.4	53.4	1523.1	3.0	-1.39	0.05	0.05	36.5	53.5	40.9	59.9	6.52	0.05	36.5	53.5	1576.5				
30.0	70.0	102.7	36.5	53.5	1576.5	3.0	-1.39	0.05	0.04	36.5	53.5	40.9	60.0	6.51	0.04	36.5	53.5	1630.0				
31.0	70.0	102.7	36.5	53.5	1630.0	3.0	-1.39	0.05	0.04	36.5	53.5	40.9	60.0	6.51	0.04	36.5	53.5	1683.5				
32.0	70.0	102.7	36.5	53.5	1683.5	3.0	-1.39	0.05	0.04	36.5	53.6	40.9	60.1	6.50	0.04	36.5	53.6	1737.1				
33.0	70.0	102.7	36.5	53.6	1737.1	3.0	-1.39	0.04	0.04	36.6	53.6	41.0	60.1	6.50	0.04	36.6	53.6	1790.7				
34.0	70.0	102.7	36.6	53.6	1790.7	3.0	-1.39	0.04	0.04	36.6	53.7	41.0	60.1	6.50	0.04	36.6	53.7	1844.4				
35.0	70.0	102.7	36.6	53.7	1844.4	3.0	-1.39	0.04	0.04	36.6	53.7	41.0	60.2	6.49	0.04	36.6	53.7	1898.1				
36.0	70.0	102.7	36.6	53.7	1898.1	3.0	-1.39	0.04	0.04	36.6	53.7	41.0	60.2	6.49	0.04	36.6	53.7	1951.8				
37.0	70.0	102.7	36.6	53.7	1951.8	3.0	-1.39	0.04	0.04	36.7	53.8	41.1	60.2	6.48	0.04	36.7	53.8	2005.6				
38.0	70.0	102.7	36.7	53.8	2005.6	3.0	-1.39	0.04	0.03	36.7	53.8	41.1	60.3	6.48	0.03	36.7	53.8	2059.4				
39.0	70.0	102.7	36.7	53.8	2059.4	3.0	-1.39	0.04	0.03	36.7	53.9	41.1	60.3	6.48	0.03	36.7	53.9	2113.2				
40.0	70.0	102.7	36.7	53.9	2113.2	3.0	-1.39	0.04	0.03	36.7	53.9	41.1	60.3	6.47	0.03	36.7	53.9	2167.1				
41.0	70.0	102.7	36.7	53.9	2167.1	3.0	-1.39	0.04	0.03	36.8	53.9	41.1	60.4	6.47	0.03	36.8	53.9	2221.0				
42.0	70.0	102.7	36.8	53.9	2221.0	3.0	-1.39	0.03	0.03	36.8	53.9	41.2	60.4	6.47	0.03	36.8	53.9	2274.9				
43.0	70.0	102.7	36.8	53.9	2274.9	3.0	-1.39	0.03	0.03	36.8	54.0	41.2	60.4	6.46	0.03	36.8	54.0	2328.8				

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(9)	(10)	(11)	(12)	(13)			(14)	(15)	(16)	(17)			(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval								
			Speed	Position	Coasting		Power	Effective	Speed			Acceleration	New speed			New position								
	(mph)	(ft/sec)	(mph)	(ft/sec)					(ft)	(mph)	(ft/sec)		(mph)	(ft/sec)			(ft)							
44.0	70.0	102.7	36.8	54.0	2328.8	3.0	-1.39	0.03	0.03	36.8	54.0	41.2	60.4	6.46	0.03	36.8	54.0	2382.8						

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)				
	Desired speed		Start of 1-sec Interval			Coasting	Power	Effective	New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval				
	(mph)	(ft/sec)	Speed						(mph)	(ft/sec)	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)	(mph)	(ft/sec)	New position (ft)	
			(mph)	(ft/sec)									(mph)						(ft/sec)
45.0	70.0	102.7	36.8	54.0	3.0	-1.39	0.03	0.03	36.8	54.0	41.2	60.5	6.46	0.03	36.8	54.0	2436.9		
46.0	70.0	102.7	36.8	54.0	3.0	-1.39	0.03	0.03	36.9	54.1	41.2	60.5	6.45	0.03	36.9	54.1	2490.9		
47.0	70.0	102.7	36.9	54.1	3.0	-1.39	0.03	0.03	36.9	54.1	41.3	60.5	6.45	0.03	36.9	54.1	2545.0		
48.0	70.0	102.7	36.9	54.1	3.0	-1.39	0.03	0.03	36.9	54.1	41.3	60.5	6.45	0.03	36.9	54.1	2599.1		
49.0	70.0	102.7	36.9	54.1	3.0	-1.39	0.03	0.03	36.9	54.1	41.3	60.6	6.44	0.03	36.9	54.1	2653.2		
50.0	70.0	102.7	36.9	54.1	3.0	-1.39	0.03	0.02	36.9	54.2	41.3	60.6	6.44	0.02	36.9	54.2	2707.4		
51.0	70.0	102.7	36.9	54.2	3.0	-1.39	0.03	0.02	36.9	54.2	41.3	60.6	6.44	0.02	36.9	54.2	2761.6		
52.0	70.0	102.7	36.9	54.2	3.0	-1.39	0.03	0.02	37.0	54.2	41.3	60.6	6.44	0.02	37.0	54.2	2815.8		
53.0	70.0	102.7	37.0	54.2	3.0	-1.39	0.03	0.02	37.0	54.2	41.4	60.6	6.43	0.02	37.0	54.2	2870.0		
54.0	70.0	102.7	37.0	54.2	3.0	-1.39	0.02	0.02	37.0	54.3	41.4	60.7	6.43	0.02	37.0	54.3	2924.2		
55.0	70.0	102.7	37.0	54.3	3.0	-1.39	0.02	0.02	37.0	54.3	41.4	60.7	6.43	0.02	37.0	54.3	2978.5		
56.0	70.0	102.7	37.0	54.3	3.0	-1.39	0.02	0.02	37.0	54.3	41.4	60.7	6.43	0.02	37.0	54.3	3032.8		
57.0	70.0	102.7	37.0	54.3	3.0	-1.39	0.02	0.02	37.0	54.3	41.4	60.7	6.42	0.02	37.0	54.3	3087.1		
58.0	70.0	102.7	37.0	54.3	3.0	-1.39	0.02	0.02	37.1	54.3	41.4	60.7	6.42	0.02	37.1	54.3	3141.4		
59.0	70.0	102.7	37.1	54.3	3.0	-1.39	0.02	0.02	37.1	54.4	41.4	60.8	6.42	0.02	37.1	54.4	3195.8		
60.0	70.0	102.7	37.1	54.4	3.0	-1.39	0.02	0.02	37.1	54.4	41.4	60.8	6.42	0.02	37.1	54.4	3250.2		
61.0	70.0	102.7	37.1	54.4	3.0	-1.39	0.02	0.02	37.1	54.4	41.5	60.8	6.41	0.02	37.1	54.4	3304.6		
62.0	70.0	102.7	37.1	54.4	3.0	-1.39	0.02	0.02	37.1	54.4	41.5	60.8	6.41	0.02	37.1	54.4	3359.0		
63.0	70.0	102.7	37.1	54.4	3.0	-1.39	0.02	0.02	37.1	54.4	41.5	60.8	6.41	0.02	37.1	54.4	3413.4		
64.0	70.0	102.7	37.1	54.4	3.0	-1.39	0.02	0.02	37.1	54.5	41.5	60.8	6.41	0.02	37.1	54.5	3467.8		
65.0	70.0	102.7	37.1	54.5	3.0	-1.39	0.02	0.02	37.1	54.5	41.5	60.9	6.41	0.02	37.1	54.5	3522.3		
66.0	70.0	102.7	37.1	54.5	3.0	-1.39	0.02	0.02	37.1	54.5	41.5	60.9	6.41	0.02	37.1	54.5	3576.8		
67.0	70.0	102.7	37.1	54.5	3.0	-1.39	0.02	0.02	37.2	54.5	41.5	60.9	6.40	0.02	37.2	54.5	3631.3		
68.0	70.0	102.7	37.2	54.5	3.0	-1.39	0.02	0.02	37.2	54.5	41.5	60.9	6.40	0.02	37.2	54.5	3685.8		
69.0	70.0	102.7	37.2	54.5	3.0	-1.39	0.02	0.01	37.2	54.5	41.5	60.9	6.40	0.01	37.2	54.5	3740.3		
70.0	70.0	102.7	37.2	54.5	3.0	-1.39	0.02	0.01	37.2	54.5	41.5	60.9	6.40	0.01	37.2	54.5	3794.8		
71.0	70.0	102.7	37.2	54.5	3.0	-1.39	0.02	0.01	37.2	54.6	41.6	60.9	6.40	0.01	37.2	54.6	3849.4		
72.0	70.0	102.7	37.2	54.6	3.0	-1.39	0.01	0.01	37.2	54.6	41.6	61.0	6.40	0.01	37.2	54.6	3904.0		
73.0	70.0	102.7	37.2	54.6	3.0	-1.39	0.01	0.01	37.2	54.6	41.6	61.0	6.39	0.01	37.2	54.6	3958.5		
74.0	70.0	102.7	37.2	54.6	3.0	-1.39	0.01	0.01	37.2	54.6	41.6	61.0	6.39	0.01	37.2	54.6	4013.1		
75.0	70.0	102.7	37.2	54.6	3.0	-1.39	0.01	0.01	37.2	54.6	41.6	61.0	6.39	0.01	37.2	54.6	4067.7		
76.0	70.0	102.7	37.2	54.6	3.8	-1.63	-0.22	-0.25	37.1	54.4	41.6	61.0	6.39	-0.25	37.1	54.4	4122.2		
77.0	70.0	102.7	37.1	54.4	3.8	-1.63	-0.22	-0.24	36.9	54.1	41.4	60.8	6.42	-0.24	36.9	54.1	4176.5		
78.0	70.0	102.7	36.9	54.1	3.8	-1.63	-0.21	-0.23	36.7	53.9	41.3	60.6	6.44	-0.23	36.7	53.9	4230.5		
79.0	70.0	102.7	36.7	53.9	3.8	-1.63	-0.20	-0.22	36.6	53.7	41.2	60.4	6.47	-0.22	36.6	53.7	4284.2		
80.0	70.0	102.7	36.6	53.7	3.8	-1.63	-0.19	-0.22	36.4	53.5	41.0	60.2	6.49	-0.22	36.4	53.5	4337.8		
81.0	70.0	102.7	36.4	53.5	3.8	-1.63	-0.19	-0.21	36.3	53.2	40.9	60.0	6.51	-0.21	36.3	53.2	4391.2		
82.0	70.0	102.7	36.3	53.2	3.8	-1.63	-0.18	-0.20	36.2	53.0	40.8	59.8	6.54	-0.20	36.2	53.0	4444.3		
83.0	70.0	102.7	36.2	53.0	3.8	-1.63	-0.17	-0.19	36.0	52.9	40.6	59.6	6.56	-0.19	36.0	52.9	4497.3		
84.0	70.0	102.7	36.0	52.9	3.8	-1.63	-0.17	-0.19	35.9	52.7	40.5	59.4	6.58	-0.19	35.9	52.7	4550.0		
85.0	70.0	102.7	35.9	52.7	3.8	-1.62	-0.16	-0.18	35.8	52.5	40.4	59.3	6.60	-0.18	35.8	52.5	4602.6		
86.0	70.0	102.7	35.8	52.5	3.8	-1.62	-0.16	-0.17	35.7	52.3	40.3	59.1	6.62	-0.17	35.7	52.3	4655.0		
87.0	70.0	102.7	35.7	52.3	3.8	-1.62	-0.15	-0.17	35.6	52.1	40.2	58.9	6.64	-0.17	35.6	52.1	4707.2		
88.0	70.0	102.7	35.6	52.1	3.8	-1.62	-0.14	-0.16	35.4	52.0	40.1	58.8	6.66	-0.16	35.4	52.0	4759.3		

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TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(4)		(5)	(7) Local grade (%)	(8)			(11) New speed based on vehicle performance (mph)	(12) (ft/sec)	(13)		(15) Acceleration (ft/sec ²)	(16) Actual acceleration (ft/sec ²)	(17)			(19) New position (ft)
	Desired speed		Start of 1-sec Interval		Position (ft)		Limiting acceleration (ft/sec ²)					Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
	(mph)	(ft/sec)	(mph)	(ft/sec)			Coasting	Power	Effective			Speed				(mph)	(ft/sec)	(mph)	
					Speed							Acceleration	New speed						
89.0	70.0	102.7	35.4	52.0	4759.3	3.8	-1.62	-0.14	-0.16	35.3	51.8	40.0	58.7	6.67	-0.16	35.3	51.8	4811.2	
90.0	70.0	102.7	35.3	51.8	4811.2	3.8	-1.62	-0.13	-0.15	35.2	51.7	39.9	58.5	6.69	-0.15	35.2	51.7	4862.9	
91.0	70.0	102.7	35.2	51.7	4862.9	3.8	-1.62	-0.13	-0.15	35.1	51.5	39.8	58.4	6.71	-0.15	35.1	51.5	4914.5	
92.0	70.0	102.7	35.1	51.5	4914.5	3.8	-1.62	-0.12	-0.14	35.0	51.4	39.7	58.3	6.72	-0.14	35.0	51.4	4966.0	
93.0	70.0	102.7	35.0	51.4	4966.0	3.8	-1.62	-0.12	-0.13	34.9	51.3	39.6	58.1	6.74	-0.13	34.9	51.3	5017.3	
94.0	70.0	102.7	34.9	51.3	5017.3	3.8	-1.62	-0.12	-0.13	34.9	51.1	39.5	58.0	6.75	-0.13	34.9	51.1	5068.5	
95.0	70.0	102.7	34.9	51.1	5068.5	3.8	-1.62	-0.11	-0.13	34.8	51.0	39.5	57.9	6.77	-0.13	34.8	51.0	5119.6	
96.0	70.0	102.7	34.8	51.0	5119.6	3.8	-1.62	-0.11	-0.12	34.7	50.9	39.4	57.8	6.78	-0.12	34.7	50.9	5170.5	
97.0	70.0	102.7	34.7	50.9	5170.5	3.8	-1.62	-0.10	-0.12	34.6	50.8	39.3	57.7	6.79	-0.12	34.6	50.8	5221.3	
98.0	70.0	102.7	34.6	50.8	5221.3	3.8	-1.62	-0.10	-0.11	34.5	50.6	39.3	57.6	6.81	-0.11	34.5	50.6	5272.0	
99.0	70.0	102.7	34.5	50.6	5272.0	3.8	-1.62	-0.10	-0.11	34.5	50.5	39.2	57.5	6.82	-0.11	34.5	50.5	5322.6	
100.0	70.0	102.7	34.5	50.5	5322.6	3.8	-1.61	-0.09	-0.10	34.4	50.4	39.1	57.4	6.83	-0.10	34.4	50.4	5373.1	
101.0	70.0	102.7	34.4	50.4	5373.1	3.8	-1.61	-0.09	-0.10	34.3	50.3	39.1	57.3	6.84	-0.10	34.3	50.3	5423.5	
102.0	70.0	102.7	34.3	50.3	5423.5	3.8	-1.61	-0.08	-0.10	34.3	50.2	39.0	57.2	6.85	-0.10	34.3	50.2	5473.8	
103.0	70.0	102.7	34.3	50.2	5473.8	3.8	-1.61	-0.08	-0.09	34.2	50.2	38.9	57.1	6.86	-0.09	34.2	50.2	5524.0	
104.0	70.0	102.7	34.2	50.2	5524.0	3.8	-1.61	-0.08	-0.09	34.1	50.1	38.9	57.0	6.87	-0.09	34.1	50.1	5574.1	
105.0	70.0	102.7	34.1	50.1	5574.1	3.8	-1.61	-0.08	-0.09	34.1	50.0	38.8	56.9	6.88	-0.09	34.1	50.0	5624.1	
106.0	70.0	102.7	34.1	50.0	5624.1	3.8	-1.61	-0.07	-0.08	34.0	49.9	38.8	56.9	6.89	-0.08	34.0	49.9	5674.1	
107.0	70.0	102.7	34.0	49.9	5674.1	3.8	-1.61	-0.07	-0.08	34.0	49.8	38.7	56.8	6.90	-0.08	34.0	49.8	5723.9	
108.0	70.0	102.7	34.0	49.8	5723.9	3.8	-1.61	-0.07	-0.08	33.9	49.7	38.7	56.7	6.91	-0.08	33.9	49.7	5773.7	
109.0	70.0	102.7	33.9	49.7	5773.7	3.8	-1.61	-0.06	-0.07	33.9	49.7	38.6	56.7	6.92	-0.07	33.9	49.7	5823.4	
110.0	70.0	102.7	33.9	49.7	5823.4	3.8	-1.61	-0.06	-0.07	33.8	49.6	38.6	56.6	6.92	-0.07	33.8	49.6	5873.0	
111.0	70.0	102.7	33.8	49.6	5873.0	3.8	-1.61	-0.06	-0.07	33.8	49.5	38.5	56.5	6.93	-0.07	33.8	49.5	5922.6	
112.0	70.0	102.7	33.8	49.5	5922.6	3.8	-1.61	-0.06	-0.06	33.7	49.5	38.5	56.5	6.94	-0.06	33.7	49.5	5972.1	
113.0	70.0	102.7	33.7	49.5	5972.1	3.8	-1.61	-0.05	-0.06	33.7	49.4	38.5	56.4	6.95	-0.06	33.7	49.4	6021.5	
114.0	70.0	102.7	33.7	49.4	6021.5	3.8	-1.61	-0.05	-0.06	33.6	49.3	38.4	56.4	6.95	-0.06	33.6	49.3	6070.9	
115.0	70.0	102.7	33.6	49.3	6070.9	3.8	-1.61	-0.05	-0.06	33.6	49.3	38.4	56.3	6.96	-0.06	33.6	49.3	6120.2	
116.0	70.0	102.7	33.6	49.3	6120.2	3.8	-1.61	-0.05	-0.05	33.6	49.2	38.4	56.3	6.96	-0.05	33.6	49.2	6169.5	
117.0	70.0	102.7	33.6	49.2	6169.5	3.8	-1.61	-0.05	-0.05	33.5	49.2	38.3	56.2	6.97	-0.05	33.5	49.2	6218.7	
118.0	70.0	102.7	33.5	49.2	6218.7	3.8	-1.61	-0.04	-0.05	33.5	49.1	38.3	56.2	6.98	-0.05	33.5	49.1	6267.9	
119.0	70.0	102.7	33.5	49.1	6267.9	3.8	-1.61	-0.04	-0.05	33.5	49.1	38.3	56.1	6.98	-0.05	33.5	49.1	6317.0	
120.0	70.0	102.7	33.5	49.1	6317.0	3.8	-1.61	-0.04	-0.05	33.4	49.0	38.2	56.1	6.99	-0.05	33.4	49.0	6366.0	
121.0	70.0	102.7	33.4	49.0	6366.0	3.8	-1.61	-0.04	-0.04	33.4	49.0	38.2	56.0	6.99	-0.04	33.4	49.0	6415.0	
122.0	70.0	102.7	33.4	49.0	6415.0	3.8	-1.61	-0.04	-0.04	33.4	48.9	38.2	56.0	7.00	-0.04	33.4	48.9	6464.0	
123.0	70.0	102.7	33.4	48.9	6464.0	3.8	-1.61	-0.04	-0.04	33.3	48.9	38.1	56.0	7.00	-0.04	33.3	48.9	6512.9	
124.0	70.0	102.7	33.3	48.9	6512.9	3.8	-1.61	-0.03	-0.04	33.3	48.9	38.1	55.9	7.01	-0.04	33.3	48.9	6561.8	
125.0	70.0	102.7	33.3	48.9	6561.8	3.8	-1.61	-0.03	-0.04	33.3	48.8	38.1	55.9	7.01	-0.04	33.3	48.8	6610.7	
126.0	70.0	102.7	33.3	48.8	6610.7	3.8	-1.61	-0.03	-0.04	33.3	48.8	38.1	55.8	7.01	-0.04	33.3	48.8	6659.5	
127.0	70.0	102.7	33.3	48.8	6659.5	3.8	-1.61	-0.03	-0.03	33.2	48.8	38.1	55.8	7.02	-0.03	33.2	48.8	6708.3	
128.0	70.0	102.7	33.2	48.8	6708.3	3.8	-1.61	-0.03	-0.03	33.2	48.7	38.0	55.8	7.02	-0.03	33.2	48.7	6757.0	
129.0	70.0	102.7	33.2	48.7	6757.0	3.8	-1.61	-0.03	-0.03	33.2	48.7	38.0	55.8	7.03	-0.03	33.2	48.7	6805.7	
130.0	70.0	102.7	33.2	48.7	6805.7	3.8	-1.61	-0.03	-0.03	33.2	48.7	38.0	55.7	7.03	-0.03	33.2	48.7	6854.4	
131.0	70.0	102.7	33.2	48.7	6854.4	3.8	-1.61	-0.03	-0.03	33.2	48.6	38.0	55.7	7.03	-0.03	33.2	48.6	6903.0	
132.0	70.0	102.7	33.2	48.6	6903.0	3.8	-1.61	-0.02	-0.03	33.1	48.6	38.0	55.7	7.04	-0.03	33.1	48.6	6951.7	

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(9)	(10)	(11)	(12)	(13)			(14)	(15)	(16)	(17)		(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval		Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval								
			Speed	Position		Coasting	Power	Effective			Speed		Acceleration		New speed	New position							
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(ft/sec ²)	(mph)					(ft/sec)						
133.0	70.0	102.7	33.1	48.6	6951.7	3.8	-1.61	-0.02	-0.03	33.1	48.6	37.9	55.6	7.04	-0.03	33.1	48.6	7000.2					
134.0	70.0	102.7	33.1	48.6	7000.2	3.8	-1.61	-0.02	-0.03	33.1	48.6	37.9	55.6	7.04	-0.03	33.1	48.6	7048.8					
135.0	70.0	102.7	33.1	48.6	7048.8	3.8	-1.61	-0.02	-0.03	33.1	48.5	37.9	55.6	7.04	-0.03	33.1	48.5	7097.3					
136.0	70.0	102.7	33.1	48.5	7097.3	3.8	-1.61	-0.02	-0.02	33.1	48.5	37.9	55.6	7.05	-0.02	33.1	48.5	7145.9					
137.0	70.0	102.7	33.1	48.5	7145.9	3.8	-1.61	-0.02	-0.02	33.1	48.5	37.9	55.6	7.05	-0.02	33.1	48.5	7194.3					
138.0	70.0	102.7	33.1	48.5	7194.3	3.8	-1.60	-0.02	-0.02	33.0	48.5	37.9	55.5	7.05	-0.02	33.0	48.5	7242.8					
139.0	70.0	102.7	33.0	48.5	7242.8	3.8	-1.60	-0.02	-0.02	33.0	48.4	37.8	55.5	7.05	-0.02	33.0	48.4	7291.3					
140.0	70.0	102.7	33.0	48.4	7291.3	3.8	-1.60	-0.02	-0.02	33.0	48.4	37.8	55.5	7.06	-0.02	33.0	48.4	7339.7					
141.0	70.0	102.7	33.0	48.4	7339.7	3.8	-1.60	-0.02	-0.02	33.0	48.4	37.8	55.5	7.06	-0.02	33.0	48.4	7388.1					
142.0	70.0	102.7	33.0	48.4	7388.1	3.8	-1.60	-0.02	-0.02	33.0	48.4	37.8	55.5	7.06	-0.02	33.0	48.4	7436.5					
143.0	70.0	102.7	33.0	48.4	7436.5	3.8	-1.60	-0.02	-0.02	33.0	48.4	37.8	55.4	7.06	-0.02	33.0	48.4	7484.8					
144.0	70.0	102.7	33.0	48.4	7484.8	3.8	-1.60	-0.02	-0.02	33.0	48.3	37.8	55.4	7.07	-0.02	33.0	48.3	7533.2					
145.0	70.0	102.7	33.0	48.3	7533.2	3.8	-1.60	-0.01	-0.02	32.9	48.3	37.8	55.4	7.07	-0.02	32.9	48.3	7581.5					
146.0	70.0	102.7	32.9	48.3	7581.5	3.8	-1.60	-0.01	-0.02	32.9	48.3	37.8	55.4	7.07	-0.02	32.9	48.3	7629.9					
147.0	70.0	102.7	32.9	48.3	7629.9	3.8	-1.60	-0.01	-0.02	32.9	48.3	37.8	55.4	7.07	-0.02	32.9	48.3	7678.2					
148.0	70.0	102.7	32.9	48.3	7678.2	3.8	-1.60	-0.01	-0.01	32.9	48.3	37.8	55.4	7.07	-0.01	32.9	48.3	7726.4					
149.0	70.0	102.7	32.9	48.3	7726.4	3.8	-1.60	-0.01	-0.01	32.9	48.3	37.7	55.4	7.07	-0.01	32.9	48.3	7774.7					
150.0	70.0	102.7	32.9	48.3	7774.7	3.8	-1.60	-0.01	-0.01	32.9	48.3	37.7	55.3	7.08	-0.01	32.9	48.3	7823.0					
151.0	70.0	102.7	32.9	48.3	7823.0	3.8	-1.60	-0.01	-0.01	32.9	48.2	37.7	55.3	7.08	-0.01	32.9	48.2	7871.2					
152.0	70.0	102.7	32.9	48.2	7871.2	3.8	-1.60	-0.01	-0.01	32.9	48.2	37.7	55.3	7.08	-0.01	32.9	48.2	7919.5					
153.0	70.0	102.7	32.9	48.2	7919.5	3.8	-1.60	-0.01	-0.01	32.9	48.2	37.7	55.3	7.08	-0.01	32.9	48.2	7967.7					
154.0	70.0	102.7	32.9	48.2	7967.7	3.8	-1.60	-0.01	-0.01	32.9	48.2	37.7	55.3	7.08	-0.01	32.9	48.2	8015.9					
155.0	70.0	102.7	32.9	48.2	8015.9	3.8	-1.60	-0.01	-0.01	32.9	48.2	37.7	55.3	7.08	-0.01	32.9	48.2	8064.1					
156.0	70.0	102.7	32.9	48.2	8064.1	3.8	-1.60	-0.01	-0.01	32.9	48.2	37.7	55.3	7.08	-0.01	32.9	48.2	8112.3					
157.0	70.0	102.7	32.9	48.2	8112.3	3.8	-1.60	-0.01	-0.01	32.8	48.2	37.7	55.3	7.08	-0.01	32.8	48.2	8160.5					
158.0	70.0	102.7	32.8	48.2	8160.5	3.8	-1.60	-0.01	-0.01	32.8	48.2	37.7	55.3	7.09	-0.01	32.8	48.2	8208.6					
159.0	70.0	102.7	32.8	48.2	8208.6	3.8	-1.60	-0.01	-0.01	32.8	48.2	37.7	55.3	7.09	-0.01	32.8	48.2	8256.8					
160.0	70.0	102.7	32.8	48.2	8256.8	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.7	55.2	7.09	-0.01	32.8	48.1	8304.9					
161.0	70.0	102.7	32.8	48.1	8304.9	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.7	55.2	7.09	-0.01	32.8	48.1	8353.1					
162.0	70.0	102.7	32.8	48.1	8353.1	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.7	55.2	7.09	-0.01	32.8	48.1	8401.2					
163.0	70.0	102.7	32.8	48.1	8401.2	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.7	55.2	7.09	-0.01	32.8	48.1	8449.3					
164.0	70.0	102.7	32.8	48.1	8449.3	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.6	55.2	7.09	-0.01	32.8	48.1	8497.5					
165.0	70.0	102.7	32.8	48.1	8497.5	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.6	55.2	7.09	-0.01	32.8	48.1	8545.6					
166.0	70.0	102.7	32.8	48.1	8545.6	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.6	55.2	7.09	-0.01	32.8	48.1	8593.7					
167.0	70.0	102.7	32.8	48.1	8593.7	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.6	55.2	7.09	-0.01	32.8	48.1	8641.8					
168.0	70.0	102.7	32.8	48.1	8641.8	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.6	55.2	7.09	-0.01	32.8	48.1	8689.9					
169.0	70.0	102.7	32.8	48.1	8689.9	3.8	-1.60	-0.01	-0.01	32.8	48.1	37.6	55.2	7.09	-0.01	32.8	48.1	8738.0					
170.0	70.0	102.7	32.8	48.1	8738.0	3.8	-1.60	0.00	-0.01	32.8	48.1	37.6	55.2	7.09	-0.01	32.8	48.1	8786.0					
171.0	70.0	102.7	32.8	48.1	8786.0	3.8	-1.60	0.00	-0.01	32.8	48.1	37.6	55.2	7.10	-0.01	32.8	48.1	8834.1					
172.0	70.0	102.7	32.8	48.1	8834.1	3.8	-1.60	0.00	-0.01	32.8	48.1	37.6	55.2	7.10	-0.01	32.8	48.1	8882.2					
173.0	70.0	102.7	32.8	48.1	8882.2	3.8	-1.60	0.00	0.00	32.8	48.1	37.6	55.2	7.10	0.00	32.8	48.1	8930.3					
174.0	70.0	102.7	32.8	48.1	8930.3	3.8	-1.60	0.00	0.00	32.8	48.1	37.6	55.2	7.10	0.00	32.8	48.1	8978.3					
175.0	70.0	102.7	32.8	48.1	8978.3	3.8	-1.60	0.00	0.00	32.8	48.1	37.6	55.2	7.10	0.00	32.8	48.1	9026.4					
176.0	70.0	102.7	32.8	48.1	9026.4	3.8	-1.60	0.00	0.00	32.8	48.0	37.6	55.2	7.10	0.00	32.8	48.0	9074.4					

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(4)		(5)	(6)	(7) Local grade (%)	(8)			(11) New speed based on vehicle performance (mph)	(12) (ft/sec)	(13)			(16) Actual acceleration (ft/sec ²)	(17)			(19) New position (ft)
	Desired speed		Start of 1-sec Interval		Speed (ft/sec)	Position (ft)		Limiting acceleration (ft/sec ²)					Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
	(mph)	(ft/sec)	(mph)	(ft/sec)				Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	(ft/sec)	(mph)	
					(mph)	(ft/sec)														
177.0	70.0	102.7	32.8	48.0	9074.4	3.8	-1.60	0.00	0.00	32.8	48.0	37.6	55.1	7.10	0.00	32.8	48.0	9122.5		
178.0	70.0	102.7	32.8	48.0	9122.5	3.8	-1.60	0.00	0.00	32.8	48.0	37.6	55.1	7.10	0.00	32.8	48.0	9170.5		
179.0	70.0	102.7	32.8	48.0	9170.5	3.8	-1.60	0.00	0.00	32.8	48.0	37.6	55.1	7.10	0.00	32.8	48.0	9218.5		
180.0	70.0	102.7	32.8	48.0	9218.5	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9266.6		
181.0	70.0	102.7	32.7	48.0	9266.6	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9314.6		
182.0	70.0	102.7	32.7	48.0	9314.6	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9362.6		
183.0	70.0	102.7	32.7	48.0	9362.6	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9410.7		
184.0	70.0	102.7	32.7	48.0	9410.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9458.7		
185.0	70.0	102.7	32.7	48.0	9458.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9506.7		
186.0	70.0	102.7	32.7	48.0	9506.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9554.7		
187.0	70.0	102.7	32.7	48.0	9554.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9602.7		
188.0	70.0	102.7	32.7	48.0	9602.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9650.7		
189.0	70.0	102.7	32.7	48.0	9650.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9698.7		
190.0	70.0	102.7	32.7	48.0	9698.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9746.7		
191.0	70.0	102.7	32.7	48.0	9746.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9794.7		
192.0	70.0	102.7	32.7	48.0	9794.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9842.7		
193.0	70.0	102.7	32.7	48.0	9842.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9890.7		
194.0	70.0	102.7	32.7	48.0	9890.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9938.7		
195.0	70.0	102.7	32.7	48.0	9938.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	9986.7		
196.0	70.0	102.7	32.7	48.0	9986.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.10	0.00	32.7	48.0	10034.7		
197.0	70.0	102.7	32.7	48.0	10034.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10082.7		
198.0	70.0	102.7	32.7	48.0	10082.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10130.7		
199.0	70.0	102.7	32.7	48.0	10130.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10178.7		
200.0	70.0	102.7	32.7	48.0	10178.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10226.7		
201.0	70.0	102.7	32.7	48.0	10226.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10274.7		
202.0	70.0	102.7	32.7	48.0	10274.7	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10322.6		
203.0	70.0	102.7	32.7	48.0	10322.6	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10370.6		
204.0	70.0	102.7	32.7	48.0	10370.6	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10418.6		
205.0	70.0	102.7	32.7	48.0	10418.6	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10466.6		
206.0	70.0	102.7	32.7	48.0	10466.6	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10514.5		
207.0	70.0	102.7	32.7	48.0	10514.5	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10562.5		
208.0	70.0	102.7	32.7	48.0	10562.5	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10610.5		
209.0	70.0	102.7	32.7	48.0	10610.5	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10658.5		
210.0	70.0	102.7	32.7	48.0	10658.5	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10706.4		
211.0	70.0	102.7	32.7	48.0	10706.4	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10754.4		
212.0	70.0	102.7	32.7	48.0	10754.4	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10802.4		
213.0	70.0	102.7	32.7	48.0	10802.4	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10850.4		
214.0	70.0	102.7	32.7	48.0	10850.4	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10898.3		
215.0	70.0	102.7	32.7	48.0	10898.3	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10946.3		
216.0	70.0	102.7	32.7	48.0	10946.3	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	10994.3		
217.0	70.0	102.7	32.7	48.0	10994.3	3.8	-1.60	0.00	0.00	32.7	48.0	37.6	55.1	7.11	0.00	32.7	48.0	11042.2		
218.0	70.0	102.7	32.7	48.0	11042.2	3.8	-1.60	0.00	0.00	32.7	48.0	37.5	55.1	7.11	0.00	32.7	48.0	11090.2		
219.0	70.0	102.7	32.7	48.0	11090.2	3.8	-1.60	0.00	0.00	32.7	48.0	37.5	55.1	7.11	0.00	32.7	48.0	11138.1		
220.0	70.0	102.7	32.7	48.0	11138.1	3.8	-1.60	0.00	0.00	32.7	48.0	37.5	55.1	7.11	0.00	32.7	48.0	11186.1		

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(17)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)								
221.0	70.0	102.7	32.7	48.0	11186.1	3.8	-1.60	0.00	0.00	32.7	48.0	37.5	55.1	7.11	0.00	32.7	48.0	11234.1
222.0	70.0	102.7	32.7	48.0	11234.1	3.8	-1.60	0.00	0.00	32.7	48.0	37.5	55.1	7.11	0.00	32.7	48.0	11282.0
223.0	70.0	102.7	32.7	48.0	11282.0	3.8	-1.60	0.00	0.00	32.7	48.0	37.5	55.1	7.11	0.00	32.7	48.0	11330.0
224.0	70.0	102.7	32.7	48.0	11330.0	3.8	-1.60	0.00	0.00	32.7	48.0	37.5	55.1	7.11	0.00	32.7	48.0	11378.0
225.0	70.0	102.7	32.7	48.0	11378.0	3.8	-1.60	0.00	0.00	32.7	48.0	37.5	55.1	7.11	0.00	32.7	48.0	11425.9
226.0	70.0	102.7	32.7	48.0	11425.9	-0.6	-0.20	1.36	1.22	33.5	49.2	37.5	55.1	7.11	1.22	33.5	49.2	11474.5
227.0	70.0	102.7	33.5	49.2	11474.5	-0.6	-0.20	1.32	1.18	34.3	50.4	38.3	56.2	6.98	1.18	34.3	50.4	11524.3
228.0	70.0	102.7	34.3	50.4	11524.3	-0.6	-0.21	1.28	1.15	35.1	51.5	39.0	57.2	6.85	1.15	35.1	51.5	11575.2
229.0	70.0	102.7	35.1	51.5	11575.2	-0.6	-0.21	1.25	1.13	35.9	52.6	39.7	58.2	6.72	1.13	35.9	52.6	11627.3
230.0	70.0	102.7	35.9	52.6	11627.3	-0.6	-0.22	1.21	1.10	36.6	53.7	40.4	59.2	6.60	1.10	36.6	53.7	11680.5
231.0	70.0	102.7	36.6	53.7	11680.5	-0.6	-0.22	1.18	1.07	37.4	54.8	41.1	60.2	6.48	1.07	37.4	54.8	11734.7
232.0	70.0	102.7	37.4	54.8	11734.7	-0.6	-0.23	1.15	1.05	38.1	55.9	41.7	61.2	6.37	1.05	38.1	55.9	11790.1
233.0	70.0	102.7	38.1	55.9	11790.1	-0.6	-0.24	1.11	1.02	38.8	56.9	42.3	62.1	6.26	1.02	38.8	56.9	11846.4
234.0	70.0	102.7	38.8	56.9	11846.4	-0.6	-0.24	1.09	1.00	39.5	57.9	43.0	63.0	6.15	1.00	39.5	57.9	11903.8
235.0	70.0	102.7	39.5	57.9	11903.8	-0.6	-0.25	1.06	0.98	40.1	58.9	43.6	63.9	6.04	0.98	40.1	58.9	11962.2
236.0	70.0	102.7	40.1	58.9	11962.2	-0.6	-0.25	1.03	0.95	40.8	59.8	44.2	64.8	5.93	0.95	40.8	59.8	12021.5
237.0	70.0	102.7	40.8	59.8	12021.5	-0.6	-0.26	1.01	0.93	41.4	60.7	44.8	65.6	5.83	0.93	41.4	60.7	12081.8
238.0	70.0	102.7	41.4	60.7	12081.8	-0.6	-0.26	0.98	0.91	42.0	61.7	45.3	66.5	5.73	0.91	42.0	61.7	12143.0
239.0	70.0	102.7	42.0	61.7	12143.0	-0.6	-0.27	0.96	0.89	42.6	62.5	45.9	67.3	5.63	0.89	42.6	62.5	12205.1
240.0	70.0	102.7	42.6	62.5	12205.1	-0.6	-0.27	0.94	0.87	43.2	63.4	46.4	68.1	5.53	0.87	43.2	63.4	12268.1
241.0	70.0	102.7	43.2	63.4	12268.1	-0.6	-0.28	0.92	0.86	43.8	64.3	46.9	68.9	5.44	0.86	43.8	64.3	12331.9
242.0	70.0	102.7	43.8	64.3	12331.9	-0.6	-0.28	0.90	0.84	44.4	65.1	47.5	69.6	5.35	0.84	44.4	65.1	12396.6
243.0	70.0	102.7	44.4	65.1	12396.6	-0.6	-0.29	0.88	0.82	45.0	65.9	48.0	70.4	5.26	0.82	45.0	65.9	12462.1
244.0	70.0	102.7	45.0	65.9	12462.1	-0.6	-0.30	0.86	0.80	45.5	66.7	48.5	71.1	5.17	0.80	45.5	66.7	12528.5
245.0	70.0	102.7	45.5	66.7	12528.5	-0.6	-0.30	0.84	0.79	46.0	67.5	49.0	71.8	5.08	0.79	46.0	67.5	12595.6
246.0	70.0	102.7	46.0	67.5	12595.6	-0.6	-0.31	0.82	0.77	46.6	68.3	49.4	72.5	5.00	0.77	46.6	68.3	12663.5
247.0	70.0	102.7	46.6	68.3	12663.5	-0.6	-0.31	0.80	0.76	47.1	69.1	49.9	73.2	4.91	0.76	47.1	69.1	12732.2
248.0	70.0	102.7	47.1	69.1	12732.2	-0.6	-0.32	0.79	0.74	47.6	69.8	50.4	73.9	4.83	0.74	47.6	69.8	12801.6
249.0	70.0	102.7	47.6	69.8	12801.6	-0.6	-0.32	0.77	0.73	48.1	70.5	50.8	74.5	4.75	0.73	48.1	70.5	12871.8
250.0	70.0	102.7	48.1	70.5	12871.8	-0.6	-0.33	0.75	0.71	48.6	71.2	51.3	75.2	4.67	0.71	48.6	71.2	12942.7
251.0	70.0	102.7	48.6	71.2	12942.7	-0.6	-0.33	0.74	0.70	49.0	71.9	51.7	75.8	4.59	0.70	49.0	71.9	13014.2
252.0	70.0	102.7	49.0	71.9	13014.2	-0.6	-0.34	0.72	0.69	49.5	72.6	52.1	76.5	4.52	0.69	49.5	72.6	13086.5
253.0	70.0	102.7	49.5	72.6	13086.5	-0.6	-0.34	0.71	0.67	50.0	73.3	52.5	77.1	4.45	0.67	50.0	73.3	13159.5
254.0	70.0	102.7	50.0	73.3	13159.5	-0.6	-0.34	0.69	0.66	50.4	74.0	53.0	77.7	4.37	0.66	50.4	74.0	13233.1
255.0	70.0	102.7	50.4	74.0	13233.1	-0.6	-0.35	0.68	0.65	50.9	74.6	53.4	78.3	4.30	0.65	50.9	74.6	13307.4
256.0	70.0	102.7	50.9	74.6	13307.4	-0.6	-0.35	0.67	0.63	51.3	75.2	53.7	78.8	4.23	0.63	51.3	75.2	13382.3
257.0	70.0	102.7	51.3	75.2	13382.3	-0.6	-0.36	0.65	0.62	51.7	75.9	54.1	79.4	4.16	0.62	51.7	75.9	13457.8
258.0	70.0	102.7	51.7	75.9	13457.8	-0.6	-0.36	0.64	0.61	52.1	76.5	54.5	80.0	4.10	0.61	52.1	76.5	13534.0
259.0	70.0	102.7	52.1	76.5	13534.0	-0.6	-0.37	0.63	0.60	52.5	77.1	54.9	80.5	4.03	0.60	52.5	77.1	13610.8
260.0	70.0	102.7	52.5	77.1	13610.8	-0.6	-0.37	0.62	0.59	52.9	77.7	55.2	81.0	3.96	0.59	52.9	77.7	13688.1
261.0	70.0	102.7	52.9	77.7	13688.1	-0.6	-0.38	0.61	0.58	53.3	78.2	55.6	81.6	3.90	0.58	53.3	78.2	13766.1
262.0	70.0	102.7	53.3	78.2	13766.1	-0.6	-0.38	0.59	0.57	53.7	78.8	56.0	82.1	3.84	0.57	53.7	78.8	13844.6
263.0	70.0	102.7	53.7	78.8	13844.6	-0.6	-0.39	0.58	0.56	54.1	79.4	56.3	82.6	3.78	0.56	54.1	79.4	13923.7
264.0	70.0	102.7	54.1	79.4	13923.7	-0.6	-0.39	0.57	0.55	54.5	79.9	56.6	83.1	3.72	0.55	54.5	79.9	14003.3

3

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2) Desired speed		(3) Start of 1-sec Interval			(7) Local grade (%)	(8) Limiting acceleration (ft/sec ²)			(11) New speed based on vehicle performance		(13) Limiting acceleration and speed based on driver preferences			(16) Actual acceleration (ft/sec ²)	(18) End of 1-sec Interval		
	(2) (mph)	(3) (ft/sec)	(3) Speed		(6) Position (ft)		(8) Coasting	(9) Power	(10) Effective	(11) (mph) (ft/sec)		(13) Speed		(15) Acceleration (ft/sec ²)		(18) New speed		(19) New position (ft)
			(4) (mph)	(5) (ft/sec)						(11) (mph)	(12) (ft/sec)	(13) (mph)	(14) (ft/sec)			(17) (mph)	(18) (ft/sec)	
	(1) (sec)	(2) (mph)	(3) (ft/sec)	(4) (mph)	(5) (ft/sec)		(6) Position (ft)	(7) Local grade (%)	(8) Coasting	(9) Power	(10) Effective	(11) (mph)	(12) (ft/sec)	(13) (mph)		(14) (ft/sec)	(15) Acceleration (ft/sec ²)	(16) Actual acceleration (ft/sec ²)
265.0	70.0	102.7	54.5	79.9	14003.3	-0.6	-0.39	0.56	0.54	54.8	80.4	57.0	83.6	3.66	0.54	54.8	80.4	14083.5
266.0	70.0	102.7	54.8	80.4	14083.5	-0.6	-0.40	0.55	0.53	55.2	81.0	57.3	84.0	3.60	0.53	55.2	81.0	14164.2
267.0	70.0	102.7	55.2	81.0	14164.2	-0.6	-0.40	0.54	0.52	55.6	81.5	57.6	84.5	3.54	0.52	55.6	81.5	14245.4
268.0	70.0	102.7	55.6	81.5	14245.4	-0.6	-0.41	0.53	0.51	55.9	82.0	57.9	85.0	3.49	0.51	55.9	82.0	14327.1
269.0	70.0	102.7	55.9	82.0	14327.1	-0.6	-0.41	0.52	0.50	56.2	82.5	58.2	85.4	3.43	0.50	56.2	82.5	14409.4
270.0	70.0	102.7	56.2	82.5	14409.4	-0.6	-0.42	0.51	0.49	56.6	83.0	58.5	85.9	3.38	0.49	56.6	83.0	14492.1
271.0	70.0	102.7	56.6	83.0	14492.1	-0.6	-0.42	0.50	0.48	56.9	83.5	58.8	86.3	3.33	0.48	56.9	83.5	14575.3
272.0	70.0	102.7	56.9	83.5	14575.3	-0.6	-0.42	0.49	0.47	57.2	83.9	59.1	86.7	3.27	0.47	57.2	83.9	14659.0
273.0	70.0	102.7	57.2	83.9	14659.0	-0.6	-0.43	0.48	0.46	57.5	84.4	59.4	87.2	3.22	0.46	57.5	84.4	14743.2
274.0	70.0	102.7	57.5	84.4	14743.2	-0.6	-0.43	0.47	0.46	57.9	84.9	59.7	87.6	3.17	0.46	57.9	84.9	14827.8
275.0	70.0	102.7	57.9	84.9	14827.8	-0.6	-0.43	0.47	0.45	58.2	85.3	60.0	88.0	3.12	0.45	58.2	85.3	14912.9
276.0	70.0	102.7	58.2	85.3	14912.9	-2.8	0.28	1.17	1.12	58.9	86.4	60.3	88.4	3.07	1.12	58.9	86.4	14998.8
277.0	70.0	102.7	58.9	86.4	14998.8	-2.8	0.27	1.14	1.10	59.7	87.5	60.9	89.4	2.95	1.10	59.7	87.5	15085.8
278.0	70.0	102.7	59.7	87.5	15085.8	-2.8	0.26	1.12	1.08	60.4	88.6	61.6	90.4	2.83	1.08	60.4	88.6	15173.9
279.0	70.0	102.7	60.4	88.6	15173.9	-2.8	0.25	1.10	1.07	61.1	89.7	62.3	91.3	2.72	1.07	61.1	89.7	15263.0
280.0	70.0	102.7	61.1	89.7	15263.0	-2.8	0.24	1.09	1.05	61.9	90.7	62.9	92.3	2.60	1.05	61.9	90.7	15353.2
281.0	70.0	102.7	61.9	90.7	15353.2	-2.8	0.23	1.07	1.03	62.6	91.8	63.6	93.2	2.49	1.03	62.6	91.8	15444.5
282.0	70.0	102.7	62.6	91.8	15444.5	-2.8	0.22	1.05	1.01	63.3	92.8	64.2	94.1	2.38	1.01	63.3	92.8	15536.7
283.0	70.0	102.7	63.3	92.8	15536.7	-2.8	0.21	1.03	1.00	63.9	93.8	64.8	95.0	2.27	1.00	63.9	93.8	15630.0
284.0	70.0	102.7	63.9	93.8	15630.0	-2.8	0.20	1.01	0.98	64.6	94.8	65.4	95.9	2.16	0.98	64.6	94.8	15724.3
285.0	70.0	102.7	64.6	94.8	15724.3	-2.8	0.19	1.00	0.97	65.3	95.7	66.0	96.8	2.05	0.97	65.3	95.7	15819.5
286.0	70.0	102.7	65.3	95.7	15819.5	-2.8	0.18	0.98	0.95	65.9	96.7	66.6	97.7	1.95	0.95	65.9	96.7	15915.7
287.0	70.0	102.7	65.9	96.7	15915.7	-2.8	0.17	0.96	0.93	66.5	97.6	67.2	98.5	1.85	0.93	66.5	97.6	16012.9
288.0	70.0	102.7	66.5	97.6	16012.9	-2.8	0.17	0.95	0.92	67.2	98.5	67.7	99.4	1.75	0.92	67.2	98.5	16110.9
289.0	70.0	102.7	67.2	98.5	16110.9	-2.8	0.16	0.93	0.90	67.8	99.4	68.3	100.2	1.65	0.90	67.8	99.4	16209.9
290.0	70.0	102.7	67.8	99.4	16209.9	-2.8	0.15	0.91	0.89	68.4	100.3	68.8	101.0	1.55	0.89	68.4	100.3	16309.8
291.0	70.0	102.7	68.4	100.3	16309.8	-2.8	0.14	0.90	0.87	69.0	101.2	69.4	101.8	1.45	0.87	69.0	101.2	16410.5
292.0	70.0	102.7	69.0	101.2	16410.5	-2.8	0.13	0.88	0.86	69.6	102.0	69.9	102.5	1.36	0.86	69.6	102.0	16512.1
293.0	70.0	102.7	69.6	102.0	16512.1	-2.8	0.12	0.87	0.85	70.2	102.9	70.0	102.7	0.62	0.62	70.0	102.7	16614.5
294.0	70.0	102.7	70.0	102.7	16614.5	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	16717.2
295.0	70.0	102.7	70.0	102.7	16717.2	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	16819.8
296.0	70.0	102.7	70.0	102.7	16819.8	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	16922.5
297.0	70.0	102.7	70.0	102.7	16922.5	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17025.2
298.0	70.0	102.7	70.0	102.7	17025.2	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17127.8
299.0	70.0	102.7	70.0	102.7	17127.8	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17230.5
300.0	70.0	102.7	70.0	102.7	17230.5	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17333.2
301.0	70.0	102.7	70.0	102.7	17333.2	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17435.8
302.0	70.0	102.7	70.0	102.7	17435.8	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17538.5
303.0	70.0	102.7	70.0	102.7	17538.5	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17641.2
304.0	70.0	102.7	70.0	102.7	17641.2	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17743.8
305.0	70.0	102.7	70.0	102.7	17743.8	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17846.5
306.0	70.0	102.7	70.0	102.7	17846.5	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	17949.2
307.0	70.0	102.7	70.0	102.7	17949.2	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18051.8
308.0	70.0	102.7	70.0	102.7	18051.8	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18154.5

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TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(17)			
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)								
309.0	70.0	102.7	70.0	102.7	18154.5	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18257.2
310.0	70.0	102.7	70.0	102.7	18257.2	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18359.8
311.0	70.0	102.7	70.0	102.7	18359.8	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18462.5
312.0	70.0	102.7	70.0	102.7	18462.5	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18565.2
313.0	70.0	102.7	70.0	102.7	18565.2	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18667.8
314.0	70.0	102.7	70.0	102.7	18667.8	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18770.5
315.0	70.0	102.7	70.0	102.7	18770.5	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18873.2
316.0	70.0	102.7	70.0	102.7	18873.2	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	18975.8
317.0	70.0	102.7	70.0	102.7	18975.8	-2.8	0.12	0.86	0.84	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	19078.5
5 318.0	70.0	102.7	70.0	102.7	19078.5	3.3	-1.84	-1.09	-1.12	69.2	101.5	70.0	102.7	0.00	-1.12	69.2	101.5	19180.6
319.0	70.0	102.7	69.2	101.5	19180.6	3.3	-1.83	-1.07	-1.10	68.5	100.4	70.0	102.7	1.12	-1.10	68.5	100.4	19281.6
320.0	70.0	102.7	68.5	100.4	19281.6	3.3	-1.82	-1.05	-1.08	67.8	99.4	69.5	101.9	1.44	-1.08	67.8	99.4	19381.5
321.0	70.0	102.7	67.8	99.4	19381.5	3.3	-1.81	-1.03	-1.06	67.0	98.3	68.8	100.9	1.56	-1.06	67.0	98.3	19480.3
322.0	70.0	102.7	67.0	98.3	19480.3	3.3	-1.80	-1.01	-1.04	66.3	97.3	68.2	100.0	1.67	-1.04	66.3	97.3	19578.1
323.0	70.0	102.7	66.3	97.3	19578.1	3.3	-1.79	-0.99	-1.02	65.6	96.2	67.5	99.0	1.78	-1.02	65.6	96.2	19674.9
324.0	70.0	102.7	65.6	96.2	19674.9	3.3	-1.78	-0.97	-1.01	64.9	95.2	66.9	98.1	1.89	-1.01	64.9	95.2	19770.6
325.0	70.0	102.7	64.9	95.2	19770.6	3.3	-1.77	-0.96	-0.99	64.3	94.2	66.3	97.2	2.00	-0.99	64.3	94.2	19865.4
326.0	70.0	102.7	64.3	94.2	19865.4	3.3	-1.76	-0.94	-0.97	63.6	93.3	65.7	96.4	2.11	-0.97	63.6	93.3	19959.1
327.0	70.0	102.7	63.6	93.3	19959.1	3.3	-1.75	-0.92	-0.95	62.9	92.3	65.1	95.5	2.21	-0.95	62.9	92.3	20051.9
328.0	70.0	102.7	62.9	92.3	20051.9	3.3	-1.74	-0.90	-0.94	62.3	91.4	64.5	94.6	2.32	-0.94	62.3	91.4	20143.8
329.0	70.0	102.7	62.3	91.4	20143.8	3.3	-1.74	-0.89	-0.92	61.7	90.5	64.0	93.8	2.42	-0.92	61.7	90.5	20234.7
330.0	70.0	102.7	61.7	90.5	20234.7	3.3	-1.73	-0.87	-0.90	61.1	89.6	63.4	93.0	2.52	-0.90	61.1	89.6	20324.7
331.0	70.0	102.7	61.1	89.6	20324.7	3.3	-1.72	-0.85	-0.89	60.5	88.7	62.8	92.2	2.62	-0.89	60.5	88.7	20413.8
332.0	70.0	102.7	60.5	88.7	20413.8	3.3	-1.71	-0.84	-0.87	59.9	87.8	62.3	91.4	2.71	-0.87	59.9	87.8	20502.1
333.0	70.0	102.7	59.9	87.8	20502.1	3.3	-1.70	-0.82	-0.85	59.3	87.0	61.8	90.6	2.80	-0.85	59.3	87.0	20589.5
334.0	70.0	102.7	59.3	87.0	20589.5	3.3	-1.70	-0.81	-0.84	58.7	86.1	61.3	89.9	2.90	-0.84	58.7	86.1	20676.0
335.0	70.0	102.7	58.7	86.1	20676.0	3.3	-1.69	-0.79	-0.82	58.2	85.3	60.8	89.1	2.99	-0.82	58.2	85.3	20761.7
336.0	70.0	102.7	58.2	85.3	20761.7	3.3	-1.68	-0.77	-0.81	57.6	84.5	60.3	88.4	3.08	-0.81	57.6	84.5	20846.6
337.0	70.0	102.7	57.6	84.5	20846.6	3.3	-1.68	-0.76	-0.79	57.1	83.7	59.8	87.6	3.16	-0.79	57.1	83.7	20930.7
338.0	70.0	102.7	57.1	83.7	20930.7	3.3	-1.67	-0.74	-0.78	56.5	82.9	59.3	86.9	3.25	-0.78	56.5	82.9	21014.0
339.0	70.0	102.7	56.5	82.9	21014.0	3.3	-1.66	-0.73	-0.76	56.0	82.2	58.8	86.3	3.33	-0.76	56.0	82.2	21096.5
340.0	70.0	102.7	56.0	82.2	21096.5	3.3	-1.66	-0.71	-0.75	55.5	81.4	58.3	85.6	3.42	-0.75	55.5	81.4	21178.3
341.0	70.0	102.7	55.5	81.4	21178.3	3.3	-1.65	-0.70	-0.73	55.0	80.7	57.9	84.9	3.50	-0.73	55.0	80.7	21259.4
342.0	70.0	102.7	55.0	80.7	21259.4	3.3	-1.65	-0.69	-0.72	54.5	80.0	57.4	84.3	3.57	-0.72	54.5	80.0	21339.7
343.0	70.0	102.7	54.5	80.0	21339.7	3.3	-1.64	-0.67	-0.70	54.0	79.3	57.0	83.6	3.65	-0.70	54.0	79.3	21419.3
344.0	70.0	102.7	54.0	79.3	21419.3	3.3	-1.63	-0.66	-0.69	53.6	78.6	56.6	83.0	3.73	-0.69	53.6	78.6	21498.2
345.0	70.0	102.7	53.6	78.6	21498.2	3.3	-1.63	-0.64	-0.68	53.1	77.9	56.2	82.4	3.80	-0.68	53.1	77.9	21576.4
346.0	70.0	102.7	53.1	77.9	21576.4	3.3	-1.62	-0.63	-0.66	52.7	77.2	55.8	81.8	3.88	-0.66	52.7	77.2	21654.0
347.0	70.0	102.7	52.7	77.2	21654.0	3.3	-1.62	-0.62	-0.65	52.2	76.6	55.3	81.2	3.95	-0.65	52.2	76.6	21730.9
348.0	70.0	102.7	52.2	76.6	21730.9	3.3	-1.61	-0.60	-0.63	51.8	75.9	55.0	80.6	4.02	-0.63	51.8	75.9	21807.2
349.0	70.0	102.7	51.8	75.9	21807.2	3.3	-1.61	-0.59	-0.62	51.4	75.3	54.6	80.0	4.09	-0.62	51.4	75.3	21882.8
350.0	70.0	102.7	51.4	75.3	21882.8	3.3	-1.60	-0.58	-0.61	50.9	74.7	54.2	79.5	4.15	-0.61	50.9	74.7	21957.8
351.0	70.0	102.7	50.9	74.7	21957.8	3.3	-1.60	-0.56	-0.60	50.5	74.1	53.8	78.9	4.22	-0.60	50.5	74.1	22032.2
352.0	70.0	102.7	50.5	74.1	22032.2	3.3	-1.60	-0.55	-0.58	50.1	73.5	53.5	78.4	4.28	-0.58	50.1	73.5	22106.1

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2) Desired speed		(3) Start of 1-sec Interval		(4) Local grade (%)	(5) Limiting acceleration (ft/sec ²)			(6) New speed based on vehicle performance		(7) Limiting acceleration and speed based on driver preferences				(8) Actual acceleration (ft/sec ²)	(9) End of 1-sec Interval		
	(mph)	(ft/sec)	Speed			Coasting	Power	Effective	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)	(mph)		(ft/sec)	New speed (mph)	New position (ft)
			(mph)	(ft/sec)							(mph)	(ft/sec)						
	(6)	(7)	(8)	(9)		(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)		(19)		
353.0	70.0	102.7	50.1	73.5	22106.1	3.3	-1.59	-0.54	-0.57	49.8	73.0	53.1	77.9	4.35	-0.57	49.8	73.0	22179.3
354.0	70.0	102.7	49.8	73.0	22179.3	3.3	-1.59	-0.53	-0.56	49.4	72.4	52.8	77.4	4.41	-0.56	49.4	72.4	22252.0
355.0	70.0	102.7	49.4	72.4	22252.0	-4.8	1.01	2.04	1.94	50.7	74.3	52.4	76.9	4.47	1.94	50.7	74.3	22325.4
356.0	70.0	102.7	50.7	74.3	22325.4	-4.8	0.99	2.00	1.90	52.0	76.2	53.6	78.6	4.26	1.90	52.0	76.2	22400.7
357.0	70.0	102.7	52.0	76.2	22400.7	-4.8	0.98	1.96	1.87	53.3	78.1	54.8	80.3	4.05	1.87	53.3	78.1	22477.9
358.0	70.0	102.7	53.3	78.1	22477.9	-4.8	0.96	1.93	1.84	54.5	80.0	55.9	82.0	3.85	1.84	54.5	80.0	22556.9
359.0	70.0	102.7	54.5	80.0	22556.9	-4.8	0.95	1.89	1.81	55.8	81.8	57.0	83.6	3.65	1.81	55.8	81.8	22637.8
360.0	70.0	102.7	55.8	81.8	22637.8	-4.8	0.94	1.86	1.78	57.0	83.6	58.1	85.2	3.46	1.78	57.0	83.6	22720.4
361.0	70.0	102.7	57.0	83.6	22720.4	-4.8	0.92	1.82	1.75	58.2	85.3	59.2	86.8	3.26	1.75	58.2	85.3	22804.9
362.0	70.0	102.7	58.2	85.3	22804.9	-4.8	0.91	1.79	1.72	59.3	87.0	60.3	88.4	3.08	1.72	59.3	87.0	22891.0
363.0	70.0	102.7	59.3	87.0	22891.0	-4.8	0.89	1.76	1.70	60.5	88.7	61.3	89.9	2.89	1.70	60.5	88.7	22978.9
364.0	70.0	102.7	60.5	88.7	22978.9	-4.8	0.88	1.73	1.67	61.6	90.4	62.3	91.4	2.71	1.67	61.6	90.4	23068.4
365.0	70.0	102.7	61.6	90.4	23068.4	-4.8	0.86	1.70	1.64	62.7	92.0	63.4	92.9	2.53	1.64	62.7	92.0	23159.7
366.0	70.0	102.7	62.7	92.0	23159.7	-4.8	0.85	1.67	1.62	63.8	93.6	64.3	94.4	2.35	1.62	63.8	93.6	23252.5
367.0	70.0	102.7	63.8	93.6	23252.5	-4.8	0.83	1.64	1.59	64.9	95.2	65.3	95.8	2.17	1.59	64.9	95.2	23346.9
368.0	70.0	102.7	64.9	95.2	23346.9	-4.8	0.82	1.61	1.56	66.0	96.8	66.3	97.2	2.00	1.56	66.0	96.8	23443.0
369.0	70.0	102.7	66.0	96.8	23443.0	-4.8	0.80	1.59	1.54	67.0	98.3	67.2	98.6	1.83	1.54	67.0	98.3	23540.5
370.0	70.0	102.7	67.0	98.3	23540.5	-4.8	0.79	1.56	1.51	68.1	99.9	68.2	100.0	1.67	1.51	68.1	99.9	23639.6
371.0	70.0	102.7	68.1	99.9	23639.6	-4.8	0.77	1.53	1.49	69.1	101.3	69.1	101.4	1.50	1.49	69.1	101.3	23740.2
372.0	70.0	102.7	69.1	101.3	23740.2	-4.8	0.76	1.51	1.47	70.1	102.8	70.0	102.7	1.32	1.32	70.0	102.7	23842.2
373.0	70.0	102.7	70.0	102.7	23842.2	-4.8	0.75	1.49	1.45	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	23944.9
374.0	70.0	102.7	70.0	102.7	23944.9	-4.8	0.75	1.49	1.45	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	24047.6
375.0	70.0	102.7	70.0	102.7	24047.6	-4.8	0.75	1.49	1.45	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	24150.2
376.0	70.0	102.7	70.0	102.7	24150.2	-4.8	0.75	1.49	1.45	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	24252.9
377.0	70.0	102.7	70.0	102.7	24252.9	-4.8	0.75	1.49	1.45	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	24355.6
378.0	70.0	102.7	70.0	102.7	24355.6	-4.8	0.75	1.49	1.45	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	24458.2
379.0	70.0	102.7	70.0	102.7	24458.2	-4.8	0.75	1.49	1.45	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	24560.9
380.0	70.0	102.7	70.0	102.7	24560.9	-4.8	0.75	1.49	1.45	71.0	104.1	70.0	102.7	0.00	0.00	70.0	102.7	24663.6
381.0	70.0	102.7	70.0	102.7	24663.6	3.5	-1.91	-1.16	-1.19	69.2	101.5	70.0	102.7	0.00	-1.19	69.2	101.5	24765.6
382.0	70.0	102.7	69.2	101.5	24765.6	3.5	-1.90	-1.14	-1.17	68.4	100.3	70.0	102.7	1.19	-1.17	68.4	100.3	24866.5
383.0	70.0	102.7	68.4	100.3	24866.5	3.5	-1.89	-1.12	-1.15	67.6	99.2	69.4	101.8	1.45	-1.15	67.6	99.2	24966.3
384.0	70.0	102.7	67.6	99.2	24966.3	3.5	-1.88	-1.10	-1.13	66.8	98.0	68.7	100.7	1.58	-1.13	66.8	98.0	25064.8
385.0	70.0	102.7	66.8	98.0	25064.8	3.5	-1.87	-1.08	-1.11	66.1	96.9	68.0	99.7	1.70	-1.11	66.1	96.9	25162.3
386.0	70.0	102.7	66.1	96.9	25162.3	3.5	-1.86	-1.06	-1.09	65.3	95.8	67.3	98.7	1.82	-1.09	65.3	95.8	25258.7
387.0	70.0	102.7	65.3	95.8	25258.7	3.5	-1.85	-1.04	-1.07	64.6	94.8	66.7	97.8	1.94	-1.07	64.6	94.8	25354.0
388.0	70.0	102.7	64.6	94.8	25354.0	3.5	-1.84	-1.02	-1.05	63.9	93.7	66.0	96.8	2.05	-1.05	63.9	93.7	25448.2
389.0	70.0	102.7	63.9	93.7	25448.2	3.5	-1.83	-1.00	-1.03	63.2	92.7	65.4	95.9	2.17	-1.03	63.2	92.7	25541.4
390.0	70.0	102.7	63.2	92.7	25541.4	3.5	-1.82	-0.98	-1.02	62.5	91.7	64.7	94.9	2.28	-1.02	62.5	91.7	25633.6
391.0	70.0	102.7	62.5	91.7	25633.6	3.5	-1.81	-0.96	-1.00	61.8	90.7	64.1	94.0	2.39	-1.00	61.8	90.7	25724.7
392.0	70.0	102.7	61.8	90.7	25724.7	1.7	-1.23	-0.38	-0.40	61.5	90.3	63.5	93.2	2.50	-0.40	61.5	90.3	25815.2
393.0	70.0	102.7	61.5	90.3	25815.2	1.7	-1.23	-0.38	-0.39	61.3	89.9	63.3	92.8	2.54	-0.39	61.3	89.9	25905.2
394.0	70.0	102.7	61.3	89.9	25905.2	1.7	-1.23	-0.37	-0.38	61.0	89.5	63.0	92.5	2.58	-0.38	61.0	89.5	25994.9
395.0	70.0	102.7	61.0	89.5	25994.9	1.7	-1.22	-0.36	-0.38	60.8	89.1	62.8	92.1	2.62	-0.38	60.8	89.1	26084.2
396.0	70.0	102.7	60.8	89.1	26084.2	1.7	-1.22	-0.35	-0.37	60.5	88.7	62.6	91.8	2.66	-0.37	60.5	88.7	26173.1

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(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(17)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	(ft/sec)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)								
397.0	70.0	102.7	60.5	88.7	26173.1	1.7	-1.22	-0.35	-0.36	60.3	88.4	62.4	91.4	2.70	-0.36	60.3	88.4	26261.7
398.0	70.0	102.7	60.3	88.4	26261.7	1.7	-1.21	-0.34	-0.35	60.0	88.0	62.1	91.1	2.74	-0.35	60.0	88.0	26349.9
399.0	70.0	102.7	60.0	88.0	26349.9	1.7	-1.21	-0.33	-0.35	59.8	87.7	61.9	90.8	2.78	-0.35	59.8	87.7	26437.7
400.0	70.0	102.7	59.8	87.7	26437.7	1.7	-1.21	-0.33	-0.34	59.5	87.3	61.7	90.5	2.82	-0.34	59.5	87.3	26525.3
401.0	70.0	102.7	59.5	87.3	26525.3	1.7	-1.20	-0.32	-0.33	59.3	87.0	61.5	90.2	2.86	-0.33	59.3	87.0	26612.4
402.0	70.0	102.7	59.3	87.0	26612.4	1.7	-1.20	-0.32	-0.33	59.1	86.7	61.3	89.9	2.89	-0.33	59.1	86.7	26699.3
403.0	70.0	102.7	59.1	86.7	26699.3	1.7	-1.20	-0.31	-0.32	58.9	86.4	61.1	89.6	2.93	-0.32	58.9	86.4	26785.8
404.0	70.0	102.7	58.9	86.4	26785.8	1.7	-1.20	-0.30	-0.32	58.7	86.0	60.9	89.3	2.96	-0.32	58.7	86.0	26872.0
405.0	70.0	102.7	58.7	86.0	26872.0	1.7	-1.19	-0.30	-0.31	58.4	85.7	60.7	89.0	3.00	-0.31	58.4	85.7	26957.9
406.0	70.0	102.7	58.4	85.7	26957.9	1.7	-1.19	-0.29	-0.30	58.2	85.4	60.5	88.8	3.03	-0.30	58.2	85.4	27043.4
407.0	70.0	102.7	58.2	85.4	27043.4	4.0	-1.93	-1.02	-1.06	57.5	84.4	60.3	88.5	3.06	-1.06	57.5	84.4	27128.3
408.0	70.0	102.7	57.5	84.4	27128.3	4.0	-1.92	-1.00	-1.04	56.8	83.3	59.7	87.5	3.18	-1.04	56.8	83.3	27212.2
409.0	70.0	102.7	56.8	83.3	27212.2	4.0	-1.91	-0.98	-1.02	56.1	82.3	59.1	86.6	3.29	-1.02	56.1	82.3	27295.0
410.0	70.0	102.7	56.1	82.3	27295.0	4.0	-1.90	-0.96	-1.00	55.4	81.3	58.4	85.7	3.40	-1.00	55.4	81.3	27376.8
411.0	70.0	102.7	55.4	81.3	27376.8	4.0	-1.89	-0.94	-0.98	54.8	80.3	57.8	84.8	3.51	-0.98	54.8	80.3	27457.6
412.0	70.0	102.7	54.8	80.3	27457.6	4.0	-1.88	-0.92	-0.96	54.1	79.4	57.2	83.9	3.61	-0.96	54.1	79.4	27537.5
413.0	70.0	102.7	54.1	79.4	27537.5	4.0	-1.88	-0.90	-0.94	53.5	78.4	56.6	83.1	3.72	-0.94	53.5	78.4	27616.3
414.0	70.0	102.7	53.5	78.4	27616.3	4.0	-1.87	-0.88	-0.92	52.8	77.5	56.1	82.2	3.82	-0.92	52.8	77.5	27694.3
415.0	70.0	102.7	52.8	77.5	27694.3	4.0	-1.86	-0.86	-0.90	52.2	76.6	55.5	81.4	3.92	-0.90	52.2	76.6	27771.4
416.0	70.0	102.7	52.2	76.6	27771.4	4.0	-1.86	-0.84	-0.89	51.6	75.7	55.0	80.6	4.02	-0.89	51.6	75.7	27847.5
417.0	70.0	102.7	51.6	75.7	27847.5	4.0	-1.85	-0.82	-0.87	51.0	74.8	54.4	79.8	4.11	-0.87	51.0	74.8	27922.8
418.0	70.0	102.7	51.0	74.8	27922.8	-0.8	-0.30	0.72	0.68	51.5	75.5	53.9	79.0	4.20	0.68	51.5	75.5	27998.0
419.0	70.0	102.7	51.5	75.5	27998.0	-0.8	-0.30	0.71	0.67	52.0	76.2	54.3	79.7	4.13	0.67	52.0	76.2	28073.8
420.0	70.0	102.7	52.0	76.2	28073.8	-0.8	-0.31	0.69	0.66	52.4	76.9	54.7	80.3	4.06	0.66	52.4	76.9	28150.4
421.0	70.0	102.7	52.4	76.9	28150.4	-0.8	-0.31	0.68	0.65	52.8	77.5	55.1	80.8	3.99	0.65	52.8	77.5	28227.6
422.0	70.0	102.7	52.8	77.5	28227.6	-0.8	-0.32	0.67	0.64	53.3	78.1	55.5	81.4	3.92	0.64	53.3	78.1	28305.4
423.0	70.0	102.7	53.3	78.1	28305.4	-0.8	-0.32	0.65	0.62	53.7	78.8	55.9	82.0	3.85	0.62	53.7	78.8	28383.8
424.0	70.0	102.7	53.7	78.8	28383.8	-0.8	-0.33	0.64	0.61	54.1	79.4	56.3	82.5	3.78	0.61	54.1	79.4	28462.9
425.0	70.0	102.7	54.1	79.4	28462.9	-0.8	-0.33	0.63	0.60	54.5	80.0	56.7	83.1	3.72	0.60	54.5	80.0	28542.6
426.0	70.0	102.7	54.5	80.0	28542.6	-0.8	-0.34	0.62	0.59	54.9	80.6	57.0	83.6	3.65	0.59	54.9	80.6	28622.8
427.0	70.0	102.7	54.9	80.6	28622.8	-0.8	-0.34	0.61	0.58	55.3	81.1	57.4	84.2	3.59	0.58	55.3	81.1	28703.7
428.0	70.0	102.7	55.3	81.1	28703.7	-0.8	-0.35	0.59	0.57	55.7	81.7	57.7	84.7	3.52	0.57	55.7	81.7	28785.1
429.0	70.0	102.7	55.7	81.7	28785.1	-0.8	-0.35	0.58	0.56	56.1	82.3	58.1	85.2	3.46	0.56	56.1	82.3	28867.1
430.0	70.0	102.7	56.1	82.3	28867.1	-0.8	-0.36	0.57	0.55	56.5	82.8	58.4	85.7	3.40	0.55	56.5	82.8	28949.7
431.0	70.0	102.7	56.5	82.8	28949.7	-0.8	-0.36	0.56	0.54	56.8	83.4	58.8	86.2	3.34	0.54	56.8	83.4	29032.8
432.0	70.0	102.7	56.8	83.4	29032.8	-0.8	-0.36	0.55	0.53	57.2	83.9	59.1	86.7	3.28	0.53	57.2	83.9	29116.4
433.0	70.0	102.7	57.2	83.9	29116.4	-0.8	-0.37	0.54	0.52	57.6	84.4	59.4	87.1	3.23	0.52	57.6	84.4	29200.6
434.0	70.0	102.7	57.6	84.4	29200.6	-0.8	-0.37	0.53	0.51	57.9	84.9	59.7	87.6	3.17	0.51	57.9	84.9	29285.2
435.0	70.0	102.7	57.9	84.9	29285.2	-0.8	-0.38	0.52	0.50	58.2	85.4	60.0	88.0	3.12	0.50	58.2	85.4	29370.4
436.0	70.0	102.7	58.2	85.4	29370.4	-0.8	-0.38	0.51	0.49	58.6	85.9	60.3	88.5	3.06	0.49	58.6	85.9	29456.1
437.0	70.0	102.7	58.6	85.9	29456.1	-0.8	-0.39	0.50	0.49	58.9	86.4	60.6	88.9	3.01	0.49	58.9	86.4	29542.3
438.0	70.0	102.7	58.9	86.4	29542.3	-0.8	-0.39	0.50	0.48	59.2	86.9	60.9	89.4	2.96	0.48	59.2	86.9	29628.9
439.0	70.0	102.7	59.2	86.9	29628.9	-0.8	-0.39	0.49	0.47	59.6	87.4	61.2	89.8	2.90	0.47	59.6	87.4	29716.0
440.0	70.0	102.7	59.6	87.4	29716.0	-0.8	-0.40	0.48	0.46	59.9	87.8	61.5	90.2	2.85	0.46	59.9	87.8	29803.6

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TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)				(16) Actual acceleration (ft/sec ²)	(17)		
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences					End of 1-sec Interval		
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)	New speed (mph)		New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(mph)	(ft/sec)						
441.0	70.0	102.7	59.9	87.8	29803.6	-0.8	-0.40	0.47	0.45	60.2	88.3	61.8	90.6	2.80	0.45	60.2	88.3	29891.7
442.0	70.0	102.7	60.2	88.3	29891.7	-0.8	-0.41	0.46	0.44	60.5	88.7	62.1	91.0	2.76	0.44	60.5	88.7	29980.2
443.0	70.0	102.7	60.5	88.7	29980.2	-0.8	-0.41	0.45	0.44	60.8	89.1	62.3	91.4	2.71	0.44	60.8	89.1	30069.1
444.0	70.0	102.7	60.8	89.1	30069.1	-0.8	-0.41	0.44	0.43	61.1	89.6	62.6	91.8	2.66	0.43	61.1	89.6	30158.4
445.0	70.0	102.7	61.1	89.6	30158.4	-0.8	-0.42	0.44	0.42	61.4	90.0	62.9	92.2	2.61	0.42	61.4	90.0	30248.2
446.0	70.0	102.7	61.4	90.0	30248.2	-0.8	-0.42	0.43	0.41	61.6	90.4	63.1	92.6	2.57	0.41	61.6	90.4	30338.4
447.0	70.0	102.7	61.6	90.4	30338.4	-0.8	-0.42	0.42	0.41	61.9	90.8	63.4	92.9	2.52	0.41	61.9	90.8	30429.1
448.0	70.0	102.7	61.9	90.8	30429.1	-0.8	-0.43	0.41	0.40	62.2	91.2	63.6	93.3	2.48	0.40	62.2	91.2	30520.1
449.0	70.0	102.7	62.2	91.2	30520.1	-0.8	-0.43	0.41	0.39	62.5	91.6	63.9	93.7	2.44	0.39	62.5	91.6	30611.5
450.0	70.0	102.7	62.5	91.6	30611.5	-0.8	-0.44	0.40	0.39	62.7	92.0	64.1	94.0	2.39	0.39	62.7	92.0	30703.3
451.0	70.0	102.7	62.7	92.0	30703.3	-0.8	-0.44	0.39	0.38	63.0	92.4	64.3	94.4	2.35	0.38	63.0	92.4	30795.5
452.0	70.0	102.7	63.0	92.4	30795.5	-4.4	0.72	1.54	1.49	64.0	93.9	64.6	94.7	2.31	1.49	64.0	93.9	30888.6
453.0	70.0	102.7	64.0	93.9	30888.6	-4.4	0.70	1.51	1.46	65.0	95.3	65.5	96.0	2.15	1.46	65.0	95.3	30983.2
454.0	70.0	102.7	65.0	95.3	30983.2	-4.4	0.69	1.48	1.44	66.0	96.8	66.4	97.3	1.99	1.44	66.0	96.8	31079.3
455.0	70.0	102.7	66.0	96.8	31079.3	-4.4	0.68	1.46	1.42	66.9	98.2	67.2	98.6	1.84	1.42	66.9	98.2	31176.8
456.0	70.0	102.7	66.9	98.2	31176.8	-4.4	0.66	1.43	1.39	67.9	99.6	68.1	99.9	1.68	1.39	67.9	99.6	31275.7
457.0	70.0	102.7	67.9	99.6	31275.7	-4.4	0.65	1.41	1.37	68.8	101.0	68.9	101.1	1.53	1.37	68.8	101.0	31375.9
458.0	70.0	102.7	68.8	101.0	31375.9	-4.4	0.64	1.39	1.35	69.7	102.3	69.8	102.3	1.39	1.35	69.7	102.3	31477.5
459.0	70.0	102.7	69.7	102.3	31477.5	-4.4	0.62	1.36	1.33	70.7	103.6	70.0	102.7	0.37	0.37	70.0	102.7	31580.0
10 460.0	70.0	102.7	70.0	102.7	31580.0	-4.4	0.62	1.36	1.32	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	31682.7
461.0	70.0	102.7	70.0	102.7	31682.7	-4.4	0.62	1.36	1.32	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	31785.4
462.0	70.0	102.7	70.0	102.7	31785.4	-4.4	0.62	1.36	1.32	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	31888.0
463.0	70.0	102.7	70.0	102.7	31888.0	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	31990.7
464.0	70.0	102.7	70.0	102.7	31990.7	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	32093.4
465.0	70.0	102.7	70.0	102.7	32093.4	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	32196.0
466.0	70.0	102.7	70.0	102.7	32196.0	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	32298.7
467.0	70.0	102.7	70.0	102.7	32298.7	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	32401.4
468.0	70.0	102.7	70.0	102.7	32401.4	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	32504.0
469.0	70.0	102.7	70.0	102.7	32504.0	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	32606.7
470.0	70.0	102.7	70.0	102.7	32606.7	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	32709.4
471.0	70.0	102.7	70.0	102.7	32709.4	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	32812.0
11 472.0	70.0	102.7	70.0	102.7	32812.0	2.6	-1.63	-0.88	-0.90	69.4	101.8	70.0	102.7	0.00	-0.90	69.4	101.8	32914.2
473.0	70.0	102.7	69.4	101.8	32914.2	2.6	-1.62	-0.86	-0.89	68.8	100.9	70.0	102.7	0.90	-0.89	68.8	100.9	33015.6
474.0	70.0	102.7	68.8	100.9	33015.6	2.6	-1.62	-0.85	-0.87	68.2	100.0	69.7	102.3	1.39	-0.87	68.2	100.0	33116.0
475.0	70.0	102.7	68.2	100.0	33116.0	2.6	-1.61	-0.83	-0.86	67.6	99.1	69.2	101.5	1.49	-0.86	67.6	99.1	33215.6
476.0	70.0	102.7	67.6	99.1	33215.6	2.6	-1.60	-0.82	-0.84	67.0	98.3	68.7	100.7	1.58	-0.84	67.0	98.3	33314.3
477.0	70.0	102.7	67.0	98.3	33314.3	2.6	-1.59	-0.80	-0.83	66.5	97.5	68.2	100.0	1.67	-0.83	66.5	97.5	33412.2
478.0	70.0	102.7	66.5	97.5	33412.2	2.6	-1.58	-0.79	-0.81	65.9	96.7	67.7	99.2	1.76	-0.81	65.9	96.7	33509.2
479.0	70.0	102.7	65.9	96.7	33509.2	2.6	-1.58	-0.77	-0.80	65.4	95.9	67.2	98.5	1.85	-0.80	65.4	95.9	33605.5
480.0	70.0	102.7	65.4	95.9	33605.5	2.6	-1.57	-0.76	-0.79	64.8	95.1	66.7	97.8	1.94	-0.79	64.8	95.1	33701.0
481.0	70.0	102.7	64.8	95.1	33701.0	2.6	-1.56	-0.75	-0.77	64.3	94.3	66.2	97.1	2.02	-0.77	64.3	94.3	33795.6
482.0	70.0	102.7	64.3	94.3	33795.6	2.6	-1.55	-0.73	-0.76	63.8	93.5	65.7	96.4	2.10	-0.76	63.8	93.5	33889.6
483.0	70.0	102.7	63.8	93.5	33889.6	2.6	-1.55	-0.72	-0.74	63.3	92.8	65.3	95.7	2.19	-0.74	63.3	92.8	33982.7
484.0	70.0	102.7	63.3	92.8	33982.7	2.6	-1.54	-0.71	-0.73	62.8	92.1	64.8	95.1	2.27	-0.73	62.8	92.1	34075.2

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2) Desired speed		(3)-(6) Start of 1-sec Interval			(7) Local grade (%)	(8)-(10) Limiting acceleration (ft/sec ²)			(11)-(12) New speed based on vehicle performance		(13)-(15) Limiting acceleration and speed based on driver preferences				(16) Actual acceleration (ft/sec ²)	(17)-(19) End of 1-sec Interval		
			Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)	New speed		New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)		(mph)			(ft/sec)	
485.0	70.0	102.7	62.8	92.1	34075.2	2.6	-1.53	-0.69	-0.72	62.3	91.4	64.4	94.4	2.34	-0.72	62.3	91.4	34166.9	
486.0	70.0	102.7	62.3	91.4	34166.9	2.6	-1.53	-0.68	-0.70	61.8	90.6	63.9	93.8	2.42	-0.70	61.8	90.6	34257.9	
487.0	70.0	102.7	61.8	90.6	34257.9	2.6	-1.52	-0.67	-0.69	61.3	90.0	63.5	93.1	2.50	-0.69	61.3	90.0	34348.2	
488.0	70.0	102.7	61.3	90.0	34348.2	2.6	-1.51	-0.65	-0.68	60.9	89.3	63.1	92.5	2.57	-0.68	60.9	89.3	34437.8	
12 489.0	70.0	102.7	60.9	89.3	34437.8	-4.0	0.62	1.46	1.41	61.8	90.7	62.7	91.9	2.65	1.41	61.8	90.7	34527.8	
490.0	70.0	102.7	61.8	90.7	34527.8	-4.0	0.60	1.44	1.39	62.8	92.1	63.5	93.2	2.49	1.39	62.8	92.1	34619.2	
491.0	70.0	102.7	62.8	92.1	34619.2	-4.0	0.59	1.41	1.37	63.7	93.4	64.4	94.4	2.34	1.37	63.7	93.4	34711.9	
492.0	70.0	102.7	63.7	93.4	34711.9	-4.0	0.58	1.39	1.35	64.6	94.8	65.2	95.6	2.20	1.35	64.6	94.8	34806.1	
493.0	70.0	102.7	64.6	94.8	34806.1	-4.0	0.57	1.37	1.32	65.5	96.1	66.0	96.8	2.05	1.32	65.5	96.1	34901.5	
494.0	70.0	102.7	65.5	96.1	34901.5	-4.0	0.55	1.34	1.30	66.4	97.4	66.8	98.0	1.91	1.30	66.4	97.4	34998.3	
495.0	70.0	102.7	66.4	97.4	34998.3	-4.0	0.54	1.32	1.28	67.3	98.7	67.6	99.2	1.77	1.28	67.3	98.7	35096.3	
496.0	70.0	102.7	67.3	98.7	35096.3	-4.0	0.53	1.30	1.26	68.2	100.0	68.4	100.3	1.63	1.26	68.2	100.0	35195.7	
497.0	70.0	102.7	68.2	100.0	35195.7	-4.0	0.52	1.28	1.24	69.0	101.2	69.2	101.5	1.49	1.24	69.0	101.2	35296.3	
498.0	70.0	102.7	69.0	101.2	35296.3	-4.0	0.50	1.25	1.22	69.8	102.4	69.9	102.6	1.36	1.22	69.8	102.4	35398.1	
499.0	70.0	102.7	69.8	102.4	35398.1	-4.0	0.49	1.23	1.20	70.7	103.6	70.0	102.7	0.24	0.24	70.0	102.7	35500.6	
13 500.0	70.0	102.7	70.0	102.7	35500.6	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	35603.3	
501.0	70.0	102.7	70.0	102.7	35603.3	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	35705.9	
502.0	70.0	102.7	70.0	102.7	35705.9	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	35808.6	
503.0	70.0	102.7	70.0	102.7	35808.6	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	35911.3	
504.0	70.0	102.7	70.0	102.7	35911.3	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	36013.9	
505.0	70.0	102.7	70.0	102.7	36013.9	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	36116.6	
506.0	70.0	102.7	70.0	102.7	36116.6	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	36219.3	
507.0	70.0	102.7	70.0	102.7	36219.3	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	36321.9	
508.0	70.0	102.7	70.0	102.7	36321.9	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	36424.6	
509.0	70.0	102.7	70.0	102.7	36424.6	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	36527.3	
510.0	70.0	102.7	70.0	102.7	36527.3	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	36629.9	
511.0	70.0	102.7	70.0	102.7	36629.9	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	36732.6	
512.0	70.0	102.7	70.0	102.7	36732.6	-4.0	0.49	1.23	1.20	70.8	103.9	70.0	102.7	0.00	0.00	70.0	102.7	36835.3	
14 513.0	70.0	102.7	70.0	102.7	36835.3	3.0	-1.76	-1.00	-1.03	69.3	101.6	70.0	102.7	0.00	-1.03	69.3	101.6	36937.4	
514.0	70.0	102.7	69.3	101.6	36937.4	3.0	-1.75	-0.99	-1.01	68.6	100.6	70.0	102.7	1.03	-1.01	68.6	100.6	37038.6	
515.0	70.0	102.7	68.6	100.6	37038.6	3.0	-1.74	-0.97	-1.00	67.9	99.6	69.6	102.0	1.42	-1.00	67.9	99.6	37138.7	
516.0	70.0	102.7	67.9	99.6	37138.7	3.0	-1.73	-0.95	-0.98	67.3	98.6	69.0	101.2	1.53	-0.98	67.3	98.6	37237.8	
517.0	70.0	102.7	67.3	98.6	37237.8	3.0	-1.72	-0.93	-0.96	66.6	97.7	68.4	100.3	1.63	-0.96	66.6	97.7	37336.0	
518.0	70.0	102.7	66.6	97.7	37336.0	3.0	-1.71	-0.92	-0.95	66.0	96.7	67.8	99.4	1.74	-0.95	66.0	96.7	37433.2	
519.0	70.0	102.7	66.0	96.7	37433.2	3.0	-1.70	-0.90	-0.93	65.3	95.8	67.2	98.6	1.84	-0.93	65.3	95.8	37529.4	
520.0	70.0	102.7	65.3	95.8	37529.4	3.0	-1.69	-0.88	-0.91	64.7	94.9	66.6	97.7	1.94	-0.91	64.7	94.9	37624.8	
521.0	70.0	102.7	64.7	94.9	37624.8	3.0	-1.68	-0.87	-0.90	64.1	94.0	66.1	96.9	2.04	-0.90	64.1	94.0	37719.2	
522.0	70.0	102.7	64.1	94.0	37719.2	3.0	-1.68	-0.85	-0.88	63.5	93.1	65.5	96.1	2.14	-0.88	63.5	93.1	37812.8	
523.0	70.0	102.7	63.5	93.1	37812.8	3.0	-1.67	-0.84	-0.86	62.9	92.2	65.0	95.3	2.23	-0.86	62.9	92.2	37905.5	
524.0	70.0	102.7	62.9	92.2	37905.5	3.0	-1.66	-0.82	-0.85	62.3	91.4	64.5	94.6	2.33	-0.85	62.3	91.4	37997.3	
525.0	70.0	102.7	62.3	91.4	37997.3	3.0	-1.65	-0.80	-0.83	61.7	90.6	64.0	93.8	2.42	-0.83	61.7	90.6	38088.3	
526.0	70.0	102.7	61.7	90.6	38088.3	3.0	-1.64	-0.79	-0.82	61.2	89.7	63.5	93.1	2.51	-0.82	61.2	89.7	38178.4	
527.0	70.0	102.7	61.2	89.7	38178.4	3.0	-1.64	-0.77	-0.80	60.6	88.9	63.0	92.3	2.60	-0.80	60.6	88.9	38267.8	
528.0	70.0	102.7	60.6	88.9	38267.8	3.0	-1.63	-0.76	-0.79	60.1	88.2	62.5	91.6	2.68	-0.79	60.1	88.2	38356.3	

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2) Desired speed		(3) Start of 1-sec Interval			(4) Local grade (%)	(5) Limiting acceleration (ft/sec ²)			(6) New speed based on vehicle performance		(7) Limiting acceleration and speed based on driver preferences				(8) Actual acceleration (ft/sec ²)	(9) End of 1-sec Interval		
	(mph)	(ft/sec)	Speed		Position (ft)		Coasting	Power	Effective	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)	New speed (mph)		(ft/sec)	New position (ft)	
			(mph)	(ft/sec)								(mph)	(ft/sec)						(mph)
	(3)	(4)	(5)	(6)	(7)		(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)		(17)	(18)	(19)
529.0	70.0	102.7	60.1	88.2	38356.3	3.0	-1.62	-0.75	-0.77	59.6	87.4	62.0	90.9	2.77	-0.77	59.6	87.4	38444.1	
530.0	70.0	102.7	59.6	87.4	38444.1	3.0	-1.62	-0.73	-0.76	59.1	86.6	61.5	90.2	2.85	-0.76	59.1	86.6	38531.1	
531.0	70.0	102.7	59.1	86.6	38531.1	3.0	-1.61	-0.72	-0.75	58.6	85.9	61.1	89.6	2.93	-0.75	58.6	85.9	38617.3	
15 532.0	70.0	102.7	58.6	85.9	38617.3	-4.5	0.81	1.68	1.62	59.7	87.5	60.6	88.9	3.01	1.62	59.7	87.5	38704.0	
533.0	70.0	102.7	59.7	87.5	38704.0	-4.5	0.79	1.65	1.60	60.7	89.1	61.6	90.3	2.84	1.60	60.7	89.1	38792.3	
534.0	70.0	102.7	60.7	89.1	38792.3	-4.5	0.78	1.63	1.57	61.8	90.7	62.6	91.8	2.67	1.57	61.8	90.7	38882.2	
535.0	70.0	102.7	61.8	90.7	38882.2	-4.5	0.76	1.60	1.54	62.9	92.2	63.5	93.2	2.50	1.54	62.9	92.2	38973.6	
536.0	70.0	102.7	62.9	92.2	38973.6	-4.5	0.75	1.57	1.52	63.9	93.7	64.5	94.5	2.33	1.52	63.9	93.7	39066.6	
537.0	70.0	102.7	63.9	93.7	39066.6	-4.5	0.74	1.54	1.50	64.9	95.2	65.4	95.9	2.17	1.50	64.9	95.2	39161.1	
538.0	70.0	102.7	64.9	95.2	39161.1	-4.5	0.72	1.52	1.47	65.9	96.7	66.3	97.2	2.00	1.47	65.9	96.7	39257.0	
539.0	70.0	102.7	65.9	96.7	39257.0	-4.5	0.71	1.49	1.45	66.9	98.1	67.2	98.5	1.85	1.45	66.9	98.1	39354.5	
540.0	70.0	102.7	66.9	98.1	39354.5	-4.5	0.69	1.47	1.42	67.9	99.6	68.1	99.8	1.69	1.42	67.9	99.6	39453.3	
541.0	70.0	102.7	67.9	99.6	39453.3	-4.5	0.68	1.44	1.40	68.8	101.0	68.9	101.1	1.53	1.40	68.8	101.0	39553.6	
542.0	70.0	102.7	68.8	101.0	39553.6	-4.5	0.67	1.42	1.38	69.8	102.3	69.8	102.4	1.38	1.38	69.8	102.3	39655.2	
543.0	70.0	102.7	69.8	102.3	39655.2	-4.5	0.65	1.39	1.36	70.7	103.7	70.0	102.7	0.32	0.32	70.0	102.7	39757.7	
16 544.0	70.0	102.7	70.0	102.7	39757.7	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	39860.4	
545.0	70.0	102.7	70.0	102.7	39860.4	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	39963.1	
546.0	70.0	102.7	70.0	102.7	39963.1	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40065.7	
547.0	70.0	102.7	70.0	102.7	40065.7	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40168.4	
548.0	70.0	102.7	70.0	102.7	40168.4	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40271.1	
549.0	70.0	102.7	70.0	102.7	40271.1	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40373.7	
550.0	70.0	102.7	70.0	102.7	40373.7	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40476.4	
551.0	70.0	102.7	70.0	102.7	40476.4	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40579.1	
552.0	70.0	102.7	70.0	102.7	40579.1	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40681.7	
553.0	70.0	102.7	70.0	102.7	40681.7	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40784.4	
554.0	70.0	102.7	70.0	102.7	40784.4	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40887.1	
555.0	70.0	102.7	70.0	102.7	40887.1	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	40989.7	
556.0	70.0	102.7	70.0	102.7	40989.7	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	41092.4	
557.0	70.0	102.7	70.0	102.7	41092.4	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	41195.1	
558.0	70.0	102.7	70.0	102.7	41195.1	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	41297.7	
559.0	70.0	102.7	70.0	102.7	41297.7	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	41400.4	
560.0	70.0	102.7	70.0	102.7	41400.4	-4.5	0.65	1.39	1.35	70.9	104.0	70.0	102.7	0.00	0.00	70.0	102.7	41503.1	
17 561.0	70.0	102.7	70.0	102.7	41503.1	3.8	-2.00	-1.25	-1.28	69.1	101.4	70.0	102.7	0.00	-1.28	69.1	101.4	41605.1	
562.0	70.0	102.7	69.1	101.4	41605.1	3.8	-1.99	-1.22	-1.26	68.3	100.1	70.0	102.7	1.28	-1.26	68.3	100.1	41705.9	
563.0	70.0	102.7	68.3	100.1	41705.9	3.8	-1.98	-1.20	-1.24	67.4	98.9	69.3	101.6	1.47	-1.24	67.4	98.9	41805.4	
564.0	70.0	102.7	67.4	98.9	41805.4	3.8	-1.97	-1.18	-1.22	66.6	97.7	68.5	100.5	1.61	-1.22	66.6	97.7	41903.6	
565.0	70.0	102.7	66.6	97.7	41903.6	3.8	-1.95	-1.16	-1.20	65.8	96.5	67.8	99.4	1.74	-1.20	65.8	96.5	42000.7	
566.0	70.0	102.7	65.8	96.5	42000.7	3.8	-1.94	-1.14	-1.18	65.0	95.3	67.1	98.3	1.87	-1.18	65.0	95.3	42096.6	
567.0	70.0	102.7	65.0	95.3	42096.6	3.8	-1.93	-1.12	-1.15	64.2	94.1	66.3	97.3	2.00	-1.15	64.2	94.1	42191.3	
568.0	70.0	102.7	64.2	94.1	42191.3	3.8	-1.92	-1.10	-1.13	63.4	93.0	65.6	96.3	2.12	-1.13	63.4	93.0	42284.9	
569.0	70.0	102.7	63.4	93.0	42284.9	3.8	-1.91	-1.08	-1.11	62.7	91.9	64.9	95.3	2.24	-1.11	62.7	91.9	42377.3	
570.0	70.0	102.7	62.7	91.9	42377.3	3.8	-1.90	-1.06	-1.09	61.9	90.8	64.3	94.3	2.36	-1.09	61.9	90.8	42468.7	
571.0	70.0	102.7	61.9	90.8	42468.7	3.8	-1.89	-1.04	-1.07	61.2	89.7	63.6	93.3	2.48	-1.07	61.2	89.7	42558.9	
572.0	70.0	102.7	61.2	89.7	42558.9	3.8	-1.88	-1.02	-1.05	60.5	88.7	62.9	92.3	2.60	-1.05	60.5	88.7	42648.1	

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)			
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed		New position (ft)	
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(mph)	(ft/sec)			(mph)	(ft/sec)		
573.0	70.0	102.7	60.5	88.7	42648.1	3.8	-1.87	-1.00	-1.04	59.8	87.6	62.3	91.4	2.71	-1.04	59.8	87.6	42736.3
574.0	70.0	102.7	59.8	87.6	42736.3	3.8	-1.86	-0.98	-1.02	59.1	86.6	61.7	90.5	2.82	-1.02	59.1	86.6	42823.4
575.0	70.0	102.7	59.1	86.6	42823.4	3.8	-1.86	-0.96	-1.00	58.4	85.6	61.1	89.6	2.93	-1.00	58.4	85.6	42909.5
576.0	70.0	102.7	58.4	85.6	42909.5	3.8	-1.85	-0.94	-0.98	57.7	84.6	60.5	88.7	3.04	-0.98	57.7	84.6	42994.7
577.0	70.0	102.7	57.7	84.6	42994.7	3.8	-1.84	-0.92	-0.96	57.1	83.7	59.9	87.8	3.15	-0.96	57.1	83.7	43078.8
578.0	70.0	102.7	57.1	83.7	43078.8	3.8	-1.83	-0.90	-0.94	56.4	82.7	59.3	86.9	3.25	-0.94	56.4	82.7	43162.0
579.0	70.0	102.7	56.4	82.7	43162.0	3.8	-1.82	-0.89	-0.92	55.8	81.8	58.7	86.1	3.35	-0.92	55.8	81.8	43244.3
580.0	70.0	102.7	55.8	81.8	43244.3	3.8	-1.82	-0.87	-0.91	55.2	80.9	58.1	85.3	3.45	-0.91	55.2	80.9	43325.7
581.0	70.0	102.7	55.2	80.9	43325.7	3.8	-1.81	-0.85	-0.89	54.6	80.0	57.6	84.5	3.55	-0.89	54.6	80.0	43406.1
582.0	70.0	102.7	54.6	80.0	43406.1	-1.5	-0.11	0.84	0.80	55.1	80.8	57.0	83.7	3.65	0.80	55.1	80.8	43486.6
583.0	70.0	102.7	55.1	80.8	43486.6	-1.5	-0.12	0.82	0.79	55.6	81.6	57.5	84.4	3.56	0.79	55.6	81.6	43567.8
584.0	70.0	102.7	55.6	81.6	43567.8	-1.5	-0.12	0.81	0.77	56.2	82.4	58.0	85.1	3.47	0.77	56.2	82.4	43649.8
585.0	70.0	102.7	56.2	82.4	43649.8	-1.5	-0.13	0.79	0.76	56.7	83.1	58.5	85.8	3.39	0.76	56.7	83.1	43732.5
586.0	70.0	102.7	56.7	83.1	43732.5	-1.5	-0.14	0.78	0.75	57.2	83.9	58.9	86.5	3.31	0.75	57.2	83.9	43816.1
587.0	70.0	102.7	57.2	83.9	43816.1	-1.5	-0.14	0.76	0.74	57.7	84.6	59.4	87.1	3.23	0.74	57.7	84.6	43900.3
588.0	70.0	102.7	57.7	84.6	43900.3	-1.5	-0.15	0.75	0.72	58.2	85.4	59.8	87.8	3.15	0.72	58.2	85.4	43985.3
589.0	70.0	102.7	58.2	85.4	43985.3	-1.5	-0.16	0.74	0.71	58.7	86.1	60.3	88.4	3.07	0.71	58.7	86.1	44071.0
590.0	70.0	102.7	58.7	86.1	44071.0	-1.5	-0.16	0.72	0.70	59.2	86.8	60.7	89.1	2.99	0.70	59.2	86.8	44157.4
591.0	70.0	102.7	59.2	86.8	44157.4	-1.5	-0.17	0.71	0.69	59.6	87.4	61.1	89.7	2.92	0.69	59.6	87.4	44244.5
592.0	70.0	102.7	59.6	87.4	44244.5	-1.5	-0.17	0.70	0.67	60.1	88.1	61.6	90.3	2.84	0.67	60.1	88.1	44332.3
593.0	70.0	102.7	60.1	88.1	44332.3	-1.5	-0.18	0.69	0.66	60.5	88.8	62.0	90.9	2.77	0.66	60.5	88.8	44420.8
594.0	70.0	102.7	60.5	88.8	44420.8	-1.5	-0.18	0.67	0.65	61.0	89.4	62.4	91.5	2.70	0.65	61.0	89.4	44509.9
595.0	70.0	102.7	61.0	89.4	44509.9	-1.5	-0.19	0.66	0.64	61.4	90.1	62.8	92.1	2.63	0.64	61.4	90.1	44599.6
596.0	70.0	102.7	61.4	90.1	44599.6	-1.5	-0.20	0.65	0.63	61.8	90.7	63.2	92.6	2.56	0.63	61.8	90.7	44690.0
597.0	70.0	102.7	61.8	90.7	44690.0	-1.5	-0.20	0.64	0.62	62.3	91.3	63.5	93.2	2.49	0.62	62.3	91.3	44781.0
598.0	70.0	102.7	62.3	91.3	44781.0	-1.5	-0.21	0.63	0.61	62.7	91.9	63.9	93.7	2.43	0.61	62.7	91.9	44872.7
599.0	70.0	102.7	62.7	91.9	44872.7	-1.5	-0.21	0.62	0.60	63.1	92.5	64.3	94.3	2.36	0.60	63.1	92.5	44964.9
600.0	70.0	102.7	63.1	92.5	44964.9	-1.5	-0.22	0.61	0.59	63.5	93.1	64.7	94.8	2.30	0.59	63.5	93.1	45057.7
601.0	70.0	102.7	63.5	93.1	45057.7	-1.5	-0.22	0.60	0.58	63.9	93.7	65.0	95.3	2.23	0.58	63.9	93.7	45151.1
602.0	70.0	102.7	63.9	93.7	45151.1	-1.5	-0.23	0.59	0.57	64.3	94.3	65.4	95.9	2.17	0.57	64.3	94.3	45245.1
603.0	70.0	102.7	64.3	94.3	45245.1	-1.5	-0.23	0.58	0.56	64.6	94.8	65.7	96.4	2.11	0.56	64.6	94.8	45339.6
604.0	70.0	102.7	64.6	94.8	45339.6	-1.5	-0.24	0.57	0.55	65.0	95.4	66.0	96.9	2.05	0.55	65.0	95.4	45434.7
605.0	70.0	102.7	65.0	95.4	45434.7	-1.5	-0.24	0.56	0.54	65.4	95.9	66.4	97.4	1.99	0.54	65.4	95.9	45530.4
606.0	70.0	102.7	65.4	95.9	45530.4	-1.5	-0.25	0.55	0.53	65.8	96.4	66.7	97.8	1.93	0.53	65.8	96.4	45626.5
607.0	70.0	102.7	65.8	96.4	45626.5	-1.5	-0.25	0.54	0.52	66.1	97.0	67.0	98.3	1.87	0.52	66.1	97.0	45723.2
608.0	70.0	102.7	66.1	97.0	45723.2	-1.5	-0.26	0.53	0.51	66.5	97.5	67.3	98.8	1.82	0.51	66.5	97.5	45820.4
609.0	70.0	102.7	66.5	97.5	45820.4	-1.5	-0.26	0.52	0.51	66.8	98.0	67.7	99.2	1.76	0.51	66.8	98.0	45918.2
610.0	70.0	102.7	66.8	98.0	45918.2	-1.5	-0.27	0.51	0.50	67.1	98.5	68.0	99.7	1.71	0.50	67.1	98.5	46016.4
611.0	70.0	102.7	67.1	98.5	46016.4	-1.5	-0.27	0.50	0.49	67.5	99.0	68.3	100.1	1.65	0.49	67.5	99.0	46115.1
612.0	70.0	102.7	67.5	99.0	46115.1	-1.5	-0.28	0.49	0.48	67.8	99.4	68.6	100.6	1.60	0.48	67.8	99.4	46214.3
613.0	70.0	102.7	67.8	99.4	46214.3	4.5	-2.21	-1.43	-1.47	66.8	98.0	68.9	101.0	1.55	-1.47	66.8	98.0	46313.0
614.0	70.0	102.7	66.8	98.0	46313.0	4.5	-2.20	-1.40	-1.45	65.8	96.5	68.0	99.7	1.71	-1.45	65.8	96.5	46410.3
615.0	70.0	102.7	65.8	96.5	46410.3	4.5	-2.19	-1.38	-1.42	64.8	95.1	67.1	98.4	1.86	-1.42	64.8	95.1	46506.1
616.0	70.0	102.7	64.8	95.1	46506.1	4.5	-2.17	-1.35	-1.40	63.9	93.7	66.2	97.1	2.02	-1.40	63.9	93.7	46600.5

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)				(16) Actual acceleration (ft/sec ²)	(18)		
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences					End of 1-sec Interval		
			Speed			Coasting	Power	Effective			Speed		Acceleration			New speed		New position (ft)
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(mph)	(ft/sec)	(ft/sec ²)	(mph)		(ft/sec)		
617.0	70.0	102.7	63.9	93.7	4.5	-2.16	-1.33	-1.37	63.0	92.3	65.4	95.9	2.17	-1.37	63.0	92.3	46693.5	
618.0	70.0	102.7	63.0	92.3	4.5	-2.15	-1.30	-1.35	62.0	91.0	64.5	94.6	2.32	-1.35	62.0	91.0	46785.2	
619.0	70.0	102.7	62.0	91.0	4.5	-2.13	-1.28	-1.33	61.1	89.7	63.7	93.4	2.46	-1.33	61.1	89.7	46875.5	
620.0	70.0	102.7	61.1	89.7	4.5	-2.12	-1.25	-1.30	60.2	88.4	62.9	92.3	2.61	-1.30	60.2	88.4	46964.5	
621.0	70.0	102.7	60.2	88.4	4.5	-2.11	-1.23	-1.28	59.4	87.1	62.1	91.1	2.75	-1.28	59.4	87.1	47052.2	
622.0	70.0	102.7	59.4	87.1	4.5	-2.10	-1.21	-1.25	58.5	85.8	61.3	90.0	2.88	-1.25	58.5	85.8	47138.6	
623.0	70.0	102.7	58.5	85.8	4.5	-2.09	-1.18	-1.23	57.7	84.6	60.6	88.8	3.02	-1.23	57.7	84.6	47223.8	
624.0	70.0	102.7	57.7	84.6	4.5	-2.08	-1.16	-1.21	56.8	83.4	59.8	87.7	3.15	-1.21	56.8	83.4	47307.8	
625.0	70.0	102.7	56.8	83.4	4.5	-2.07	-1.14	-1.19	56.0	82.2	59.1	86.7	3.28	-1.19	56.0	82.2	47390.6	
626.0	70.0	102.7	56.0	82.2	4.5	-2.06	-1.11	-1.16	55.2	81.0	58.4	85.6	3.41	-1.16	55.2	81.0	47472.2	
627.0	70.0	102.7	55.2	81.0	4.5	-2.05	-1.09	-1.14	54.5	79.9	57.7	84.6	3.54	-1.14	54.5	79.9	47552.7	
628.0	70.0	102.7	54.5	79.9	4.5	-2.04	-1.07	-1.12	53.7	78.8	57.0	83.5	3.66	-1.12	53.7	78.8	47632.0	
629.0	70.0	102.7	53.7	78.8	4.5	-2.03	-1.05	-1.10	53.0	77.7	56.3	82.5	3.78	-1.10	53.0	77.7	47710.2	
630.0	70.0	102.7	53.0	77.7	4.5	-2.02	-1.02	-1.08	52.2	76.6	55.6	81.6	3.90	-1.08	52.2	76.6	47787.4	
631.0	70.0	102.7	52.2	76.6	4.5	-2.02	-1.00	-1.05	51.5	75.5	55.0	80.6	4.02	-1.05	51.5	75.5	47863.4	
632.0	70.0	102.7	51.5	75.5	4.5	-2.01	-0.98	-1.03	50.8	74.5	54.3	79.7	4.13	-1.03	50.8	74.5	47938.5	
633.0	70.0	102.7	50.8	74.5	4.5	-2.00	-0.96	-1.01	50.1	73.5	53.7	78.8	4.24	-1.01	50.1	73.5	48012.5	
634.0	70.0	102.7	50.1	73.5	4.5	-1.99	-0.94	-0.99	49.4	72.5	53.1	77.8	4.35	-0.99	49.4	72.5	48085.5	
635.0	70.0	102.7	49.4	72.5	4.5	-1.99	-0.91	-0.97	48.8	71.5	52.5	77.0	4.46	-0.97	48.8	71.5	48157.5	
636.0	70.0	102.7	48.8	71.5	4.5	-1.98	-0.89	-0.95	48.1	70.6	51.9	76.1	4.56	-0.95	48.1	70.6	48228.6	
637.0	70.0	102.7	48.1	70.6	-2.9	0.41	1.48	1.40	49.1	72.0	51.3	75.3	4.66	1.40	49.1	72.0	48299.9	
638.0	70.0	102.7	49.1	72.0	-2.9	0.40	1.45	1.37	50.0	73.4	52.2	76.5	4.51	1.37	50.0	73.4	48372.5	
639.0	70.0	102.7	50.0	73.4	-2.9	0.39	1.42	1.35	50.9	74.7	53.0	77.7	4.36	1.35	50.9	74.7	48446.6	
640.0	70.0	102.7	50.9	74.7	-2.9	0.38	1.39	1.32	51.8	76.0	53.8	78.9	4.22	1.32	51.8	76.0	48521.9	
641.0	70.0	102.7	51.8	76.0	-2.9	0.37	1.36	1.30	52.7	77.3	54.6	80.1	4.08	1.30	52.7	77.3	48598.6	
642.0	70.0	102.7	52.7	77.3	-2.9	0.36	1.34	1.28	53.6	78.6	55.4	81.3	3.94	1.28	53.6	78.6	48676.6	
643.0	70.0	102.7	53.6	78.6	-2.9	0.35	1.31	1.25	54.4	79.9	56.2	82.4	3.80	1.25	54.4	79.9	48755.8	
644.0	70.0	102.7	54.4	79.9	-2.9	0.34	1.29	1.23	55.3	81.1	56.9	83.5	3.66	1.23	55.3	81.1	48836.3	
645.0	70.0	102.7	55.3	81.1	-2.9	0.33	1.26	1.21	56.1	82.3	57.7	84.6	3.53	1.21	56.1	82.3	48918.0	
646.0	70.0	102.7	56.1	82.3	-2.9	0.32	1.24	1.19	56.9	83.5	58.4	85.7	3.40	1.19	56.9	83.5	49000.9	
647.0	70.0	102.7	56.9	83.5	-2.9	0.31	1.22	1.17	57.7	84.7	59.2	86.8	3.27	1.17	57.7	84.7	49085.0	
648.0	70.0	102.7	57.7	84.7	-2.9	0.30	1.20	1.15	58.5	85.8	59.9	87.8	3.14	1.15	58.5	85.8	49170.2	
649.0	70.0	102.7	58.5	85.8	-2.9	0.29	1.18	1.13	59.3	86.9	60.6	88.8	3.02	1.13	59.3	86.9	49256.6	
650.0	70.0	102.7	59.3	86.9	-2.9	0.28	1.15	1.11	60.0	88.1	61.3	89.8	2.90	1.11	60.0	88.1	49344.1	
651.0	70.0	102.7	60.0	88.1	-2.9	0.27	1.13	1.09	60.8	89.2	61.9	90.8	2.78	1.09	60.8	89.2	49432.7	
652.0	70.0	102.7	60.8	89.2	-2.9	0.26	1.11	1.08	61.5	90.2	62.6	91.8	2.66	1.08	61.5	90.2	49522.4	
653.0	70.0	102.7	61.5	90.2	-2.9	0.25	1.10	1.06	62.2	91.3	63.3	92.8	2.54	1.06	62.2	91.3	49613.1	
654.0	70.0	102.7	62.2	91.3	-2.9	0.24	1.08	1.04	63.0	92.3	63.9	93.7	2.43	1.04	63.0	92.3	49704.9	
655.0	70.0	102.7	63.0	92.3	-2.9	0.23	1.06	1.02	63.6	93.4	64.5	94.6	2.32	1.02	63.6	93.4	49797.8	
656.0	70.0	102.7	63.6	93.4	-2.9	0.22	1.04	1.01	64.3	94.4	65.2	95.6	2.21	1.01	64.3	94.4	49891.6	
657.0	70.0	102.7	64.3	94.4	-2.9	0.22	1.02	0.99	65.0	95.3	65.8	96.5	2.10	0.99	65.0	95.3	49986.5	
658.0	70.0	102.7	65.0	95.3	-2.9	0.21	1.00	0.97	65.7	96.3	66.4	97.3	1.99	0.97	65.7	96.3	50082.3	
659.0	70.0	102.7	65.7	96.3	-2.9	0.20	0.99	0.96	66.3	97.3	67.0	98.2	1.89	0.96	66.3	97.3	50179.1	
660.0	70.0	102.7	66.3	97.3	-2.9	0.19	0.97	0.94	67.0	98.2	67.5	99.1	1.78	0.94	67.0	98.2	50276.9	

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TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)				(16) Actual acceleration (ft/sec ²)	(17)		
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences					End of 1-sec Interval		
			Speed			Coasting	Power	Effective			Speed		Acceleration			New speed (mph)	New position (ft)	
	(mph)	(ft/sec)	(mph)	(ft/sec)					(ft/sec)	(ft/sec)	(ft/sec ²)	(ft/sec ²)	(ft/sec ²)	(ft/sec ²)				
661.0	70.0	102.7	67.0	98.2	50276.9	-2.9	0.18	0.95	0.93	67.6	99.1	68.1	99.9	1.68	0.93	67.6	99.1	50375.6
662.0	70.0	102.7	67.6	99.1	50375.6	-2.9	0.17	0.94	0.91	68.2	100.1	68.7	100.7	1.58	0.91	68.2	100.1	50475.2
663.0	70.0	102.7	68.2	100.1	50475.2	-2.9	0.16	0.92	0.90	68.8	101.0	69.2	101.5	1.48	0.90	68.8	101.0	50575.7
664.0	70.0	102.7	68.8	101.0	50575.7	-2.9	0.15	0.91	0.88	69.4	101.8	69.8	102.3	1.38	0.88	69.4	101.8	50677.1
665.0	70.0	102.7	69.4	101.8	50677.1	-2.9	0.14	0.89	0.87	70.0	102.7	70.0	102.7	0.83	0.83	70.0	102.7	50779.3
666.0	70.0	102.7	70.0	102.7	50779.3	-2.9	0.14	0.88	0.85	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	50882.0
667.0	70.0	102.7	70.0	102.7	50882.0	-2.9	0.14	0.88	0.85	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	50984.7
668.0	70.0	102.7	70.0	102.7	50984.7	-2.9	0.14	0.88	0.85	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	51087.3
669.0	70.0	102.7	70.0	102.7	51087.3	-2.9	0.14	0.88	0.85	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	51190.0
670.0	70.0	102.7	70.0	102.7	51190.0	-2.9	0.14	0.88	0.85	70.6	103.5	70.0	102.7	0.00	0.00	70.0	102.7	51292.7
671.0	70.0	102.7	70.0	102.7	51292.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	51395.3
672.0	70.0	102.7	70.0	102.7	51395.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	51498.0
673.0	70.0	102.7	70.0	102.7	51498.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	51600.7
674.0	70.0	102.7	70.0	102.7	51600.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	51703.3
675.0	70.0	102.7	70.0	102.7	51703.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	51806.0
676.0	70.0	102.7	70.0	102.7	51806.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	51908.7
677.0	70.0	102.7	70.0	102.7	51908.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52011.3
678.0	70.0	102.7	70.0	102.7	52011.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52114.0
679.0	70.0	102.7	70.0	102.7	52114.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52216.7
680.0	70.0	102.7	70.0	102.7	52216.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52319.3
681.0	70.0	102.7	70.0	102.7	52319.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52422.0
682.0	70.0	102.7	70.0	102.7	52422.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52524.7
683.0	70.0	102.7	70.0	102.7	52524.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52627.3
684.0	70.0	102.7	70.0	102.7	52627.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52730.0
685.0	70.0	102.7	70.0	102.7	52730.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52832.7
686.0	70.0	102.7	70.0	102.7	52832.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	52935.3
687.0	70.0	102.7	70.0	102.7	52935.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53038.0
688.0	70.0	102.7	70.0	102.7	53038.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53140.7
689.0	70.0	102.7	70.0	102.7	53140.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53243.3
690.0	70.0	102.7	70.0	102.7	53243.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53346.0
691.0	70.0	102.7	70.0	102.7	53346.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53448.7
692.0	70.0	102.7	70.0	102.7	53448.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53551.3
693.0	70.0	102.7	70.0	102.7	53551.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53654.0
694.0	70.0	102.7	70.0	102.7	53654.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53756.7
695.0	70.0	102.7	70.0	102.7	53756.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53859.3
696.0	70.0	102.7	70.0	102.7	53859.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	53962.0
697.0	70.0	102.7	70.0	102.7	53962.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54064.7
698.0	70.0	102.7	70.0	102.7	54064.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54167.3
699.0	70.0	102.7	70.0	102.7	54167.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54270.0
700.0	70.0	102.7	70.0	102.7	54270.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54372.7
701.0	70.0	102.7	70.0	102.7	54372.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54475.3
702.0	70.0	102.7	70.0	102.7	54475.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54578.0
703.0	70.0	102.7	70.0	102.7	54578.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54680.7
704.0	70.0	102.7	70.0	102.7	54680.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54783.3

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TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)								
705.0	70.0	102.7	70.0	102.7	54783.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54886.0
706.0	70.0	102.7	70.0	102.7	54886.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	54988.7
707.0	70.0	102.7	70.0	102.7	54988.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	55091.3
708.0	70.0	102.7	70.0	102.7	55091.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	55194.0
709.0	70.0	102.7	70.0	102.7	55194.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	55296.7
710.0	70.0	102.7	70.0	102.7	55296.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	55399.3
711.0	70.0	102.7	70.0	102.7	55399.3	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	55502.0
712.0	70.0	102.7	70.0	102.7	55502.0	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	55604.7
713.0	70.0	102.7	70.0	102.7	55604.7	-1.5	-0.31	0.43	0.42	70.3	103.1	70.0	102.7	0.00	0.00	70.0	102.7	55707.3
22 714.0	70.0	102.7	70.0	102.7	55707.3	4.7	-2.31	-1.55	-1.59	68.9	101.1	70.0	102.7	0.00	-1.59	68.9	101.1	55809.2
715.0	70.0	102.7	68.9	101.1	55809.2	4.7	-2.29	-1.52	-1.57	67.8	99.5	69.8	102.4	1.37	-1.57	67.8	99.5	55909.5
716.0	70.0	102.7	67.8	99.5	55909.5	4.7	-2.28	-1.50	-1.54	66.8	98.0	68.9	101.0	1.54	-1.54	66.8	98.0	56008.2
717.0	70.0	102.7	66.8	98.0	56008.2	4.7	-2.26	-1.47	-1.51	65.8	96.4	68.0	99.7	1.71	-1.51	65.8	96.4	56105.4
718.0	70.0	102.7	65.8	96.4	56105.4	4.7	-2.25	-1.44	-1.49	64.7	95.0	67.0	98.3	1.87	-1.49	64.7	95.0	56201.1
719.0	70.0	102.7	64.7	95.0	56201.1	4.7	-2.23	-1.41	-1.46	63.7	93.5	66.1	97.0	2.03	-1.46	63.7	93.5	56295.4
720.0	70.0	102.7	63.7	93.5	56295.4	4.7	-2.22	-1.39	-1.44	62.8	92.1	65.2	95.7	2.19	-1.44	62.8	92.1	56388.1
721.0	70.0	102.7	62.8	92.1	56388.1	4.7	-2.21	-1.36	-1.41	61.8	90.7	64.4	94.4	2.35	-1.41	61.8	90.7	56479.5
722.0	70.0	102.7	61.8	90.7	56479.5	4.7	-2.20	-1.34	-1.39	60.9	89.3	63.5	93.1	2.50	-1.39	60.9	89.3	56569.5
723.0	70.0	102.7	60.9	89.3	56569.5	4.7	-2.18	-1.31	-1.36	59.9	87.9	62.7	91.9	2.65	-1.36	59.9	87.9	56658.0
724.0	70.0	102.7	59.9	87.9	56658.0	4.7	-2.17	-1.29	-1.34	59.0	86.6	61.8	90.7	2.79	-1.34	59.0	86.6	56745.3
725.0	70.0	102.7	59.0	86.6	56745.3	4.7	-2.16	-1.26	-1.31	58.1	85.3	61.0	89.5	2.94	-1.31	58.1	85.3	56831.2
726.0	70.0	102.7	58.1	85.3	56831.2	4.7	-2.15	-1.24	-1.29	57.3	84.0	60.2	88.3	3.08	-1.29	57.3	84.0	56915.8
727.0	70.0	102.7	57.3	84.0	56915.8	4.7	-2.14	-1.21	-1.26	56.4	82.7	59.4	87.2	3.22	-1.26	56.4	82.7	56999.1
728.0	70.0	102.7	56.4	82.7	56999.1	4.7	-2.13	-1.19	-1.24	55.5	81.5	58.7	86.1	3.36	-1.24	55.5	81.5	57081.2
729.0	70.0	102.7	55.5	81.5	57081.2	4.7	-2.12	-1.16	-1.22	54.7	80.2	57.9	85.0	3.49	-1.22	54.7	80.2	57162.1
730.0	70.0	102.7	54.7	80.2	57162.1	1.0	-0.92	0.04	0.04	54.7	80.3	57.2	83.9	3.62	0.04	54.7	80.3	57242.4
23 731.0	70.0	102.7	54.7	80.3	57242.4	1.0	-0.92	0.04	0.04	54.8	80.3	57.2	83.9	3.62	0.04	54.8	80.3	57322.7
732.0	70.0	102.7	54.8	80.3	57322.7	1.0	-0.92	0.04	0.04	54.8	80.4	57.2	83.9	3.61	0.04	54.8	80.4	57403.0
733.0	70.0	102.7	54.8	80.4	57403.0	1.0	-0.92	0.04	0.04	54.8	80.4	57.3	84.0	3.61	0.04	54.8	80.4	57483.4
734.0	70.0	102.7	54.8	80.4	57483.4	1.0	-0.92	0.04	0.03	54.8	80.4	57.3	84.0	3.61	0.03	54.8	80.4	57563.8
735.0	70.0	102.7	54.8	80.4	57563.8	1.0	-0.92	0.04	0.03	54.9	80.5	57.3	84.0	3.60	0.03	54.9	80.5	57644.2
736.0	70.0	102.7	54.9	80.5	57644.2	1.0	-0.92	0.03	0.03	54.9	80.5	57.3	84.1	3.60	0.03	54.9	80.5	57724.7
737.0	70.0	102.7	54.9	80.5	57724.7	1.0	-0.92	0.03	0.03	54.9	80.5	57.3	84.1	3.59	0.03	54.9	80.5	57805.2
738.0	70.0	102.7	54.9	80.5	57805.2	1.0	-0.92	0.03	0.03	54.9	80.6	57.4	84.1	3.59	0.03	54.9	80.6	57885.8
739.0	70.0	102.7	54.9	80.6	57885.8	1.0	-0.92	0.03	0.03	54.9	80.6	57.4	84.1	3.59	0.03	54.9	80.6	57966.3
740.0	70.0	102.7	54.9	80.6	57966.3	1.0	-0.92	0.03	0.03	55.0	80.6	57.4	84.2	3.58	0.03	55.0	80.6	58046.9
741.0	70.0	102.7	55.0	80.6	58046.9	1.0	-0.92	0.03	0.03	55.0	80.7	57.4	84.2	3.58	0.03	55.0	80.7	58127.6
742.0	70.0	102.7	55.0	80.7	58127.6	1.0	-0.92	0.03	0.03	55.0	80.7	57.4	84.2	3.58	0.03	55.0	80.7	58208.2
743.0	70.0	102.7	55.0	80.7	58208.2	1.0	-0.92	0.03	0.03	55.0	80.7	57.4	84.3	3.57	0.03	55.0	80.7	58288.9
744.0	70.0	102.7	55.0	80.7	58288.9	1.0	-0.92	0.03	0.03	55.0	80.7	57.5	84.3	3.57	0.03	55.0	80.7	58369.7
745.0	70.0	102.7	55.0	80.7	58369.7	1.0	-0.92	0.03	0.03	55.1	80.8	57.5	84.3	3.57	0.03	55.1	80.8	58450.4
746.0	70.0	102.7	55.1	80.8	58450.4	1.0	-0.92	0.03	0.03	55.1	80.8	57.5	84.3	3.57	0.03	55.1	80.8	58531.2
747.0	70.0	102.7	55.1	80.8	58531.2	1.0	-0.92	0.03	0.03	55.1	80.8	57.5	84.4	3.56	0.03	55.1	80.8	58612.0
748.0	70.0	102.7	55.1	80.8	58612.0	1.0	-0.92	0.03	0.03	55.1	80.8	57.5	84.4	3.56	0.03	55.1	80.8	58692.8

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2) Desired speed		(3) Start of 1-sec Interval		(4) Local grade (%)	(5) Limiting acceleration (ft/sec ²)			(6) New speed based on vehicle performance		(7) Limiting acceleration and speed based on driver preferences			(8) Actual acceleration (ft/sec ²)	(9) End of 1-sec Interval			
	(mph)	(ft/sec)	Speed			Coasting	Power	Effective	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)		New speed		New position (ft)	
			(mph)	(ft/sec)							(mph)	(ft/sec)			(mph)	(ft/sec)		
	(ft)	(ft)	(ft/sec ²)	(ft/sec ²)		(ft/sec ²)	(ft/sec ²)	(ft/sec ²)	(ft/sec ²)	(ft/sec ²)	(ft/sec ²)	(ft/sec ²)	(ft/sec ²)		(ft/sec ²)	(ft/sec ²)		
749.0	70.0	102.7	55.1	80.8	58692.8	1.0	-0.92	0.03	0.03	55.1	80.9	57.5	84.4	3.56	0.03	55.1	80.9	58773.7
750.0	70.0	102.7	55.1	80.9	58773.7	1.0	-0.92	0.03	0.03	55.2	80.9	57.6	84.4	3.55	0.03	55.2	80.9	58854.6
751.0	70.0	102.7	55.2	80.9	58854.6	1.0	-0.92	0.03	0.02	55.2	80.9	57.6	84.4	3.55	0.02	55.2	80.9	58935.5
752.0	70.0	102.7	55.2	80.9	58935.5	1.0	-0.92	0.03	0.02	55.2	80.9	57.6	84.5	3.55	0.02	55.2	80.9	59016.4
753.0	70.0	102.7	55.2	80.9	59016.4	1.0	-0.92	0.03	0.02	55.2	81.0	57.6	84.5	3.55	0.02	55.2	81.0	59097.4
754.0	70.0	102.7	55.2	81.0	59097.4	1.0	-0.92	0.02	0.02	55.2	81.0	57.6	84.5	3.54	0.02	55.2	81.0	59178.4
755.0	70.0	102.7	55.2	81.0	59178.4	1.0	-0.92	0.02	0.02	55.2	81.0	57.6	84.5	3.54	0.02	55.2	81.0	59259.4
756.0	70.0	102.7	55.2	81.0	59259.4	1.0	-0.92	0.02	0.02	55.3	81.0	57.7	84.6	3.54	0.02	55.3	81.0	59340.4
757.0	70.0	102.7	55.3	81.0	59340.4	1.0	-0.92	0.02	0.02	55.3	81.1	57.7	84.6	3.54	0.02	55.3	81.1	59421.5
758.0	70.0	102.7	55.3	81.1	59421.5	1.0	-0.92	0.02	0.02	55.3	81.1	57.7	84.6	3.53	0.02	55.3	81.1	59502.5
759.0	70.0	102.7	55.3	81.1	59502.5	1.0	-0.92	0.02	0.02	55.3	81.1	57.7	84.6	3.53	0.02	55.3	81.1	59583.6
760.0	70.0	102.7	55.3	81.1	59583.6	1.0	-0.93	0.02	0.02	55.3	81.1	57.7	84.6	3.53	0.02	55.3	81.1	59664.7
761.0	70.0	102.7	55.3	81.1	59664.7	1.0	-0.93	0.02	0.02	55.3	81.1	57.7	84.7	3.53	0.02	55.3	81.1	59745.9
762.0	70.0	102.7	55.3	81.1	59745.9	1.0	-0.93	0.02	0.02	55.3	81.2	57.7	84.7	3.52	0.02	55.3	81.2	59827.0
763.0	70.0	102.7	55.3	81.2	59827.0	1.0	-0.93	0.02	0.02	55.4	81.2	57.7	84.7	3.52	0.02	55.4	81.2	59908.2
764.0	70.0	102.7	55.4	81.2	59908.2	1.0	-0.93	0.02	0.02	55.4	81.2	57.8	84.7	3.52	0.02	55.4	81.2	59989.4
765.0	70.0	102.7	55.4	81.2	59989.4	1.0	-0.93	0.02	0.02	55.4	81.2	57.8	84.7	3.52	0.02	55.4	81.2	60070.6
766.0	70.0	102.7	55.4	81.2	60070.6	1.0	-0.93	0.02	0.02	55.4	81.2	57.8	84.7	3.52	0.02	55.4	81.2	60151.9
767.0	70.0	102.7	55.4	81.2	60151.9	1.0	-0.93	0.02	0.02	55.4	81.3	57.8	84.8	3.51	0.02	55.4	81.3	60233.1
768.0	70.0	102.7	55.4	81.3	60233.1	1.0	-0.93	0.02	0.02	55.4	81.3	57.8	84.8	3.51	0.02	55.4	81.3	60314.4
769.0	70.0	102.7	55.4	81.3	60314.4	1.0	-0.93	0.02	0.02	55.4	81.3	57.8	84.8	3.51	0.02	55.4	81.3	60395.7
770.0	70.0	102.7	55.4	81.3	60395.7	1.0	-0.93	0.02	0.02	55.4	81.3	57.8	84.8	3.51	0.02	55.4	81.3	60477.0
771.0	70.0	102.7	55.4	81.3	60477.0	3.5	-1.73	-0.78	-0.81	54.9	80.5	57.8	84.8	3.51	-0.81	54.9	80.5	60557.9
772.0	70.0	102.7	54.9	80.5	60557.9	3.5	-1.72	-0.76	-0.80	54.3	79.7	57.3	84.1	3.59	-0.80	54.3	79.7	60638.0
773.0	70.0	102.7	54.3	79.7	60638.0	3.5	-1.72	-0.75	-0.78	53.8	78.9	56.9	83.4	3.68	-0.78	53.8	78.9	60717.3
774.0	70.0	102.7	53.8	78.9	60717.3	3.5	-1.71	-0.73	-0.77	53.3	78.2	56.4	82.7	3.76	-0.77	53.3	78.2	60795.9
775.0	70.0	102.7	53.3	78.2	60795.9	3.5	-1.71	-0.72	-0.75	52.8	77.4	55.9	82.0	3.85	-0.75	52.8	77.4	60873.7
776.0	70.0	102.7	52.8	77.4	60873.7	3.5	-1.70	-0.70	-0.74	52.3	76.7	55.5	81.3	3.93	-0.74	52.3	76.7	60950.7
777.0	70.0	102.7	52.3	76.7	60950.7	3.5	-1.70	-0.68	-0.72	51.8	76.0	55.0	80.7	4.01	-0.72	51.8	76.0	61027.0
778.0	70.0	102.7	51.8	76.0	61027.0	3.5	-1.69	-0.67	-0.71	51.3	75.2	54.6	80.0	4.09	-0.71	51.3	75.2	61102.6
779.0	70.0	102.7	51.3	75.2	61102.6	3.5	-1.68	-0.66	-0.69	50.8	74.6	54.1	79.4	4.16	-0.69	50.8	74.6	61177.5
780.0	70.0	102.7	50.8	74.6	61177.5	3.5	-1.68	-0.64	-0.68	50.4	73.9	53.7	78.8	4.24	-0.68	50.4	73.9	61251.7
781.0	70.0	102.7	50.4	73.9	61251.7	3.5	-1.67	-0.63	-0.66	49.9	73.2	53.3	78.2	4.31	-0.66	49.9	73.2	61325.3
782.0	70.0	102.7	49.9	73.2	61325.3	3.5	-1.67	-0.61	-0.65	49.5	72.6	52.9	77.6	4.38	-0.65	49.5	72.6	61398.2
783.0	70.0	102.7	49.5	72.6	61398.2	3.5	-1.67	-0.60	-0.63	49.0	71.9	52.5	77.0	4.45	-0.63	49.0	71.9	61470.4
784.0	70.0	102.7	49.0	71.9	61470.4	3.5	-1.66	-0.58	-0.62	48.6	71.3	52.1	76.5	4.52	-0.62	48.6	71.3	61542.1
785.0	70.0	102.7	48.6	71.3	61542.1	3.5	-1.66	-0.57	-0.61	48.2	70.7	51.8	75.9	4.59	-0.61	48.2	70.7	61613.1
786.0	70.0	102.7	48.2	70.7	61613.1	3.5	-1.65	-0.56	-0.59	47.8	70.1	51.4	75.4	4.65	-0.59	47.8	70.1	61683.5
787.0	70.0	102.7	47.8	70.1	61683.5	3.5	-1.65	-0.54	-0.58	47.4	69.5	51.0	74.8	4.71	-0.58	47.4	69.5	61753.3
788.0	70.0	102.7	47.4	69.5	61753.3	3.5	-1.64	-0.53	-0.57	47.0	69.0	50.7	74.3	4.78	-0.57	47.0	69.0	61822.6
789.0	70.0	102.7	47.0	69.0	61822.6	3.5	-1.64	-0.52	-0.55	46.7	68.4	50.3	73.8	4.84	-0.55	46.7	68.4	61891.3
790.0	70.0	102.7	46.7	68.4	61891.3	3.5	-1.64	-0.51	-0.54	46.3	67.9	50.0	73.3	4.90	-0.54	46.3	67.9	61959.5
791.0	70.0	102.7	46.3	67.9	61959.5	3.5	-1.63	-0.49	-0.53	45.9	67.4	49.7	72.8	4.96	-0.53	45.9	67.4	62027.1
792.0	70.0	102.7	45.9	67.4	62027.1	3.0	-1.47	-0.32	-0.35	45.7	67.0	49.3	72.4	5.01	-0.35	45.7	67.0	62094.3

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TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed			
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(mph)	(ft/sec)			(mph)	(ft/sec)		
793.0	70.0	102.7	45.7	67.0	62094.3	3.0	-1.47	-0.31	-0.34	45.5	66.7	49.1	72.1	5.05	-0.34	45.5	66.7	62161.1
794.0	70.0	102.7	45.5	66.7	62161.1	3.0	-1.46	-0.31	-0.33	45.2	66.3	48.9	71.8	5.09	-0.33	45.2	66.3	62227.6
795.0	70.0	102.7	45.2	66.3	62227.6	3.0	-1.46	-0.30	-0.32	45.0	66.0	48.7	71.5	5.12	-0.32	45.0	66.0	62293.8
796.0	70.0	102.7	45.0	66.0	62293.8	3.0	-1.46	-0.29	-0.31	44.8	65.7	48.5	71.2	5.16	-0.31	44.8	65.7	62359.7
797.0	70.0	102.7	44.8	65.7	62359.7	3.0	-1.46	-0.28	-0.30	44.6	65.4	48.3	70.9	5.19	-0.30	44.6	65.4	62425.2
798.0	70.0	102.7	44.6	65.4	62425.2	3.0	-1.46	-0.28	-0.30	44.4	65.1	48.2	70.6	5.22	-0.30	44.4	65.1	62490.5
799.0	70.0	102.7	44.4	65.1	62490.5	3.0	-1.45	-0.27	-0.29	44.2	64.8	48.0	70.4	5.26	-0.29	44.2	64.8	62555.5
800.0	70.0	102.7	44.2	64.8	62555.5	3.0	-1.45	-0.26	-0.28	44.0	64.5	47.8	70.1	5.29	-0.28	44.0	64.5	62620.2
801.0	70.0	102.7	44.0	64.5	62620.2	3.0	-1.45	-0.26	-0.27	43.8	64.3	47.6	69.9	5.32	-0.27	43.8	64.3	62684.6
802.0	70.0	102.7	43.8	64.3	62684.6	3.0	-1.45	-0.25	-0.27	43.6	64.0	47.5	69.6	5.35	-0.27	43.6	64.0	62748.7
803.0	70.0	102.7	43.6	64.0	62748.7	3.0	-1.45	-0.24	-0.26	43.5	63.7	47.3	69.4	5.38	-0.26	43.5	63.7	62812.6
804.0	70.0	102.7	43.5	63.7	62812.6	3.0	-1.45	-0.24	-0.25	43.3	63.5	47.1	69.1	5.40	-0.25	43.3	63.5	62876.2
805.0	70.0	102.7	43.3	63.5	62876.2	3.0	-1.44	-0.23	-0.25	43.1	63.2	47.0	68.9	5.43	-0.25	43.1	63.2	62939.5
806.0	70.0	102.7	43.1	63.2	62939.5	3.0	-1.44	-0.22	-0.24	43.0	63.0	46.8	68.7	5.46	-0.24	43.0	63.0	63002.6
807.0	70.0	102.7	43.0	63.0	63002.6	3.0	-1.44	-0.22	-0.23	42.8	62.8	46.7	68.5	5.48	-0.23	42.8	62.8	63065.5
808.0	70.0	102.7	42.8	62.8	63065.5	3.0	-1.44	-0.21	-0.23	42.6	62.5	46.5	68.3	5.51	-0.23	42.6	62.5	63128.2
809.0	70.0	102.7	42.6	62.5	63128.2	3.0	-1.44	-0.21	-0.22	42.5	62.3	46.4	68.1	5.53	-0.22	42.5	62.3	63190.6
810.0	70.0	102.7	42.5	62.3	63190.6	3.0	-1.44	-0.20	-0.22	42.3	62.1	46.3	67.9	5.56	-0.22	42.3	62.1	63252.8
811.0	70.0	102.7	42.3	62.1	63252.8	3.0	-1.44	-0.19	-0.21	42.2	61.9	46.1	67.7	5.58	-0.21	42.2	61.9	63314.8
812.0	70.0	102.7	42.2	61.9	63314.8	3.0	-1.43	-0.19	-0.20	42.1	61.7	46.0	67.5	5.60	-0.20	42.1	61.7	63376.6
813.0	70.0	102.7	42.1	61.7	63376.6	3.0	-1.43	-0.18	-0.20	41.9	61.5	45.9	67.3	5.63	-0.20	41.9	61.5	63438.1
814.0	70.0	102.7	41.9	61.5	63438.1	3.0	-1.43	-0.18	-0.19	41.8	61.3	45.8	67.1	5.65	-0.19	41.8	61.3	63499.5
815.0	70.0	102.7	41.8	61.3	63499.5	3.0	-1.43	-0.17	-0.19	41.7	61.1	45.7	67.0	5.67	-0.19	41.7	61.1	63560.7
816.0	70.0	102.7	41.7	61.1	63560.7	3.0	-1.43	-0.17	-0.18	41.5	60.9	45.5	66.8	5.69	-0.18	41.5	60.9	63621.7
817.0	70.0	102.7	41.5	60.9	63621.7	3.0	-1.43	-0.16	-0.18	41.4	60.7	45.4	66.6	5.71	-0.18	41.4	60.7	63682.6
818.0	70.0	102.7	41.4	60.7	63682.6	3.0	-1.43	-0.16	-0.17	41.3	60.6	45.3	66.5	5.73	-0.17	41.3	60.6	63743.2
819.0	70.0	102.7	41.3	60.6	63743.2	3.0	-1.43	-0.15	-0.17	41.2	60.4	45.2	66.3	5.75	-0.17	41.2	60.4	63803.7
820.0	70.0	102.7	41.2	60.4	63803.7	3.0	-1.43	-0.15	-0.16	41.1	60.2	45.1	66.2	5.77	-0.16	41.1	60.2	63864.0
821.0	70.0	102.7	41.1	60.2	63864.0	3.0	-1.42	-0.15	-0.16	41.0	60.1	45.0	66.0	5.78	-0.16	41.0	60.1	63924.2
822.0	70.0	102.7	41.0	60.1	63924.2	3.0	-1.42	-0.14	-0.15	40.9	59.9	44.9	65.9	5.80	-0.15	40.9	59.9	63984.2
823.0	70.0	102.7	40.9	59.9	63984.2	3.0	-1.42	-0.14	-0.15	40.8	59.8	44.8	65.7	5.82	-0.15	40.8	59.8	64044.0
824.0	70.0	102.7	40.8	59.8	64044.0	3.0	-1.42	-0.13	-0.15	40.7	59.6	44.7	65.6	5.83	-0.15	40.7	59.6	64103.7
825.0	70.0	102.7	40.7	59.6	64103.7	3.0	-1.42	-0.13	-0.14	40.6	59.5	44.6	65.5	5.85	-0.14	40.6	59.5	64163.2
826.0	70.0	102.7	40.6	59.5	64163.2	-3.5	0.67	1.92	1.78	41.8	61.3	44.6	65.3	5.86	1.78	41.8	61.3	64223.6
827.0	70.0	102.7	41.8	61.3	64223.6	-3.5	0.66	1.88	1.75	43.0	63.0	45.6	66.9	5.67	1.75	43.0	63.0	64285.8
828.0	70.0	102.7	43.0	63.0	64285.8	-3.5	0.65	1.84	1.72	44.1	64.7	46.7	68.5	5.48	1.72	44.1	64.7	64349.6
829.0	70.0	102.7	44.1	64.7	64349.6	-3.5	0.64	1.80	1.68	45.3	66.4	47.7	70.0	5.30	1.68	45.3	66.4	64415.2
830.0	70.0	102.7	45.3	66.4	64415.2	-3.5	0.63	1.76	1.65	46.4	68.1	48.8	71.5	5.12	1.65	46.4	68.1	64482.4
831.0	70.0	102.7	46.4	68.1	64482.4	-3.5	0.62	1.72	1.62	47.5	69.7	49.8	73.0	4.94	1.62	47.5	69.7	64551.3
832.0	70.0	102.7	47.5	69.7	64551.3	-3.5	0.61	1.68	1.59	48.6	71.3	50.8	74.4	4.76	1.59	48.6	71.3	64621.8
833.0	70.0	102.7	48.6	71.3	64621.8	-3.5	0.60	1.65	1.56	49.7	72.8	51.7	75.9	4.59	1.56	49.7	72.8	64693.9
834.0	70.0	102.7	49.7	72.8	64693.9	-3.5	0.58	1.62	1.54	50.7	74.4	52.7	77.3	4.42	1.54	50.7	74.4	64767.5
835.0	70.0	102.7	50.7	74.4	64767.5	-3.5	0.57	1.59	1.51	51.7	75.9	53.6	78.6	4.25	1.51	51.7	75.9	64842.6
836.0	70.0	102.7	51.7	75.9	64842.6	-3.5	0.56	1.56	1.48	52.8	77.4	54.5	80.0	4.09	1.48	52.8	77.4	64919.2

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TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(4)		(5)	(7) Local grade (%)	(8)			(11) New speed based on vehicle performance (mph)	(12) (ft/sec)	(13)		(15) Acceleration (ft/sec ²)	(16) Actual acceleration (ft/sec ²)	(17)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval		Position (ft)		Limiting acceleration (ft/sec ²)					Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
	(mph)	(ft/sec)	Speed				Coasting	Power	Effective			Speed				New speed (mph)	(ft/sec)		New speed (mph)
			(mph)	(ft/sec)	(mph)							(ft/sec)							
837.0	70.0	102.7	52.8	77.4	64919.2	-3.5	0.55	1.53	1.46	53.7	78.8	55.4	81.3	3.93	1.46	53.7	78.8	64997.4	
838.0	70.0	102.7	53.7	78.8	64997.4	-3.5	0.54	1.50	1.43	54.7	80.3	56.3	82.6	3.77	1.43	54.7	80.3	65076.9	
839.0	70.0	102.7	54.7	80.3	65076.9	-3.5	0.53	1.47	1.41	55.7	81.7	57.2	83.9	3.62	1.41	55.7	81.7	65157.9	
840.0	70.0	102.7	55.7	81.7	65157.9	-3.5	0.52	1.44	1.38	56.6	83.1	58.0	85.1	3.47	1.38	56.6	83.1	65240.2	
841.0	70.0	102.7	56.6	83.1	65240.2	-3.5	0.51	1.42	1.36	57.6	84.4	58.9	86.4	3.32	1.36	57.6	84.4	65324.0	
842.0	70.0	102.7	57.6	84.4	65324.0	-3.5	0.50	1.39	1.34	58.5	85.8	59.7	87.6	3.17	1.34	58.5	85.8	65409.1	
843.0	70.0	102.7	58.5	85.8	65409.1	-3.5	0.48	1.37	1.32	59.4	87.1	60.5	88.8	3.03	1.32	59.4	87.1	65495.5	
844.0	70.0	102.7	59.4	87.1	65495.5	-3.5	0.47	1.34	1.29	60.3	88.4	61.3	90.0	2.88	1.29	60.3	88.4	65583.2	
845.0	70.0	102.7	60.3	88.4	65583.2	-3.5	0.46	1.32	1.27	61.1	89.6	62.1	91.1	2.74	1.27	61.1	89.6	65672.2	
846.0	70.0	102.7	61.1	89.6	65672.2	-3.5	0.45	1.30	1.25	62.0	90.9	62.9	92.2	2.61	1.25	62.0	90.9	65762.5	
847.0	70.0	102.7	62.0	90.9	65762.5	-3.5	0.44	1.27	1.23	62.8	92.1	63.7	93.4	2.47	1.23	62.8	92.1	65854.0	
848.0	70.0	102.7	62.8	92.1	65854.0	-3.5	0.43	1.25	1.21	63.6	93.3	64.4	94.5	2.34	1.21	63.6	93.3	65946.7	
849.0	70.0	102.7	63.6	93.3	65946.7	-3.5	0.42	1.23	1.19	64.5	94.5	65.1	95.5	2.21	1.19	64.5	94.5	66040.7	
850.0	70.0	102.7	64.5	94.5	66040.7	-3.5	0.41	1.21	1.17	65.3	95.7	65.9	96.6	2.08	1.17	65.3	95.7	66135.8	
851.0	70.0	102.7	65.3	95.7	66135.8	-3.5	0.40	1.19	1.15	66.0	96.9	66.6	97.7	1.95	1.15	66.0	96.9	66232.1	
852.0	70.0	102.7	66.0	96.9	66232.1	-3.5	0.39	1.17	1.14	66.8	98.0	67.3	98.7	1.83	1.14	66.8	98.0	66329.5	
853.0	70.0	102.7	66.8	98.0	66329.5	-3.5	0.37	1.15	1.12	67.6	99.1	68.0	99.7	1.70	1.12	67.6	99.1	66428.0	
26	854.0	70.0	102.7	67.6	99.1	66428.0	0.5	-0.92	-0.15	-0.15	67.5	99.0	68.7	100.7	1.58	-0.15	67.5	99.0	66527.1
855.0	70.0	102.7	67.5	99.0	66527.1	0.5	-0.92	-0.14	-0.15	67.4	98.8	68.6	100.6	1.60	-0.15	67.4	98.8	66625.9	
856.0	70.0	102.7	67.4	98.8	66625.9	0.5	-0.92	-0.14	-0.15	67.3	98.7	68.5	100.4	1.62	-0.15	67.3	98.7	66724.7	
857.0	70.0	102.7	67.3	98.7	66724.7	0.5	-0.92	-0.14	-0.14	67.2	98.5	68.4	100.3	1.63	-0.14	67.2	98.5	66823.3	
858.0	70.0	102.7	67.2	98.5	66823.3	0.5	-0.92	-0.14	-0.14	67.1	98.4	68.3	100.2	1.65	-0.14	67.1	98.4	66921.7	
859.0	70.0	102.7	67.1	98.4	66921.7	0.5	-0.92	-0.13	-0.14	67.0	98.2	68.2	100.0	1.66	-0.14	67.0	98.2	67020.0	
860.0	70.0	102.7	67.0	98.2	67020.0	0.5	-0.91	-0.13	-0.14	66.9	98.1	68.1	99.9	1.68	-0.14	66.9	98.1	67118.2	
861.0	70.0	102.7	66.9	98.1	67118.2	0.5	-0.91	-0.13	-0.13	66.8	98.0	68.0	99.8	1.69	-0.13	66.8	98.0	67216.3	
862.0	70.0	102.7	66.8	98.0	67216.3	0.5	-0.91	-0.13	-0.13	66.7	97.8	68.0	99.7	1.71	-0.13	66.7	97.8	67314.2	
863.0	70.0	102.7	66.7	97.8	67314.2	0.5	-0.91	-0.12	-0.13	66.6	97.7	67.9	99.6	1.72	-0.13	66.6	97.7	67411.9	
864.0	70.0	102.7	66.6	97.7	67411.9	0.5	-0.91	-0.12	-0.13	66.5	97.6	67.8	99.4	1.73	-0.13	66.5	97.6	67509.6	
865.0	70.0	102.7	66.5	97.6	67509.6	0.5	-0.91	-0.12	-0.12	66.5	97.5	67.7	99.3	1.75	-0.12	66.5	97.5	67607.1	
866.0	70.0	102.7	66.5	97.5	67607.1	0.5	-0.91	-0.12	-0.12	66.4	97.3	67.7	99.2	1.76	-0.12	66.4	97.3	67704.5	
867.0	70.0	102.7	66.4	97.3	67704.5	0.5	-0.91	-0.12	-0.12	66.3	97.2	67.6	99.1	1.78	-0.12	66.3	97.2	67801.8	
868.0	70.0	102.7	66.3	97.2	67801.8	0.5	-0.91	-0.11	-0.12	66.2	97.1	67.5	99.0	1.79	-0.12	66.2	97.1	67899.0	
869.0	70.0	102.7	66.2	97.1	67899.0	0.5	-0.90	-0.11	-0.12	66.1	97.0	67.4	98.9	1.80	-0.12	66.1	97.0	67996.0	
870.0	70.0	102.7	66.1	97.0	67996.0	0.5	-0.90	-0.11	-0.11	66.1	96.9	67.4	98.8	1.81	-0.11	66.1	96.9	68092.9	
27	871.0	70.0	102.7	66.1	96.9	68092.9	-3.1	0.26	1.04	1.01	66.7	97.9	67.3	98.7	1.83	1.01	66.7	97.9	68190.3
872.0	70.0	102.7	66.7	97.9	68190.3	-3.1	0.25	1.02	0.99	67.4	98.9	67.9	99.6	1.72	0.99	67.4	98.9	68288.7	
873.0	70.0	102.7	67.4	98.9	68288.7	-3.1	0.24	1.01	0.98	68.1	99.9	68.5	100.5	1.61	0.98	68.1	99.9	68388.1	
874.0	70.0	102.7	68.1	99.9	68388.1	-3.1	0.23	0.99	0.96	68.7	100.8	69.1	101.4	1.50	0.96	68.7	100.8	68488.4	
875.0	70.0	102.7	68.7	100.8	68488.4	-3.1	0.22	0.97	0.95	69.4	101.8	69.7	102.2	1.40	0.95	69.4	101.8	68589.7	
876.0	70.0	102.7	69.4	101.8	68589.7	-3.1	0.21	0.96	0.93	70.0	102.7	70.0	102.7	0.90	0.90	70.0	102.7	68691.9	
28	877.0	70.0	102.7	70.0	102.7	68691.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68794.6
878.0	70.0	102.7	70.0	102.7	68794.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68897.3	
879.0	70.0	102.7	70.0	102.7	68897.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	68999.9	
880.0	70.0	102.7	70.0	102.7	68999.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	69102.6	

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)			
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	New position (ft)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(ft/sec)	(mph)	(ft/sec)	(mph)					(ft/sec)	
881.0	70.0	102.7	70.0	102.7	69102.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	69205.3
882.0	70.0	102.7	70.0	102.7	69205.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	69307.9
883.0	70.0	102.7	70.0	102.7	69307.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	69410.6
884.0	70.0	102.7	70.0	102.7	69410.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	69513.3
885.0	70.0	102.7	70.0	102.7	69513.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	69615.9
886.0	70.0	102.7	70.0	102.7	69615.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	69718.6
887.0	70.0	102.7	70.0	102.7	69718.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	69821.3
888.0	70.0	102.7	70.0	102.7	69821.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	69923.9
889.0	70.0	102.7	70.0	102.7	69923.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70026.6
890.0	70.0	102.7	70.0	102.7	70026.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70129.3
891.0	70.0	102.7	70.0	102.7	70129.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70231.9
892.0	70.0	102.7	70.0	102.7	70231.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70334.6
893.0	70.0	102.7	70.0	102.7	70334.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70437.3
894.0	70.0	102.7	70.0	102.7	70437.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70539.9
895.0	70.0	102.7	70.0	102.7	70539.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70642.6
896.0	70.0	102.7	70.0	102.7	70642.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70745.3
897.0	70.0	102.7	70.0	102.7	70745.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70847.9
898.0	70.0	102.7	70.0	102.7	70847.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	70950.6
899.0	70.0	102.7	70.0	102.7	70950.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	71053.3
900.0	70.0	102.7	70.0	102.7	71053.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	71155.9
901.0	70.0	102.7	70.0	102.7	71155.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	71258.6
902.0	70.0	102.7	70.0	102.7	71258.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	71361.3
903.0	70.0	102.7	70.0	102.7	71361.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	71463.9
904.0	70.0	102.7	70.0	102.7	71463.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	71566.6
905.0	70.0	102.7	70.0	102.7	71566.6	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	71669.3
906.0	70.0	102.7	70.0	102.7	71669.3	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	71771.9
907.0	70.0	102.7	70.0	102.7	71771.9	-3.1	0.20	0.94	0.92	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	71874.6
908.0	70.0	102.7	70.0	102.7	71874.6	4.0	-2.08	-1.33	-1.36	69.1	101.3	70.0	102.7	0.00	-1.36	69.1	101.3	71976.6
909.0	70.0	102.7	69.1	101.3	71976.6	4.0	-2.07	-1.30	-1.34	68.2	100.0	70.0	102.6	1.35	-1.34	68.2	100.0	72077.2
910.0	70.0	102.7	68.2	100.0	72077.2	4.0	-2.06	-1.28	-1.32	67.3	98.6	69.2	101.5	1.49	-1.32	67.3	98.6	72176.5
911.0	70.0	102.7	67.3	98.6	72176.5	4.0	-2.04	-1.26	-1.30	66.4	97.3	68.4	100.3	1.63	-1.30	66.4	97.3	72274.5
912.0	70.0	102.7	66.4	97.3	72274.5	4.0	-2.03	-1.23	-1.27	65.5	96.1	67.6	99.1	1.77	-1.27	65.5	96.1	72371.2
913.0	70.0	102.7	65.5	96.1	72371.2	4.0	-2.02	-1.21	-1.25	64.7	94.8	66.8	98.0	1.91	-1.25	64.7	94.8	72466.7
914.0	70.0	102.7	64.7	94.8	72466.7	4.0	-2.01	-1.19	-1.23	63.8	93.6	66.0	96.9	2.05	-1.23	63.8	93.6	72560.9
915.0	70.0	102.7	63.8	93.6	72560.9	4.0	-2.00	-1.17	-1.21	63.0	92.4	65.3	95.8	2.18	-1.21	63.0	92.4	72653.9
916.0	70.0	102.7	63.0	92.4	72653.9	4.0	-1.99	-1.14	-1.19	62.2	91.2	64.6	94.7	2.31	-1.19	62.2	91.2	72745.7
917.0	70.0	102.7	62.2	91.2	72745.7	4.0	-1.98	-1.12	-1.16	61.4	90.0	63.8	93.6	2.44	-1.16	61.4	90.0	72836.3
918.0	70.0	102.7	61.4	90.0	72836.3	4.0	-1.97	-1.10	-1.14	60.6	88.9	63.1	92.6	2.56	-1.14	60.6	88.9	72925.7
919.0	70.0	102.7	60.6	88.9	72925.7	4.0	-1.96	-1.08	-1.12	59.8	87.8	62.4	91.6	2.69	-1.12	59.8	87.8	73014.1
920.0	70.0	102.7	59.8	87.8	73014.1	4.0	-1.95	-1.06	-1.10	59.1	86.7	61.8	90.6	2.81	-1.10	59.1	86.7	73101.3
921.0	70.0	102.7	59.1	86.7	73101.3	4.0	-1.94	-1.04	-1.08	58.4	85.6	61.1	89.6	2.93	-1.08	58.4	85.6	73187.4
922.0	70.0	102.7	58.4	85.6	73187.4	4.0	-1.93	-1.02	-1.06	57.6	84.5	60.4	88.6	3.04	-1.06	57.6	84.5	73272.5
923.0	70.0	102.7	57.6	84.5	73272.5	4.0	-1.92	-1.00	-1.04	56.9	83.5	59.8	87.7	3.16	-1.04	56.9	83.5	73356.5
924.0	70.0	102.7	56.9	83.5	73356.5	4.0	-1.91	-0.98	-1.02	56.2	82.5	59.2	86.8	3.27	-1.02	56.2	82.5	73439.5

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			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)					
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(mph)	(ft/sec)		(mph)		(ft/sec)	(ft)	
925.0	70.0	102.7	56.2	82.5	73439.5	4.0	-1.90	-0.96	-1.00	55.5	81.5	58.5	85.8	3.38	-1.00	55.5	81.5	73521.4
926.0	70.0	102.7	55.5	81.5	73521.4	4.0	-1.89	-0.94	-0.98	54.9	80.5	57.9	85.0	3.49	-0.98	54.9	80.5	73602.4
927.0	70.0	102.7	54.9	80.5	73602.4	4.0	-1.89	-0.92	-0.96	54.2	79.5	57.3	84.1	3.60	-0.96	54.2	79.5	73682.4
928.0	70.0	102.7	54.2	79.5	73682.4	4.0	-1.88	-0.90	-0.94	53.6	78.6	56.7	83.2	3.70	-0.94	53.6	78.6	73761.4
929.0	70.0	102.7	53.6	78.6	73761.4	4.0	-1.87	-0.88	-0.93	52.9	77.6	56.2	82.4	3.80	-0.93	52.9	77.6	73839.6
930.0	70.0	102.7	52.9	77.6	73839.6	-5.0	1.03	2.00	1.91	54.2	79.6	55.6	81.5	3.90	1.91	54.2	79.6	73918.2
931.0	70.0	102.7	54.2	79.6	73918.2	-5.0	1.02	1.96	1.88	55.5	81.4	56.8	83.2	3.70	1.88	55.5	81.4	73998.6
932.0	70.0	102.7	55.5	81.4	73998.6	-5.0	1.00	1.93	1.85	56.8	83.3	57.9	84.9	3.49	1.85	56.8	83.3	74081.0
933.0	70.0	102.7	56.8	83.3	74081.0	-5.0	0.99	1.89	1.82	58.0	85.1	59.0	86.6	3.29	1.82	58.0	85.1	74165.2
934.0	70.0	102.7	58.0	85.1	74165.2	-5.0	0.97	1.86	1.79	59.2	86.9	60.1	88.2	3.10	1.79	59.2	86.9	74251.2
935.0	70.0	102.7	59.2	86.9	74251.2	-5.0	0.96	1.82	1.76	60.4	88.6	61.2	89.8	2.90	1.76	60.4	88.6	74338.9
936.0	70.0	102.7	60.4	88.6	74338.9	-5.0	0.94	1.79	1.73	61.6	90.4	62.3	91.4	2.71	1.73	61.6	90.4	74428.4
937.0	70.0	102.7	61.6	90.4	74428.4	-5.0	0.93	1.76	1.70	62.8	92.1	63.3	92.9	2.53	1.70	62.8	92.1	74519.7
938.0	70.0	102.7	62.8	92.1	74519.7	-5.0	0.91	1.73	1.68	63.9	93.8	64.4	94.4	2.34	1.68	63.9	93.8	74612.6
939.0	70.0	102.7	63.9	93.8	74612.6	-5.0	0.90	1.70	1.65	65.0	95.4	65.4	95.9	2.16	1.65	65.0	95.4	74707.2
940.0	70.0	102.7	65.0	95.4	74707.2	-5.0	0.88	1.67	1.62	66.2	97.0	66.4	97.4	1.98	1.62	66.2	97.0	74803.4
941.0	70.0	102.7	66.2	97.0	74803.4	-5.0	0.87	1.65	1.60	67.2	98.6	67.4	98.8	1.81	1.60	67.2	98.6	74901.2
942.0	70.0	102.7	67.2	98.6	74901.2	-5.0	0.85	1.62	1.57	68.3	100.2	68.4	100.3	1.64	1.57	68.3	100.2	75000.6
943.0	70.0	102.7	68.3	100.2	75000.6	-5.0	0.84	1.59	1.55	69.4	101.7	69.3	101.7	1.47	1.47	69.3	101.7	75101.5
944.0	70.0	102.7	69.3	101.7	75101.5	-5.0	0.82	1.57	1.52	70.4	103.2	70.0	102.7	1.00	1.00	70.0	102.7	75203.7
945.0	70.0	102.7	70.0	102.7	75203.7	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	75306.4
946.0	70.0	102.7	70.0	102.7	75306.4	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	75409.0
947.0	70.0	102.7	70.0	102.7	75409.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	75511.7
948.0	70.0	102.7	70.0	102.7	75511.7	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	75614.4
949.0	70.0	102.7	70.0	102.7	75614.4	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	75717.0
950.0	70.0	102.7	70.0	102.7	75717.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	75819.7
951.0	70.0	102.7	70.0	102.7	75819.7	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	75922.4
952.0	70.0	102.7	70.0	102.7	75922.4	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76025.0
953.0	70.0	102.7	70.0	102.7	76025.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76127.7
954.0	70.0	102.7	70.0	102.7	76127.7	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76230.4
955.0	70.0	102.7	70.0	102.7	76230.4	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76333.0
956.0	70.0	102.7	70.0	102.7	76333.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76435.7
957.0	70.0	102.7	70.0	102.7	76435.7	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76538.4
958.0	70.0	102.7	70.0	102.7	76538.4	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76641.0
959.0	70.0	102.7	70.0	102.7	76641.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76743.7
960.0	70.0	102.7	70.0	102.7	76743.7	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76846.4
961.0	70.0	102.7	70.0	102.7	76846.4	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	76949.0
962.0	70.0	102.7	70.0	102.7	76949.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	77051.7
963.0	70.0	102.7	70.0	102.7	77051.7	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	77154.4
964.0	70.0	102.7	70.0	102.7	77154.4	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	77257.0
965.0	70.0	102.7	70.0	102.7	77257.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	77359.7
966.0	70.0	102.7	70.0	102.7	77359.7	4.1	-2.12	-1.36	-1.40	69.0	101.3	70.0	102.7	0.00	-1.40	69.0	101.3	77461.7
967.0	70.0	102.7	69.0	101.3	77461.7	4.1	-2.10	-1.33	-1.37	68.1	99.9	70.0	102.6	1.35	-1.37	68.1	99.9	77562.3
968.0	70.0	102.7	68.1	99.9	77562.3	4.1	-2.09	-1.31	-1.35	67.2	98.5	69.1	101.4	1.50	-1.35	67.2	98.5	77661.5

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TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)		(19) New position (ft)	
	Desired speed		Start of 1-sec Interval			Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed			Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed (mph)	(ft/sec)		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)								
969.0	70.0	102.7	67.2	98.5	77661.5	4.1	-2.08	-1.29	-1.33	66.3	97.2	68.3	100.2	1.65	-1.33	66.3	97.2	77759.4
970.0	70.0	102.7	66.3	97.2	77759.4	4.1	-2.06	-1.26	-1.30	65.4	95.9	67.5	99.0	1.79	-1.30	65.4	95.9	77855.9
971.0	70.0	102.7	65.4	95.9	77855.9	4.1	-2.05	-1.24	-1.28	64.5	94.6	66.7	97.8	1.93	-1.28	64.5	94.6	77951.2
972.0	70.0	102.7	64.5	94.6	77951.2	4.1	-2.04	-1.22	-1.26	63.7	93.4	65.9	96.7	2.07	-1.26	63.7	93.4	78045.2
973.0	70.0	102.7	63.7	93.4	78045.2	4.1	-2.03	-1.19	-1.24	62.8	92.1	65.2	95.6	2.20	-1.24	62.8	92.1	78138.0
974.0	70.0	102.7	62.8	92.1	78138.0	4.1	-2.02	-1.17	-1.21	62.0	90.9	64.4	94.5	2.34	-1.21	62.0	90.9	78229.5
975.0	70.0	102.7	62.0	90.9	78229.5	4.1	-2.01	-1.15	-1.19	61.2	89.7	63.7	93.4	2.47	-1.19	61.2	89.7	78319.8
976.0	70.0	102.7	61.2	89.7	78319.8	4.1	-1.99	-1.13	-1.17	60.4	88.6	63.0	92.3	2.60	-1.17	60.4	88.6	78409.0
977.0	70.0	102.7	60.4	88.6	78409.0	4.1	-1.98	-1.11	-1.15	59.6	87.4	62.2	91.3	2.72	-1.15	59.6	87.4	78497.0
978.0	70.0	102.7	59.6	87.4	78497.0	4.1	-1.97	-1.09	-1.13	58.8	86.3	61.5	90.3	2.85	-1.13	58.8	86.3	78583.8
979.0	70.0	102.7	58.8	86.3	78583.8	4.1	-1.96	-1.06	-1.11	58.1	85.2	60.9	89.3	2.97	-1.11	58.1	85.2	78669.5
980.0	70.0	102.7	58.1	85.2	78669.5	4.1	-1.95	-1.04	-1.09	57.3	84.1	60.2	88.3	3.09	-1.09	57.3	84.1	78754.2
981.0	70.0	102.7	57.3	84.1	78754.2	4.1	-1.95	-1.02	-1.07	56.6	83.0	59.5	87.3	3.21	-1.07	56.6	83.0	78837.7
982.0	70.0	102.7	56.6	83.0	78837.7	4.1	-1.94	-1.00	-1.05	55.9	82.0	58.9	86.3	3.32	-1.05	55.9	82.0	78920.2
983.0	70.0	102.7	55.9	82.0	78920.2	4.1	-1.93	-0.98	-1.03	55.2	81.0	58.2	85.4	3.43	-1.03	55.2	81.0	79001.7
984.0	70.0	102.7	55.2	81.0	79001.7	4.1	-1.92	-0.96	-1.01	54.5	79.9	57.6	84.5	3.55	-1.01	54.5	79.9	79082.1
985.0	70.0	102.7	54.5	79.9	79082.1	4.1	-1.91	-0.94	-0.99	53.8	79.0	57.0	83.6	3.65	-0.99	53.8	79.0	79161.6
986.0	70.0	102.7	53.8	79.0	79161.6	4.1	-1.91	-0.92	-0.97	53.2	78.0	56.4	82.7	3.76	-0.97	53.2	78.0	79240.1
987.0	70.0	102.7	53.2	78.0	79240.1	4.1	-1.90	-0.90	-0.95	52.5	77.0	55.8	81.9	3.86	-0.95	52.5	77.0	79317.6
988.0	70.0	102.7	52.5	77.0	79317.6	4.1	-1.89	-0.88	-0.93	51.9	76.1	55.2	81.0	3.97	-0.93	51.9	76.1	79394.2
989.0	70.0	102.7	51.9	76.1	79394.2	4.1	-1.88	-0.86	-0.91	51.3	75.2	54.7	80.2	4.07	-0.91	51.3	75.2	79469.8
990.0	70.0	102.7	51.3	75.2	79469.8	4.1	-1.88	-0.84	-0.89	50.7	74.3	54.1	79.4	4.17	-0.89	50.7	74.3	79544.6
991.0	70.0	102.7	50.7	74.3	79544.6	4.1	-1.87	-0.83	-0.87	50.1	73.4	53.6	78.6	4.26	-0.87	50.1	73.4	79618.5
992.0	70.0	102.7	50.1	73.4	79618.5	4.1	-1.86	-0.81	-0.85	49.5	72.6	53.0	77.8	4.36	-0.85	49.5	72.6	79691.5
993.0	70.0	102.7	49.5	72.6	79691.5	4.1	-1.86	-0.79	-0.84	48.9	71.8	52.5	77.0	4.45	-0.84	48.9	71.8	79763.7
994.0	70.0	102.7	48.9	71.8	79763.7	4.1	-1.85	-0.77	-0.82	48.4	70.9	52.0	76.3	4.54	-0.82	48.4	70.9	79835.0
995.0	70.0	102.7	48.4	70.9	79835.0	4.1	-1.85	-0.75	-0.80	47.8	70.1	51.5	75.6	4.63	-0.80	47.8	70.1	79905.5
996.0	70.0	102.7	47.8	70.1	79905.5	4.1	-1.84	-0.74	-0.78	47.3	69.4	51.0	74.8	4.71	-0.78	47.3	69.4	79975.3
997.0	70.0	102.7	47.3	69.4	79975.3	4.1	-1.84	-0.72	-0.76	46.8	68.6	50.6	74.2	4.80	-0.76	46.8	68.6	80044.2
998.0	70.0	102.7	46.8	68.6	80044.2	4.1	-1.83	-0.70	-0.75	46.3	67.8	50.1	73.5	4.88	-0.75	46.3	67.8	80112.5
999.0	70.0	102.7	46.3	67.8	80112.5	4.1	-1.83	-0.68	-0.73	45.8	67.1	49.6	72.8	4.96	-0.73	45.8	67.1	80179.9
1000.0	70.0	102.7	45.8	67.1	80179.9	4.1	-1.82	-0.67	-0.71	45.3	66.4	49.2	72.2	5.04	-0.71	45.3	66.4	80246.7
1001.0	70.0	102.7	45.3	66.4	80246.7	4.1	-1.82	-0.65	-0.69	44.8	65.7	48.8	71.5	5.12	-0.69	44.8	65.7	80312.8
1002.0	70.0	102.7	44.8	65.7	80312.8	4.1	-1.81	-0.63	-0.68	44.3	65.0	48.3	70.9	5.19	-0.68	44.3	65.0	80378.1
1003.0	70.0	102.7	44.3	65.0	80378.1	4.1	-1.81	-0.62	-0.66	43.9	64.4	47.9	70.3	5.26	-0.66	43.9	64.4	80442.8
1004.0	70.0	102.7	43.9	64.4	80442.8	4.1	-1.80	-0.60	-0.64	43.4	63.7	47.5	69.7	5.34	-0.64	43.4	63.7	80506.9
1005.0	70.0	102.7	43.4	63.7	80506.9	4.1	-1.80	-0.58	-0.63	43.0	63.1	47.1	69.1	5.41	-0.63	43.0	63.1	80570.3
1006.0	70.0	102.7	43.0	63.1	80570.3	4.1	-1.80	-0.57	-0.61	42.6	62.5	46.8	68.6	5.47	-0.61	42.6	62.5	80633.1
1007.0	70.0	102.7	42.6	62.5	80633.1	4.1	-1.79	-0.55	-0.60	42.2	61.9	46.4	68.0	5.54	-0.60	42.2	61.9	80695.3
1008.0	70.0	102.7	42.2	61.9	80695.3	4.1	-1.79	-0.54	-0.58	41.8	61.3	46.0	67.5	5.60	-0.58	41.8	61.3	80756.9
1009.0	70.0	102.7	41.8	61.3	80756.9	4.1	-1.78	-0.52	-0.57	41.4	60.7	45.7	67.0	5.67	-0.57	41.4	60.7	80817.9
1010.0	70.0	102.7	41.4	60.7	80817.9	4.1	-1.78	-0.51	-0.55	41.0	60.2	45.3	66.5	5.73	-0.55	41.0	60.2	80878.4
1011.0	70.0	102.7	41.0	60.2	80878.4	4.1	-1.78	-0.49	-0.54	40.7	59.7	45.0	66.0	5.79	-0.54	40.7	59.7	80938.3
1012.0	70.0	102.7	40.7	59.7	80938.3	-5.0	1.15	2.39	2.22	42.2	61.9	44.7	65.5	5.85	2.22	42.2	61.9	80999.1

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
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 Weight/frontal area ratio (lb/ft²) = 431.4
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 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(9)	(10)	(11)	(12)	(13)			(14)	(15)	(16)	(17)		(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval		Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval								
			Speed	Position		Coasting	Power	Effective			Speed		Acceleration		New speed	New position							
	(mph)	(ft/sec)	(mph)	(ft/sec)					(mph)	(ft/sec)	(ft/sec ²)	(mph)					(ft/sec)						
1013.0	70.0	102.7	42.2	61.9	80999.1	-5.0	1.14	2.34	2.18	43.7	64.1	46.0	67.5	5.61	2.18	43.7	64.1	81062.0					
1014.0	70.0	102.7	43.7	64.1	81062.0	-5.0	1.13	2.29	2.14	45.1	66.2	47.3	69.4	5.37	2.14	45.1	66.2	81127.1					
1015.0	70.0	102.7	45.1	66.2	81127.1	-5.0	1.11	2.24	2.10	46.6	68.3	48.6	71.3	5.14	2.10	46.6	68.3	81194.4					
1016.0	70.0	102.7	46.6	68.3	81194.4	-5.0	1.10	2.19	2.07	48.0	70.4	49.9	73.2	4.91	2.07	48.0	70.4	81263.7					
1017.0	70.0	102.7	48.0	70.4	81263.7	-5.0	1.08	2.15	2.03	49.4	72.4	51.2	75.1	4.69	2.03	49.4	72.4	81335.1					
1018.0	70.0	102.7	49.4	72.4	81335.1	-5.0	1.07	2.10	2.00	50.7	74.4	52.4	76.9	4.47	2.00	50.7	74.4	81408.5					
1019.0	70.0	102.7	50.7	74.4	81408.5	-5.0	1.06	2.06	1.96	52.1	76.4	53.6	78.6	4.25	1.96	52.1	76.4	81483.9					
1020.0	70.0	102.7	52.1	76.4	81483.9	-5.0	1.04	2.02	1.93	53.4	78.3	54.8	80.4	4.04	1.93	53.4	78.3	81561.2					
1021.0	70.0	102.7	53.4	78.3	81561.2	-5.0	1.03	1.99	1.90	54.7	80.2	56.0	82.1	3.83	1.90	54.7	80.2	81640.4					
1022.0	70.0	102.7	54.7	80.2	81640.4	-5.0	1.01	1.95	1.87	55.9	82.1	57.1	83.8	3.63	1.87	55.9	82.1	81721.6					
1023.0	70.0	102.7	55.9	82.1	81721.6	-5.0	1.00	1.91	1.84	57.2	83.9	58.3	85.5	3.43	1.84	57.2	83.9	81804.5					
1024.0	70.0	102.7	57.2	83.9	81804.5	-5.0	0.98	1.88	1.81	58.4	85.7	59.4	87.1	3.23	1.81	58.4	85.7	81889.3					
1025.0	70.0	102.7	58.4	85.7	81889.3	-5.0	0.97	1.85	1.78	59.6	87.5	60.5	88.7	3.03	1.78	59.6	87.5	81975.9					
1026.0	70.0	102.7	59.6	87.5	81975.9	-5.0	0.95	1.81	1.75	60.8	89.2	61.6	90.3	2.84	1.75	60.8	89.2	82064.3					
1027.0	70.0	102.7	60.8	89.2	82064.3	-5.0	0.94	1.78	1.72	62.0	90.9	62.6	91.9	2.65	1.72	62.0	90.9	82154.4					
1028.0	70.0	102.7	62.0	90.9	82154.4	-5.0	0.92	1.75	1.69	63.2	92.6	63.7	93.4	2.47	1.69	63.2	92.6	82246.2					
1029.0	70.0	102.7	63.2	92.6	82246.2	-5.0	0.91	1.72	1.67	64.3	94.3	64.7	94.9	2.28	1.67	64.3	94.3	82339.6					
1030.0	70.0	102.7	64.3	94.3	82339.6	-5.0	0.89	1.69	1.64	65.4	95.9	65.7	96.4	2.10	1.64	65.4	95.9	82434.8					
1031.0	70.0	102.7	65.4	95.9	82434.8	-5.0	0.88	1.66	1.61	66.5	97.6	66.7	97.9	1.93	1.61	66.5	97.6	82531.5					
1032.0	70.0	102.7	66.5	97.6	82531.5	-5.0	0.86	1.64	1.59	67.6	99.2	67.7	99.3	1.75	1.59	67.6	99.2	82629.9					
1033.0	70.0	102.7	67.6	99.2	82629.9	-5.0	0.85	1.61	1.56	68.7	100.7	68.7	100.7	1.58	1.56	68.7	100.7	82729.8					
1034.0	70.0	102.7	68.7	100.7	82729.8	-5.0	0.83	1.58	1.54	69.7	102.3	69.6	102.1	1.41	1.41	69.6	102.1	82831.2					
1035.0	70.0	102.7	69.6	102.1	82831.2	-5.0	0.82	1.56	1.52	70.7	103.6	70.0	102.7	0.54	0.54	70.0	102.7	82933.6					
34 1036.0	70.0	102.7	70.0	102.7	82933.6	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	83036.3					
1037.0	70.0	102.7	70.0	102.7	83036.3	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	83139.0					
1038.0	70.0	102.7	70.0	102.7	83139.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	83241.6					
1039.0	70.0	102.7	70.0	102.7	83241.6	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	83344.3					
1040.0	70.0	102.7	70.0	102.7	83344.3	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	83447.0					
1041.0	70.0	102.7	70.0	102.7	83447.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	83549.6					
1042.0	70.0	102.7	70.0	102.7	83549.6	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	83652.3					
1043.0	70.0	102.7	70.0	102.7	83652.3	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	83755.0					
1044.0	70.0	102.7	70.0	102.7	83755.0	-5.0	0.81	1.55	1.51	71.0	104.2	70.0	102.7	0.00	0.00	70.0	102.7	83857.6					
35 1045.0	70.0	102.7	70.0	102.7	83857.6	0.5	-0.96	-0.21	-0.21	69.9	102.5	70.0	102.7	0.00	-0.21	69.9	102.5	83960.2					
1046.0	70.0	102.7	69.9	102.5	83960.2	0.5	-0.96	-0.20	-0.21	69.7	102.2	70.0	102.7	0.21	-0.21	69.7	102.2	84062.5					
1047.0	70.0	102.7	69.7	102.2	84062.5	0.5	-0.95	-0.20	-0.21	69.6	102.0	70.0	102.7	0.43	-0.21	69.6	102.0	84164.7					
1048.0	70.0	102.7	69.6	102.0	84164.7	0.5	-0.95	-0.20	-0.20	69.4	101.8	70.0	102.7	0.63	-0.20	69.4	101.8	84266.6					
1049.0	70.0	102.7	69.4	101.8	84266.6	0.5	-0.95	-0.19	-0.20	69.3	101.6	70.0	102.7	0.84	-0.20	69.3	101.6	84368.3					
1050.0	70.0	102.7	69.3	101.6	84368.3	0.5	-0.95	-0.19	-0.20	69.2	101.4	70.0	102.7	1.04	-0.20	69.2	101.4	84469.9					
1051.0	70.0	102.7	69.2	101.4	84469.9	0.5	-0.95	-0.19	-0.19	69.0	101.2	70.0	102.7	1.23	-0.19	69.0	101.2	84571.2					
1052.0	70.0	102.7	69.0	101.2	84571.2	0.5	-0.94	-0.18	-0.19	68.9	101.1	70.0	102.6	1.35	-0.19	68.9	101.1	84672.4					
1053.0	70.0	102.7	68.9	101.1	84672.4	0.5	-0.94	-0.18	-0.19	68.8	100.9	69.8	102.4	1.37	-0.19	68.8	100.9	84773.3					
1054.0	70.0	102.7	68.8	100.9	84773.3	0.5	-0.94	-0.18	-0.18	68.6	100.7	69.7	102.3	1.39	-0.18	68.6	100.7	84874.1					
1055.0	70.0	102.7	68.6	100.7	84874.1	0.5	-0.94	-0.17	-0.18	68.5	100.5	69.6	102.1	1.41	-0.18	68.5	100.5	84974.7					
1056.0	70.0	102.7	68.5	100.5	84974.7	0.5	-0.94	-0.17	-0.18	68.4	100.3	69.5	101.9	1.43	-0.18	68.4	100.3	85075.1					

TRUCK SPEED PROFILE FOR SR823 Southbound, Phase3, Phase1 and Phase2 - Reference Plans - 02/17/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 70.0
 Initial speed (mph) = 35.0 Minimum speed (mph) = 32.7
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 37.3
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(3)		(5)		(7) Local grade (%)	(8)			(11)		(13)			(16) Actual acceleration (ft/sec ²)	(18)				
	Desired speed		Start of 1-sec Interval			Coasting	Power	Effective	New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval				
	(mph)	(ft/sec)	Speed						(mph)	(ft/sec)	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)	New speed		New position (ft)	
			(mph)	(ft/sec)									(mph)			(ft/sec)	(mph)		(ft/sec)
1057.0	70.0	102.7	68.4	100.3	85075.1	0.9	-1.05	-0.29	-0.29	68.2	100.0	69.4	101.8	1.45	-0.29	68.2	100.0	85175.3	
1058.0	70.0	102.7	68.2	100.0	85175.3	0.9	-1.05	-0.28	-0.29	68.0	99.7	69.2	101.5	1.48	-0.29	68.0	99.7	85275.2	
1059.0	70.0	102.7	68.0	99.7	85275.2	0.9	-1.05	-0.28	-0.28	67.8	99.5	69.0	101.3	1.52	-0.28	67.8	99.5	85374.8	
1060.0	70.0	102.7	67.8	99.5	85374.8	0.9	-1.05	-0.27	-0.28	67.6	99.2	68.9	101.0	1.55	-0.28	67.6	99.2	85474.1	
1061.0	70.0	102.7	67.6	99.2	85474.1	0.9	-1.04	-0.27	-0.27	67.4	98.9	68.7	100.8	1.58	-0.27	67.4	98.9	85573.1	
1062.0	70.0	102.7	67.4	98.9	85573.1	0.9	-1.04	-0.26	-0.27	67.3	98.6	68.5	100.5	1.61	-0.27	67.3	98.6	85671.9	
1063.0	70.0	102.7	67.3	98.6	85671.9	0.9	-1.04	-0.26	-0.26	67.1	98.4	68.4	100.3	1.64	-0.26	67.1	98.4	85770.4	
1064.0	70.0	102.7	67.1	98.4	85770.4	0.9	-1.04	-0.25	-0.26	66.9	98.1	68.2	100.0	1.66	-0.26	66.9	98.1	85868.7	
1065.0	70.0	102.7	66.9	98.1	85868.7	0.9	-1.03	-0.25	-0.26	66.7	97.9	68.0	99.8	1.69	-0.26	66.7	97.9	85966.7	
1066.0	70.0	102.7	66.7	97.9	85966.7	0.9	-1.03	-0.24	-0.25	66.6	97.6	67.9	99.6	1.72	-0.25	66.6	97.6	86064.4	
1067.0	70.0	102.7	66.6	97.6	86064.4	0.9	-1.03	-0.24	-0.25	66.4	97.4	67.7	99.4	1.75	-0.25	66.4	97.4	86161.9	
36 1068.0	70.0	102.7	66.4	97.4	86161.9	-3.2	0.28	1.06	1.03	67.1	98.4	67.6	99.1	1.77	1.03	67.1	98.4	86259.7	
1069.0	70.0	102.7	67.1	98.4	86259.7	-3.2	0.27	1.04	1.01	67.8	99.4	68.2	100.1	1.66	1.01	67.8	99.4	86358.6	
1070.0	70.0	102.7	67.8	99.4	86358.6	-3.2	0.26	1.03	1.00	68.5	100.4	68.8	101.0	1.55	1.00	68.5	100.4	86458.5	
1071.0	70.0	102.7	68.5	100.4	86458.5	-3.2	0.25	1.01	0.98	69.1	101.4	69.4	101.8	1.44	0.98	69.1	101.4	86559.4	
1072.0	70.0	102.7	69.1	101.4	86559.4	-3.2	0.24	0.99	0.97	69.8	102.4	70.0	102.7	1.28	0.97	69.8	102.4	86661.3	
1073.0	70.0	102.7	69.8	102.4	86661.3	-3.2	0.23	0.98	0.95	70.4	103.3	70.0	102.7	0.32	0.32	70.0	102.7	86763.8	
37 1074.0	70.0	102.7	70.0	102.7	86763.8	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86866.5	
1075.0	70.0	102.7	70.0	102.7	86866.5	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	86969.2	
1076.0	70.0	102.7	70.0	102.7	86969.2	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87071.8	
1077.0	70.0	102.7	70.0	102.7	87071.8	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87174.5	
1078.0	70.0	102.7	70.0	102.7	87174.5	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87277.2	
1079.0	70.0	102.7	70.0	102.7	87277.2	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87379.8	
1080.0	70.0	102.7	70.0	102.7	87379.8	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87482.5	
1081.0	70.0	102.7	70.0	102.7	87482.5	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87585.2	
1082.0	70.0	102.7	70.0	102.7	87585.2	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87687.8	
1083.0	70.0	102.7	70.0	102.7	87687.8	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87790.5	
1084.0	70.0	102.7	70.0	102.7	87790.5	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87893.2	
1085.0	70.0	102.7	70.0	102.7	87893.2	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	87995.8	
1086.0	70.0	102.7	70.0	102.7	87995.8	-3.2	0.23	0.97	0.95	70.6	103.6	70.0	102.7	0.00	0.00	70.0	102.7	88098.5	
38 1087.0	70.0	102.7	70.0	102.7	88098.5	0.3	-0.89	-0.14	-0.15	69.9	102.5	70.0	102.7	0.00	-0.15	69.9	102.5	88201.1	
1088.0	70.0	102.7	69.9	102.5	88201.1	0.3	-0.89	-0.14	-0.15	69.8	102.4	70.0	102.7	0.15	-0.15	69.8	102.4	88303.5	
1089.0	70.0	102.7	69.8	102.4	88303.5	0.3	-0.89	-0.14	-0.14	69.7	102.2	70.0	102.7	0.29	-0.14	69.7	102.2	88405.8	
1090.0	70.0	102.7	69.7	102.2	88405.8	0.3	-0.89	-0.14	-0.14	69.6	102.1	70.0	102.7	0.44	-0.14	69.6	102.1	88508.0	
1091.0	70.0	102.7	69.6	102.1	88508.0	0.3	-0.89	-0.13	-0.14	69.5	101.9	70.0	102.7	0.58	-0.14	69.5	101.9	88610.0	
1092.0	70.0	102.7	69.5	101.9	88610.0	1.1	-1.16	-0.40	-0.41	69.2	101.5	70.0	102.7	0.72	-0.41	69.2	101.5	88711.7	
1093.0	70.0	102.7	69.2	101.5	88711.7	1.1	-1.15	-0.39	-0.40	69.0	101.1	70.0	102.7	1.13	-0.40	69.0	101.1	88813.1	
1094.0	70.0	102.7	69.0	101.1	88813.1	1.1	-1.15	-0.39	-0.40	68.7	100.7	69.9	102.5	1.37	-0.40	68.7	100.7	88914.0	

SCI-823, PORTSMOUTH BYPASS - TRUCK SPEED PROFILES - SOUTHBOUND - 02/17/2014

SECTION		Position	Speed MPH	Avg. Speed MPH	Distance FT	Avg.Speed x Distance	Average Speed for the Section MPH	Min. Speed for the Section MPH	Comments
Begin SR 823, Sta. 904+10.82 to Sta. 16+44.85, US52 Ramp B	1	0.0	35.0						Minimum Speed from Point 1 through Point 4 is 32.7 mph use 32.5 mph as minimum speed, for the rest of the project the Minimum Speed is 40 mph
	2	4067.7	37.2	36.1	4067.7	146912.5			
	3	11425.9	32.7	35.0	7358.2	257292.1			
	4	16614.5	70.0	51.4	5188.6	266433.4			
	5	19078.5	70.0	70.0	2464.0	172480.0			
	6	22252.0	49.4	59.7	3173.5	189411.2			
	7	23842.2	70.0	59.7	1590.2	94912.9			
	8	24663.6	70.0	70.0	821.3	57493.3			
	9	27922.8	51.0	60.5	3259.2	197231.4			
	10	31580.0	70.0	60.5	3657.2	221316.2			
	11	32812.0	70.0	70.0	1232.0	86240.0			
	12	34437.8	60.9	65.4	1625.8	106384.4			
	13	35500.6	70.0	65.4	1062.8	69546.0			
	14	36835.3	70.0	70.0	1334.7	93426.7			
	15	38617.3	58.6	64.3	1782.0	114583.9			
	16	39757.7	70.0	64.3	1140.4	73330.2			
	17	41503.1	70.0	70.0	1745.3	122173.3			
	18	43406.1	54.6	62.3	1903.1	118521.7			
	19	46214.3	67.8	61.2	2808.2	171808.7			
	20	48228.6	48.1	58.0	2014.2	116762.2			
	21	50779.3	70.0	59.1	2550.8	150665.4			
	22	55707.3	70.0	70.0	4928.0	344960.0			
	23	57242.4	54.7	62.4	1535.1	95723.0			
	24	60477.0	55.4	55.1	3234.6	178161.6			
	25	64163.2	40.6	48.0	3686.2	176941.7			
	26	66428.0	67.6	54.1	2264.8	122447.7			
	27	68092.9	66.1	66.8	1664.9	111238.5			
	28	68691.9	70.0	68.0	599.0	40746.7			
	29	71874.6	70.0	70.0	3182.7	222786.7			
	30	73839.6	52.9	61.5	1965.0	120785.3			
	31	75203.7	70.0	61.5	1364.2	83853.9			
	32	77359.7	70.0	70.0	2156.0	150920.0			
	33	80938.3	40.7	55.3	3578.6	198029.4			
	34	82933.6	70.0	55.3	1995.3	110417.2			
	35	83857.6	70.0	70.0	924.0	64680.0			
	36	86161.9	66.4	68.2	2304.2	157128.7			
	37	86763.8	70.0	68.2	602.0	41047.7			
	38	88098.5	70.0	70.0	1334.7	93426.7			
	39	88766.0	69.0	69.5	667.5	46374.5		58.4	32.5

Use 55 mph

TRUCK SPEED PROFILE - TR234 RAMP A - NORTHBOUND ENTRANCE RAMP

TRUCK SPEED PERFORMANCE MODEL

Desired speed (mph) = 70.0
 Initial speed (mph) = 0.0
 Weight/power ratio (lb/hp) = 200.0
 Weight/frontal area ratio (lb/ft²) = 0.0 ← enter value or enter zero to use default estimate
 Elevation (ft) = 800.0
 Location (legend) = TR234 RAMP A, NB ENTRANCE RAMP, 03/04/2014

Vertical Profile

(Beginning of first segment must equal 0)

Position (ft)		Percent Grade
Begin	End	
0	100	-1.72
100	1550	4.97
1550	3750	2.9
3750	4350	-4.5



Stationing from Reference Design

Sta. 384+50.00 to Sta. 385+50.00 - -1.72%
 Sta. 385+50.00 to Sta. 400+00.00 - 4.97%
 Sta. 400+00.00 to Sta. 422+00.00 - 2.9%
 Sta. 422+00.00 to Sta. 428+00.00 - -4.5%

The Entrance Ramp has 1850 feet of Acceleration Lane (from Reference Plans)

TRUCK SPEED PROFILE FOR TR234 RAMP A, NB ENTRANCE RAMP, 03/04/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 50.4
 Initial speed (mph) = 0.0 Minimum speed (mph) = 1.9
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 48.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval		
	(mph)	(ft/sec)	Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed		New position (ft)
			(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)			(mph)	(ft/sec)	
0.0	70.0	102.7	0.0	0.0	0.0	-1.7	0.19	4.62	2.78	1.9	2.8	8.4	12.3	12.29	2.78	1.9	2.8	1.4
1.0	70.0	102.7	1.9	2.8	1.4	-1.7	0.19	4.62	2.78	3.8	5.6	10.1	14.8	11.99	2.78	3.8	5.6	5.6
2.0	70.0	102.7	3.8	5.6	5.6	-1.7	0.19	4.62	2.78	5.7	8.3	11.8	17.2	11.69	2.78	5.7	8.3	12.5
3.0	70.0	102.7	5.7	8.3	12.5	-1.7	0.19	4.62	2.78	7.6	11.1	13.4	19.7	11.39	2.78	7.6	11.1	22.2
4.0	70.0	102.7	7.6	11.1	22.2	-1.7	0.20	4.53	1.84	8.8	12.9	15.1	22.2	11.09	1.84	8.8	12.9	34.2
5.0	70.0	102.7	8.8	12.9	34.2	-1.7	0.21	4.33	1.97	10.2	14.9	16.2	23.8	10.89	1.97	10.2	14.9	48.2
6.0	70.0	102.7	10.2	14.9	48.2	-1.7	0.22	4.08	2.07	11.6	17.0	17.4	25.6	10.68	2.07	11.6	17.0	64.1
7.0	70.0	102.7	11.6	17.0	64.1	-1.7	0.22	3.82	2.13	13.0	19.1	18.7	27.4	10.45	2.13	13.0	19.1	82.1
8.0	70.0	102.7	13.0	19.1	82.1	-1.7	0.23	3.56	2.15	14.5	21.3	20.0	29.3	10.22	2.15	14.5	21.3	102.3
9.0	70.0	102.7	14.5	21.3	102.3	5.0	-1.93	1.46	0.91	15.1	22.2	21.3	31.3	9.99	0.91	15.1	22.2	124.1
10.0	70.0	102.7	15.1	22.2	124.1	5.0	-1.93	1.35	0.87	15.7	23.0	21.9	32.1	9.89	0.87	15.7	23.0	146.7
11.0	70.0	102.7	15.7	23.0	146.7	5.0	-1.93	1.24	0.82	16.3	23.9	22.4	32.8	9.80	0.82	16.3	23.9	170.1
12.0	70.0	102.7	16.3	23.9	170.1	5.0	-1.93	1.15	0.78	16.8	24.6	22.9	33.6	9.71	0.78	16.8	24.6	194.4
13.0	70.0	102.7	16.8	24.6	194.4	5.0	-1.93	1.07	0.73	17.3	25.4	23.4	34.3	9.63	0.73	17.3	25.4	219.4
14.0	70.0	102.7	17.3	25.4	219.4	5.0	-1.93	0.99	0.69	17.8	26.1	23.8	34.9	9.55	0.69	17.8	26.1	245.1
15.0	70.0	102.7	17.8	26.1	245.1	5.0	-1.93	0.92	0.65	18.2	26.7	24.2	35.5	9.47	0.65	18.2	26.7	271.5
16.0	70.0	102.7	18.2	26.7	271.5	5.0	-1.93	0.86	0.62	18.6	27.3	24.6	36.1	9.40	0.62	18.6	27.3	298.5
17.0	70.0	102.7	18.6	27.3	298.5	5.0	-1.93	0.80	0.58	19.0	27.9	25.0	36.7	9.34	0.58	19.0	27.9	326.2
18.0	70.0	102.7	19.0	27.9	326.2	5.0	-1.93	0.75	0.55	19.4	28.5	25.4	37.2	9.27	0.55	19.4	28.5	354.4
19.0	70.0	102.7	19.4	28.5	354.4	5.0	-1.93	0.70	0.52	19.8	29.0	25.7	37.7	9.21	0.52	19.8	29.0	383.1
20.0	70.0	102.7	19.8	29.0	383.1	5.0	-1.93	0.66	0.49	20.1	29.5	26.0	38.2	9.16	0.49	20.1	29.5	412.3
21.0	70.0	102.7	20.1	29.5	412.3	5.0	-1.93	0.62	0.47	20.4	30.0	26.3	38.6	9.10	0.47	20.4	30.0	442.1
22.0	70.0	102.7	20.4	30.0	442.1	5.0	-1.94	0.58	0.44	20.7	30.4	26.6	39.0	9.05	0.44	20.7	30.4	472.3
23.0	70.0	102.7	20.7	30.4	472.3	5.0	-1.94	0.55	0.42	21.0	30.8	26.9	39.4	9.00	0.42	21.0	30.8	502.9
24.0	70.0	102.7	21.0	30.8	502.9	5.0	-1.94	0.52	0.40	21.3	31.2	27.1	39.8	8.96	0.40	21.3	31.2	533.9
25.0	70.0	102.7	21.3	31.2	533.9	5.0	-1.94	0.49	0.38	21.5	31.6	27.4	40.1	8.92	0.38	21.5	31.6	565.3
26.0	70.0	102.7	21.5	31.6	565.3	5.0	-1.94	0.46	0.36	21.8	32.0	27.6	40.5	8.87	0.36	21.8	32.0	597.1
27.0	70.0	102.7	21.8	32.0	597.1	5.0	-1.94	0.43	0.34	22.0	32.3	27.8	40.8	8.84	0.34	22.0	32.3	629.2
28.0	70.0	102.7	22.0	32.3	629.2	5.0	-1.94	0.41	0.32	22.2	32.6	28.0	41.1	8.80	0.32	22.2	32.6	661.7
29.0	70.0	102.7	22.2	32.6	661.7	5.0	-1.94	0.39	0.31	22.5	32.9	28.2	41.4	8.76	0.31	22.5	32.9	694.5
30.0	70.0	102.7	22.5	32.9	694.5	5.0	-1.94	0.37	0.29	22.7	33.2	28.4	41.7	8.73	0.29	22.7	33.2	727.6
31.0	70.0	102.7	22.7	33.2	727.6	5.0	-1.94	0.35	0.28	22.8	33.5	28.6	41.9	8.70	0.28	22.8	33.5	760.9
32.0	70.0	102.7	22.8	33.5	760.9	5.0	-1.94	0.33	0.26	23.0	33.8	28.8	42.2	8.67	0.26	23.0	33.8	794.6
33.0	70.0	102.7	23.0	33.8	794.6	5.0	-1.94	0.31	0.25	23.2	34.0	28.9	42.4	8.64	0.25	23.2	34.0	828.4
34.0	70.0	102.7	23.2	34.0	828.4	5.0	-1.94	0.30	0.24	23.4	34.2	29.1	42.6	8.61	0.24	23.4	34.2	862.6
35.0	70.0	102.7	23.4	34.2	862.6	5.0	-1.95	0.28	0.23	23.5	34.5	29.2	42.8	8.59	0.23	23.5	34.5	896.9
36.0	70.0	102.7	23.5	34.5	896.9	5.0	-1.95	0.27	0.22	23.7	34.7	29.3	43.0	8.56	0.22	23.7	34.7	931.5
37.0	70.0	102.7	23.7	34.7	931.5	5.0	-1.95	0.25	0.20	23.8	34.9	29.5	43.2	8.54	0.20	23.8	34.9	966.3
38.0	70.0	102.7	23.8	34.9	966.3	5.0	-1.95	0.24	0.20	23.9	35.1	29.6	43.4	8.52	0.20	23.9	35.1	1001.3
39.0	70.0	102.7	23.9	35.1	1001.3	5.0	-1.95	0.23	0.19	24.1	35.3	29.7	43.6	8.50	0.19	24.1	35.3	1036.5
40.0	70.0	102.7	24.1	35.3	1036.5	5.0	-1.95	0.22	0.18	24.2	35.5	29.8	43.8	8.48	0.18	24.2	35.5	1071.9
41.0	70.0	102.7	24.2	35.5	1071.9	5.0	-1.95	0.21	0.17	24.3	35.6	29.9	43.9	8.46	0.17	24.3	35.6	1107.4
42.0	70.0	102.7	24.3	35.6	1107.4	5.0	-1.95	0.20	0.16	24.4	35.8	30.0	44.1	8.44	0.16	24.4	35.8	1143.1
43.0	70.0	102.7	24.4	35.8	1143.1	5.0	-1.95	0.19	0.15	24.5	35.9	30.1	44.2	8.42	0.15	24.5	35.9	1179.0
44.0	70.0	102.7	24.5	35.9	1179.0	5.0	-1.95	0.18	0.15	24.6	36.1	30.2	44.3	8.41	0.15	24.6	36.1	1215.0

TRUCK SPEED PROFILE FOR TR234 RAMP A, NB ENTRANCE RAMP, 03/04/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 50.4
 Initial speed (mph) = 0.0 Minimum speed (mph) = 1.9
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 48.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval		New position (ft)
	(mph)	(ft/sec)	Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed		
			(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)			(mph)	(ft/sec)	
45.0	70.0	102.7	24.6	36.1	1215.0	5.0	-1.95	0.17	0.14	24.7	36.2	30.3	44.5	8.39	0.14	24.7	36.2	1251.1
46.0	70.0	102.7	24.7	36.2	1251.1	5.0	-1.95	0.16	0.13	24.8	36.4	30.4	44.6	8.38	0.13	24.8	36.4	1287.4
47.0	70.0	102.7	24.8	36.4	1287.4	5.0	-1.95	0.15	0.13	24.9	36.5	30.5	44.7	8.36	0.13	24.9	36.5	1323.8
48.0	70.0	102.7	24.9	36.5	1323.8	5.0	-1.95	0.15	0.12	25.0	36.6	30.6	44.8	8.35	0.12	25.0	36.6	1360.4
49.0	70.0	102.7	25.0	36.6	1360.4	5.0	-1.95	0.14	0.12	25.0	36.7	30.6	44.9	8.34	0.12	25.0	36.7	1397.0
50.0	70.0	102.7	25.0	36.7	1397.0	5.0	-1.95	0.13	0.11	25.1	36.8	30.7	45.0	8.32	0.11	25.1	36.8	1433.8
51.0	70.0	102.7	25.1	36.8	1433.8	5.0	-1.95	0.13	0.10	25.2	36.9	30.8	45.1	8.31	0.10	25.2	36.9	1470.7
52.0	70.0	102.7	25.2	36.9	1470.7	5.0	-1.95	0.12	0.10	25.2	37.0	30.8	45.2	8.30	0.10	25.2	37.0	1507.7
53.0	70.0	102.7	25.2	37.0	1507.7	5.0	-1.95	0.12	0.10	25.3	37.1	30.9	45.3	8.29	0.10	25.3	37.1	1544.7
54.0	70.0	102.7	25.3	37.1	1544.7	5.0	-1.95	0.11	0.09	25.4	37.2	31.0	45.4	8.28	0.09	25.4	37.2	1581.9
55.0	70.0	102.7	25.4	37.2	1581.9	2.9	-1.29	0.74	0.61	25.8	37.8	31.0	45.5	8.27	0.61	25.8	37.8	1619.4
56.0	70.0	102.7	25.8	37.8	1619.4	2.9	-1.29	0.71	0.59	26.2	38.4	31.4	46.0	8.20	0.59	26.2	38.4	1657.6
57.0	70.0	102.7	26.2	38.4	1657.6	2.9	-1.29	0.68	0.57	26.6	39.0	31.7	46.6	8.14	0.57	26.6	39.0	1696.3
58.0	70.0	102.7	26.6	39.0	1696.3	2.9	-1.29	0.65	0.55	27.0	39.5	32.1	47.1	8.08	0.55	27.0	39.5	1735.5
59.0	70.0	102.7	27.0	39.5	1735.5	2.9	-1.30	0.62	0.52	27.3	40.1	32.4	47.6	8.02	0.52	27.3	40.1	1775.3
60.0	70.0	102.7	27.3	40.1	1775.3	2.9	-1.30	0.59	0.51	27.7	40.6	32.7	48.0	7.96	0.51	27.7	40.6	1815.6
61.0	70.0	102.7	27.7	40.6	1815.6	2.9	-1.30	0.57	0.49	28.0	41.1	33.0	48.5	7.91	0.49	28.0	41.1	1856.4
62.0	70.0	102.7	28.0	41.1	1856.4	2.9	-1.30	0.55	0.47	28.3	41.5	33.3	48.9	7.85	0.47	28.3	41.5	1897.7
63.0	70.0	102.7	28.3	41.5	1897.7	2.9	-1.30	0.53	0.45	28.6	42.0	33.6	49.3	7.80	0.45	28.6	42.0	1939.5
64.0	70.0	102.7	28.6	42.0	1939.5	2.9	-1.30	0.51	0.44	28.9	42.4	33.9	49.7	7.76	0.44	28.9	42.4	1981.7
65.0	70.0	102.7	28.9	42.4	1981.7	2.9	-1.31	0.49	0.42	29.2	42.8	34.2	50.1	7.71	0.42	29.2	42.8	2024.3
66.0	70.0	102.7	29.2	42.8	2024.3	2.9	-1.31	0.47	0.41	29.5	43.2	34.4	50.5	7.66	0.41	29.5	43.2	2067.3
67.0	70.0	102.7	29.5	43.2	2067.3	2.9	-1.31	0.45	0.39	29.7	43.6	34.7	50.9	7.62	0.39	29.7	43.6	2110.7
68.0	70.0	102.7	29.7	43.6	2110.7	2.9	-1.31	0.43	0.38	30.0	44.0	34.9	51.2	7.58	0.38	30.0	44.0	2154.5
69.0	70.0	102.7	30.0	44.0	2154.5	2.9	-1.31	0.42	0.36	30.2	44.4	35.1	51.5	7.54	0.36	30.2	44.4	2198.7
70.0	70.0	102.7	30.2	44.4	2198.7	2.9	-1.31	0.40	0.35	30.5	44.7	35.4	51.9	7.50	0.35	30.5	44.7	2243.3
71.0	70.0	102.7	30.5	44.7	2243.3	2.9	-1.32	0.39	0.34	30.7	45.1	35.6	52.2	7.46	0.34	30.7	45.1	2288.2
72.0	70.0	102.7	30.7	45.1	2288.2	2.9	-1.32	0.38	0.33	30.9	45.4	35.8	52.5	7.42	0.33	30.9	45.4	2333.4
73.0	70.0	102.7	30.9	45.4	2333.4	2.9	-1.32	0.36	0.32	31.2	45.7	36.0	52.8	7.39	0.32	31.2	45.7	2378.9
74.0	70.0	102.7	31.2	45.7	2378.9	2.9	-1.32	0.35	0.31	31.4	46.0	36.2	53.1	7.35	0.31	31.4	46.0	2424.8
75.0	70.0	102.7	31.4	46.0	2424.8	2.9	-1.32	0.34	0.30	31.6	46.3	36.4	53.3	7.32	0.30	31.6	46.3	2470.9
76.0	70.0	102.7	31.6	46.3	2470.9	2.9	-1.32	0.33	0.29	31.8	46.6	36.5	53.6	7.29	0.29	31.8	46.6	2517.4
77.0	70.0	102.7	31.8	46.6	2517.4	2.9	-1.32	0.32	0.28	32.0	46.9	36.7	53.9	7.26	0.28	32.0	46.9	2564.1
78.0	70.0	102.7	32.0	46.9	2564.1	2.9	-1.32	0.30	0.27	32.1	47.1	36.9	54.1	7.23	0.27	32.1	47.1	2611.2
79.0	70.0	102.7	32.1	47.1	2611.2	2.9	-1.33	0.29	0.26	32.3	47.4	37.1	54.3	7.20	0.26	32.3	47.4	2658.4
80.0	70.0	102.7	32.3	47.4	2658.4	2.9	-1.33	0.29	0.25	32.5	47.7	37.2	54.6	7.17	0.25	32.5	47.7	2706.0
81.0	70.0	102.7	32.5	47.7	2706.0	2.9	-1.33	0.28	0.24	32.7	47.9	37.4	54.8	7.14	0.24	32.7	47.9	2753.8
82.0	70.0	102.7	32.7	47.9	2753.8	2.9	-1.33	0.27	0.24	32.8	48.1	37.5	55.0	7.11	0.24	32.8	48.1	2801.8
83.0	70.0	102.7	32.8	48.1	2801.8	2.9	-1.33	0.26	0.23	33.0	48.4	37.7	55.2	7.09	0.23	33.0	48.4	2850.0
84.0	70.0	102.7	33.0	48.4	2850.0	2.9	-1.33	0.25	0.22	33.1	48.6	37.8	55.4	7.06	0.22	33.1	48.6	2898.5
85.0	70.0	102.7	33.1	48.6	2898.5	2.9	-1.33	0.24	0.22	33.3	48.8	37.9	55.6	7.04	0.22	33.3	48.8	2947.2
86.0	70.0	102.7	33.3	48.8	2947.2	2.9	-1.33	0.23	0.21	33.4	49.0	38.1	55.8	7.02	0.21	33.4	49.0	2996.2
87.0	70.0	102.7	33.4	49.0	2996.2	2.9	-1.33	0.23	0.20	33.6	49.2	38.2	56.0	6.99	0.20	33.6	49.2	3045.3
88.0	70.0	102.7	33.6	49.2	3045.3	2.9	-1.33	0.22	0.20	33.7	49.4	38.3	56.2	6.97	0.20	33.7	49.4	3094.6
89.0	70.0	102.7	33.7	49.4	3094.6	2.9	-1.34	0.21	0.19	33.8	49.6	38.4	56.4	6.95	0.19	33.8	49.6	3144.1
90.0	70.0	102.7	33.8	49.6	3144.1	2.9	-1.34	0.21	0.18	34.0	49.8	38.6	56.5	6.93	0.18	34.0	49.8	3193.8
91.0	70.0	102.7	34.0	49.8	3193.8	2.9	-1.34	0.20	0.18	34.1	50.0	38.7	56.7	6.91	0.18	34.1	50.0	3243.7

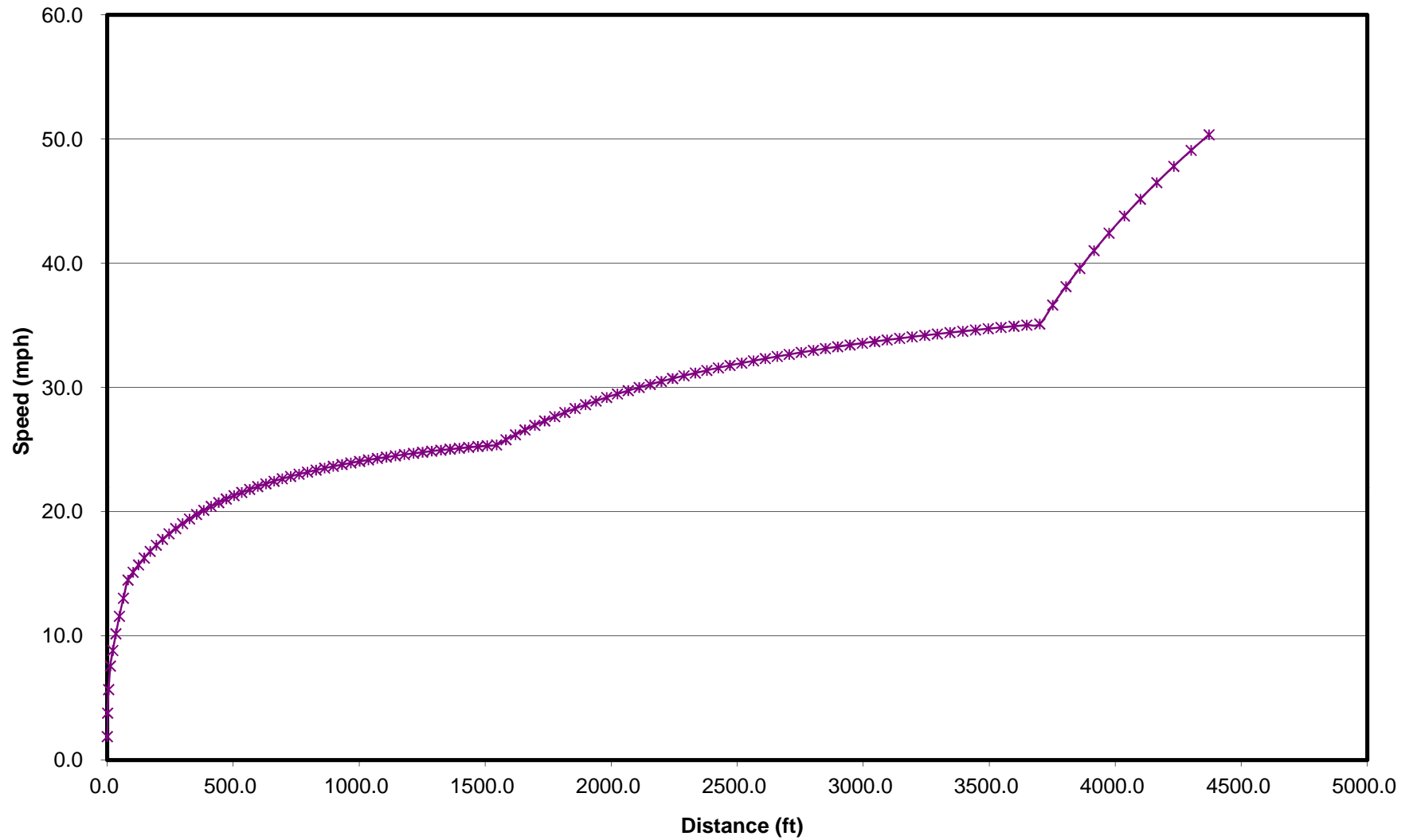
TRUCK SPEED PROFILE FOR TR234 RAMP A, NB ENTRANCE RAMP, 03/04/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 50.4
 Initial speed (mph) = 0.0 Minimum speed (mph) = 1.9
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 48.5
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval		
			Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed		New position (ft)
	(mph)	(ft/sec)	(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)					
92.0	70.0	102.7	34.1	50.0	3243.7	2.9	-1.34	0.19	0.17	34.2	50.1	38.8	56.9	6.89	0.17	34.2	50.1	3293.8
93.0	70.0	102.7	34.2	50.1	3293.8	2.9	-1.34	0.19	0.17	34.3	50.3	38.9	57.0	6.87	0.17	34.3	50.3	3344.0
94.0	70.0	102.7	34.3	50.3	3344.0	2.9	-1.34	0.18	0.16	34.4	50.5	39.0	57.2	6.85	0.16	34.4	50.5	3394.4
95.0	70.0	102.7	34.4	50.5	3394.4	2.9	-1.34	0.18	0.16	34.5	50.6	39.1	57.3	6.84	0.16	34.5	50.6	3445.0
96.0	70.0	102.7	34.5	50.6	3445.0	2.9	-1.34	0.17	0.15	34.6	50.8	39.2	57.5	6.82	0.15	34.6	50.8	3495.7
97.0	70.0	102.7	34.6	50.8	3495.7	2.9	-1.34	0.17	0.15	34.7	50.9	39.3	57.6	6.80	0.15	34.7	50.9	3546.5
98.0	70.0	102.7	34.7	50.9	3546.5	2.9	-1.34	0.16	0.14	34.8	51.1	39.4	57.7	6.79	0.14	34.8	51.1	3597.6
99.0	70.0	102.7	34.8	51.1	3597.6	2.9	-1.34	0.16	0.14	34.9	51.2	39.4	57.9	6.77	0.14	34.9	51.2	3648.7
100.0	70.0	102.7	34.9	51.2	3648.7	2.9	-1.34	0.15	0.14	35.0	51.4	39.5	58.0	6.76	0.14	35.0	51.4	3700.0
101.0	70.0	102.7	35.0	51.4	3700.0	2.9	-1.35	0.15	0.13	35.1	51.5	39.6	58.1	6.74	0.13	35.1	51.5	3751.4
102.0	70.0	102.7	35.1	51.5	3751.4	-4.5	1.03	2.46	2.23	36.6	53.7	39.7	58.2	6.73	2.23	36.6	53.7	3804.1
103.0	70.0	102.7	36.6	53.7	3804.1	-4.5	1.02	2.40	2.19	38.1	55.9	41.1	60.2	6.49	2.19	38.1	55.9	3858.9
104.0	70.0	102.7	38.1	55.9	3858.9	-4.5	1.01	2.33	2.14	39.6	58.1	42.4	62.2	6.25	2.14	39.6	58.1	3915.9
105.0	70.0	102.7	39.6	58.1	3915.9	-4.5	1.00	2.28	2.10	41.0	60.2	43.7	64.1	6.02	2.10	41.0	60.2	3975.0
106.0	70.0	102.7	41.0	60.2	3975.0	-4.5	0.99	2.22	2.06	42.4	62.2	45.0	66.0	5.79	2.06	42.4	62.2	4036.2
107.0	70.0	102.7	42.4	62.2	4036.2	-4.5	0.98	2.17	2.03	43.8	64.2	46.2	67.8	5.57	2.03	43.8	64.2	4099.4
108.0	70.0	102.7	43.8	64.2	4099.4	-4.5	0.96	2.12	1.99	45.2	66.2	47.5	69.6	5.35	1.99	45.2	66.2	4164.6
109.0	70.0	102.7	45.2	66.2	4164.6	-4.5	0.95	2.08	1.95	46.5	68.2	48.7	71.4	5.13	1.95	46.5	68.2	4231.9
110.0	70.0	102.7	46.5	68.2	4231.9	-4.5	0.94	2.03	1.92	47.8	70.1	49.9	73.1	4.92	1.92	47.8	70.1	4301.0
111.0	70.0	102.7	47.8	70.1	4301.0	-4.5	0.93	1.99	1.89	49.1	72.0	51.0	74.8	4.72	1.89	49.1	72.0	4372.1
112.0	70.0	102.7	49.1	72.0	4372.1	-4.5	0.91	1.95	1.85	50.4	73.8	52.2	76.5	4.51	1.85	50.4	73.8	4445.0

Truck Speed at the end of the Acceleration Lane on the Entrance Ramp is 48.7 mph - use 48 mph

TRUCK SPEED PROFILE FOR TR234 RAMP A, NB ENTRANCE RAMP, 03/04/2014



TRUCK SPEED PROFILE - TR234 RAMP C - SOUTHBOUND ENTRANCE RAMP

TRUCK SPEED PERFORMANCE MODEL

Desired speed (mph) = 70.0
Initial speed (mph) = 0.0
Weight/power ratio (lb/hp) = 200.0
Weight/frontal area ratio (lb/ft²) = 0.0 ← enter value or enter zero to use default estimate
Elevation (ft) = 800.0
Location (legend) = TR234 RAMP C, SB ENTRANCE RAMP, 03/03/2014

Vertical Profile

(Beginning of first segment must equal 0)

Position (ft)		Percent Grade
Begin	End	
0	200.33	-4.8
200.33	725.33	2.36
725.33	2425.33	-1.33



Stationing from Reference Design

Sta. 384+25.33 to Sta. 382+25.00 - -4.8%
Sta. 382+25.00 to Sta. 377+00.00 - 2.36%
Sta. 377+00.00 to Sta. 360+00.00 - -1.33%

TRUCK SPEED PROFILE FOR TR234 RAMP C, SB ENTRANCE RAMP, 03/03/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 52.1
 Initial speed (mph) = 0.0 Minimum speed (mph) = 2.2
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 49.9
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval		
	(mph)	(ft/sec)	Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed		New position (ft)
			(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)			(mph)	(ft/sec)	
0.0	70.0	102.7	0.0	0.0	0.0	-4.8	1.18	5.20	3.24	2.2	3.2	8.4	12.3	12.29	3.24	2.2	3.2	1.6
1.0	70.0	102.7	2.2	3.2	1.6	-4.8	1.18	5.20	3.24	4.4	6.5	10.4	15.2	11.94	3.24	4.4	6.5	6.5
2.0	70.0	102.7	4.4	6.5	6.5	-4.8	1.18	5.20	3.24	6.6	9.7	12.3	18.1	11.59	3.24	6.6	9.7	14.6
3.0	70.0	102.7	6.6	9.7	14.6	-4.8	1.18	5.20	3.24	8.8	13.0	14.3	21.0	11.24	3.24	8.8	13.0	26.0
4.0	70.0	102.7	8.8	13.0	26.0	-4.8	1.20	5.02	2.39	10.5	15.4	16.3	23.9	10.89	2.39	10.5	15.4	40.1
5.0	70.0	102.7	10.5	15.4	40.1	-4.8	1.21	4.78	2.56	12.2	17.9	17.7	26.0	10.63	2.56	12.2	17.9	56.8
6.0	70.0	102.7	12.2	17.9	56.8	-4.8	1.22	4.51	2.67	14.0	20.6	19.3	28.3	10.35	2.67	14.0	20.6	76.0
7.0	70.0	102.7	14.0	20.6	76.0	-4.8	1.22	4.24	2.74	15.9	23.3	20.9	30.7	10.06	2.74	15.9	23.3	98.0
8.0	70.0	102.7	15.9	23.3	98.0	-4.8	1.22	3.99	2.76	17.8	26.1	22.6	33.1	9.77	2.76	17.8	26.1	122.7
9.0	70.0	102.7	17.8	26.1	122.7	-4.8	1.21	3.77	2.76	19.7	28.8	24.2	35.6	9.47	2.76	19.7	28.8	150.1
10.0	70.0	102.7	19.7	28.8	150.1	-4.8	1.21	3.57	2.73	21.5	31.6	25.9	38.0	9.17	2.73	21.5	31.6	180.4
11.0	70.0	102.7	21.5	31.6	180.4	-4.8	1.20	3.40	2.70	23.4	34.3	27.6	40.5	8.88	2.70	23.4	34.3	213.3
12.0	70.0	102.7	23.4	34.3	213.3	2.4	-1.11	1.07	0.87	24.0	35.1	29.2	42.9	8.59	0.87	24.0	35.1	248.0
13.0	70.0	102.7	24.0	35.1	248.0	2.4	-1.11	1.02	0.83	24.5	36.0	29.7	43.6	8.49	0.83	24.5	36.0	283.5
14.0	70.0	102.7	24.5	36.0	283.5	2.4	-1.11	0.97	0.80	25.1	36.8	30.3	44.4	8.40	0.80	25.1	36.8	319.9
15.0	70.0	102.7	25.1	36.8	319.9	2.4	-1.11	0.93	0.77	25.6	37.5	30.7	45.1	8.32	0.77	25.6	37.5	357.1
16.0	70.0	102.7	25.6	37.5	357.1	2.4	-1.12	0.89	0.74	26.1	38.3	31.2	45.8	8.23	0.74	26.1	38.3	395.0
17.0	70.0	102.7	26.1	38.3	395.0	2.4	-1.12	0.85	0.71	26.6	39.0	31.7	46.4	8.15	0.71	26.6	39.0	433.6
18.0	70.0	102.7	26.6	39.0	433.6	2.4	-1.12	0.81	0.69	27.1	39.7	32.1	47.1	8.08	0.69	27.1	39.7	472.9
19.0	70.0	102.7	27.1	39.7	472.9	2.4	-1.12	0.78	0.66	27.5	40.3	32.5	47.7	8.00	0.66	27.5	40.3	512.9
20.0	70.0	102.7	27.5	40.3	512.9	2.4	-1.12	0.75	0.64	27.9	41.0	32.9	48.3	7.93	0.64	27.9	41.0	553.6
21.0	70.0	102.7	27.9	41.0	553.6	2.4	-1.13	0.72	0.61	28.4	41.6	33.3	48.8	7.86	0.61	28.4	41.6	594.9
22.0	70.0	102.7	28.4	41.6	594.9	2.4	-1.13	0.69	0.59	28.8	42.2	33.7	49.4	7.80	0.59	28.8	42.2	636.8
23.0	70.0	102.7	28.8	42.2	636.8	2.4	-1.13	0.66	0.57	29.1	42.8	34.0	49.9	7.73	0.57	29.1	42.8	679.2
24.0	70.0	102.7	29.1	42.8	679.2	2.4	-1.13	0.64	0.55	29.5	43.3	34.4	50.4	7.67	0.55	29.5	43.3	722.2
25.0	70.0	102.7	29.5	43.3	722.2	2.4	-1.14	0.62	0.53	29.9	43.8	34.7	50.9	7.61	0.53	29.9	43.8	765.8
26.0	70.0	102.7	29.9	43.8	765.8	-1.3	0.05	1.74	1.52	30.9	45.4	35.0	51.4	7.55	1.52	30.9	45.4	810.4
27.0	70.0	102.7	30.9	45.4	810.4	-1.3	0.04	1.68	1.48	31.9	46.8	36.0	52.7	7.39	1.48	31.9	46.8	856.5
28.0	70.0	102.7	31.9	46.8	856.5	-1.3	0.04	1.63	1.44	32.9	48.3	36.9	54.1	7.23	1.44	32.9	48.3	904.1
29.0	70.0	102.7	32.9	48.3	904.1	-1.3	0.03	1.57	1.41	33.9	49.7	37.7	55.4	7.07	1.41	33.9	49.7	953.1
30.0	70.0	102.7	33.9	49.7	953.1	-1.3	0.02	1.53	1.37	34.8	51.1	38.6	56.6	6.92	1.37	34.8	51.1	1003.4
31.0	70.0	102.7	34.8	51.1	1003.4	-1.3	0.02	1.48	1.34	35.7	52.4	39.4	57.8	6.77	1.34	35.7	52.4	1055.1
32.0	70.0	102.7	35.7	52.4	1055.1	-1.3	0.01	1.44	1.31	36.6	53.7	40.2	59.0	6.63	1.31	36.6	53.7	1108.2
33.0	70.0	102.7	36.6	53.7	1108.2	-1.3	0.00	1.40	1.28	37.5	55.0	41.0	60.2	6.49	1.28	37.5	55.0	1162.5
34.0	70.0	102.7	37.5	55.0	1162.5	-1.3	0.00	1.36	1.25	38.3	56.2	41.8	61.3	6.35	1.25	38.3	56.2	1218.1
35.0	70.0	102.7	38.3	56.2	1218.1	-1.3	-0.01	1.33	1.22	39.2	57.4	42.6	62.4	6.22	1.22	39.2	57.4	1275.0
36.0	70.0	102.7	39.2	57.4	1275.0	-1.3	-0.02	1.29	1.19	40.0	58.6	43.3	63.5	6.08	1.19	40.0	58.6	1333.0
37.0	70.0	102.7	40.0	58.6	1333.0	-1.3	-0.02	1.26	1.17	40.8	59.8	44.0	64.6	5.96	1.17	40.8	59.8	1392.2
38.0	70.0	102.7	40.8	59.8	1392.2	-1.3	-0.03	1.23	1.14	41.6	60.9	44.7	65.6	5.83	1.14	41.6	60.9	1452.6
39.0	70.0	102.7	41.6	60.9	1452.6	-1.3	-0.04	1.20	1.12	42.3	62.1	45.4	66.6	5.71	1.12	42.3	62.1	1514.1
40.0	70.0	102.7	42.3	62.1	1514.1	-1.3	-0.04	1.17	1.09	43.1	63.2	46.1	67.6	5.59	1.09	43.1	63.2	1576.7
41.0	70.0	102.7	43.1	63.2	1576.7	-1.3	-0.05	1.15	1.07	43.8	64.2	46.8	68.6	5.47	1.07	43.8	64.2	1640.4
42.0	70.0	102.7	43.8	64.2	1640.4	-1.3	-0.06	1.12	1.05	44.5	65.3	47.4	69.6	5.35	1.05	44.5	65.3	1705.1
43.0	70.0	102.7	44.5	65.3	1705.1	-1.3	-0.06	1.10	1.03	45.2	66.3	48.1	70.5	5.24	1.03	45.2	66.3	1770.9
44.0	70.0	102.7	45.2	66.3	1770.9	-1.3	-0.07	1.07	1.01	45.9	67.3	48.7	71.4	5.13	1.01	45.9	67.3	1837.7

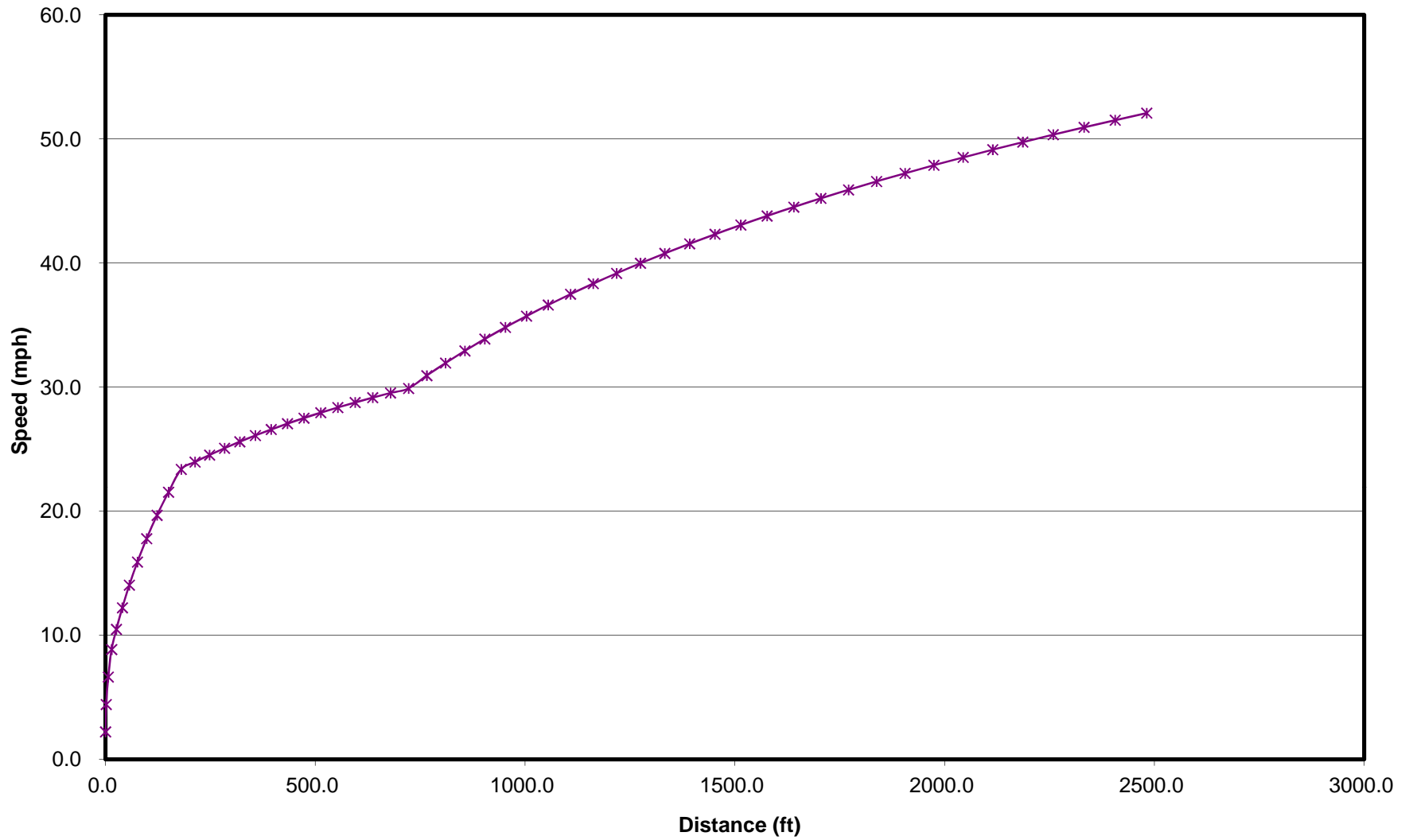
TRUCK SPEED PROFILE FOR TR234 RAMP C, SB ENTRANCE RAMP, 03/03/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 52.1
 Initial speed (mph) = 0.0 Minimum speed (mph) = 2.2
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 49.9
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval		
			Speed	Position	Coasting		Power	Effective	Speed			Acceleration	New speed			New position		
	(mph)	(ft/sec)	(mph)	(ft/sec)					(ft)	(mph)	(ft/sec)		(mph)	(ft/sec)			(ft)	
45.0	70.0	102.7	45.9	67.3	1837.7	-1.3	-0.08	1.05	0.99	46.6	68.3	49.3	72.3	5.02	0.99	46.6	68.3	1905.5
46.0	70.0	102.7	46.6	68.3	1905.5	-1.3	-0.08	1.03	0.97	47.2	69.3	49.9	73.2	4.91	0.97	47.2	69.3	1974.3
47.0	70.0	102.7	47.2	69.3	1974.3	-1.3	-0.09	1.01	0.95	47.9	70.2	50.5	74.1	4.81	0.95	47.9	70.2	2044.1
48.0	70.0	102.7	47.9	70.2	2044.1	-1.3	-0.09	0.99	0.93	48.5	71.1	51.1	74.9	4.70	0.93	48.5	71.1	2114.7
49.0	70.0	102.7	48.5	71.1	2114.7	-1.3	-0.10	0.97	0.91	49.1	72.1	51.6	75.8	4.60	0.91	49.1	72.1	2186.3
50.0	70.0	102.7	49.1	72.1	2186.3	-1.3	-0.11	0.95	0.90	49.7	73.0	52.2	76.6	4.51	0.90	49.7	73.0	2258.9
51.0	70.0	102.7	49.7	73.0	2258.9	-1.3	-0.11	0.93	0.88	50.3	73.8	52.7	77.4	4.41	0.88	50.3	73.8	2332.3
52.0	70.0	102.7	50.3	73.8	2332.3	-1.3	-0.12	0.91	0.86	50.9	74.7	53.3	78.2	4.31	0.86	50.9	74.7	2406.5
53.0	70.0	102.7	50.9	74.7	2406.5	-1.3	-0.13	0.89	0.85	51.5	75.5	53.8	78.9	4.22	0.85	51.5	75.5	2481.6
54.0	70.0	102.7	51.5	75.5	2481.6	-1.3	-0.13	0.87	0.83	52.1	76.4	54.3	79.7	4.13	0.83	52.1	76.4	2557.6

Truck Speed on the Entrance Ramp at the Merge Point is 51.1 mph - use 50 mph

TRUCK SPEED PROFILE FOR TR234 RAMP C, SB ENTRANCE RAMP, 03/03/2014



TRUCK SPEED PROFILE - CR28 RAMP B - NORTHBOUND ENTRANCE RAMP

TRUCK SPEED PERFORMANCE MODEL

Desired speed (mph) = 70.0
 Initial speed (mph) = 0.0
 Weight/power ratio (lb/hp) = 200.0
 Weight/frontal area ratio (lb/ft²) = 0.0 ← enter value or enter zero to use default estimate
 Elevation (ft) = 800.0
 Location (legend) = CR28 Ramp B, NB Entrance Ramp, 03/03/2014

Vertical Profile

(Beginning of first segment must equal 0)

Position (ft)		Percent Grade
Begin	End	
0	57.5	-2
57.5	445	0.34
445	1030	5
1030	1288.02	-0.5
1288.02	1485	-2.99
1485	2270	4



Stationing from Reference Design

Sta. 521+70.00 to Sta. 522+27.50 - -2%
 Sta. 522+27.50 to Sta. 526+15.00 - 0.34%
 Sta. 526+15.00 to Sta. 532+00.00 - 5%
 Sta. 532+00.00 to Sta. 534+58.62 - -0.5%
 Sta. 534+58.62 to Sta. 536+55.00 - -2.99%
 Sta. 536+55.00 to Sta. 544+40.00 - 4%

TRUCK SPEED PROFILE FOR CR28 Ramp B, NB Entrance Ramp, 03/03/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 37.1
 Initial speed (mph) = 0.0 Minimum speed (mph) = 1.9
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 35.1
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval		
	(mph)	(ft/sec)	Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed		New position (ft)
			(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)			(mph)	(ft/sec)	
0.0	70.0	102.7	0.0	0.0	0.0	-2.0	0.28	4.67	2.82	1.9	2.8	8.4	12.3	12.29	2.82	1.9	2.8	1.4
1.0	70.0	102.7	1.9	2.8	1.4	-2.0	0.28	4.67	2.82	3.8	5.6	10.1	14.8	11.98	2.82	3.8	5.6	5.6
2.0	70.0	102.7	3.8	5.6	5.6	-2.0	0.28	4.67	2.82	5.8	8.4	11.8	17.3	11.68	2.82	5.8	8.4	12.7
3.0	70.0	102.7	5.8	8.4	12.7	-2.0	0.28	4.67	2.82	7.7	11.3	13.5	19.8	11.38	2.82	7.7	11.3	22.5
4.0	70.0	102.7	7.7	11.3	22.5	-2.0	0.29	4.57	1.89	9.0	13.2	15.2	22.3	11.07	1.89	9.0	13.2	34.7
5.0	70.0	102.7	9.0	13.2	34.7	-2.0	0.30	4.37	2.02	10.3	15.2	16.4	24.0	10.87	2.02	10.3	15.2	48.9
6.0	70.0	102.7	10.3	15.2	48.9	-2.0	0.31	4.11	2.12	11.8	17.3	17.6	25.8	10.65	2.12	11.8	17.3	65.1
7.0	70.0	102.7	11.8	17.3	65.1	0.3	-0.44	3.24	1.80	13.0	19.1	18.9	27.7	10.42	1.80	13.0	19.1	83.3
8.0	70.0	102.7	13.0	19.1	83.3	0.3	-0.44	3.01	1.79	14.2	20.9	20.0	29.3	10.23	1.79	14.2	20.9	103.3
9.0	70.0	102.7	14.2	20.9	103.3	0.3	-0.44	2.79	1.77	15.4	22.7	21.1	30.9	10.03	1.77	15.4	22.7	125.1
10.0	70.0	102.7	15.4	22.7	125.1	0.3	-0.44	2.60	1.73	16.6	24.4	22.2	32.5	9.84	1.73	16.6	24.4	148.6
11.0	70.0	102.7	16.6	24.4	148.6	0.3	-0.44	2.43	1.68	17.8	26.1	23.2	34.0	9.65	1.68	17.8	26.1	173.9
12.0	70.0	102.7	17.8	26.1	173.9	0.3	-0.44	2.27	1.63	18.9	27.7	24.2	35.5	9.47	1.63	18.9	27.7	200.7
13.0	70.0	102.7	18.9	27.7	200.7	0.3	-0.44	2.14	1.58	20.0	29.3	25.2	37.0	9.30	1.58	20.0	29.3	229.2
14.0	70.0	102.7	20.0	29.3	229.2	0.3	-0.44	2.01	1.53	21.0	30.8	26.2	38.4	9.12	1.53	21.0	30.8	259.3
15.0	70.0	102.7	21.0	30.8	259.3	0.3	-0.45	1.90	1.48	22.0	32.3	27.1	39.8	8.96	1.48	22.0	32.3	290.9
16.0	70.0	102.7	22.0	32.3	290.9	0.3	-0.45	1.81	1.43	23.0	33.7	28.0	41.1	8.80	1.43	23.0	33.7	323.9
17.0	70.0	102.7	23.0	33.7	323.9	0.3	-0.45	1.72	1.38	23.9	35.1	28.9	42.4	8.64	1.38	23.9	35.1	358.3
18.0	70.0	102.7	23.9	35.1	358.3	0.3	-0.46	1.64	1.34	24.9	36.5	29.7	43.6	8.50	1.34	24.9	36.5	394.1
19.0	70.0	102.7	24.9	36.5	394.1	0.3	-0.46	1.56	1.29	25.7	37.7	30.5	44.8	8.35	1.29	25.7	37.7	431.2
20.0	70.0	102.7	25.7	37.7	431.2	0.3	-0.47	1.50	1.25	26.6	39.0	31.3	46.0	8.21	1.25	26.6	39.0	469.6
21.0	70.0	102.7	26.6	39.0	469.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	508.6
22.0	70.0	102.7	26.6	39.0	508.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	547.6
23.0	70.0	102.7	26.6	39.0	547.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	586.6
24.0	70.0	102.7	26.6	39.0	586.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	625.6
25.0	70.0	102.7	26.6	39.0	625.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	664.6
26.0	70.0	102.7	26.6	39.0	664.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	703.6
27.0	70.0	102.7	26.6	39.0	703.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	742.6
28.0	70.0	102.7	26.6	39.0	742.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	781.6
29.0	70.0	102.7	26.6	39.0	781.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	820.6
30.0	70.0	102.7	26.6	39.0	820.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	859.6
31.0	70.0	102.7	26.6	39.0	859.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	898.6
32.0	70.0	102.7	26.6	39.0	898.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	937.6
33.0	70.0	102.7	26.6	39.0	937.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	976.6
34.0	70.0	102.7	26.6	39.0	976.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	1015.6
35.0	70.0	102.7	26.6	39.0	1015.6	5.0	-1.97	0.00	0.00	26.6	39.0	32.1	47.1	8.08	0.00	26.6	39.0	1054.6
36.0	70.0	102.7	26.6	39.0	1054.6	-0.5	-0.20	1.69	1.43	27.6	40.4	32.1	47.1	8.08	1.43	27.6	40.4	1094.3
37.0	70.0	102.7	27.6	40.4	1094.3	-0.5	-0.21	1.63	1.39	28.5	41.8	33.0	48.4	7.92	1.39	28.5	41.8	1135.5
38.0	70.0	102.7	28.5	41.8	1135.5	-0.5	-0.21	1.56	1.35	29.4	43.2	33.8	49.6	7.77	1.35	29.4	43.2	1178.0
39.0	70.0	102.7	29.4	43.2	1178.0	-0.5	-0.22	1.51	1.31	30.3	44.5	34.6	50.8	7.62	1.31	30.3	44.5	1221.8
40.0	70.0	102.7	30.3	44.5	1221.8	-0.5	-0.22	1.45	1.27	31.2	45.8	35.4	52.0	7.48	1.27	31.2	45.8	1266.9
41.0	70.0	102.7	31.2	45.8	1266.9	-0.5	-0.23	1.41	1.24	32.0	47.0	36.2	53.1	7.35	1.24	32.0	47.0	1313.3
42.0	70.0	102.7	32.0	47.0	1313.3	-3.0	0.57	2.14	1.90	33.3	48.9	37.0	54.2	7.21	1.90	33.3	48.9	1361.3
43.0	70.0	102.7	33.3	48.9	1361.3	-3.0	0.56	2.07	1.86	34.6	50.8	38.1	55.9	7.01	1.86	34.6	50.8	1411.1
44.0	70.0	102.7	34.6	50.8	1411.1	-3.0	0.55	2.01	1.82	35.8	52.6	39.2	57.6	6.81	1.82	35.8	52.6	1462.8

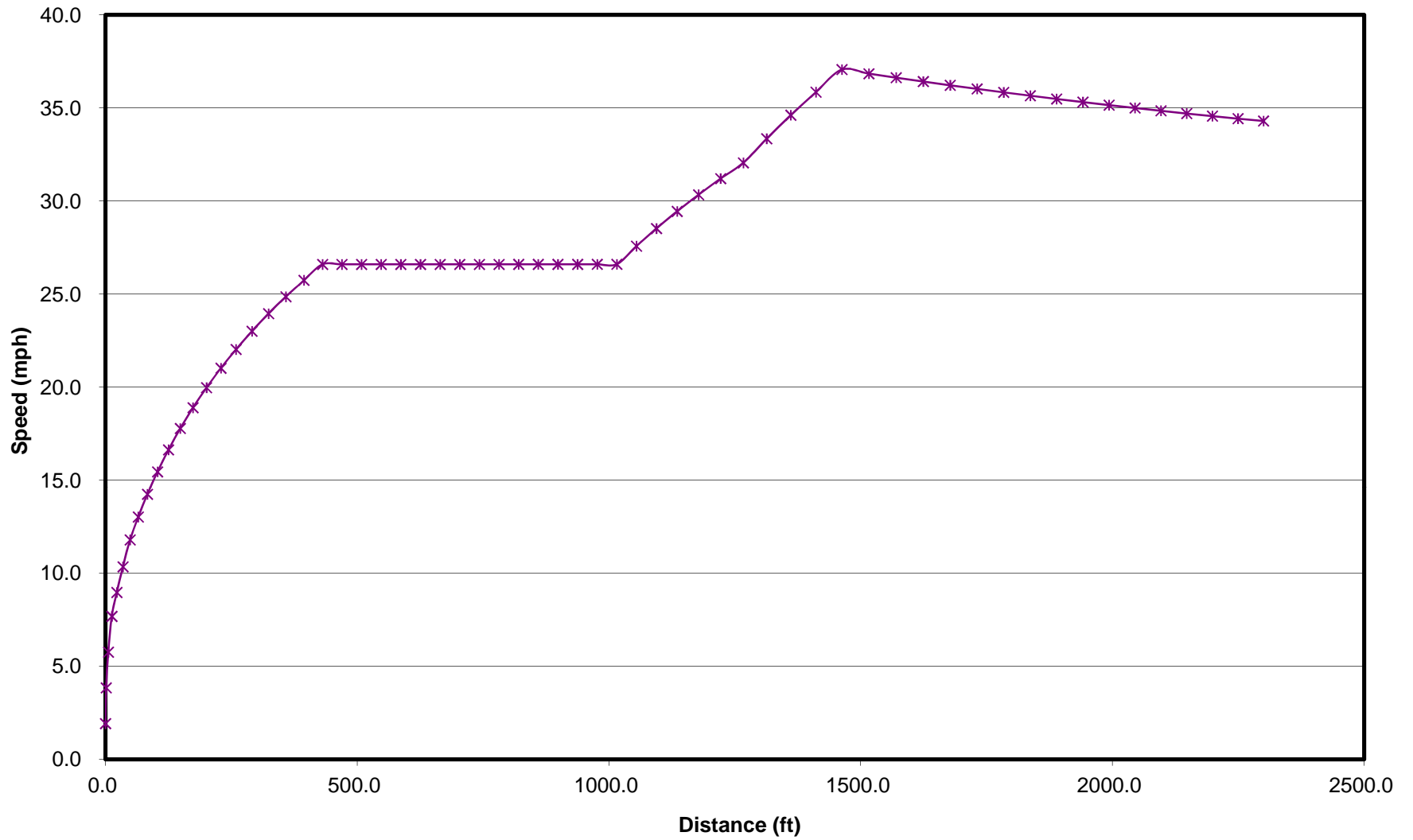
TRUCK SPEED PROFILE FOR CR28 Ramp B, NB Entrance Ramp, 03/03/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 37.1
 Initial speed (mph) = 0.0 Minimum speed (mph) = 1.9
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 35.1
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval		
			Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed		New position (ft)
	(mph)	(ft/sec)	(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)					
45.0	70.0	102.7	35.8	52.6	1462.8	-3.0	0.54	1.96	1.78	37.1	54.4	40.4	59.2	6.61	1.78	37.1	54.4	1516.2
46.0	70.0	102.7	37.1	54.4	1516.2	4.0	-1.71	-0.29	-0.33	36.8	54.0	41.4	60.8	6.42	-0.33	36.8	54.0	1570.4
47.0	70.0	102.7	36.8	54.0	1570.4	4.0	-1.71	-0.28	-0.31	36.6	53.7	41.2	60.5	6.45	-0.31	36.6	53.7	1624.3
48.0	70.0	102.7	36.6	53.7	1624.3	4.0	-1.71	-0.27	-0.30	36.4	53.4	41.0	60.2	6.49	-0.30	36.4	53.4	1677.8
49.0	70.0	102.7	36.4	53.4	1677.8	4.0	-1.71	-0.26	-0.29	36.2	53.1	40.9	59.9	6.52	-0.29	36.2	53.1	1731.1
50.0	70.0	102.7	36.2	53.1	1731.1	4.0	-1.71	-0.25	-0.28	36.0	52.8	40.7	59.7	6.55	-0.28	36.0	52.8	1784.1
51.0	70.0	102.7	36.0	52.8	1784.1	4.0	-1.71	-0.25	-0.27	35.8	52.6	40.5	59.4	6.58	-0.27	35.8	52.6	1836.8
52.0	70.0	102.7	35.8	52.6	1836.8	4.0	-1.70	-0.24	-0.26	35.7	52.3	40.3	59.2	6.61	-0.26	35.7	52.3	1889.2
53.0	70.0	102.7	35.7	52.3	1889.2	4.0	-1.70	-0.23	-0.26	35.5	52.0	40.2	58.9	6.64	-0.26	35.5	52.0	1941.3
54.0	70.0	102.7	35.5	52.0	1941.3	4.0	-1.70	-0.22	-0.25	35.3	51.8	40.0	58.7	6.67	-0.25	35.3	51.8	1993.3
55.0	70.0	102.7	35.3	51.8	1993.3	4.0	-1.70	-0.21	-0.24	35.1	51.6	39.9	58.5	6.69	-0.24	35.1	51.6	2044.9
56.0	70.0	102.7	35.1	51.6	2044.9	4.0	-1.70	-0.20	-0.23	35.0	51.3	39.7	58.3	6.72	-0.23	35.0	51.3	2096.4
57.0	70.0	102.7	35.0	51.3	2096.4	4.0	-1.70	-0.20	-0.22	34.8	51.1	39.6	58.1	6.74	-0.22	34.8	51.1	2147.6
58.0	70.0	102.7	34.8	51.1	2147.6	4.0	-1.70	-0.19	-0.21	34.7	50.9	39.5	57.9	6.77	-0.21	34.7	50.9	2198.6
59.0	70.0	102.7	34.7	50.9	2198.6	4.0	-1.70	-0.18	-0.20	34.6	50.7	39.3	57.7	6.79	-0.20	34.6	50.7	2249.4
60.0	70.0	102.7	34.6	50.7	2249.4	4.0	-1.70	-0.17	-0.20	34.4	50.5	39.2	57.5	6.81	-0.20	34.4	50.5	2300.0
61.0	70.0	102.7	34.4	50.5	2300.0	4.0	-1.69	-0.17	-0.19	34.3	50.3	39.1	57.3	6.84	-0.19	34.3	50.3	2350.4

Truck Speed on the Entrance Ramp at the Merge Point is 34.5 mph - use 34 mph

TRUCK SPEED PROFILE FOR CR28 Ramp B, NB Entrance Ramp, 03/03/2014



TRUCK SPEED PROFILE - CR28 RAMP D - SOUTHBOUND ENTRANCE RAMP

TRUCK SPEED PERFORMANCE MODEL

Desired speed (mph) = **70.0**
 Initial speed (mph) = **0.0**
 Weight/power ratio (lb/hp) = **200.0**
 Weight/frontal area ratio (lb/ft²) = **0.0** ← enter value or enter zero to use default estimate
 Elevation (ft) = **800.0**
 Location (legend) = **CR28 RAMP D, SB ENTRANCE RAMP, 03/03/2014**

Vertical Profile

(Beginning of first segment must equal 0)

Position (ft)		Percent Grade
Begin	End	
0	150	-4.01
150	2160	3.7
2160	2595	0.66
2595	3125	-4.5



Stationing from Reference Design
 Sta. 543+95.00 to Sta. 542+45.00 - -4.01%
 Sta. 542+45.00 to Sta. 522+35.00 - 3.7%
 Sta. 522+35.00 to Sta. 518+00.00 - 0.66%
 Sta. 518+00.00 to Sta. 512+70.00 - -4.5%

TRUCK SPEED PROFILE FOR CR28 RAMP D, SB ENTRANCE RAMP, 03/03/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 49.9
 Initial speed (mph) = 0.0 Minimum speed (mph) = 2.1
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 47.7
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Elapsed time (sec)	Desired speed		Start of 1-sec Interval			Local grade (%)	Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences			Actual acceleration (ft/sec ²)	End of 1-sec Interval		
	(mph)	(ft/sec)	Speed		Position (ft)		Coasting	Power	Effective			Speed		Acceleration (ft/sec ²)		New speed		New position (ft)
			(mph)	(ft/sec)						(mph)	(ft/sec)	(mph)	(ft/sec)			(mph)	(ft/sec)	
0.0	70.0	102.7	0.0	0.0	0.0	-4.0	0.93	5.05	3.12	2.1	3.1	8.4	12.3	12.29	3.12	2.1	3.1	1.6
1.0	70.0	102.7	2.1	3.1	1.6	-4.0	0.93	5.05	3.12	4.3	6.2	10.3	15.1	11.95	3.12	4.3	6.2	6.2
2.0	70.0	102.7	4.3	6.2	6.2	-4.0	0.93	5.05	3.12	6.4	9.4	12.2	17.9	11.61	3.12	6.4	9.4	14.0
3.0	70.0	102.7	6.4	9.4	14.0	-4.0	0.93	5.05	3.12	8.5	12.5	14.1	20.6	11.28	3.12	8.5	12.5	25.0
4.0	70.0	102.7	8.5	12.5	25.0	-4.0	0.94	4.89	2.24	10.0	14.7	16.0	23.4	10.94	2.24	10.0	14.7	38.6
5.0	70.0	102.7	10.0	14.7	38.6	-4.0	0.95	4.66	2.40	11.7	17.1	17.3	25.4	10.70	2.40	11.7	17.1	54.5
6.0	70.0	102.7	11.7	17.1	54.5	-4.0	0.96	4.39	2.51	13.4	19.6	18.8	27.6	10.44	2.51	13.4	19.6	72.9
7.0	70.0	102.7	13.4	19.6	72.9	-4.0	0.96	4.12	2.57	15.1	22.2	20.3	29.8	10.17	2.57	15.1	22.2	93.8
8.0	70.0	102.7	15.1	22.2	93.8	-4.0	0.96	3.87	2.60	16.9	24.8	21.9	32.1	9.89	2.60	16.9	24.8	117.3
9.0	70.0	102.7	16.9	24.8	117.3	-4.0	0.96	3.64	2.59	18.7	27.4	23.5	34.4	9.61	2.59	18.7	27.4	143.3
10.0	70.0	102.7	18.7	27.4	143.3	-4.0	0.96	3.44	2.57	20.4	30.0	25.0	36.7	9.33	2.57	20.4	30.0	172.0
11.0	70.0	102.7	20.4	30.0	172.0	3.7	-1.53	0.96	0.73	20.9	30.7	26.6	39.0	9.05	0.73	20.9	30.7	202.3
12.0	70.0	102.7	20.9	30.7	202.3	3.7	-1.53	0.91	0.70	21.4	31.4	27.0	39.7	8.97	0.70	21.4	31.4	233.4
13.0	70.0	102.7	21.4	31.4	233.4	3.7	-1.53	0.86	0.67	21.9	32.1	27.5	40.3	8.90	0.67	21.9	32.1	265.1
14.0	70.0	102.7	21.9	32.1	265.1	3.7	-1.53	0.81	0.64	22.3	32.7	27.9	40.9	8.83	0.64	22.3	32.7	297.5
15.0	70.0	102.7	22.3	32.7	297.5	3.7	-1.53	0.77	0.61	22.7	33.3	28.3	41.4	8.76	0.61	22.7	33.3	330.4
16.0	70.0	102.7	22.7	33.3	330.4	3.7	-1.53	0.73	0.58	23.1	33.9	28.6	42.0	8.69	0.58	23.1	33.9	364.0
17.0	70.0	102.7	23.1	33.9	364.0	3.7	-1.54	0.69	0.55	23.5	34.4	29.0	42.5	8.63	0.55	23.5	34.4	398.2
18.0	70.0	102.7	23.5	34.4	398.2	3.7	-1.54	0.66	0.53	23.8	35.0	29.3	43.0	8.57	0.53	23.8	35.0	432.9
19.0	70.0	102.7	23.8	35.0	432.9	3.7	-1.54	0.62	0.51	24.2	35.5	29.6	43.5	8.51	0.51	24.2	35.5	468.1
20.0	70.0	102.7	24.2	35.5	468.1	3.7	-1.54	0.59	0.48	24.5	35.9	29.9	43.9	8.46	0.48	24.5	35.9	503.8
21.0	70.0	102.7	24.5	35.9	503.8	3.7	-1.54	0.57	0.46	24.8	36.4	30.2	44.4	8.41	0.46	24.8	36.4	540.0
22.0	70.0	102.7	24.8	36.4	540.0	3.7	-1.54	0.54	0.44	25.1	36.9	30.5	44.8	8.36	0.44	25.1	36.9	576.6
23.0	70.0	102.7	25.1	36.9	576.6	3.7	-1.54	0.51	0.42	25.4	37.3	30.8	45.2	8.31	0.42	25.4	37.3	613.7
24.0	70.0	102.7	25.4	37.3	613.7	3.7	-1.55	0.49	0.41	25.7	37.7	31.1	45.5	8.26	0.41	25.7	37.7	651.2
25.0	70.0	102.7	25.7	37.7	651.2	3.7	-1.55	0.47	0.39	26.0	38.1	31.3	45.9	8.22	0.39	26.0	38.1	689.0
26.0	70.0	102.7	26.0	38.1	689.0	3.7	-1.55	0.45	0.37	26.2	38.5	31.5	46.3	8.18	0.37	26.2	38.5	727.3
27.0	70.0	102.7	26.2	38.5	727.3	3.7	-1.55	0.43	0.36	26.5	38.8	31.8	46.6	8.14	0.36	26.5	38.8	765.9
28.0	70.0	102.7	26.5	38.8	765.9	3.7	-1.55	0.41	0.34	26.7	39.2	32.0	46.9	8.10	0.34	26.7	39.2	804.9
29.0	70.0	102.7	26.7	39.2	804.9	3.7	-1.55	0.39	0.33	26.9	39.5	32.2	47.2	8.06	0.33	26.9	39.5	844.3
30.0	70.0	102.7	26.9	39.5	844.3	3.7	-1.55	0.38	0.32	27.1	39.8	32.4	47.5	8.02	0.32	27.1	39.8	883.9
31.0	70.0	102.7	27.1	39.8	883.9	3.7	-1.55	0.36	0.31	27.3	40.1	32.6	47.8	7.99	0.31	27.3	40.1	923.9
32.0	70.0	102.7	27.3	40.1	923.9	3.7	-1.56	0.35	0.29	27.5	40.4	32.8	48.1	7.96	0.29	27.5	40.4	964.1
33.0	70.0	102.7	27.5	40.4	964.1	3.7	-1.56	0.33	0.28	27.7	40.7	33.0	48.3	7.92	0.28	27.7	40.7	1004.7
34.0	70.0	102.7	27.7	40.7	1004.7	3.7	-1.56	0.32	0.27	27.9	41.0	33.1	48.6	7.89	0.27	27.9	41.0	1045.5
35.0	70.0	102.7	27.9	41.0	1045.5	3.7	-1.56	0.31	0.26	28.1	41.2	33.3	48.8	7.86	0.26	28.1	41.2	1086.6
36.0	70.0	102.7	28.1	41.2	1086.6	3.7	-1.56	0.29	0.25	28.3	41.5	33.4	49.1	7.84	0.25	28.3	41.5	1127.9
37.0	70.0	102.7	28.3	41.5	1127.9	3.7	-1.56	0.28	0.24	28.4	41.7	33.6	49.3	7.81	0.24	28.4	41.7	1169.5
38.0	70.0	102.7	28.4	41.7	1169.5	3.7	-1.56	0.27	0.23	28.6	41.9	33.7	49.5	7.78	0.23	28.6	41.9	1211.3
39.0	70.0	102.7	28.6	41.9	1211.3	3.7	-1.56	0.26	0.22	28.7	42.2	33.9	49.7	7.76	0.22	28.7	42.2	1253.4
40.0	70.0	102.7	28.7	42.2	1253.4	3.7	-1.56	0.25	0.22	28.9	42.4	34.0	49.9	7.73	0.22	28.9	42.4	1295.7
41.0	70.0	102.7	28.9	42.4	1295.7	3.7	-1.56	0.24	0.21	29.0	42.6	34.2	50.1	7.71	0.21	29.0	42.6	1338.1
42.0	70.0	102.7	29.0	42.6	1338.1	3.7	-1.56	0.23	0.20	29.2	42.8	34.3	50.3	7.69	0.20	29.2	42.8	1380.8
43.0	70.0	102.7	29.2	42.8	1380.8	3.7	-1.56	0.22	0.19	29.3	43.0	34.4	50.5	7.67	0.19	29.3	43.0	1423.7
44.0	70.0	102.7	29.3	43.0	1423.7	3.7	-1.57	0.21	0.19	29.4	43.2	34.5	50.6	7.65	0.19	29.4	43.2	1466.8

TRUCK SPEED PROFILE FOR CR28 RAMP D, SB ENTRANCE RAMP, 03/03/2014

Desired speed (mph) = 70.0 Maximum speed (mph) = 49.9
 Initial speed (mph) = 0.0 Minimum speed (mph) = 2.1
 Weight/horsepower ratio (lb/hp) = 200.0 Speed difference (mph) = 47.7
 Weight/frontal area ratio (lb/ft²) = 431.4
 Elevation (ft) = 800.0
 Horsepower correction factor for elevation = 1.0000
 Aerodynamic drag correction factor for elevation = 0.9768

(1) Elapsed time (sec)	(2)		(3)			(7) Local grade (%)	(8)			(11)		(14)			(16) Actual acceleration (ft/sec ²)	(17)			
	Desired speed		Start of 1-sec Interval				Limiting acceleration (ft/sec ²)			New speed based on vehicle performance		Limiting acceleration and speed based on driver preferences				End of 1-sec Interval			
			Speed		Position		Coasting	Power	Effective	(mph)	(ft/sec)	Speed		Acceleration (ft/sec ²)		(mph)	New speed		New position (ft)
	(mph)	(ft/sec)	(mph)	(ft/sec)	(ft)							(mph)	(ft/sec)				(mph)	(ft/sec)	
45.0	70.0	102.7	29.4	43.2	1466.8	3.7	-1.57	0.21	0.18	29.6	43.3	34.6	50.8	7.63	0.18	29.6	43.3	1510.0	
46.0	70.0	102.7	29.6	43.3	1510.0	3.7	-1.57	0.20	0.17	29.7	43.5	34.7	51.0	7.61	0.17	29.7	43.5	1553.5	
47.0	70.0	102.7	29.7	43.5	1553.5	3.7	-1.57	0.19	0.17	29.8	43.7	34.8	51.1	7.59	0.17	29.8	43.7	1597.1	
48.0	70.0	102.7	29.8	43.7	1597.1	3.7	-1.57	0.18	0.16	29.9	43.8	34.9	51.3	7.57	0.16	29.9	43.8	1640.8	
49.0	70.0	102.7	29.9	43.8	1640.8	3.7	-1.57	0.18	0.15	30.0	44.0	35.0	51.4	7.55	0.15	30.0	44.0	1684.7	
50.0	70.0	102.7	30.0	44.0	1684.7	3.7	-1.57	0.17	0.15	30.1	44.1	35.1	51.5	7.54	0.15	30.1	44.1	1728.8	
51.0	70.0	102.7	30.1	44.1	1728.8	3.7	-1.57	0.16	0.14	30.2	44.3	35.2	51.7	7.52	0.14	30.2	44.3	1773.0	
52.0	70.0	102.7	30.2	44.3	1773.0	3.7	-1.57	0.16	0.14	30.3	44.4	35.3	51.8	7.50	0.14	30.3	44.4	1817.4	
53.0	70.0	102.7	30.3	44.4	1817.4	3.7	-1.57	0.15	0.13	30.4	44.6	35.4	51.9	7.49	0.13	30.4	44.6	1861.9	
54.0	70.0	102.7	30.4	44.6	1861.9	3.7	-1.57	0.15	0.13	30.5	44.7	35.5	52.0	7.48	0.13	30.5	44.7	1906.5	
55.0	70.0	102.7	30.5	44.7	1906.5	3.7	-1.57	0.14	0.12	30.6	44.8	35.6	52.1	7.46	0.12	30.6	44.8	1951.2	
56.0	70.0	102.7	30.6	44.8	1951.2	3.7	-1.57	0.14	0.12	30.6	44.9	35.6	52.3	7.45	0.12	30.6	44.9	1996.1	
57.0	70.0	102.7	30.6	44.9	1996.1	3.7	-1.57	0.13	0.12	30.7	45.0	35.7	52.4	7.44	0.12	30.7	45.0	2041.1	
58.0	70.0	102.7	30.7	45.0	2041.1	3.7	-1.57	0.13	0.11	30.8	45.2	35.8	52.5	7.42	0.11	30.8	45.2	2086.2	
59.0	70.0	102.7	30.8	45.2	2086.2	3.7	-1.57	0.12	0.11	30.9	45.3	35.8	52.6	7.41	0.11	30.9	45.3	2131.4	
60.0	70.0	102.7	30.9	45.3	2131.4	3.7	-1.57	0.12	0.10	30.9	45.4	35.9	52.7	7.40	0.10	30.9	45.4	2176.7	
61.0	70.0	102.7	30.9	45.4	2176.7	0.7	-0.60	1.06	0.93	31.6	46.3	36.0	52.8	7.39	0.93	31.6	46.3	2222.6	
62.0	70.0	102.7	31.6	46.3	2222.6	0.7	-0.60	1.02	0.91	32.2	47.2	36.5	53.6	7.29	0.91	32.2	47.2	2269.3	
63.0	70.0	102.7	32.2	47.2	2269.3	0.7	-0.61	0.99	0.88	32.8	48.1	37.1	54.4	7.19	0.88	32.8	48.1	2317.0	
64.0	70.0	102.7	32.8	48.1	2317.0	0.7	-0.61	0.96	0.85	33.4	48.9	37.6	55.2	7.09	0.85	33.4	48.9	2365.5	
65.0	70.0	102.7	33.4	48.9	2365.5	0.7	-0.61	0.93	0.83	33.9	49.8	38.1	55.9	7.00	0.83	33.9	49.8	2414.9	
66.0	70.0	102.7	33.9	49.8	2414.9	0.7	-0.62	0.90	0.81	34.5	50.6	38.6	56.7	6.91	0.81	34.5	50.6	2465.0	
67.0	70.0	102.7	34.5	50.6	2465.0	0.7	-0.62	0.87	0.79	35.0	51.4	39.1	57.4	6.83	0.79	35.0	51.4	2516.0	
68.0	70.0	102.7	35.0	51.4	2516.0	0.7	-0.62	0.85	0.77	35.5	52.1	39.6	58.1	6.74	0.77	35.5	52.1	2567.8	
69.0	70.0	102.7	35.5	52.1	2567.8	0.7	-0.63	0.82	0.75	36.1	52.9	40.1	58.8	6.66	0.75	36.1	52.9	2620.3	
70.0	70.0	102.7	36.1	52.9	2620.3	-4.5	1.03	2.42	2.20	37.6	55.1	40.5	59.5	6.58	2.20	37.6	55.1	2674.3	
71.0	70.0	102.7	37.6	55.1	2674.3	-4.5	1.02	2.36	2.16	39.0	57.2	41.9	61.4	6.34	2.16	39.0	57.2	2730.4	
72.0	70.0	102.7	39.0	57.2	2730.4	-4.5	1.01	2.30	2.12	40.5	59.4	43.2	63.4	6.11	2.12	40.5	59.4	2788.7	
73.0	70.0	102.7	40.5	59.4	2788.7	-4.5	0.99	2.24	2.08	41.9	61.4	44.5	65.2	5.88	2.08	41.9	61.4	2849.1	
74.0	70.0	102.7	41.9	61.4	2849.1	-4.5	0.98	2.19	2.04	43.3	63.5	45.7	67.1	5.65	2.04	43.3	63.5	2911.6	
75.0	70.0	102.7	43.3	63.5	2911.6	-4.5	0.97	2.14	2.00	44.6	65.5	47.0	68.9	5.43	2.00	44.6	65.5	2976.1	
76.0	70.0	102.7	44.6	65.5	2976.1	-4.5	0.96	2.10	1.97	46.0	67.5	48.2	70.7	5.22	1.97	46.0	67.5	3042.5	
77.0	70.0	102.7	46.0	67.5	3042.5	-4.5	0.94	2.05	1.93	47.3	69.4	49.4	72.5	5.00	1.93	47.3	69.4	3111.0	
78.0	70.0	102.7	47.3	69.4	3111.0	-4.5	0.93	2.01	1.90	48.6	71.3	50.6	74.2	4.79	1.90	48.6	71.3	3181.3	
79.0	70.0	102.7	48.6	71.3	3181.3	-4.5	0.92	1.97	1.87	49.9	73.1	51.7	75.9	4.59	1.87	49.9	73.1	3253.5	

Truck Speed on the Entrance Ramp at the Merge Point is 47.6 mph - use 45 mph

TRUCK SPEED PROFILE FOR CR28 RAMP D, SB ENTRANCE RAMP, 03/03/2014

