HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2019
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2019 Existing Eastbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	928	4646	0.20	73.5	6.3	A
2	1.00	0.526	1148	4646	0.25	73.5	7.8	A
3	1.00	0.526	943	4646	0.20	73.5	6.4	A
4	1.00	0.526	1049	4646	0.23	73.5	7.1	A
5	1.00	0.526	1186	4646	0.26	73.5	8.1	A
6	1.00	0.526	1103	4646	0.24	73.5	7.5	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.515	0.641	948	119	6970	1936	0.14	0.06	73.5	73.5	4.3	4.3	A
2	1.00	1.00	0.515	0.641	1173	94	6970	1936	0.17	0.05	73.5	73.5	5.3	5.3	A
3	1.00	1.00	0.515	0.641	963	69	6970	1936	0.14	0.04	73.5	73.5	4.4	4.4	A
4	1.00	1.00	0.515	0.641	1072	119	6970	1936	0.15	0.06	73.5	73.5	4.9	4.9	A
5	1.00	1.00	0.515	0.641	1212	144	6970	1936	0.17	0.07	73.5	73.5	5.5	5.5	A
6	1.00	1.00	0.515	0.641	1126	137	6970	1936	0.16	0.07	73.5	73.5	5.1	5.1	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.515	800	4646	0.17	70.4	5.7	A
2	1.00	0.515	1056	4646	0.23	70.4	7.5	A
3	1.00	0.515	878	4646	0.19	70.4	6.2	A
4	1.00	0.515	924	4646	0.20	70.4	6.6	A
5	1.00	0.515	1033	4646	0.22	70.4	7.3	A
6	1.00	0.515	955	4646	0.21	70.4	6.8	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.515	0.794	1143	343	6970	1936	0.16	0.18	73.3	73.5	5.2	5.2	A
2	1.00	1.00	0.515	0.794	1610	554	6970	1936	0.23	0.29	73.3	73.5	7.3	7.3	A
3	1.00	1.00	0.515	0.794	1341	463	6970	1936	0.19	0.24	73.3	73.5	6.1	6.1	A
4	1.00	1.00	0.515	0.794	1287	363	6970	1936	0.18	0.19	73.3	73.5	5.8	5.8	A
5	1.00	1.00	0.515	0.794	1315	282	6970	1936	0.19	0.15	73.3	73.5	6.0	6.0	A
6	1.00	1.00	0.515	0.794	1222	267	6970	1936	0.18	0.14	73.3	73.5	5.5	5.5	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1150	4646	0.25	70.4	8.2	A
2	1.00	0.595	1654	4646	0.36	70.4	11.7	B
3	1.00	0.595	1378	4646	0.30	70.4	9.8	A
4	1.00	0.595	1284	4646	0.28	70.4	9.1	A
5	1.00	0.595	1271	4646	0.27	70.4	9.0	A
6	1.00	0.595	1183	4646	0.25	70.4	8.4	A

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.588	0.725	1163	55	6970	1936	0.17	0.03	73.5	73.5	5.3	5.3	A

2	1.00	1.00	0.588	0.725	1673	61	6970	1936	0.24	0.03	73.5	73.5	7.6	7.6	A
3	1.00	1.00	0.588	0.725	1395	55	6970	1936	0.20	0.03	73.5	73.5	6.3	6.3	A
4	1.00	1.00	0.588	0.725	1299	154	6970	1936	0.19	0.08	73.5	73.5	5.9	5.9	A
5	1.00	1.00	0.588	0.725	1286	77	6970	1936	0.18	0.04	73.5	73.5	5.8	5.8	A
6	1.00	1.00	0.588	0.725	1197	77	6970	1936	0.17	0.04	73.5	73.5	5.4	5.4	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.588	1095	4646	0.24	70.4	7.8	A
2	1.00	0.588	1599	4646	0.34	70.4	11.4	B
3	1.00	0.588	1327	4646	0.29	70.4	9.4	A
4	1.00	0.588	1109	4646	0.24	70.4	7.9	A
5	1.00	0.588	1190	4646	0.26	70.4	8.5	A
6	1.00	0.588	1102	4646	0.24	70.4	7.8	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.588	0.980	1409	314	6970	1936	0.20	0.16	73.1	73.5	6.4	6.4	A
2	1.00	1.00	0.588	0.980	2146	547	6970	1936	0.31	0.28	73.1	73.5	9.7	9.7	A
3	1.00	1.00	0.588	0.980	1662	335	6970	1936	0.24	0.17	73.1	73.5	7.5	7.5	A
4	1.00	1.00	0.588	0.980	1456	347	6970	1936	0.21	0.18	73.1	73.5	6.6	6.6	A
5	1.00	1.00	0.588	0.980	1390	200	6970	1936	0.20	0.10	73.1	73.5	6.3	6.3	A
6	1.00	1.00	0.588	0.980	1278	176	6970	1936	0.18	0.09	73.1	73.5	5.8	5.8	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.667	1427	4646	0.31	70.4	10.1	A
2	1.00	0.667	2213	4646	0.48	70.4	15.7	B
3	1.00	0.667	1661	4646	0.36	70.4	11.8	B
4	1.00	0.667	1487	4646	0.32	70.4	10.6	A
5	1.00	0.667	1343	4646	0.29	70.4	9.5	A
6	1.00	0.667	1229	4646	0.26	70.4	8.7	A

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.794	2855	3568	0.80	58.3	16.3	B
2	1.00	0.794	3695	4062	0.91	55.8	22.1	C
3	1.00	0.794	3208	3700	0.87	57.1	18.7	B
4	1.00	0.794	2261	4178	0.54	61.3	12.3	B
5	1.00	0.794	2438	3664	0.67	59.9	13.6	B
6	1.00	0.794	1917	3772	0.51	62.1	10.3	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.781	3037	4646	0.65	68.3	22.2	C
2	1.00	0.781	3857	4646	0.83	61.9	31.1	D
3	1.00	0.781	3426	4646	0.74	65.8	26.0	C
4	1.00	0.781	2269	4646	0.49	70.2	16.1	B
5	1.00	0.781	2515	4646	0.54	70.1	17.9	B
6	1.00	0.781	1849	4646	0.40	70.2	13.1	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.833	0.980	3126	278	6970	1936	0.45	0.14	72.9	73.5	14.2	14.2	B
2	1.00	1.00	0.833	0.980	4016	400	6970	1936	0.58	0.21	72.0	72.0	18.6	18.6	C
3	1.00	1.00	0.833	0.980	4216	1004	6970	1936	0.60	0.52	71.4	71.4	19.7	19.7	C
4	1.00	1.00	0.833	0.980	3123	996	6970	1936	0.45	0.51	73.1	73.5	14.2	14.2	B
5	1.00	1.00	0.833	0.980	3248	890	6970	1936	0.47	0.46	73.1	73.4	14.8	14.8	B
6	1.00	1.00	0.833	0.980	2521	788	6970	1936	0.36	0.41	73.1	73.5	11.4	11.4	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.833	3174	6970	0.46	70.4	15.0	B
2	1.00	0.833	4086	6970	0.59	69.6	19.6	C
3	1.00	0.833	4394	6970	0.63	68.8	21.3	C
4	1.00	0.833	3299	6970	0.47	70.4	15.6	B
5	1.00	0.833	3405	6970	0.49	70.4	16.1	B
6	1.00	0.833	2660	6970	0.38	70.4	12.6	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.833	0.943	4120	946	9293	1936	0.44	0.49	72.9	73.5	14.0	14.0	B
2	1.00	1.00	0.833	0.943	5159	1073	9293	1936	0.56	0.55	72.4	72.4	17.8	17.8	B
3	1.00	1.00	0.833	0.943	5450	1056	9293	1936	0.59	0.55	71.8	71.8	19.0	19.0	C
4	1.00	1.00	0.833	0.943	4304	1005	9293	1936	0.46	0.52	72.9	73.4	14.7	14.7	B
5	1.00	1.00	0.833	0.943	4105	700	9293	1936	0.44	0.36	72.9	73.5	14.0	14.0	B
6	1.00	1.00	0.833	0.943	3343	683	9293	1936	0.36	0.35	72.9	73.5	11.4	11.4	B

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.847	4175	6970	0.60	69.4	20.1	C
2	1.00	0.847	5214	6970	0.75	65.4	26.6	D

3	1.00	0.847	5497	6970	0.79	63.7	28.8	D
4	1.00	0.847	4364	6970	0.63	68.9	21.1	C
5	1.00	0.847	4128	6970	0.59	69.5	19.8	C
6	1.00	0.847	3377	6970	0.48	70.4	16.0	B

Facility Time Period Results

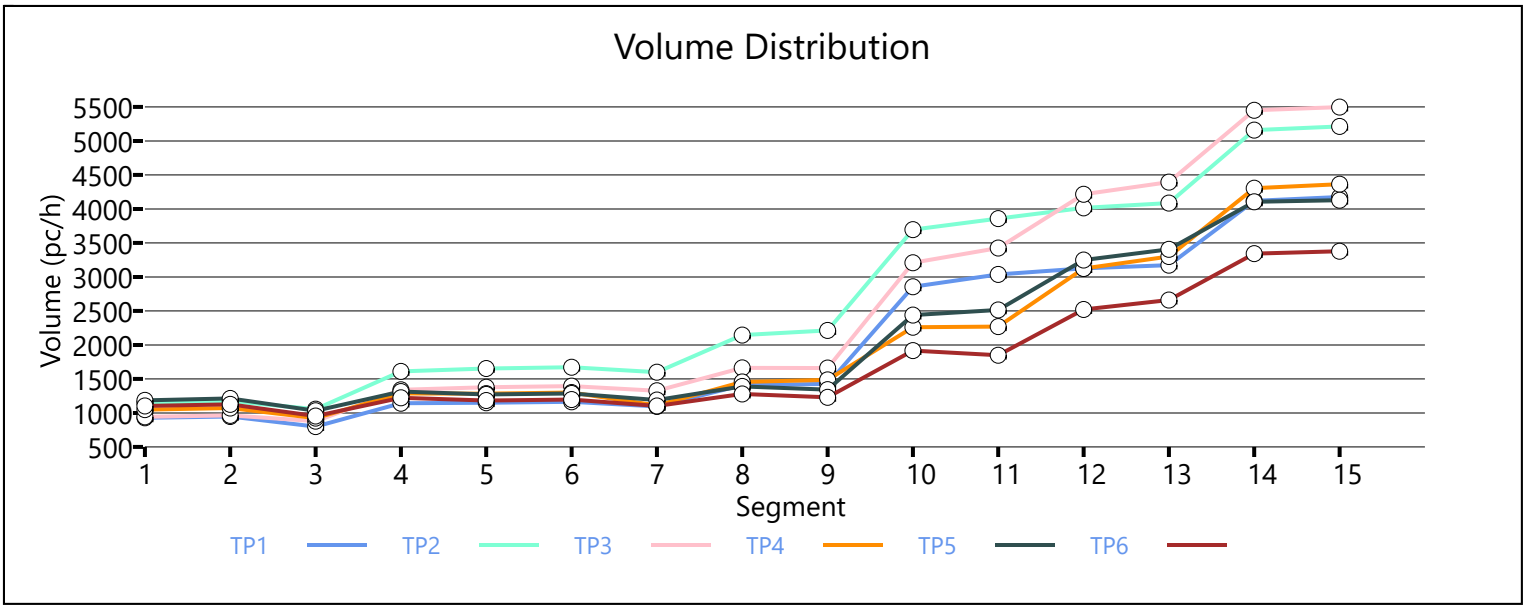
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	68.4	11.7	8.7	6.10	B
2	66.0	15.9	11.7	6.30	B
3	65.8	14.9	11.1	6.40	B
4	69.3	11.7	8.6	6.00	B
5	69.2	11.8	8.6	6.10	B
6	70.0	10.0	7.2	6.00	A

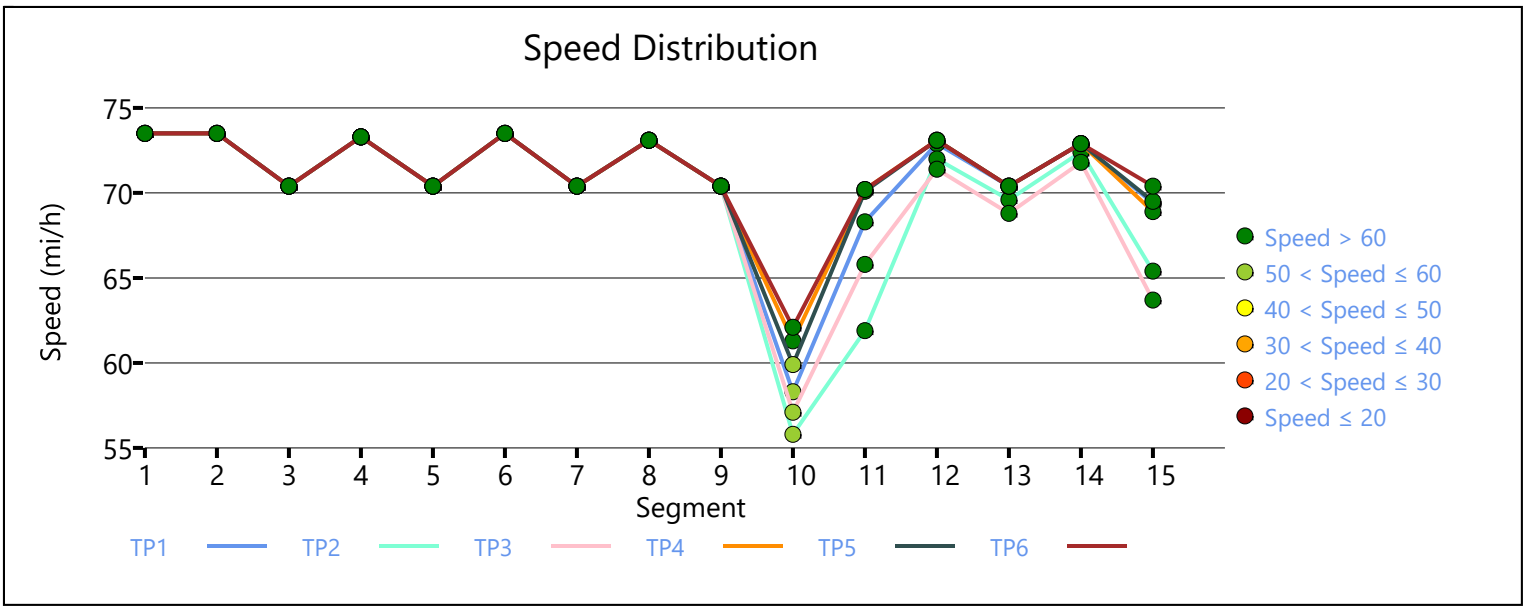
Facility Overall Results

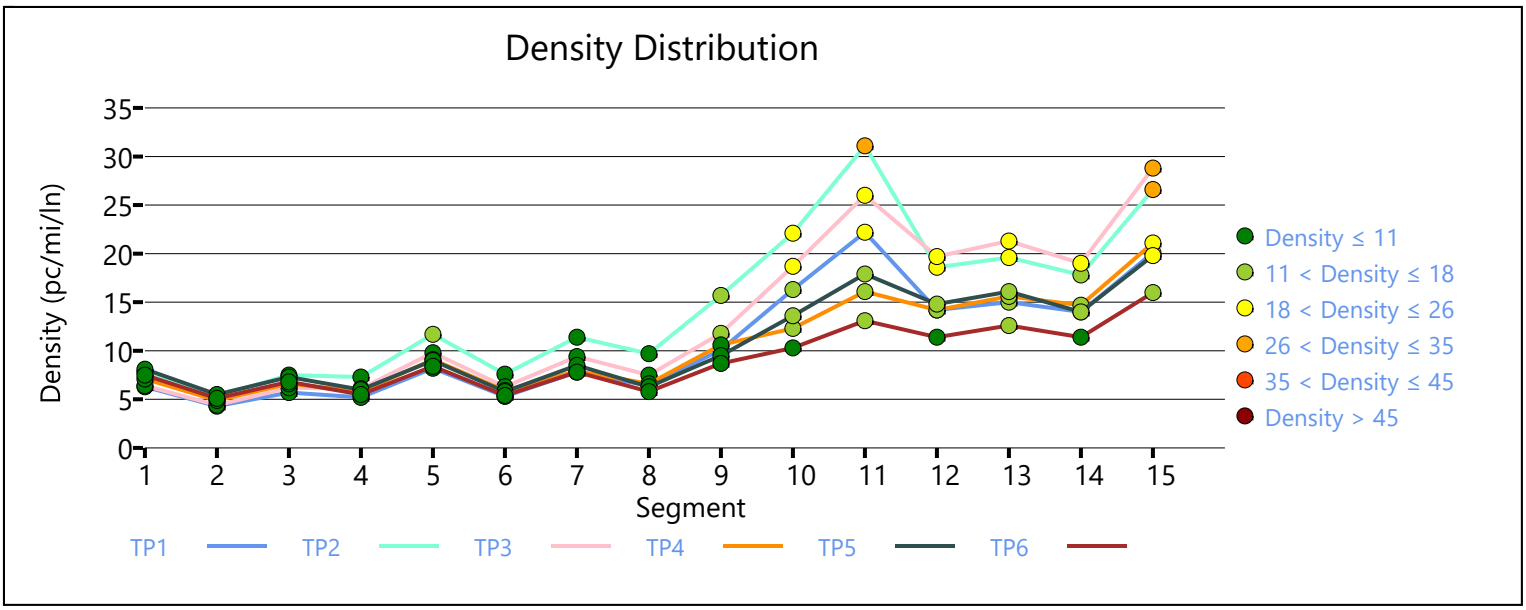
Space Mean Speed, mi/h	67.8	Density, veh/mi/ln	9.3
Average Travel Time, min	6.20	Density, pc/mi/ln	12.7

Messages

Comments







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Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.633	1479	4646	0.32	73.5	10.1	A
2	1.00	0.633	1611	4646	0.35	73.5	11.0	A
3	1.00	0.633	1327	4646	0.29	73.5	9.0	A
4	1.00	0.633	1441	4646	0.31	73.5	9.8	A
5	1.00	0.633	1327	4646	0.29	73.5	9.0	A
6	1.00	0.633	1485	4646	0.32	73.5	10.1	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.610	0.725	1534	204	6970	1936	0.22	0.11	73.5	73.5	7.0	7.0	A
2	1.00	1.00	0.610	0.725	1672	243	6970	1936	0.24	0.13	73.5	73.5	7.6	7.6	A
3	1.00	1.00	0.610	0.725	1377	248	6970	1936	0.20	0.13	73.5	73.5	6.2	6.2	A
4	1.00	1.00	0.610	0.725	1495	199	6970	1936	0.21	0.10	73.5	73.5	6.8	6.8	A
5	1.00	1.00	0.610	0.725	1377	276	6970	1936	0.20	0.14	73.5	73.5	6.2	6.2	A
6	1.00	1.00	0.610	0.725	1541	281	6970	1936	0.22	0.15	73.5	73.5	7.0	7.0	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	1292	4646	0.28	70.4	9.2	A
2	1.00	0.610	1384	4646	0.30	70.4	9.8	A
3	1.00	0.610	1082	4646	0.23	70.4	7.7	A
4	1.00	0.610	1259	4646	0.27	70.4	8.9	A
5	1.00	0.610	1049	4646	0.23	70.4	7.4	A
6	1.00	0.610	1207	4646	0.26	70.4	8.6	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.769	0.781	1450	425	6970	1936	0.21	0.22	73.3	73.5	6.6	6.6	A
2	1.00	1.00	0.769	0.781	1441	343	6970	1936	0.21	0.18	73.3	73.5	6.5	6.5	A
3	1.00	1.00	0.769	0.781	1375	517	6970	1936	0.20	0.27	73.3	73.5	6.2	6.2	A
4	1.00	1.00	0.769	0.781	1429	430	6970	1936	0.21	0.22	73.3	73.5	6.5	6.5	A
5	1.00	1.00	0.769	0.781	1257	425	6970	1936	0.18	0.22	73.3	73.5	5.7	5.7	A
6	1.00	1.00	0.769	0.781	1208	251	6970	1936	0.17	0.13	73.3	73.5	5.5	5.5	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.649	1726	4646	0.37	70.4	12.3	B
2	1.00	0.649	1713	4646	0.37	70.4	12.2	B
3	1.00	0.649	1639	4646	0.35	70.4	11.6	B
4	1.00	0.649	1701	4646	0.37	70.4	12.1	B
5	1.00	0.649	1498	4646	0.32	70.4	10.6	A
6	1.00	0.649	1436	4646	0.31	70.4	10.2	A

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.658	0.617	1702	162	6970	1936	0.24	0.08	73.5	73.5	7.7	7.7	A

2	1.00	1.00	0.658	0.617	1690	188	6970	1936	0.24	0.10	73.5	73.5	7.7	7.7	A
3	1.00	1.00	0.658	0.617	1617	207	6970	1936	0.23	0.11	73.5	73.5	7.3	7.3	A
4	1.00	1.00	0.658	0.617	1678	149	6970	1936	0.24	0.08	73.5	73.5	7.6	7.6	A
5	1.00	1.00	0.658	0.617	1477	136	6970	1936	0.21	0.07	73.5	73.5	6.7	6.7	A
6	1.00	1.00	0.658	0.617	1416	194	6970	1936	0.20	0.10	73.5	73.5	6.4	6.4	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.658	1550	4646	0.33	70.4	11.0	A
2	1.00	0.658	1514	4646	0.33	70.4	10.8	A
3	1.00	0.658	1422	4646	0.31	70.4	10.1	A
4	1.00	0.658	1538	4646	0.33	70.4	10.9	A
5	1.00	0.658	1350	4646	0.29	70.4	9.6	A
6	1.00	0.658	1234	4646	0.27	70.4	8.8	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.676	1.000	1669	160	6970	1936	0.24	0.08	73.1	73.5	7.6	7.6	A
2	1.00	1.00	0.676	1.000	1557	84	6970	1936	0.22	0.04	73.1	73.5	7.1	7.1	A
3	1.00	1.00	0.676	1.000	1465	80	6970	1936	0.21	0.04	73.1	73.5	6.6	6.6	A
4	1.00	1.00	0.676	1.000	1573	76	6970	1936	0.23	0.04	73.1	73.5	7.1	7.1	A
5	1.00	1.00	0.676	1.000	1398	84	6970	1936	0.20	0.04	73.1	73.5	6.3	6.3	A
6	1.00	1.00	0.676	1.000	1301	100	6970	1936	0.19	0.05	73.1	73.5	5.9	5.9	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1746	4646	0.38	70.4	12.4	B
2	1.00	0.676	1598	4646	0.34	70.4	11.3	B
3	1.00	0.676	1503	4646	0.32	70.4	10.7	A
4	1.00	0.676	1609	4646	0.35	70.4	11.4	B
5	1.00	0.676	1438	4646	0.31	70.4	10.2	A
6	1.00	0.676	1349	4646	0.29	70.4	9.6	A

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.735	2225	5947	0.37	63.5	11.7	B
2	1.00	0.735	2301	5402	0.43	62.6	12.3	B
3	1.00	0.735	2097	5454	0.38	63.4	11.0	B
4	1.00	0.735	2194	5952	0.37	63.6	11.5	B
5	1.00	0.735	2025	5292	0.38	63.5	10.6	B
6	1.00	0.735	1928	5197	0.37	63.7	10.1	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.725	2179	4646	0.47	70.3	15.5	B
2	1.00	0.725	2339	4646	0.50	70.2	16.6	B
3	1.00	0.725	2097	4646	0.45	70.3	14.9	B
4	1.00	0.725	2246	4646	0.48	70.3	16.0	B
5	1.00	0.725	2019	4646	0.43	70.3	14.3	B
6	1.00	0.725	1926	4646	0.41	70.3	13.7	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.758	0.980	2460	376	6970	1936	0.35	0.19	73.1	73.5	11.2	11.2	B
2	1.00	1.00	0.758	0.980	2535	298	6970	1936	0.36	0.15	73.1	73.5	11.5	11.5	B
3	1.00	1.00	0.758	0.980	2299	294	6970	1936	0.33	0.15	73.1	73.5	10.4	10.4	A
4	1.00	1.00	0.758	0.980	2503	355	6970	1936	0.36	0.18	73.1	73.5	11.4	11.4	B
5	1.00	1.00	0.758	0.980	2404	473	6970	1936	0.34	0.24	73.1	73.5	10.9	10.9	A
6	1.00	1.00	0.758	0.980	2246	404	6970	1936	0.32	0.21	73.1	73.5	10.2	10.2	A

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.758	2570	6970	0.37	70.4	12.2	B
2	1.00	0.758	2623	6970	0.38	70.4	12.4	B
3	1.00	0.758	2385	6970	0.34	70.4	11.3	B
4	1.00	0.758	2607	6970	0.37	70.4	12.3	B
5	1.00	0.758	2544	6970	0.36	70.4	12.0	B
6	1.00	0.758	2364	6970	0.34	70.4	11.2	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.758	0.943	3185	615	9293	1936	0.34	0.32	72.9	73.5	10.8	10.8	A
2	1.00	1.00	0.758	0.943	3191	568	9293	1936	0.34	0.29	72.9	73.5	10.9	10.9	A
3	1.00	1.00	0.758	0.943	3076	691	9293	1936	0.33	0.36	72.9	73.5	10.5	10.5	A
4	1.00	1.00	0.758	0.943	3129	522	9293	1936	0.34	0.27	72.9	73.5	10.6	10.6	A
5	1.00	1.00	0.758	0.943	3282	738	9293	1936	0.35	0.38	72.9	73.5	11.2	11.2	B
6	1.00	1.00	0.758	0.943	2915	551	9293	1936	0.31	0.28	72.9	73.5	9.9	9.9	A

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.794	3184	6970	0.46	70.4	15.1	B
2	1.00	0.794	3179	6970	0.46	70.4	15.1	B

3	1.00	0.794	3098	6970	0.44	70.4	14.7	B
4	1.00	0.794	3108	6970	0.45	70.4	14.7	B
5	1.00	0.794	3305	6970	0.47	70.4	15.7	B
6	1.00	0.794	2912	6970	0.42	70.4	13.8	B

Facility Time Period Results

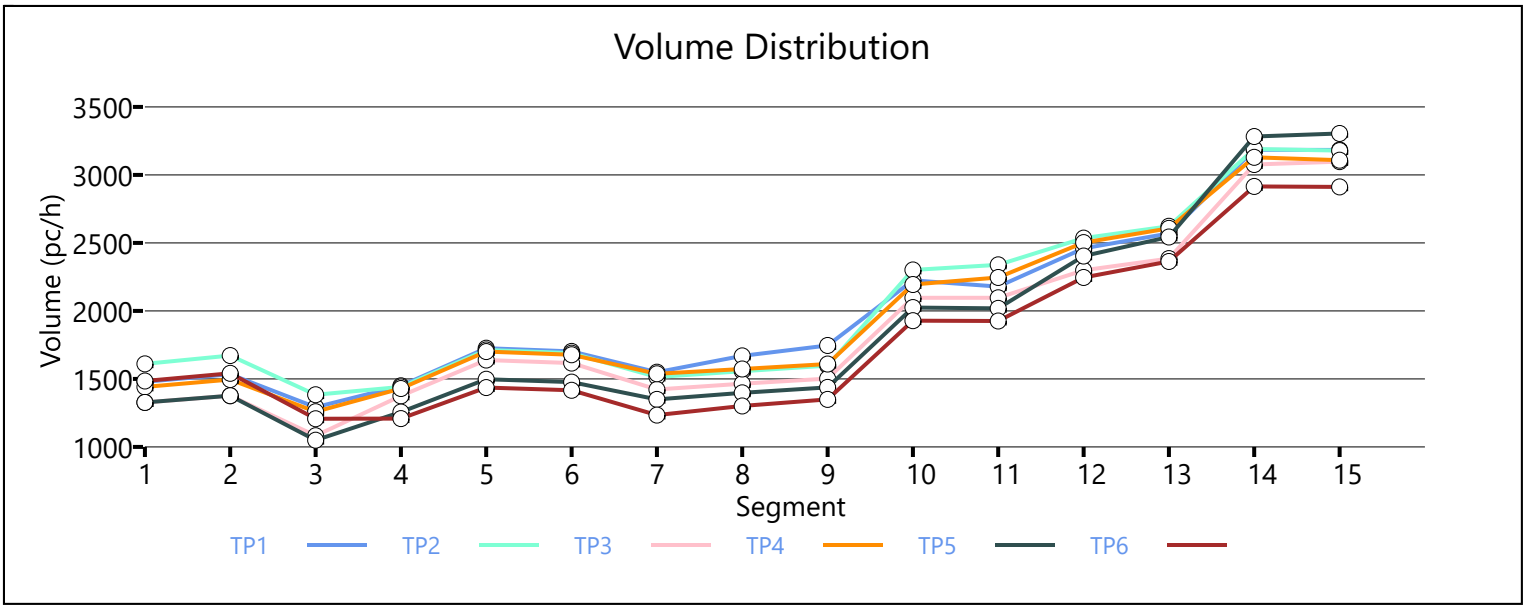
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.3	11.7	8.3	6.00	B
2	70.2	11.9	8.4	6.00	B
3	70.3	11.0	7.8	6.00	A
4	70.3	11.5	8.2	6.00	B
5	70.3	10.8	7.7	6.00	A
6	70.4	10.4	7.3	5.90	A

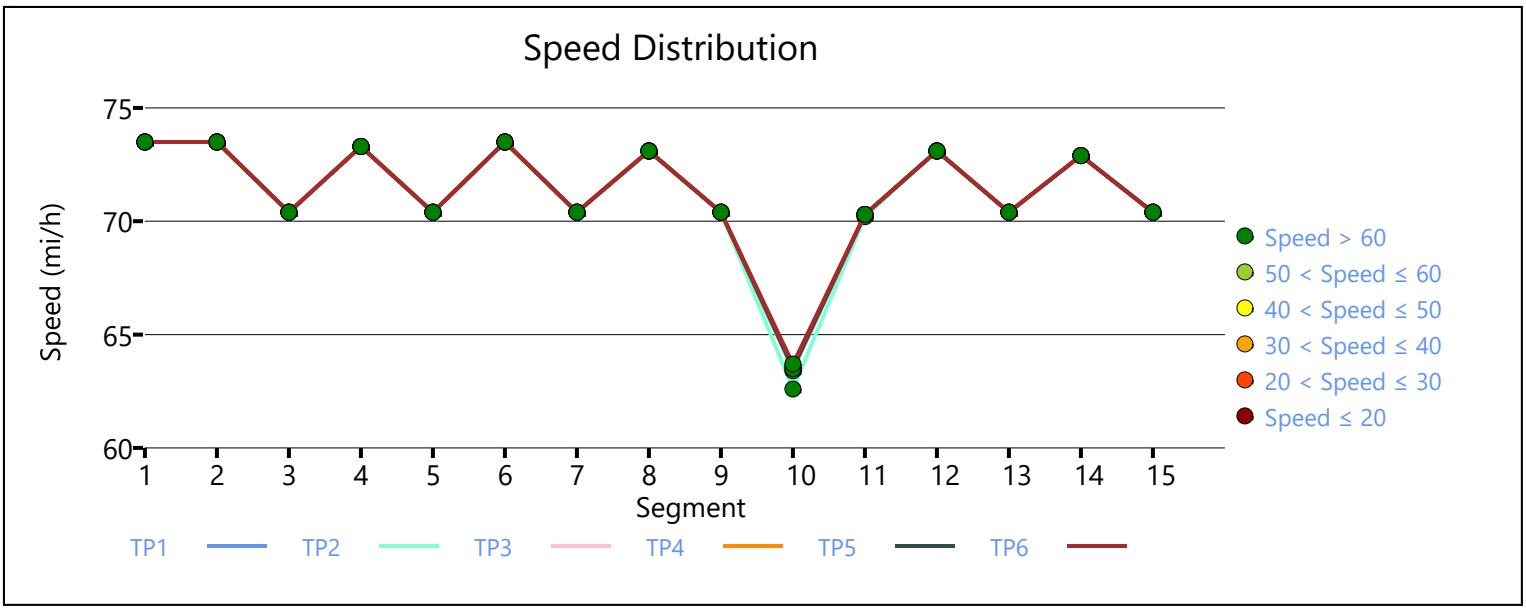
Facility Overall Results

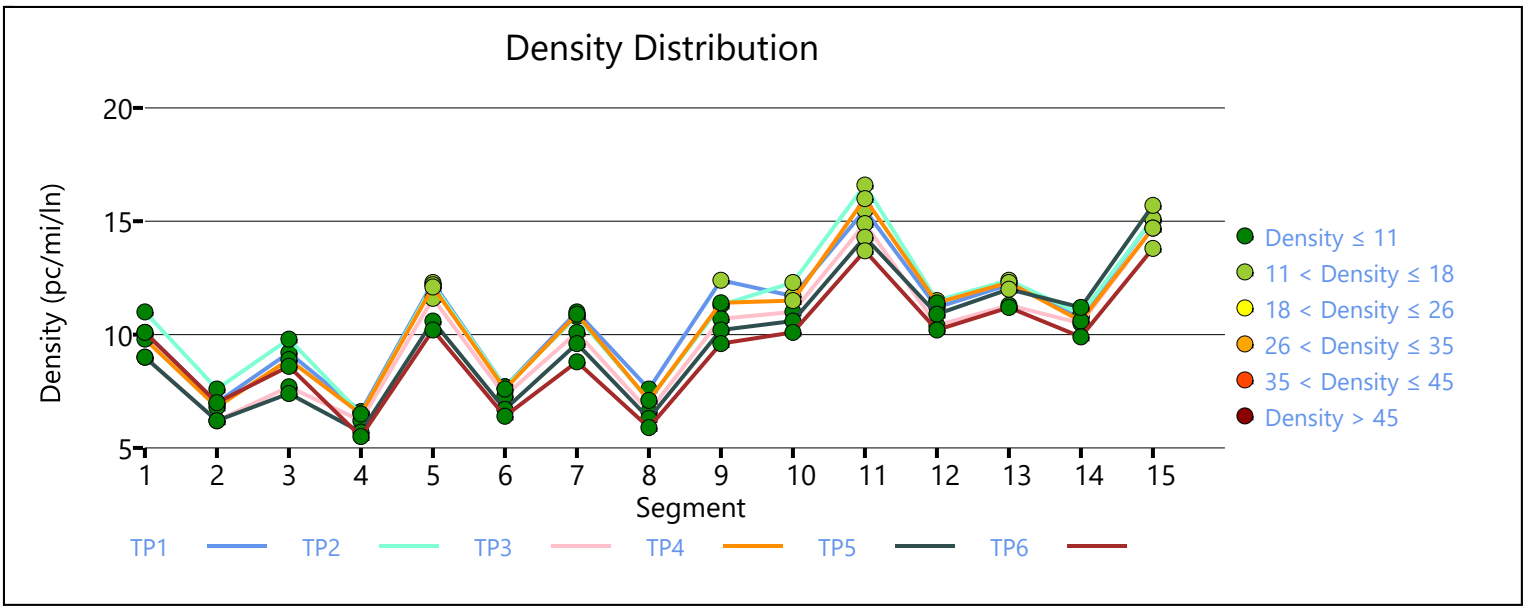
Space Mean Speed, mi/h	70.3	Density, veh/mi/ln	8.0
Average Travel Time, min	6.00	Density, pc/mi/ln	11.2

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2022 No Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2022 No Build Eastbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.521	992	4646	0.21	73.5	6.7	A
2	1.00	0.521	1228	4646	0.26	73.5	8.4	A
3	1.00	0.521	1010	4646	0.22	73.5	6.9	A
4	1.00	0.521	1123	4646	0.24	73.5	7.6	A
5	1.00	0.521	1269	4646	0.27	73.5	8.6	A
6	1.00	0.521	1180	4646	0.25	73.5	8.0	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.521	0.641	992	128	6970	1936	0.14	0.07	73.5	73.5	4.5	4.5	A
2	1.00	1.00	0.521	0.641	1228	101	6970	1936	0.18	0.05	73.5	73.5	5.6	5.6	A
3	1.00	1.00	0.521	0.641	1010	75	6970	1936	0.14	0.04	73.5	73.5	4.6	4.6	A
4	1.00	1.00	0.521	0.641	1123	128	6970	1936	0.16	0.07	73.5	73.5	5.1	5.1	A
5	1.00	1.00	0.521	0.641	1269	154	6970	1936	0.18	0.08	73.5	73.5	5.8	5.8	A
6	1.00	1.00	0.521	0.641	1180	148	6970	1936	0.17	0.08	73.5	73.5	5.3	5.3	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.505	861	4646	0.19	70.4	6.1	A
2	1.00	0.505	1139	4646	0.25	70.4	8.1	A
3	1.00	0.505	947	4646	0.20	70.4	6.7	A
4	1.00	0.505	996	4646	0.21	70.4	7.1	A
5	1.00	0.505	1113	4646	0.24	70.4	7.9	A
6	1.00	0.505	1030	4646	0.22	70.4	7.3	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.505	0.794	1231	370	6970	1936	0.18	0.19	73.3	73.5	5.6	5.6	A
2	1.00	1.00	0.505	0.794	1737	598	6970	1936	0.25	0.31	73.3	73.5	7.9	7.9	A
3	1.00	1.00	0.505	0.794	1447	500	6970	1936	0.21	0.26	73.3	73.5	6.6	6.6	A
4	1.00	1.00	0.505	0.794	1388	392	6970	1936	0.20	0.20	73.3	73.5	6.3	6.3	A
5	1.00	1.00	0.505	0.794	1418	305	6970	1936	0.20	0.16	73.3	73.5	6.4	6.4	A
6	1.00	1.00	0.505	0.794	1318	288	6970	1936	0.19	0.15	73.3	73.5	6.0	6.0	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1225	4646	0.26	70.4	8.7	A
2	1.00	0.595	1765	4646	0.38	70.4	12.5	B
3	1.00	0.595	1471	4646	0.32	70.4	10.5	A
4	1.00	0.595	1368	4646	0.29	70.4	9.7	A
5	1.00	0.595	1351	4646	0.29	70.4	9.6	A
6	1.00	0.595	1259	4646	0.27	70.4	8.9	A

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.725	1225	59	6970	1936	0.18	0.03	73.5	73.5	5.6	5.6	A

2	1.00	1.00	0.595	0.725	1765	66	6970	1936	0.25	0.03	73.5	73.5	8.0	8.0	A
3	1.00	1.00	0.595	0.725	1471	59	6970	1936	0.21	0.03	73.5	73.5	6.7	6.7	A
4	1.00	1.00	0.595	0.725	1368	167	6970	1936	0.20	0.09	73.5	73.5	6.2	6.2	A
5	1.00	1.00	0.595	0.725	1351	83	6970	1936	0.19	0.04	73.5	73.5	6.1	6.1	A
6	1.00	1.00	0.595	0.725	1259	83	6970	1936	0.18	0.04	73.5	73.5	5.7	5.7	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.588	1167	4646	0.25	70.4	8.3	A
2	1.00	0.588	1704	4646	0.37	70.4	12.1	B
3	1.00	0.588	1415	4646	0.30	70.4	10.1	A
4	1.00	0.588	1179	4646	0.25	70.4	8.4	A
5	1.00	0.588	1265	4646	0.27	70.4	9.0	A
6	1.00	0.588	1172	4646	0.25	70.4	8.3	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.588	0.980	1507	340	6970	1936	0.22	0.18	73.1	73.5	6.8	6.8	A
2	1.00	1.00	0.588	0.980	2295	591	6970	1936	0.33	0.31	73.1	73.5	10.4	10.4	A
3	1.00	1.00	0.588	0.980	1776	361	6970	1936	0.25	0.19	73.1	73.5	8.1	8.1	A
4	1.00	1.00	0.588	0.980	1553	374	6970	1936	0.22	0.19	73.1	73.5	7.0	7.0	A
5	1.00	1.00	0.588	0.980	1481	216	6970	1936	0.21	0.11	73.1	73.5	6.7	6.7	A
6	1.00	1.00	0.588	0.980	1362	190	6970	1936	0.20	0.10	73.1	73.5	6.2	6.2	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1507	4646	0.32	70.4	10.7	A
2	1.00	0.676	2339	4646	0.50	70.4	16.6	B
3	1.00	0.676	1754	4646	0.38	70.4	12.5	B
4	1.00	0.676	1568	4646	0.34	70.4	11.1	B
5	1.00	0.676	1414	4646	0.30	70.4	10.0	A
6	1.00	0.676	1294	4646	0.28	70.4	9.2	A

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.806	3046	3546	0.86	57.5	17.7	B
2	1.00	0.806	3934	4026	0.98	54.9	23.9	C
3	1.00	0.806	3423	3670	0.93	56.2	20.3	C
4	1.00	0.806	2399	4141	0.58	60.8	13.2	B
5	1.00	0.806	2591	3630	0.71	59.3	14.6	B
6	1.00	0.806	2029	3741	0.54	61.6	11.0	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.794	3214	4646	0.69	67.2	23.9	C
2	1.00	0.794	4079	4646	0.88	59.4	34.3	D
3	1.00	0.794	3626	4646	0.78	64.1	28.3	D
4	1.00	0.794	2395	4646	0.52	70.2	17.0	B
5	1.00	0.794	2656	4646	0.57	69.8	19.0	C
6	1.00	0.794	1951	4646	0.42	70.2	13.9	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.794	0.980	3514	300	6970	1936	0.50	0.15	72.8	73.1	16.0	16.0	B
2	1.00	1.00	0.794	0.980	4511	432	6970	1936	0.65	0.22	70.3	70.3	21.4	21.4	C
3	1.00	1.00	0.794	0.980	4711	1085	6970	1936	0.68	0.56	69.4	69.4	22.6	22.6	C
4	1.00	1.00	0.794	0.980	3471	1076	6970	1936	0.50	0.56	73.1	73.2	15.8	15.8	B
5	1.00	1.00	0.794	0.980	3617	961	6970	1936	0.52	0.50	72.9	72.9	16.5	16.5	B
6	1.00	1.00	0.794	0.980	2802	851	6970	1936	0.40	0.44	73.1	73.5	12.7	12.7	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.847	3360	6970	0.48	70.4	15.9	B
2	1.00	0.847	4323	6970	0.62	69.0	20.9	C
3	1.00	0.847	4654	6970	0.67	67.9	22.8	C
4	1.00	0.847	3490	6970	0.50	70.4	16.5	B
5	1.00	0.847	3602	6970	0.52	70.3	17.1	B
6	1.00	0.847	2813	6970	0.40	70.4	13.3	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.847	0.962	4361	1001	9293	1936	0.47	0.52	72.9	73.4	14.9	14.9	B
2	1.00	1.00	0.847	0.962	5459	1136	9293	1936	0.59	0.59	71.8	71.8	19.0	19.0	C
3	1.00	1.00	0.847	0.962	5773	1119	9293	1936	0.62	0.58	71.0	71.0	20.3	20.3	C
4	1.00	1.00	0.847	0.962	4554	1064	9293	1936	0.49	0.55	72.9	73.2	15.6	15.6	B
5	1.00	1.00	0.847	0.962	4343	741	9293	1936	0.47	0.38	72.9	73.4	14.8	14.8	B
6	1.00	1.00	0.847	0.962	3536	723	9293	1936	0.38	0.37	72.9	73.5	12.0	12.0	B

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.862	4419	6970	0.63	68.7	21.4	C
2	1.00	0.862	5516	6970	0.79	63.6	28.9	D

3	1.00	0.862	5821	6970	0.84	61.6	31.5	D
4	1.00	0.862	4617	6970	0.66	68.0	22.6	C
5	1.00	0.862	4367	6970	0.63	68.9	21.1	C
6	1.00	0.862	3572	6970	0.51	70.3	16.9	B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.9	12.5	9.4	6.20	B
2	64.8	17.2	12.8	6.50	B
3	64.4	16.2	12.2	6.50	B
4	68.8	12.5	9.3	6.10	B
5	68.9	12.6	9.3	6.10	B
6	69.9	10.6	7.7	6.00	A

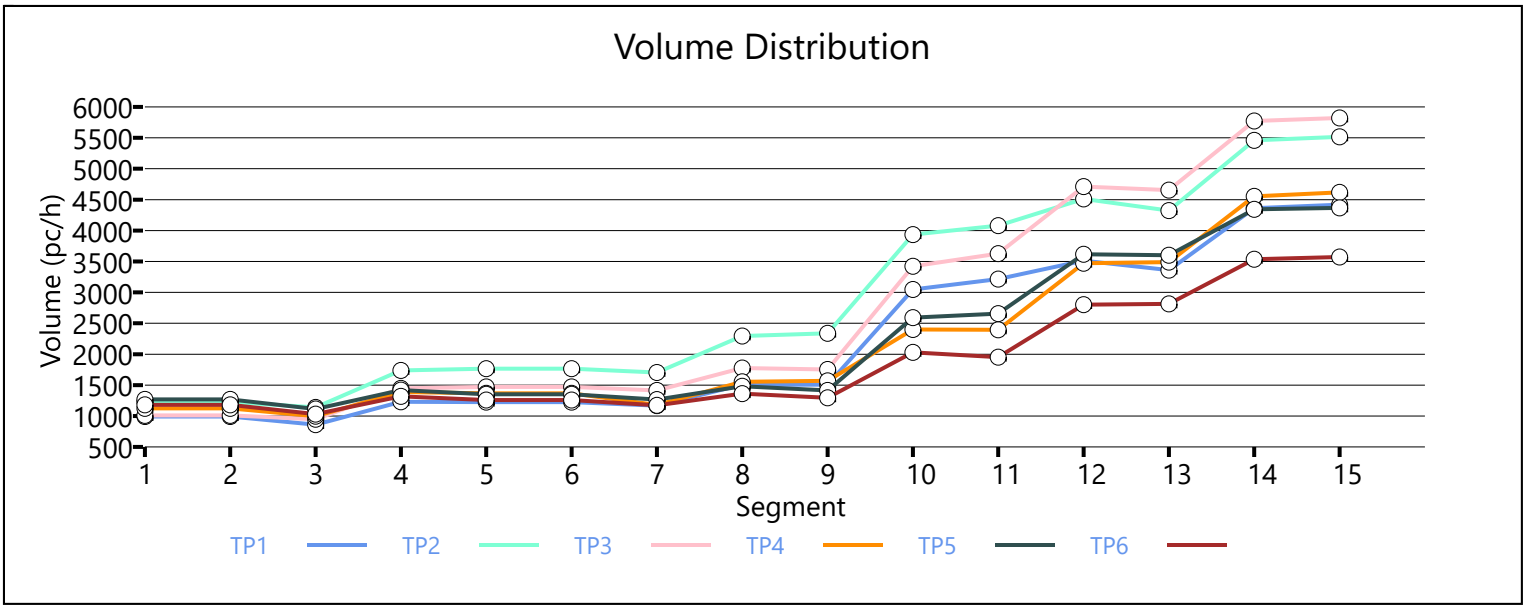
Facility Overall Results

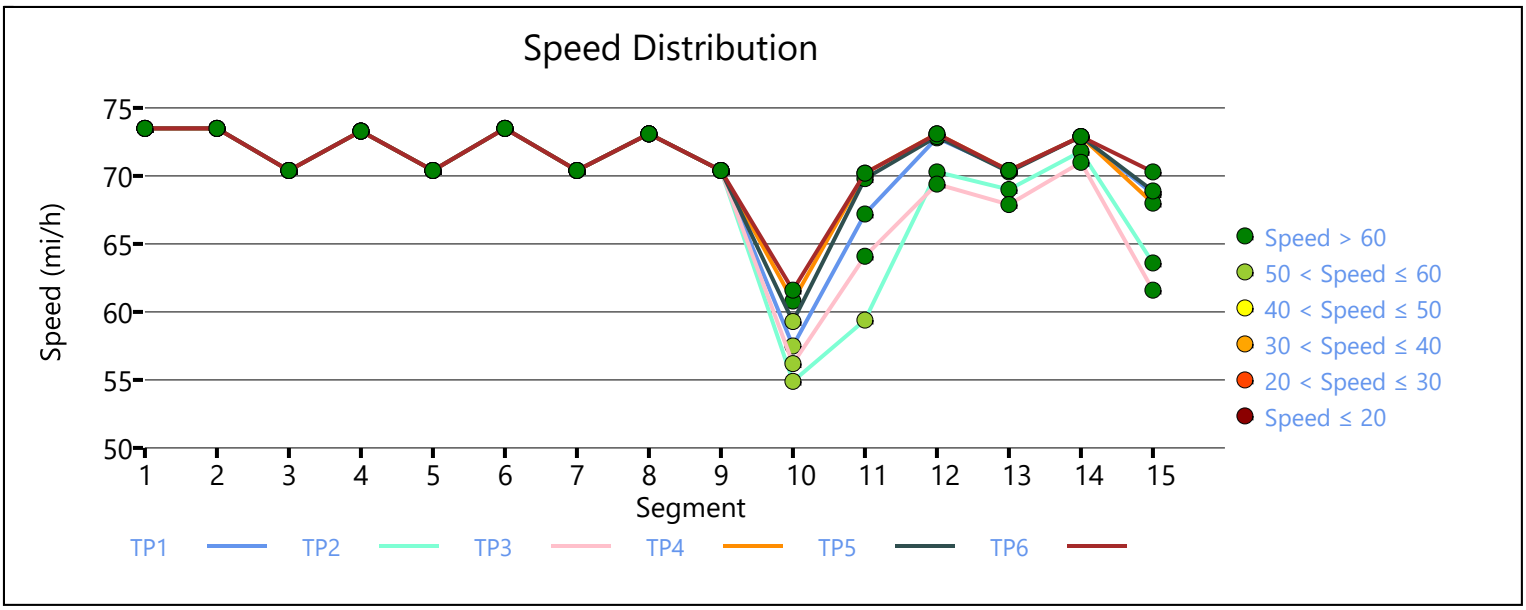
Space Mean Speed, mi/h	67.1	Density, veh/mi/ln	10.1
Average Travel Time, min	6.20	Density, pc/mi/ln	13.6

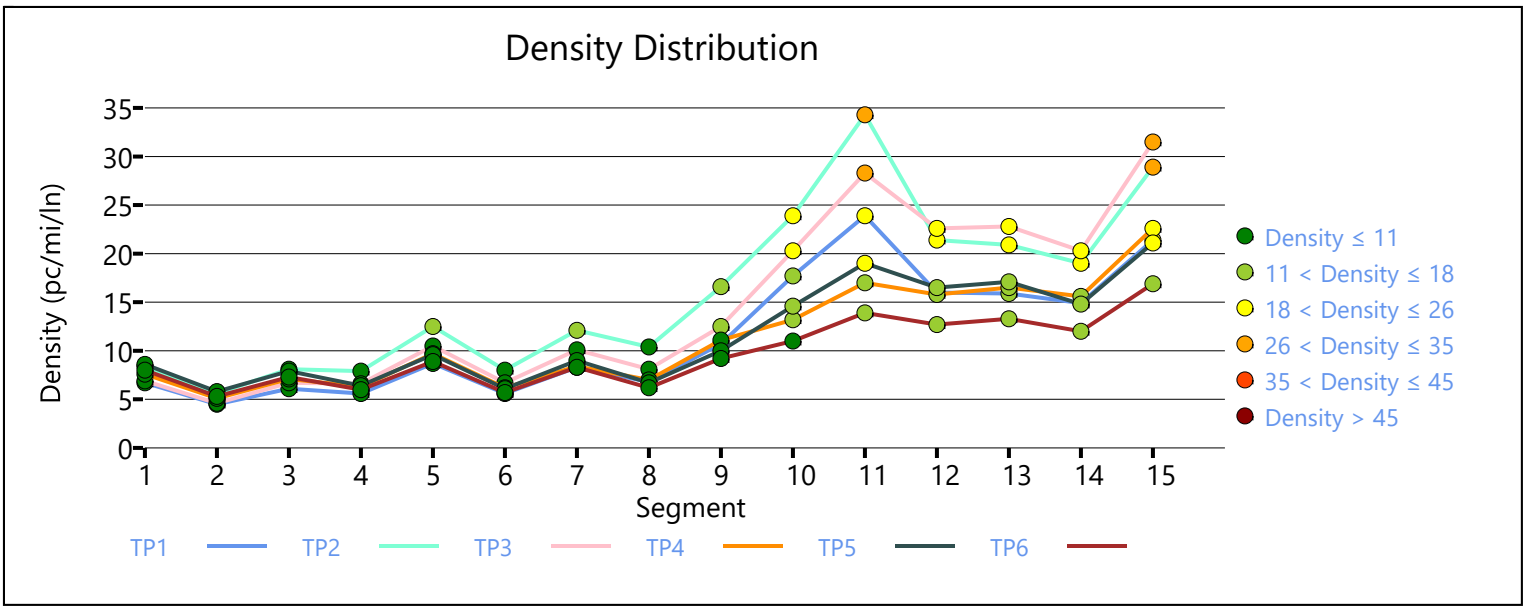
Messages

WARNING 1	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2022 No Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2022 No Build Eastbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	1626	4646	0.35	73.5	11.1	B
2	1.00	0.610	1772	4646	0.38	73.5	12.1	B
3	1.00	0.610	1459	4646	0.31	73.5	9.9	A
4	1.00	0.610	1585	4646	0.34	73.5	10.8	A
5	1.00	0.610	1459	4646	0.31	73.5	9.9	A
6	1.00	0.610	1633	4646	0.35	73.5	11.1	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.610	0.725	1626	221	6970	1936	0.23	0.11	73.5	73.5	7.4	7.4	A
2	1.00	1.00	0.610	0.725	1772	262	6970	1936	0.25	0.14	73.5	73.5	8.0	8.0	A
3	1.00	1.00	0.610	0.725	1459	268	6970	1936	0.21	0.14	73.5	73.5	6.6	6.6	A
4	1.00	1.00	0.610	0.725	1585	215	6970	1936	0.23	0.11	73.5	73.5	7.2	7.2	A
5	1.00	1.00	0.610	0.725	1459	298	6970	1936	0.21	0.15	73.5	73.5	6.6	6.6	A
6	1.00	1.00	0.610	0.725	1633	303	6970	1936	0.23	0.16	73.5	73.5	7.4	7.4	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1432	4646	0.31	70.4	10.2	A
2	1.00	0.581	1534	4646	0.33	70.4	10.9	A
3	1.00	0.581	1198	4646	0.26	70.4	8.5	A
4	1.00	0.581	1396	4646	0.30	70.4	9.9	A
5	1.00	0.581	1160	4646	0.25	70.4	8.2	A
6	1.00	0.581	1336	4646	0.29	70.4	9.5	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.781	1892	460	6970	1936	0.27	0.24	73.3	73.5	8.6	8.6	A
2	1.00	1.00	0.581	0.781	1904	370	6970	1936	0.27	0.19	73.3	73.5	8.6	8.6	A
3	1.00	1.00	0.581	0.781	1756	558	6970	1936	0.25	0.29	73.3	73.5	8.0	8.0	A
4	1.00	1.00	0.581	0.781	1861	465	6970	1936	0.27	0.24	73.3	73.5	8.4	8.4	A
5	1.00	1.00	0.581	0.781	1620	460	6970	1936	0.23	0.24	73.3	73.5	7.3	7.3	A
6	1.00	1.00	0.581	0.781	1607	271	6970	1936	0.23	0.14	73.3	73.5	7.3	7.3	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1858	4646	0.40	70.4	13.2	B
2	1.00	0.641	1841	4646	0.40	70.4	13.1	B
3	1.00	0.641	1766	4646	0.38	70.4	12.5	B
4	1.00	0.641	1832	4646	0.39	70.4	13.0	B
5	1.00	0.641	1612	4646	0.35	70.4	11.4	B
6	1.00	0.641	1541	4646	0.33	70.4	10.9	A

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	0.617	1858	175	6970	1936	0.27	0.09	73.5	73.5	8.4	8.4	A

2	1.00	1.00	0.641	0.617	1841	203	6970	1936	0.26	0.10	73.5	73.5	8.4	8.4	A
3	1.00	1.00	0.641	0.617	1766	224	6970	1936	0.25	0.12	73.5	73.5	8.0	8.0	A
4	1.00	1.00	0.641	0.617	1832	160	6970	1936	0.26	0.08	73.5	73.5	8.3	8.3	A
5	1.00	1.00	0.641	0.617	1612	147	6970	1936	0.23	0.08	73.5	73.5	7.3	7.3	A
6	1.00	1.00	0.641	0.617	1541	211	6970	1936	0.22	0.11	73.5	73.5	7.0	7.0	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1690	4646	0.36	70.4	12.0	B
2	1.00	0.641	1646	4646	0.35	70.4	11.7	B
3	1.00	0.641	1551	4646	0.33	70.4	11.0	A
4	1.00	0.641	1677	4646	0.36	70.4	11.9	B
5	1.00	0.641	1470	4646	0.32	70.4	10.4	A
6	1.00	0.641	1339	4646	0.29	70.4	9.5	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	1.000	1863	173	6970	1936	0.27	0.09	73.1	73.5	8.4	8.4	A
2	1.00	1.00	0.641	1.000	1737	91	6970	1936	0.25	0.05	73.1	73.5	7.9	7.9	A
3	1.00	1.00	0.641	1.000	1637	86	6970	1936	0.23	0.04	73.1	73.5	7.4	7.4	A
4	1.00	1.00	0.641	1.000	1759	82	6970	1936	0.25	0.04	73.1	73.5	8.0	8.0	A
5	1.00	1.00	0.641	1.000	1561	91	6970	1936	0.22	0.05	73.1	73.5	7.1	7.1	A
6	1.00	1.00	0.641	1.000	1447	108	6970	1936	0.21	0.06	73.1	73.5	6.6	6.6	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.667	1883	4646	0.41	70.4	13.4	B
2	1.00	0.667	1718	4646	0.37	70.4	12.2	B
3	1.00	0.667	1619	4646	0.35	70.4	11.5	B
4	1.00	0.667	1735	4646	0.37	70.4	12.3	B
5	1.00	0.667	1549	4646	0.33	70.4	11.0	A
6	1.00	0.667	1448	4646	0.31	70.4	10.3	A

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.746	2308	5966	0.39	63.3	12.2	B
2	1.00	0.746	2374	5506	0.43	62.4	12.7	B
3	1.00	0.746	2167	5546	0.39	63.2	11.4	B
4	1.00	0.746	2269	5974	0.38	63.5	11.9	B
5	1.00	0.746	2094	5390	0.39	63.4	11.0	B
6	1.00	0.746	1987	5280	0.38	63.6	10.4	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.735	2301	4646	0.50	70.2	16.3	B
2	1.00	0.735	2468	4646	0.53	70.2	17.6	B
3	1.00	0.735	2214	4646	0.48	70.2	15.7	B
4	1.00	0.735	2370	4646	0.51	70.3	16.9	B
5	1.00	0.735	2132	4646	0.46	70.3	15.1	B
6	1.00	0.735	2029	4646	0.44	70.3	14.4	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.735	0.980	2699	398	6970	1936	0.39	0.21	73.1	73.5	12.2	12.2	B
2	1.00	1.00	0.735	0.980	2784	316	6970	1936	0.40	0.16	73.1	73.5	12.6	12.6	B
3	1.00	1.00	0.735	0.980	2525	311	6970	1936	0.36	0.16	73.1	73.5	11.5	11.5	B
4	1.00	1.00	0.735	0.980	2747	377	6970	1936	0.39	0.19	73.1	73.5	12.5	12.5	B
5	1.00	1.00	0.735	0.980	2634	502	6970	1936	0.38	0.26	73.1	73.5	11.9	11.9	B
6	1.00	1.00	0.735	0.980	2458	429	6970	1936	0.35	0.22	73.1	73.5	11.1	11.1	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.781	2665	6970	0.38	70.4	12.6	B
2	1.00	0.781	2720	6970	0.39	70.4	12.9	B
3	1.00	0.781	2474	6970	0.35	70.4	11.7	B
4	1.00	0.781	2703	6970	0.39	70.4	12.8	B
5	1.00	0.781	2636	6970	0.38	70.4	12.5	B
6	1.00	0.781	2447	6970	0.35	70.4	11.6	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.781	0.962	3304	639	9293	1936	0.36	0.33	72.9	73.5	11.2	11.2	B
2	1.00	1.00	0.781	0.962	3310	590	9293	1936	0.36	0.30	72.9	73.5	11.3	11.3	B
3	1.00	1.00	0.781	0.962	3192	718	9293	1936	0.34	0.37	72.9	73.5	10.9	10.9	A
4	1.00	1.00	0.781	0.962	3246	543	9293	1936	0.35	0.28	72.9	73.5	11.0	11.0	A
5	1.00	1.00	0.781	0.962	3403	767	9293	1936	0.37	0.40	72.9	73.5	11.6	11.6	B
6	1.00	1.00	0.781	0.962	3020	573	9293	1936	0.32	0.30	72.9	73.5	10.3	10.3	A

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.820	3288	6970	0.47	70.4	15.6	B
2	1.00	0.820	3283	6970	0.47	70.4	15.5	B

3	1.00	0.820	3199	6970	0.46	70.4	15.1	B
4	1.00	0.820	3211	6970	0.46	70.4	15.2	B
5	1.00	0.820	3411	6970	0.49	70.4	16.2	B
6	1.00	0.820	3002	6970	0.43	70.4	14.2	B

Facility Time Period Results

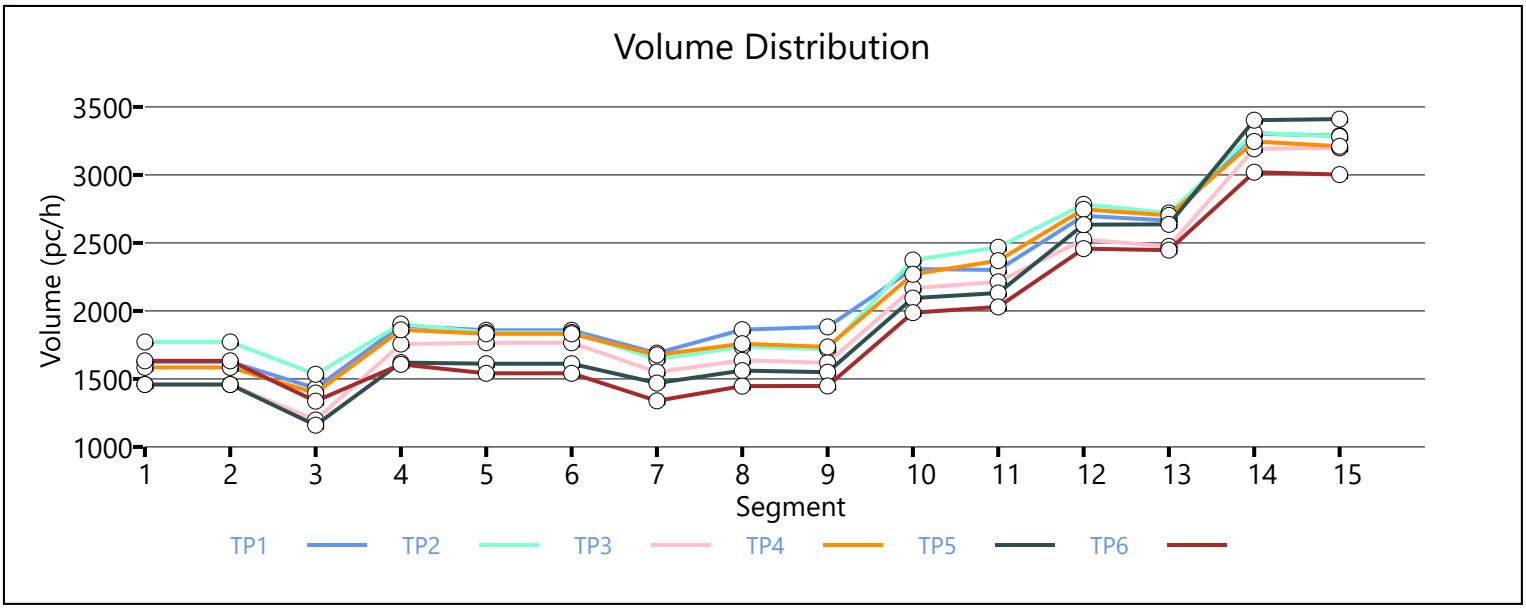
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.3	12.5	8.8	6.00	B
2	70.2	12.7	8.9	6.00	B
3	70.2	11.7	8.2	6.00	B
4	70.3	12.3	8.6	6.00	B
5	70.3	11.6	8.2	6.00	B
6	70.4	11.0	7.8	6.00	B

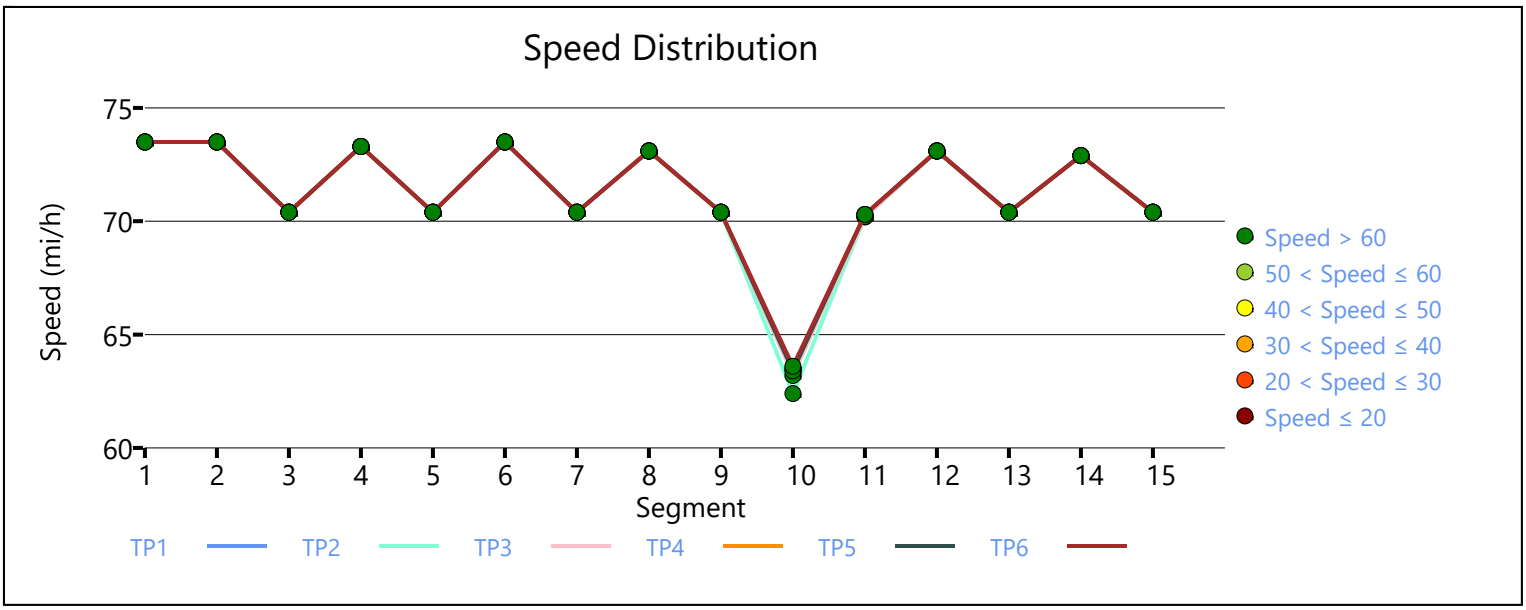
Facility Overall Results

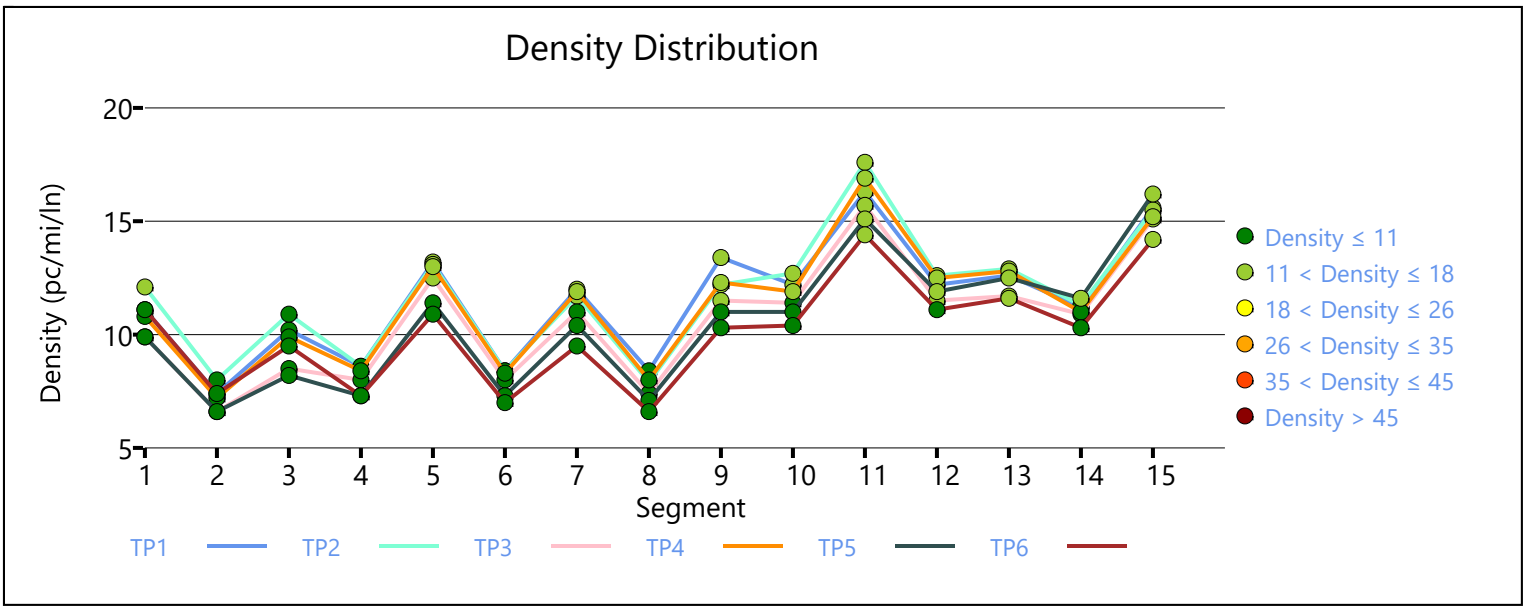
Space Mean Speed, mi/h	70.3	Density, veh/mi/ln	8.4
Average Travel Time, min	6.00	Density, pc/mi/ln	12.0

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2022 Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2022 Build Eastbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.521	992	4646	0.21	73.5	6.7	A
2	1.00	0.521	1228	4646	0.26	73.5	8.4	A
3	1.00	0.521	1010	4646	0.22	73.5	6.9	A
4	1.00	0.521	1123	4646	0.24	73.5	7.6	A
5	1.00	0.521	1269	4646	0.27	73.5	8.6	A
6	1.00	0.521	1180	4646	0.25	73.5	8.0	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.521	0.641	992	128	6970	1936	0.14	0.07	73.5	73.5	4.5	4.5	A
2	1.00	1.00	0.521	0.641	1228	101	6970	1936	0.18	0.05	73.5	73.5	5.6	5.6	A
3	1.00	1.00	0.521	0.641	1010	75	6970	1936	0.14	0.04	73.5	73.5	4.6	4.6	A
4	1.00	1.00	0.521	0.641	1123	129	6970	1936	0.16	0.07	73.5	73.5	5.1	5.1	A
5	1.00	1.00	0.521	0.641	1269	156	6970	1936	0.18	0.08	73.5	73.5	5.8	5.8	A
6	1.00	1.00	0.521	0.641	1180	148	6970	1936	0.17	0.08	73.5	73.5	5.3	5.3	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.505	861	4646	0.19	70.4	6.1	A
2	1.00	0.505	1139	4646	0.25	70.4	8.1	A
3	1.00	0.505	947	4646	0.20	70.4	6.7	A
4	1.00	0.505	994	4646	0.21	70.4	7.1	A
5	1.00	0.505	1111	4646	0.24	70.4	7.9	A
6	1.00	0.505	1030	4646	0.22	70.4	7.3	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.505	0.794	1231	370	6970	1936	0.18	0.19	73.3	73.5	5.6	5.6	A
2	1.00	1.00	0.505	0.794	1741	602	6970	1936	0.25	0.31	73.3	73.5	7.9	7.9	A
3	1.00	1.00	0.505	0.794	1451	504	6970	1936	0.21	0.26	73.3	73.5	6.6	6.6	A
4	1.00	1.00	0.505	0.794	1389	395	6970	1936	0.20	0.20	73.3	73.5	6.3	6.3	A
5	1.00	1.00	0.505	0.794	1418	307	6970	1936	0.20	0.16	73.3	73.5	6.4	6.4	A
6	1.00	1.00	0.505	0.794	1318	288	6970	1936	0.19	0.15	73.3	73.5	6.0	6.0	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1225	4646	0.26	70.4	8.7	A
2	1.00	0.595	1770	4646	0.38	70.4	12.6	B
3	1.00	0.595	1476	4646	0.32	70.4	10.5	A
4	1.00	0.595	1371	4646	0.30	70.4	9.7	A
5	1.00	0.595	1353	4646	0.29	70.4	9.6	A
6	1.00	0.595	1259	4646	0.27	70.4	8.9	A

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.725	1225	59	6970	1936	0.18	0.03	73.5	73.5	5.6	5.6	A

2	1.00	1.00	0.595	0.725	1770	66	6970	1936	0.25	0.03	73.5	73.5	8.0	8.0	A
3	1.00	1.00	0.595	0.725	1476	59	6970	1936	0.21	0.03	73.5	73.5	6.7	6.7	A
4	1.00	1.00	0.595	0.725	1371	167	6970	1936	0.20	0.09	73.5	73.5	6.2	6.2	A
5	1.00	1.00	0.595	0.725	1353	83	6970	1936	0.19	0.04	73.5	73.5	6.1	6.1	A
6	1.00	1.00	0.595	0.725	1259	83	6970	1936	0.18	0.04	73.5	73.5	5.7	5.7	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.588	1167	4646	0.25	70.4	8.3	A
2	1.00	0.588	1709	4646	0.37	70.4	12.1	B
3	1.00	0.588	1420	4646	0.31	70.4	10.1	A
4	1.00	0.588	1182	4646	0.25	70.4	8.4	A
5	1.00	0.588	1267	4646	0.27	70.4	9.0	A
6	1.00	0.588	1172	4646	0.25	70.4	8.3	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.588	0.980	1507	340	6970	1936	0.22	0.18	73.1	73.5	6.8	6.8	A
2	1.00	1.00	0.588	0.980	2430	721	6970	1936	0.35	0.37	73.1	73.5	11.0	11.0	A
3	1.00	1.00	0.588	0.980	1912	492	6970	1936	0.27	0.25	73.1	73.5	8.7	8.7	A
4	1.00	1.00	0.588	0.980	1687	505	6970	1936	0.24	0.26	73.1	73.5	7.7	7.7	A
5	1.00	1.00	0.588	0.980	1614	347	6970	1936	0.23	0.18	73.1	73.5	7.3	7.3	A
6	1.00	1.00	0.588	0.980	1362	190	6970	1936	0.20	0.10	73.1	73.5	6.2	6.2	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1507	4646	0.32	70.4	10.7	A
2	1.00	0.676	2533	4646	0.55	70.1	18.1	C
3	1.00	0.676	1948	4646	0.42	70.4	13.8	B
4	1.00	0.676	1760	4646	0.38	70.4	12.5	B
5	1.00	0.676	1605	4646	0.35	70.4	11.4	B
6	1.00	0.676	1294	4646	0.28	70.4	9.2	A

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.806	3046	3546	0.86	57.5	17.7	B
2	1.00	0.806	4097	4194	0.98	54.5	25.1	C
3	1.00	0.806	3585	3846	0.93	55.9	21.4	C
4	1.00	0.806	2560	4416	0.58	60.5	14.1	B
5	1.00	0.806	2751	3860	0.71	59.0	15.5	B
6	1.00	0.806	2029	3741	0.54	61.6	11.0	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.794	3214	4646	0.69	67.2	23.9	C
2	1.00	0.794	4244	4646	0.91	57.3	37.0	E
3	1.00	0.794	3791	4646	0.82	62.5	30.3	D
4	1.00	0.794	2559	4646	0.55	70.0	18.3	C
5	1.00	0.794	2819	4646	0.61	69.2	20.4	C
6	1.00	0.794	1951	4646	0.42	70.2	13.9	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.794	0.980	3514	300	6970	1936	0.50	0.15	72.8	73.1	16.0	16.0	B
2	1.00	1.00	0.794	0.980	4676	432	6970	1936	0.67	0.22	69.5	69.5	22.4	22.4	C
3	1.00	1.00	0.794	0.980	4876	1085	6970	1936	0.70	0.56	68.6	68.6	23.7	23.7	C
4	1.00	1.00	0.794	0.980	3635	1076	6970	1936	0.52	0.56	72.9	72.9	16.6	16.6	B
5	1.00	1.00	0.794	0.980	3780	961	6970	1936	0.54	0.50	72.6	72.6	17.4	17.4	B
6	1.00	1.00	0.794	0.980	2802	851	6970	1936	0.40	0.44	73.1	73.5	12.7	12.7	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.847	3360	6970	0.48	70.4	15.9	B
2	1.00	0.847	4478	6970	0.64	68.5	21.8	C
3	1.00	0.847	4809	6970	0.69	67.3	23.8	C
4	1.00	0.847	3643	6970	0.52	70.3	17.3	B
5	1.00	0.847	3754	6970	0.54	70.1	17.8	B
6	1.00	0.847	2813	6970	0.40	70.4	13.3	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.847	0.962	4361	1001	9293	1936	0.47	0.52	72.9	73.4	14.9	14.9	B
2	1.00	1.00	0.847	0.962	5614	1136	9293	1936	0.60	0.59	71.4	71.4	19.7	19.7	C
3	1.00	1.00	0.847	0.962	5928	1119	9293	1936	0.64	0.58	70.5	70.5	21.0	21.0	C
4	1.00	1.00	0.847	0.962	4707	1064	9293	1936	0.51	0.55	72.9	73.1	16.1	16.1	B
5	1.00	1.00	0.847	0.962	4495	741	9293	1936	0.48	0.38	72.8	73.3	15.3	15.3	B
6	1.00	1.00	0.847	0.962	3536	723	9293	1936	0.38	0.37	72.9	73.5	12.0	12.0	B

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.862	4419	6970	0.63	68.7	21.4	C
2	1.00	0.862	5668	6970	0.81	62.7	30.1	D

3	1.00	0.862	5973	6970	0.86	60.5	32.9	D
4	1.00	0.862	4768	6970	0.68	67.5	23.5	C
5	1.00	0.862	4516	6970	0.65	68.4	22.0	C
6	1.00	0.862	3572	6970	0.51	70.3	16.9	B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.9	12.5	9.4	6.20	B
2	64.1	17.8	13.3	6.50	B
3	63.7	16.7	12.7	6.60	B
4	68.5	13.0	9.6	6.10	B
5	68.5	13.1	9.6	6.10	B
6	69.9	10.6	7.7	6.00	A

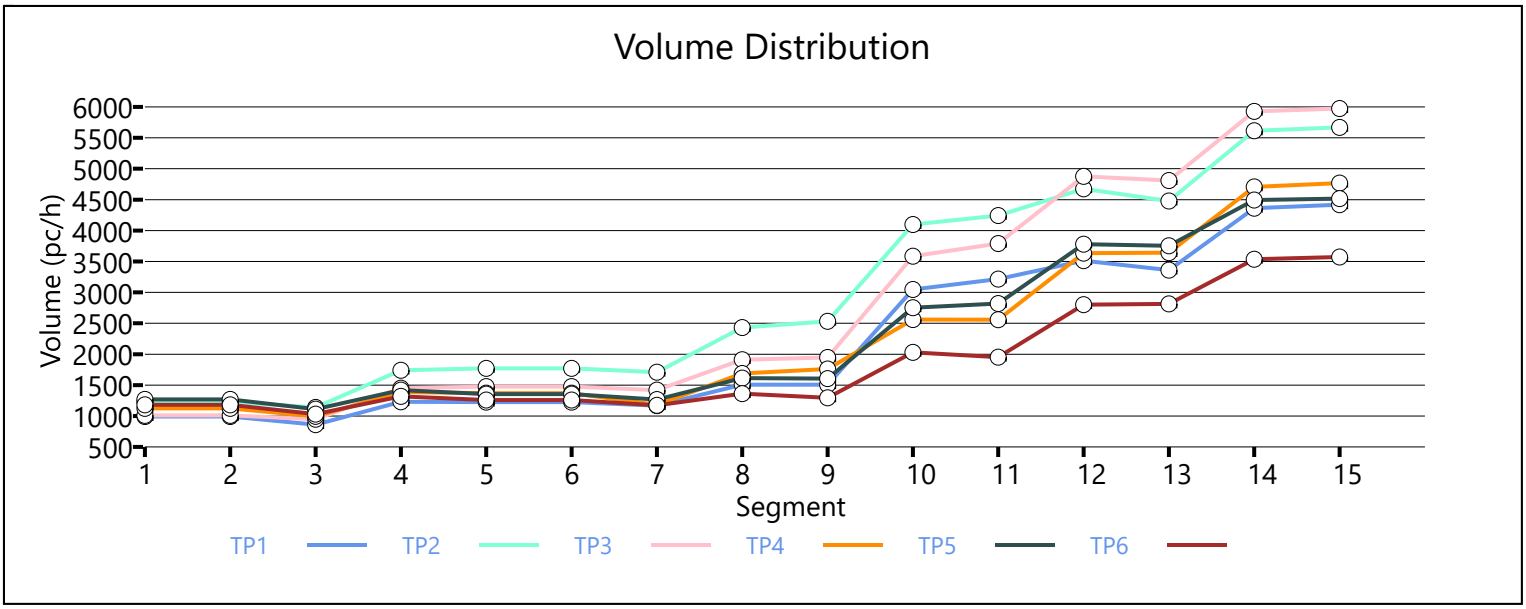
Facility Overall Results

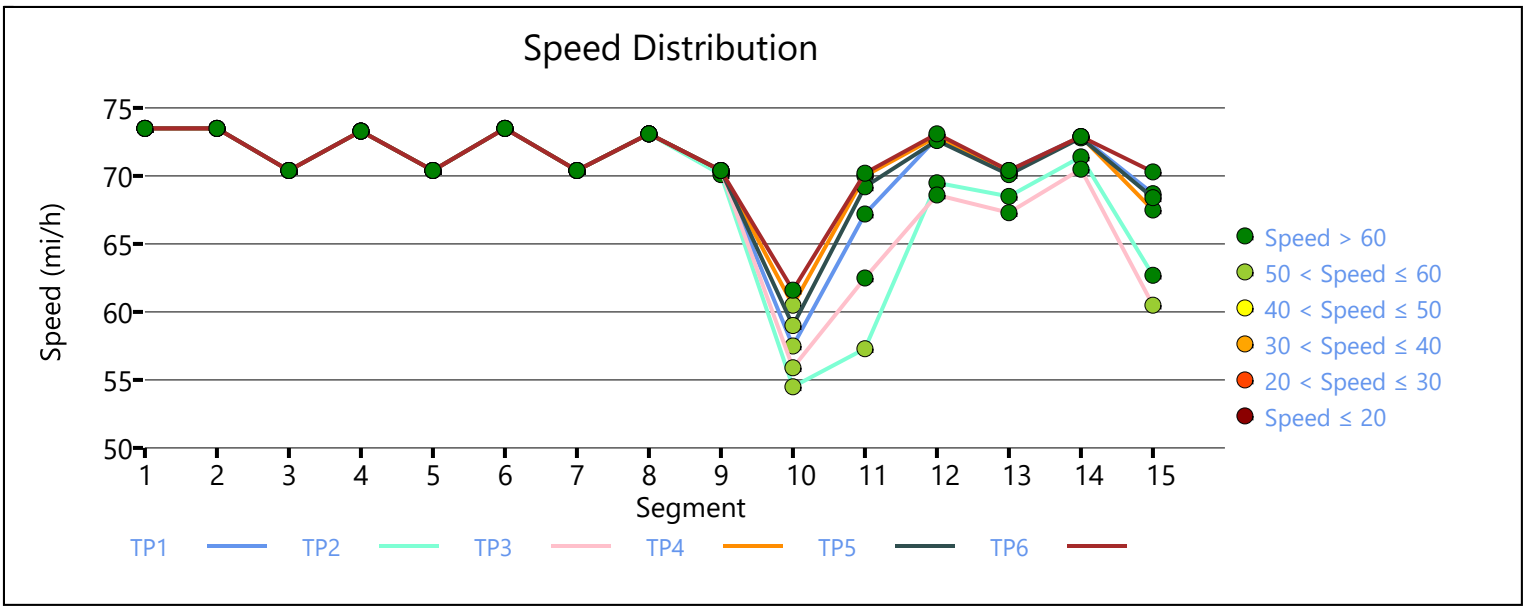
Space Mean Speed, mi/h	66.7	Density, veh/mi/ln	10.4
Average Travel Time, min	6.30	Density, pc/mi/ln	14.0

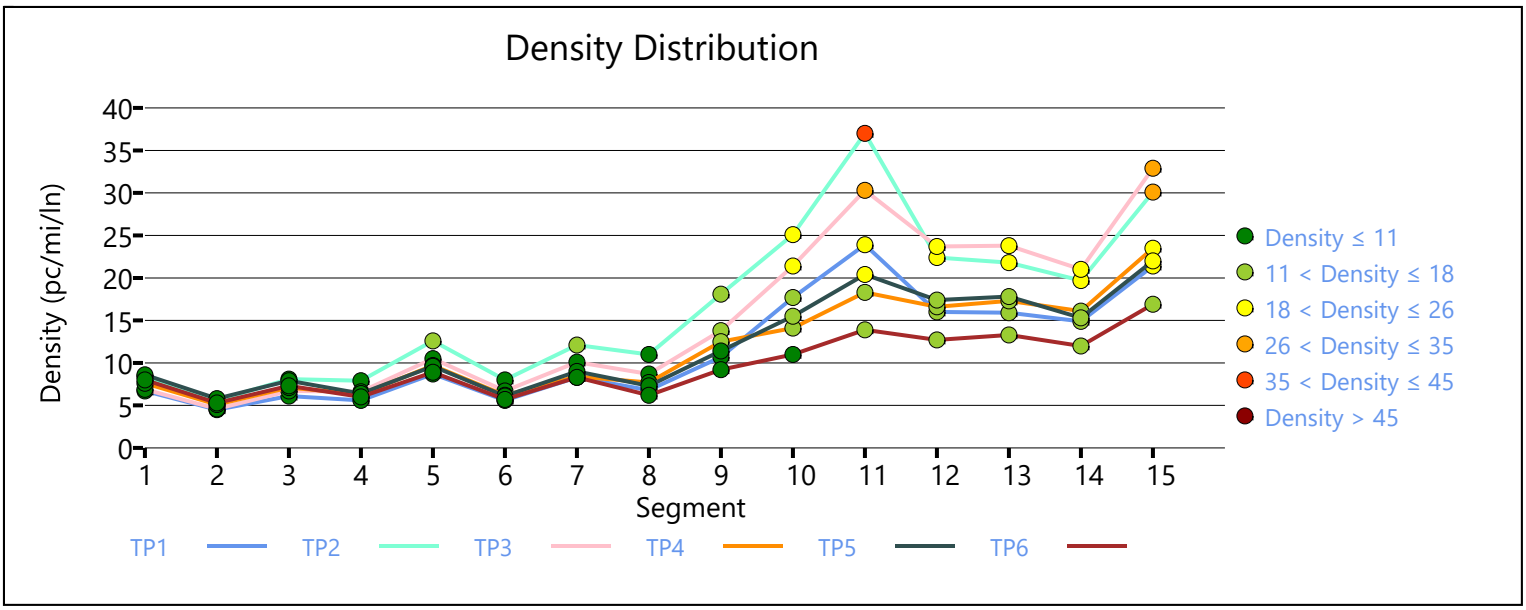
Messages

WARNING 1	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2022 Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2022 Build Eastbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	1626	4646	0.35	73.5	11.1	B
2	1.00	0.610	1772	4646	0.38	73.5	12.1	B
3	1.00	0.610	1459	4646	0.31	73.5	9.9	A
4	1.00	0.610	1585	4646	0.34	73.5	10.8	A
5	1.00	0.610	1459	4646	0.31	73.5	9.9	A
6	1.00	0.610	1633	4646	0.35	73.5	11.1	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.610	0.725	1626	221	6970	1936	0.23	0.11	73.5	73.5	7.4	7.4	A
2	1.00	1.00	0.610	0.725	1772	263	6970	1936	0.25	0.14	73.5	73.5	8.0	8.0	A
3	1.00	1.00	0.610	0.725	1459	269	6970	1936	0.21	0.14	73.5	73.5	6.6	6.6	A
4	1.00	1.00	0.610	0.725	1585	217	6970	1936	0.23	0.11	73.5	73.5	7.2	7.2	A
5	1.00	1.00	0.610	0.725	1459	299	6970	1936	0.21	0.15	73.5	73.5	6.6	6.6	A
6	1.00	1.00	0.610	0.725	1633	303	6970	1936	0.23	0.16	73.5	73.5	7.4	7.4	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1432	4646	0.31	70.4	10.2	A
2	1.00	0.581	1532	4646	0.33	70.4	10.9	A
3	1.00	0.581	1196	4646	0.26	70.4	8.5	A
4	1.00	0.581	1394	4646	0.30	70.4	9.9	A
5	1.00	0.581	1158	4646	0.25	70.4	8.2	A
6	1.00	0.581	1336	4646	0.29	70.4	9.5	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.781	1892	460	6970	1936	0.27	0.24	73.3	73.5	8.6	8.6	A
2	1.00	1.00	0.581	0.781	1928	396	6970	1936	0.28	0.20	73.3	73.5	8.7	8.7	A
3	1.00	1.00	0.581	0.781	1780	584	6970	1936	0.26	0.30	73.3	73.5	8.1	8.1	A
4	1.00	1.00	0.581	0.781	1883	489	6970	1936	0.27	0.25	73.3	73.5	8.5	8.5	A
5	1.00	1.00	0.581	0.781	1642	484	6970	1936	0.24	0.25	73.3	73.5	7.4	7.4	A
6	1.00	1.00	0.581	0.781	1607	271	6970	1936	0.23	0.14	73.3	73.5	7.3	7.3	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1858	4646	0.40	70.4	13.2	B
2	1.00	0.641	1871	4646	0.40	70.4	13.3	B
3	1.00	0.641	1796	4646	0.39	70.4	12.8	B
4	1.00	0.641	1860	4646	0.40	70.4	13.2	B
5	1.00	0.641	1640	4646	0.35	70.4	11.6	B
6	1.00	0.641	1541	4646	0.33	70.4	10.9	A

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	0.617	1858	175	6970	1936	0.27	0.09	73.5	73.5	8.4	8.4	A

2	1.00	1.00	0.641	0.617	1871	203	6970	1936	0.27	0.10	73.5	73.5	8.5	8.5	A
3	1.00	1.00	0.641	0.617	1796	224	6970	1936	0.26	0.12	73.5	73.5	8.1	8.1	A
4	1.00	1.00	0.641	0.617	1860	160	6970	1936	0.27	0.08	73.5	73.5	8.4	8.4	A
5	1.00	1.00	0.641	0.617	1640	147	6970	1936	0.24	0.08	73.5	73.5	7.4	7.4	A
6	1.00	1.00	0.641	0.617	1541	211	6970	1936	0.22	0.11	73.5	73.5	7.0	7.0	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1690	4646	0.36	70.4	12.0	B
2	1.00	0.641	1676	4646	0.36	70.4	11.9	B
3	1.00	0.641	1580	4646	0.34	70.4	11.2	B
4	1.00	0.641	1705	4646	0.37	70.4	12.1	B
5	1.00	0.641	1498	4646	0.32	70.4	10.6	A
6	1.00	0.641	1339	4646	0.29	70.4	9.5	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	1.000	1863	173	6970	1936	0.27	0.09	73.1	73.5	8.4	8.4	A
2	1.00	1.00	0.641	1.000	1852	176	6970	1936	0.27	0.09	73.1	73.5	8.4	8.4	A
3	1.00	1.00	0.641	1.000	1752	172	6970	1936	0.25	0.09	73.1	73.5	7.9	7.9	A
4	1.00	1.00	0.641	1.000	1872	167	6970	1936	0.27	0.09	73.1	73.5	8.5	8.5	A
5	1.00	1.00	0.641	1.000	1674	176	6970	1936	0.24	0.09	73.1	73.5	7.6	7.6	A
6	1.00	1.00	0.641	1.000	1447	108	6970	1936	0.21	0.06	73.1	73.5	6.6	6.6	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.667	1883	4646	0.41	70.4	13.4	B
2	1.00	0.667	1874	4646	0.40	70.4	13.3	B
3	1.00	0.667	1777	4646	0.38	70.4	12.6	B
4	1.00	0.667	1889	4646	0.41	70.4	13.4	B
5	1.00	0.667	1703	4646	0.37	70.4	12.1	B
6	1.00	0.667	1448	4646	0.31	70.4	10.3	A

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.746	2308	5966	0.39	63.3	12.2	B
2	1.00	0.746	2513	5808	0.43	62.2	13.5	B
3	1.00	0.746	2307	5896	0.39	63.1	12.2	B
4	1.00	0.746	2406	6023	0.40	63.3	12.7	B
5	1.00	0.746	2231	5736	0.39	63.2	11.8	B
6	1.00	0.746	1987	5280	0.38	63.6	10.4	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.735	2301	4646	0.50	70.2	16.3	B
2	1.00	0.735	2607	4646	0.56	69.9	18.7	C
3	1.00	0.735	2354	4646	0.51	70.2	16.7	B
4	1.00	0.735	2507	4646	0.54	70.1	17.9	B
5	1.00	0.735	2269	4646	0.49	70.2	16.1	B
6	1.00	0.735	2029	4646	0.44	70.3	14.4	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.735	0.980	2699	398	6970	1936	0.39	0.21	73.1	73.5	12.2	12.2	B
2	1.00	1.00	0.735	0.980	2923	316	6970	1936	0.42	0.16	73.1	73.5	13.3	13.3	B
3	1.00	1.00	0.735	0.980	2665	311	6970	1936	0.38	0.16	73.1	73.5	12.1	12.1	B
4	1.00	1.00	0.735	0.980	2884	377	6970	1936	0.41	0.19	73.1	73.5	13.1	13.1	B
5	1.00	1.00	0.735	0.980	2771	502	6970	1936	0.40	0.26	73.1	73.5	12.6	12.6	B
6	1.00	1.00	0.735	0.980	2458	429	6970	1936	0.35	0.22	73.1	73.5	11.1	11.1	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.781	2665	6970	0.38	70.4	12.6	B
2	1.00	0.781	2850	6970	0.41	70.4	13.5	B
3	1.00	0.781	2606	6970	0.37	70.4	12.3	B
4	1.00	0.781	2832	6970	0.41	70.4	13.4	B
5	1.00	0.781	2766	6970	0.40	70.4	13.1	B
6	1.00	0.781	2447	6970	0.35	70.4	11.6	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.781	0.962	3304	639	9293	1936	0.36	0.33	72.9	73.5	11.2	11.2	B
2	1.00	1.00	0.781	0.962	3440	590	9293	1936	0.37	0.30	72.9	73.5	11.7	11.7	B
3	1.00	1.00	0.781	0.962	3324	718	9293	1936	0.36	0.37	72.9	73.5	11.3	11.3	B
4	1.00	1.00	0.781	0.962	3375	543	9293	1936	0.36	0.28	72.9	73.5	11.5	11.5	B
5	1.00	1.00	0.781	0.962	3533	767	9293	1936	0.38	0.40	72.9	73.5	12.0	12.0	B
6	1.00	1.00	0.781	0.962	3020	573	9293	1936	0.32	0.30	72.9	73.5	10.3	10.3	A

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.820	3288	6970	0.47	70.4	15.6	B
2	1.00	0.820	3407	6970	0.49	70.4	16.1	B

3	1.00	0.820	3324	6970	0.48	70.4	15.7	B
4	1.00	0.820	3334	6970	0.48	70.4	15.8	B
5	1.00	0.820	3534	6970	0.51	70.3	16.8	B
6	1.00	0.820	3002	6970	0.43	70.4	14.2	B

Facility Time Period Results

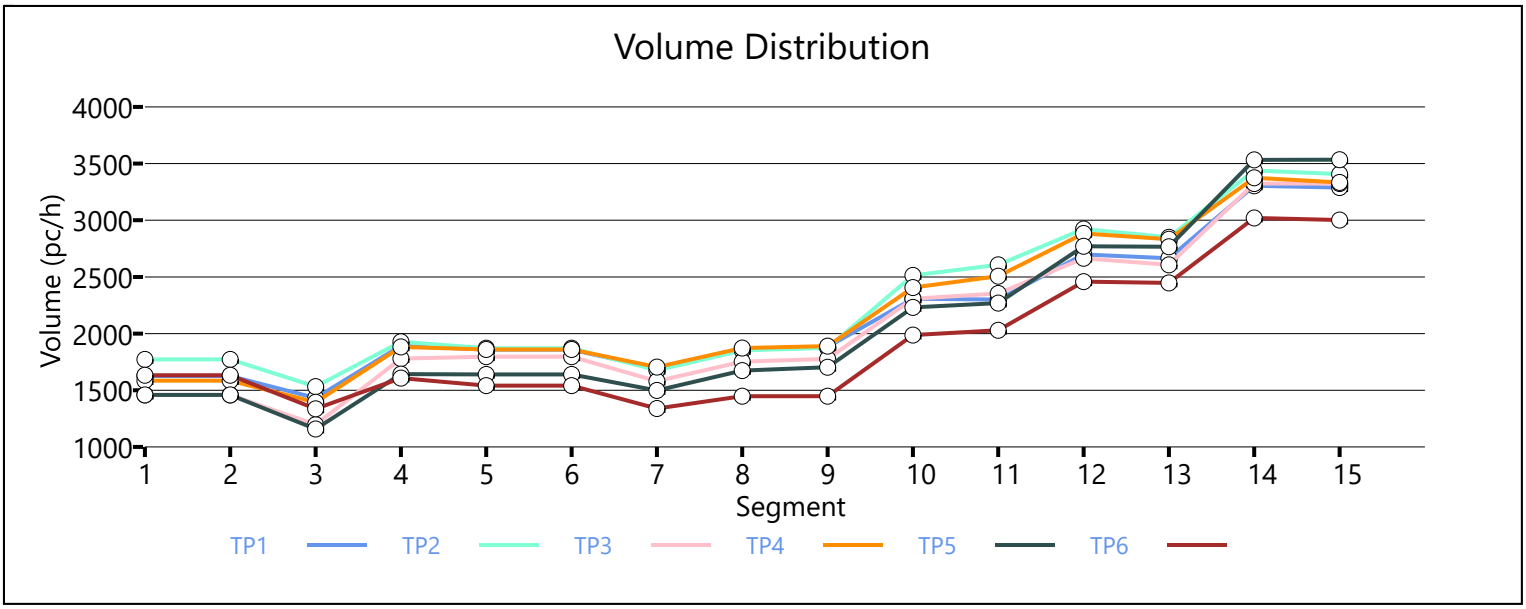
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.3	12.5	8.8	6.00	B
2	70.1	13.1	9.2	6.00	B
3	70.2	12.1	8.5	6.00	B
4	70.2	12.7	9.0	6.00	B
5	70.2	11.9	8.5	6.00	B
6	70.4	11.0	7.8	6.00	B

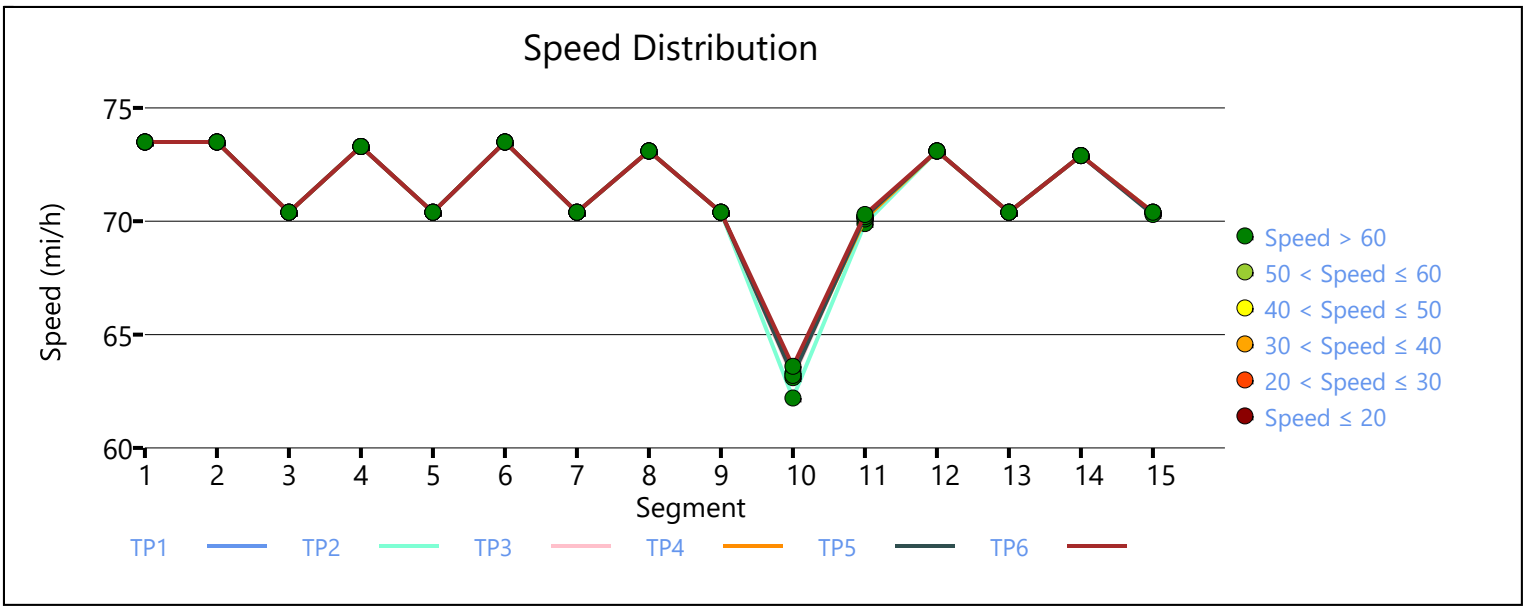
Facility Overall Results

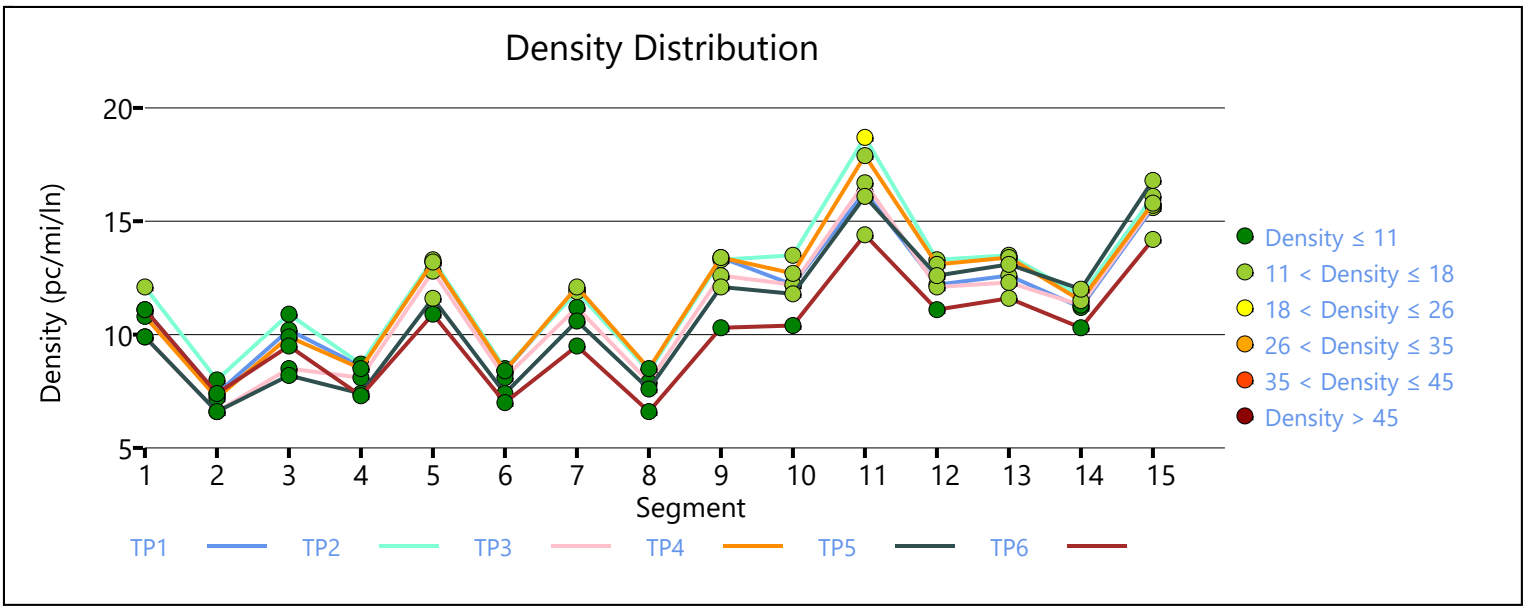
Space Mean Speed, mi/h	70.2	Density, veh/mi/ln	8.6
Average Travel Time, min	6.00	Density, pc/mi/ln	12.2

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2025 No Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2025 No Build Eastbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.521	1035	4646	0.22	73.5	7.0	A
2	1.00	0.521	1280	4646	0.28	73.5	8.7	A
3	1.00	0.521	1052	4646	0.23	73.5	7.2	A
4	1.00	0.521	1171	4646	0.25	73.5	8.0	A
5	1.00	0.521	1324	4646	0.28	73.5	9.0	A
6	1.00	0.521	1230	4646	0.26	73.5	8.4	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.521	0.641	1035	136	6970	1936	0.15	0.07	73.5	73.5	4.7	4.7	A
2	1.00	1.00	0.521	0.641	1280	106	6970	1936	0.18	0.05	63.7	63.7	6.7	6.7	A
3	1.00	1.00	0.521	0.641	1052	78	6970	1936	0.15	0.04	63.6	63.6	5.5	5.5	A
4	1.00	1.00	0.521	0.641	1171	136	6970	1936	0.17	0.07	63.4	63.4	6.2	6.2	A
5	1.00	1.00	0.521	0.641	1324	164	6970	1936	0.19	0.08	63.3	63.3	7.0	7.0	A
6	1.00	1.00	0.521	0.641	1230	156	6970	1936	0.18	0.08	63.3	63.3	6.5	6.5	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.505	895	4646	0.19	70.4	6.4	A
2	1.00	0.505	1174	4646	0.26	69.9	8.3	A
3	1.00	0.505	965	4646	0.21	69.9	6.9	A
4	1.00	0.505	1084	4646	0.22	69.9	7.7	A
5	1.00	0.505	1170	4646	0.25	69.8	8.3	A
6	1.00	0.505	1078	4646	0.23	69.8	7.7	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.505	0.794	1285	390	6970	1936	0.18	0.20	73.3	73.5	5.8	5.8	A
2	1.00	1.00	0.505	0.794	1806	632	6970	1936	0.26	0.33	67.1	67.1	9.0	9.0	A
3	1.00	1.00	0.505	0.794	1494	529	6970	1936	0.22	0.27	67.2	67.2	7.4	7.4	A
4	1.00	1.00	0.505	0.794	1497	413	6970	1936	0.21	0.21	67.4	67.4	7.4	7.4	A
5	1.00	1.00	0.505	0.794	1491	321	6970	1936	0.21	0.17	67.7	67.7	7.3	7.3	A
6	1.00	1.00	0.505	0.794	1383	305	6970	1936	0.20	0.16	67.7	67.7	6.8	6.8	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1281	4646	0.28	70.4	9.1	A
2	1.00	0.595	1806	4646	0.40	70.4	12.8	B
3	1.00	0.595	1494	4646	0.33	70.4	10.6	A
4	1.00	0.595	1497	4646	0.31	70.4	10.6	A
5	1.00	0.595	1491	4646	0.30	70.4	10.6	A
6	1.00	0.595	1383	4646	0.28	70.4	9.8	A

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.725	1281	63	6970	1936	0.18	0.03	73.5	73.5	5.8	5.8	A

2	1.00	1.00	0.595	0.725	1806	69	6970	1936	0.27	0.04	64.1	64.1	9.4	9.4	A
3	1.00	1.00	0.595	0.725	1494	63	6970	1936	0.22	0.03	64.0	64.0	7.8	7.8	A
4	1.00	1.00	0.595	0.725	1497	177	6970	1936	0.21	0.09	63.4	63.4	7.9	7.9	A
5	1.00	1.00	0.595	0.725	1491	88	6970	1936	0.20	0.05	63.8	63.8	7.8	7.8	A
6	1.00	1.00	0.595	0.725	1383	88	6970	1936	0.19	0.05	63.8	63.8	7.2	7.2	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.588	1218	4646	0.26	70.4	8.7	A
2	1.00	0.588	1739	4646	0.38	69.7	12.4	B
3	1.00	0.588	1438	4646	0.32	69.7	10.2	A
4	1.00	0.588	1436	4646	0.26	69.6	10.2	A
5	1.00	0.588	1307	4646	0.28	69.6	9.3	A
6	1.00	0.588	1296	4646	0.26	69.6	9.2	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.588	0.980	1576	358	6970	1936	0.23	0.18	73.1	73.5	7.1	7.1	A
2	1.00	1.00	0.588	0.980	2066	623	6970	1936	0.35	0.32	66.8	66.8	10.3	10.3	A
3	1.00	1.00	0.588	0.980	1936	382	6970	1936	0.27	0.20	67.1	67.1	9.6	9.6	A
4	1.00	1.00	0.588	0.980	1936	396	6970	1936	0.23	0.20	67.1	67.1	9.6	9.6	A
5	1.00	1.00	0.588	0.980	1610	228	6970	1936	0.22	0.12	67.4	67.4	8.0	8.0	A
6	1.00	1.00	0.588	0.980	1496	200	6970	1936	0.20	0.10	67.5	67.5	7.4	7.4	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1578	4646	0.34	70.4	11.2	B
2	1.00	0.676	2066	4646	0.53	69.7	14.7	B
3	1.00	0.676	1936	4646	0.40	69.7	13.8	B
4	1.00	0.676	1936	4646	0.35	69.7	13.8	B
5	1.00	0.676	1610	4646	0.32	69.8	11.4	B
6	1.00	0.676	1496	4646	0.29	69.8	10.6	A

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.806	3205	3535	0.91	56.9	18.8	B
2	1.00	0.806	2427	4020	1.03	65.2	12.4	F
3	1.00	0.806	2269	3664	0.98	65.7	11.5	B
4	1.00	0.806	2269	4127	0.61	65.9	11.5	B
5	1.00	0.806	2049	3619	0.75	64.8	10.5	B
6	1.00	0.806	2000	3724	0.57	64.7	10.3	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.794	3383	4646	0.73	66.1	25.6	C
2	1.00	0.794	2245	4646	0.93	70.3	15.9	B
3	1.00	0.794	2099	4646	0.82	70.3	14.9	B
4	1.00	0.794	2127	4646	0.54	70.3	15.1	B
5	1.00	0.794	1825	4646	0.60	70.3	13.0	B
6	1.00	0.794	1805	4646	0.44	70.3	12.8	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.794	0.980	3699	316	6970	1936	0.53	0.16	72.7	72.8	16.9	16.9	B
2	1.00	1.00	0.794	0.980	2570	456	6970	1936	0.68	0.24	65.7	65.7	13.0	13.0	B
3	1.00	1.00	0.794	0.980	2421	1145	6970	1936	0.71	0.59	64.7	64.7	12.5	12.5	B
4	1.00	1.00	0.794	0.980	2450	1136	6970	1936	0.52	0.59	64.7	64.7	12.6	12.6	B
5	1.00	1.00	0.794	0.980	2147	1014	6970	1936	0.55	0.52	64.8	64.8	11.0	11.0	A
6	1.00	1.00	0.794	0.980	2128	898	6970	1936	0.42	0.46	65.1	65.1	10.9	10.9	A

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.847	3537	6970	0.51	70.3	16.8	B
2	1.00	0.847	2570	6970	0.65	69.5	12.2	B
3	1.00	0.847	2421	6970	0.70	69.3	11.5	B
4	1.00	0.847	2450	6970	0.53	69.3	11.6	B
5	1.00	0.847	2147	6970	0.54	69.3	10.2	A
6	1.00	0.847	2128	6970	0.42	69.4	10.1	A

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.847	0.962	4594	1057	9293	1936	0.49	0.55	72.9	73.2	15.7	15.7	B
2	1.00	1.00	0.847	0.962	2828	1200	9293	1936	0.62	0.62	67.2	67.2	10.5	10.5	A
3	1.00	1.00	0.847	0.962	2663	1180	9293	1936	0.66	0.61	67.2	67.2	9.9	9.9	A
4	1.00	1.00	0.847	0.962	2692	1124	9293	1936	0.52	0.58	67.3	67.3	10.0	10.0	A
5	1.00	1.00	0.847	0.962	2389	782	9293	1936	0.49	0.40	67.9	67.9	8.8	8.8	A
6	1.00	1.00	0.847	0.962	2370	763	9293	1936	0.40	0.39	67.9	67.9	8.7	8.7	A

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.862	4655	6970	0.67	67.9	22.9	C
2	1.00	0.862	2828	6970	0.83	70.4	13.4	B

3	1.00	0.862	2663	6970	0.88	70.4	12.6	B
4	1.00	0.862	2692	6970	0.70	70.4	12.7	B
5	1.00	0.862	2389	6970	0.66	70.4	11.3	B
6	1.00	0.862	2370	6970	0.54	70.4	11.2	B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.4	13.3	9.9	6.20	B
2	69.2	11.8	8.3	6.10	F
3	69.2	10.4	7.4	6.10	A
4	69.2	10.6	7.5	6.10	A
5	69.2	10.0	7.0	6.10	A
6	69.2	9.6	6.8	6.10	A

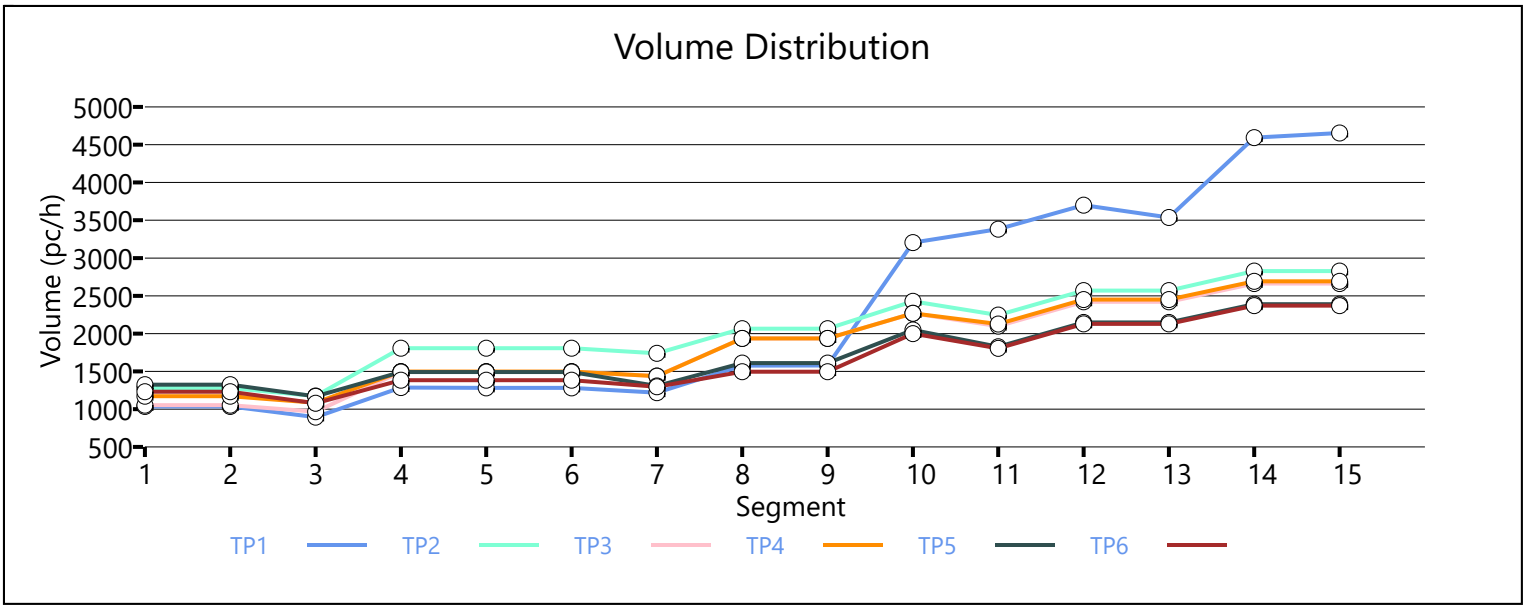
Facility Overall Results

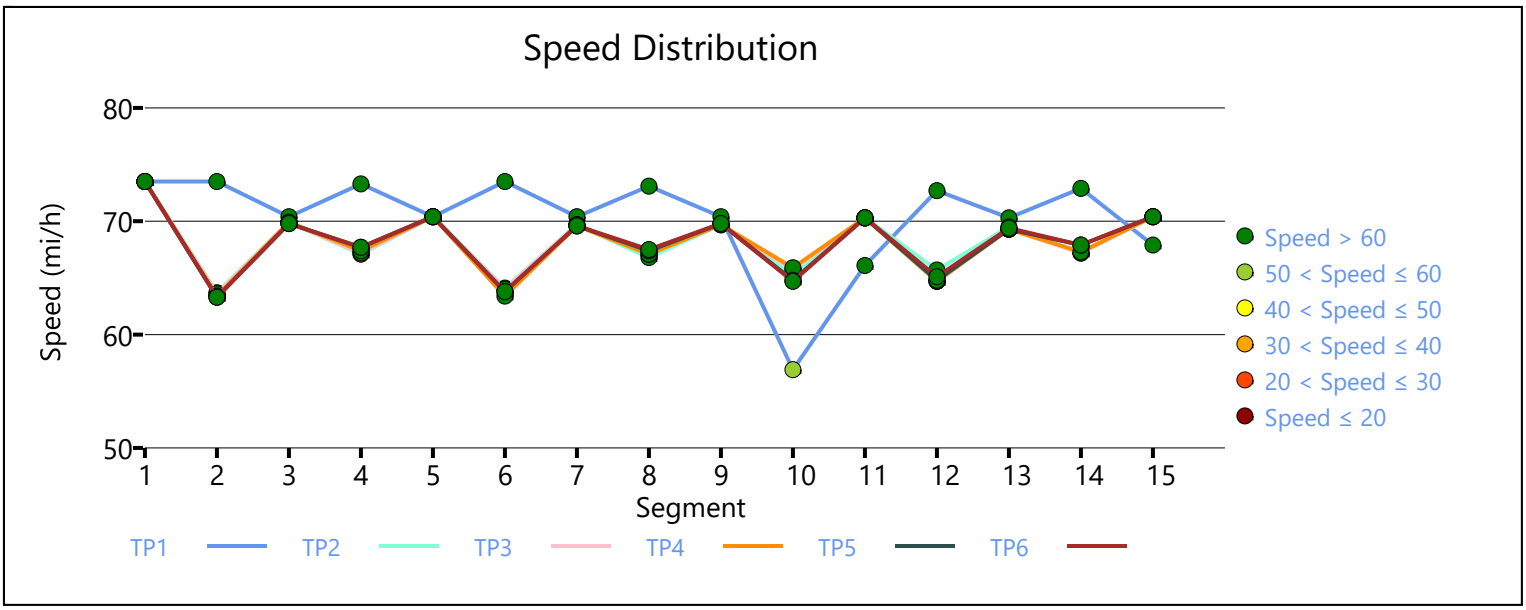
Space Mean Speed, mi/h	68.8	Density, veh/mi/ln	7.8
Average Travel Time, min	6.10	Density, pc/mi/ln	11.0

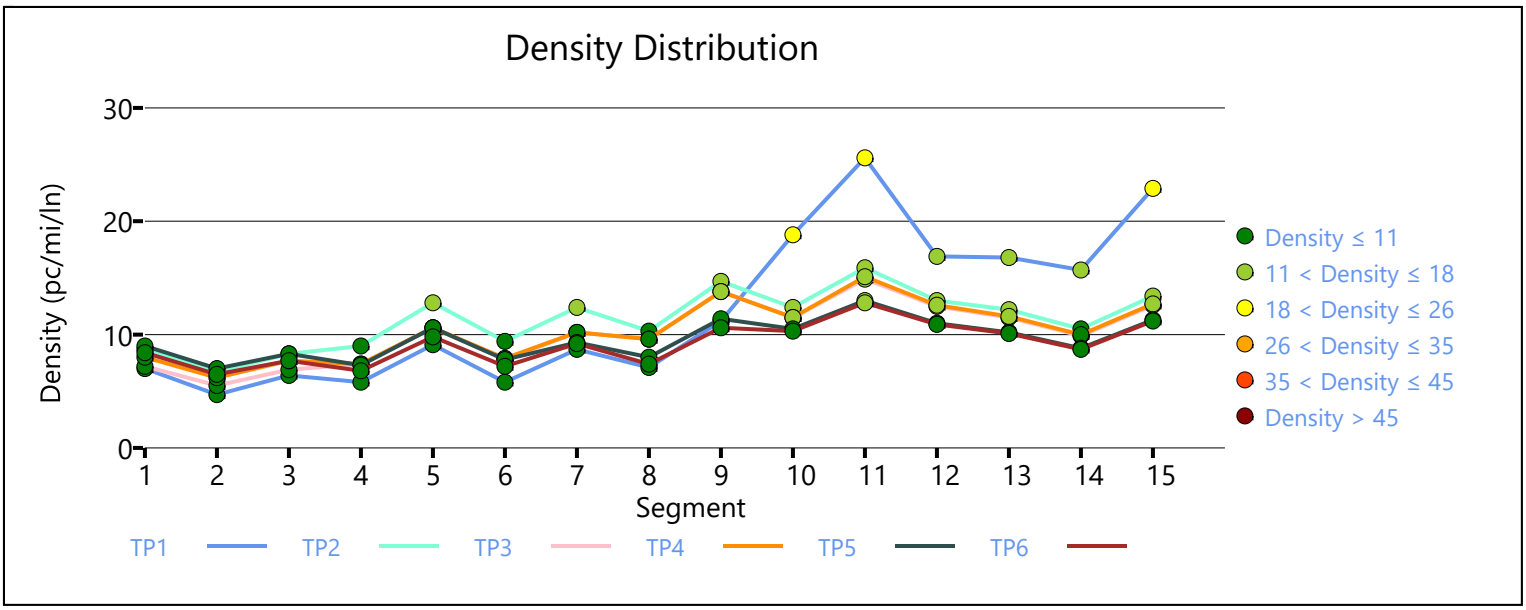
Messages

WARNING 1	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 2	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2025 No Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2025 No Build Eastbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	1695	4646	0.36	73.5	11.5	B
2	1.00	0.610	1848	4646	0.40	73.5	12.6	B
3	1.00	0.610	1521	4646	0.33	73.5	10.3	A
4	1.00	0.610	1652	4646	0.36	73.5	11.2	B
5	1.00	0.610	1521	4646	0.33	73.5	10.3	A
6	1.00	0.610	1703	4646	0.37	73.5	11.6	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.610	0.725	1695	233	6970	1936	0.24	0.12	73.5	73.5	7.7	7.7	A
2	1.00	1.00	0.610	0.725	1848	277	6970	1936	0.27	0.14	73.5	73.5	8.4	8.4	A
3	1.00	1.00	0.610	0.725	1521	283	6970	1936	0.22	0.15	73.5	73.5	6.9	6.9	A
4	1.00	1.00	0.610	0.725	1652	226	6970	1936	0.24	0.12	73.5	73.5	7.5	7.5	A
5	1.00	1.00	0.610	0.725	1521	314	6970	1936	0.22	0.16	73.5	73.5	6.9	6.9	A
6	1.00	1.00	0.610	0.725	1703	321	6970	1936	0.24	0.17	73.5	73.5	7.7	7.7	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1489	4646	0.32	70.4	10.6	A
2	1.00	0.581	1594	4646	0.34	70.4	11.3	B
3	1.00	0.581	1244	4646	0.27	70.4	8.8	A
4	1.00	0.581	1453	4646	0.31	70.4	10.3	A
5	1.00	0.581	1205	4646	0.26	70.4	8.6	A
6	1.00	0.581	1387	4646	0.30	70.4	9.9	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.781	1973	484	6970	1936	0.28	0.25	73.3	73.5	8.9	8.9	A
2	1.00	1.00	0.581	0.781	1986	392	6970	1936	0.28	0.20	73.3	73.5	9.0	9.0	A
3	1.00	1.00	0.581	0.781	1834	590	6970	1936	0.26	0.30	73.3	73.5	8.3	8.3	A
4	1.00	1.00	0.581	0.781	1943	490	6970	1936	0.28	0.25	73.3	73.5	8.8	8.8	A
5	1.00	1.00	0.581	0.781	1689	484	6970	1936	0.24	0.25	73.3	73.5	7.7	7.7	A
6	1.00	1.00	0.581	0.781	1673	286	6970	1936	0.24	0.15	73.3	73.5	7.6	7.6	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1939	4646	0.42	70.4	13.8	B
2	1.00	0.641	1922	4646	0.41	70.4	13.7	B
3	1.00	0.641	1847	4646	0.40	70.4	13.1	B
4	1.00	0.641	1914	4646	0.41	70.4	13.6	B
5	1.00	0.641	1682	4646	0.36	70.4	11.9	B
6	1.00	0.641	1605	4646	0.35	70.4	11.4	B

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	0.617	1939	185	6970	1936	0.28	0.10	73.5	73.5	8.8	8.8	A

2	1.00	1.00	0.641	0.617	1922	214	6970	1936	0.28	0.11	73.5	73.5	8.7	8.7	A
3	1.00	1.00	0.641	0.617	1847	237	6970	1936	0.26	0.12	73.5	73.5	8.4	8.4	A
4	1.00	1.00	0.641	0.617	1914	170	6970	1936	0.27	0.09	73.5	73.5	8.7	8.7	A
5	1.00	1.00	0.641	0.617	1682	156	6970	1936	0.24	0.08	73.5	73.5	7.6	7.6	A
6	1.00	1.00	0.641	0.617	1605	222	6970	1936	0.23	0.11	73.5	73.5	7.3	7.3	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1761	4646	0.38	70.4	12.5	B
2	1.00	0.641	1716	4646	0.37	70.4	12.2	B
3	1.00	0.641	1619	4646	0.35	70.4	11.5	B
4	1.00	0.641	1750	4646	0.38	70.4	12.4	B
5	1.00	0.641	1532	4646	0.33	70.4	10.9	A
6	1.00	0.641	1392	4646	0.30	70.4	9.9	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	1.000	1943	182	6970	1936	0.28	0.09	73.1	73.5	8.8	8.8	A
2	1.00	1.00	0.641	1.000	1812	96	6970	1936	0.26	0.05	73.1	73.5	8.2	8.2	A
3	1.00	1.00	0.641	1.000	1710	91	6970	1936	0.25	0.05	73.1	73.5	7.8	7.8	A
4	1.00	1.00	0.641	1.000	1837	87	6970	1936	0.26	0.04	73.1	73.5	8.3	8.3	A
5	1.00	1.00	0.641	1.000	1628	96	6970	1936	0.23	0.05	73.1	73.5	7.4	7.4	A
6	1.00	1.00	0.641	1.000	1506	114	6970	1936	0.22	0.06	73.1	73.5	6.8	6.8	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.667	1966	4646	0.42	70.4	14.0	B
2	1.00	0.667	1793	4646	0.39	70.4	12.7	B
3	1.00	0.667	1693	4646	0.36	70.4	12.0	B
4	1.00	0.667	1813	4646	0.39	70.4	12.9	B
5	1.00	0.667	1616	4646	0.35	70.4	11.5	B
6	1.00	0.667	1508	4646	0.32	70.4	10.7	A

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.746	2416	5956	0.41	62.9	12.8	B
2	1.00	0.746	2486	5454	0.46	62.0	13.4	B
3	1.00	0.746	2272	5492	0.41	62.8	12.1	B
4	1.00	0.746	2378	5962	0.40	63.1	12.6	B
5	1.00	0.746	2192	5328	0.41	62.9	11.6	B
6	1.00	0.746	2079	5220	0.40	63.2	11.0	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.735	2404	4646	0.52	70.2	17.1	B
2	1.00	0.735	2582	4646	0.56	70.0	18.4	C
3	1.00	0.735	2318	4646	0.50	70.2	16.5	B
4	1.00	0.735	2482	4646	0.53	70.2	17.7	B
5	1.00	0.735	2230	4646	0.48	70.2	15.8	B
6	1.00	0.735	2120	4646	0.46	70.2	15.1	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.735	0.980	2833	429	6970	1936	0.41	0.22	73.1	73.5	12.8	12.8	B
2	1.00	1.00	0.735	0.980	2922	340	6970	1936	0.42	0.18	73.1	73.5	13.3	13.3	B
3	1.00	1.00	0.735	0.980	2653	335	6970	1936	0.38	0.17	73.1	73.5	12.0	12.0	B
4	1.00	1.00	0.735	0.980	2887	405	6970	1936	0.41	0.21	73.1	73.5	13.1	13.1	B
5	1.00	1.00	0.735	0.980	2770	540	6970	1936	0.40	0.28	73.1	73.5	12.6	12.6	B
6	1.00	1.00	0.735	0.980	2580	460	6970	1936	0.37	0.24	73.1	73.5	11.7	11.7	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.781	2800	6970	0.40	70.4	13.3	B
2	1.00	0.781	2857	6970	0.41	70.4	13.5	B
3	1.00	0.781	2602	6970	0.37	70.4	12.3	B
4	1.00	0.781	2844	6970	0.41	70.4	13.5	B
5	1.00	0.781	2776	6970	0.40	70.4	13.1	B
6	1.00	0.781	2572	6970	0.37	70.4	12.2	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.781	0.962	3487	687	9293	1936	0.38	0.35	72.9	73.5	11.9	11.9	B
2	1.00	1.00	0.781	0.962	3492	635	9293	1936	0.38	0.33	72.9	73.5	11.9	11.9	B
3	1.00	1.00	0.781	0.962	3374	772	9293	1936	0.36	0.40	72.9	73.5	11.5	11.5	B
4	1.00	1.00	0.781	0.962	3427	583	9293	1936	0.37	0.30	72.9	73.5	11.7	11.7	B
5	1.00	1.00	0.781	0.962	3600	824	9293	1936	0.39	0.43	72.9	73.5	12.2	12.2	B
6	1.00	1.00	0.781	0.962	3188	616	9293	1936	0.34	0.32	72.9	73.5	10.8	10.8	A

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.820	3473	6970	0.50	70.4	16.4	B
2	1.00	0.820	3466	6970	0.50	70.4	16.4	B

3	1.00	0.820	3384	6970	0.49	70.4	16.0	B
4	1.00	0.820	3393	6970	0.49	70.4	16.1	B
5	1.00	0.820	3611	6970	0.52	70.3	17.1	B
6	1.00	0.820	3173	6970	0.46	70.4	15.0	B

Facility Time Period Results

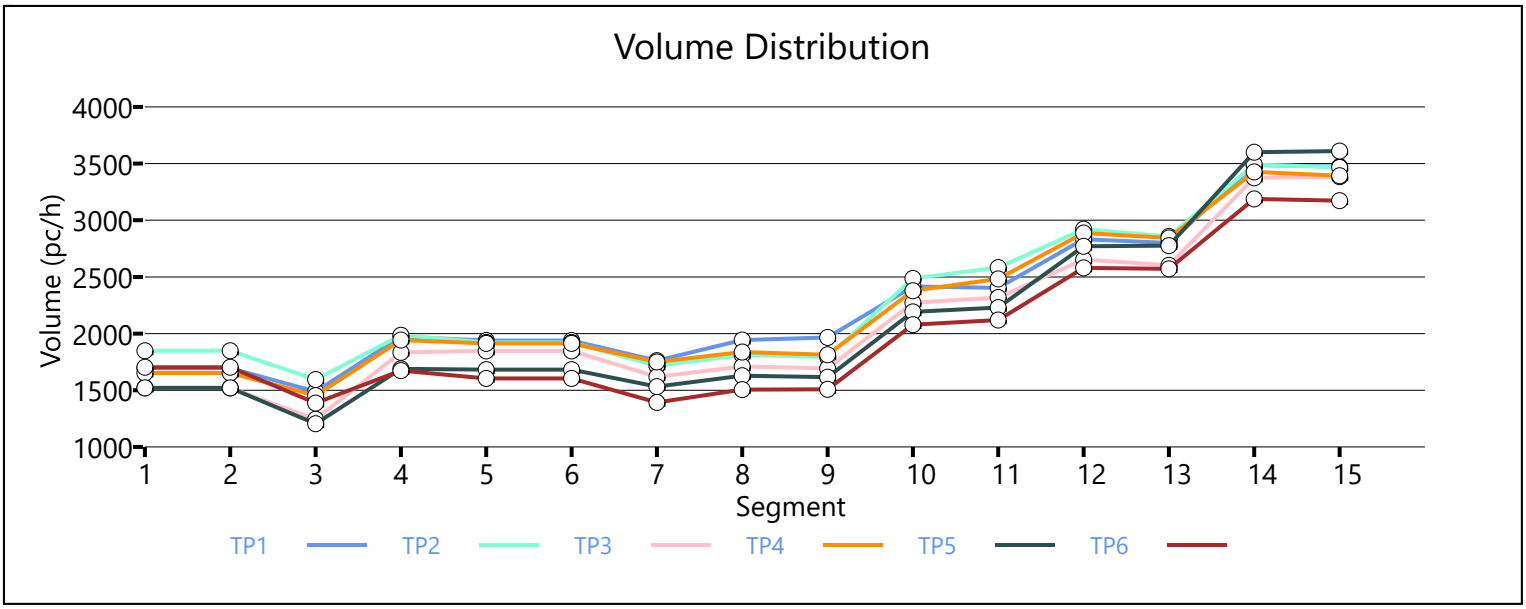
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.2	13.1	9.2	6.00	B
2	70.1	13.3	9.4	6.00	B
3	70.2	12.3	8.7	6.00	B
4	70.3	12.9	9.1	6.00	B
5	70.2	12.1	8.6	6.00	B
6	70.3	11.6	8.1	6.00	B

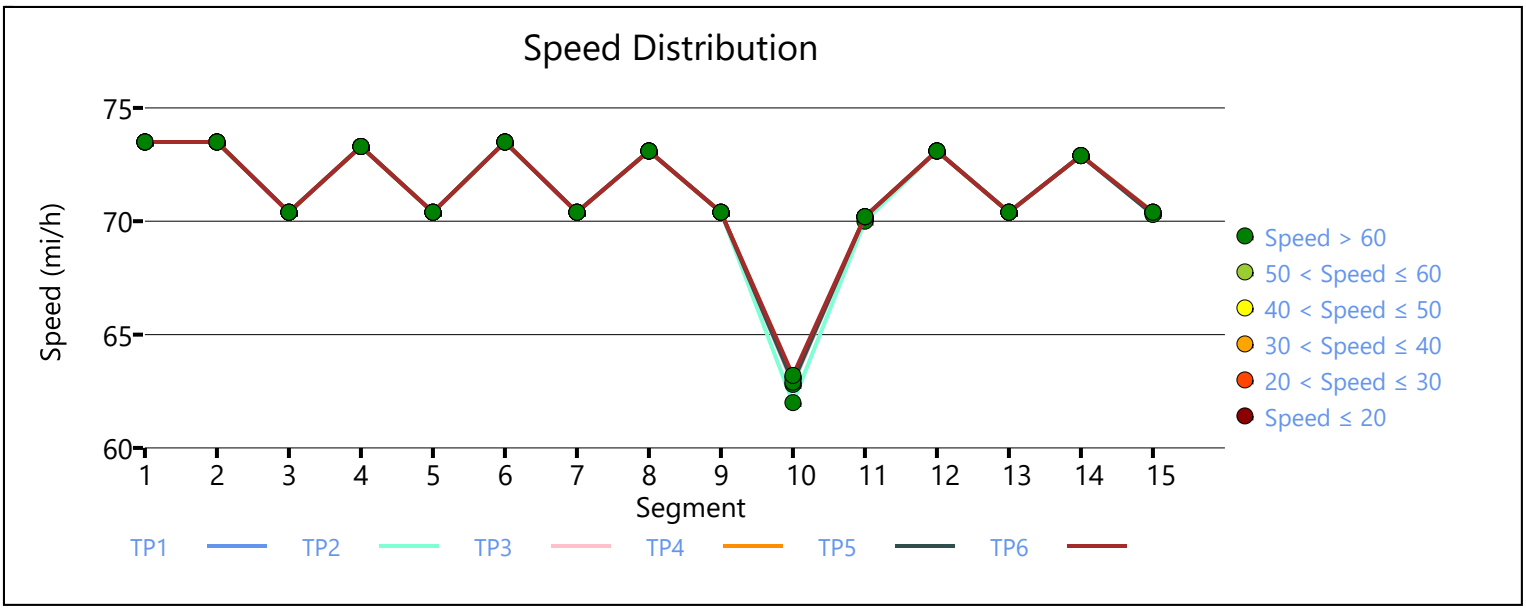
Facility Overall Results

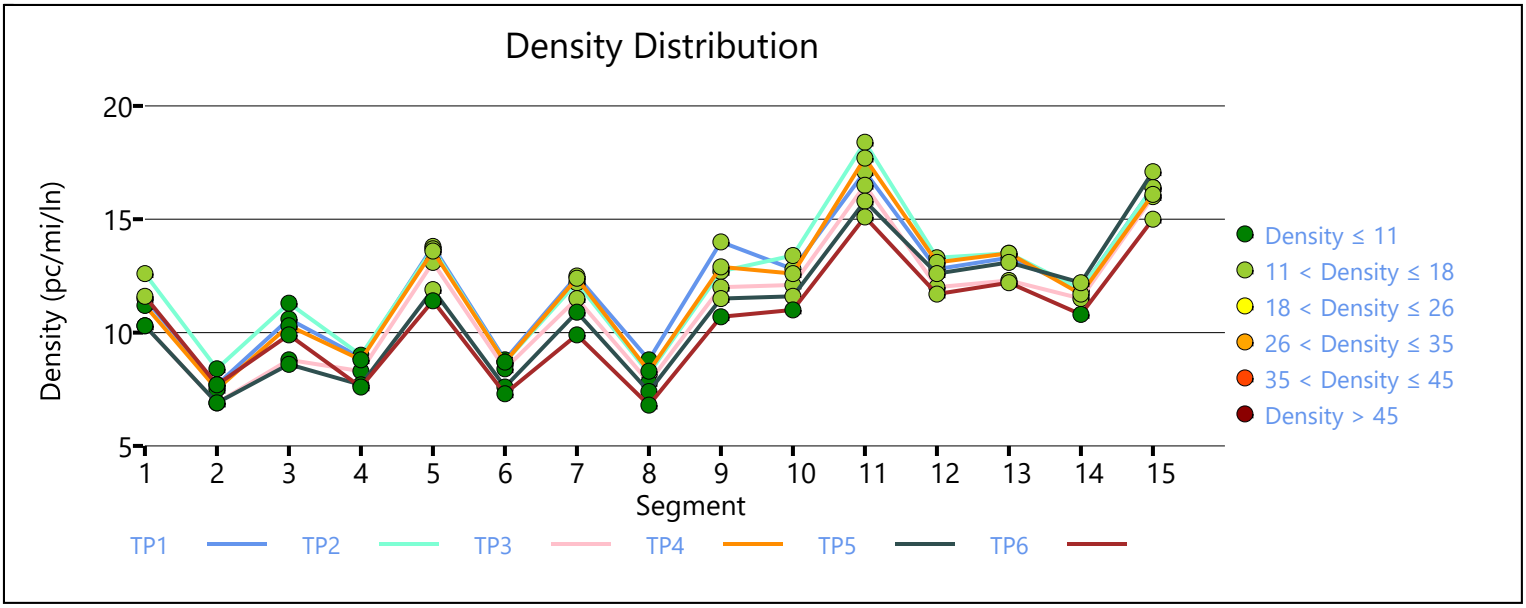
Space Mean Speed, mi/h	70.2	Density, veh/mi/ln	8.8
Average Travel Time, min	6.00	Density, pc/mi/ln	12.5

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2025 Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2025 Build Eastbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.521	1035	4646	0.22	73.5	7.0	A
2	1.00	0.521	1280	4646	0.28	73.5	8.7	A
3	1.00	0.521	1052	4646	0.23	73.5	7.2	A
4	1.00	0.521	1171	4646	0.25	73.5	8.0	A
5	1.00	0.521	1324	4646	0.28	73.5	9.0	A
6	1.00	0.521	1230	4646	0.26	73.5	8.4	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.521	0.641	1035	136	6970	1936	0.15	0.07	73.5	73.5	4.7	4.7	A
2	1.00	1.00	0.521	0.641	1280	109	6970	1936	0.18	0.06	63.6	63.6	6.7	6.7	A
3	1.00	1.00	0.521	0.641	1052	81	6970	1936	0.15	0.04	63.6	63.6	5.5	5.5	A
4	1.00	1.00	0.521	0.641	1171	137	6970	1936	0.17	0.07	63.4	63.4	6.2	6.2	A
5	1.00	1.00	0.521	0.641	1324	165	6970	1936	0.19	0.09	63.3	63.3	7.0	7.0	A
6	1.00	1.00	0.521	0.641	1230	156	6970	1936	0.18	0.08	63.3	63.3	6.5	6.5	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.505	895	4646	0.19	70.4	6.4	A
2	1.00	0.505	1171	4646	0.25	69.9	8.3	A
3	1.00	0.505	962	4646	0.21	69.9	6.8	A
4	1.00	0.505	1081	4646	0.22	69.9	7.7	A
5	1.00	0.505	1169	4646	0.25	69.8	8.3	A
6	1.00	0.505	1077	4646	0.23	69.8	7.6	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.505	0.794	1285	390	6970	1936	0.18	0.20	73.3	73.5	5.8	5.8	A
2	1.00	1.00	0.505	0.794	1937	848	6970	1936	0.29	0.44	66.9	66.9	9.7	9.7	A
3	1.00	1.00	0.505	0.794	1788	744	6970	1936	0.25	0.38	66.9	66.9	8.9	8.9	A
4	1.00	1.00	0.505	0.794	1711	630	6970	1936	0.24	0.33	67.2	67.2	8.5	8.5	A
5	1.00	1.00	0.505	0.794	1707	538	6970	1936	0.24	0.28	67.3	67.3	8.5	8.5	A
6	1.00	1.00	0.505	0.794	1382	305	6970	1936	0.20	0.16	67.7	67.7	6.8	6.8	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1281	4646	0.28	70.4	9.1	A
2	1.00	0.595	1937	4646	0.46	70.4	13.8	B
3	1.00	0.595	1788	4646	0.39	70.4	12.7	B
4	1.00	0.595	1711	4646	0.37	70.4	12.2	B
5	1.00	0.595	1707	4646	0.37	70.4	12.1	B
6	1.00	0.595	1382	4646	0.28	70.4	9.8	A

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.725	1281	63	6970	1936	0.18	0.03	73.5	73.5	5.8	5.8	A

2	1.00	1.00	0.595	0.725	1937	69	6970	1936	0.31	0.04	64.2	64.2	10.1	10.1	A
3	1.00	1.00	0.595	0.725	1788	63	6970	1936	0.26	0.03	64.2	64.2	9.3	9.3	A
4	1.00	1.00	0.595	0.725	1711	177	6970	1936	0.25	0.09	63.5	63.5	9.0	9.0	A
5	1.00	1.00	0.595	0.725	1707	88	6970	1936	0.24	0.05	64.0	64.0	8.9	8.9	A
6	1.00	1.00	0.595	0.725	1382	88	6970	1936	0.19	0.05	63.8	63.8	7.2	7.2	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.588	1218	4646	0.26	70.4	8.7	A
2	1.00	0.588	1875	4646	0.45	69.7	13.3	B
3	1.00	0.588	1730	4646	0.38	69.7	12.3	B
4	1.00	0.588	1652	4646	0.33	69.6	11.7	B
5	1.00	0.588	1531	4646	0.35	69.7	10.9	A
6	1.00	0.588	1310	4646	0.26	69.6	9.3	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.588	0.980	1576	358	6970	1936	0.23	0.18	73.1	73.5	7.1	7.1	A
2	1.00	1.00	0.588	0.980	2207	920	6970	1936	0.43	0.48	66.3	66.3	11.1	11.1	B
3	1.00	1.00	0.588	0.980	2053	679	6970	1936	0.35	0.35	66.7	66.7	10.3	10.3	A
4	1.00	1.00	0.588	0.980	1975	693	6970	1936	0.32	0.36	66.7	66.7	9.9	9.9	A
5	1.00	1.00	0.588	0.980	1936	526	6970	1936	0.31	0.27	66.9	66.9	9.6	9.6	A
6	1.00	1.00	0.588	0.980	1936	200	6970	1936	0.20	0.10	67.4	67.4	9.6	9.6	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1578	4646	0.34	70.4	11.2	B
2	1.00	0.676	2207	4646	0.68	69.6	15.7	B
3	1.00	0.676	2053	4646	0.54	69.6	14.6	B
4	1.00	0.676	1975	4646	0.50	69.6	14.0	B
5	1.00	0.676	1936	4646	0.47	69.7	13.8	B
6	1.00	0.676	1936	4646	0.29	69.8	13.8	B

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.806	3205	3535	0.91	56.9	18.8	B
2	1.00	0.806	2568	4574	1.03	65.2	13.1	F
3	1.00	0.806	2386	4240	0.99	65.6	12.1	B
4	1.00	0.806	2308	5062	0.61	66.0	11.7	B
5	1.00	0.806	2269	4375	0.75	65.5	11.5	B
6	1.00	0.806	2269	3724	0.57	65.6	11.5	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.794	3383	4646	0.73	66.1	25.6	C
2	1.00	0.794	2399	4646	1.05	70.3	17.1	F
3	1.00	0.794	2229	4646	0.95	70.3	15.8	B
4	1.00	0.794	2182	4646	0.67	70.3	15.5	B
5	1.00	0.794	2066	4646	0.73	70.3	14.7	B
6	1.00	0.794	2086	4646	0.44	70.3	14.8	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.794	0.980	3699	316	6970	1936	0.53	0.16	72.7	72.8	16.9	16.9	B
2	1.00	1.00	0.794	0.980	2724	456	6970	1936	0.77	0.24	65.7	65.7	13.8	13.8	B
3	1.00	1.00	0.794	0.980	2551	1145	6970	1936	0.80	0.59	64.7	64.7	13.1	13.1	B
4	1.00	1.00	0.794	0.980	2505	1136	6970	1936	0.61	0.59	64.7	64.7	12.9	12.9	B
5	1.00	1.00	0.794	0.980	2388	1014	6970	1936	0.63	0.52	64.9	64.9	12.3	12.3	B
6	1.00	1.00	0.794	0.980	2408	898	6970	1936	0.42	0.46	65.1	65.1	12.3	12.3	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.847	3537	6970	0.51	70.3	16.8	B
2	1.00	0.847	2724	6970	0.73	69.5	12.9	B
3	1.00	0.847	2551	6970	0.78	69.3	12.1	B
4	1.00	0.847	2505	6970	0.61	69.3	11.9	B
5	1.00	0.847	2388	6970	0.62	69.3	11.3	B
6	1.00	0.847	2408	6970	0.42	69.4	11.4	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.847	0.962	4594	1057	9293	1936	0.49	0.55	72.9	73.2	15.7	15.7	B
2	1.00	1.00	0.847	0.962	2982	1200	9293	1936	0.68	0.62	67.3	67.3	11.1	11.1	B
3	1.00	1.00	0.847	0.962	2793	1180	9293	1936	0.71	0.61	67.2	67.2	10.4	10.4	A
4	1.00	1.00	0.847	0.962	2747	1124	9293	1936	0.58	0.58	67.4	67.4	10.2	10.2	A
5	1.00	1.00	0.847	0.962	2630	782	9293	1936	0.55	0.40	68.0	68.0	9.7	9.7	A
6	1.00	1.00	0.847	0.962	2650	763	9293	1936	0.40	0.39	68.1	68.1	9.7	9.7	A

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.862	4655	6970	0.67	67.9	22.9	C
2	1.00	0.862	2982	6970	0.91	70.4	14.1	B

3	1.00	0.862	2793	6970	0.96	70.4	13.2	B
4	1.00	0.862	2747	6970	0.77	70.4	13.0	B
5	1.00	0.862	2630	6970	0.74	70.4	12.5	B
6	1.00	0.862	2650	6970	0.54	70.4	12.5	B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.4	13.3	9.9	6.20	B
2	69.2	12.4	8.8	6.10	F
3	69.2	11.4	8.1	6.10	B
4	69.2	11.2	7.9	6.00	B
5	69.2	11.1	7.8	6.00	B
6	69.2	10.3	7.4	6.00	A

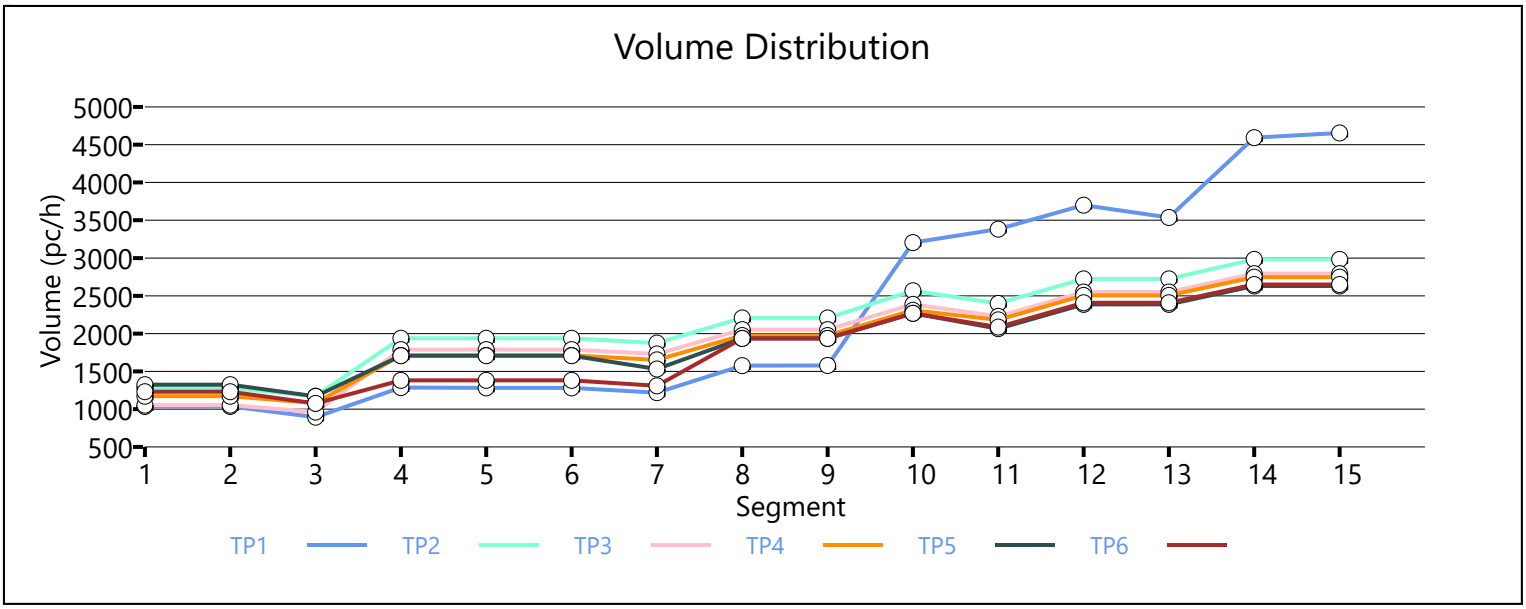
Facility Overall Results

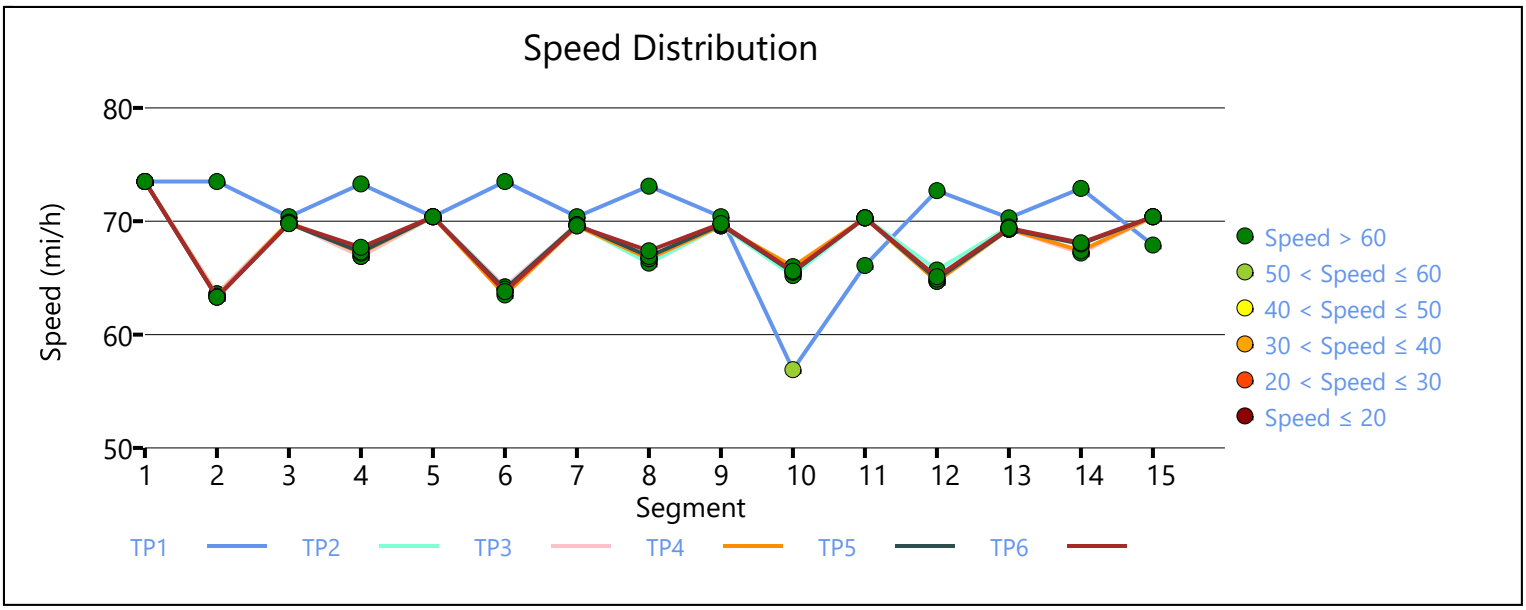
Space Mean Speed, mi/h	68.8	Density, veh/mi/ln	8.3
Average Travel Time, min	6.10	Density, pc/mi/ln	11.6

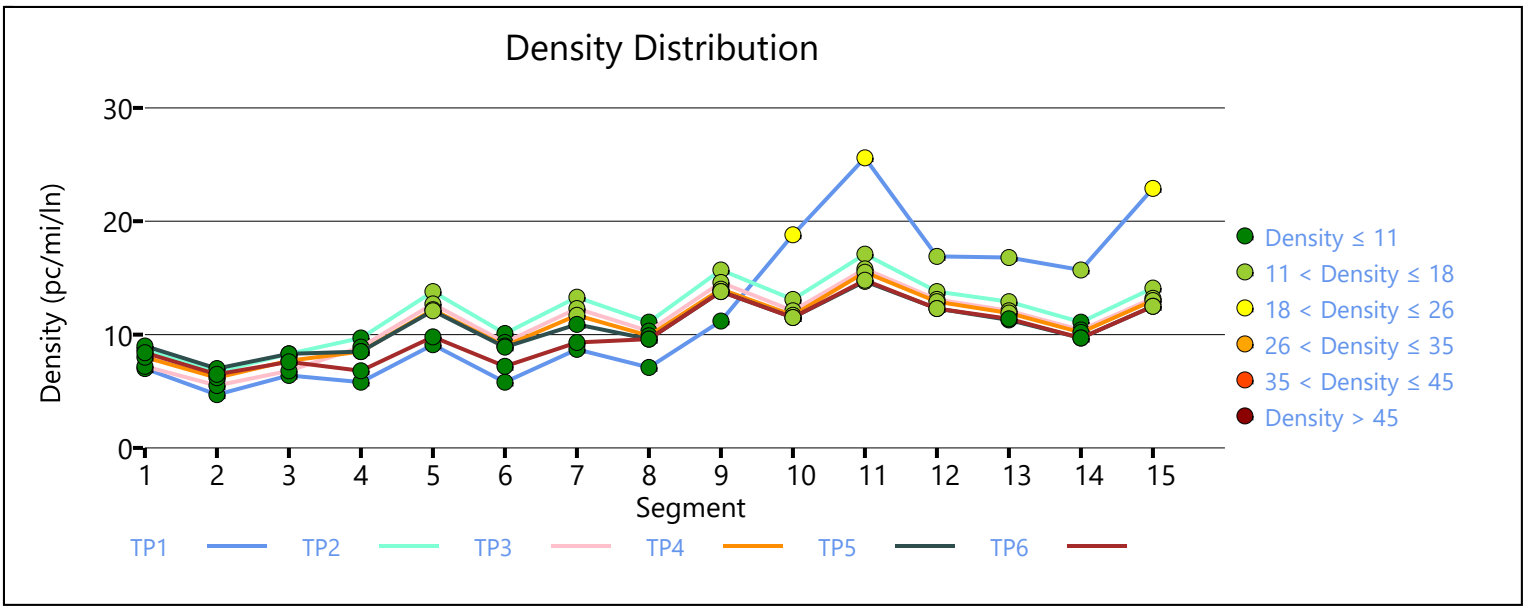
Messages

WARNING 1	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 2	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2025 Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2025 Build Eastbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	1695	4646	0.36	73.5	11.5	B
2	1.00	0.610	1848	4646	0.40	73.5	12.6	B
3	1.00	0.610	1521	4646	0.33	73.5	10.3	A
4	1.00	0.610	1652	4646	0.36	73.5	11.2	B
5	1.00	0.610	1521	4646	0.33	73.5	10.3	A
6	1.00	0.610	1703	4646	0.37	73.5	11.6	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.610	0.725	1695	233	6970	1936	0.24	0.12	73.5	73.5	7.7	7.7	A
2	1.00	1.00	0.610	0.725	1848	281	6970	1936	0.27	0.15	73.5	73.5	8.4	8.4	A
3	1.00	1.00	0.610	0.725	1521	288	6970	1936	0.22	0.15	73.5	73.5	6.9	6.9	A
4	1.00	1.00	0.610	0.725	1652	232	6970	1936	0.24	0.12	73.5	73.5	7.5	7.5	A
5	1.00	1.00	0.610	0.725	1521	320	6970	1936	0.22	0.17	73.5	73.5	6.9	6.9	A
6	1.00	1.00	0.610	0.725	1703	321	6970	1936	0.24	0.17	73.5	73.5	7.7	7.7	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1489	4646	0.32	70.4	10.6	A
2	1.00	0.581	1589	4646	0.34	70.4	11.3	B
3	1.00	0.581	1238	4646	0.27	70.4	8.8	A
4	1.00	0.581	1446	4646	0.31	70.4	10.3	A
5	1.00	0.581	1198	4646	0.26	70.4	8.5	A
6	1.00	0.581	1387	4646	0.30	70.4	9.9	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.781	1973	484	6970	1936	0.28	0.25	73.3	73.5	8.9	8.9	A
2	1.00	1.00	0.581	0.781	2169	580	6970	1936	0.31	0.30	73.3	73.5	9.8	9.8	A
3	1.00	1.00	0.581	0.781	2016	778	6970	1936	0.29	0.40	73.3	73.5	9.1	9.1	A
4	1.00	1.00	0.581	0.781	2126	680	6970	1936	0.31	0.35	73.3	73.5	9.6	9.6	A
5	1.00	1.00	0.581	0.781	1871	673	6970	1936	0.27	0.35	73.3	73.5	8.5	8.5	A
6	1.00	1.00	0.581	0.781	1673	286	6970	1936	0.24	0.15	73.3	73.5	7.6	7.6	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1939	4646	0.42	70.4	13.8	B
2	1.00	0.641	2147	4646	0.46	70.4	15.3	B
3	1.00	0.641	2070	4646	0.45	70.4	14.7	B
4	1.00	0.641	2139	4646	0.46	70.4	15.2	B
5	1.00	0.641	1906	4646	0.41	70.4	13.5	B
6	1.00	0.641	1605	4646	0.35	70.4	11.4	B

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	0.617	1939	185	6970	1936	0.28	0.10	73.5	73.5	8.8	8.8	A

2	1.00	1.00	0.641	0.617	2147	214	6970	1936	0.31	0.11	73.5	73.5	9.7	9.7	A
3	1.00	1.00	0.641	0.617	2070	237	6970	1936	0.30	0.12	73.5	73.5	9.4	9.4	A
4	1.00	1.00	0.641	0.617	2139	170	6970	1936	0.31	0.09	73.5	73.5	9.7	9.7	A
5	1.00	1.00	0.641	0.617	1906	156	6970	1936	0.27	0.08	73.5	73.5	8.6	8.6	A
6	1.00	1.00	0.641	0.617	1605	222	6970	1936	0.23	0.11	73.5	73.5	7.3	7.3	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1761	4646	0.38	70.4	12.5	B
2	1.00	0.641	1941	4646	0.42	70.4	13.8	B
3	1.00	0.641	1842	4646	0.40	70.4	13.1	B
4	1.00	0.641	1975	4646	0.43	70.4	14.0	B
5	1.00	0.641	1757	4646	0.38	70.4	12.5	B
6	1.00	0.641	1392	4646	0.30	70.4	9.9	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	1.000	1943	182	6970	1936	0.28	0.09	73.1	73.5	8.8	8.8	A
2	1.00	1.00	0.641	1.000	2231	290	6970	1936	0.32	0.15	73.1	73.5	10.1	10.1	A
3	1.00	1.00	0.641	1.000	2127	285	6970	1936	0.31	0.15	73.1	73.5	9.6	9.6	A
4	1.00	1.00	0.641	1.000	2255	280	6970	1936	0.32	0.14	73.1	73.5	10.2	10.2	A
5	1.00	1.00	0.641	1.000	2047	290	6970	1936	0.29	0.15	73.1	73.5	9.3	9.3	A
6	1.00	1.00	0.641	1.000	1506	114	6970	1936	0.22	0.06	73.1	73.5	6.8	6.8	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.667	1966	4646	0.42	70.4	14.0	B
2	1.00	0.667	2300	4646	0.50	70.4	16.3	B
3	1.00	0.667	2198	4646	0.47	70.4	15.6	B
4	1.00	0.667	2318	4646	0.50	70.4	16.5	B
5	1.00	0.667	2123	4646	0.46	70.4	15.1	B
6	1.00	0.667	1508	4646	0.32	70.4	10.7	A

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.746	2416	5956	0.41	62.9	12.8	B
2	1.00	0.746	2938	5991	0.49	61.4	16.0	B
3	1.00	0.746	2722	6009	0.45	62.2	14.6	B
4	1.00	0.746	2828	6104	0.46	62.5	15.1	B
5	1.00	0.746	2645	5987	0.44	62.4	14.1	B
6	1.00	0.746	2079	5220	0.40	63.2	11.0	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.735	2404	4646	0.52	70.2	17.1	B
2	1.00	0.735	3037	4646	0.65	68.3	22.2	C
3	1.00	0.735	2770	4646	0.60	69.4	20.0	C
4	1.00	0.735	2935	4646	0.63	68.8	21.3	C
5	1.00	0.735	2684	4646	0.58	69.7	19.3	C
6	1.00	0.735	2120	4646	0.46	70.2	15.1	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.735	0.980	2833	429	6970	1936	0.41	0.22	73.1	73.5	12.8	12.8	B
2	1.00	1.00	0.735	0.980	3377	340	6970	1936	0.48	0.18	72.9	73.3	15.4	15.4	B
3	1.00	1.00	0.735	0.980	3105	335	6970	1936	0.45	0.17	73.0	73.5	14.1	14.1	B
4	1.00	1.00	0.735	0.980	3340	405	6970	1936	0.48	0.21	73.0	73.3	15.2	15.2	B
5	1.00	1.00	0.735	0.980	3224	540	6970	1936	0.46	0.28	73.1	73.4	14.6	14.6	B
6	1.00	1.00	0.735	0.980	2580	460	6970	1936	0.37	0.24	73.1	73.5	11.7	11.7	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.781	2800	6970	0.40	70.4	13.3	B
2	1.00	0.781	3284	6970	0.47	70.4	15.6	B
3	1.00	0.781	3027	6970	0.43	70.4	14.3	B
4	1.00	0.781	3270	6970	0.47	70.4	15.5	B
5	1.00	0.781	3204	6970	0.46	70.4	15.2	B
6	1.00	0.781	2572	6970	0.37	70.4	12.2	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.781	0.962	3487	687	9293	1936	0.38	0.35	72.9	73.5	11.9	11.9	B
2	1.00	1.00	0.781	0.962	3919	635	9293	1936	0.42	0.33	72.9	73.5	13.3	13.3	B
3	1.00	1.00	0.781	0.962	3799	772	9293	1936	0.41	0.40	72.9	73.5	12.9	12.9	B
4	1.00	1.00	0.781	0.962	3853	583	9293	1936	0.41	0.30	72.9	73.5	13.1	13.1	B
5	1.00	1.00	0.781	0.962	4028	824	9293	1936	0.43	0.43	72.9	73.5	13.7	13.7	B
6	1.00	1.00	0.781	0.962	3188	616	9293	1936	0.34	0.32	72.9	73.5	10.8	10.8	A

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.820	3473	6970	0.50	70.4	16.4	B
2	1.00	0.820	3873	6970	0.56	70.0	18.4	C

3	1.00	0.820	3789	6970	0.54	70.1	18.0	B
4	1.00	0.820	3799	6970	0.55	70.1	18.1	C
5	1.00	0.820	4018	6970	0.58	69.7	19.2	C
6	1.00	0.820	3173	6970	0.46	70.4	15.0	B

Facility Time Period Results

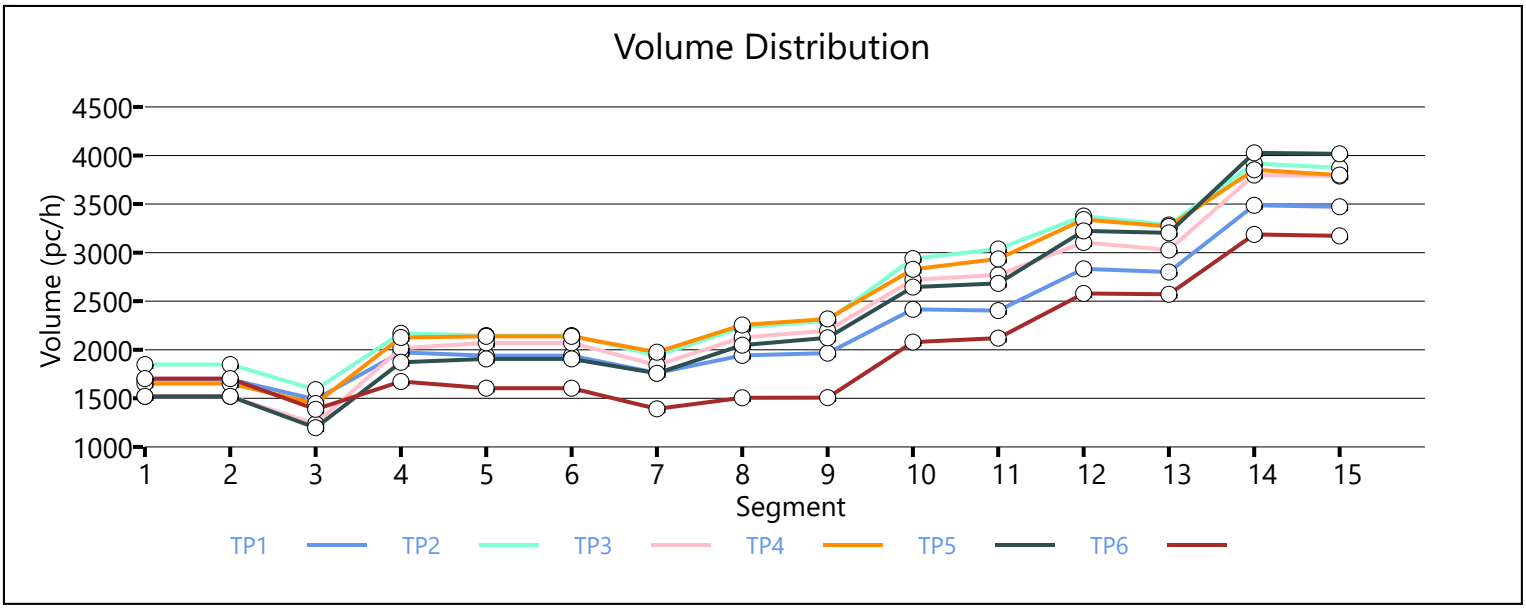
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.2	13.1	9.2	6.00	B
2	69.7	14.9	10.5	6.00	B
3	69.9	13.9	9.8	6.00	B
4	69.9	14.5	10.2	6.00	B
5	69.9	13.7	9.7	6.00	B
6	70.3	11.6	8.1	6.00	B

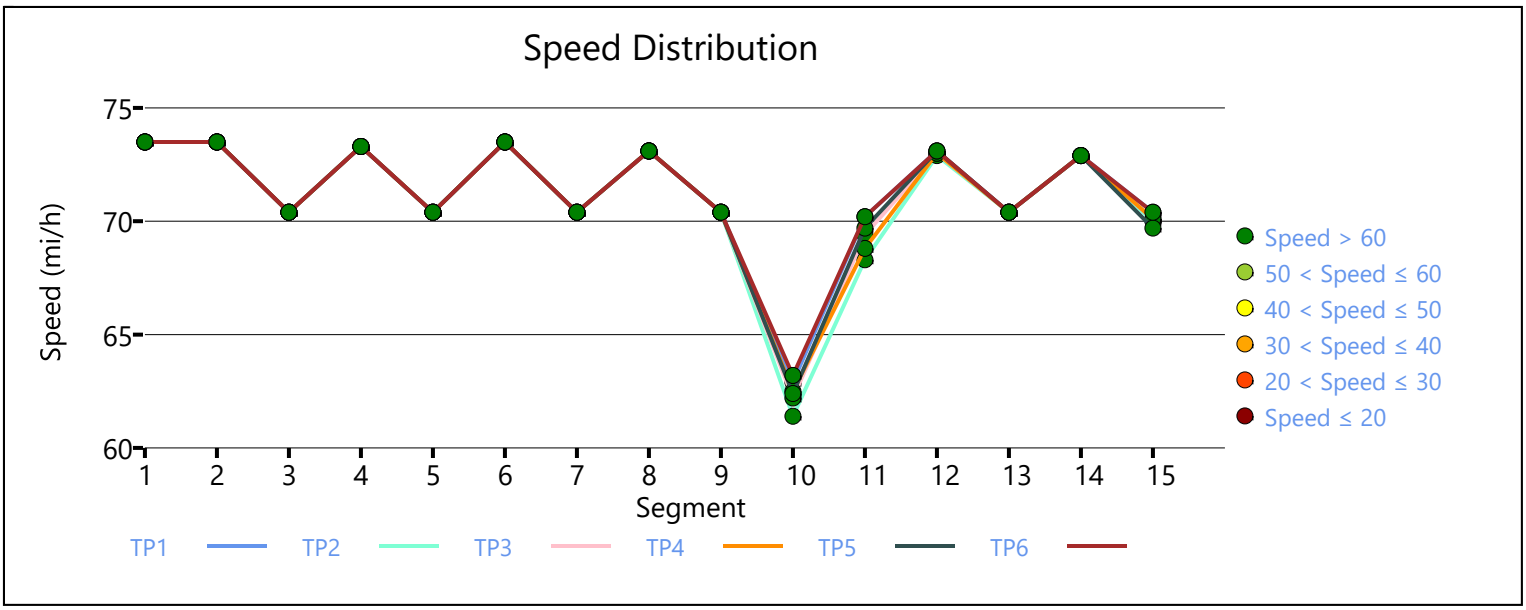
Facility Overall Results

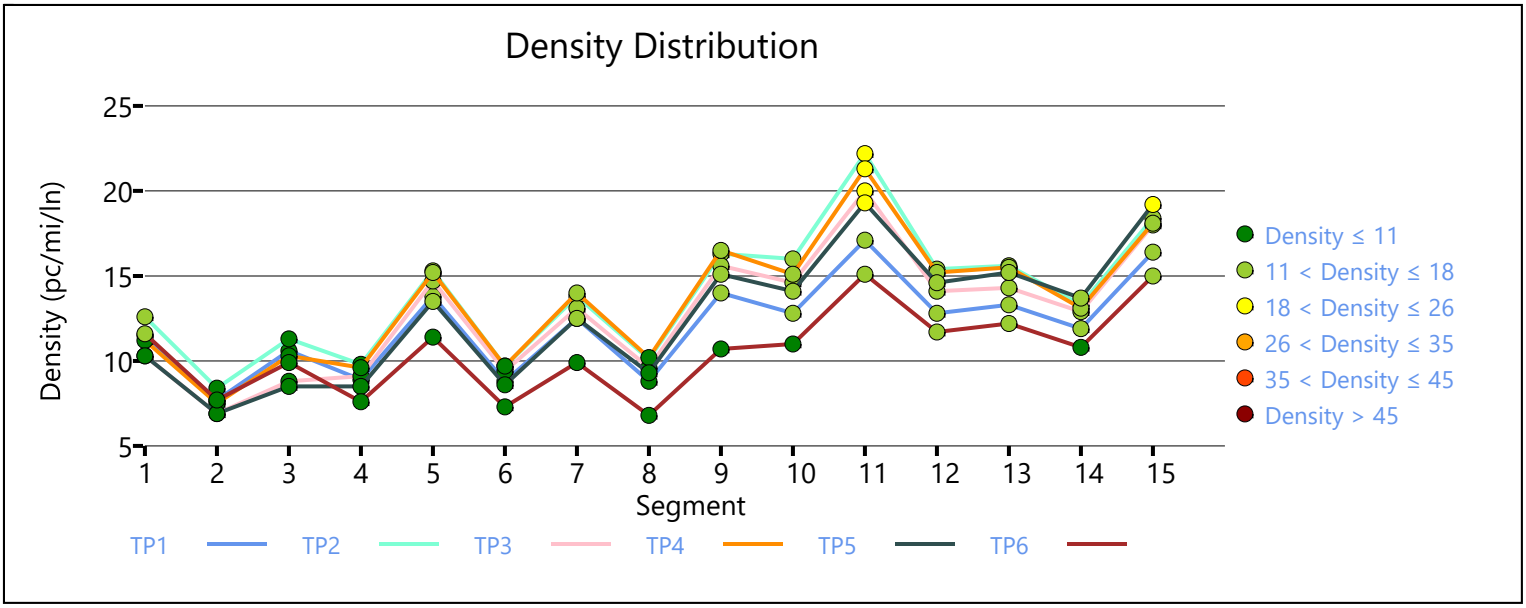
Space Mean Speed, mi/h	70.0	Density, veh/mi/ln	9.6
Average Travel Time, min	6.00	Density, pc/mi/ln	13.6

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2030 No Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2030 No Build Eastbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.521	1106	4646	0.24	73.5	7.5	A
2	1.00	0.521	1369	4646	0.29	73.5	9.3	A
3	1.00	0.521	1123	4646	0.24	73.5	7.6	A
4	1.00	0.521	1250	4646	0.27	73.5	8.5	A
5	1.00	0.521	1413	4646	0.30	73.5	9.6	A
6	1.00	0.521	1313	4646	0.28	73.5	8.9	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.521	0.641	1106	147	6970	1936	0.16	0.08	73.5	73.5	5.0	5.0	A
2	1.00	1.00	0.521	0.641	1369	115	6970	1936	0.20	0.06	63.6	63.6	7.2	7.2	A
3	1.00	1.00	0.521	0.641	1123	86	6970	1936	0.16	0.04	63.6	63.6	5.9	5.9	A
4	1.00	1.00	0.521	0.641	1250	147	6970	1936	0.18	0.08	63.3	63.3	6.6	6.6	A
5	1.00	1.00	0.521	0.641	1413	178	6970	1936	0.20	0.09	63.3	63.3	7.4	7.4	A
6	1.00	1.00	0.521	0.641	1313	170	6970	1936	0.19	0.09	63.3	63.3	6.9	6.9	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.505	954	4646	0.21	70.4	6.8	A
2	1.00	0.505	1254	4646	0.27	69.9	8.9	A
3	1.00	0.505	1029	4646	0.23	69.9	7.3	A
4	1.00	0.505	1154	4646	0.24	69.8	8.2	A
5	1.00	0.505	1247	4646	0.27	69.8	8.9	A
6	1.00	0.505	1148	4646	0.25	69.8	8.2	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.505	0.794	1378	424	6970	1936	0.20	0.22	73.3	73.5	6.2	6.2	A
2	1.00	1.00	0.505	0.794	1936	688	6970	1936	0.28	0.36	67.1	67.1	9.6	9.6	A
3	1.00	1.00	0.505	0.794	1609	574	6970	1936	0.23	0.30	67.2	67.2	8.0	8.0	A
4	1.00	1.00	0.505	0.794	1604	450	6970	1936	0.22	0.23	67.4	67.4	7.9	7.9	A
5	1.00	1.00	0.505	0.794	1597	350	6970	1936	0.23	0.18	67.6	67.6	7.9	7.9	A
6	1.00	1.00	0.505	0.794	1479	331	6970	1936	0.21	0.17	67.7	67.7	7.3	7.3	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1376	4646	0.30	70.4	9.8	A
2	1.00	0.595	1936	4646	0.43	70.4	13.8	B
3	1.00	0.595	1609	4646	0.36	70.4	11.4	B
4	1.00	0.595	1604	4646	0.33	70.4	11.4	B
5	1.00	0.595	1597	4646	0.33	70.4	11.3	B
6	1.00	0.595	1479	4646	0.30	70.4	10.5	A

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.725	1376	69	6970	1936	0.20	0.04	73.5	73.5	6.2	6.2	A

2	1.00	1.00	0.595	0.725	1936	76	6970	1936	0.29	0.04	64.1	64.1	10.1	10.1	A
3	1.00	1.00	0.595	0.725	1609	69	6970	1936	0.24	0.04	64.0	64.0	8.4	8.4	A
4	1.00	1.00	0.595	0.725	1604	192	6970	1936	0.22	0.10	63.4	63.4	8.4	8.4	A
5	1.00	1.00	0.595	0.725	1597	95	6970	1936	0.22	0.05	63.9	63.9	8.3	8.3	A
6	1.00	1.00	0.595	0.725	1479	95	6970	1936	0.20	0.05	63.8	63.8	7.7	7.7	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.588	1308	4646	0.28	70.4	9.3	A
2	1.00	0.588	1862	4646	0.41	69.7	13.2	B
3	1.00	0.588	1547	4646	0.34	69.7	11.0	A
4	1.00	0.588	1537	4646	0.28	69.6	10.9	A
5	1.00	0.588	1397	4646	0.30	69.7	9.9	A
6	1.00	0.588	1386	4646	0.28	69.6	9.8	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.588	0.980	1698	390	6970	1936	0.24	0.20	73.1	73.5	7.7	7.7	A
2	1.00	1.00	0.588	0.980	2191	679	6970	1936	0.37	0.35	66.7	66.7	10.9	10.9	A
3	1.00	1.00	0.588	0.980	1940	415	6970	1936	0.29	0.21	67.1	67.1	9.6	9.6	A
4	1.00	1.00	0.588	0.980	1936	431	6970	1936	0.25	0.22	67.0	67.0	9.6	9.6	A
5	1.00	1.00	0.588	0.980	1936	248	6970	1936	0.24	0.13	67.3	67.3	9.6	9.6	A
6	1.00	1.00	0.588	0.980	1717	217	6970	1936	0.22	0.11	67.4	67.4	8.5	8.5	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1703	4646	0.37	70.4	12.1	B
2	1.00	0.676	2191	4646	0.57	69.6	15.6	B
3	1.00	0.676	1940	4646	0.43	69.7	13.8	B
4	1.00	0.676	1936	4646	0.38	69.7	13.8	B
5	1.00	0.676	1936	4646	0.34	69.8	13.8	B
6	1.00	0.676	1717	4646	0.31	69.8	12.2	B

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.806	3473	3521	0.99	55.8	20.7	C
2	1.00	0.806	2552	4005	1.12	65.0	13.1	F
3	1.00	0.806	2273	3653	1.07	65.7	11.5	F
4	1.00	0.806	2269	4105	0.66	65.9	11.5	B
5	1.00	0.806	2269	3597	0.82	65.2	11.6	B
6	1.00	0.806	2092	3699	0.62	65.4	10.7	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.794	3668	4646	0.79	63.7	28.8	D
2	1.00	0.794	2360	4646	1.00	70.3	16.8	F
3	1.00	0.794	2102	4646	0.89	70.3	14.9	B
4	1.00	0.794	2127	4646	0.59	70.3	15.1	B
5	1.00	0.794	2019	4646	0.65	70.3	14.3	B
6	1.00	0.794	1887	4646	0.48	70.3	13.4	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.794	0.980	4012	344	6970	1936	0.58	0.18	72.0	72.0	18.6	18.6	C
2	1.00	1.00	0.794	0.980	2685	496	6970	1936	0.74	0.26	65.6	65.6	13.6	13.6	B
3	1.00	1.00	0.794	0.980	2425	1245	6970	1936	0.77	0.64	64.5	64.5	12.5	12.5	B
4	1.00	1.00	0.794	0.980	2449	1235	6970	1936	0.57	0.64	64.5	64.5	12.7	12.7	B
5	1.00	1.00	0.794	0.980	2341	1103	6970	1936	0.59	0.57	64.7	64.7	12.1	12.1	B
6	1.00	1.00	0.794	0.980	2209	977	6970	1936	0.46	0.50	64.9	64.9	11.3	11.3	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.847	3836	6970	0.55	70.0	18.3	C
2	1.00	0.847	2685	6970	0.71	69.5	12.7	B
3	1.00	0.847	2425	6970	0.76	69.2	11.5	B
4	1.00	0.847	2449	6970	0.57	69.2	11.6	B
5	1.00	0.847	2341	6970	0.59	69.3	11.1	B
6	1.00	0.847	2209	6970	0.46	69.3	10.5	A

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.847	0.962	4986	1150	9293	1936	0.54	0.59	72.7	72.7	17.1	17.1	B
2	1.00	1.00	0.847	0.962	2945	1305	9293	1936	0.67	0.67	67.0	67.0	11.0	11.0	A
3	1.00	1.00	0.847	0.962	2667	1284	9293	1936	0.71	0.66	66.9	66.9	10.0	10.0	A
4	1.00	1.00	0.847	0.962	2691	1222	9293	1936	0.56	0.63	67.1	67.1	10.0	10.0	A
5	1.00	1.00	0.847	0.962	2583	850	9293	1936	0.53	0.44	67.8	67.8	9.5	9.5	A
6	1.00	1.00	0.847	0.962	2451	831	9293	1936	0.43	0.43	67.9	67.9	9.0	9.0	A

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.862	5052	6970	0.72	66.2	25.4	C
2	1.00	0.862	2945	6970	0.91	70.4	13.9	B

3	1.00	0.862	2667	6970	0.96	70.4	12.6	B
4	1.00	0.862	2691	6970	0.76	70.4	12.7	B
5	1.00	0.862	2583	6970	0.72	70.4	12.2	B
6	1.00	0.862	2451	6970	0.58	70.4	11.6	B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.3	14.5	10.9	6.30	B
2	69.1	12.5	8.8	6.10	F
3	69.2	10.8	7.6	6.10	F
4	69.2	11.0	7.7	6.10	A
5	69.2	10.9	7.7	6.10	A
6	69.2	10.2	7.2	6.00	A

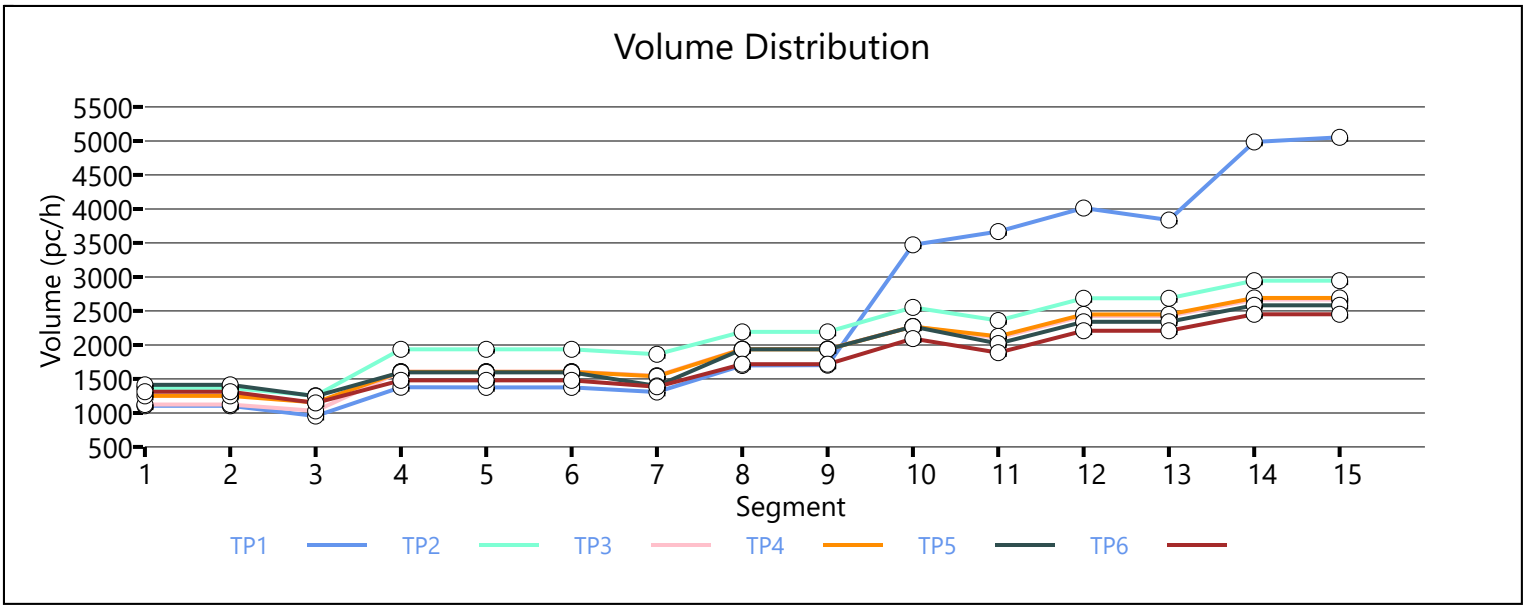
Facility Overall Results

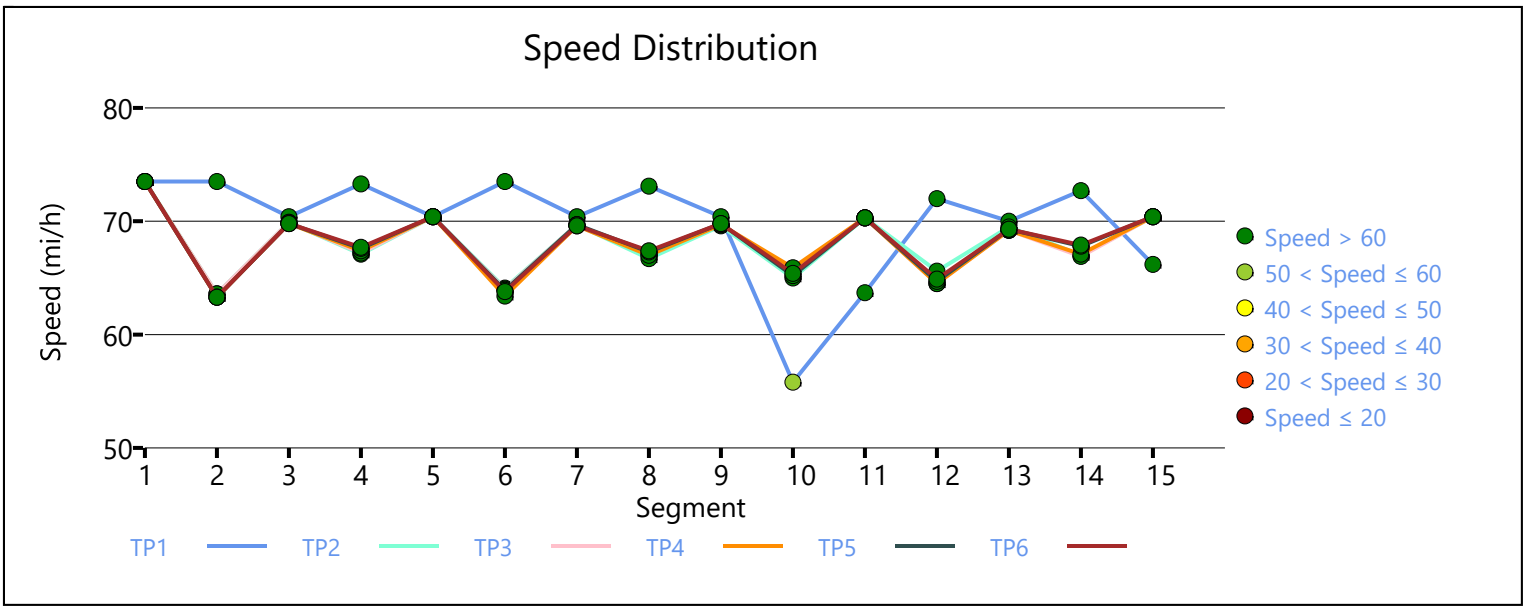
Space Mean Speed, mi/h	68.6	Density, veh/mi/ln	8.3
Average Travel Time, min	6.10	Density, pc/mi/ln	11.6

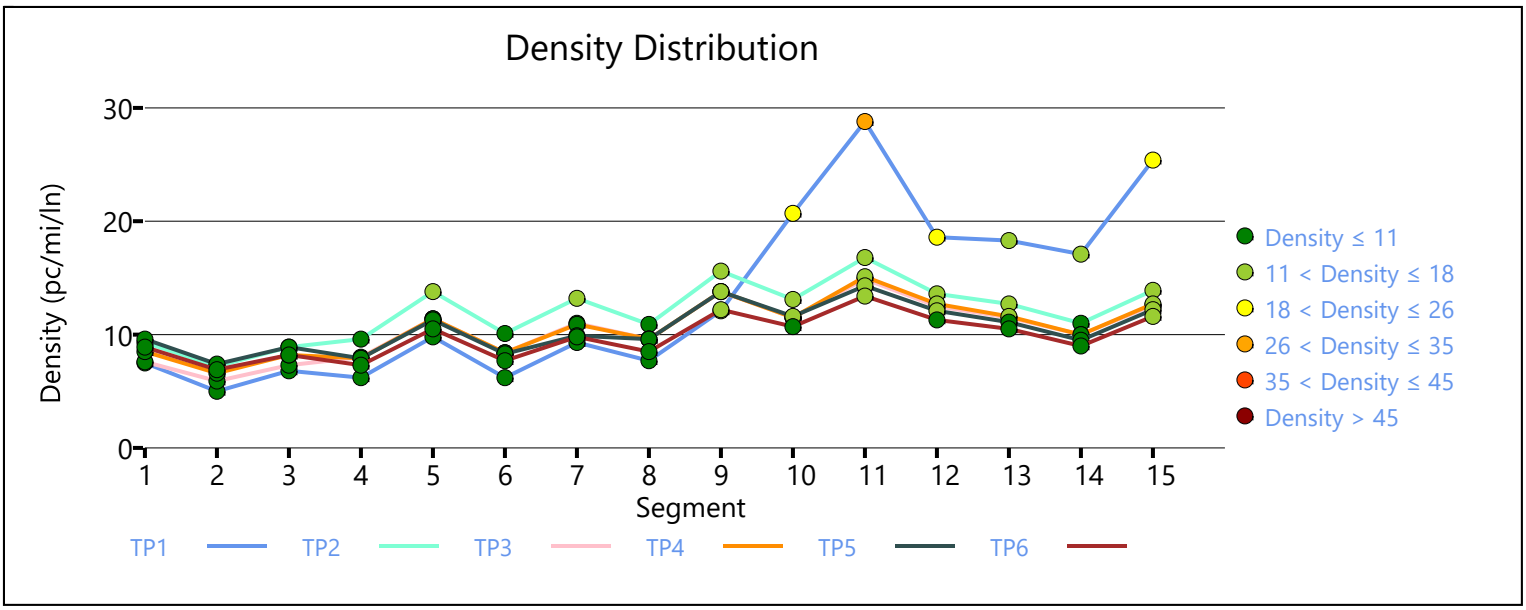
Messages

WARNING 1	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 2	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 3	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2030 No Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2030 No Build Eastbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	1810	4646	0.39	73.5	12.3	B
2	1.00	0.610	1974	4646	0.42	73.5	13.4	B
3	1.00	0.610	1625	4646	0.35	73.5	11.0	A
4	1.00	0.610	1764	4646	0.38	73.5	12.0	B
5	1.00	0.610	1625	4646	0.35	73.5	11.0	A
6	1.00	0.610	1818	4646	0.39	73.5	12.4	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.610	0.725	1810	254	6970	1936	0.26	0.13	73.5	73.5	8.2	8.2	A
2	1.00	1.00	0.610	0.725	1974	301	6970	1936	0.28	0.16	73.5	73.5	9.0	9.0	A
3	1.00	1.00	0.610	0.725	1625	308	6970	1936	0.23	0.16	73.5	73.5	7.4	7.4	A
4	1.00	1.00	0.610	0.725	1764	247	6970	1936	0.25	0.13	73.5	73.5	8.0	8.0	A
5	1.00	1.00	0.610	0.725	1625	342	6970	1936	0.23	0.18	73.5	73.5	7.4	7.4	A
6	1.00	1.00	0.610	0.725	1818	349	6970	1936	0.26	0.18	73.5	73.5	8.2	8.2	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1583	4646	0.34	70.4	11.2	B
2	1.00	0.581	1697	4646	0.37	70.4	12.0	B
3	1.00	0.581	1322	4646	0.28	70.4	9.4	A
4	1.00	0.581	1544	4646	0.33	70.4	11.0	A
5	1.00	0.581	1279	4646	0.28	70.4	9.1	A
6	1.00	0.581	1473	4646	0.32	70.4	10.5	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.781	2111	528	6970	1936	0.30	0.27	73.3	73.5	9.6	9.6	A
2	1.00	1.00	0.581	0.781	2122	425	6970	1936	0.30	0.22	73.3	73.5	9.6	9.6	A
3	1.00	1.00	0.581	0.781	1963	641	6970	1936	0.28	0.33	73.3	73.5	8.9	8.9	A
4	1.00	1.00	0.581	0.781	2078	534	6970	1936	0.30	0.28	73.3	73.5	9.4	9.4	A
5	1.00	1.00	0.581	0.781	1807	528	6970	1936	0.26	0.27	73.3	73.5	8.2	8.2	A
6	1.00	1.00	0.581	0.781	1784	311	6970	1936	0.26	0.16	73.3	73.5	8.1	8.1	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	2078	4646	0.45	70.4	14.8	B
2	1.00	0.641	2056	4646	0.44	70.4	14.6	B
3	1.00	0.641	1980	4646	0.43	70.4	14.1	B
4	1.00	0.641	2050	4646	0.44	70.4	14.6	B
5	1.00	0.641	1802	4646	0.39	70.4	12.8	B
6	1.00	0.641	1715	4646	0.37	70.4	12.2	B

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	0.617	2078	201	6970	1936	0.30	0.10	73.5	73.5	9.4	9.4	A

2	1.00	1.00	0.641	0.617	2056	233	6970	1936	0.29	0.12	73.5	73.5	9.3	9.3	A
3	1.00	1.00	0.641	0.617	1980	258	6970	1936	0.28	0.13	73.5	73.5	9.0	9.0	A
4	1.00	1.00	0.641	0.617	2050	185	6970	1936	0.29	0.10	73.5	73.5	9.3	9.3	A
5	1.00	1.00	0.641	0.617	1802	169	6970	1936	0.26	0.09	73.5	73.5	8.2	8.2	A
6	1.00	1.00	0.641	0.617	1715	241	6970	1936	0.25	0.12	73.5	73.5	7.8	7.8	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1885	4646	0.41	70.4	13.4	B
2	1.00	0.641	1832	4646	0.39	70.4	13.0	B
3	1.00	0.641	1732	4646	0.37	70.4	12.3	B
4	1.00	0.641	1872	4646	0.40	70.4	13.3	B
5	1.00	0.641	1640	4646	0.35	70.4	11.6	B
6	1.00	0.641	1482	4646	0.32	70.4	10.5	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	1.000	2083	198	6970	1936	0.30	0.10	73.1	73.5	9.4	9.4	A
2	1.00	1.00	0.641	1.000	1936	104	6970	1936	0.28	0.05	73.1	73.5	8.8	8.8	A
3	1.00	1.00	0.641	1.000	1831	99	6970	1936	0.26	0.05	73.1	73.5	8.3	8.3	A
4	1.00	1.00	0.641	1.000	1966	94	6970	1936	0.28	0.05	73.1	73.5	8.9	8.9	A
5	1.00	1.00	0.641	1.000	1744	104	6970	1936	0.25	0.05	73.1	73.5	7.9	7.9	A
6	1.00	1.00	0.641	1.000	1606	124	6970	1936	0.23	0.06	73.1	73.5	7.3	7.3	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.667	2108	4646	0.45	70.4	15.0	B
2	1.00	0.667	1916	4646	0.41	70.4	13.6	B
3	1.00	0.667	1813	4646	0.39	70.4	12.9	B
4	1.00	0.667	1940	4646	0.42	70.4	13.8	B
5	1.00	0.667	1732	4646	0.37	70.4	12.3	B
6	1.00	0.667	1610	4646	0.35	70.4	11.4	B

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.746	2601	5944	0.44	62.2	13.9	B
2	1.00	0.746	2675	5378	0.50	61.2	14.6	B
3	1.00	0.746	2446	5440	0.45	62.1	13.1	B
4	1.00	0.746	2558	5956	0.43	62.4	13.7	B
5	1.00	0.746	2362	5280	0.45	62.2	12.7	B
6	1.00	0.746	2234	5151	0.43	62.6	11.9	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.735	2588	4646	0.56	70.0	18.5	C
2	1.00	0.735	2778	4646	0.60	69.4	20.0	C
3	1.00	0.735	2495	4646	0.54	70.2	17.8	B
4	1.00	0.735	2672	4646	0.58	69.7	19.2	C
5	1.00	0.735	2401	4646	0.52	70.2	17.1	B
6	1.00	0.735	2278	4646	0.49	70.2	16.2	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.735	0.980	3053	465	6970	1936	0.44	0.24	73.1	73.5	13.8	13.8	B
2	1.00	1.00	0.735	0.980	3147	369	6970	1936	0.45	0.19	73.0	73.5	14.3	14.3	B
3	1.00	1.00	0.735	0.980	2859	364	6970	1936	0.41	0.19	73.1	73.5	13.0	13.0	B
4	1.00	1.00	0.735	0.980	3113	441	6970	1936	0.45	0.23	73.1	73.5	14.1	14.1	B
5	1.00	1.00	0.735	0.980	2988	587	6970	1936	0.43	0.30	73.1	73.5	13.6	13.6	B
6	1.00	1.00	0.735	0.980	2779	501	6970	1936	0.40	0.26	73.1	73.5	12.6	12.6	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.781	3019	6970	0.43	70.4	14.3	B
2	1.00	0.781	3078	6970	0.44	70.4	14.6	B
3	1.00	0.781	2805	6970	0.40	70.4	13.3	B
4	1.00	0.781	3068	6970	0.44	70.4	14.5	B
5	1.00	0.781	2996	6970	0.43	70.4	14.2	B
6	1.00	0.781	2772	6970	0.40	70.4	13.1	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.781	0.962	3766	747	9293	1936	0.41	0.39	72.9	73.5	12.8	12.8	B
2	1.00	1.00	0.781	0.962	3769	691	9293	1936	0.41	0.36	72.9	73.5	12.8	12.8	B
3	1.00	1.00	0.781	0.962	3645	840	9293	1936	0.39	0.43	72.9	73.5	12.4	12.4	B
4	1.00	1.00	0.781	0.962	3702	634	9293	1936	0.40	0.33	72.9	73.5	12.6	12.6	B
5	1.00	1.00	0.781	0.962	3893	897	9293	1936	0.42	0.46	72.9	73.5	13.2	13.2	B
6	1.00	1.00	0.781	0.962	3442	670	9293	1936	0.37	0.35	72.9	73.5	11.7	11.7	B

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.820	3752	6970	0.54	70.1	17.8	B
2	1.00	0.820	3743	6970	0.54	70.2	17.8	B

3	1.00	0.820	3657	6970	0.52	70.2	17.4	B
4	1.00	0.820	3666	6970	0.53	70.2	17.4	B
5	1.00	0.820	3906	6970	0.56	69.9	18.6	C
6	1.00	0.820	3427	6970	0.49	70.4	16.2	B

Facility Time Period Results

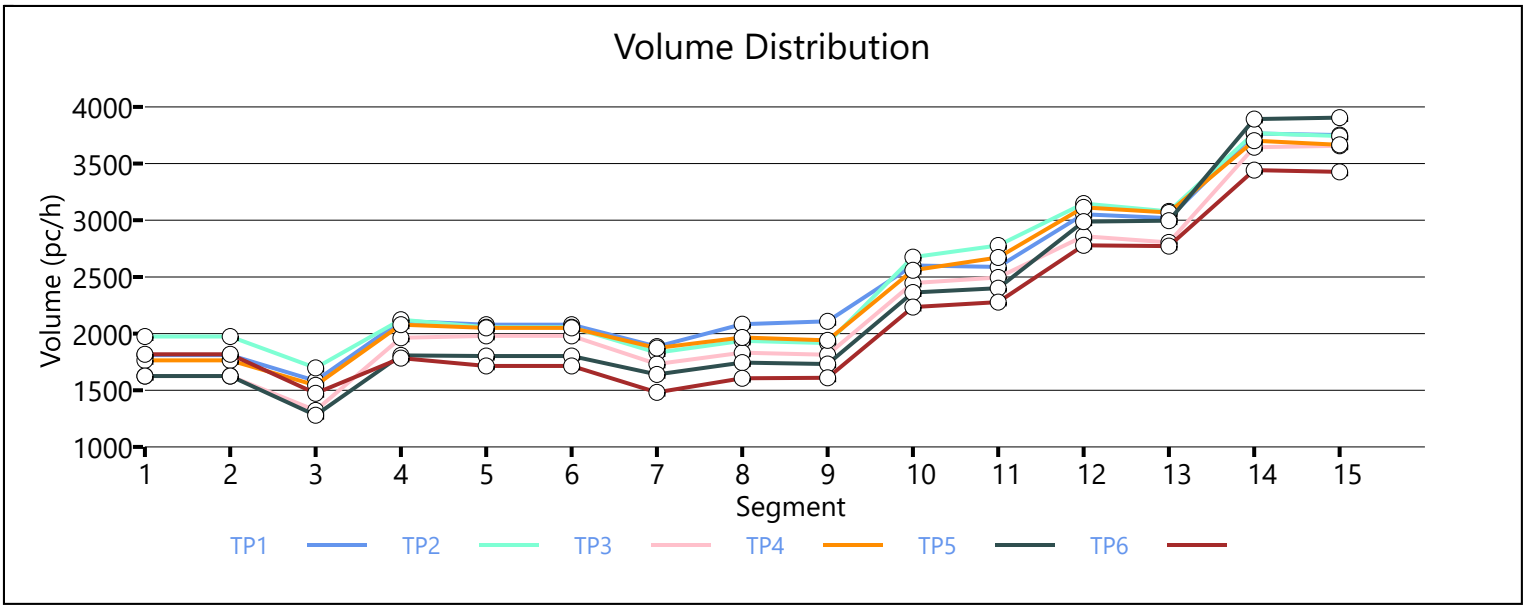
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.0	14.1	9.9	6.00	B
2	69.9	14.3	10.1	6.00	B
3	70.1	13.3	9.4	6.00	B
4	70.1	13.9	9.8	6.00	B
5	70.0	13.1	9.3	6.00	B
6	70.2	12.4	8.7	6.00	B

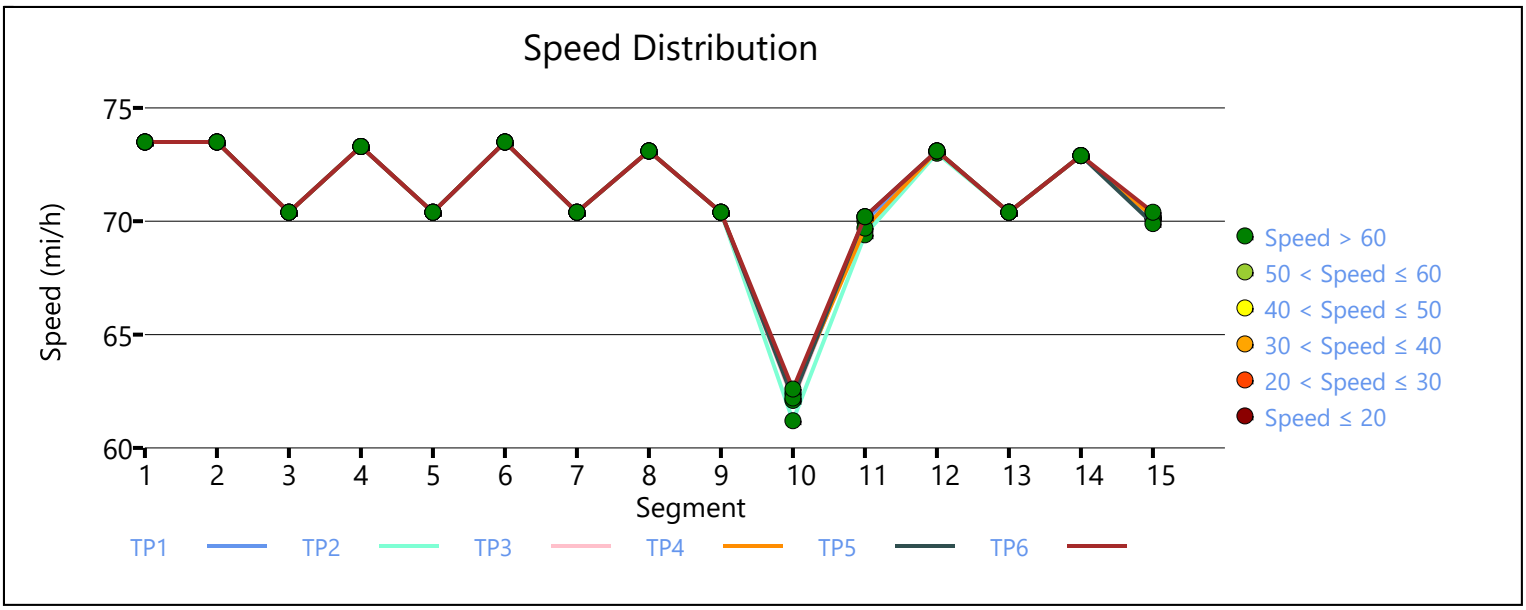
Facility Overall Results

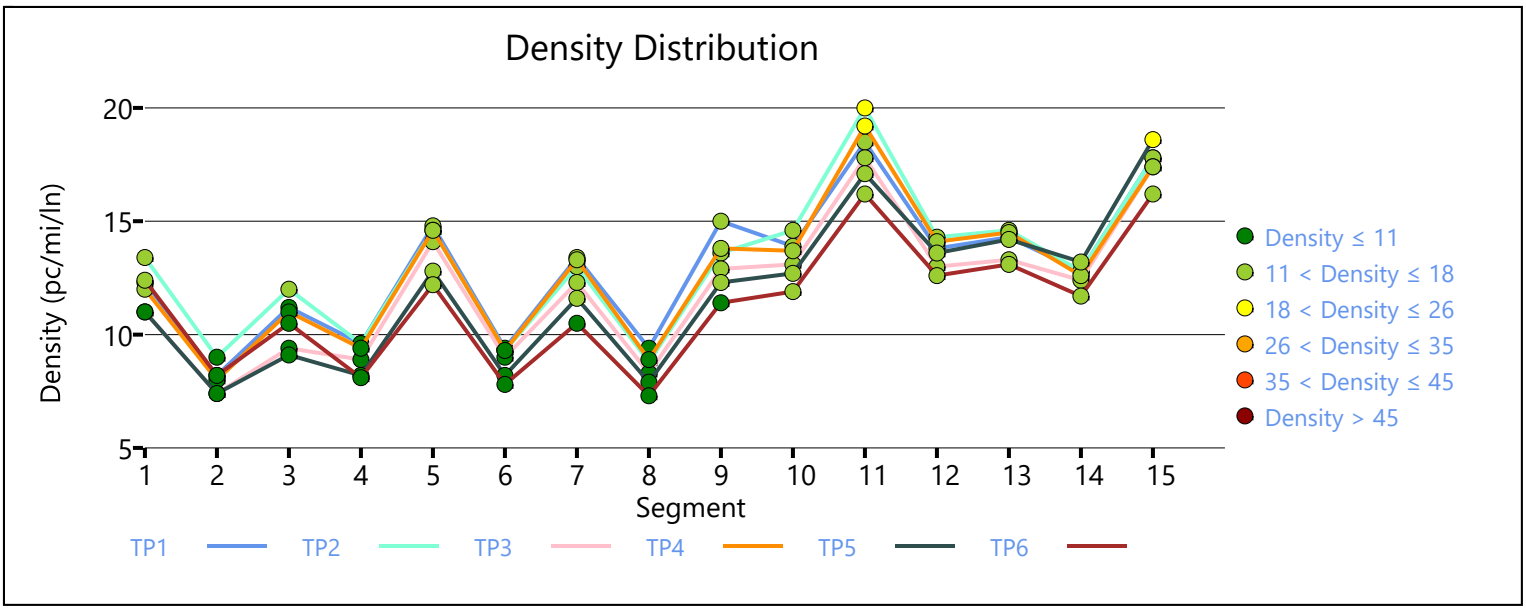
Space Mean Speed, mi/h	70.1	Density, veh/mi/ln	9.5
Average Travel Time, min	6.00	Density, pc/mi/ln	13.5

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2030 Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2030 Build Eastbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.521	1106	4646	0.24	73.5	7.5	A
2	1.00	0.521	1369	4646	0.29	73.5	9.3	A
3	1.00	0.521	1123	4646	0.24	73.5	7.6	A
4	1.00	0.521	1250	4646	0.27	73.5	8.5	A
5	1.00	0.521	1413	4646	0.30	73.5	9.6	A
6	1.00	0.521	1313	4646	0.28	73.5	8.9	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.521	0.641	1106	147	6970	1936	0.16	0.08	73.5	73.5	5.0	5.0	A
2	1.00	1.00	0.521	0.641	1369	122	6970	1936	0.20	0.06	63.6	63.6	7.2	7.2	A
3	1.00	1.00	0.521	0.641	1123	90	6970	1936	0.16	0.05	63.6	63.6	5.9	5.9	A
4	1.00	1.00	0.521	0.641	1250	153	6970	1936	0.18	0.08	63.3	63.3	6.6	6.6	A
5	1.00	1.00	0.521	0.641	1413	184	6970	1936	0.20	0.10	63.3	63.3	7.4	7.4	A
6	1.00	1.00	0.521	0.641	1313	170	6970	1936	0.19	0.09	63.3	63.3	6.9	6.9	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.505	954	4646	0.21	70.4	6.8	A
2	1.00	0.505	1247	4646	0.27	69.9	8.9	A
3	1.00	0.505	1023	4646	0.22	69.9	7.3	A
4	1.00	0.505	1150	4646	0.24	69.8	8.2	A
5	1.00	0.505	1240	4646	0.26	69.8	8.8	A
6	1.00	0.505	1142	4646	0.25	69.8	8.1	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.505	0.794	1378	424	6970	1936	0.20	0.22	73.3	73.5	6.2	6.2	A
2	1.00	1.00	0.505	0.794	1957	1982	6970	1936	0.46	1.02	64.8	64.8	10.1	10.1	A
3	1.00	1.00	0.505	0.794	1936	1870	6970	1936	0.42	0.97	65.0	65.0	9.9	9.9	A
4	1.00	1.00	0.505	0.794	1936	1746	6970	1936	0.41	0.90	65.2	65.2	9.9	9.9	A
5	1.00	1.00	0.505	0.794	1936	1645	6970	1936	0.41	0.85	65.4	65.4	9.9	9.9	A
6	1.00	1.00	0.505	0.794	1936	331	6970	1936	0.21	0.17	67.5	67.5	9.6	9.6	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1376	4646	0.30	70.4	9.8	A
2	1.00	0.595	1957	4646	0.80	70.4	13.9	B
3	1.00	0.595	1936	4646	0.73	70.4	13.8	B
4	1.00	0.595	1936	4646	0.70	70.4	13.8	B
5	1.00	0.595	1936	4646	0.70	70.4	13.8	B
6	1.00	0.595	1936	4646	0.30	70.4	13.8	B

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.725	1376	69	6970	1936	0.20	0.04	73.5	73.5	6.2	6.2	A

2	1.00	1.00	0.595	0.725	1957	76	6970	1936	0.53	0.04	64.1	64.1	10.2	10.2	A
3	1.00	1.00	0.595	0.725	1936	69	6970	1936	0.49	0.04	64.2	64.2	10.1	10.1	A
4	1.00	1.00	0.595	0.725	1936	192	6970	1936	0.47	0.10	63.6	63.6	10.1	10.1	A
5	1.00	1.00	0.595	0.725	1936	95	6970	1936	0.46	0.05	64.1	64.1	10.1	10.1	A
6	1.00	1.00	0.595	0.725	1936	95	6970	1936	0.20	0.05	64.1	64.1	10.1	10.1	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.588	1308	4646	0.28	70.4	9.3	A
2	1.00	0.588	1917	4646	0.79	69.7	13.6	B
3	1.00	0.588	1896	4646	0.72	69.7	13.5	B
4	1.00	0.588	1897	4646	0.66	69.6	13.5	B
5	1.00	0.588	1822	4646	0.68	69.7	12.9	B
6	1.00	0.588	1879	4646	0.28	69.7	13.3	B

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.588	0.980	1698	390	6970	1936	0.24	0.20	73.1	73.5	7.7	7.7	A
2	1.00	1.00	0.588	0.980	2249	876	6970	1936	0.65	0.45	66.4	66.4	11.3	11.3	B
3	1.00	1.00	0.588	0.980	2219	613	6970	1936	0.57	0.32	66.7	66.7	11.1	11.1	B
4	1.00	1.00	0.588	0.980	2219	628	6970	1936	0.53	0.32	66.7	66.7	11.1	11.1	B
5	1.00	1.00	0.588	0.980	2145	446	6970	1936	0.52	0.23	67.0	67.0	10.7	10.7	A
6	1.00	1.00	0.588	0.980	2202	217	6970	1936	0.22	0.11	67.2	67.2	10.9	10.9	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1703	4646	0.37	70.4	12.1	B
2	1.00	0.676	2249	4646	0.96	69.6	16.0	B
3	1.00	0.676	2219	4646	0.82	69.6	15.8	B
4	1.00	0.676	2219	4646	0.77	69.6	15.8	B
5	1.00	0.676	2145	4646	0.73	69.7	15.2	B
6	1.00	0.676	2202	4646	0.31	69.7	15.6	B

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.806	3473	3521	0.99	55.8	20.7	C
2	1.00	0.806	2610	5353	1.12	65.3	13.3	F
3	1.00	0.806	2552	5062	1.07	65.6	13.0	F
4	1.00	0.806	2553	5982	0.71	65.8	12.9	B
5	1.00	0.806	2478	5441	0.82	65.5	12.6	B
6	1.00	0.806	2535	3699	0.62	65.5	12.9	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.794	3668	4646	0.79	63.7	28.8	D
2	1.00	0.794	2462	4646	1.33	70.2	17.5	F
3	1.00	0.794	2408	4646	1.22	70.3	17.1	F
4	1.00	0.794	2436	4646	0.92	70.2	17.4	B
5	1.00	0.794	2301	4646	0.98	70.3	16.3	B
6	1.00	0.794	2370	4646	0.48	70.3	16.9	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.794	0.980	4012	344	6970	1936	0.58	0.18	72.0	72.0	18.6	18.6	C
2	1.00	1.00	0.794	0.980	2787	496	6970	1936	0.96	0.26	65.5	65.5	14.2	14.2	B
3	1.00	1.00	0.794	0.980	2730	1245	6970	1936	0.99	0.64	64.6	64.6	14.1	14.1	B
4	1.00	1.00	0.794	0.980	2758	1235	6970	1936	0.79	0.64	64.6	64.6	14.2	14.2	B
5	1.00	1.00	0.794	0.980	2624	1103	6970	1936	0.81	0.57	64.8	64.8	13.5	13.5	B
6	1.00	1.00	0.794	0.980	2693	977	6970	1936	0.46	0.50	64.9	64.9	13.8	13.8	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.847	3836	6970	0.55	70.0	18.3	C
2	1.00	0.847	2787	6970	0.91	69.4	13.2	B
3	1.00	0.847	2730	6970	0.97	69.3	12.9	B
4	1.00	0.847	2758	6970	0.78	69.3	13.1	B
5	1.00	0.847	2624	6970	0.80	69.3	12.4	B
6	1.00	0.847	2693	6970	0.46	69.3	12.8	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.847	0.962	4986	1150	9293	1936	0.54	0.59	72.7	72.7	17.1	17.1	B
2	1.00	1.00	0.847	0.962	3047	1305	9293	1936	0.83	0.67	67.1	67.1	11.4	11.4	B
3	1.00	1.00	0.847	0.962	2972	1284	9293	1936	0.87	0.66	67.1	67.1	11.1	11.1	B
4	1.00	1.00	0.847	0.962	3000	1222	9293	1936	0.71	0.63	67.3	67.3	11.1	11.1	B
5	1.00	1.00	0.847	0.962	2866	850	9293	1936	0.69	0.44	67.9	67.9	10.6	10.6	A
6	1.00	1.00	0.847	0.962	2935	831	9293	1936	0.43	0.43	67.9	67.9	10.8	10.8	A

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.862	5052	6970	0.72	66.2	25.4	C
2	1.00	0.862	3047	6970	1.11	70.4	14.4	F

3	1.00	0.862	2972	6970	1.16	70.4	14.1	F
4	1.00	0.862	3000	6970	0.96	70.4	14.2	B
5	1.00	0.862	2866	6970	0.92	70.4	13.6	B
6	1.00	0.862	2935	6970	0.58	70.4	13.9	B

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.3	14.5	10.9	6.30	B
2	69.1	12.7	8.9	6.10	F
3	69.1	12.2	8.6	6.10	F
4	69.2	12.4	8.7	6.10	B
5	69.2	12.3	8.6	6.10	B
6	69.2	12.3	8.7	6.00	B

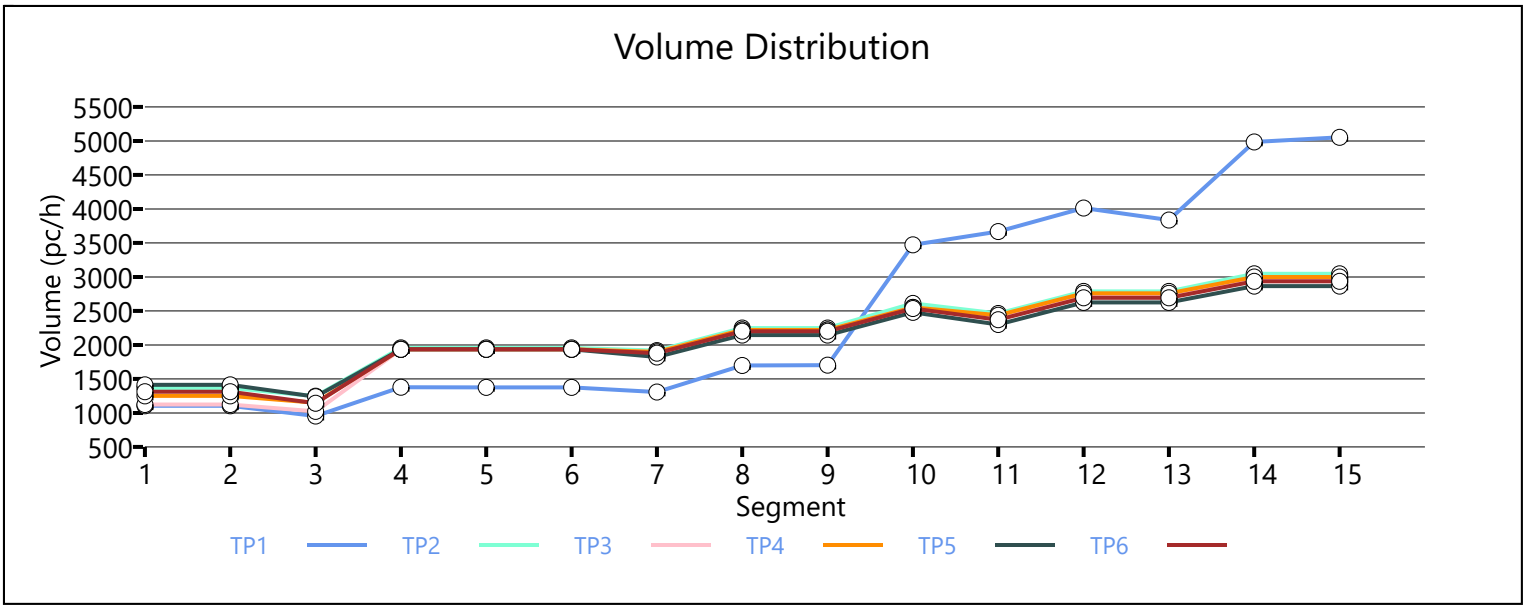
Facility Overall Results

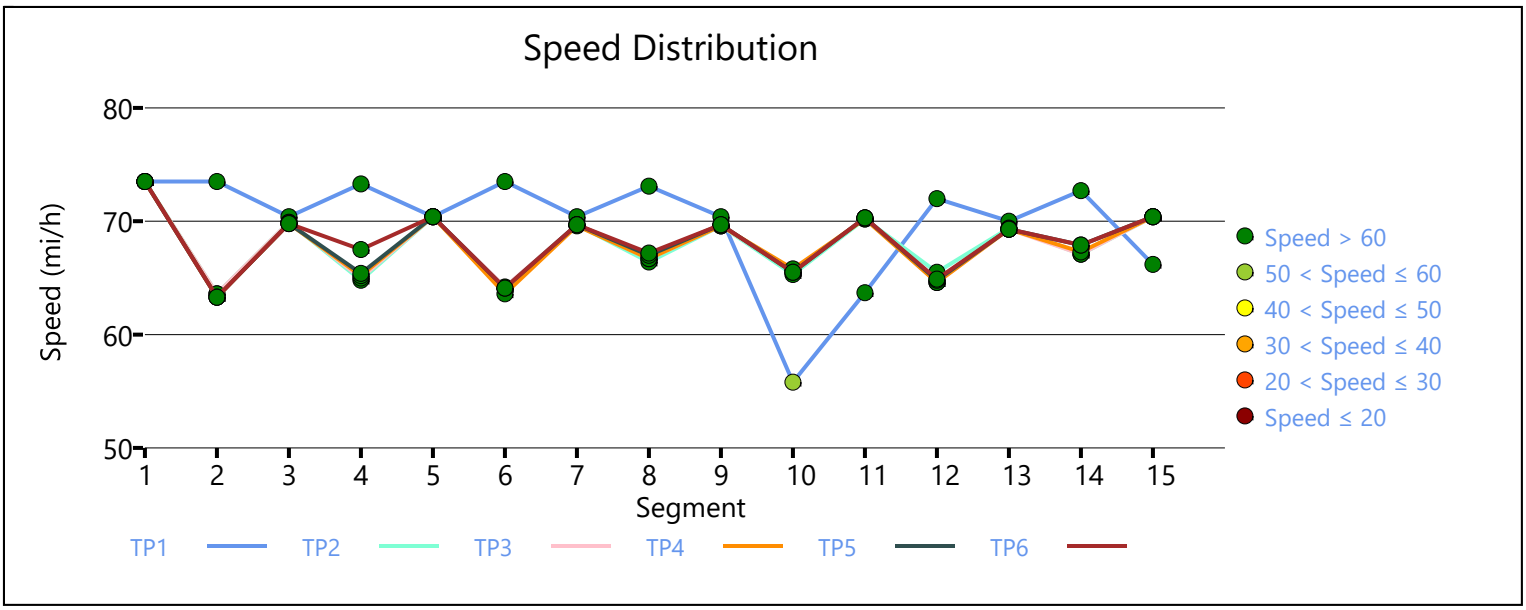
Space Mean Speed, mi/h	68.6	Density, veh/mi/ln	9.1
Average Travel Time, min	6.10	Density, pc/mi/ln	12.8

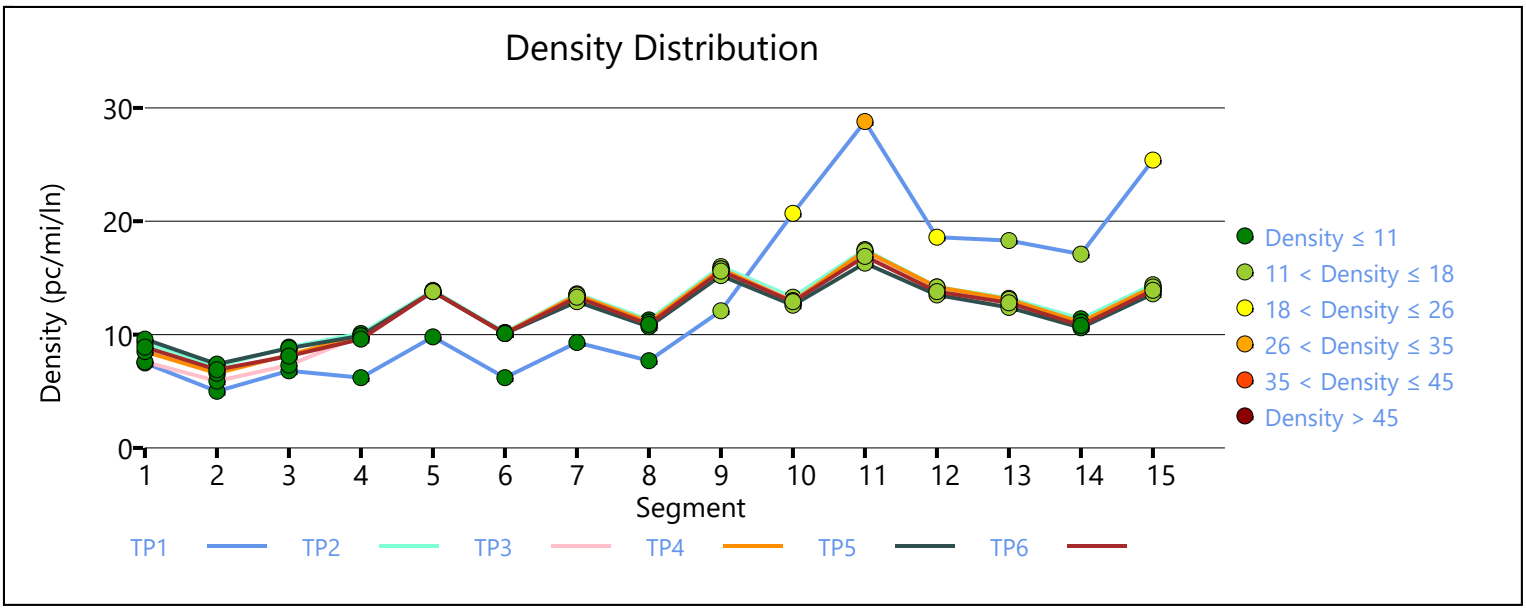
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 15. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Merge capacity is less than merge demand on segment 4.
WARNING 3	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 4	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 5	Diverge capacity is less than diverge demand on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2030 Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2030 Build Eastbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.98		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	West of Atrisco	5000	2
2	Diverge	Basic	Atrisco Diverge	850	3
3	Basic	Basic	Between Atrisco Ramps	2300	2
4	Merge	Basic	Atrisco Merge	1080	3
5	Basic	Basic	West of Arroyo	10000	2
6	Diverge	Basic	Arroyo Diverge	920	3
7	Basic	Basic	Before Arroyo Merge	1750	2
8	Merge	Basic	Arroyo Merge	850	3
9	Basic	Basic	Between Arroyo Ramps	1100	2
10	Weaving	Weaving	Arroyo Merge Unser Diverge	2850	3
11	Basic	Basic	Before Unser Merge	1900	2
12	Merge	Basic	Unser Merge	800	3
13	Basic	Basic	Between Unser Ramps	1200	3
14	Merge	Basic	Unser Merge	800	4
15	Basic	Basic	East of Unser	5450	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	1810	4646	0.39	73.5	12.3	B
2	1.00	0.610	1974	4646	0.42	73.5	13.4	B
3	1.00	0.610	1625	4646	0.35	73.5	11.0	A
4	1.00	0.610	1764	4646	0.38	73.5	12.0	B
5	1.00	0.610	1625	4646	0.35	73.5	11.0	A
6	1.00	0.610	1818	4646	0.39	73.5	12.4	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.610	0.725	1810	254	6970	1936	0.26	0.13	73.5	73.5	8.2	8.2	A
2	1.00	1.00	0.610	0.725	1974	313	6970	1936	0.28	0.16	73.5	73.5	9.0	9.0	A
3	1.00	1.00	0.610	0.725	1625	320	6970	1936	0.23	0.17	73.5	73.5	7.4	7.4	A
4	1.00	1.00	0.610	0.725	1764	259	6970	1936	0.25	0.13	73.5	73.5	8.0	8.0	A
5	1.00	1.00	0.610	0.725	1625	354	6970	1936	0.23	0.18	73.5	73.5	7.4	7.4	A
6	1.00	1.00	0.610	0.725	1818	349	6970	1936	0.26	0.18	73.5	73.5	8.2	8.2	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1583	4646	0.34	70.4	11.2	B
2	1.00	0.581	1682	4646	0.36	70.4	11.9	B
3	1.00	0.581	1306	4646	0.28	70.4	9.3	A
4	1.00	0.581	1528	4646	0.33	70.4	10.9	A
5	1.00	0.581	1263	4646	0.27	70.4	9.0	A
6	1.00	0.581	1473	4646	0.32	70.4	10.5	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.781	2111	528	6970	1936	0.30	0.27	73.3	73.5	9.6	9.6	A
2	1.00	1.00	0.581	0.781	3033	1351	6970	1936	0.44	0.70	73.3	73.5	13.8	13.8	B
3	1.00	1.00	0.581	0.781	2872	1566	6970	1936	0.41	0.81	73.3	73.5	13.0	13.0	B
4	1.00	1.00	0.581	0.781	2986	1458	6970	1936	0.43	0.75	73.3	73.5	13.5	13.5	B
5	1.00	1.00	0.581	0.781	2715	1452	6970	1936	0.39	0.75	73.3	73.5	12.3	12.3	B
6	1.00	1.00	0.581	0.781	1784	311	6970	1936	0.26	0.16	73.3	73.5	8.1	8.1	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	2078	4646	0.45	70.4	14.8	B
2	1.00	0.641	3170	4646	0.68	67.5	23.5	C
3	1.00	0.641	3092	4646	0.67	68.0	22.7	C
4	1.00	0.641	3162	4646	0.68	67.6	23.4	C
5	1.00	0.641	2914	4646	0.63	68.9	21.1	C
6	1.00	0.641	1715	4646	0.37	70.4	12.2	B

Segment 6: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	0.617	2078	201	6970	1936	0.30	0.10	73.5	73.5	9.4	9.4	A

2	1.00	1.00	0.641	0.617	3170	233	6970	1936	0.45	0.12	73.4	73.4	14.4	14.4	B
3	1.00	1.00	0.641	0.617	3092	258	6970	1936	0.44	0.13	73.5	73.5	14.0	14.0	B
4	1.00	1.00	0.641	0.617	3162	185	6970	1936	0.45	0.10	73.5	73.5	14.3	14.3	B
5	1.00	1.00	0.641	0.617	2914	169	6970	1936	0.42	0.09	73.5	73.5	13.2	13.2	B
6	1.00	1.00	0.641	0.617	1715	241	6970	1936	0.25	0.12	73.5	73.5	7.8	7.8	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.641	1885	4646	0.41	70.4	13.4	B
2	1.00	0.641	2945	4646	0.63	68.7	21.4	C
3	1.00	0.641	2844	4646	0.61	69.2	20.5	C
4	1.00	0.641	2984	4646	0.64	68.5	21.8	C
5	1.00	0.641	2752	4646	0.59	69.5	19.8	C
6	1.00	0.641	1482	4646	0.32	70.4	10.5	A

Segment 8: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.641	1.000	2083	198	6970	1936	0.30	0.10	73.1	73.5	9.4	9.4	A
2	1.00	1.00	0.641	1.000	3179	234	6970	1936	0.46	0.12	72.9	73.4	14.4	14.4	B
3	1.00	1.00	0.641	1.000	3073	229	6970	1936	0.44	0.12	73.0	73.5	13.9	13.9	B
4	1.00	1.00	0.641	1.000	3208	224	6970	1936	0.46	0.12	72.9	73.4	14.6	14.6	B
5	1.00	1.00	0.641	1.000	2986	234	6970	1936	0.43	0.12	73.0	73.5	13.5	13.5	B
6	1.00	1.00	0.641	1.000	1606	124	6970	1936	0.23	0.06	73.1	73.5	7.3	7.3	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.667	2108	4646	0.45	70.4	15.0	B
2	1.00	0.667	3181	4646	0.68	67.5	23.6	C
3	1.00	0.667	3076	4646	0.66	68.1	22.6	C
4	1.00	0.667	3204	4646	0.69	67.3	23.8	C
5	1.00	0.667	2996	4646	0.64	68.5	21.9	C
6	1.00	0.667	1610	4646	0.35	70.4	11.4	B

Segment 10: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.746	2601	5944	0.44	62.2	13.9	B
2	1.00	0.746	3804	6128	0.62	59.6	21.3	C
3	1.00	0.746	3574	6151	0.58	60.5	19.7	B
4	1.00	0.746	3687	6227	0.59	60.8	20.2	C
5	1.00	0.746	3489	6138	0.57	60.7	19.2	B
6	1.00	0.746	2234	5151	0.43	62.6	11.9	B

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.735	2588	4646	0.56	70.0	18.5	C
2	1.00	0.735	3917	4646	0.84	61.2	32.0	D
3	1.00	0.735	3633	4646	0.78	64.0	28.4	D
4	1.00	0.735	3810	4646	0.82	62.3	30.6	D
5	1.00	0.735	3539	4646	0.76	64.8	27.3	D
6	1.00	0.735	2278	4646	0.49	70.2	16.2	B

Segment 12: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.735	0.980	3053	465	6970	1936	0.44	0.24	73.1	73.5	13.8	13.8	B
2	1.00	1.00	0.735	0.980	4286	369	6970	1936	0.61	0.19	71.2	71.2	20.1	20.1	C
3	1.00	1.00	0.735	0.980	3997	364	6970	1936	0.57	0.19	72.1	72.1	18.5	18.5	C
4	1.00	1.00	0.735	0.980	4251	441	6970	1936	0.61	0.23	71.3	71.3	19.9	19.9	C
5	1.00	1.00	0.735	0.980	4126	587	6970	1936	0.59	0.30	71.7	71.7	19.2	19.2	C
6	1.00	1.00	0.735	0.980	2779	501	6970	1936	0.40	0.26	73.1	73.5	12.6	12.6	B

Segment 13: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.781	3019	6970	0.43	70.4	14.3	B
2	1.00	0.781	4150	6970	0.60	69.4	19.9	C
3	1.00	0.781	3876	6970	0.56	70.0	18.5	C
4	1.00	0.781	4138	6970	0.59	69.5	19.8	C
5	1.00	0.781	4067	6970	0.58	69.6	19.5	C
6	1.00	0.781	2772	6970	0.40	70.4	13.1	B

Segment 14: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.781	0.962	3766	747	9293	1936	0.41	0.39	72.9	73.5	12.8	12.8	B
2	1.00	1.00	0.781	0.962	4841	691	9293	1936	0.52	0.36	72.7	72.9	16.6	16.6	B
3	1.00	1.00	0.781	0.962	4716	840	9293	1936	0.51	0.43	72.8	73.1	16.1	16.1	B
4	1.00	1.00	0.781	0.962	4772	634	9293	1936	0.51	0.33	72.7	73.0	16.3	16.3	B
5	1.00	1.00	0.781	0.962	4964	897	9293	1936	0.53	0.46	72.7	72.7	17.1	17.1	B
6	1.00	1.00	0.781	0.962	3442	670	9293	1936	0.37	0.35	72.9	73.5	11.7	11.7	B

Segment 15: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.820	3752	6970	0.54	70.1	17.8	B
2	1.00	0.820	4763	6970	0.68	67.5	23.5	C

3	1.00	0.820	4677	6970	0.67	67.8	23.0	C
4	1.00	0.820	4685	6970	0.67	67.8	23.0	C
5	1.00	0.820	4926	6970	0.71	66.8	24.6	C
6	1.00	0.820	3427	6970	0.49	70.4	16.2	B

Facility Time Period Results

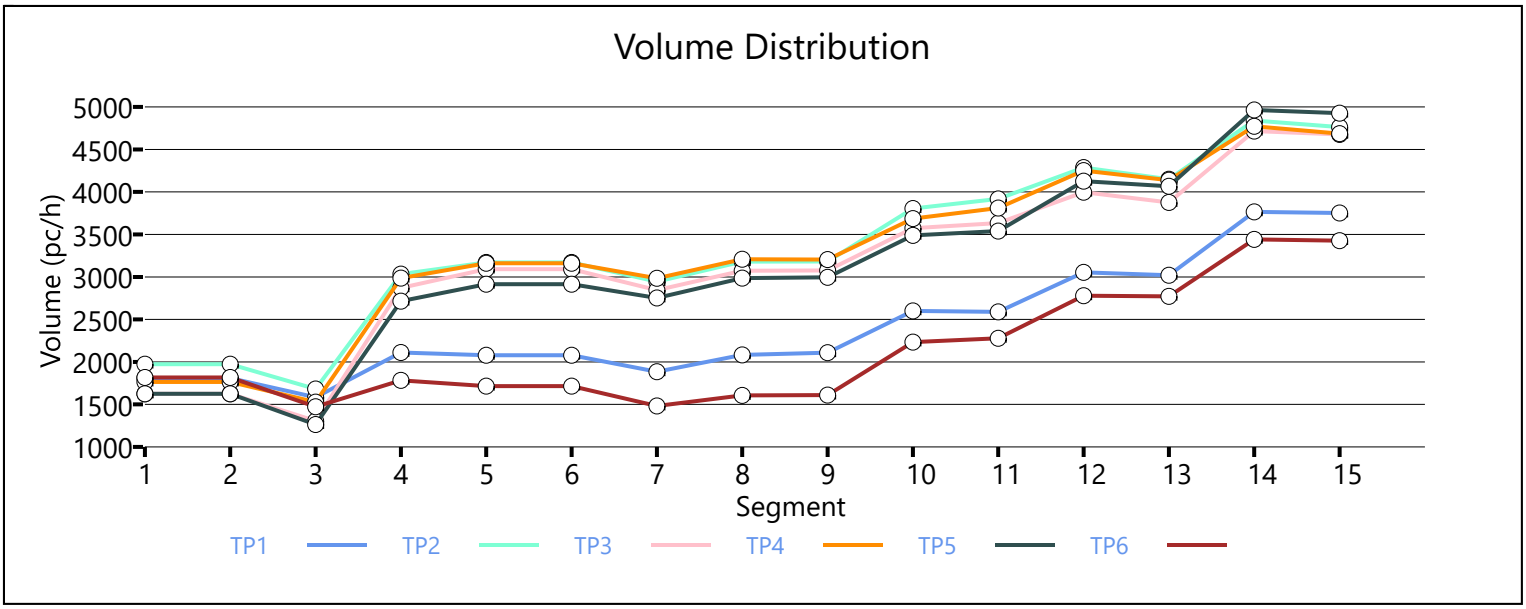
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.0	14.1	9.9	6.00	B
2	67.4	20.1	14.1	6.20	C
3	68.0	18.8	13.3	6.20	C
4	67.7	19.5	13.8	6.20	C
5	68.0	18.6	13.2	6.20	C
6	70.2	12.4	8.7	6.00	B

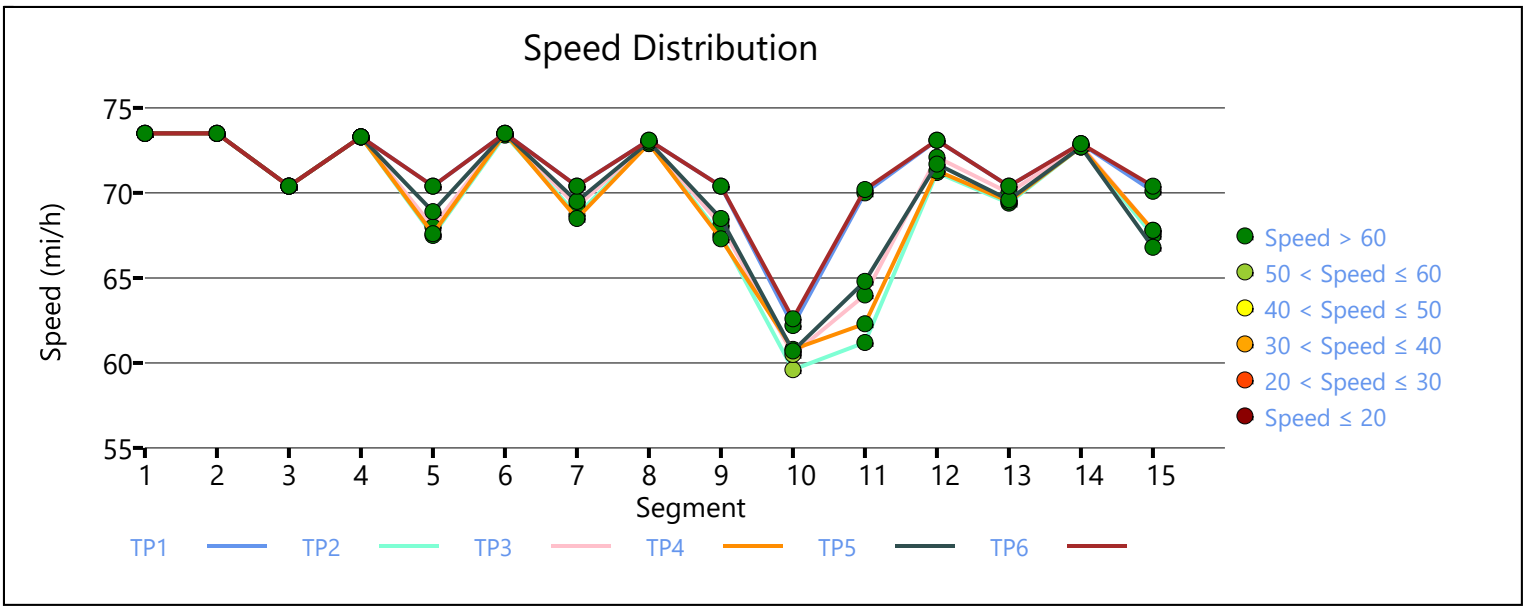
Facility Overall Results

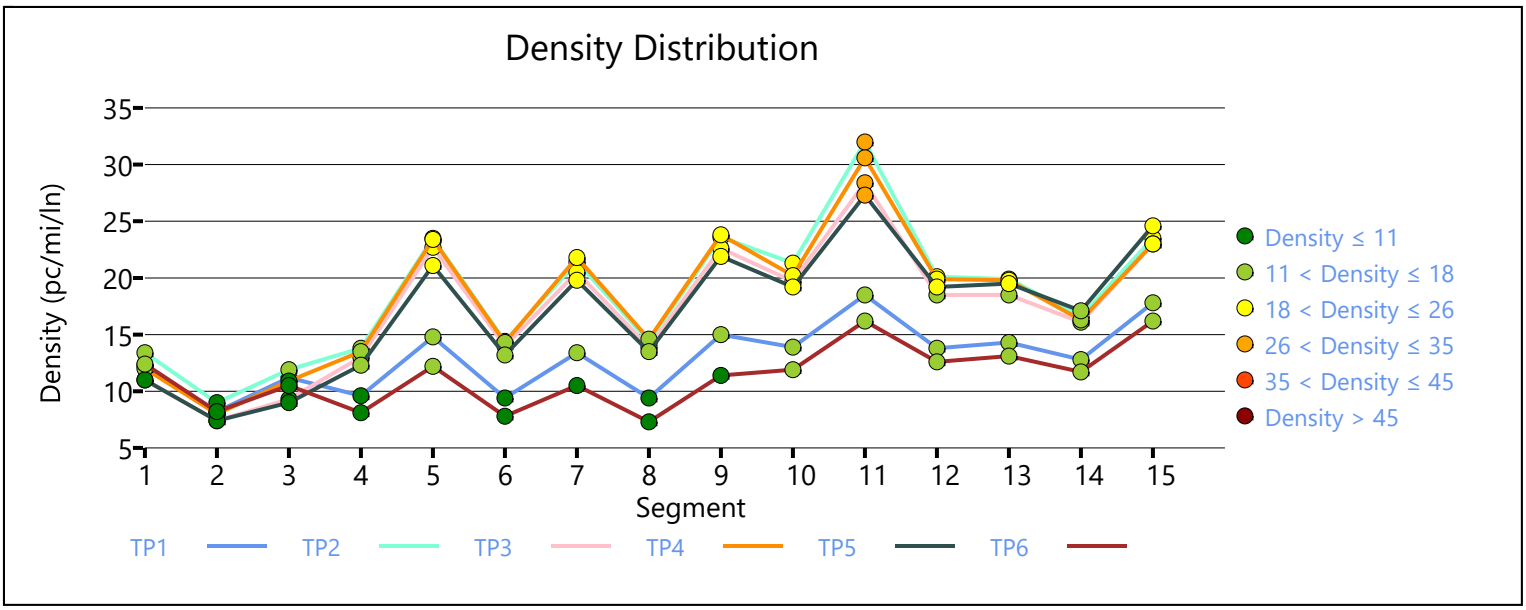
Space Mean Speed, mi/h	68.4	Density, veh/mi/ln	12.2
Average Travel Time, min	6.10	Density, pc/mi/ln	17.3

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2019
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2019 Existing Westbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	3042	6970	0.44	70.4	14.4	B
2	1.00	0.526	2852	6970	0.41	70.4	13.5	B
3	1.00	0.526	3665	6970	0.53	70.2	17.4	B
4	1.00	0.526	3163	6970	0.45	70.4	15.0	B
5	1.00	0.526	3087	6970	0.44	70.4	14.6	B
6	1.00	0.526	3316	6970	0.48	70.4	15.7	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.526	0.909	3042	669	9293	4000	0.33	0.17	69.3	58.1	11.0	1.8	A

2	1.00	1.00	0.526	0.909	2852	480	9293	4000	0.31	0.12	70.1	58.7	10.2	0.6	A
3	1.00	1.00	0.526	0.909	3665	669	9293	4000	0.39	0.17	69.6	58.1	13.2	3.4	A
4	1.00	1.00	0.526	0.909	3163	572	9293	4000	0.34	0.14	70.0	58.4	11.3	1.6	A
5	1.00	1.00	0.526	0.909	3087	673	9293	4000	0.33	0.17	69.3	58.1	11.1	1.9	A
6	1.00	1.00	0.526	0.909	3316	616	9293	4000	0.36	0.15	69.9	58.3	11.9	2.2	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	1886	4646	0.41	70.4	13.4	B
2	1.00	0.526	2023	4646	0.44	70.4	14.4	B
3	1.00	0.526	2510	4646	0.54	70.1	17.9	B
4	1.00	0.526	2175	4646	0.47	70.4	15.5	B
5	1.00	0.526	1924	4646	0.41	70.4	13.7	B
6	1.00	0.526	2251	4646	0.48	70.4	16.0	B

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	1733	5773	0.30	64.8	8.9	A
2	1.00	0.526	1888	5826	0.32	64.5	9.8	A
3	1.00	0.526	2218	5352	0.41	61.9	11.9	B
4	1.00	0.526	1937	5545	0.35	63.3	10.2	B
5	1.00	0.526	1794	5744	0.31	64.4	9.3	A
6	1.00	0.526	2146	5903	0.36	64.1	11.2	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	1392	4646	0.30	70.3	9.9	A
2	1.00	0.526	1559	4646	0.34	70.3	11.1	B
3	1.00	0.526	1643	4646	0.35	70.3	11.7	B
4	1.00	0.526	1460	4646	0.31	70.3	10.4	A
5	1.00	0.526	1460	4646	0.31	70.3	10.4	A
6	1.00	0.526	1840	4646	0.40	70.3	13.1	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.526	0.667	1512	120	6970	2000	0.22	0.06	73.4	73.5	6.9	6.9	A
2	1.00	1.00	0.526	0.667	1721	162	6970	2000	0.25	0.08	73.4	73.5	7.8	7.8	A
3	1.00	1.00	0.526	0.667	1757	114	6970	2000	0.25	0.06	73.4	73.5	8.0	8.0	A
4	1.00	1.00	0.526	0.667	1646	186	6970	2000	0.24	0.09	73.4	73.5	7.5	7.5	A
5	1.00	1.00	0.526	0.667	1646	186	6970	2000	0.24	0.09	73.4	73.5	7.5	7.5	A
6	1.00	1.00	0.526	0.667	1936	96	6970	2000	0.28	0.05	73.4	73.5	8.8	8.8	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	1331	6970	0.19	70.4	6.3	A
2	1.00	0.610	1521	6970	0.22	70.4	7.2	A
3	1.00	0.610	1541	6970	0.22	70.4	7.3	A
4	1.00	0.610	1462	6970	0.21	70.4	6.9	A
5	1.00	0.610	1462	6970	0.21	70.4	6.9	A
6	1.00	0.610	1692	6970	0.24	70.4	8.0	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	1398	467	9293	2000	0.15	0.23	73.5	73.5	4.8	4.8	A
2	1.00	1.00	0.581	0.676	1597	391	9293	2000	0.17	0.20	73.5	73.5	5.4	5.4	A
3	1.00	1.00	0.581	0.676	1618	396	9293	2000	0.17	0.20	73.5	73.5	5.5	5.5	A
4	1.00	1.00	0.581	0.676	1535	361	9293	2000	0.17	0.18	73.5	73.5	5.2	5.2	A
5	1.00	1.00	0.581	0.676	1535	444	9293	2000	0.17	0.22	73.5	73.5	5.2	5.2	A
6	1.00	1.00	0.581	0.676	1776	467	9293	2000	0.19	0.23	73.5	73.5	6.0	6.0	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	854	6970	0.12	70.4	4.0	A
2	1.00	0.581	1143	6970	0.16	70.4	5.4	A
3	1.00	0.581	1157	6970	0.17	70.4	5.5	A
4	1.00	0.581	1115	6970	0.16	70.4	5.3	A
5	1.00	0.581	1019	6970	0.15	70.4	4.8	A
6	1.00	0.581	1232	6970	0.18	70.4	5.8	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.769	1041	187	9293	2000	0.11	0.09	73.4	73.5	3.5	3.5	A
2	1.00	1.00	0.581	0.769	1330	187	9293	2000	0.14	0.09	73.4	73.5	4.5	4.5	A
3	1.00	1.00	0.581	0.769	1422	265	9293	2000	0.15	0.13	73.4	73.5	4.8	4.8	A
4	1.00	1.00	0.581	0.769	1266	151	9293	2000	0.14	0.08	73.4	73.5	4.3	4.3	A
5	1.00	1.00	0.581	0.769	1159	140	9293	2000	0.12	0.07	73.4	73.5	3.9	3.9	A
6	1.00	1.00	0.581	0.769	1357	125	9293	2000	0.15	0.06	73.4	73.5	4.6	4.6	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.602	1063	6970	0.15	70.4	5.0	A
2	1.00	0.602	1342	6970	0.19	70.4	6.3	A

3	1.00	0.602	1455	6970	0.21	70.4	6.9	A
4	1.00	0.602	1269	6970	0.18	70.4	6.0	A
5	1.00	0.602	1163	6970	0.17	70.4	5.5	A
6	1.00	0.602	1349	6970	0.19	70.4	6.4	A

Facility Time Period Results

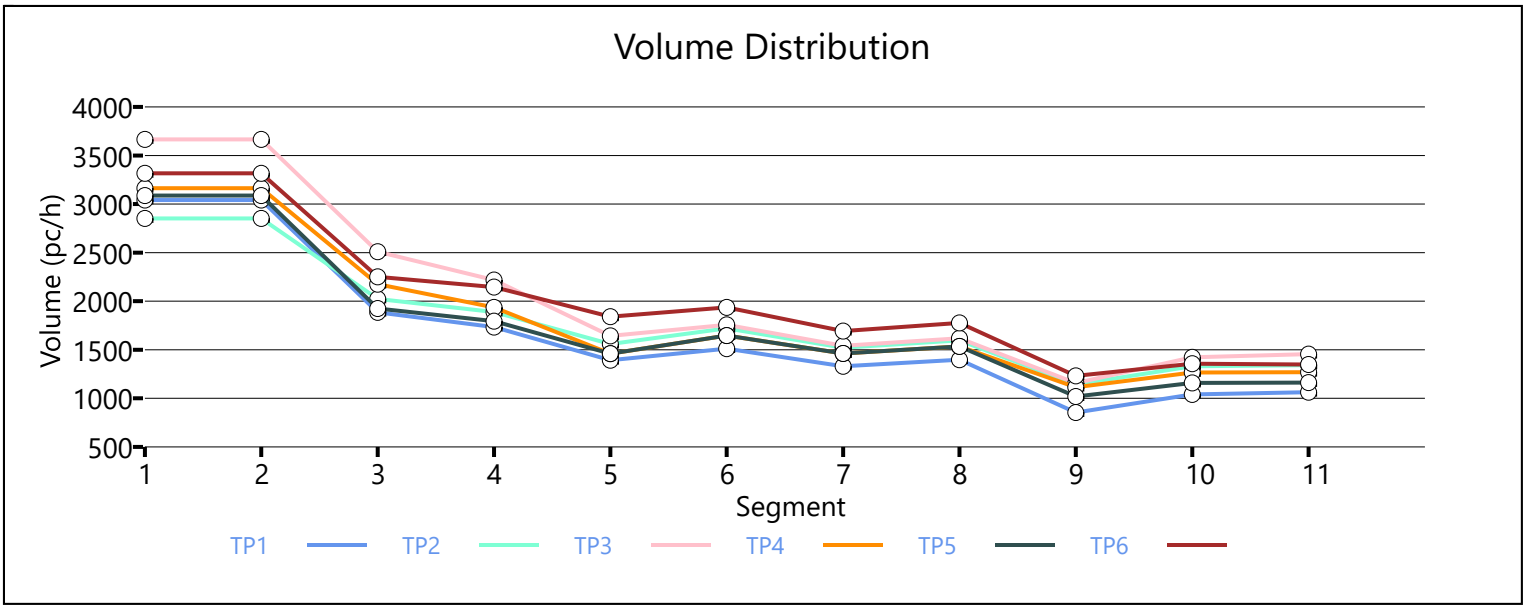
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.1	8.7	4.7	5.80	A
2	70.2	9.2	5.1	5.80	A
3	69.8	10.8	5.9	5.80	A
4	70.1	9.5	5.2	5.80	A
5	70.1	9.1	5.0	5.80	A
6	70.1	10.4	5.7	5.80	A

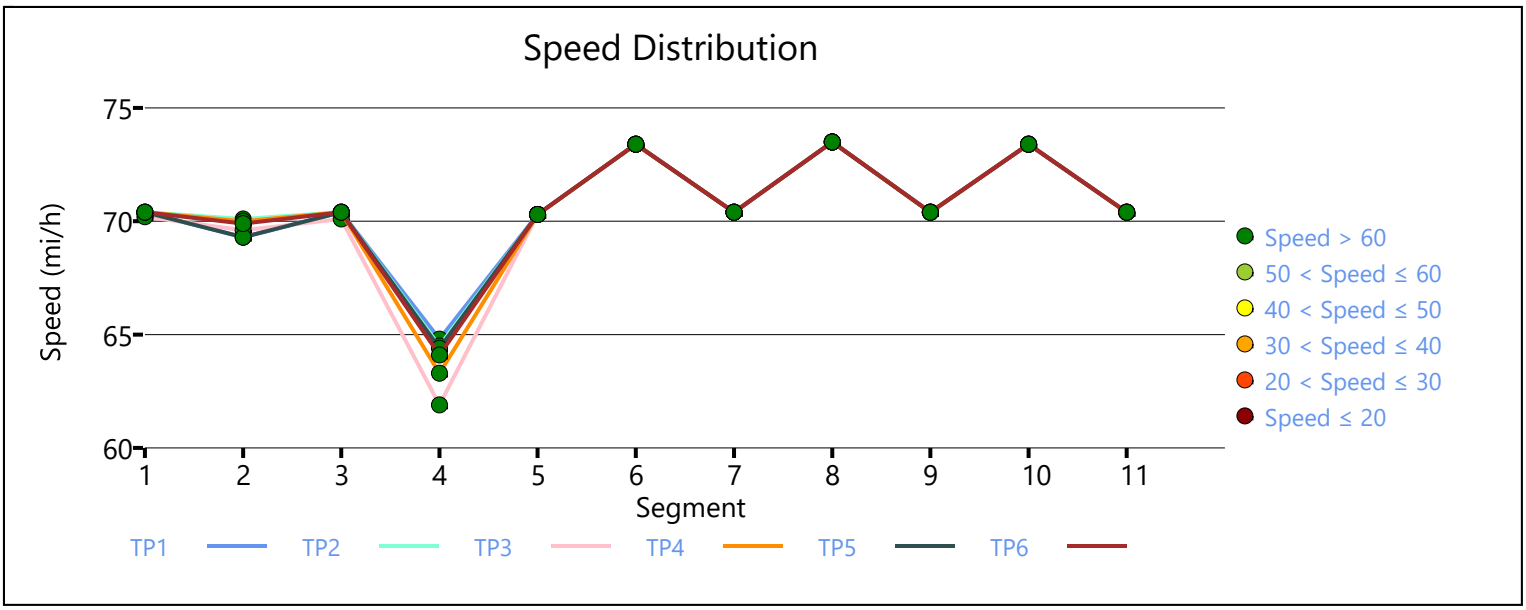
Facility Overall Results

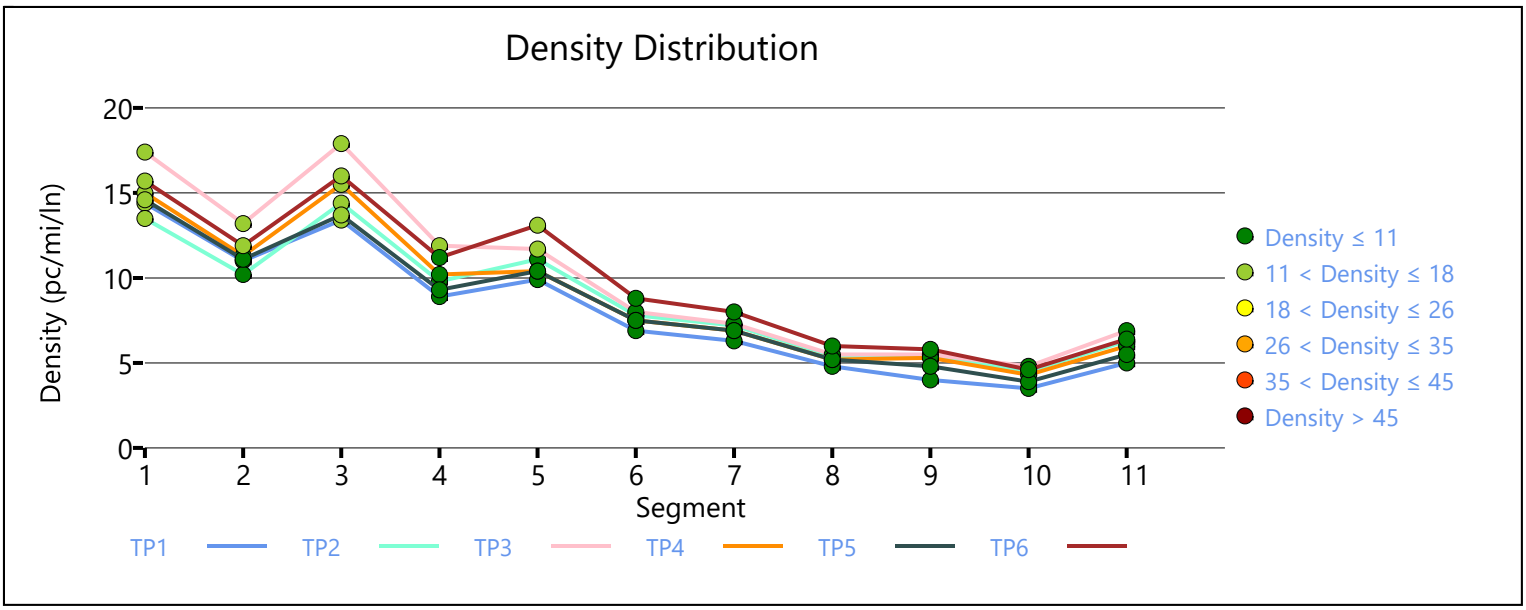
Space Mean Speed, mi/h	70.0	Density, veh/mi/ln	5.3
Average Travel Time, min	5.80	Density, pc/mi/ln	9.6

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2019
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2019 Existing Westbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	8	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	6826	6970	0.98	53.1	42.8	E
2	1.00	0.610	5713	6970	1.02	29.8	64.0	F
3	1.00	0.610	3999	6970	1.00	12.5	106.8	F
4	1.00	0.610	4096	6970	1.01	13.0	104.8	F
5	1.00	0.610	3884	6970	1.00	11.9	109.2	F
6	1.00	0.610	3903	6970	1.07	12.0	108.8	F
7	1.00	0.610	4099	6970	1.05	13.0	104.7	F
8	1.00	0.610	3988	6970	1.01	12.4	107.0	F

Segment 2: Diverge

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.610	0.962	6826	1813	9293	4000	0.73	0.45	65.2	54.9	26.2	17.5	B
2	1.00	1.00	0.610	0.962	4886	2091	9293	4000	0.76	0.52	15.1	54.1	80.7	19.9	F
3	1.00	1.00	0.610	0.962	4036	2029	9293	4000	0.75	0.51	8.7	54.3	116.6	19.3	F
4	1.00	1.00	0.610	0.962	4055	2204	9293	4000	0.76	0.55	8.7	53.8	116.8	20.5	F
5	1.00	1.00	0.610	0.962	3898	2104	9293	4000	0.75	0.53	8.3	54.1	117.0	19.8	F
6	1.00	1.00	0.610	0.962	3913	2324	9293	4000	0.80	0.58	8.3	53.4	118.4	22.2	F
7	1.00	1.00	0.610	0.962	4122	2025	9293	4000	0.79	0.51	8.9	54.3	115.6	20.0	F
8	1.00	1.00	0.610	0.962	3961	1958	9293	4000	0.76	0.49	8.4	54.5	117.7	19.0	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	3967	4646	0.85	60.7	32.7	D
2	1.00	0.610	2556	4646	0.81	13.0	98.6	F
3	1.00	0.610	2956	4646	0.82	15.1	97.7	F
4	1.00	0.610	2806	4646	0.77	13.7	102.1	F
5	1.00	0.610	2655	4646	0.79	12.4	107.1	F
6	1.00	0.610	2784	4646	0.82	13.5	103.0	F
7	1.00	0.610	2920	4646	0.89	14.8	98.9	F
8	1.00	0.610	2812	4646	0.85	13.8	102.0	F

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	3165	3520	0.90	54.6	19.3	B
2	1.00	0.610	2891	3105	0.97	51.7	20.8	C
3	1.00	0.610	3289	3537	0.88	50.5	23.9	C
4	1.00	0.610	3140	3376	0.86	52.1	20.1	C
5	1.00	0.610	2988	3213	0.91	52.3	19.6	B
6	1.00	0.610	3117	3352	0.92	51.2	22.2	C
7	1.00	0.610	3253	3498	0.94	51.4	21.8	C
8	1.00	0.610	3145	3382	0.96	51.7	20.8	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.610	1397	4646	0.30	70.2	9.9	A
2	1.00	0.610	0	4646	0.26	70.1	0.0	A
3	1.00	0.610	0	4646	0.32	70.1	0.0	A
4	1.00	0.610	397	4646	0.28	70.1	2.8	A
5	1.00	0.610	252	4646	0.25	70.1	1.8	A
6	1.00	0.610	45	4646	0.29	70.1	0.3	A
7	1.00	0.610	232	4646	0.31	70.1	1.6	A
8	1.00	0.610	249	4646	0.32	70.1	1.8	A

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.610	0.588	1649	252	6970	2000	0.24	0.13	73.4	73.5	7.5	7.5	A
2	1.00	1.00	0.610	0.588	224	224	6970	2000	0.21	0.11	65.0	65.0	1.1	1.1	A
3	1.00	1.00	0.610	0.588	190	190	6970	2000	0.24	0.10	65.0	65.0	1.0	1.0	A
4	1.00	1.00	0.610	0.588	547	150	6970	2000	0.21	0.08	67.3	67.3	2.7	2.7	A
5	1.00	1.00	0.610	0.588	422	170	6970	2000	0.19	0.09	66.9	66.9	2.1	2.1	A
6	1.00	1.00	0.610	0.588	222	177	6970	2000	0.22	0.09	65.6	65.6	1.1	1.1	A
7	1.00	1.00	0.610	0.588	382	150	6970	2000	0.23	0.08	66.9	66.9	1.9	1.9	A
8	1.00	1.00	0.610	0.588	412	163	6970	2000	0.24	0.08	66.9	66.9	2.1	2.1	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.588	1701	6970	0.24	70.4	8.1	A
2	1.00	0.588	224	6970	0.21	70.4	1.1	A
3	1.00	0.588	190	6970	0.25	70.4	0.9	A
4	1.00	0.588	547	6970	0.22	70.4	2.6	A
5	1.00	0.588	422	6970	0.20	70.4	2.0	A
6	1.00	0.588	222	6970	0.23	70.4	1.1	A
7	1.00	0.588	382	6970	0.24	70.4	1.8	A
8	1.00	0.588	412	6970	0.24	70.4	2.0	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.588	0.847	1701	387	9293	2000	0.18	0.19	73.5	73.5	5.8	5.8	A
2	1.00	1.00	0.588	0.847	224	288	9293	2000	0.16	0.14	56.8	56.8	1.0	1.0	A
3	1.00	1.00	0.588	0.847	190	316	9293	2000	0.19	0.16	53.7	53.7	0.9	0.9	A
4	1.00	1.00	0.588	0.847	547	326	9293	2000	0.16	0.16	62.9	62.9	2.2	2.2	A
5	1.00	1.00	0.588	0.847	422	316	9293	2000	0.15	0.16	61.4	61.4	1.7	1.7	A
6	1.00	1.00	0.588	0.847	222	335	9293	2000	0.17	0.17	54.9	54.9	1.0	1.0	A
7	1.00	1.00	0.588	0.847	382	283	9293	2000	0.18	0.14	61.6	61.6	1.6	1.6	A
8	1.00	1.00	0.588	0.847	412	298	9293	2000	0.18	0.15	61.7	61.7	1.7	1.7	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.588	1143	6970	0.16	70.4	5.4	A
2	1.00	0.588	180	6970	0.15	69.8	0.9	A
3	1.00	0.588	153	6970	0.18	69.7	0.7	A
4	1.00	0.588	448	6970	0.15	70.1	2.1	A

5	1.00	0.588	331	6970	0.13	70.0	1.6	A
6	1.00	0.588	172	6970	0.16	69.7	0.8	A
7	1.00	0.588	302	6970	0.18	70.0	1.4	A
8	1.00	0.588	340	6970	0.18	70.0	1.6	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.625	0.820	1246	171	9293	2000	0.13	0.09	73.4	73.5	4.2	4.2	A
2	1.00	1.00	0.625	0.820	321	141	9293	2000	0.12	0.07	67.5	67.5	1.2	1.2	A
3	1.00	1.00	0.625	0.820	358	205	9293	2000	0.15	0.10	67.1	67.1	1.3	1.3	A
4	1.00	1.00	0.625	0.820	633	185	9293	2000	0.13	0.09	68.0	68.0	2.3	2.3	A
5	1.00	1.00	0.625	0.820	536	205	9293	2000	0.12	0.10	67.7	67.7	2.0	2.0	A
6	1.00	1.00	0.625	0.820	387	215	9293	2000	0.13	0.11	67.1	67.1	1.4	1.4	A
7	1.00	1.00	0.625	0.820	468	166	9293	2000	0.14	0.08	67.8	67.8	1.7	1.7	A
8	1.00	1.00	0.625	0.820	545	205	9293	2000	0.15	0.10	67.7	67.7	2.0	2.0	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	1544	6970	0.22	70.4	7.3	A
2	1.00	0.526	321	6970	0.20	70.4	1.5	A
3	1.00	0.526	358	6970	0.25	70.4	1.7	A
4	1.00	0.526	633	6970	0.21	70.4	3.0	A
5	1.00	0.526	536	6970	0.20	70.4	2.5	A
6	1.00	0.526	387	6970	0.22	70.4	1.8	A
7	1.00	0.526	468	6970	0.23	70.4	2.2	A
8	1.00	0.526	545	6970	0.25	70.4	2.6	A

Facility Time Period Results

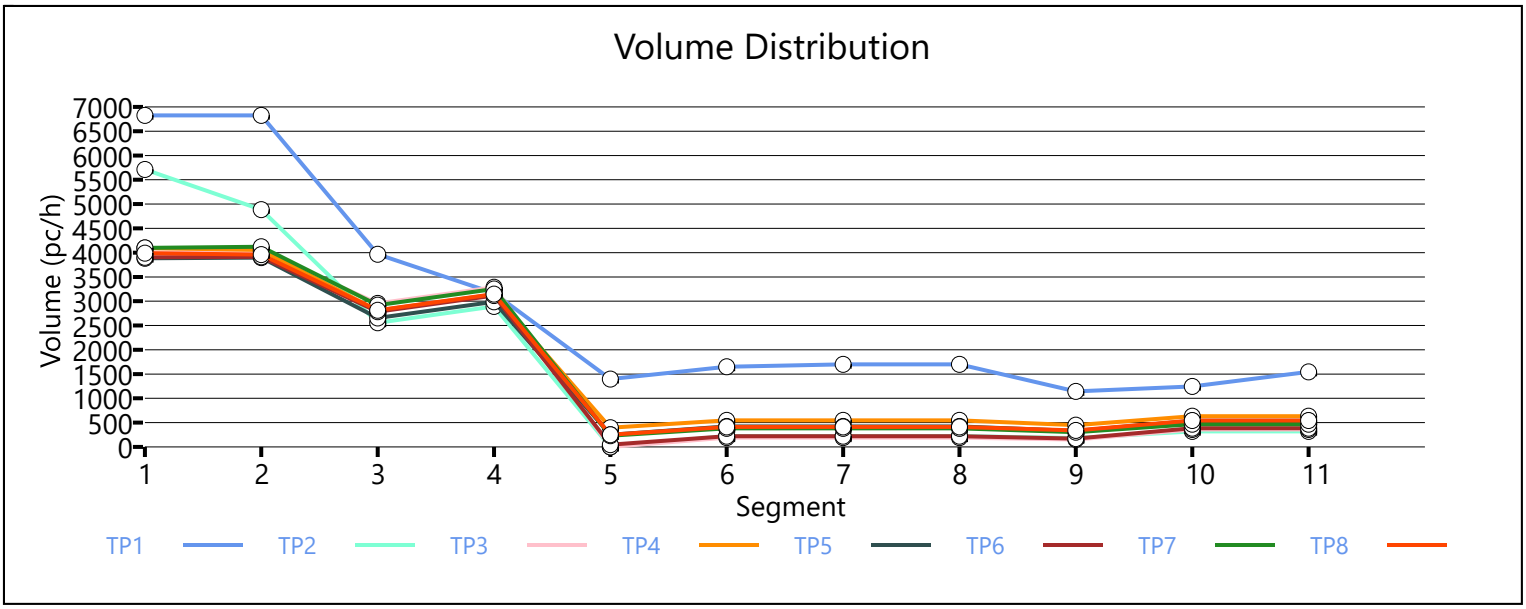
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.3	18.3	11.0	6.70	C
2	21.8	31.2	19.3	18.60	F
3	14.1	42.1	26.0	28.80	F
4	15.1	43.0	26.4	26.90	F
5	13.7	43.8	27.0	29.60	F
6	13.4	43.2	26.6	30.20	F
7	14.9	42.1	25.9	27.20	F
8	14.4	43.1	26.5	28.30	F

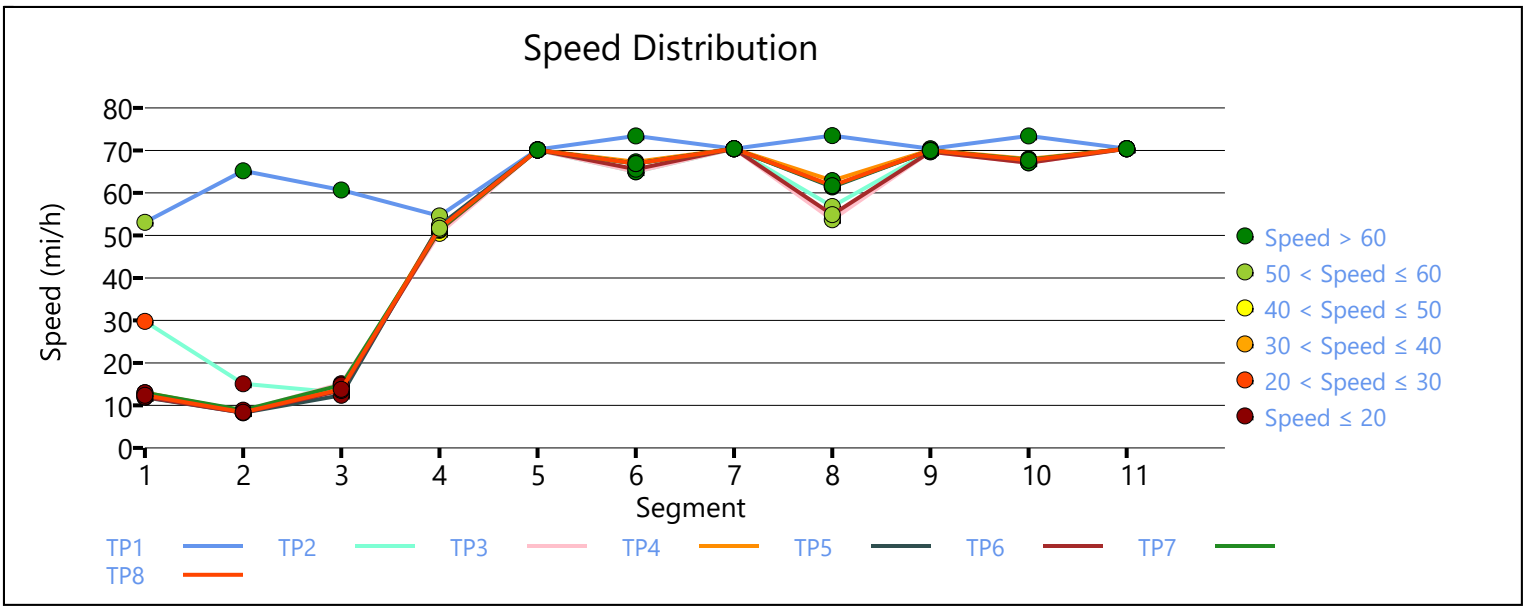
Facility Overall Results

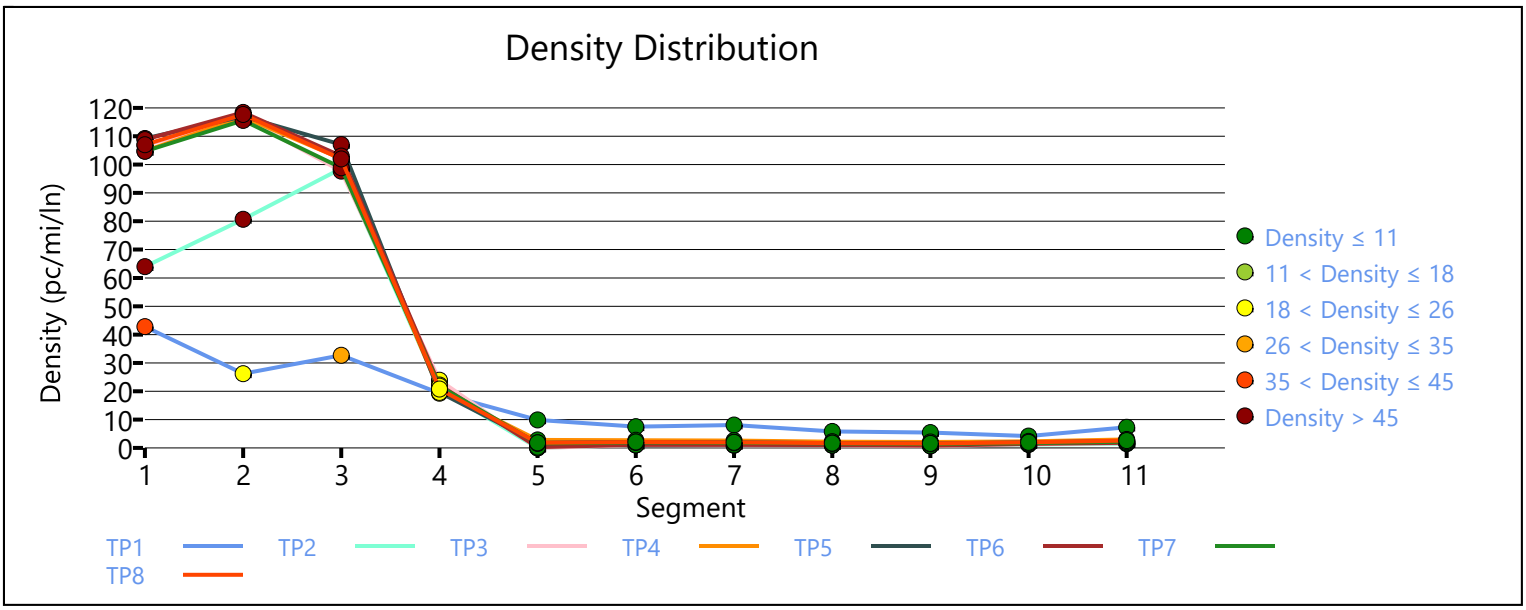
Space Mean Speed, mi/h	17.8	Density, veh/mi/ln	23.6
Average Travel Time, min	22.80	Density, pc/mi/ln	38.4

Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 8. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 3. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 4	Queue extends past the beginning of the facility on time period 4. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 5	Queue extends past the beginning of the facility on time period 5. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 6	Queue extends past the beginning of the facility on time period 6. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 7	Queue extends past the beginning of the facility on time period 7. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 8	Queue extends past the beginning of the facility on time period 8. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
Comments	







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2022 No Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2022 No Build Westbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	2762	6970	0.40	70.4	13.1	B
2	1.00	0.617	2585	6970	0.37	70.4	12.2	B
3	1.00	0.617	3327	6970	0.48	70.4	15.8	B
4	1.00	0.617	2872	6970	0.41	70.4	13.6	B
5	1.00	0.617	2806	6970	0.40	70.4	13.3	B
6	1.00	0.617	3008	6970	0.43	70.4	14.2	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	2762	710	9293	4000	0.30	0.18	68.6	58.0	10.1	1.5	A

2	1.00	1.00	0.617	0.926	2585	509	9293	4000	0.28	0.13	69.9	58.6	9.2	0.0	A
3	1.00	1.00	0.617	0.926	3327	710	9293	4000	0.36	0.18	69.3	58.0	12.0	2.7	A
4	1.00	1.00	0.617	0.926	2872	607	9293	4000	0.31	0.15	69.5	58.3	10.3	1.0	A
5	1.00	1.00	0.617	0.926	2806	714	9293	4000	0.30	0.18	68.6	58.0	10.2	1.6	A
6	1.00	1.00	0.617	0.926	3008	653	9293	4000	0.32	0.16	69.4	58.2	10.8	1.6	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	1821	4646	0.39	70.4	12.9	B
2	1.00	0.575	1955	4646	0.42	70.4	13.9	B
3	1.00	0.575	2428	4646	0.52	70.3	17.3	B
4	1.00	0.575	2104	4646	0.45	70.4	14.9	B
5	1.00	0.575	1861	4646	0.40	70.4	13.2	B
6	1.00	0.575	2176	4646	0.47	70.4	15.5	B

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1568	5379	0.29	64.6	8.1	A
2	1.00	0.676	1699	5681	0.30	64.4	8.8	A
3	1.00	0.676	2038	4693	0.43	61.7	11.0	B
4	1.00	0.676	1774	4850	0.37	63.1	9.4	A
5	1.00	0.676	1628	5233	0.31	64.2	8.5	A
6	1.00	0.676	1916	5771	0.33	64.1	10.0	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1334	4646	0.29	70.3	9.5	A
2	1.00	0.581	1496	4646	0.32	70.3	10.6	A
3	1.00	0.581	1577	4646	0.34	70.3	11.2	B
4	1.00	0.581	1403	4646	0.30	70.3	10.0	A
5	1.00	0.581	1403	4646	0.30	70.3	10.0	A
6	1.00	0.581	1766	4646	0.38	70.3	12.5	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	1460	126	6970	2000	0.21	0.06	73.4	73.5	6.6	6.6	A
2	1.00	1.00	0.581	0.676	1665	169	6970	2000	0.24	0.08	73.4	73.5	7.6	7.6	A
3	1.00	1.00	0.581	0.676	1697	120	6970	2000	0.24	0.06	73.4	73.5	7.7	7.7	A
4	1.00	1.00	0.581	0.676	1597	194	6970	2000	0.23	0.10	73.4	73.5	7.2	7.2	A
5	1.00	1.00	0.581	0.676	1597	194	6970	2000	0.23	0.10	73.4	73.5	7.2	7.2	A
6	1.00	1.00	0.581	0.676	1867	101	6970	2000	0.27	0.05	73.4	73.5	8.5	8.5	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1445	6970	0.21	70.4	6.8	A
2	1.00	0.595	1652	6970	0.24	70.4	7.8	A
3	1.00	0.595	1676	6970	0.24	70.4	7.9	A
4	1.00	0.595	1590	6970	0.23	70.4	7.5	A
5	1.00	0.595	1590	6970	0.23	70.4	7.5	A
6	1.00	0.595	1839	6970	0.26	70.4	8.7	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	1445	496	9293	2000	0.16	0.25	73.5	73.5	4.9	4.9	A
2	1.00	1.00	0.595	0.676	1652	414	9293	2000	0.18	0.21	73.5	73.5	5.6	5.6	A
3	1.00	1.00	0.595	0.676	1676	420	9293	2000	0.18	0.21	73.5	73.5	5.7	5.7	A
4	1.00	1.00	0.595	0.676	1590	383	9293	2000	0.17	0.19	73.5	73.5	5.4	5.4	A
5	1.00	1.00	0.595	0.676	1590	470	9293	2000	0.17	0.24	73.5	73.5	5.4	5.4	A
6	1.00	1.00	0.595	0.676	1839	496	9293	2000	0.20	0.25	73.5	73.5	6.3	6.3	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	934	6970	0.13	70.4	4.4	A
2	1.00	0.562	1251	6970	0.18	70.4	5.9	A
3	1.00	0.562	1269	6970	0.18	70.4	6.0	A
4	1.00	0.562	1222	6970	0.18	70.4	5.8	A
5	1.00	0.562	1117	6970	0.16	70.4	5.3	A
6	1.00	0.562	1351	6970	0.19	70.4	6.4	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	1130	196	9293	2000	0.12	0.10	73.4	73.5	3.8	3.8	A
2	1.00	1.00	0.562	0.781	1447	196	9293	2000	0.16	0.10	73.4	73.5	4.9	4.9	A
3	1.00	1.00	0.562	0.781	1546	277	9293	2000	0.17	0.14	73.4	73.5	5.3	5.3	A
4	1.00	1.00	0.562	0.781	1379	157	9293	2000	0.15	0.08	73.4	73.5	4.7	4.7	A
5	1.00	1.00	0.562	0.781	1263	146	9293	2000	0.14	0.07	73.4	73.5	4.3	4.3	A
6	1.00	1.00	0.562	0.781	1482	131	9293	2000	0.16	0.07	73.4	73.5	5.0	5.0	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1167	6970	0.17	70.4	5.5	A
2	1.00	0.581	1473	6970	0.21	70.4	7.0	A

3	1.00	0.581	1599	6970	0.23	70.4	7.6	A
4	1.00	0.581	1394	6970	0.20	70.4	6.6	A
5	1.00	0.581	1277	6970	0.18	70.4	6.1	A
6	1.00	0.581	1482	6970	0.21	70.4	7.0	A

Facility Time Period Results

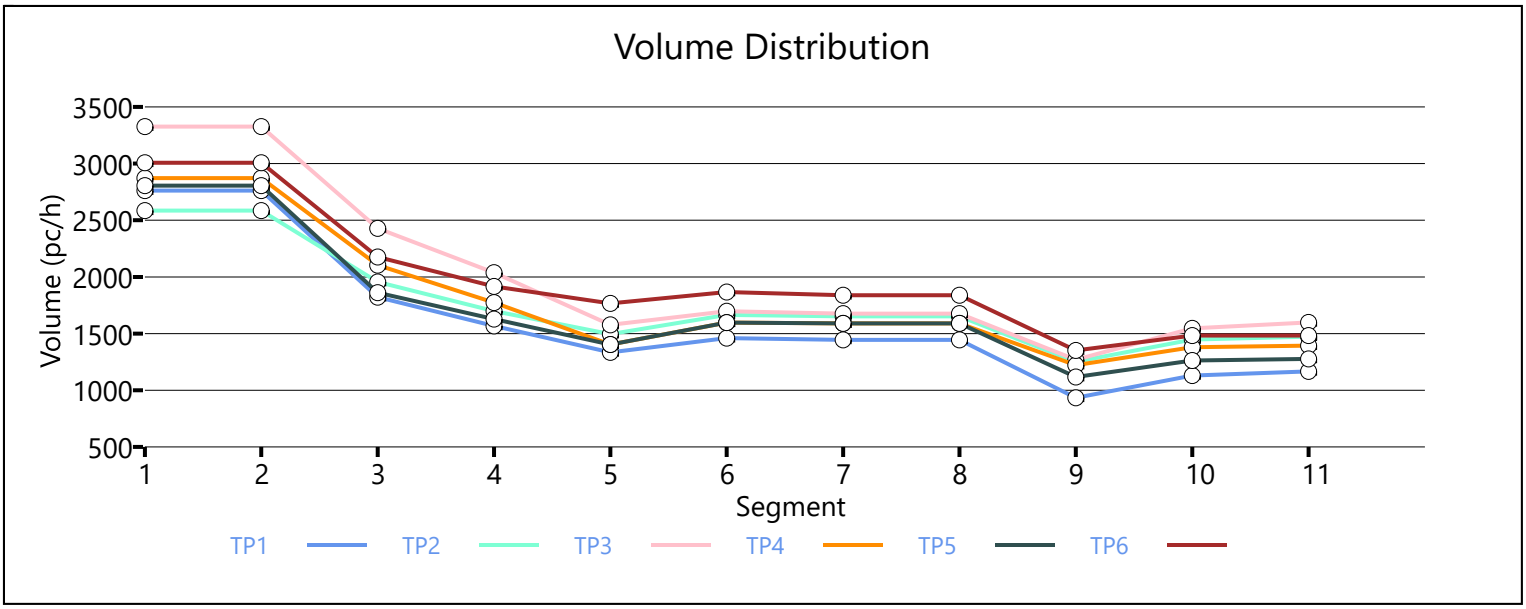
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.0	8.4	5.1	5.80	A
2	70.2	9.0	5.4	5.80	A
3	69.8	10.5	6.3	5.80	A
4	70.0	9.3	5.6	5.80	A
5	70.0	8.9	5.3	5.80	A
6	70.1	10.1	6.1	5.80	A

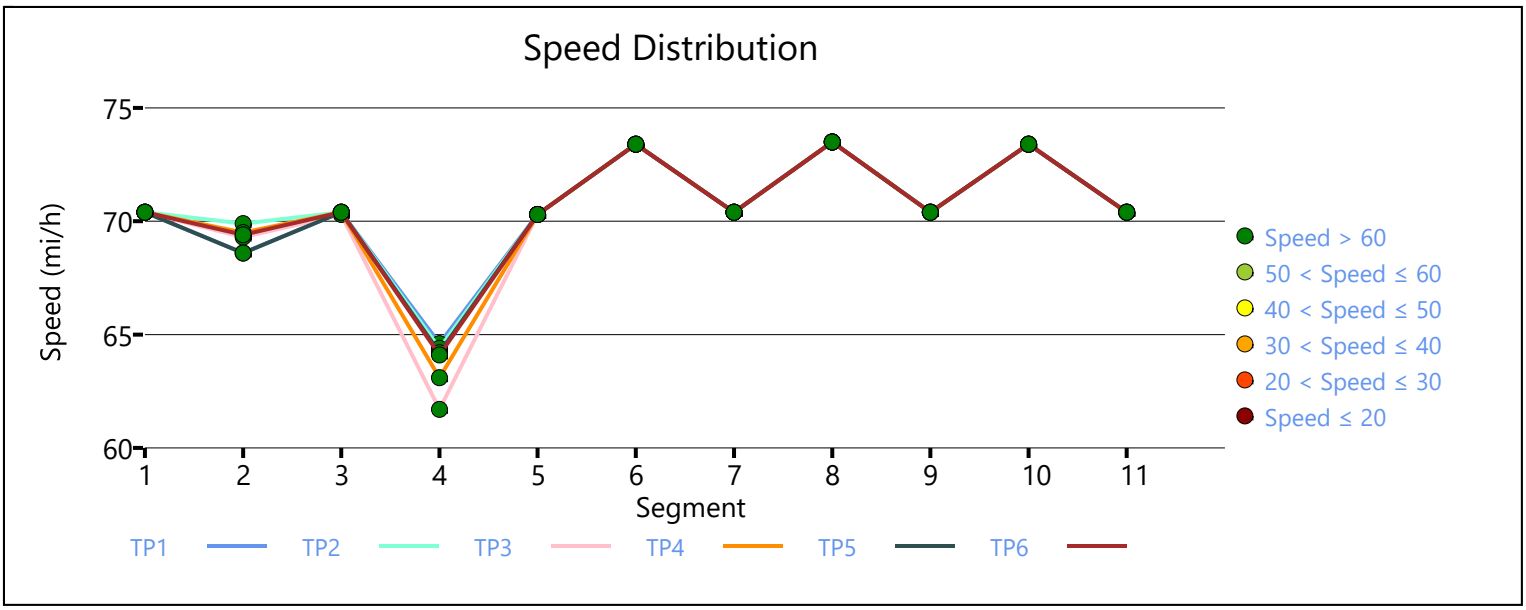
Facility Overall Results

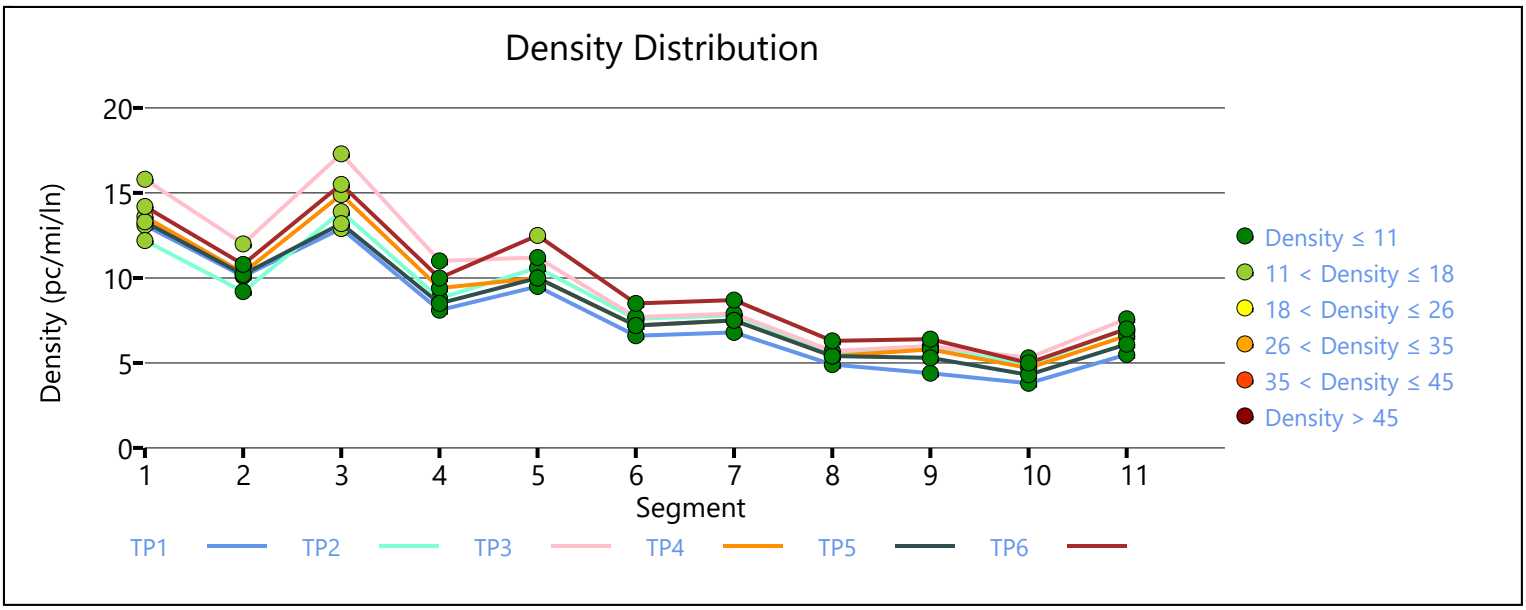
Space Mean Speed, mi/h	70.0	Density, veh/mi/ln	5.6
Average Travel Time, min	5.80	Density, pc/mi/ln	9.4

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2022 No Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2022 No Build Westbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	8	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	6107	6970	1.04	34.1	59.6	F
2	1.00	0.617	3698	6970	1.08	10.9	113.1	F
3	1.00	0.617	3809	6970	1.07	11.5	110.8	F
4	1.00	0.617	3968	6970	1.07	12.3	107.5	F
5	1.00	0.617	3777	6970	1.07	11.3	111.4	F
6	1.00	0.617	3742	6970	1.14	11.1	112.2	F
7	1.00	0.617	4014	6970	1.12	12.6	106.5	F
8	1.00	0.617	3894	6970	1.08	11.9	109.0	F

Segment 2: Diverge

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	5322	2035	9293	4000	0.78	0.51	16.5	54.3	80.6	19.9	F
2	1.00	1.00	0.617	0.926	3603	2347	9293	4000	0.81	0.59	7.3	53.4	122.8	22.5	F
3	1.00	1.00	0.617	0.926	3893	2276	9293	4000	0.80	0.57	8.1	53.6	119.8	21.9	F
4	1.00	1.00	0.617	0.926	3946	2473	9293	4000	0.81	0.62	8.4	53.0	117.3	23.2	F
5	1.00	1.00	0.617	0.926	3795	2361	9293	4000	0.80	0.59	8.1	53.3	117.4	22.4	F
6	1.00	1.00	0.617	0.926	3786	2608	9293	4000	0.85	0.65	7.9	52.6	119.2	25.1	F
7	1.00	1.00	0.617	0.926	3999	2272	9293	4000	0.84	0.57	8.7	53.6	115.1	22.7	F
8	1.00	1.00	0.617	0.926	3848	2198	9293	4000	0.81	0.55	8.1	53.8	118.8	21.5	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	2803	4646	0.97	14.7	95.1	F
2	1.00	0.575	2446	4646	0.93	10.8	113.0	F
3	1.00	0.575	2794	4646	0.93	13.6	102.8	F
4	1.00	0.575	2664	4646	0.87	12.5	106.5	F
5	1.00	0.575	2532	4646	0.90	11.4	110.9	F
6	1.00	0.575	2646	4646	0.93	12.3	107.4	F
7	1.00	0.575	2763	4646	1.02	13.3	103.8	F
8	1.00	0.575	2668	4646	0.97	12.5	106.5	F

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	3117	3347	1.00	54.2	19.2	F
2	1.00	0.676	2780	2989	1.08	53.4	17.4	F
3	1.00	0.676	3128	3363	0.98	51.9	20.5	C
4	1.00	0.676	2997	3223	0.95	52.9	18.9	B
5	1.00	0.676	2865	3081	1.01	53.2	18.0	F
6	1.00	0.676	2980	3204	1.02	52.4	19.2	F
7	1.00	0.676	3096	3329	1.05	52.4	19.7	F
8	1.00	0.676	3001	3227	1.06	52.7	19.0	F

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	298	4646	0.33	70.2	2.1	A
2	1.00	0.581	440	4646	0.29	70.1	3.1	A
3	1.00	0.581	274	4646	0.36	70.1	1.9	A
4	1.00	0.581	577	4646	0.31	70.1	4.1	A
5	1.00	0.581	451	4646	0.28	70.1	3.2	A
6	1.00	0.581	295	4646	0.33	70.1	2.1	A
7	1.00	0.581	455	4646	0.34	70.1	3.2	A
8	1.00	0.581	455	4646	0.35	70.1	3.2	A

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	535	237	6970	2000	0.26	0.12	66.7	66.7	2.7	2.7	A
2	1.00	1.00	0.581	0.676	652	212	6970	2000	0.22	0.11	67.1	67.1	3.2	3.2	A
3	1.00	1.00	0.581	0.676	453	179	6970	2000	0.26	0.09	66.9	66.9	2.3	2.3	A
4	1.00	1.00	0.581	0.676	718	141	6970	2000	0.23	0.07	67.5	67.5	3.5	3.5	A
5	1.00	1.00	0.581	0.676	611	160	6970	2000	0.21	0.08	67.3	67.3	3.0	3.0	A
6	1.00	1.00	0.581	0.676	461	166	6970	2000	0.24	0.08	67.0	67.0	2.3	2.3	A
7	1.00	1.00	0.581	0.676	596	141	6970	2000	0.25	0.07	67.4	67.4	2.9	2.9	A
8	1.00	1.00	0.581	0.676	609	154	6970	2000	0.26	0.08	67.3	67.3	3.0	3.0	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	535	6970	0.26	70.4	2.5	A
2	1.00	0.595	652	6970	0.22	70.4	3.1	A
3	1.00	0.595	453	6970	0.26	70.4	2.1	A
4	1.00	0.595	718	6970	0.23	70.4	3.4	A
5	1.00	0.595	611	6970	0.21	70.4	2.9	A
6	1.00	0.595	461	6970	0.24	70.4	2.2	A
7	1.00	0.595	596	6970	0.25	70.4	2.8	A
8	1.00	0.595	609	6970	0.26	70.4	2.9	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	535	524	9293	2000	0.19	0.26	58.7	58.7	2.3	2.3	A
2	1.00	1.00	0.595	0.676	652	391	9293	2000	0.17	0.20	62.7	62.7	2.6	2.6	A
3	1.00	1.00	0.595	0.676	453	428	9293	2000	0.20	0.21	59.3	59.3	1.9	1.9	A
4	1.00	1.00	0.595	0.676	718	441	9293	2000	0.17	0.22	62.5	62.5	2.9	2.9	A
5	1.00	1.00	0.595	0.676	611	428	9293	2000	0.16	0.21	61.6	61.6	2.5	2.5	A
6	1.00	1.00	0.595	0.676	461	454	9293	2000	0.18	0.23	58.8	58.8	2.0	2.0	A
7	1.00	1.00	0.595	0.676	596	383	9293	2000	0.19	0.19	62.3	62.3	2.4	2.4	A
8	1.00	1.00	0.595	0.676	609	402	9293	2000	0.19	0.20	62.1	62.1	2.5	2.5	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	11	6970	0.18	69.9	0.1	A
2	1.00	0.562	461	6970	0.17	70.1	2.2	A
3	1.00	0.562	339	6970	0.20	69.9	1.6	A
4	1.00	0.562	549	6970	0.16	70.1	2.6	A

5	1.00	0.562	441	6970	0.15	70.0	2.1	A
6	1.00	0.562	325	6970	0.17	69.9	1.5	A
7	1.00	0.562	433	6970	0.20	70.1	2.1	A
8	1.00	0.562	473	6970	0.20	70.0	2.2	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	204	193	9293	2000	0.16	0.10	65.9	65.9	0.8	0.8	A
2	1.00	1.00	0.562	0.781	621	160	9293	2000	0.14	0.08	68.1	68.1	2.3	2.3	A
3	1.00	1.00	0.562	0.781	571	232	9293	2000	0.18	0.12	67.6	67.6	2.1	2.1	A
4	1.00	1.00	0.562	0.781	759	210	9293	2000	0.15	0.11	68.1	68.1	2.8	2.8	A
5	1.00	1.00	0.562	0.781	673	232	9293	2000	0.14	0.12	67.8	67.8	2.5	2.5	A
6	1.00	1.00	0.562	0.781	568	243	9293	2000	0.16	0.12	67.6	67.6	2.1	2.1	A
7	1.00	1.00	0.562	0.781	621	188	9293	2000	0.17	0.09	68.0	68.0	2.3	2.3	A
8	1.00	1.00	0.562	0.781	705	232	9293	2000	0.18	0.12	67.9	67.9	2.6	2.6	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	204	6970	0.23	70.4	1.0	A
2	1.00	0.526	621	6970	0.21	70.4	2.9	A
3	1.00	0.526	571	6970	0.27	70.4	2.7	A
4	1.00	0.526	759	6970	0.22	70.4	3.6	A
5	1.00	0.526	673	6970	0.21	70.4	3.2	A
6	1.00	0.526	568	6970	0.24	70.4	2.7	A
7	1.00	0.526	621	6970	0.25	70.4	2.9	A
8	1.00	0.526	705	6970	0.26	70.4	3.3	A

Facility Time Period Results

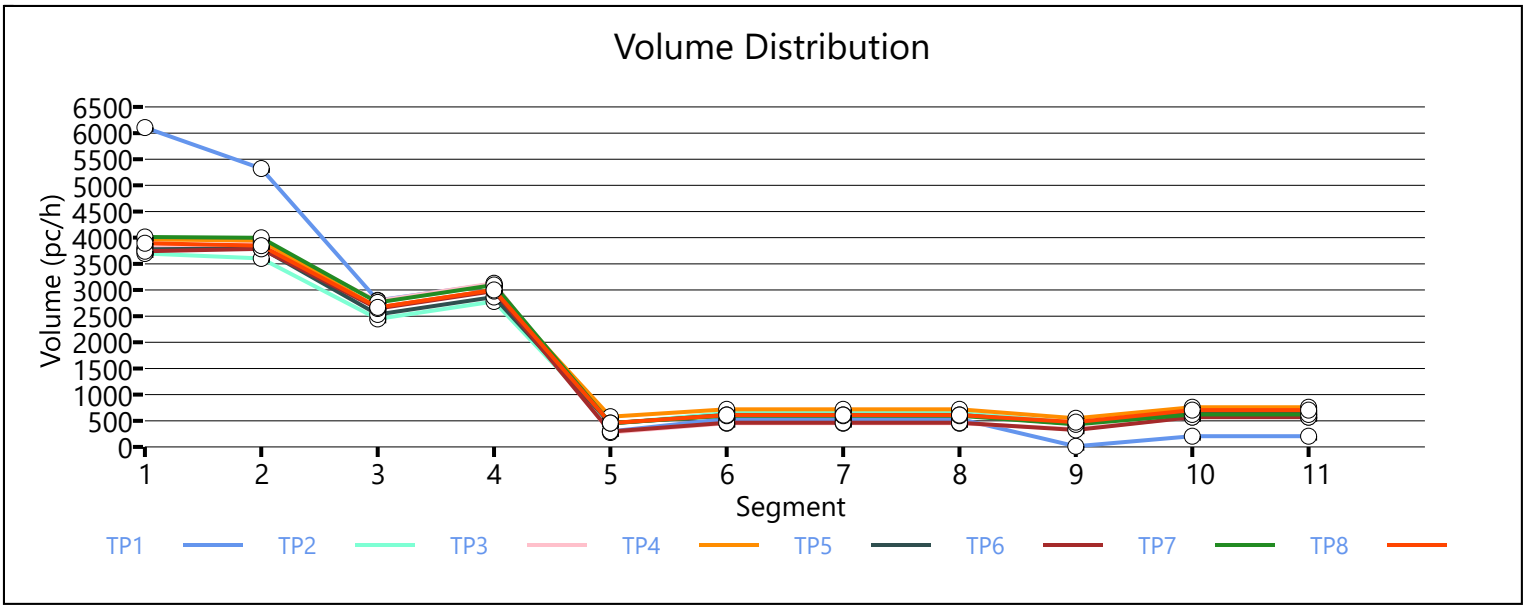
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	24.9	30.4	18.5	16.30	F
2	13.0	46.0	28.1	31.20	F
3	13.8	44.1	27.0	29.30	F
4	14.8	44.2	27.0	27.40	F
5	13.6	45.0	27.4	29.80	F
6	13.3	44.7	27.3	30.50	F
7	14.9	43.2	26.4	27.30	F
8	14.2	44.4	27.1	28.50	F

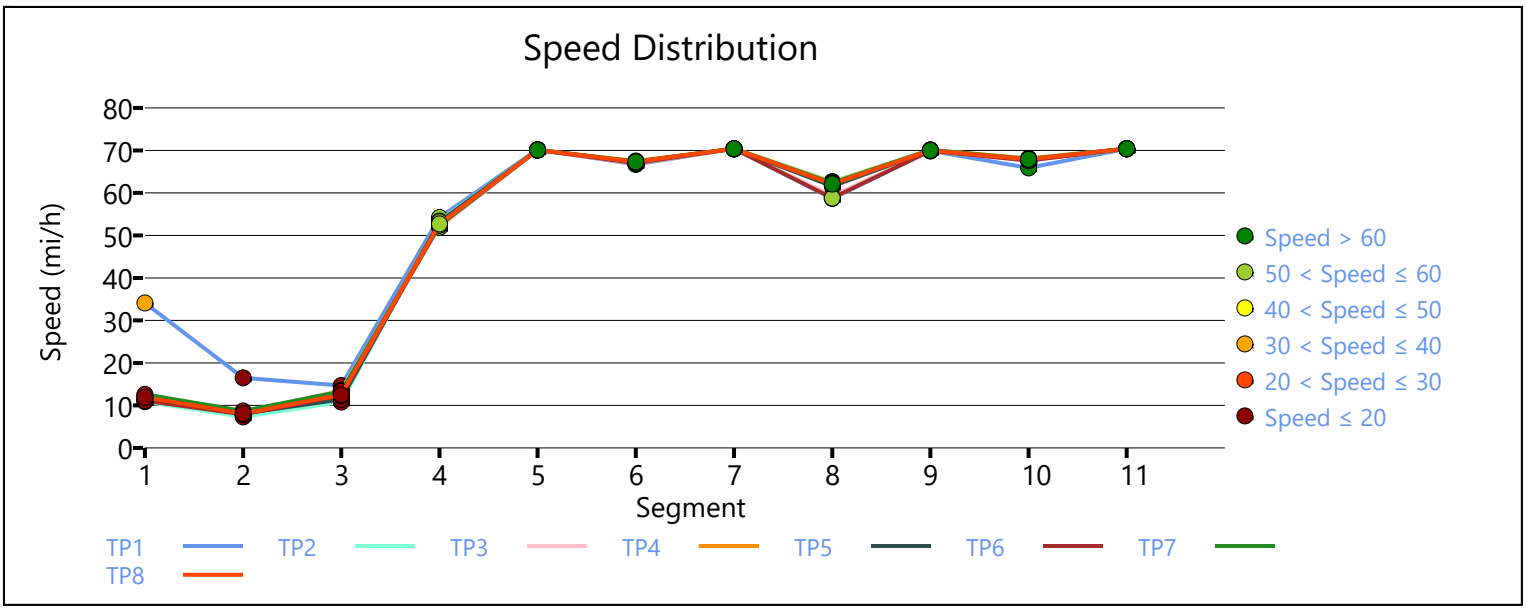
Facility Overall Results

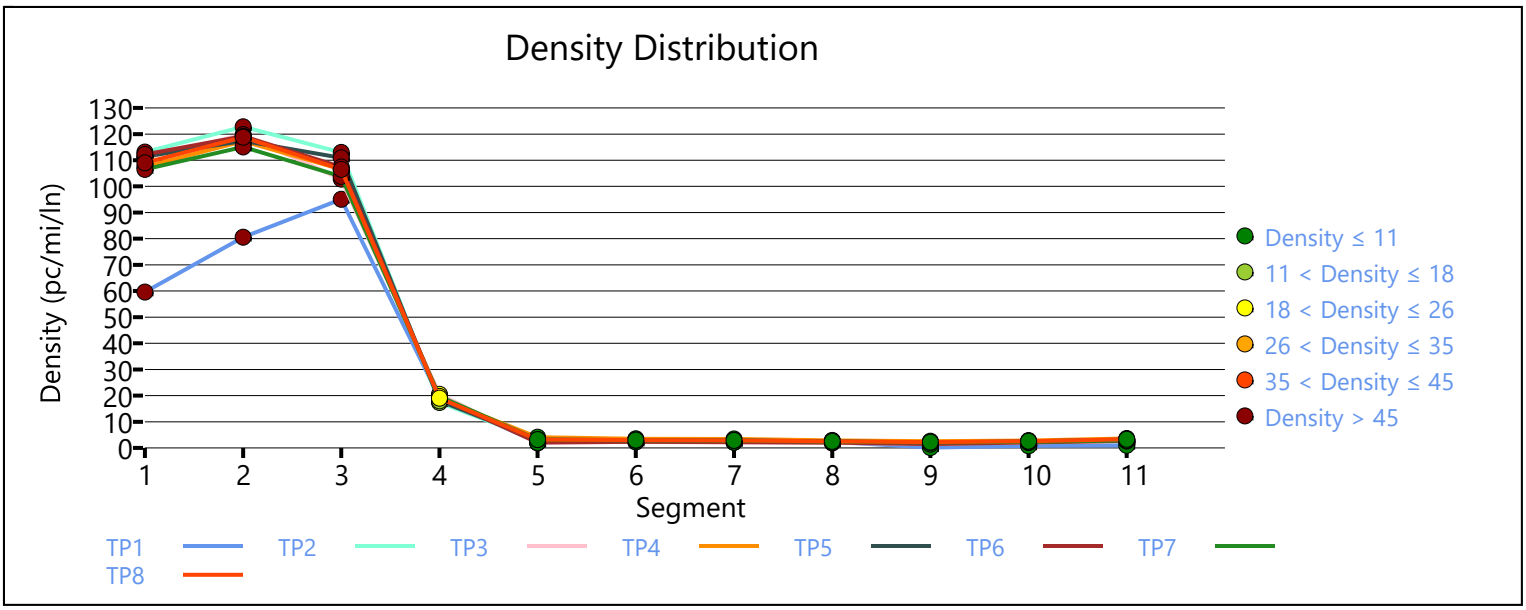
Space Mean Speed, mi/h	14.9	Density, veh/mi/ln	26.1
Average Travel Time, min	27.20	Density, pc/mi/ln	42.8

Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Oversaturated conditions currently exist in boundary time period 8. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 4	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 5	Queue extends past the beginning of the facility on time period 2. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 6	Queue extends past the beginning of the facility on time period 3. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 7	Queue extends past the beginning of the facility on time period 4. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 8	Queue extends past the beginning of the facility on time period 5. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 9	Queue extends past the beginning of the facility on time period 6. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 10	Queue extends past the beginning of the facility on time period 7. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 11	Queue extends past the beginning of the facility on time period 8. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
Comments	







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2022 Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2022 Build Westbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	2762	6970	0.40	70.4	13.1	B
2	1.00	0.617	2689	6970	0.39	70.4	12.7	B
3	1.00	0.617	3429	6970	0.49	70.4	16.2	B
4	1.00	0.617	2974	6970	0.43	70.4	14.1	B
5	1.00	0.617	2908	6970	0.42	70.4	13.8	B
6	1.00	0.617	3008	6970	0.43	70.4	14.2	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	2762	710	9293	4000	0.30	0.18	68.6	58.0	10.1	1.5	A

2	1.00	1.00	0.617	0.926	2689	509	9293	4000	0.29	0.13	70.1	58.6	9.6	0.0	A
3	1.00	1.00	0.617	0.926	3429	710	9293	4000	0.37	0.18	69.4	58.0	12.4	2.9	A
4	1.00	1.00	0.617	0.926	2974	607	9293	4000	0.32	0.15	69.7	58.3	10.7	1.3	A
5	1.00	1.00	0.617	0.926	2908	714	9293	4000	0.31	0.18	68.8	58.0	10.6	1.8	A
6	1.00	1.00	0.617	0.926	3008	653	9293	4000	0.32	0.16	69.4	58.2	10.8	1.6	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	1821	4646	0.39	70.4	12.9	B
2	1.00	0.575	2066	4646	0.44	70.4	14.7	B
3	1.00	0.575	2537	4646	0.55	70.1	18.1	C
4	1.00	0.575	2214	4646	0.48	70.4	15.7	B
5	1.00	0.575	1970	4646	0.42	70.4	14.0	B
6	1.00	0.575	2176	4646	0.47	70.4	15.5	B

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1568	5379	0.29	64.6	8.1	A
2	1.00	0.676	1777	5506	0.32	63.9	9.3	A
3	1.00	0.676	2114	4619	0.46	61.3	11.5	B
4	1.00	0.676	1849	4751	0.39	62.6	9.8	A
5	1.00	0.676	1705	5084	0.34	63.7	8.9	A
6	1.00	0.676	1916	5771	0.33	64.1	10.0	A

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1334	4646	0.29	70.3	9.5	A
2	1.00	0.581	1525	4646	0.33	70.3	10.8	A
3	1.00	0.581	1604	4646	0.35	70.3	11.4	B
4	1.00	0.581	1430	4646	0.31	70.3	10.2	A
5	1.00	0.581	1430	4646	0.31	70.3	10.2	A
6	1.00	0.581	1766	4646	0.38	70.3	12.5	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	1460	126	6970	2000	0.21	0.06	73.4	73.5	6.6	6.6	A
2	1.00	1.00	0.581	0.676	1694	169	6970	2000	0.24	0.08	73.4	73.5	7.7	7.7	A
3	1.00	1.00	0.581	0.676	1724	120	6970	2000	0.25	0.06	73.4	73.5	7.8	7.8	A
4	1.00	1.00	0.581	0.676	1624	194	6970	2000	0.23	0.10	73.4	73.5	7.4	7.4	A
5	1.00	1.00	0.581	0.676	1624	194	6970	2000	0.23	0.10	73.4	73.5	7.4	7.4	A
6	1.00	1.00	0.581	0.676	1867	101	6970	2000	0.27	0.05	73.4	73.5	8.5	8.5	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1445	6970	0.21	70.4	6.8	A
2	1.00	0.595	1681	6970	0.24	70.4	8.0	A
3	1.00	0.595	1703	6970	0.24	70.4	8.1	A
4	1.00	0.595	1617	6970	0.23	70.4	7.7	A
5	1.00	0.595	1617	6970	0.23	70.4	7.7	A
6	1.00	0.595	1839	6970	0.26	70.4	8.7	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	1445	496	9293	2000	0.16	0.25	73.5	73.5	4.9	4.9	A
2	1.00	1.00	0.595	0.676	1681	439	9293	2000	0.18	0.22	73.5	73.5	5.7	5.7	A
3	1.00	1.00	0.595	0.676	1703	447	9293	2000	0.18	0.22	73.5	73.5	5.8	5.8	A
4	1.00	1.00	0.595	0.676	1617	408	9293	2000	0.17	0.20	73.5	73.5	5.5	5.5	A
5	1.00	1.00	0.595	0.676	1617	497	9293	2000	0.17	0.25	73.5	73.5	5.5	5.5	A
6	1.00	1.00	0.595	0.676	1839	496	9293	2000	0.20	0.25	73.5	73.5	6.3	6.3	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	934	6970	0.13	70.4	4.4	A
2	1.00	0.562	1251	6970	0.18	70.4	5.9	A
3	1.00	0.562	1265	6970	0.18	70.4	6.0	A
4	1.00	0.562	1221	6970	0.18	70.4	5.8	A
5	1.00	0.562	1114	6970	0.16	70.4	5.3	A
6	1.00	0.562	1351	6970	0.19	70.4	6.4	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	1130	196	9293	2000	0.12	0.10	73.4	73.5	3.8	3.8	A
2	1.00	1.00	0.562	0.781	1448	197	9293	2000	0.16	0.10	73.4	73.5	4.9	4.9	A
3	1.00	1.00	0.562	0.781	1543	278	9293	2000	0.17	0.14	73.4	73.5	5.2	5.2	A
4	1.00	1.00	0.562	0.781	1380	159	9293	2000	0.15	0.08	73.4	73.5	4.7	4.7	A
5	1.00	1.00	0.562	0.781	1261	147	9293	2000	0.14	0.07	73.4	73.5	4.3	4.3	A
6	1.00	1.00	0.562	0.781	1482	131	9293	2000	0.16	0.07	73.4	73.5	5.0	5.0	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1167	6970	0.17	70.4	5.5	A
2	1.00	0.581	1475	6970	0.21	70.4	7.0	A

3	1.00	0.581	1597	6970	0.23	70.4	7.6	A
4	1.00	0.581	1394	6970	0.20	70.4	6.6	A
5	1.00	0.581	1275	6970	0.18	70.4	6.0	A
6	1.00	0.581	1482	6970	0.21	70.4	7.0	A

Facility Time Period Results

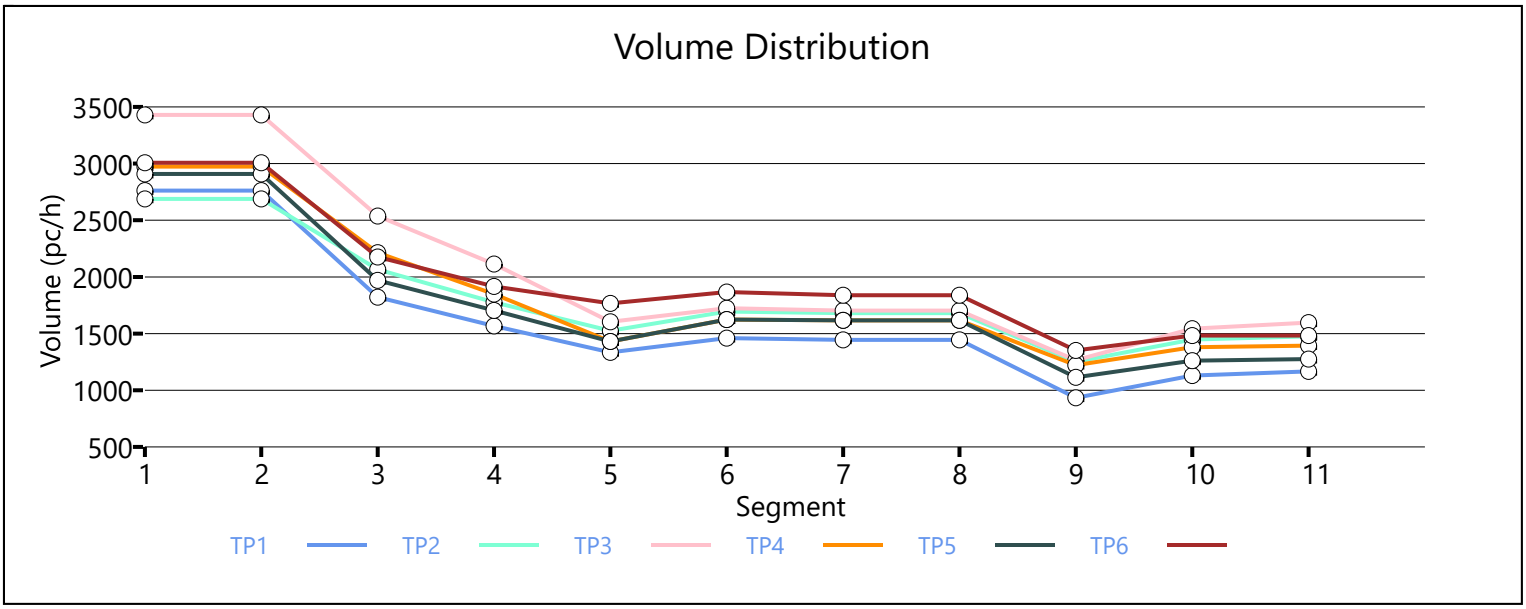
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.0	8.4	5.1	5.80	A
2	70.1	9.3	5.6	5.80	A
3	69.7	10.8	6.5	5.80	A
4	69.9	9.6	5.7	5.80	A
5	69.9	9.2	5.5	5.80	A
6	70.1	10.1	6.1	5.80	A

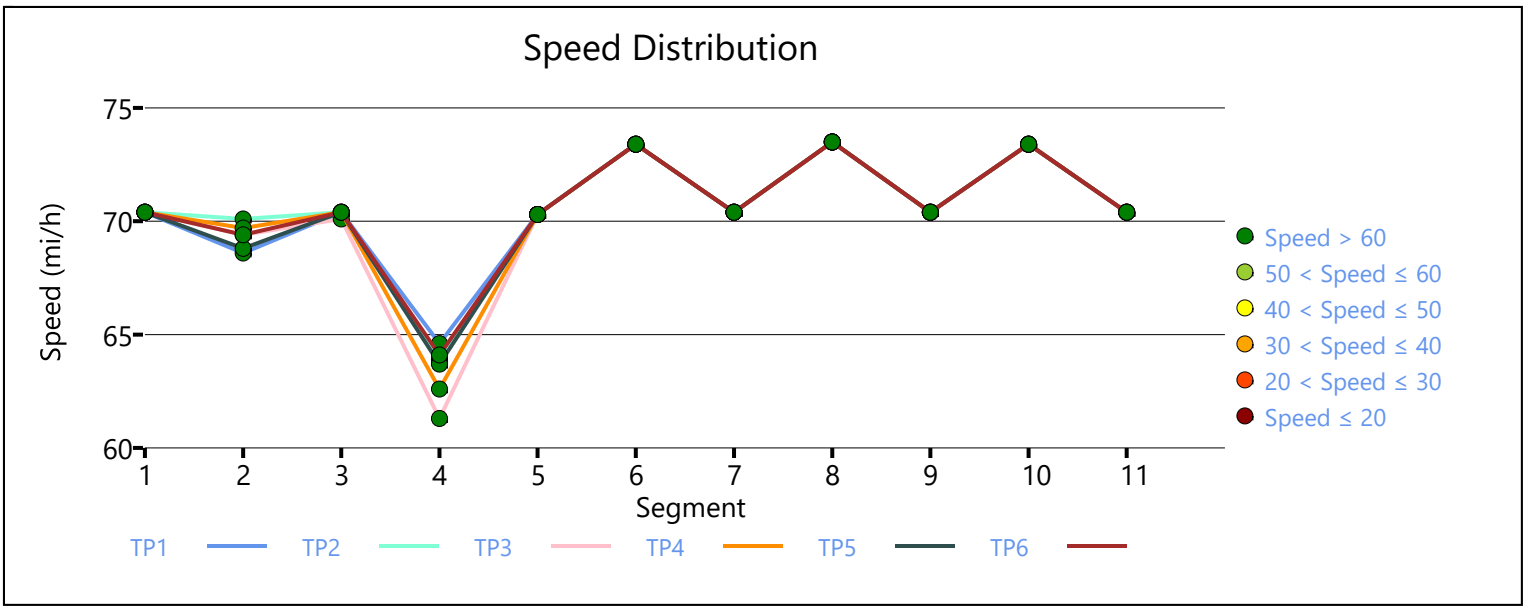
Facility Overall Results

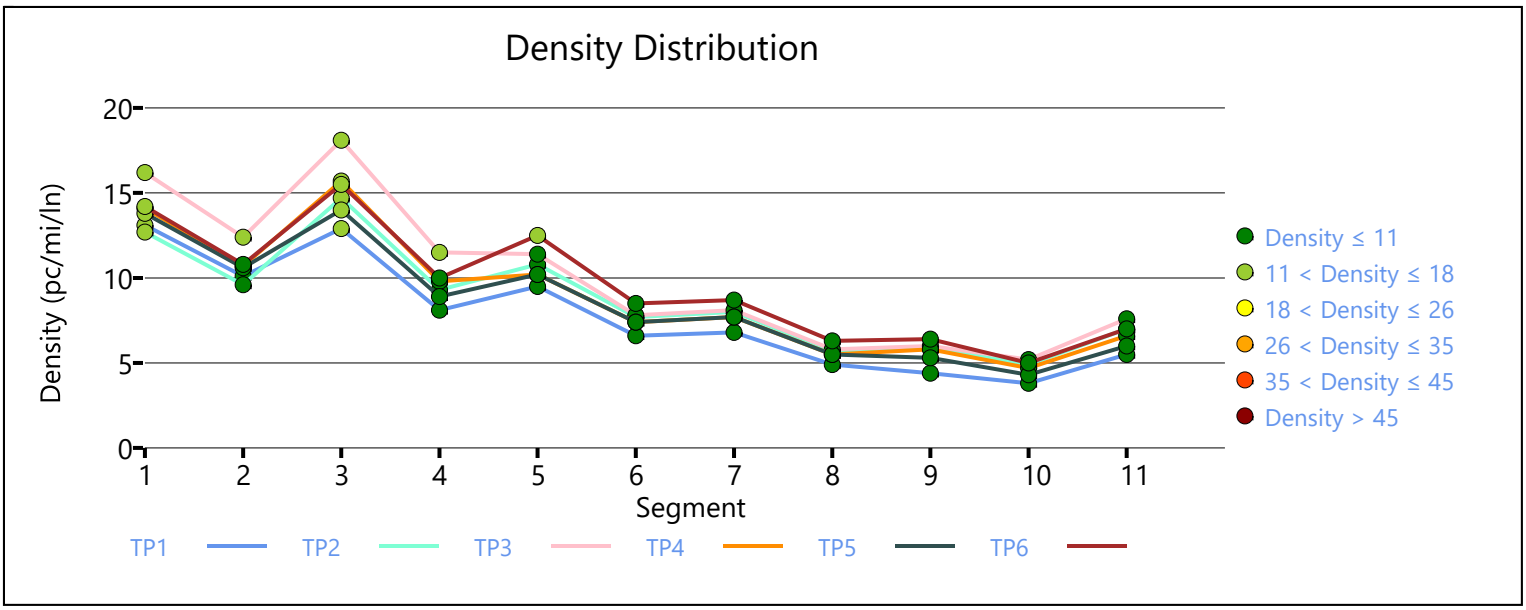
Space Mean Speed, mi/h	70.0	Density, veh/mi/ln	5.7
Average Travel Time, min	5.80	Density, pc/mi/ln	9.6

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2022 Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2022 Build Westbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	8	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	6107	6970	1.04	34.1	59.6	F
2	1.00	0.617	3698	6970	1.08	10.9	113.1	F
3	1.00	0.617	3634	6970	1.10	10.6	114.4	F
4	1.00	0.617	3905	6970	1.11	12.0	108.8	F
5	1.00	0.617	3654	6970	1.10	10.7	114.0	F
6	1.00	0.617	3643	6970	1.17	10.6	114.2	F
7	1.00	0.617	3928	6970	1.12	12.1	108.3	F
8	1.00	0.617	3954	6970	1.08	12.2	107.7	F

Segment 2: Diverge

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	5322	2035	9293	4000	0.78	0.51	16.5	54.3	80.6	19.9	F
2	1.00	1.00	0.617	0.926	3603	2347	9293	4000	0.81	0.59	7.3	53.4	122.8	22.5	F
3	1.00	1.00	0.617	0.926	3750	2276	9293	4000	0.83	0.57	7.7	53.6	121.5	22.4	F
4	1.00	1.00	0.617	0.926	3842	2473	9293	4000	0.83	0.62	7.9	53.0	121.1	23.8	F
5	1.00	1.00	0.617	0.926	3673	2361	9293	4000	0.83	0.59	7.7	53.3	119.1	23.0	F
6	1.00	1.00	0.617	0.926	3669	2608	9293	4000	0.88	0.65	7.5	52.6	122.4	25.6	F
7	1.00	1.00	0.617	0.926	3962	2272	9293	4000	0.84	0.57	8.5	53.6	116.2	22.7	F
8	1.00	1.00	0.617	0.926	3865	2198	9293	4000	0.81	0.55	8.1	53.8	118.8	21.5	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	2803	4646	0.97	14.7	95.1	F
2	1.00	0.575	2446	4646	0.93	10.8	113.0	F
3	1.00	0.575	2731	4646	0.98	13.0	104.8	F
4	1.00	0.575	2614	4646	0.93	12.1	108.1	F
5	1.00	0.575	2494	4646	0.96	11.1	112.1	F
6	1.00	0.575	2599	4646	0.99	11.9	108.9	F
7	1.00	0.575	2763	4646	1.02	13.3	103.8	F
8	1.00	0.575	2668	4646	0.97	12.5	106.5	F

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	3117	3347	1.00	54.2	19.2	F
2	1.00	0.676	2780	2989	1.08	53.4	17.4	F
3	1.00	0.676	3064	3295	1.05	52.1	20.0	F
4	1.00	0.676	2947	3169	1.02	52.9	18.6	F
5	1.00	0.676	2827	3040	1.08	53.2	17.7	F
6	1.00	0.676	2932	3153	1.09	52.4	19.3	F
7	1.00	0.676	3096	3329	1.05	52.3	19.7	F
8	1.00	0.676	3001	3227	1.06	52.7	19.0	F

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	298	4646	0.33	70.2	2.1	A
2	1.00	0.581	440	4646	0.29	70.1	3.1	A
3	1.00	0.581	269	4646	0.36	70.1	1.9	A
4	1.00	0.581	499	4646	0.32	70.1	3.5	A
5	1.00	0.581	382	4646	0.28	70.1	2.7	A
6	1.00	0.581	232	4646	0.33	70.1	1.6	A
7	1.00	0.581	388	4646	0.34	70.1	2.8	A
8	1.00	0.581	455	4646	0.35	70.1	3.2	A

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	535	237	6970	2000	0.26	0.12	66.7	66.7	2.7	2.7	A
2	1.00	1.00	0.581	0.676	652	212	6970	2000	0.22	0.11	67.1	67.1	3.2	3.2	A
3	1.00	1.00	0.581	0.676	448	179	6970	2000	0.26	0.09	66.9	66.9	2.2	2.2	A
4	1.00	1.00	0.581	0.676	640	141	6970	2000	0.23	0.07	67.4	67.4	3.2	3.2	A
5	1.00	1.00	0.581	0.676	542	160	6970	2000	0.21	0.08	67.2	67.2	2.7	2.7	A
6	1.00	1.00	0.581	0.676	398	166	6970	2000	0.24	0.08	66.8	66.8	2.0	2.0	A
7	1.00	1.00	0.581	0.676	529	141	6970	2000	0.25	0.07	67.3	67.3	2.6	2.6	A
8	1.00	1.00	0.581	0.676	609	154	6970	2000	0.26	0.08	67.3	67.3	3.0	3.0	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	535	6970	0.26	70.4	2.5	A
2	1.00	0.595	652	6970	0.22	70.4	3.1	A
3	1.00	0.595	448	6970	0.26	70.4	2.1	A
4	1.00	0.595	640	6970	0.23	70.4	3.0	A
5	1.00	0.595	542	6970	0.21	70.4	2.6	A
6	1.00	0.595	398	6970	0.24	70.4	1.9	A
7	1.00	0.595	529	6970	0.25	70.4	2.5	A
8	1.00	0.595	609	6970	0.26	70.4	2.9	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	535	524	9293	2000	0.19	0.26	58.7	58.7	2.3	2.3	A
2	1.00	1.00	0.595	0.676	652	391	9293	2000	0.17	0.20	62.7	62.7	2.6	2.6	A
3	1.00	1.00	0.595	0.676	448	436	9293	2000	0.20	0.22	59.0	59.0	1.9	1.9	A
4	1.00	1.00	0.595	0.676	640	448	9293	2000	0.17	0.22	61.6	61.6	2.6	2.6	A
5	1.00	1.00	0.595	0.676	542	436	9293	2000	0.16	0.22	60.6	60.6	2.2	2.2	A
6	1.00	1.00	0.595	0.676	398	462	9293	2000	0.18	0.23	57.3	57.3	1.7	1.7	A
7	1.00	1.00	0.595	0.676	529	383	9293	2000	0.19	0.19	61.5	61.5	2.2	2.2	A
8	1.00	1.00	0.595	0.676	609	402	9293	2000	0.19	0.20	62.1	62.1	2.5	2.5	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	11	6970	0.18	69.9	0.1	A
2	1.00	0.562	461	6970	0.17	70.1	2.2	A
3	1.00	0.562	335	6970	0.20	69.9	1.6	A
4	1.00	0.562	487	6970	0.16	70.0	2.3	A

5	1.00	0.562	390	6970	0.15	70.0	1.8	A
6	1.00	0.562	279	6970	0.17	69.8	1.3	A
7	1.00	0.562	382	6970	0.20	70.0	1.8	A
8	1.00	0.562	473	6970	0.20	70.0	2.2	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	204	193	9293	2000	0.16	0.10	64.9	64.9	0.8	0.8	A
2	1.00	1.00	0.562	0.781	621	160	9293	2000	0.14	0.08	68.3	68.3	2.3	2.3	A
3	1.00	1.00	0.562	0.781	568	233	9293	2000	0.18	0.12	67.5	67.5	2.1	2.1	A
4	1.00	1.00	0.562	0.781	698	211	9293	2000	0.15	0.11	68.0	68.0	2.6	2.6	A
5	1.00	1.00	0.562	0.781	623	233	9293	2000	0.14	0.12	67.7	67.7	2.3	2.3	A
6	1.00	1.00	0.562	0.781	524	245	9293	2000	0.16	0.12	67.2	67.2	1.9	1.9	A
7	1.00	1.00	0.562	0.781	570	188	9293	2000	0.17	0.09	67.9	67.9	2.1	2.1	A
8	1.00	1.00	0.562	0.781	705	232	9293	2000	0.18	0.12	67.9	67.9	2.6	2.6	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	204	6970	0.23	70.4	1.0	A
2	1.00	0.526	621	6970	0.21	70.4	2.9	A
3	1.00	0.526	568	6970	0.27	70.4	2.7	A
4	1.00	0.526	698	6970	0.22	70.4	3.3	A
5	1.00	0.526	623	6970	0.21	70.4	2.9	A
6	1.00	0.526	524	6970	0.24	70.4	2.5	A
7	1.00	0.526	570	6970	0.25	70.4	2.7	A
8	1.00	0.526	705	6970	0.26	70.4	3.3	A

Facility Time Period Results

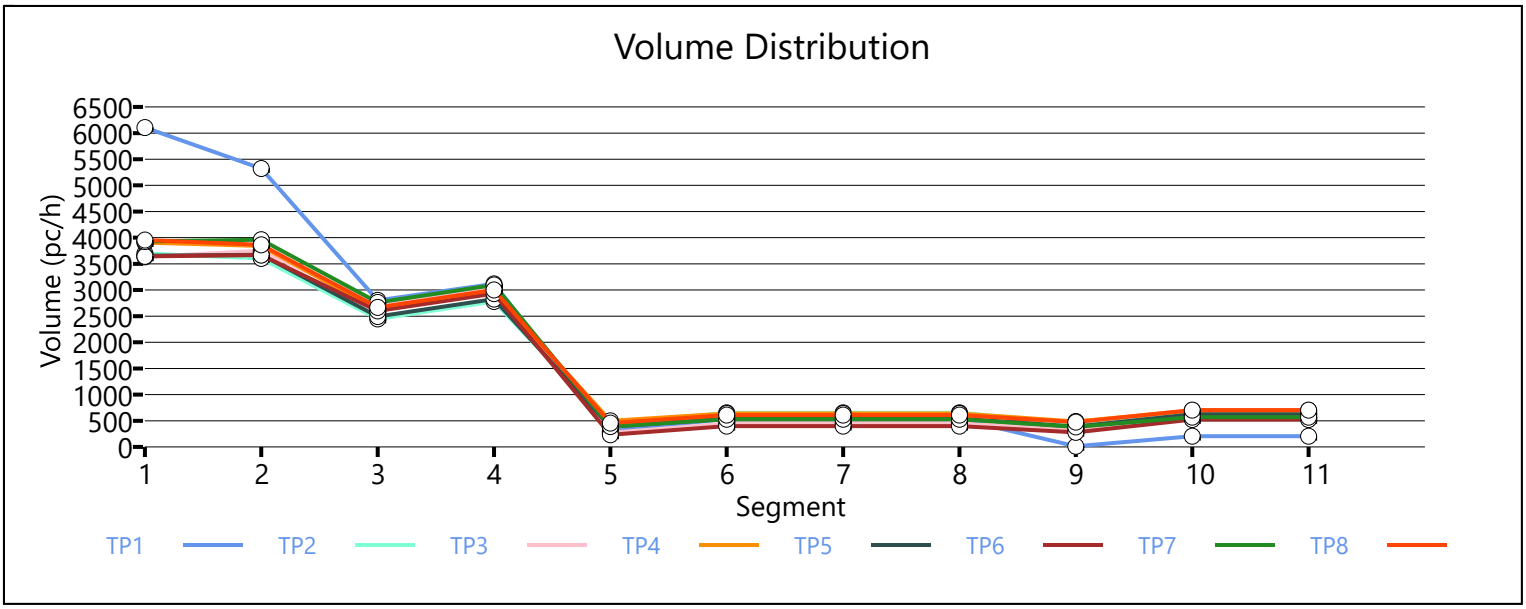
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	24.9	30.4	18.5	16.30	F
2	13.0	46.0	28.1	31.20	F
3	13.1	45.0	27.5	30.90	F
4	14.1	44.8	27.4	28.80	F
5	12.9	45.5	27.8	31.40	F
6	12.6	45.3	27.7	32.10	F
7	14.4	43.5	26.6	28.20	F
8	14.4	44.2	27.0	28.20	F

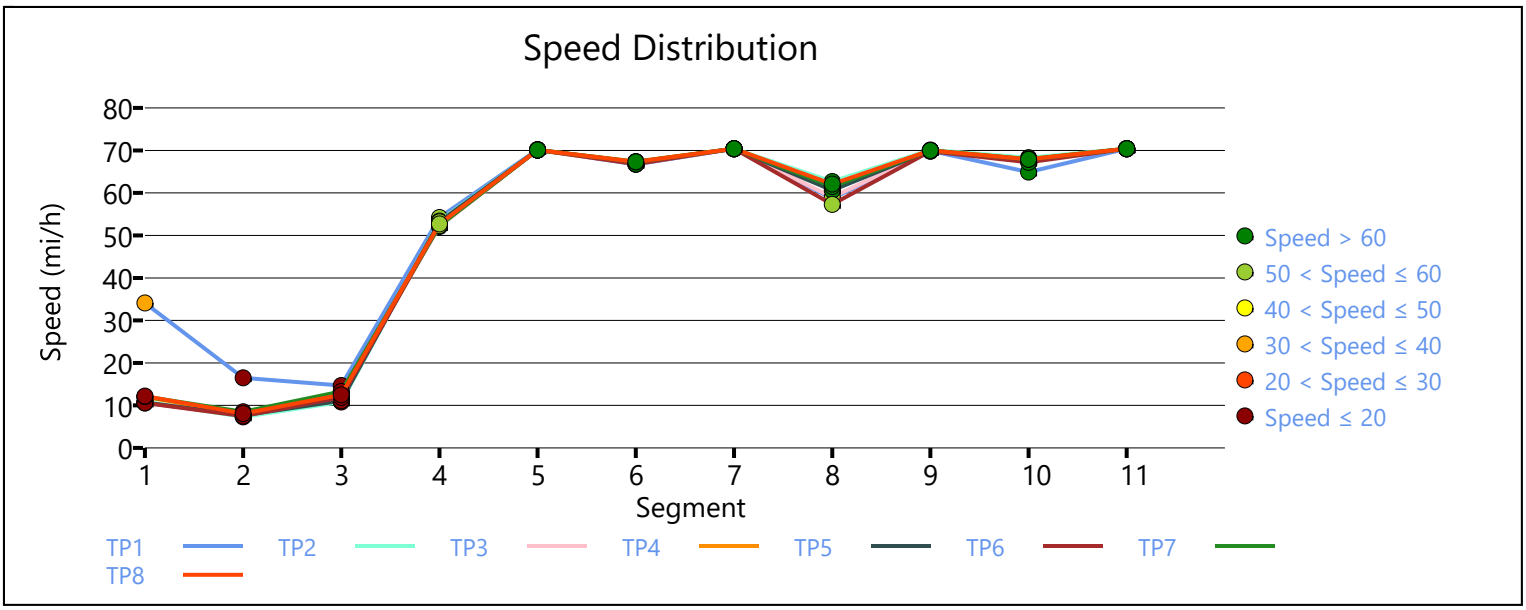
Facility Overall Results

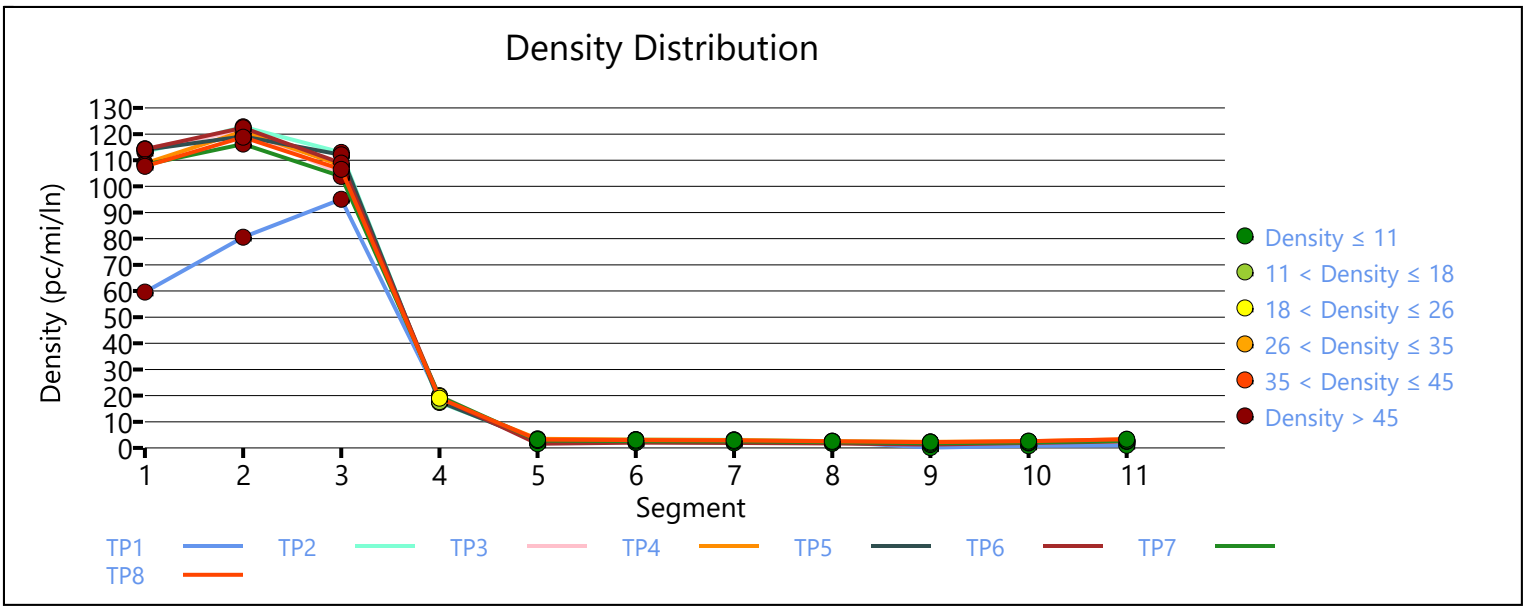
Space Mean Speed, mi/h	14.5	Density, veh/mi/ln	26.3
Average Travel Time, min	28.00	Density, pc/mi/ln	43.1

Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Oversaturated conditions currently exist in boundary time period 8. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 4	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 5	Queue extends past the beginning of the facility on time period 2. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 6	Queue extends past the beginning of the facility on time period 3. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 7	Queue extends past the beginning of the facility on time period 4. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 8	Queue extends past the beginning of the facility on time period 5. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 9	Queue extends past the beginning of the facility on time period 6. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 10	Queue extends past the beginning of the facility on time period 7. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 11	Queue extends past the beginning of the facility on time period 8. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
Comments	







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2025 No Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2025 No Build Westbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	2921	6970	0.42	70.4	13.8	B
2	1.00	0.617	2726	6970	0.39	70.4	12.9	B
3	1.00	0.617	3512	6970	0.50	70.4	16.6	B
4	1.00	0.617	3031	6970	0.43	70.4	14.3	B
5	1.00	0.617	2961	6970	0.42	70.4	14.0	B
6	1.00	0.617	3177	6970	0.46	70.4	15.0	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	2921	748	9293	4000	0.31	0.19	68.5	57.9	10.7	2.0	A

2	1.00	1.00	0.617	0.926	2726	537	9293	4000	0.29	0.13	69.9	58.5	9.7	0.3	A
3	1.00	1.00	0.617	0.926	3512	748	9293	4000	0.38	0.19	69.2	57.9	12.7	3.4	A
4	1.00	1.00	0.617	0.926	3031	640	9293	4000	0.33	0.16	69.5	58.2	10.9	1.6	A
5	1.00	1.00	0.617	0.926	2961	754	9293	4000	0.32	0.19	68.5	57.9	10.8	2.2	A
6	1.00	1.00	0.617	0.926	3177	689	9293	4000	0.34	0.17	69.3	58.1	11.5	2.2	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	1929	4646	0.42	70.4	13.7	B
2	1.00	0.575	2061	4646	0.44	70.4	14.6	B
3	1.00	0.575	2563	4646	0.55	70.0	18.3	C
4	1.00	0.575	2221	4646	0.48	70.4	15.8	B
5	1.00	0.575	1963	4646	0.42	70.4	13.9	B
6	1.00	0.575	2299	4646	0.49	70.4	16.3	B

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1656	5316	0.31	64.2	8.6	A
2	1.00	0.676	1788	5585	0.32	63.9	9.3	A
3	1.00	0.676	2147	4620	0.46	61.1	11.7	B
4	1.00	0.676	1868	4770	0.39	62.6	9.9	A
5	1.00	0.676	1714	5162	0.33	63.8	9.0	A
6	1.00	0.676	2021	5756	0.35	63.5	10.6	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1398	4646	0.30	70.3	9.9	A
2	1.00	0.581	1561	4646	0.34	70.3	11.1	B
3	1.00	0.581	1644	4646	0.35	70.3	11.7	B
4	1.00	0.581	1461	4646	0.31	70.3	10.4	A
5	1.00	0.581	1465	4646	0.32	70.3	10.4	A
6	1.00	0.581	1852	4646	0.40	70.3	13.2	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	1533	135	6970	2000	0.22	0.07	73.4	73.5	7.0	7.0	A
2	1.00	1.00	0.581	0.676	1743	182	6970	2000	0.25	0.09	73.4	73.5	7.9	7.9	A
3	1.00	1.00	0.581	0.676	1773	129	6970	2000	0.25	0.06	73.4	73.5	8.0	8.0	A
4	1.00	1.00	0.581	0.676	1670	209	6970	2000	0.24	0.10	73.4	73.5	7.6	7.6	A
5	1.00	1.00	0.581	0.676	1674	209	6970	2000	0.24	0.10	73.4	73.5	7.6	7.6	A
6	1.00	1.00	0.581	0.676	1960	108	6970	2000	0.28	0.05	73.4	73.5	8.9	8.9	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1518	6970	0.22	70.4	7.2	A
2	1.00	0.595	1731	6970	0.25	70.4	8.2	A
3	1.00	0.595	1751	6970	0.25	70.4	8.3	A
4	1.00	0.595	1664	6970	0.24	70.4	7.9	A
5	1.00	0.595	1667	6970	0.24	70.4	7.9	A
6	1.00	0.595	1931	6970	0.28	70.4	9.1	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	1518	533	9293	2000	0.16	0.27	73.5	73.5	5.2	5.2	A
2	1.00	1.00	0.595	0.676	1731	445	9293	2000	0.19	0.22	73.5	73.5	5.9	5.9	A
3	1.00	1.00	0.595	0.676	1751	453	9293	2000	0.19	0.23	73.5	73.5	6.0	6.0	A
4	1.00	1.00	0.595	0.676	1664	411	9293	2000	0.18	0.21	73.5	73.5	5.7	5.7	A
5	1.00	1.00	0.595	0.676	1667	506	9293	2000	0.18	0.25	73.5	73.5	5.7	5.7	A
6	1.00	1.00	0.595	0.676	1931	533	9293	2000	0.21	0.27	73.5	73.5	6.6	6.6	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	966	6970	0.14	70.4	4.6	A
2	1.00	0.562	1297	6970	0.19	70.4	6.1	A
3	1.00	0.562	1310	6970	0.19	70.4	6.2	A
4	1.00	0.562	1267	6970	0.18	70.4	6.0	A
5	1.00	0.562	1157	6970	0.17	70.4	5.5	A
6	1.00	0.562	1404	6970	0.20	70.4	6.6	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	1176	210	9293	2000	0.13	0.11	73.4	73.5	4.0	4.0	A
2	1.00	1.00	0.562	0.781	1507	210	9293	2000	0.16	0.11	73.4	73.5	5.1	5.1	A
3	1.00	1.00	0.562	0.781	1608	298	9293	2000	0.17	0.15	73.4	73.5	5.5	5.5	A
4	1.00	1.00	0.562	0.781	1436	169	9293	2000	0.15	0.08	73.4	73.5	4.9	4.9	A
5	1.00	1.00	0.562	0.781	1314	157	9293	2000	0.14	0.08	73.4	73.5	4.5	4.5	A
6	1.00	1.00	0.562	0.781	1544	140	9293	2000	0.17	0.07	73.4	73.5	5.3	5.3	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1217	6970	0.17	70.4	5.8	A
2	1.00	0.581	1537	6970	0.22	70.4	7.3	A

3	1.00	0.581	1668	6970	0.24	70.4	7.9	A
4	1.00	0.581	1453	6970	0.21	70.4	6.9	A
5	1.00	0.581	1330	6970	0.19	70.4	6.3	A
6	1.00	0.581	1546	6970	0.22	70.4	7.3	A

Facility Time Period Results

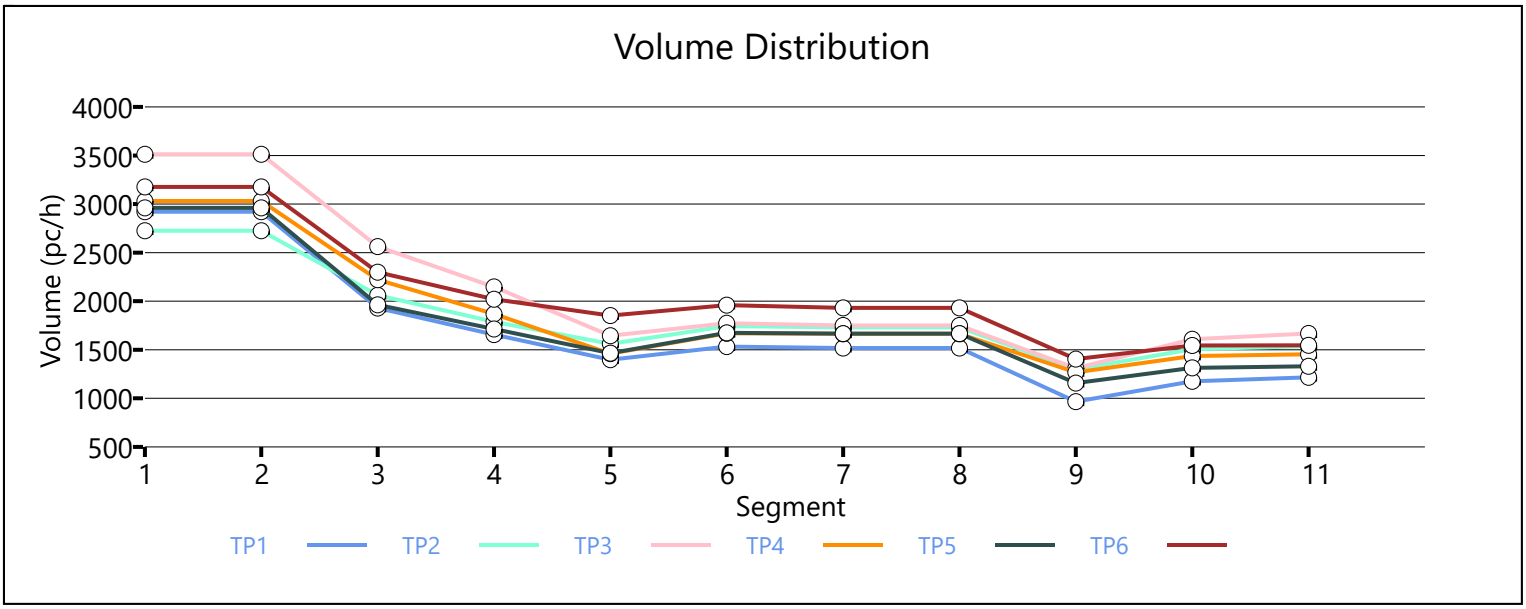
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.9	8.9	5.4	5.80	A
2	70.1	9.5	5.7	5.80	A
3	69.7	11.1	6.6	5.80	B
4	69.9	9.8	5.9	5.80	A
5	69.9	9.3	5.6	5.80	A
6	70.0	10.6	6.4	5.80	A

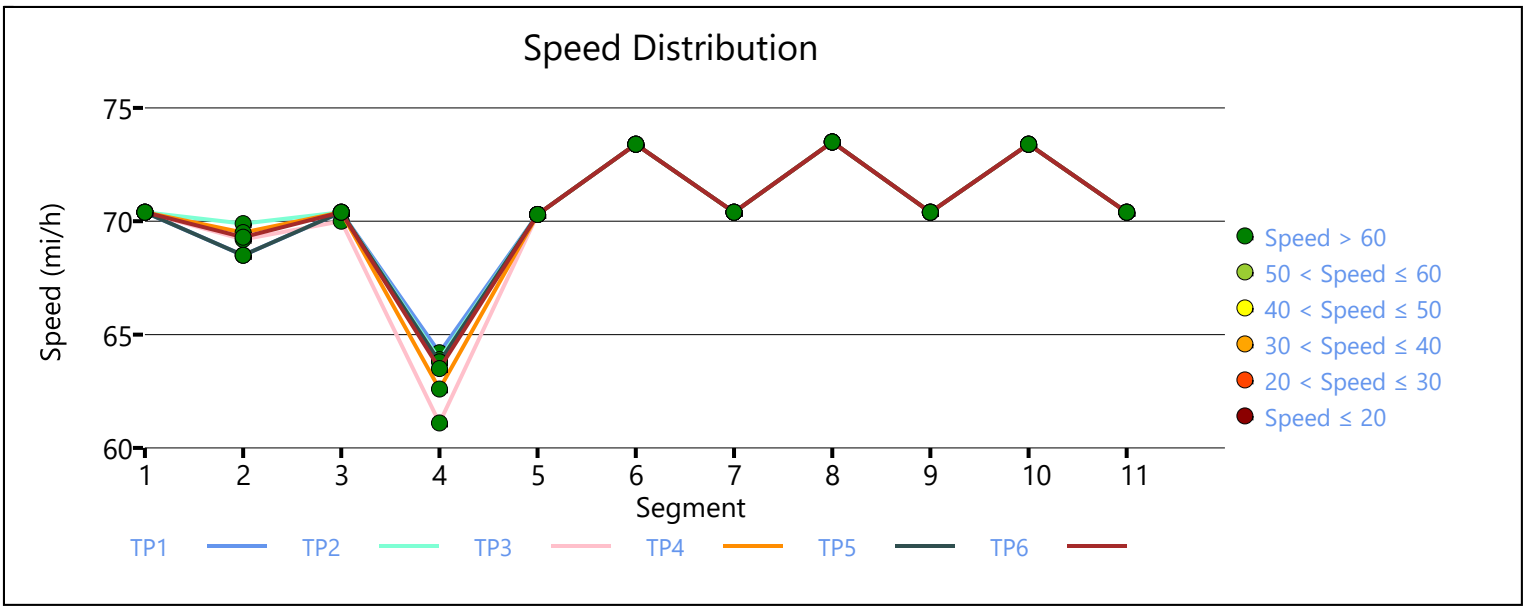
Facility Overall Results

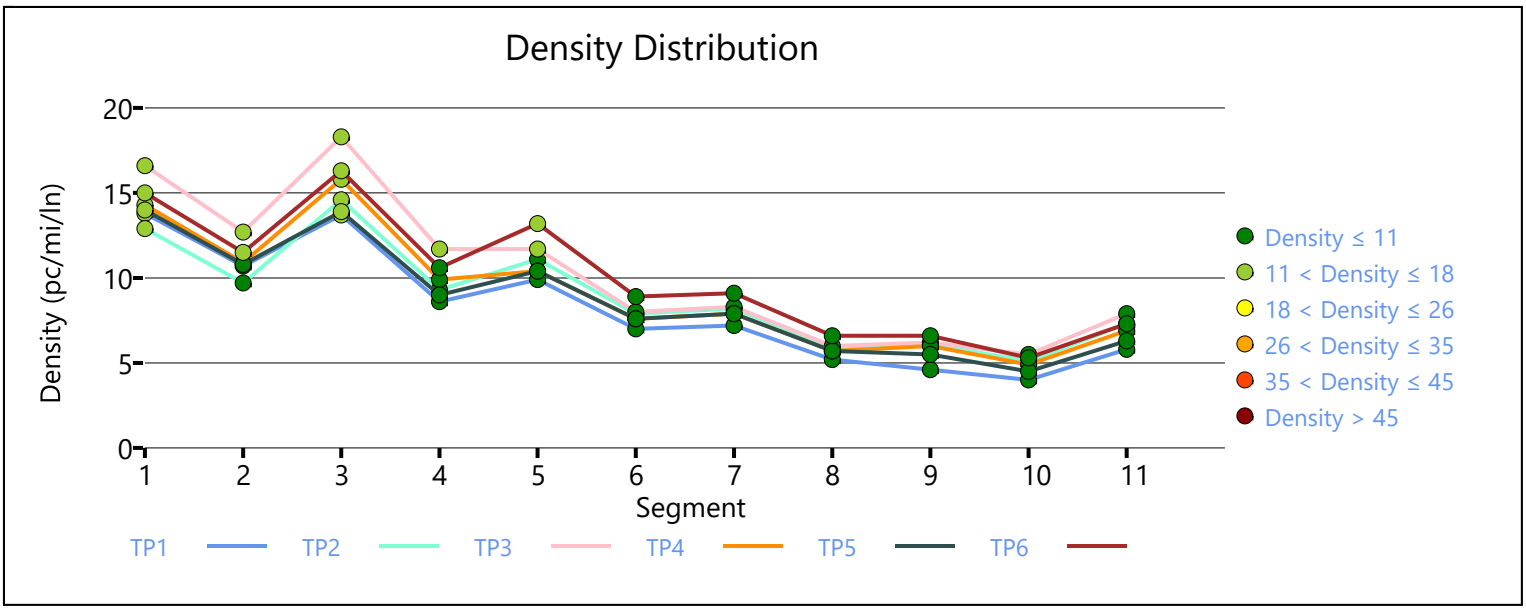
Space Mean Speed, mi/h	69.9	Density, veh/mi/ln	5.9
Average Travel Time, min	5.80	Density, pc/mi/ln	9.9

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2025 No Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2025 No Build Westbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	8	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	6147	6970	1.10	34.8	58.9	F
2	1.00	0.617	3741	6970	1.14	11.1	112.2	F
3	1.00	0.617	3724	6970	1.12	11.0	112.5	F
4	1.00	0.617	3958	6970	1.13	12.3	107.7	F
5	1.00	0.617	3758	6970	1.13	11.2	111.8	F
6	1.00	0.617	3767	6970	1.20	11.2	111.6	F
7	1.00	0.617	3974	6970	1.18	12.3	107.3	F
8	1.00	0.617	3842	6970	1.13	11.6	110.1	F

Segment 2: Diverge

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	5388	2147	9293	4000	0.82	0.54	16.8	53.9	80.0	21.5	F
2	1.00	1.00	0.617	0.926	3588	2477	9293	4000	0.85	0.62	7.0	53.0	127.6	24.2	F
3	1.00	1.00	0.617	0.926	3852	2403	9293	4000	0.84	0.60	7.9	53.2	122.5	23.5	F
4	1.00	1.00	0.617	0.926	3938	2610	9293	4000	0.85	0.65	8.4	52.6	117.5	25.0	F
5	1.00	1.00	0.617	0.926	3776	2491	9293	4000	0.84	0.62	8.0	53.0	117.5	24.1	F
6	1.00	1.00	0.617	0.926	3778	2753	9293	4000	0.90	0.69	7.9	52.2	119.9	27.0	F
7	1.00	1.00	0.617	0.926	4009	2398	9293	4000	0.88	0.60	8.7	53.2	114.8	24.4	F
8	1.00	1.00	0.617	0.926	3799	2320	9293	4000	0.85	0.58	8.0	53.4	118.6	23.2	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	2773	4646	1.02	14.3	96.6	F
2	1.00	0.575	2432	4646	0.97	10.7	113.5	F
3	1.00	0.575	2776	4646	0.97	13.4	103.4	F
4	1.00	0.575	2651	4646	0.92	12.4	106.9	F
5	1.00	0.575	2520	4646	0.95	11.3	111.3	F
6	1.00	0.575	2632	4646	0.98	12.2	107.9	F
7	1.00	0.575	2749	4646	1.07	13.2	104.1	F
8	1.00	0.575	2655	4646	1.02	12.4	107.1	F

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	3103	3332	1.06	54.2	19.1	F
2	1.00	0.676	2766	2974	1.14	53.5	17.2	F
3	1.00	0.676	3109	3343	1.03	51.9	20.4	F
4	1.00	0.676	2984	3209	1.01	52.9	18.8	F
5	1.00	0.676	2853	3068	1.06	53.2	17.9	F
6	1.00	0.676	2965	3188	1.07	52.4	19.2	F
7	1.00	0.676	3082	3314	1.11	52.4	19.6	F
8	1.00	0.676	2988	3213	1.12	52.7	18.9	F

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	128	4646	0.35	70.2	0.9	A
2	1.00	0.581	427	4646	0.30	70.1	3.0	A
3	1.00	0.581	258	4646	0.37	70.1	1.8	A
4	1.00	0.581	563	4646	0.33	70.1	4.0	A
5	1.00	0.581	438	4646	0.29	70.1	3.1	A
6	1.00	0.581	282	4646	0.34	70.1	2.0	A
7	1.00	0.581	437	4646	0.36	70.1	3.1	A
8	1.00	0.581	442	4646	0.37	70.1	3.1	A

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	378	250	6970	2000	0.27	0.13	66.0	66.0	1.9	1.9	A
2	1.00	1.00	0.581	0.676	649	222	6970	2000	0.23	0.11	67.0	67.0	3.2	3.2	A
3	1.00	1.00	0.581	0.676	447	189	6970	2000	0.28	0.09	66.8	66.8	2.2	2.2	A
4	1.00	1.00	0.581	0.676	711	148	6970	2000	0.24	0.07	67.5	67.5	3.5	3.5	A
5	1.00	1.00	0.581	0.676	607	169	6970	2000	0.22	0.08	67.2	67.2	3.0	3.0	A
6	1.00	1.00	0.581	0.676	458	176	6970	2000	0.25	0.09	66.9	66.9	2.3	2.3	A
7	1.00	1.00	0.581	0.676	585	148	6970	2000	0.26	0.07	67.3	67.3	2.9	2.9	A
8	1.00	1.00	0.581	0.676	603	161	6970	2000	0.27	0.08	67.3	67.3	3.0	3.0	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	378	6970	0.27	70.4	1.8	A
2	1.00	0.595	649	6970	0.23	70.4	3.1	A
3	1.00	0.595	447	6970	0.27	70.4	2.1	A
4	1.00	0.595	711	6970	0.24	70.4	3.4	A
5	1.00	0.595	607	6970	0.22	70.4	2.9	A
6	1.00	0.595	458	6970	0.25	70.4	2.2	A
7	1.00	0.595	585	6970	0.26	70.4	2.8	A
8	1.00	0.595	603	6970	0.27	70.4	2.9	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	554	553	9293	2000	0.20	0.28	58.4	58.4	2.4	2.4	A
2	1.00	1.00	0.595	0.676	649	411	9293	2000	0.17	0.21	62.4	62.4	2.6	2.6	A
3	1.00	1.00	0.595	0.676	447	453	9293	2000	0.20	0.23	58.6	58.6	1.9	1.9	A
4	1.00	1.00	0.595	0.676	711	466	9293	2000	0.18	0.23	62.0	62.0	2.9	2.9	A
5	1.00	1.00	0.595	0.676	607	453	9293	2000	0.16	0.23	61.1	61.1	2.5	2.5	A
6	1.00	1.00	0.595	0.676	458	479	9293	2000	0.19	0.24	58.3	58.3	2.0	2.0	A
7	1.00	1.00	0.595	0.676	585	405	9293	2000	0.19	0.20	61.8	61.8	2.4	2.4	A
8	1.00	1.00	0.595	0.676	603	425	9293	2000	0.20	0.21	61.6	61.6	2.4	2.4	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	1	6970	0.19	69.9	0.0	A
2	1.00	0.562	457	6970	0.17	70.1	2.2	A
3	1.00	0.562	333	6970	0.21	69.9	1.6	A
4	1.00	0.562	542	6970	0.17	70.0	2.6	A

5	1.00	0.562	436	6970	0.15	70.0	2.1	A
6	1.00	0.562	322	6970	0.18	69.9	1.5	A
7	1.00	0.562	423	6970	0.20	70.0	2.0	A
8	1.00	0.562	467	6970	0.21	70.0	2.2	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	206	205	9293	2000	0.16	0.10	64.6	64.6	0.8	0.8	A
2	1.00	1.00	0.562	0.781	626	169	9293	2000	0.15	0.08	68.2	68.2	2.3	2.3	A
3	1.00	1.00	0.562	0.781	579	246	9293	2000	0.18	0.12	67.4	67.4	2.1	2.1	A
4	1.00	1.00	0.562	0.781	764	222	9293	2000	0.15	0.11	68.1	68.1	2.8	2.8	A
5	1.00	1.00	0.562	0.781	682	246	9293	2000	0.14	0.12	67.8	67.8	2.5	2.5	A
6	1.00	1.00	0.562	0.781	579	257	9293	2000	0.16	0.13	67.3	67.3	2.2	2.2	A
7	1.00	1.00	0.562	0.781	621	198	9293	2000	0.17	0.10	68.0	68.0	2.3	2.3	A
8	1.00	1.00	0.562	0.781	713	246	9293	2000	0.18	0.12	67.8	67.8	2.6	2.6	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	206	6970	0.24	70.4	1.0	A
2	1.00	0.526	626	6970	0.22	70.4	3.0	A
3	1.00	0.526	579	6970	0.28	70.4	2.7	A
4	1.00	0.526	764	6970	0.23	70.4	3.6	A
5	1.00	0.526	682	6970	0.22	70.4	3.2	A
6	1.00	0.526	579	6970	0.25	70.4	2.7	A
7	1.00	0.526	621	6970	0.26	70.4	2.9	A
8	1.00	0.526	713	6970	0.28	70.4	3.4	A

Facility Time Period Results

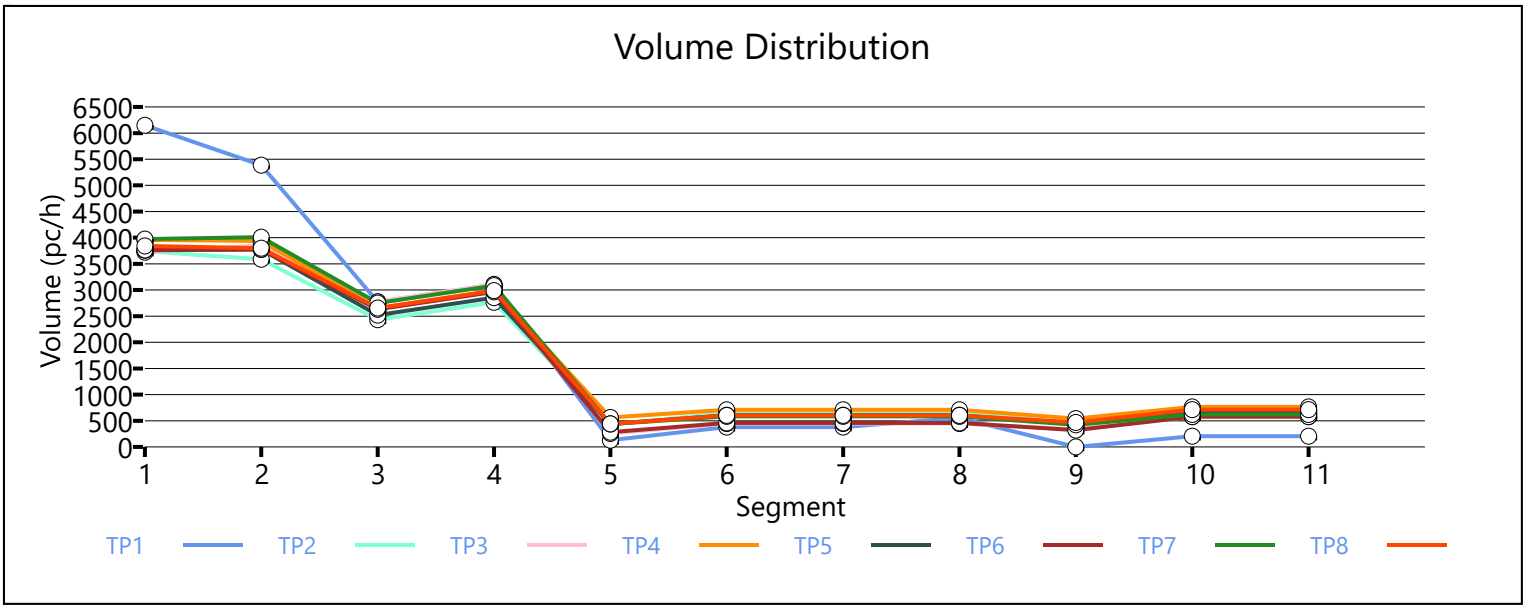
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	24.7	30.1	18.4	16.50	F
2	12.9	46.5	28.4	31.50	F
3	13.5	44.7	27.4	30.10	F
4	14.7	44.3	27.0	27.50	F
5	13.5	45.1	27.5	30.00	F
6	13.3	44.7	27.3	30.50	F
7	14.7	43.4	26.5	27.50	F
8	14.1	44.6	27.2	28.90	F

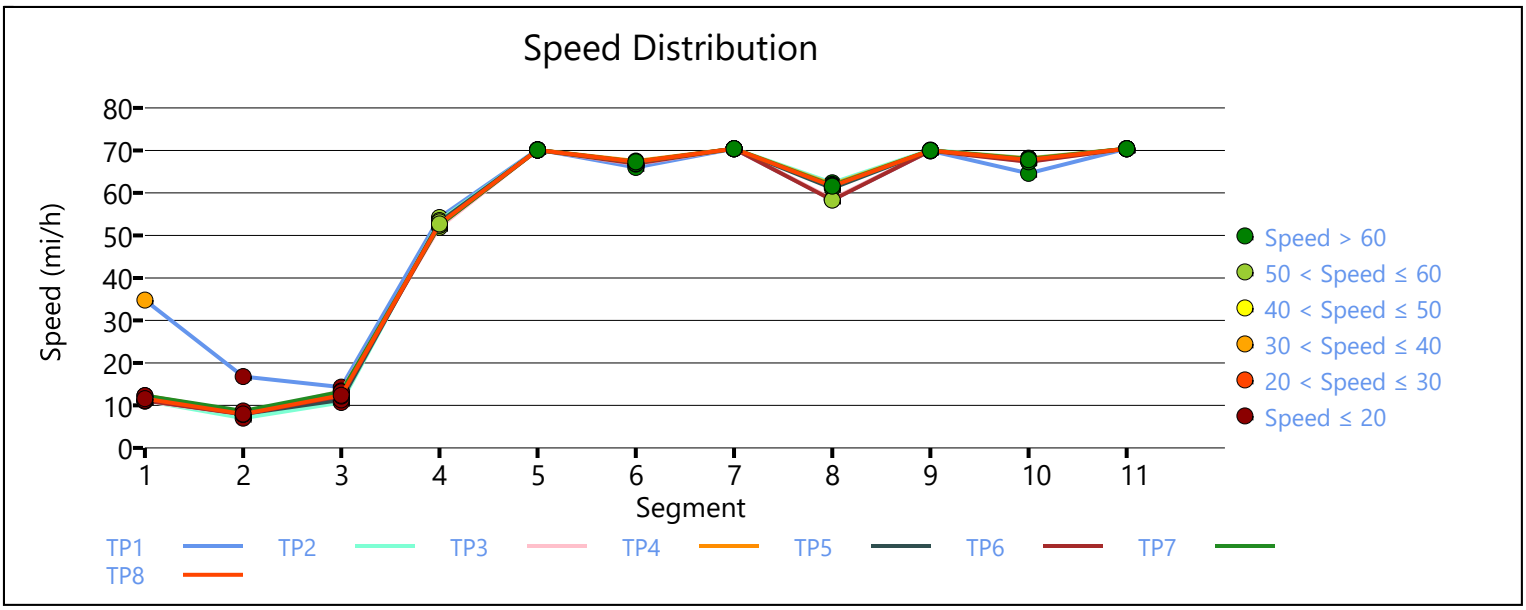
Facility Overall Results

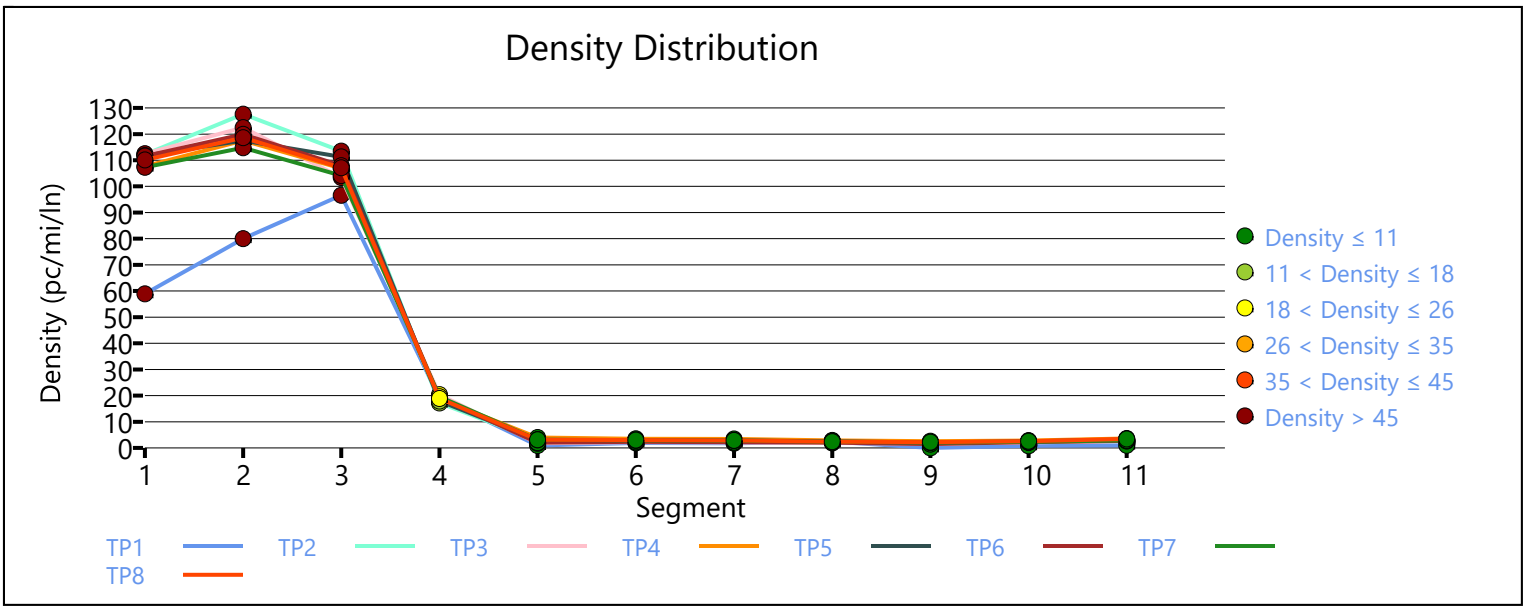
Space Mean Speed, mi/h	14.8	Density, veh/mi/ln	26.2
Average Travel Time, min	27.50	Density, pc/mi/ln	42.9

Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Oversaturated conditions currently exist in boundary time period 8. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 4	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 5	Queue extends past the beginning of the facility on time period 2. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 6	Queue extends past the beginning of the facility on time period 3. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 7	Queue extends past the beginning of the facility on time period 4. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 8	Queue extends past the beginning of the facility on time period 5. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 9	Queue extends past the beginning of the facility on time period 6. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 10	Queue extends past the beginning of the facility on time period 7. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 11	Queue extends past the beginning of the facility on time period 8. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
Comments	







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2025 Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2025 Build Westbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	2921	6970	0.42	70.4	13.8	B
2	1.00	0.617	2726	6970	0.39	70.4	12.9	B
3	1.00	0.617	3512	6970	0.50	70.4	16.6	B
4	1.00	0.617	3031	6970	0.43	70.4	14.3	B
5	1.00	0.617	2961	6970	0.42	70.4	14.0	B
6	1.00	0.617	3177	6970	0.46	70.4	15.0	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	2921	748	9293	4000	0.31	0.19	68.5	57.9	10.7	2.0	A

2	1.00	1.00	0.617	0.926	2726	537	9293	4000	0.29	0.13	69.9	58.5	9.7	0.3	A
3	1.00	1.00	0.617	0.926	3512	748	9293	4000	0.38	0.19	69.2	57.9	12.7	3.4	A
4	1.00	1.00	0.617	0.926	3031	640	9293	4000	0.33	0.16	69.5	58.2	10.9	1.6	A
5	1.00	1.00	0.617	0.926	2961	754	9293	4000	0.32	0.19	68.5	57.9	10.8	2.2	A
6	1.00	1.00	0.617	0.926	3177	689	9293	4000	0.34	0.17	69.3	58.1	11.5	2.2	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	1929	4646	0.42	70.4	13.7	B
2	1.00	0.575	2061	4646	0.44	70.4	14.6	B
3	1.00	0.575	2563	4646	0.55	70.0	18.3	C
4	1.00	0.575	2221	4646	0.48	70.4	15.8	B
5	1.00	0.575	1963	4646	0.42	70.4	13.9	B
6	1.00	0.575	2299	4646	0.49	70.4	16.3	B

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1656	5316	0.31	64.2	8.6	A
2	1.00	0.676	1750	4665	0.38	62.9	9.3	A
3	1.00	0.676	2109	4054	0.52	60.3	11.7	B
4	1.00	0.676	1828	4098	0.45	61.7	9.9	A
5	1.00	0.676	1676	4318	0.39	62.8	8.9	A
6	1.00	0.676	2021	5756	0.35	63.5	10.6	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1398	4646	0.30	70.3	9.9	A
2	1.00	0.581	1375	4646	0.30	70.3	9.8	A
3	1.00	0.581	1456	4646	0.31	70.3	10.3	A
4	1.00	0.581	1274	4646	0.27	70.3	9.0	A
5	1.00	0.581	1277	4646	0.27	70.3	9.1	A
6	1.00	0.581	1852	4646	0.40	70.3	13.2	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	1533	135	6970	2000	0.22	0.07	73.4	73.5	7.0	7.0	A
2	1.00	1.00	0.581	0.676	1557	182	6970	2000	0.22	0.09	73.4	73.5	7.1	7.1	A
3	1.00	1.00	0.581	0.676	1585	129	6970	2000	0.23	0.06	73.4	73.5	7.2	7.2	A
4	1.00	1.00	0.581	0.676	1483	209	6970	2000	0.21	0.10	73.4	73.5	6.7	6.7	A
5	1.00	1.00	0.581	0.676	1486	209	6970	2000	0.21	0.10	73.4	73.5	6.7	6.7	A
6	1.00	1.00	0.581	0.676	1960	108	6970	2000	0.28	0.05	73.4	73.5	8.9	8.9	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1518	6970	0.22	70.4	7.2	A
2	1.00	0.595	1550	6970	0.22	70.4	7.3	A
3	1.00	0.595	1568	6970	0.22	70.4	7.4	A
4	1.00	0.595	1481	6970	0.21	70.4	7.0	A
5	1.00	0.595	1484	6970	0.21	70.4	7.0	A
6	1.00	0.595	1931	6970	0.28	70.4	9.1	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	1518	533	9293	2000	0.16	0.27	73.5	73.5	5.2	5.2	A
2	1.00	1.00	0.595	0.676	1550	584	9293	2000	0.17	0.29	73.5	73.5	5.3	5.3	A
3	1.00	1.00	0.595	0.676	1568	590	9293	2000	0.17	0.30	73.5	73.5	5.3	5.3	A
4	1.00	1.00	0.595	0.676	1481	550	9293	2000	0.16	0.28	73.5	73.5	5.0	5.0	A
5	1.00	1.00	0.595	0.676	1484	645	9293	2000	0.16	0.32	73.5	73.5	5.0	5.0	A
6	1.00	1.00	0.595	0.676	1931	533	9293	2000	0.21	0.27	73.5	73.5	6.6	6.6	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	966	6970	0.14	70.4	4.6	A
2	1.00	0.562	938	6970	0.13	70.4	4.4	A
3	1.00	0.562	950	6970	0.14	70.4	4.5	A
4	1.00	0.562	906	6970	0.13	70.4	4.3	A
5	1.00	0.562	795	6970	0.11	70.4	3.8	A
6	1.00	0.562	1404	6970	0.20	70.4	6.6	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	1176	210	9293	2000	0.13	0.11	73.4	73.5	4.0	4.0	A
2	1.00	1.00	0.562	0.781	1152	214	9293	2000	0.12	0.11	73.4	73.5	3.9	3.9	A
3	1.00	1.00	0.562	0.781	1252	302	9293	2000	0.13	0.15	73.4	73.5	4.3	4.3	A
4	1.00	1.00	0.562	0.781	1079	173	9293	2000	0.12	0.09	73.4	73.5	3.7	3.7	A
5	1.00	1.00	0.562	0.781	956	161	9293	2000	0.10	0.08	73.4	73.5	3.3	3.3	A
6	1.00	1.00	0.562	0.781	1544	140	9293	2000	0.17	0.07	73.4	73.5	5.3	5.3	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1217	6970	0.17	70.4	5.8	A
2	1.00	0.581	1194	6970	0.17	70.4	5.7	A

3	1.00	0.581	1325	6970	0.19	70.4	6.3	A
4	1.00	0.581	1108	6970	0.16	70.4	5.2	A
5	1.00	0.581	986	6970	0.14	70.4	4.7	A
6	1.00	0.581	1546	6970	0.22	70.4	7.3	A

Facility Time Period Results

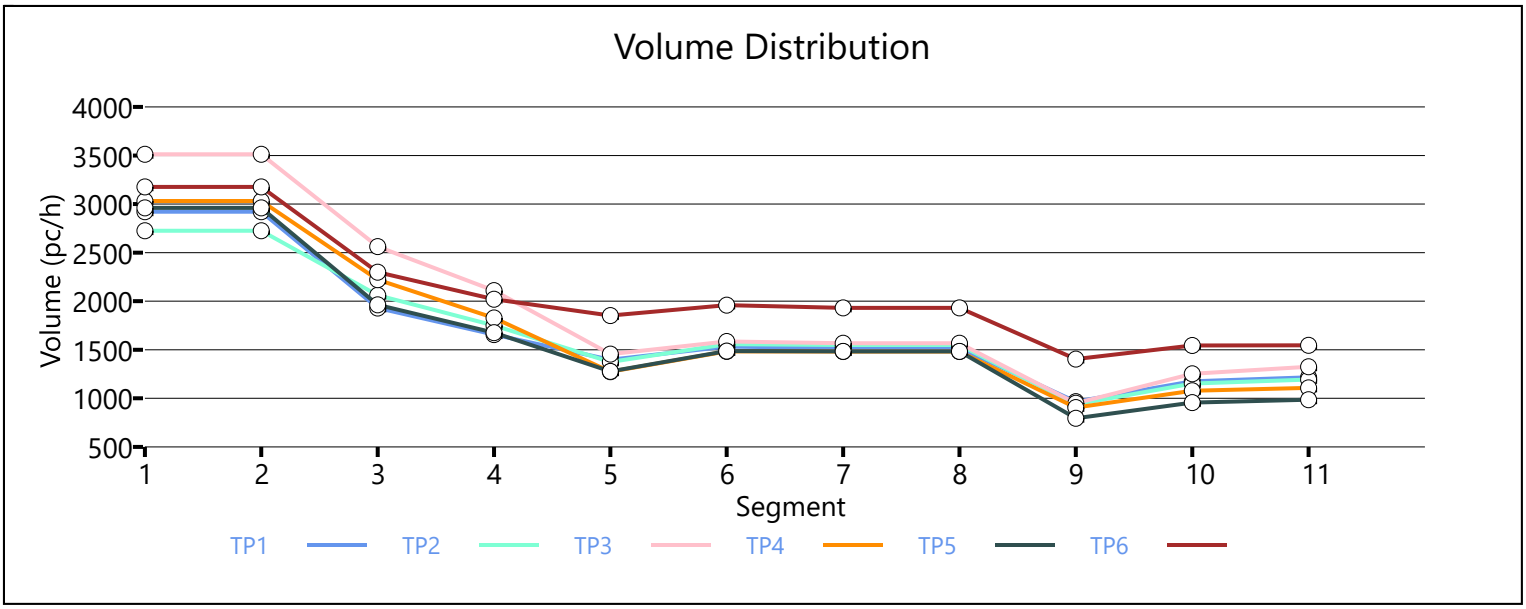
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.9	8.9	5.4	5.80	A
2	70.0	8.8	5.3	5.80	A
3	69.5	10.4	6.2	5.80	A
4	69.8	9.1	5.4	5.80	A
5	69.7	8.6	5.2	5.80	A
6	70.0	10.6	6.4	5.80	A

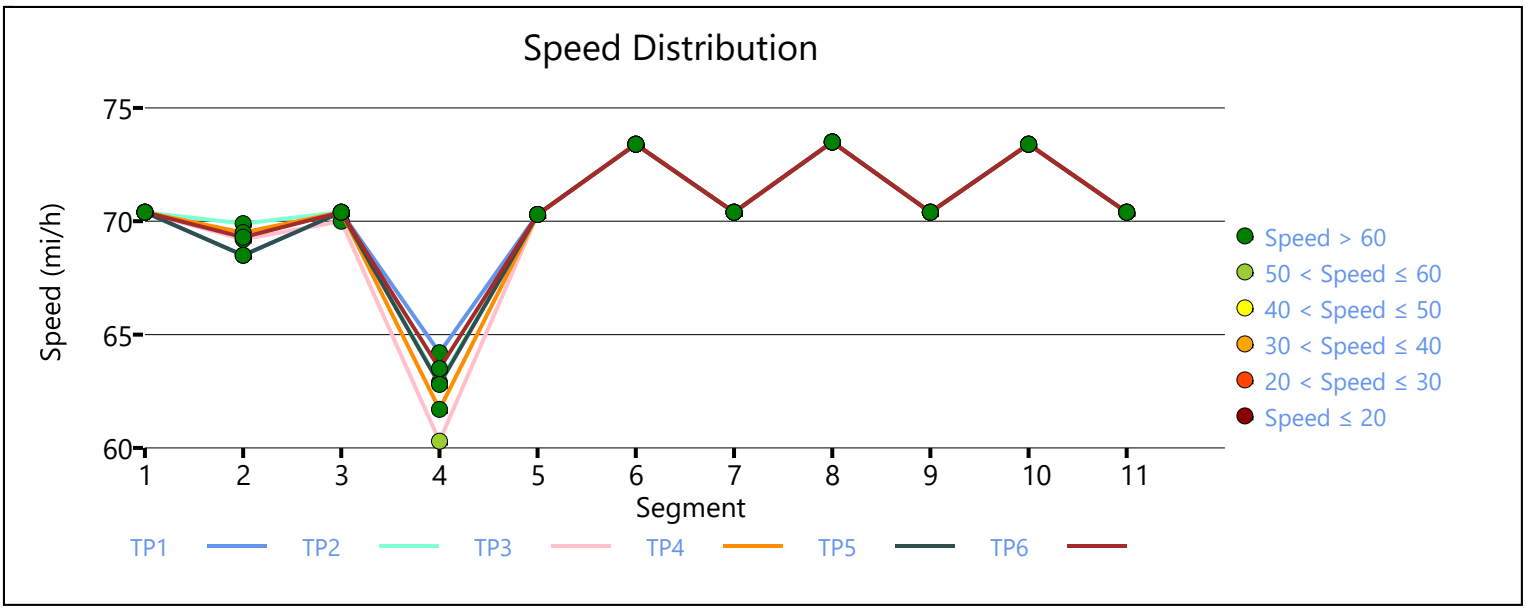
Facility Overall Results

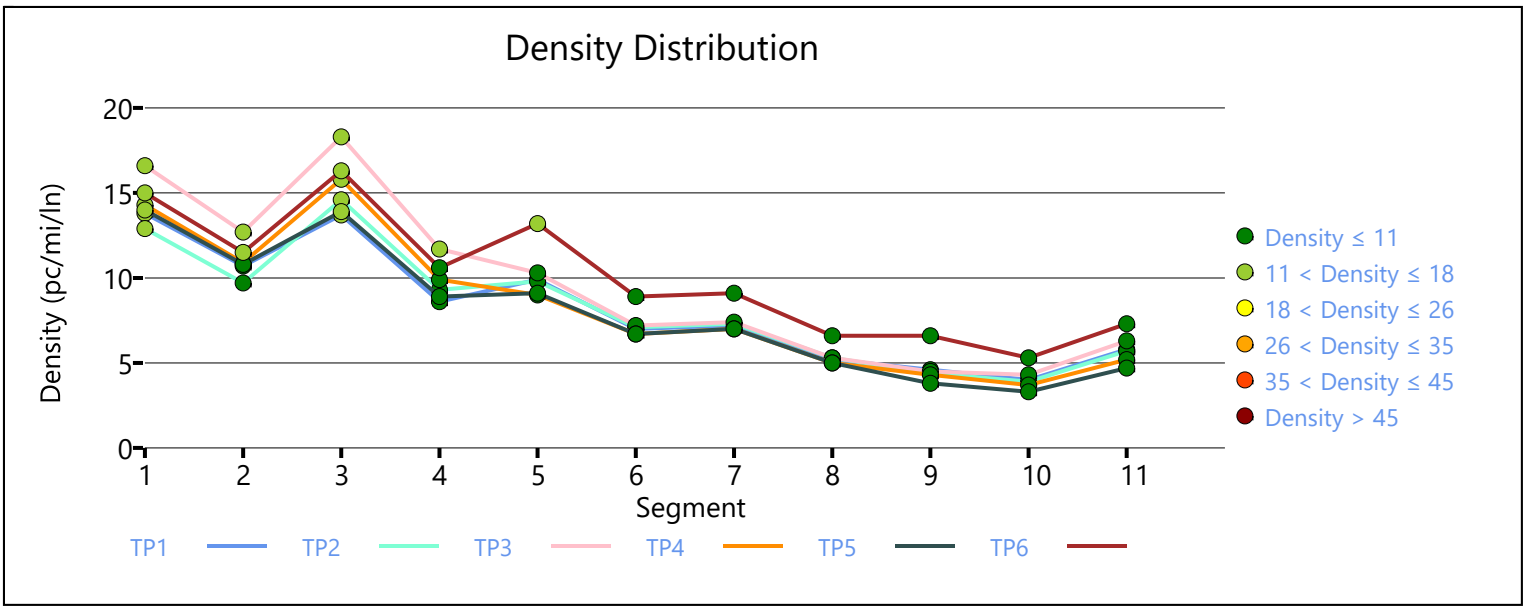
Space Mean Speed, mi/h	69.8	Density, veh/mi/ln	5.6
Average Travel Time, min	5.80	Density, pc/mi/ln	9.4

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2025 Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2025 Build Westbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	8	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	6147	6970	1.10	34.8	58.9	F
2	1.00	0.617	3741	6970	1.14	11.1	112.2	F
3	1.00	0.617	3485	6970	1.12	9.9	117.5	F
4	1.00	0.617	3304	6970	1.13	9.1	121.3	F
5	1.00	0.617	3103	6970	1.13	8.2	125.4	F
6	1.00	0.617	3089	6970	1.20	8.2	125.7	F
7	1.00	0.617	3344	6970	1.18	9.3	120.4	F
8	1.00	0.617	3842	6970	1.13	11.6	110.1	F

Segment 2: Diverge

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	5388	2147	9293	4000	0.82	0.54	16.8	53.9	80.0	21.5	F
2	1.00	1.00	0.617	0.926	3588	2477	9293	4000	0.85	0.62	7.0	53.0	127.6	24.2	F
3	1.00	1.00	0.617	0.926	3398	2403	9293	4000	0.84	0.60	6.2	53.2	136.3	23.5	F
4	1.00	1.00	0.617	0.926	3235	2610	9293	4000	0.85	0.65	5.8	52.6	139.5	25.0	F
5	1.00	1.00	0.617	0.926	3087	2491	9293	4000	0.84	0.62	5.4	53.0	141.8	24.1	F
6	1.00	1.00	0.617	0.926	3092	2753	9293	4000	0.90	0.69	5.5	52.2	141.8	27.0	F
7	1.00	1.00	0.617	0.926	3684	2398	9293	4000	0.88	0.60	7.1	53.2	129.7	24.4	F
8	1.00	1.00	0.617	0.926	3799	2320	9293	4000	0.85	0.58	8.0	53.4	118.6	23.2	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	2773	4646	1.02	14.3	96.6	F
2	1.00	0.575	2432	4646	0.97	10.7	113.5	F
3	1.00	0.575	2270	4646	0.97	9.5	119.0	F
4	1.00	0.575	2150	4646	0.92	8.8	122.6	F
5	1.00	0.575	2058	4646	0.95	8.2	125.8	F
6	1.00	0.575	2159	4646	0.98	8.8	122.6	F
7	1.00	0.575	2749	4646	1.07	13.2	104.2	F
8	1.00	0.575	2655	4646	1.02	12.4	107.1	F

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	3103	3332	1.06	54.2	19.1	F
2	1.00	0.676	2766	2974	1.14	53.5	17.2	F
3	1.00	0.676	2603	2799	1.19	53.5	16.9	F
4	1.00	0.676	2483	2670	1.16	53.2	17.5	F
5	1.00	0.676	2391	2571	1.22	53.1	17.6	F
6	1.00	0.676	2492	2680	1.23	52.3	19.5	F
7	1.00	0.676	3082	3314	1.11	50.8	23.2	F
8	1.00	0.676	2988	3213	1.12	52.7	18.9	F

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	128	4646	0.35	70.2	0.9	A
2	1.00	0.581	427	4646	0.30	70.1	3.0	A
3	1.00	0.581	216	4646	0.25	70.1	1.5	A
4	1.00	0.581	26	4646	0.21	70.1	0.2	A
5	1.00	0.581	0	4646	0.17	70.1	0.0	A
6	1.00	0.581	0	4646	0.22	70.1	0.0	A
7	1.00	0.581	0	4646	0.36	70.1	0.0	A
8	1.00	0.581	442	4646	0.37	70.1	3.1	A

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	378	250	6970	2000	0.27	0.13	66.0	66.0	1.9	1.9	A
2	1.00	1.00	0.581	0.676	649	222	6970	2000	0.23	0.11	67.0	67.0	3.2	3.2	A
3	1.00	1.00	0.581	0.676	405	189	6970	2000	0.19	0.09	66.6	66.6	2.0	2.0	A
4	1.00	1.00	0.581	0.676	174	148	6970	2000	0.16	0.07	65.4	65.4	0.9	0.9	A
5	1.00	1.00	0.581	0.676	169	169	6970	2000	0.14	0.08	65.0	65.0	0.9	0.9	A
6	1.00	1.00	0.581	0.676	176	176	6970	2000	0.17	0.09	65.0	65.0	0.9	0.9	A
7	1.00	1.00	0.581	0.676	148	148	6970	2000	0.26	0.07	65.0	65.0	0.8	0.8	A
8	1.00	1.00	0.581	0.676	603	161	6970	2000	0.27	0.08	67.3	67.3	3.0	3.0	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	378	6970	0.27	70.4	1.8	A
2	1.00	0.595	649	6970	0.23	70.4	3.1	A
3	1.00	0.595	405	6970	0.19	70.4	1.9	A
4	1.00	0.595	174	6970	0.16	70.4	0.8	A
5	1.00	0.595	169	6970	0.14	70.4	0.8	A
6	1.00	0.595	176	6970	0.17	70.4	0.8	A
7	1.00	0.595	148	6970	0.26	70.4	0.7	A
8	1.00	0.595	603	6970	0.27	70.4	2.9	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	554	553	9293	2000	0.20	0.28	58.4	58.4	2.4	2.4	A
2	1.00	1.00	0.595	0.676	649	411	9293	2000	0.17	0.21	62.4	62.4	2.6	2.6	A
3	1.00	1.00	0.595	0.676	405	747	9293	2000	0.15	0.37	51.0	51.0	2.0	2.0	A
4	1.00	1.00	0.595	0.676	174	760	9293	2000	0.12	0.38	37.7	37.7	1.2	1.2	A
5	1.00	1.00	0.595	0.676	169	747	9293	2000	0.10	0.37	37.5	37.5	1.1	1.1	A
6	1.00	1.00	0.595	0.676	176	775	9293	2000	0.13	0.39	37.5	37.5	1.2	1.2	A
7	1.00	1.00	0.595	0.676	148	405	9293	2000	0.19	0.20	46.6	46.6	0.8	0.8	A
8	1.00	1.00	0.595	0.676	603	425	9293	2000	0.20	0.21	61.6	61.6	2.4	2.4	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	1	6970	0.19	69.9	0.0	A
2	1.00	0.562	457	6970	0.17	70.1	2.2	A
3	1.00	0.562	302	6970	0.08	69.6	1.4	A
4	1.00	0.562	78	6970	0.04	69.0	0.4	A

5	1.00	0.562	53	6970	0.02	69.0	0.3	A
6	1.00	0.562	40	6970	0.05	69.0	0.2	A
7	1.00	0.562	51	6970	0.20	69.4	0.2	A
8	1.00	0.562	467	6970	0.21	70.0	2.2	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	206	205	9293	2000	0.16	0.10	65.7	65.7	0.8	0.8	A
2	1.00	1.00	0.562	0.781	626	169	9293	2000	0.15	0.08	68.1	68.1	2.3	2.3	A
3	1.00	1.00	0.562	0.781	550	248	9293	2000	0.08	0.12	67.5	67.5	2.0	2.0	A
4	1.00	1.00	0.562	0.781	303	225	9293	2000	0.05	0.11	66.5	66.5	1.1	1.1	A
5	1.00	1.00	0.562	0.781	301	248	9293	2000	0.04	0.12	66.3	66.3	1.1	1.1	A
6	1.00	1.00	0.562	0.781	300	260	9293	2000	0.06	0.13	66.1	66.1	1.1	1.1	A
7	1.00	1.00	0.562	0.781	249	198	9293	2000	0.17	0.10	66.4	66.4	0.9	0.9	A
8	1.00	1.00	0.562	0.781	713	246	9293	2000	0.18	0.12	67.9	67.9	2.6	2.6	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	206	6970	0.24	70.4	1.0	A
2	1.00	0.526	626	6970	0.22	70.4	3.0	A
3	1.00	0.526	550	6970	0.13	70.4	2.6	A
4	1.00	0.526	303	6970	0.09	70.4	1.4	A
5	1.00	0.526	301	6970	0.07	70.4	1.4	A
6	1.00	0.526	300	6970	0.10	70.4	1.4	A
7	1.00	0.526	249	6970	0.26	70.4	1.2	A
8	1.00	0.526	713	6970	0.28	70.4	3.4	A

Facility Time Period Results

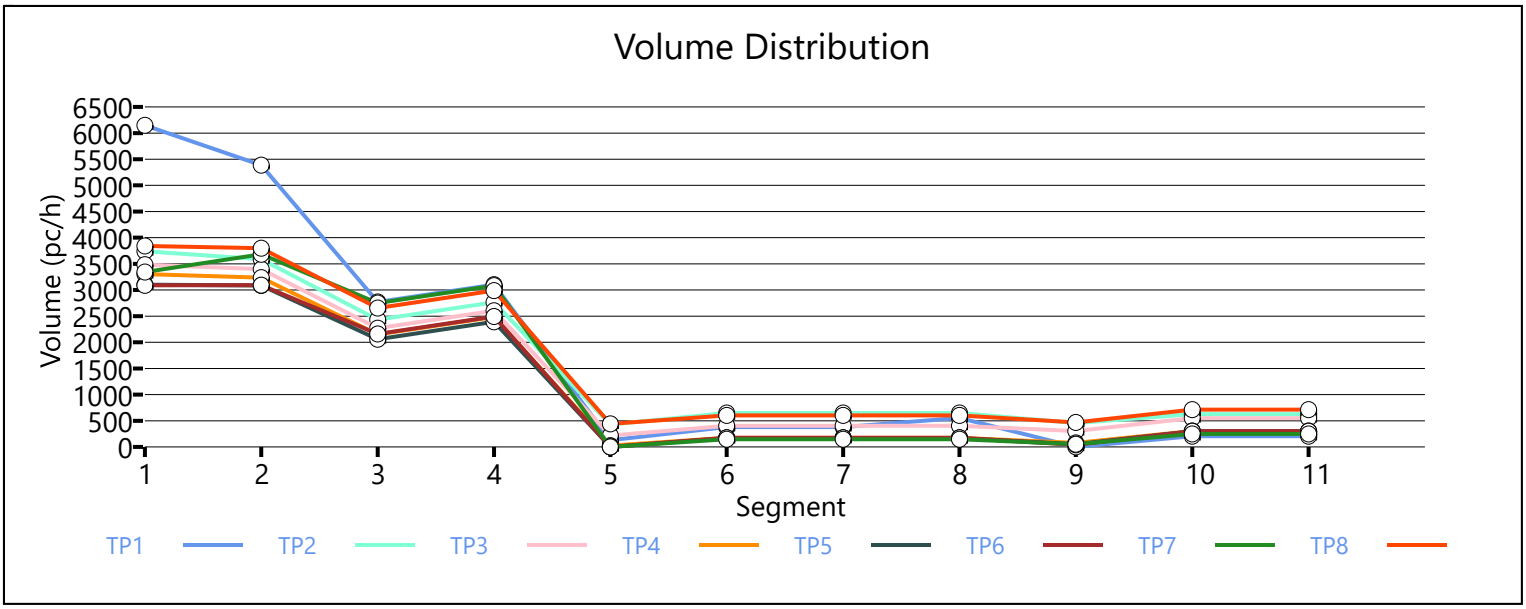
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	24.7	30.1	18.4	16.50	F
2	12.9	46.5	28.4	31.50	F
3	11.1	48.4	29.5	36.60	F
4	9.6	49.1	30.0	42.10	F
5	8.9	50.4	30.8	45.40	F
6	9.1	50.2	30.7	44.50	F
7	11.3	46.2	28.4	35.90	F
8	14.1	44.6	27.2	28.90	F

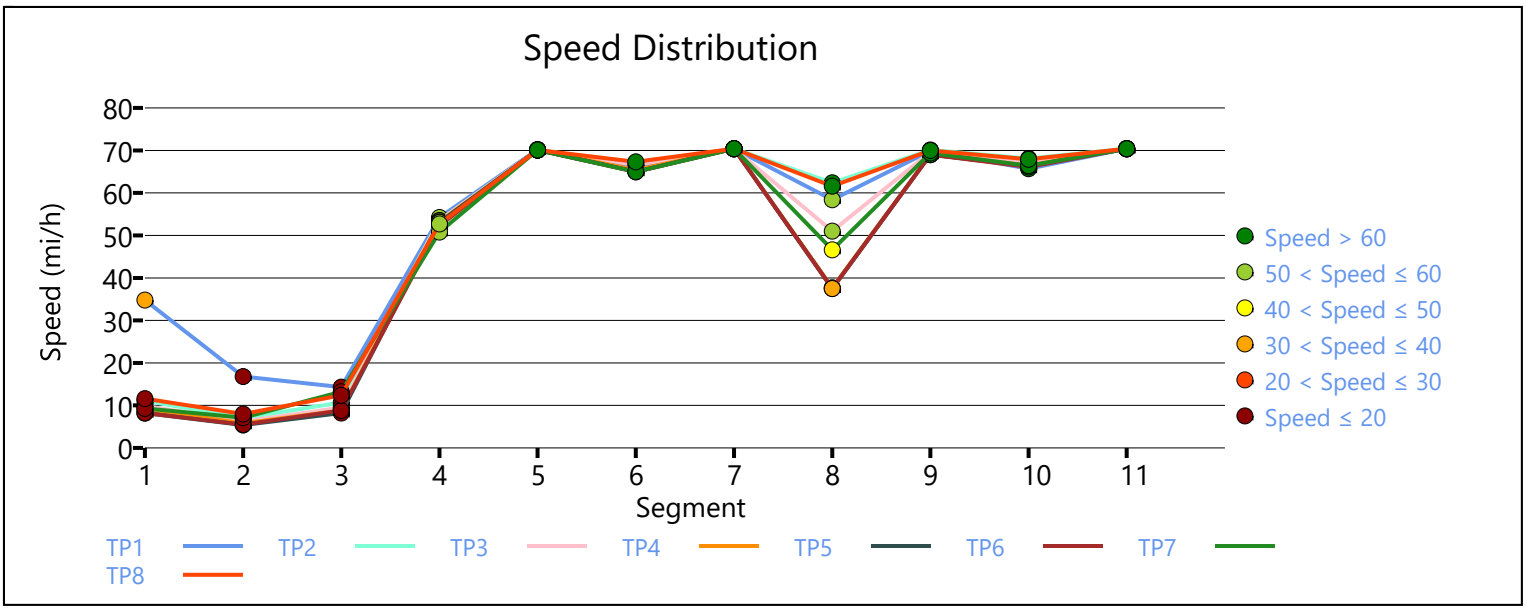
Facility Overall Results

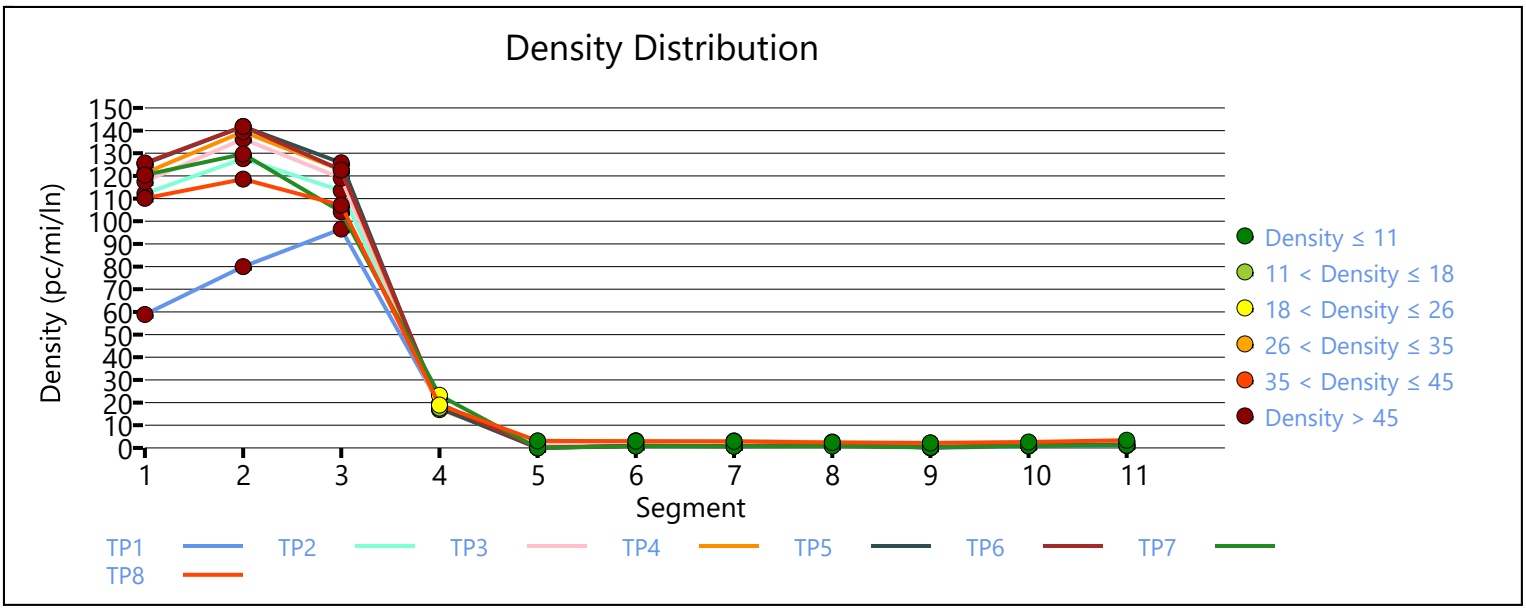
Space Mean Speed, mi/h	12.1	Density, veh/mi/ln	27.9
Average Travel Time, min	33.60	Density, pc/mi/ln	45.7

Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Oversaturated conditions currently exist in boundary time period 8. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 4	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 5	Queue extends past the beginning of the facility on time period 2. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 6	Queue extends past the beginning of the facility on time period 3. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 7	Queue extends past the beginning of the facility on time period 4. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 8	Queue extends past the beginning of the facility on time period 5. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 9	Queue extends past the beginning of the facility on time period 6. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 10	Queue extends past the beginning of the facility on time period 7. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 11	Queue extends past the beginning of the facility on time period 8. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
Comments	







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2030 No Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2030 No Build Westbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	3154	6970	0.45	70.4	14.9	B
2	1.00	0.617	2937	6970	0.42	70.4	13.9	B
3	1.00	0.617	3789	6970	0.54	70.1	18.0	B
4	1.00	0.617	3271	6970	0.47	70.4	15.5	B
5	1.00	0.617	3196	6970	0.46	70.4	15.1	B
6	1.00	0.617	3426	6970	0.49	70.4	16.2	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	3154	814	9293	4000	0.34	0.20	68.4	57.7	11.5	3.0	A

2	1.00	1.00	0.617	0.926	2937	584	9293	4000	0.32	0.15	69.7	58.3	10.5	1.0	A
3	1.00	1.00	0.617	0.926	3789	814	9293	4000	0.41	0.20	68.9	57.7	13.7	4.4	A
4	1.00	1.00	0.617	0.926	3271	697	9293	4000	0.35	0.17	69.3	58.0	11.8	2.5	A
5	1.00	1.00	0.617	0.926	3196	820	9293	4000	0.34	0.21	68.4	57.7	11.7	3.1	A
6	1.00	1.00	0.617	0.926	3426	749	9293	4000	0.37	0.19	69.2	57.9	12.4	3.2	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	2073	4646	0.45	70.4	14.7	B
2	1.00	0.575	2210	4646	0.48	70.4	15.7	B
3	1.00	0.575	2755	4646	0.59	69.5	19.8	C
4	1.00	0.575	2388	4646	0.51	70.3	17.0	B
5	1.00	0.575	2110	4646	0.45	70.4	15.0	B
6	1.00	0.575	2470	4646	0.53	70.2	17.6	B

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1780	5256	0.34	63.6	9.3	A
2	1.00	0.676	1917	5518	0.35	63.3	10.1	B
3	1.00	0.676	2306	4565	0.51	60.4	12.7	B
4	1.00	0.676	2006	4722	0.42	61.9	10.8	B
5	1.00	0.676	1843	5084	0.36	63.1	9.7	A
6	1.00	0.676	2173	5743	0.38	62.9	11.5	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1496	4646	0.32	70.3	10.6	A
2	1.00	0.581	1666	4646	0.36	70.3	11.8	B
3	1.00	0.581	1754	4646	0.38	70.3	12.5	B
4	1.00	0.581	1561	4646	0.34	70.3	11.1	B
5	1.00	0.581	1566	4646	0.34	70.3	11.1	B
6	1.00	0.581	1983	4646	0.43	70.3	14.1	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	1642	146	6970	2000	0.24	0.07	73.4	73.5	7.4	7.4	A
2	1.00	1.00	0.581	0.676	1864	198	6970	2000	0.27	0.10	73.4	73.5	8.5	8.5	A
3	1.00	1.00	0.581	0.676	1893	139	6970	2000	0.27	0.07	73.4	73.5	8.6	8.6	A
4	1.00	1.00	0.581	0.676	1789	228	6970	2000	0.26	0.11	73.4	73.5	8.1	8.1	A
5	1.00	1.00	0.581	0.676	1794	228	6970	2000	0.26	0.11	73.4	73.5	8.1	8.1	A
6	1.00	1.00	0.581	0.676	2100	117	6970	2000	0.30	0.06	73.4	73.5	9.5	9.5	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1627	6970	0.23	70.4	7.7	A
2	1.00	0.595	1852	6970	0.27	70.4	8.8	A
3	1.00	0.595	1871	6970	0.27	70.4	8.9	A
4	1.00	0.595	1783	6970	0.26	70.4	8.4	A
5	1.00	0.595	1788	6970	0.26	70.4	8.5	A
6	1.00	0.595	2069	6970	0.30	70.4	9.8	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	1627	580	9293	2000	0.18	0.29	73.5	73.5	5.5	5.5	A
2	1.00	1.00	0.595	0.676	1852	484	9293	2000	0.20	0.24	73.5	73.5	6.3	6.3	A
3	1.00	1.00	0.595	0.676	1871	491	9293	2000	0.20	0.25	73.5	73.5	6.4	6.4	A
4	1.00	1.00	0.595	0.676	1783	448	9293	2000	0.19	0.22	73.5	73.5	6.1	6.1	A
5	1.00	1.00	0.595	0.676	1788	550	9293	2000	0.19	0.28	73.5	73.5	6.1	6.1	A
6	1.00	1.00	0.595	0.676	2069	580	9293	2000	0.22	0.29	73.5	73.5	7.0	7.0	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	1025	6970	0.15	70.4	4.9	A
2	1.00	0.562	1379	6970	0.20	70.4	6.5	A
3	1.00	0.562	1390	6970	0.20	70.4	6.6	A
4	1.00	0.562	1349	6970	0.19	70.4	6.4	A
5	1.00	0.562	1231	6970	0.18	70.4	5.8	A
6	1.00	0.562	1493	6970	0.21	70.4	7.1	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	1254	229	9293	2000	0.13	0.11	73.4	73.5	4.3	4.3	A
2	1.00	1.00	0.562	0.781	1608	229	9293	2000	0.17	0.11	73.4	73.5	5.5	5.5	A
3	1.00	1.00	0.562	0.781	1714	324	9293	2000	0.18	0.16	73.4	73.5	5.8	5.8	A
4	1.00	1.00	0.562	0.781	1533	184	9293	2000	0.16	0.09	73.4	73.5	5.2	5.2	A
5	1.00	1.00	0.562	0.781	1403	172	9293	2000	0.15	0.09	73.4	73.5	4.8	4.8	A
6	1.00	1.00	0.562	0.781	1645	152	9293	2000	0.18	0.08	73.4	73.5	5.6	5.6	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1299	6970	0.19	70.4	6.2	A
2	1.00	0.581	1642	6970	0.24	70.4	7.8	A

3	1.00	0.581	1780	6970	0.26	70.4	8.4	A
4	1.00	0.581	1552	6970	0.22	70.4	7.3	A
5	1.00	0.581	1422	6970	0.20	70.4	6.7	A
6	1.00	0.581	1649	6970	0.24	70.4	7.8	A

Facility Time Period Results

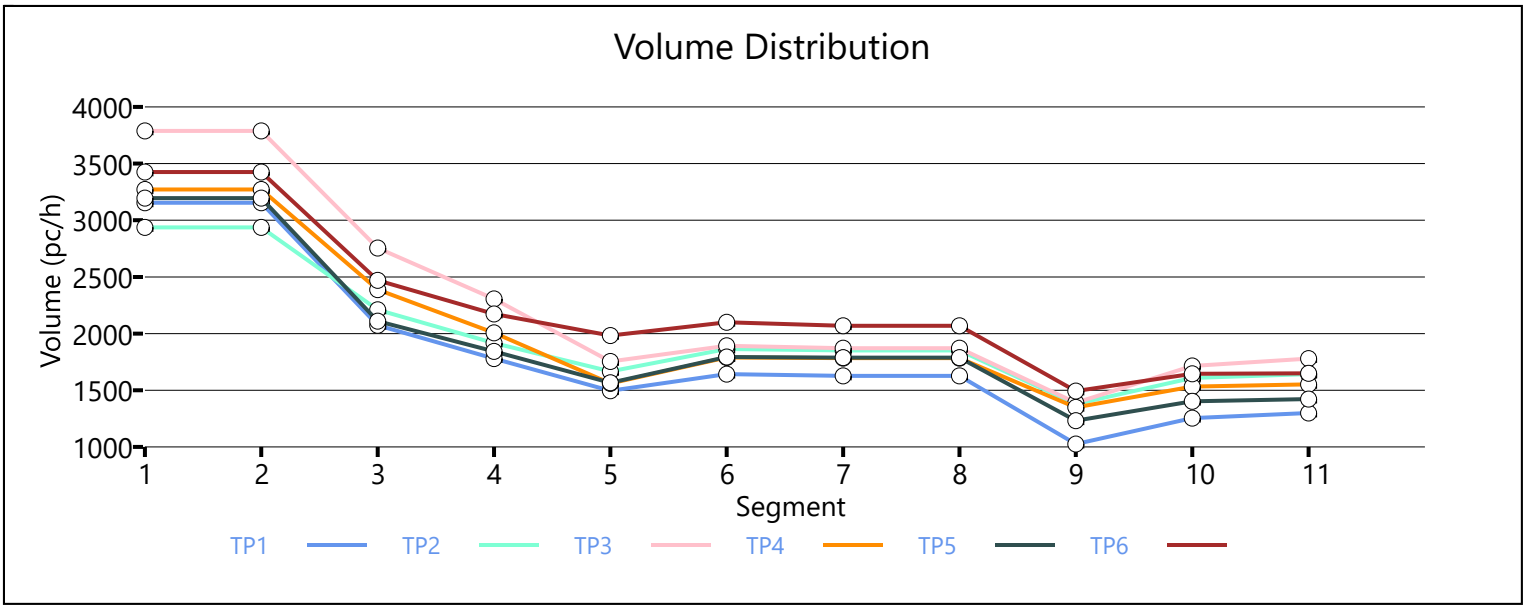
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.9	9.6	5.8	5.80	A
2	70.0	10.2	6.1	5.80	A
3	69.4	11.9	7.2	5.80	B
4	69.8	10.5	6.3	5.80	A
5	69.8	10.0	6.0	5.80	A
6	69.9	11.4	6.9	5.80	B

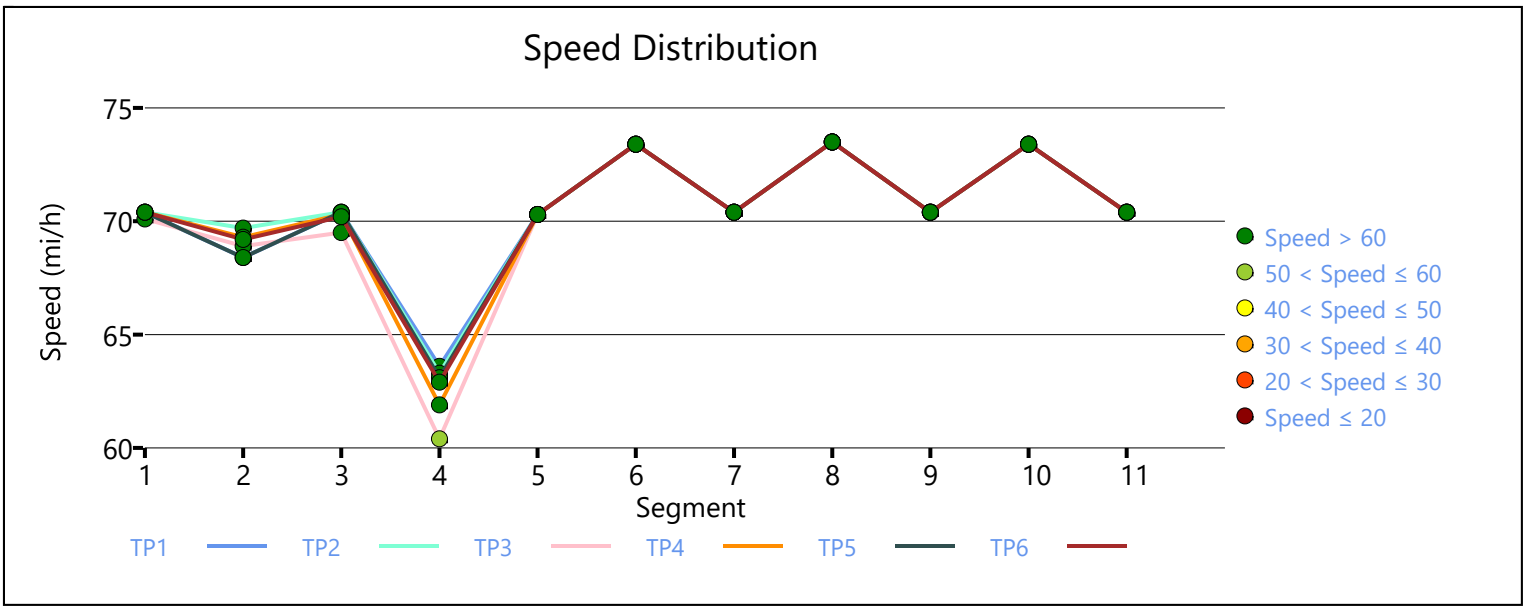
Facility Overall Results

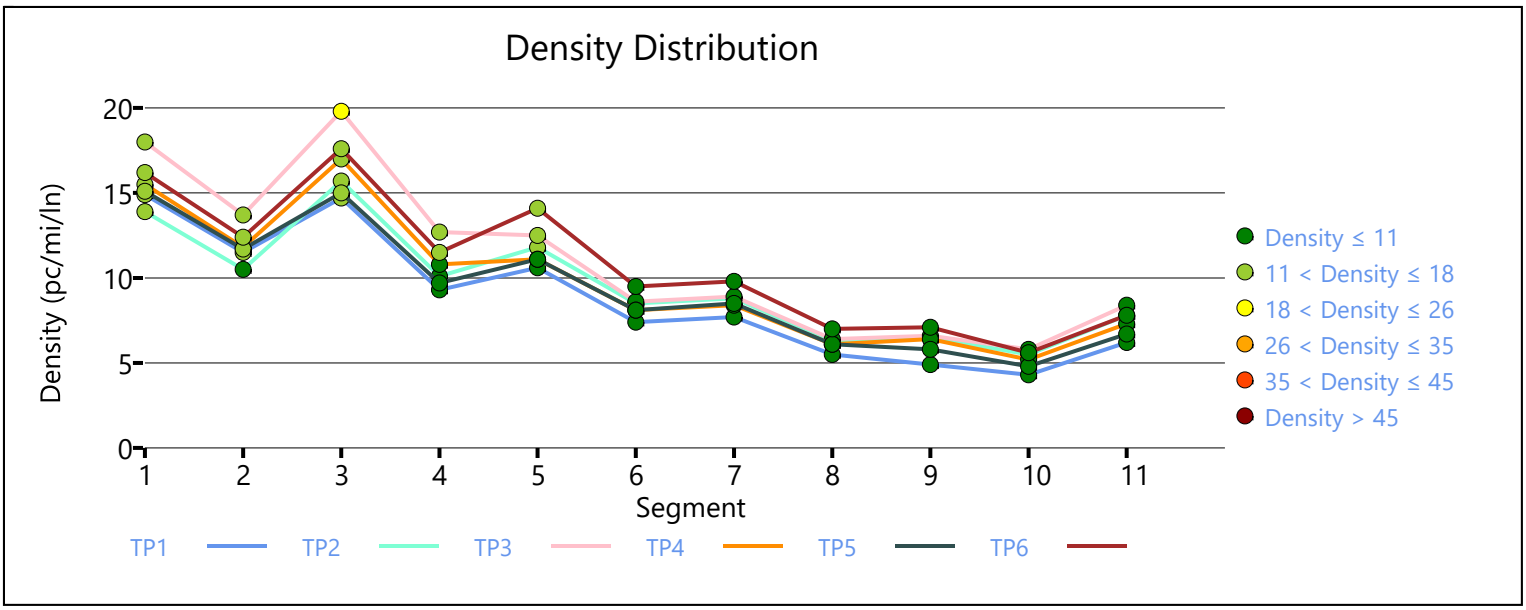
Space Mean Speed, mi/h	69.8	Density, veh/mi/ln	6.4
Average Travel Time, min	5.80	Density, pc/mi/ln	10.6

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2030 No Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2030 No Build Westbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	8	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	6268	6970	1.19	37.3	56.0	F
2	1.00	0.617	3808	6970	1.23	11.5	110.8	F
3	1.00	0.617	3565	6970	1.22	10.3	115.8	F
4	1.00	0.617	3882	6970	1.23	11.8	109.2	F
5	1.00	0.617	3783	6970	1.22	11.3	111.3	F
6	1.00	0.617	3801	6970	1.30	11.4	110.9	F
7	1.00	0.617	4001	6970	1.28	12.5	106.8	F
8	1.00	0.617	3848	6970	1.23	11.7	109.9	F

Segment 2: Diverge

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	5558	2336	9293	4000	0.89	0.58	18.0	53.4	77.0	24.2	F
2	1.00	1.00	0.617	0.926	3571	2694	9293	4000	0.93	0.67	6.7	52.4	134.0	27.1	F
3	1.00	1.00	0.617	0.926	3786	2613	9293	4000	0.91	0.65	7.5	52.6	126.4	26.3	F
4	1.00	1.00	0.617	0.926	3866	2839	9293	4000	0.92	0.71	8.2	52.0	118.4	27.9	F
5	1.00	1.00	0.617	0.926	3782	2711	9293	4000	0.92	0.68	8.0	52.3	117.6	27.0	F
6	1.00	1.00	0.617	0.926	3794	2995	9293	4000	0.98	0.75	8.1	51.5	117.8	30.1	F
7	1.00	1.00	0.617	0.926	4019	2609	9293	4000	0.96	0.65	8.7	52.6	115.0	27.3	F
8	1.00	1.00	0.617	0.926	3781	2523	9293	4000	0.92	0.63	7.9	52.9	119.0	26.0	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	2747	4646	1.11	14.1	97.3	F
2	1.00	0.575	2416	4646	1.05	10.6	114.2	F
3	1.00	0.575	2754	4646	1.05	13.2	104.0	F
4	1.00	0.575	2631	4646	0.99	12.2	107.7	F
5	1.00	0.575	2502	4646	1.03	11.2	111.8	F
6	1.00	0.575	2610	4646	1.06	12.0	108.5	F
7	1.00	0.575	2726	4646	1.15	13.0	104.9	F
8	1.00	0.575	2631	4646	1.10	12.2	107.8	F

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	3081	3309	1.15	53.6	20.1	F
2	1.00	0.676	2749	2956	1.24	53.5	17.1	F
3	1.00	0.676	3088	3320	1.12	51.9	20.4	F
4	1.00	0.676	2964	3187	1.09	53.0	18.6	F
5	1.00	0.676	2836	3049	1.16	53.3	17.7	F
6	1.00	0.676	2943	3165	1.17	52.5	19.1	F
7	1.00	0.676	3060	3290	1.20	52.4	19.5	F
8	1.00	0.676	2964	3187	1.22	52.7	18.7	F

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1	4646	0.37	70.2	0.0	A
2	1.00	0.581	408	4646	0.32	70.1	2.9	A
3	1.00	0.581	238	4646	0.40	70.1	1.7	A
4	1.00	0.581	540	4646	0.35	70.1	3.8	A
5	1.00	0.581	418	4646	0.31	70.1	3.0	A
6	1.00	0.581	262	4646	0.36	70.1	1.9	A
7	1.00	0.581	415	4646	0.38	70.1	2.9	A
8	1.00	0.581	421	4646	0.39	70.1	3.0	A

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	273	272	6970	2000	0.29	0.14	65.0	65.0	1.4	1.4	A
2	1.00	1.00	0.581	0.676	651	243	6970	2000	0.25	0.12	66.9	66.9	3.2	3.2	A
3	1.00	1.00	0.581	0.676	444	206	6970	2000	0.29	0.10	66.6	66.6	2.2	2.2	A
4	1.00	1.00	0.581	0.676	701	161	6970	2000	0.26	0.08	67.4	67.4	3.5	3.5	A
5	1.00	1.00	0.581	0.676	601	183	6970	2000	0.23	0.09	67.2	67.2	3.0	3.0	A
6	1.00	1.00	0.581	0.676	453	191	6970	2000	0.27	0.10	66.8	66.8	2.3	2.3	A
7	1.00	1.00	0.581	0.676	576	161	6970	2000	0.28	0.08	67.2	67.2	2.9	2.9	A
8	1.00	1.00	0.581	0.676	597	176	6970	2000	0.29	0.09	67.2	67.2	3.0	3.0	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	273	6970	0.29	70.4	1.3	A
2	1.00	0.595	651	6970	0.25	70.4	3.1	A
3	1.00	0.595	444	6970	0.29	70.4	2.1	A
4	1.00	0.595	701	6970	0.25	70.4	3.3	A
5	1.00	0.595	601	6970	0.23	70.4	2.8	A
6	1.00	0.595	453	6970	0.27	70.4	2.1	A
7	1.00	0.595	576	6970	0.28	70.4	2.7	A
8	1.00	0.595	597	6970	0.29	70.4	2.8	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	602	602	9293	2000	0.22	0.30	58.3	58.3	2.6	2.6	A
2	1.00	1.00	0.595	0.676	651	448	9293	2000	0.19	0.22	61.7	61.7	2.6	2.6	A
3	1.00	1.00	0.595	0.676	444	491	9293	2000	0.22	0.25	57.6	57.6	1.9	1.9	A
4	1.00	1.00	0.595	0.676	701	506	9293	2000	0.19	0.25	61.2	61.2	2.9	2.9	A
5	1.00	1.00	0.595	0.676	601	491	9293	2000	0.18	0.25	60.3	60.3	2.5	2.5	A
6	1.00	1.00	0.595	0.676	453	521	9293	2000	0.20	0.26	57.2	57.2	2.0	2.0	A
7	1.00	1.00	0.595	0.676	576	441	9293	2000	0.21	0.22	61.0	61.0	2.4	2.4	A
8	1.00	1.00	0.595	0.676	597	462	9293	2000	0.21	0.23	60.8	60.8	2.5	2.5	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	0	6970	0.20	69.9	0.0	A
2	1.00	0.562	455	6970	0.19	70.0	2.2	A
3	1.00	0.562	329	6970	0.22	69.8	1.6	A
4	1.00	0.562	532	6970	0.18	70.0	2.5	A

5	1.00	0.562	430	6970	0.16	70.0	2.0	A
6	1.00	0.562	316	6970	0.19	69.8	1.5	A
7	1.00	0.562	415	6970	0.22	70.0	2.0	A
8	1.00	0.562	460	6970	0.22	70.0	2.2	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	223	223	9293	2000	0.17	0.11	64.6	64.6	0.9	0.9	A
2	1.00	1.00	0.562	0.781	639	184	9293	2000	0.16	0.09	68.1	68.1	2.3	2.3	A
3	1.00	1.00	0.562	0.781	595	266	9293	2000	0.20	0.13	67.3	67.3	2.2	2.2	A
4	1.00	1.00	0.562	0.781	773	241	9293	2000	0.16	0.12	68.0	68.0	2.8	2.8	A
5	1.00	1.00	0.562	0.781	696	266	9293	2000	0.15	0.13	67.6	67.6	2.6	2.6	A
6	1.00	1.00	0.562	0.781	595	279	9293	2000	0.17	0.14	67.2	67.2	2.2	2.2	A
7	1.00	1.00	0.562	0.781	631	216	9293	2000	0.19	0.11	67.8	67.8	2.3	2.3	A
8	1.00	1.00	0.562	0.781	726	266	9293	2000	0.20	0.13	67.7	67.7	2.7	2.7	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	223	6970	0.26	70.4	1.1	A
2	1.00	0.526	639	6970	0.24	70.4	3.0	A
3	1.00	0.526	595	6970	0.30	70.4	2.8	A
4	1.00	0.526	773	6970	0.25	70.4	3.7	A
5	1.00	0.526	696	6970	0.23	70.4	3.3	A
6	1.00	0.526	595	6970	0.26	70.4	2.8	A
7	1.00	0.526	631	6970	0.28	70.4	3.0	A
8	1.00	0.526	726	6970	0.29	70.4	3.4	A

Facility Time Period Results

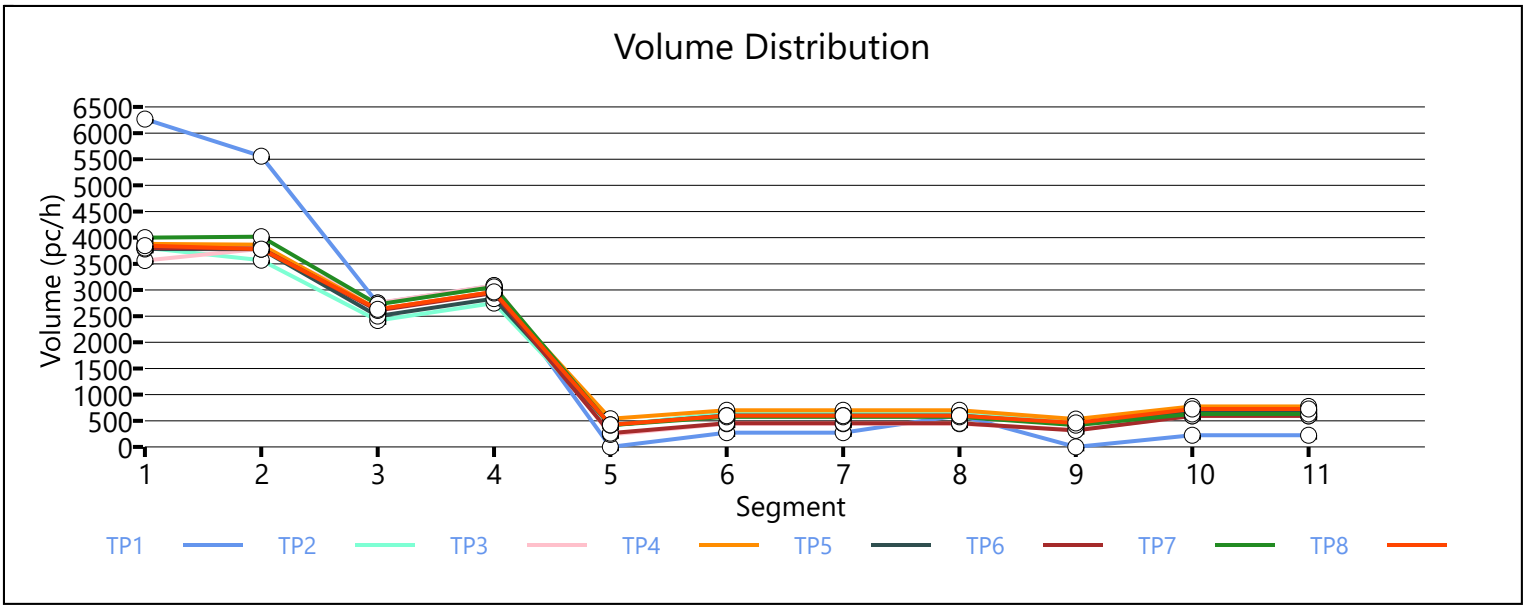
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	25.4	29.3	17.9	16.00	F
2	12.8	47.1	28.7	31.80	F
3	12.9	45.8	28.0	31.50	F
4	14.4	44.7	27.3	28.20	F
5	13.5	45.1	27.5	30.00	F
6	13.4	44.4	27.1	30.30	F
7	14.7	43.3	26.5	27.60	F
8	14.0	44.7	27.3	29.10	F

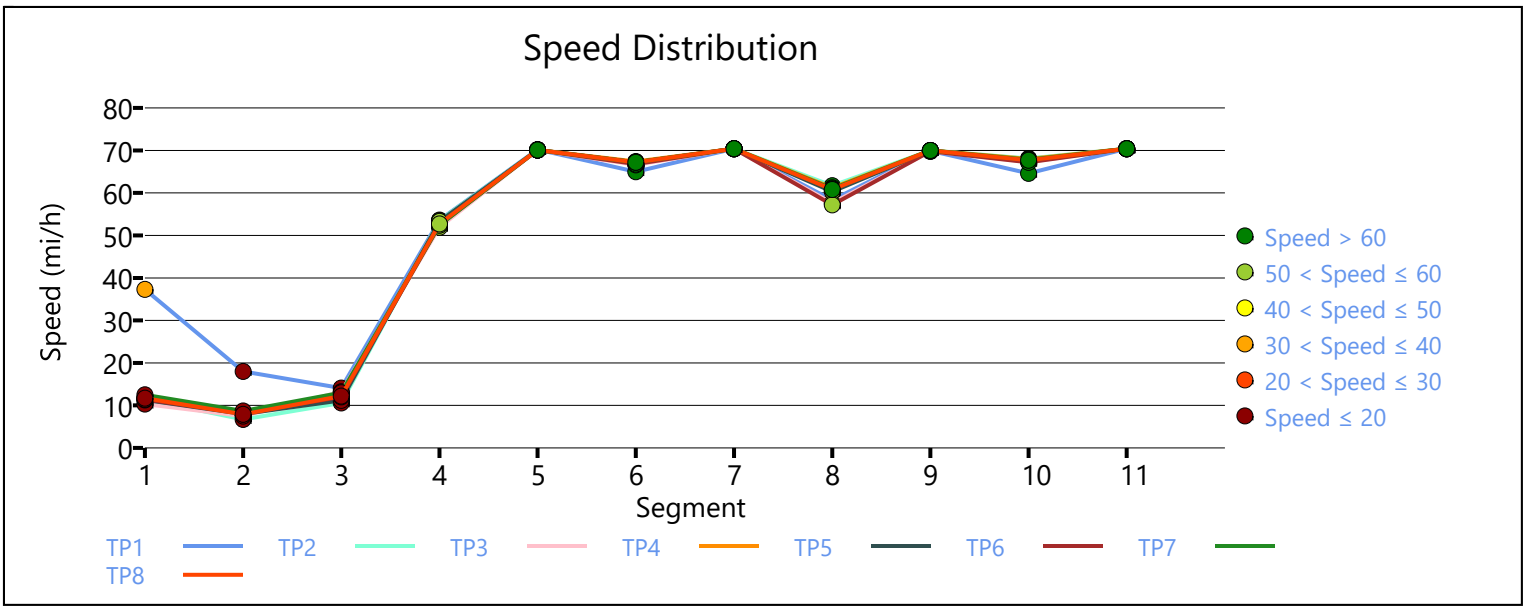
Facility Overall Results

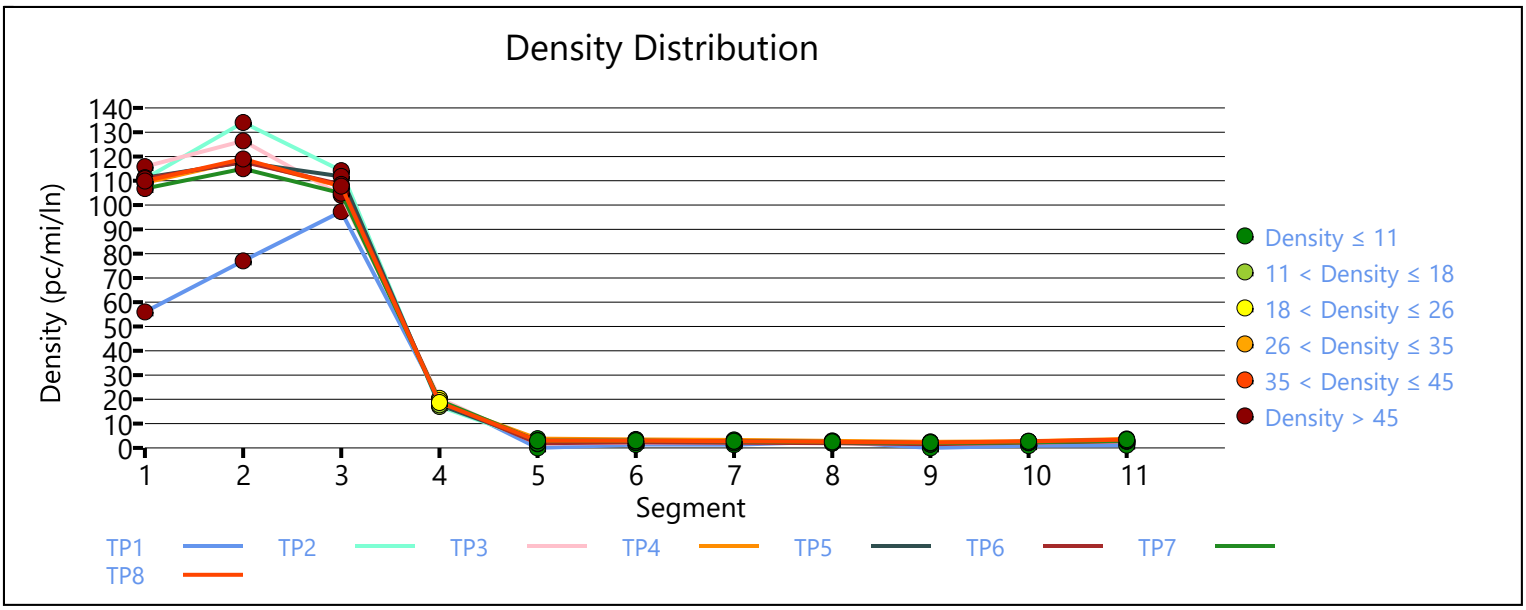
Space Mean Speed, mi/h	14.7	Density, veh/mi/ln	26.3
Average Travel Time, min	27.70	Density, pc/mi/ln	43.0

Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Oversaturated conditions currently exist in boundary time period 8. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 4	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 5	Queue extends past the beginning of the facility on time period 2. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 6	Queue extends past the beginning of the facility on time period 3. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 7	Queue extends past the beginning of the facility on time period 4. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 8	Queue extends past the beginning of the facility on time period 5. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 9	Queue extends past the beginning of the facility on time period 6. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 10	Queue extends past the beginning of the facility on time period 7. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 11	Queue extends past the beginning of the facility on time period 8. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
Comments	







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2030 Build
Jurisdiction	NMDOT	Time Period Analyzed	AM
Project Description	2030 Build Westbound AM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	6	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	3154	6970	0.45	70.4	14.9	B
2	1.00	0.617	3716	6970	0.53	70.2	17.6	B
3	1.00	0.617	4571	6970	0.66	68.2	22.3	C
4	1.00	0.617	4050	6970	0.58	69.7	19.4	C
5	1.00	0.617	3977	6970	0.57	69.8	19.0	C
6	1.00	0.617	3426	6970	0.49	70.4	16.2	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	3154	814	9293	4000	0.34	0.20	68.4	57.7	11.5	3.0	A

2	1.00	1.00	0.617	0.926	3716	584	9293	4000	0.40	0.15	69.7	58.3	13.3	3.5	A
3	1.00	1.00	0.617	0.926	4571	814	9293	4000	0.49	0.20	68.9	57.7	16.6	6.5	A
4	1.00	1.00	0.617	0.926	4050	697	9293	4000	0.44	0.17	69.4	58.0	14.6	4.7	A
5	1.00	1.00	0.617	0.926	3977	820	9293	4000	0.43	0.21	69.0	57.7	14.4	4.9	A
6	1.00	1.00	0.617	0.926	3426	749	9293	4000	0.37	0.19	69.2	57.9	12.4	3.2	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	2073	4646	0.45	70.4	14.7	B
2	1.00	0.575	3047	4646	0.66	68.2	22.3	C
3	1.00	0.575	3593	4646	0.77	64.4	27.9	D
4	1.00	0.575	3224	4646	0.69	67.2	24.0	C
5	1.00	0.575	2948	4646	0.63	68.7	21.5	C
6	1.00	0.575	2470	4646	0.53	70.2	17.6	B

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	1780	5256	0.34	63.6	9.3	A
2	1.00	0.676	2603	5826	0.45	61.8	14.0	B
3	1.00	0.676	2993	5429	0.55	58.9	16.9	B
4	1.00	0.676	2692	5689	0.47	60.5	14.8	B
5	1.00	0.676	2529	5771	0.44	61.7	13.7	B
6	1.00	0.676	2173	5743	0.38	62.9	11.5	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1496	4646	0.32	70.3	10.6	A
2	1.00	0.581	2351	4646	0.51	70.3	16.7	B
3	1.00	0.581	2439	4646	0.52	70.2	17.4	B
4	1.00	0.581	2244	4646	0.48	70.3	15.9	B
5	1.00	0.581	2253	4646	0.48	70.3	16.0	B
6	1.00	0.581	1983	4646	0.43	70.3	14.1	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	1642	146	6970	2000	0.24	0.07	73.4	73.5	7.4	7.4	A
2	1.00	1.00	0.581	0.676	2549	198	6970	2000	0.37	0.10	73.4	73.5	11.6	11.6	B
3	1.00	1.00	0.581	0.676	2578	139	6970	2000	0.37	0.07	73.4	73.5	11.7	11.7	B
4	1.00	1.00	0.581	0.676	2472	228	6970	2000	0.35	0.11	73.4	73.5	11.2	11.2	B
5	1.00	1.00	0.581	0.676	2481	228	6970	2000	0.36	0.11	73.4	73.5	11.3	11.3	B
6	1.00	1.00	0.581	0.676	2100	117	6970	2000	0.30	0.06	73.4	73.5	9.5	9.5	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	1627	6970	0.23	70.4	7.7	A
2	1.00	0.595	2521	6970	0.36	70.4	11.9	B
3	1.00	0.595	2539	6970	0.36	70.4	12.0	B
4	1.00	0.595	2450	6970	0.35	70.4	11.6	B
5	1.00	0.595	2459	6970	0.35	70.4	11.6	B
6	1.00	0.595	2069	6970	0.30	70.4	9.8	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	1627	580	9293	2000	0.18	0.29	73.5	73.5	5.5	5.5	A
2	1.00	1.00	0.595	0.676	2521	1086	9293	2000	0.27	0.54	73.5	73.5	8.6	8.6	A
3	1.00	1.00	0.595	0.676	2539	1093	9293	2000	0.27	0.55	73.5	73.5	8.6	8.6	A
4	1.00	1.00	0.595	0.676	2450	1049	9293	2000	0.26	0.52	73.5	73.5	8.3	8.3	A
5	1.00	1.00	0.595	0.676	2459	1152	9293	2000	0.26	0.58	73.5	73.5	8.4	8.4	A
6	1.00	1.00	0.595	0.676	2069	580	9293	2000	0.22	0.29	73.5	73.5	7.0	7.0	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	1025	6970	0.15	70.4	4.9	A
2	1.00	0.562	1363	6970	0.20	70.4	6.4	A
3	1.00	0.562	1374	6970	0.20	70.4	6.5	A
4	1.00	0.562	1333	6970	0.19	70.4	6.3	A
5	1.00	0.562	1217	6970	0.17	70.4	5.8	A
6	1.00	0.562	1493	6970	0.21	70.4	7.1	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	1254	229	9293	2000	0.13	0.11	73.4	73.5	4.3	4.3	A
2	1.00	1.00	0.562	0.781	1602	239	9293	2000	0.17	0.12	73.4	73.5	5.4	5.4	A
3	1.00	1.00	0.562	0.781	1708	334	9293	2000	0.18	0.17	73.4	73.5	5.8	5.8	A
4	1.00	1.00	0.562	0.781	1528	195	9293	2000	0.16	0.10	73.4	73.5	5.2	5.2	A
5	1.00	1.00	0.562	0.781	1399	182	9293	2000	0.15	0.09	73.4	73.5	4.8	4.8	A
6	1.00	1.00	0.562	0.781	1645	152	9293	2000	0.18	0.08	73.4	73.5	5.6	5.6	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1299	6970	0.19	70.4	6.2	A
2	1.00	0.581	1640	6970	0.24	70.4	7.8	A

3	1.00	0.581	1778	6970	0.26	70.4	8.4	A
4	1.00	0.581	1551	6970	0.22	70.4	7.3	A
5	1.00	0.581	1422	6970	0.20	70.4	6.7	A
6	1.00	0.581	1649	6970	0.24	70.4	7.8	A

Facility Time Period Results

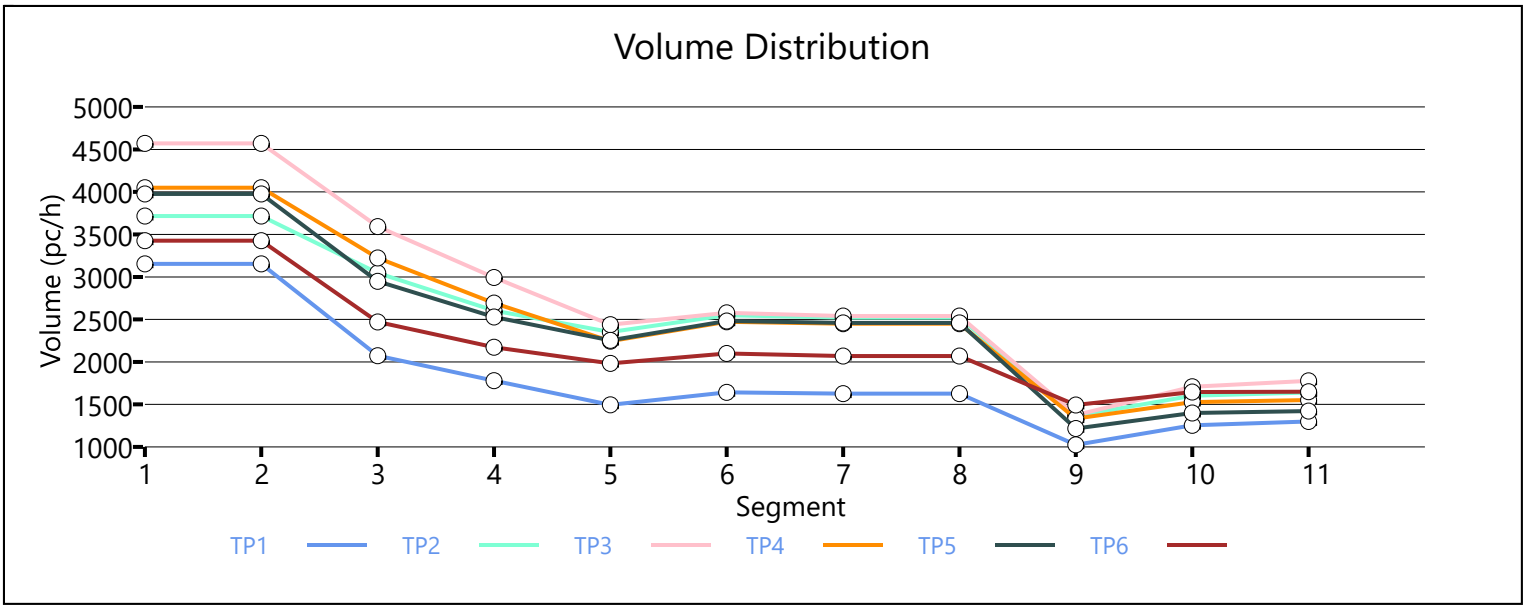
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.9	9.6	5.8	5.80	A
2	69.5	13.0	7.8	5.80	B
3	67.9	15.0	9.0	6.00	B
4	69.0	13.4	8.0	5.90	B
5	69.4	12.9	7.7	5.80	B
6	69.9	11.4	6.9	5.80	B

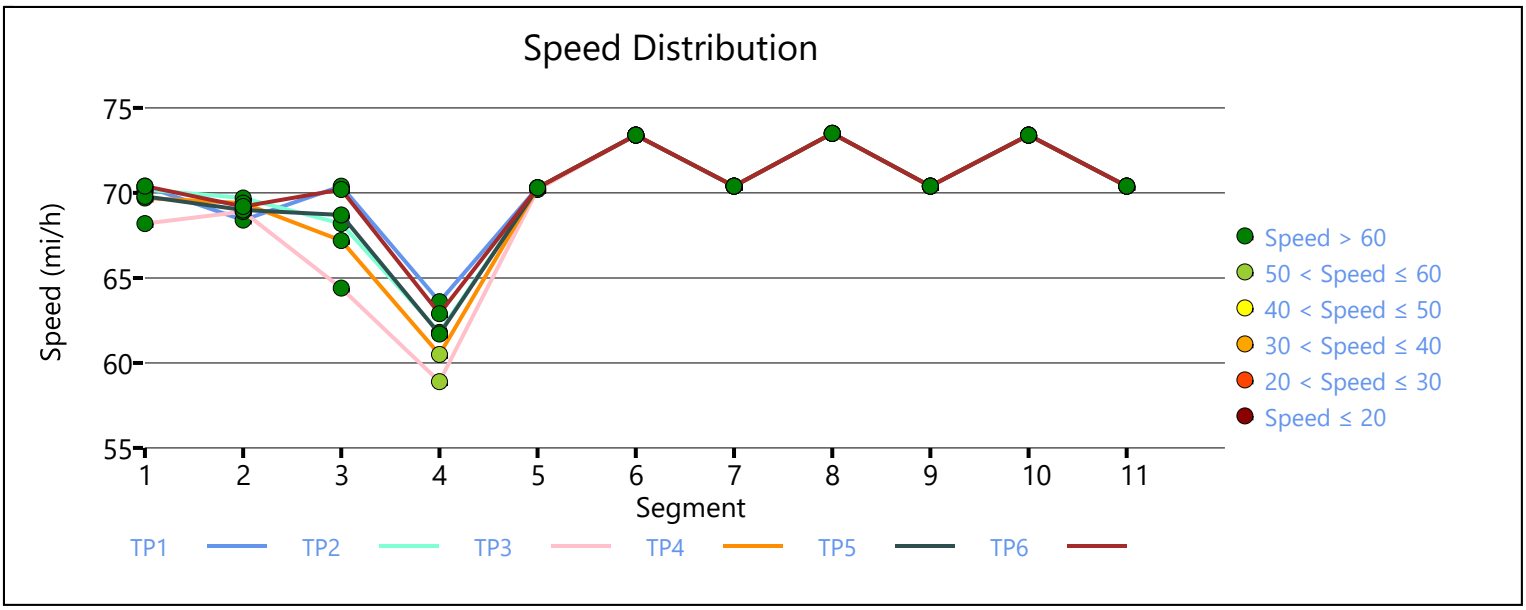
Facility Overall Results

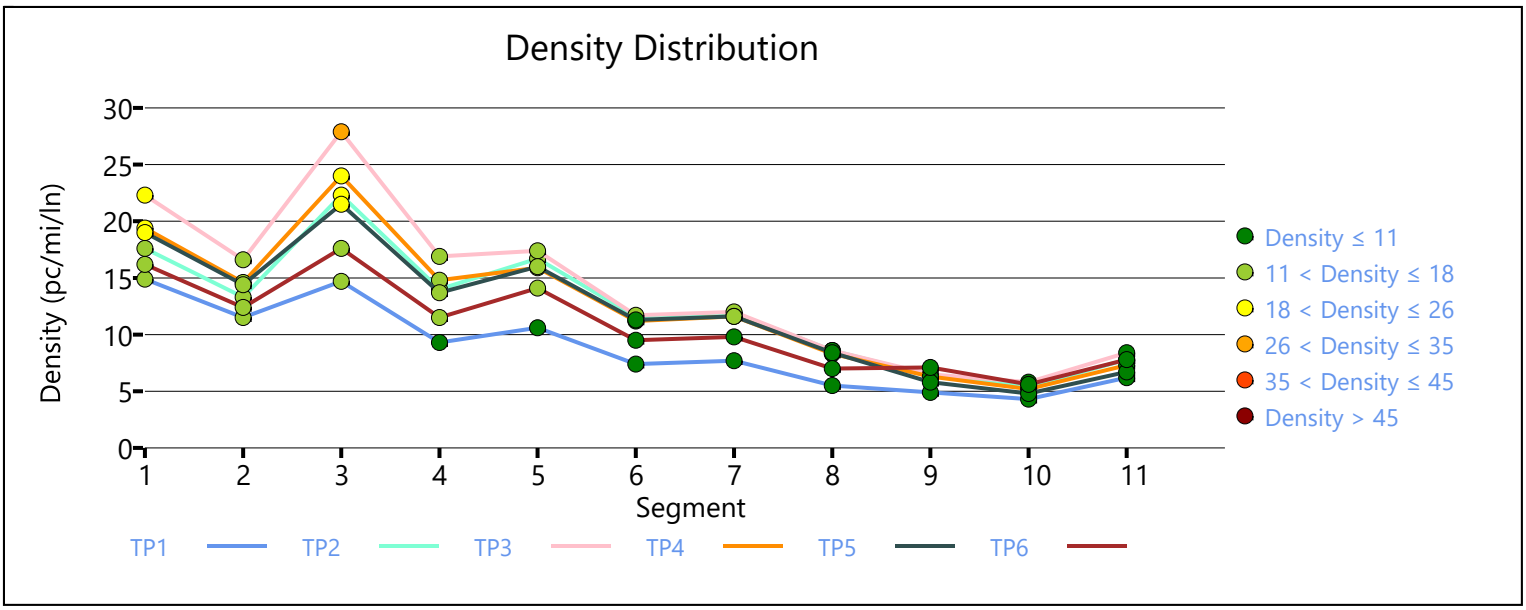
Space Mean Speed, mi/h	69.2	Density, veh/mi/ln	7.5
Average Travel Time, min	5.90	Density, pc/mi/ln	12.5

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst	C Vermillion	Date	10/17/2019
Agency	BHI	Analysis Year	2030 Build
Jurisdiction	NMDOT	Time Period Analyzed	PM
Project Description	2030 Build Westbound PM (15 Minute Intervals)	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	11
Total Time Periods	8	Time Period Duration, min	15
Facility Length, mi	6.76		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	East of Unser	5450	3
2	Diverge	Diverge	Unser Diverge	3000	4
3	Basic	Basic	Between Unser Ramps	5280	2
4	Weaving	Weaving	Unser Merge Arroyo Diverge	2000	3
5	Basic	Basic	Between Arroyo Ramps	3200	2
6	Merge	Basic	Arroyo Merge	1500	3
7	Basic	Basic	East of Atrisco	5280	3
8	Diverge	Basic	Atrisco Diverge	1230	4
9	Basic	Basic	Between Atrisco Ramps	2650	3
10	Merge	Basic	Atrisco Merge	1120	4
11	Basic	Basic	West of Atrisco	5000	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.617	6268	6970	1.19	37.3	56.0	F
2	1.00	0.617	3808	6970	1.23	11.5	110.8	F
3	1.00	0.617	4341	6970	1.81	14.5	99.7	F
4	1.00	0.617	4991	6970	1.78	19.3	86.2	F
5	1.00	0.617	4744	6970	1.76	17.3	91.3	F
6	1.00	0.617	4775	6970	1.87	17.6	90.7	F
7	1.00	0.617	4396	6970	1.28	14.9	98.5	F
8	1.00	0.617	3754	6970	1.23	11.2	111.9	F

Segment 2: Diverge

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.617	0.926	5558	2336	9293	4000	0.89	0.58	18.0	53.4	77.0	24.2	F
2	1.00	1.00	0.617	0.926	3571	2694	9293	4000	0.93	0.67	6.7	52.4	134.0	27.1	F
3	1.00	1.00	0.617	0.926	4794	3311	9293	4000	1.36	0.83	10.5	50.6	114.0	52.7	F
4	1.00	1.00	0.617	0.926	4898	3537	9293	4000	1.33	0.88	11.6	50.0	105.7	50.7	F
5	1.00	1.00	0.617	0.926	4738	3407	9293	4000	1.32	0.85	10.9	50.3	108.6	49.6	F
6	1.00	1.00	0.617	0.926	4811	3691	9293	4000	1.40	0.92	11.2	49.6	107.2	56.2	F
7	1.00	1.00	0.617	0.926	4175	2609	9293	4000	0.96	0.65	9.2	52.6	113.6	27.3	F
8	1.00	1.00	0.617	0.926	3754	2523	9293	4000	0.92	0.63	7.9	52.9	119.4	26.0	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.575	2747	4646	1.11	14.1	97.3	F
2	1.00	0.575	2416	4646	1.05	10.6	114.2	F
3	1.00	0.575	3774	4646	1.76	26.1	72.2	F
4	1.00	0.575	3524	4646	1.63	22.1	79.7	F
5	1.00	0.575	3335	4646	1.65	19.5	85.7	F
6	1.00	0.575	3531	4646	1.72	22.2	79.6	F
7	1.00	0.575	2726	4646	1.15	13.2	103.3	F
8	1.00	0.575	2631	4646	1.10	12.2	107.8	F

Segment 4: Weaving

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.676	3081	3309	1.15	53.6	20.1	F
2	1.00	0.676	2749	2956	1.24	53.5	17.1	F
3	1.00	0.676	4107	4416	1.45	49.2	27.9	F
4	1.00	0.676	3858	4148	1.42	51.2	25.1	F
5	1.00	0.676	3668	3944	1.48	51.5	23.7	F
6	1.00	0.676	3864	4155	1.49	50.4	25.6	F
7	1.00	0.676	3060	3290	1.20	53.8	19.0	F
8	1.00	0.676	2964	3187	1.22	52.7	18.7	F

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.581	1	4646	0.37	70.2	0.0	A
2	1.00	0.581	408	4646	0.32	70.1	2.9	A
3	1.00	0.581	317	4646	0.90	70.1	2.3	A
4	1.00	0.581	1477	4646	0.79	70.1	10.5	A
5	1.00	0.581	1255	4646	0.73	70.1	8.9	A
6	1.00	0.581	1143	4646	0.83	70.1	8.1	A
7	1.00	0.581	1040	4646	0.38	70.2	7.4	A
8	1.00	0.581	421	4646	0.39	70.1	3.0	A

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.581	0.676	273	272	6970	2000	0.29	0.14	65.0	65.0	1.4	1.4	A
2	1.00	1.00	0.581	0.676	651	243	6970	2000	0.25	0.12	66.9	66.9	3.2	3.2	A
3	1.00	1.00	0.581	0.676	582	265	6970	2000	0.64	0.13	66.7	66.7	2.9	2.9	A
4	1.00	1.00	0.581	0.676	1697	220	6970	2000	0.56	0.11	67.5	67.5	8.4	8.4	A
5	1.00	1.00	0.581	0.676	1498	243	6970	2000	0.52	0.12	67.5	67.5	7.4	7.4	A
6	1.00	1.00	0.581	0.676	1393	250	6970	2000	0.59	0.13	67.4	67.4	6.9	6.9	A
7	1.00	1.00	0.581	0.676	1201	161	6970	2000	0.28	0.08	67.6	67.6	5.9	5.9	A
8	1.00	1.00	0.581	0.676	597	176	6970	2000	0.29	0.09	67.2	67.2	3.0	3.0	A

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.595	273	6970	0.29	70.4	1.3	A
2	1.00	0.595	651	6970	0.25	70.4	3.1	A
3	1.00	0.595	582	6970	0.63	70.4	2.8	A
4	1.00	0.595	1697	6970	0.55	70.4	8.0	A
5	1.00	0.595	1498	6970	0.52	70.4	7.1	A
6	1.00	0.595	1393	6970	0.58	70.4	6.6	A
7	1.00	0.595	1201	6970	0.28	70.4	5.7	A
8	1.00	0.595	597	6970	0.29	70.4	2.8	A

Segment 8: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.595	0.676	602	602	9293	2000	0.22	0.30	58.3	58.3	2.6	2.6	A
2	1.00	1.00	0.595	0.676	651	448	9293	2000	0.19	0.22	61.7	61.7	2.6	2.6	A
3	1.00	1.00	0.595	0.676	582	1050	9293	2000	0.47	0.53	50.3	50.3	2.9	2.9	A
4	1.00	1.00	0.595	0.676	1697	1065	9293	2000	0.41	0.53	60.7	60.7	7.0	7.0	A
5	1.00	1.00	0.595	0.676	1498	1050	9293	2000	0.39	0.53	60.0	60.0	6.2	6.2	A
6	1.00	1.00	0.595	0.676	1393	1080	9293	2000	0.43	0.54	59.2	59.2	5.9	5.9	A
7	1.00	1.00	0.595	0.676	1201	441	9293	2000	0.21	0.22	65.1	65.1	4.6	4.6	A
8	1.00	1.00	0.595	0.676	597	462	9293	2000	0.21	0.23	60.8	60.8	2.5	2.5	A

Segment 9: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.562	0	6970	0.20	69.9	0.0	A
2	1.00	0.562	455	6970	0.19	70.0	2.2	A
3	1.00	0.562	432	6970	0.49	69.5	2.0	A
4	1.00	0.562	1292	6970	0.40	70.0	6.1	A

5	1.00	0.562	1082	6970	0.36	70.0	5.1	A
6	1.00	0.562	986	6970	0.43	69.9	4.7	A
7	1.00	0.562	880	6970	0.22	70.2	4.2	A
8	1.00	0.562	460	6970	0.22	70.0	2.2	A

Segment 10: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.562	0.781	223	223	9293	2000	0.17	0.11	64.6	64.6	0.9	0.9	A
2	1.00	1.00	0.562	0.781	639	184	9293	2000	0.16	0.09	68.1	68.1	2.3	2.3	A
3	1.00	1.00	0.562	0.781	767	335	9293	2000	0.40	0.17	67.4	67.4	2.8	2.8	A
4	1.00	1.00	0.562	0.781	1602	310	9293	2000	0.33	0.16	68.6	68.6	5.8	5.8	A
5	1.00	1.00	0.562	0.781	1417	335	9293	2000	0.31	0.17	68.3	68.3	5.2	5.2	A
6	1.00	1.00	0.562	0.781	1334	348	9293	2000	0.36	0.17	68.2	68.2	4.9	4.9	A
7	1.00	1.00	0.562	0.781	1096	216	9293	2000	0.19	0.11	68.6	68.6	4.0	4.0	A
8	1.00	1.00	0.562	0.781	726	266	9293	2000	0.20	0.13	67.7	67.7	2.7	2.7	A

Segment 11: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.526	223	6970	0.26	70.4	1.1	A
2	1.00	0.526	639	6970	0.24	70.4	3.0	A
3	1.00	0.526	767	6970	0.59	70.4	3.6	A
4	1.00	0.526	1602	6970	0.49	70.4	7.6	A
5	1.00	0.526	1417	6970	0.46	70.4	6.7	A
6	1.00	0.526	1334	6970	0.53	70.4	6.3	A
7	1.00	0.526	1096	6970	0.28	70.4	5.2	A
8	1.00	0.526	726	6970	0.29	70.4	3.4	A

Facility Time Period Results

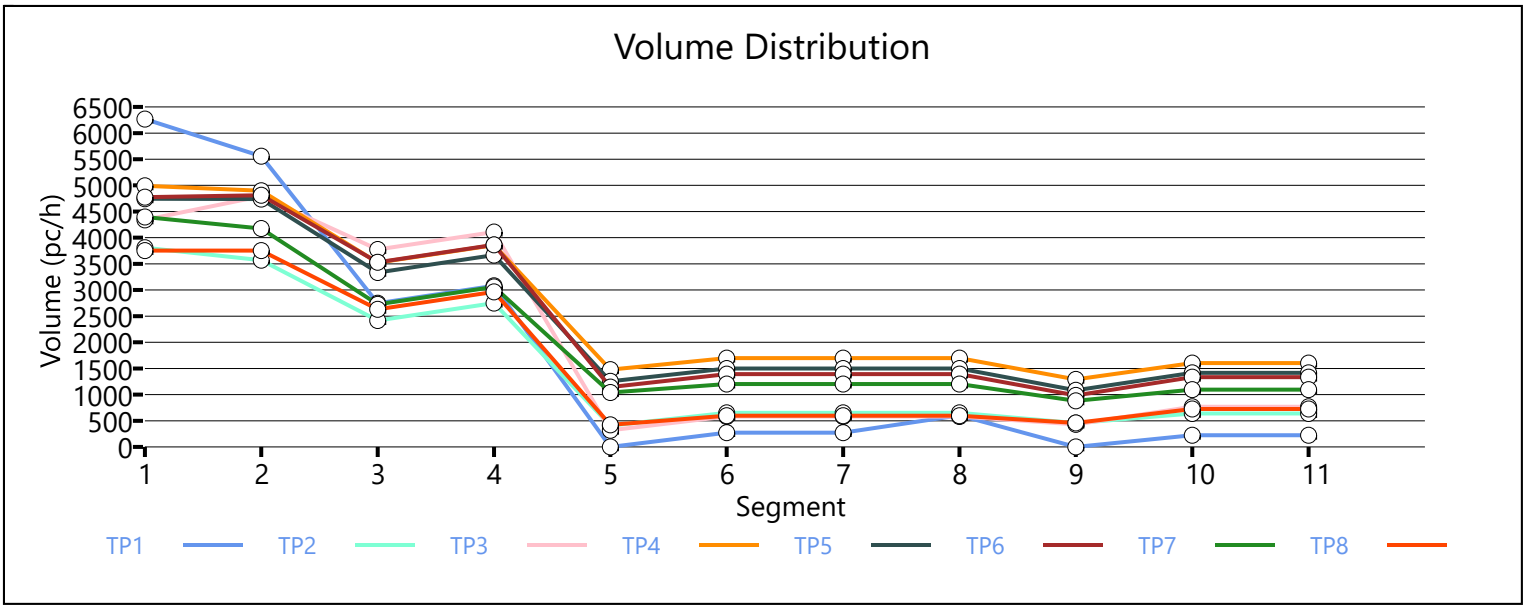
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	25.4	29.3	17.9	16.00	F
2	12.8	47.1	28.7	31.80	F
3	19.1	39.4	24.2	21.30	F
4	24.1	39.7	24.2	16.80	F
5	21.8	40.8	24.9	18.60	F
6	22.4	39.7	24.3	18.20	F
7	17.7	43.2	26.3	22.90	F
8	13.7	45.0	27.5	29.60	F

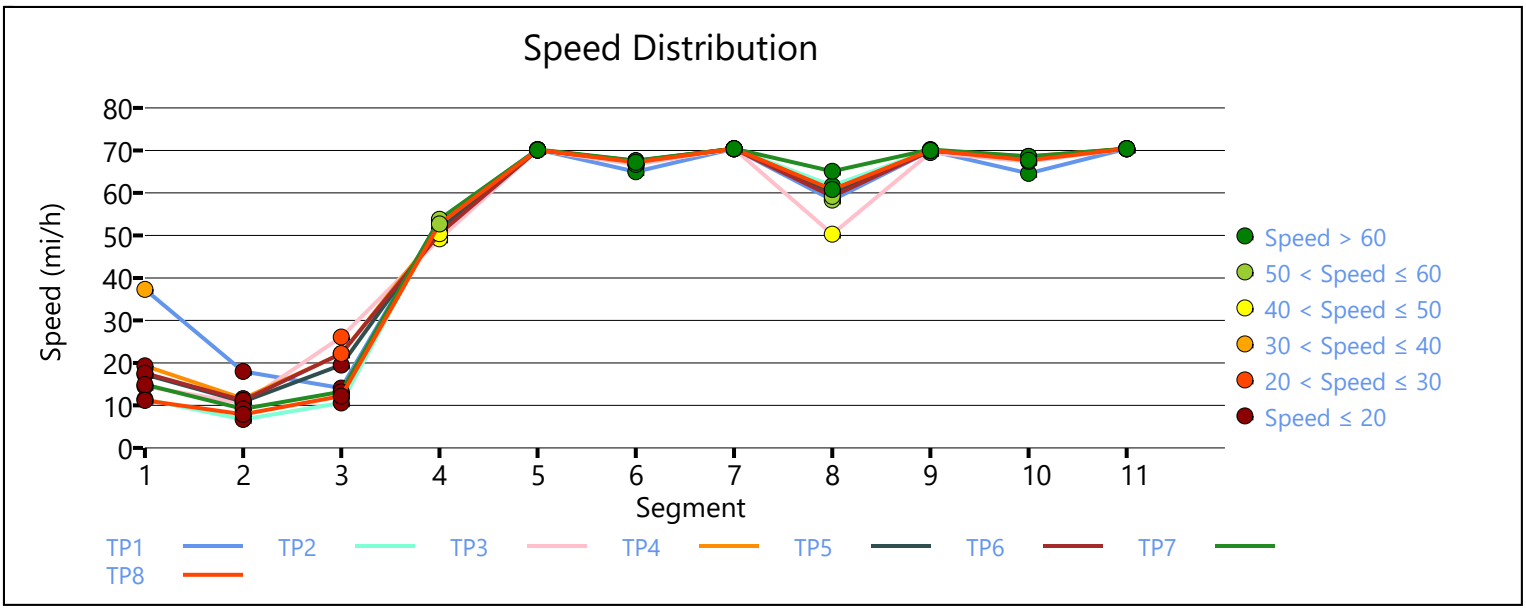
Facility Overall Results

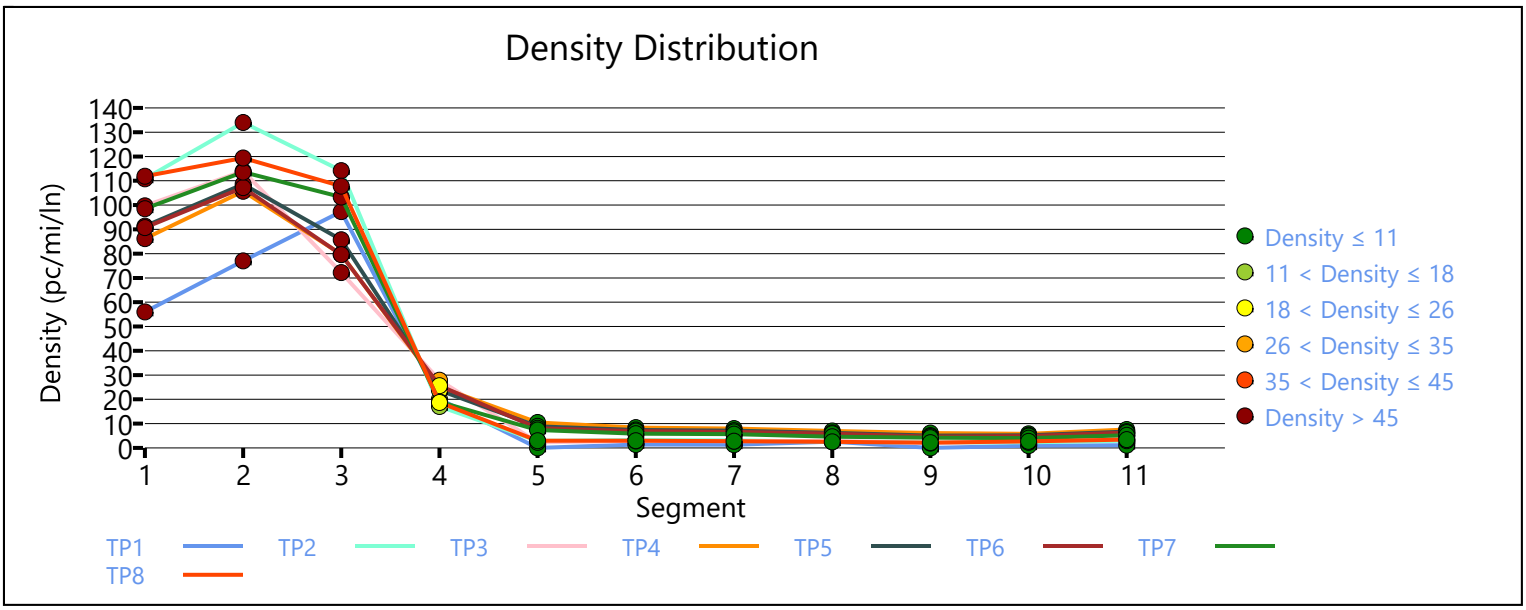
Space Mean Speed, mi/h	19.2	Density, veh/mi/ln	24.8
Average Travel Time, min	21.20	Density, pc/mi/ln	40.5

Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Oversaturated conditions currently exist in boundary time period 8. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 4	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 5	Queue extends past the beginning of the facility on time period 2. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 6	Queue extends past the beginning of the facility on time period 3. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 7	Queue extends past the beginning of the facility on time period 4. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 8	Queue extends past the beginning of the facility on time period 5. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 9	Queue extends past the beginning of the facility on time period 6. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 10	Queue extends past the beginning of the facility on time period 7. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
WARNING 11	Queue extends past the beginning of the facility on time period 8. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.
Comments	







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