LINSCOTT
LAW &
GREENSPAN
engineers

LOCAL MOBILITY ANALYSIS
TECHNICAL APPENDICES

SCRIPPS MERCY HOSPITAL CAMPUS PROJECT

San Diego, California
June 2022

LLG Ref. 3-19-3072

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APPENDICES

APPENDIX	
A.	Intersection Methodology
B.	Intersection and Segment Manual Count Sheets
C.	Existing Intersection Analysis Calculation Sheets
D.	Existing Freeway Analysis Calculation Sheets
E.	SANDAG Employee Density Rates and HSB Parking Structure Re-Routed Trip Assignment
F.	Sixth Avenue Parking Structure Re-Routed Trip Distribution and Assignment
G.	Year 2035 Intersection Analysis Calculation Sheets
H.	Year 2035 Freeway Analysis Calculation Sheets
I.	Year 2035 + Project Phase II (Project Buildout) Intersection Analysis Calculation Sheets
J.	Excerpts from the Uptown Community Plan EIR
K.	Year 2035 + Project Phase II (Project Buildout) Freeway Analysis Calculation Sheets
L.	Year 2035 + Project Phase II (Project Buildout) Intersection Improvement Analysis Calculation Sheets, Year 2035 Signal Warrant Analysis Sheets, and Improvement Concept Plans
M.	Bus Route Schedules and Excerpts from the Draft 2021 Regional Plan

APPENDIX A

INTERSECTION METHODOLOGY

SIGNALIZED INTERSECTIONS

For signalized intersections, level of service criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. **Table 1** summarizes the delay thresholds for signalized intersections.

Level of service A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of service B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

TABLE 1

LEVEL OF SERVICE THRESHOLDS FOR SIGNALIZED INTERSECTIONS

AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)			LEVEL OF SERVICE
0.0	≤	10.0	A
10.1	to	20.0	B
21.1	to	35.0	C
35.1	to	55.0	D
55.1	to	80.0	E
	≥	80.0	F

Source: Highway Capacity Manual, 2000.

Level of service C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of service D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

UNSIGNALIZED INTERSECTIONS

For unsignalized intersections, level of service is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. **Table 2** depicts the criteria, which are based on the average control delay for any particular minor movement.

TABLE 2

LEVEL OF SERVICE THRESHOLDS FOR UNSIGNALIZED INTERSECTIONS

AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)	LEVEL OF SERVICE	EXPECTED DELAY TO MINOR STREET TRAFFIC
0.0 ≤ 10.0	A	Little or no delay
10.1 to 15.0	B	Short traffic delays
15.1 to 25.0	C	Average traffic delays
25.1 to 35.0	D	Long traffic delays
35.1 to 50.0	E	Very long traffic delays
≥ 50.0	F	Severe congestion

Source: Highway Capacity Manual, 2000.

Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

APPENDIX B

INTERSECTION AND SEGMENT MANUAL COUNT SHEETS

Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#05	File Name:	ITM-19-033-05
Intersection:	Fourth Avenue & Lewis Street (East)	Project:	LLG Ref. 3-19-3072
Date of Count:	Wednesday, March 27, 2019		San Diego Scripps Mercy

AM	Fourth Avenue Southbound			Lewis Street (East) Westbound			Fourth Avenue Northbound			Lewis Street (East) Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	25	2	27	0	9	6	45	35	9	13	2	173
7:15	0	24	0	13	0	1	1	76	34	6	8	4	167
7:30	0	43	0	39	1	6	5	63	39	10	12	2	220
7:45	1	34	2	13	1	6	5	80	56	9	11	1	219
8:00	0	29	2	14	1	4	9	48	41	11	20	3	182
8:15	1	25	1	12	0	1	2	64	34	10	12	4	166
8:30	0	20	0	7	1	3	6	40	28	13	5	2	125
8:45	0	28	1	10	1	0	6	45	39	14	11	1	156
Total	2	228	8	135	5	30	40	461	306	82	92	19	1408
Approach%	0.8	95.8	3.4	79.4	2.9	17.6	5.0	57.1	37.9	42.5	47.7	9.8	
Total%	0.1	16.2	0.6	9.6	0.4	2.1	2.8	32.7	21.7	5.8	6.5	1.3	

AM Intersection Peak Hour: **07:15 to 08:15**

Volume	1	130	4	79	3	17	20	267	170	36	51	10	788
Approach%	0.7	96.3	3.0	79.8	3.0	17.2	4.4	58.4	37.2	37.1	52.6	10.3	
Total%	0.1	16.5	0.5	10.0	0.4	2.2	2.5	33.9	21.6	4.6	6.5	1.3	
PHF			0.78			0.54			0.81			0.71	0.00

PM	Fourth Avenue Southbound			Lewis Street (East) Westbound			Fourth Avenue Northbound			Lewis Street (East) Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	3	56	2	27	1	2	4	31	10	18	7	4	165
16:15	1	46	2	18	2	3	3	38	10	11	5	11	150
16:30	1	41	1	22	0	6	5	43	11	21	6	3	160
16:45	3	35	0	15	1	4	4	39	11	12	4	12	140
17:00	2	47	0	24	1	5	1	47	19	6	4	2	158
17:15	1	36	0	14	0	4	4	37	15	7	4	2	124
17:30	1	35	0	13	0	2	2	43	17	12	3	7	135
17:45	1	39	0	18	1	1	3	21	24	20	3	4	135
Total	13	335	5	151	6	27	26	299	117	107	36	45	1167
Approach%	3.7	94.9	1.4	82.1	3.3	14.7	5.9	67.6	26.5	56.9	19.1	23.9	
Total%	1.1	28.7	0.4	12.9	0.5	2.3	2.2	25.6	10.0	9.2	3.1	3.9	

PM Intersection Peak Hour: **16:00 to 17:00**

Volume	8	178	5	82	4	15	16	151	42	62	22	30	615
Approach%	4.2	93.2	2.6	81.2	4.0	14.9	7.7	72.2	20.1	54.4	19.3	26.3	
Total%	1.3	28.9	0.8	13.3	0.7	2.4	2.6	24.6	6.8	10.1	3.6	4.9	
PHF			0.78			0.84			0.89			0.95	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#05	File Name:	ITM-19-033-05
Intersection:	Fourth Avenue & Lewis Street (East)	Project:	LLG Ref. 3-19-3072
Date of Count:	Wednesday, March 27, 2019		San Diego Scripps Mercy

AM	Fourth Avenue Southbound				Lewis Street (East) Westbound				Fourth Avenue Northbound				Lewis Street (East) Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	5	0	0	0	18	0	0	0	2	0	0	0	1	0	0	0	26	0
7:15	9	0	0	0	14	0	0	0	2	0	0	0	0	0	0	0	25	0
7:30	5	0	0	0	21	0	0	0	6	0	0	0	0	0	0	0	32	0
7:45	5	0	0	0	23	0	0	0	7	0	0	0	1	0	0	0	36	0
8:00	5	0	0	0	17	0	0	0	10	0	0	0	2	0	0	0	34	0
8:15	13	0	0	0	25	0	0	0	5	0	0	0	4	0	0	0	47	0
8:30	6	0	0	0	12	0	0	0	1	0	0	0	0	0	0	0	19	0
8:45	3	0	0	0	26	0	0	0	4	0	0	0	4	0	0	0	37	0
Ped Total	51				156				37				12				256	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	Fourth Avenue Southbound				Lewis Street (East) Westbound				Fourth Avenue Northbound				Lewis Street (East) Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	7	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	25	0
16:15	5	0	0	0	10	0	0	0	2	0	0	0	2	0	0	0	19	0
16:30	8	0	0	0	14	0	0	0	6	0	0	0	4	0	0	0	32	0
16:45	10	0	0	0	11	0	0	0	3	0	0	0	3	0	0	0	27	0
17:00	2	0	0	0	24	0	0	0	16	0	0	0	2	0	0	0	44	0
17:15	3	0	0	0	8	0	0	0	6	0	0	0	0	0	0	0	17	0
17:30	4	0	0	0	9	0	0	0	8	0	0	0	3	0	0	0	24	0
17:45	6	0	0	0	10	0	0	0	6	0	0	0	4	0	0	0	26	0
Ped Total	45				86				65				18				214	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

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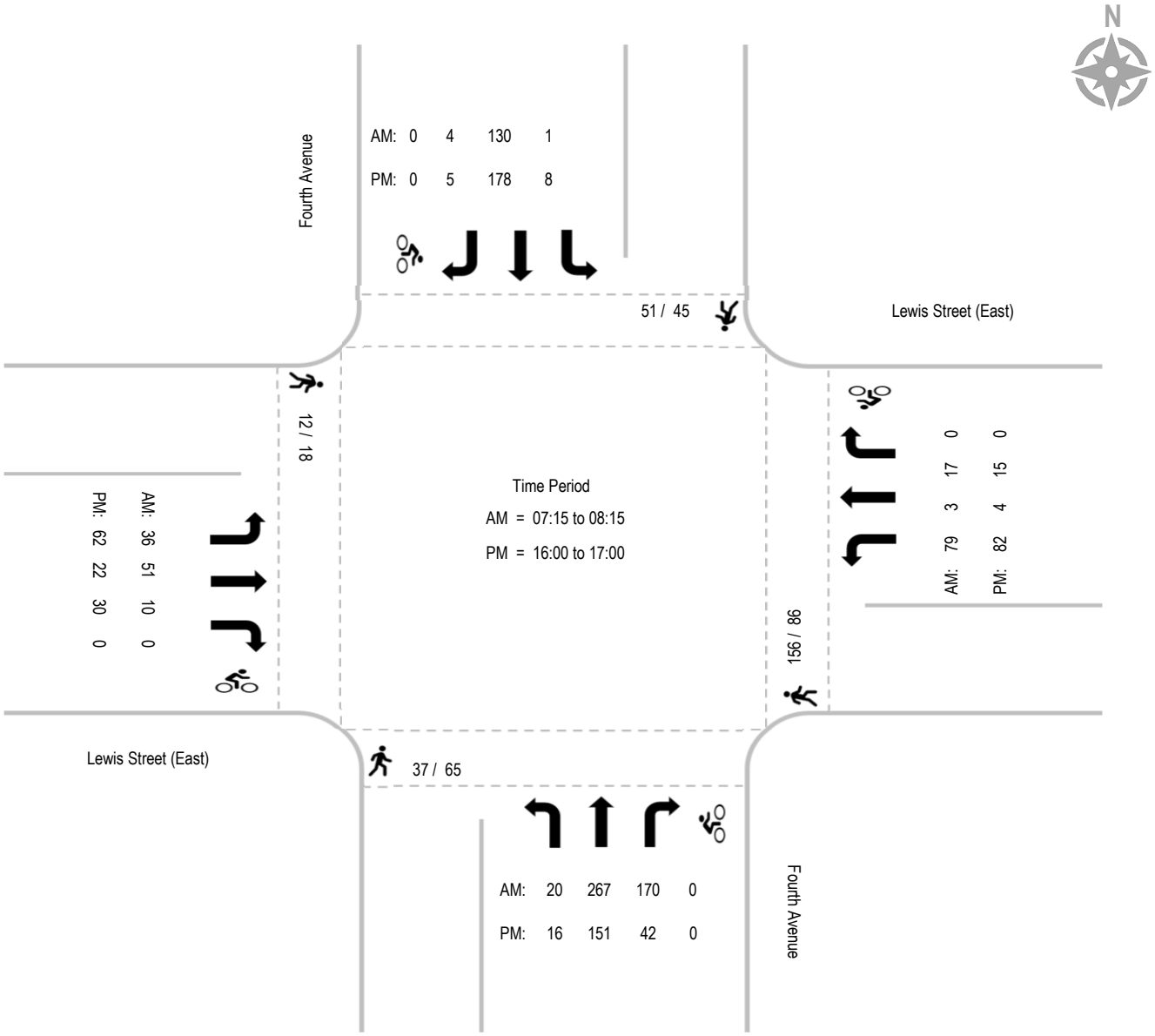
Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#05	File Name: ITM-19-033-05
	Intersection:	Fourth Avenue & Lewis Street (East)	Project: LLG Ref. 3-19-3072
	Date of Count:	Wednesday, March 27, 2019	San Diego Scripps Mercy



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#02	File Name:	ITM-19-033-02
Intersection:	Fourth Avenue & Fifth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Wednesday, March 27, 2019		San Diego Scripps Mercy

AM	Fourth Avenue Southbound			Fifth Avenue Westbound			Fourth Avenue Northbound			- Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	1	81	0	18	0	49	0	37	3	0	0	0	189
7:15	1	62	0	18	0	57	0	56	4	0	0	0	198
7:30	3	109	0	16	0	57	0	45	3	0	0	0	233
7:45	4	96	0	31	0	78	0	62	3	0	0	0	274
8:00	4	72	0	20	0	62	0	45	1	0	0	0	204
8:15	2	69	0	24	0	58	0	40	5	0	0	0	198
8:30	2	63	0	25	0	53	0	41	2	0	0	0	186
8:45	3	71	0	30	0	58	0	33	2	0	0	0	197
Total	20	623	0	182	0	472	0	359	23	0	0	0	1679
Approach%	3.1	96.9	-	27.8	-	72.2	-	94.0	6.0	-	-	-	
Total%	1.2	37.1	-	10.8	-	28.1	-	21.4	1.4	-	-	-	

AM Intersection Peak Hour: **07:15 to 08:15**

Volume	12	339	-	85	-	254	-	208	11	-	-	-	909
Approach%	3.4	96.6	-	25.1	-	74.9	-	95.0	5.0	-	-	-	
Total%	1.3	37.3	-	9.4	-	27.9	-	22.9	1.2	-	-	-	
PHF			0.78			0.78			0.84			#DIV/0!	0.83

PM	Fourth Avenue Southbound			Fifth Avenue Westbound			Fourth Avenue Northbound			- Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	2	155	0	22	0	19	0	25	4	0	0	0	227
16:15	0	134	0	12	0	31	0	23	3	0	0	0	203
16:30	4	143	0	18	0	32	0	26	4	0	0	0	227
16:45	3	136	0	14	0	32	0	24	2	0	0	0	211
17:00	3	133	0	16	0	40	0	23	6	0	0	0	221
17:15	2	153	0	8	0	37	0	13	2	0	0	0	215
17:30	2	132	0	17	0	35	0	28	2	0	0	0	216
17:45	2	141	0	15	0	31	0	17	0	0	0	0	206
Total	18	1127	0	122	0	257	0	179	23	0	0	0	1726
Approach%	1.6	98.4	-	32.2	-	67.8	-	88.6	11.4	-	-	-	
Total%	1.0	65.3	-	7.1	-	14.9	-	10.4	1.3	-	-	-	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	12	565	-	56	-	141	-	86	14	-	-	-	874
Approach%	2.1	97.9	-	28.4	-	71.6	-	86.0	14.0	-	-	-	
Total%	1.4	64.6	-	6.4	-	16.1	-	9.8	1.6	-	-	-	
PHF			0.93			0.88			0.83			#DIV/0!	0.96

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#02	File Name:	ITM-19-033-02
Intersection:	Fourth Avenue & Fifth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Wednesday, March 27, 2019		San Diego Scripps Mercy

AM	Fourth Avenue Southbound				Fifth Avenue Westbound				Fourth Avenue Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	9	0	0	0	4	0	0	0	0	0	0	0	4	0	0	1	17	1
7:15	9	0	0	0	4	1	0	0	0	0	0	0	6	0	0	0	19	1
7:30	21	0	0	0	9	0	0	0	1	0	0	0	12	0	0	1	43	1
7:45	13	0	0	0	7	0	0	0	0	0	0	0	5	0	0	0	25	0
8:00	21	0	0	0	8	0	0	0	2	0	0	0	5	0	0	0	36	0
8:15	31	0	0	0	8	0	0	0	1	0	0	0	10	0	0	0	50	0
8:30	21	0	0	0	2	0	0	0	0	0	1	0	11	0	0	0	34	1
8:45	18	0	0	0	4	1	0	0	1	0	0	0	17	0	0	0	40	1
Ped Total	143				46				5				70				264	
Bike Total		0	0	0		2	0	0		0	1	0		0	0	2		5

PM	Fourth Avenue Southbound				Fifth Avenue Westbound				Fourth Avenue Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	26	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	30	0
16:15	14	0	0	0	4	0	0	0	6	0	0	0	6	0	0	0	30	0
16:30	15	0	0	0	5	0	0	0	5	0	0	0	5	0	0	0	30	0
16:45	22	0	0	0	4	0	0	0	6	0	0	0	6	0	0	0	38	0
17:00	37	0	0	0	5	0	0	0	5	0	0	0	5	0	0	0	52	0
17:15	14	0	0	0	4	0	0	0	5	0	0	0	5	0	0	0	28	0
17:30	19	0	0	0	2	0	0	0	5	0	0	0	5	0	0	0	31	0
17:45	13	0	0	0	4	0	0	0	11	0	0	0	11	0	0	0	39	0
Ped Total	160				28				45				45				278	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

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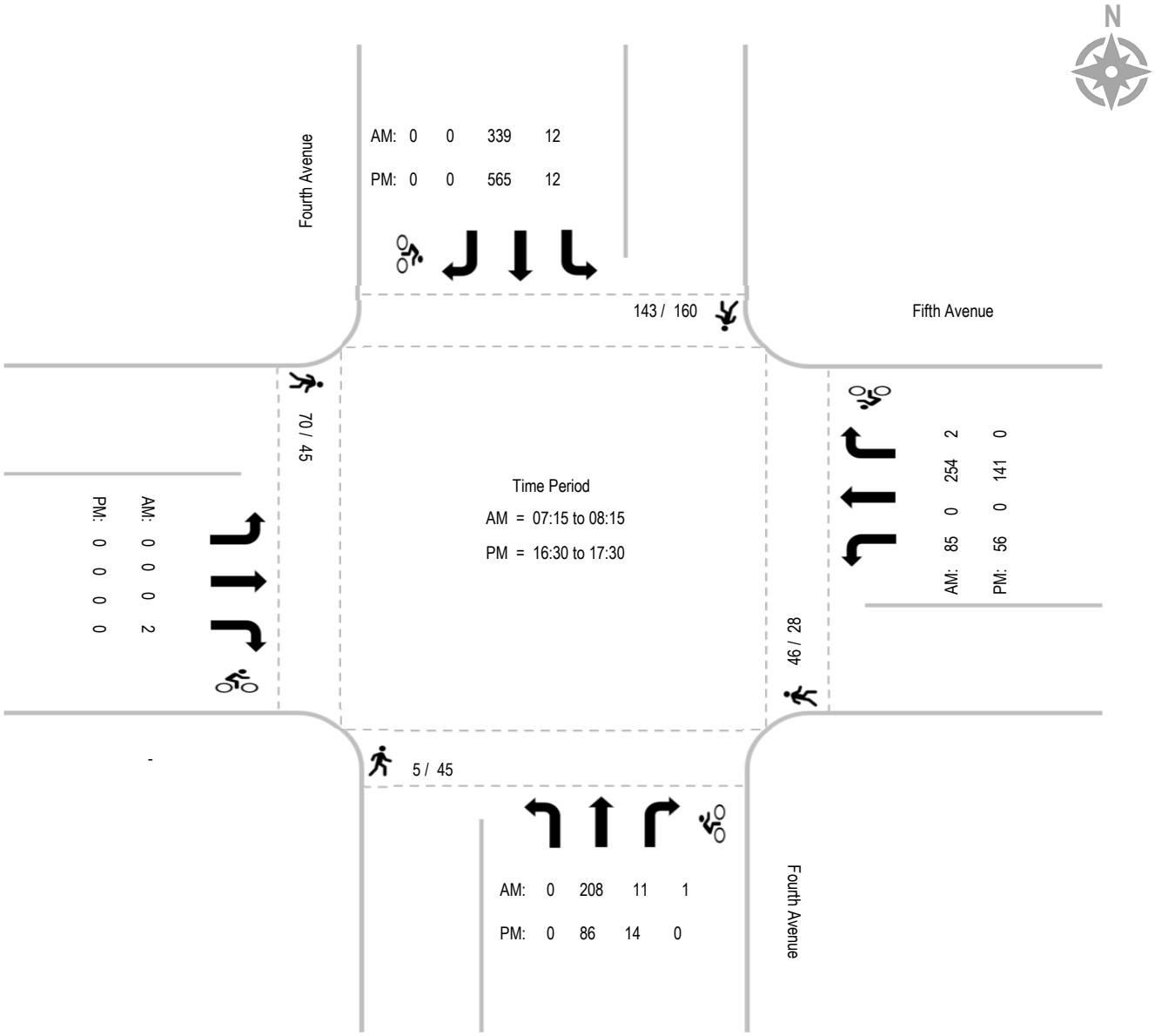
Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#02	File Name: ITM-19-033-02
	Intersection:	Fourth Avenue & Fifth Avenue	Project: LLG Ref. 3-19-3072
	Date of Count:	Wednesday, March 27, 2019	San Diego Scripps Mercy



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#10	File Name:	ITM-19-069-10
Intersection:	Washington Street & Fourth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, June 04, 2019		Scripps Mercy SD

AM	Fourth Avenue Southbound			Washington Street Westbound			Fourth Avenue Northbound			Washington Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	33	18	11	20	166	39	0	0	0	7	73	12	379
7:15	41	21	10	34	224	39	0	0	0	11	71	11	462
7:30	90	26	19	42	221	46	0	0	0	14	123	19	600
7:45	55	18	20	50	233	40	0	0	0	16	113	14	559
8:00	54	29	25	49	254	42	0	0	0	17	107	22	599
8:15	45	19	17	52	188	38	0	0	0	18	125	22	524
8:30	40	32	28	63	199	40	0	0	0	31	113	25	571
8:45	59	27	19	54	239	43	0	0	0	19	110	30	600
Total	417	190	149	364	1724	327	0	0	0	133	835	155	4294
Approach%	55.2	25.1	19.7	15.1	71.4	13.5	-	-	-	11.8	74.4	13.8	
Total%	9.7	4.4	3.5	8.5	40.1	7.6	-	-	-	3.1	19.4	3.6	

AM Intersection Peak Hour: **08:00 to 09:00**

Volume	198	107	89	218	880	163	-	-	-	85	455	99	2,294
Approach%	50.3	27.2	22.6	17.3	69.8	12.9	-	-	-	13.3	71.2	15.5	
Total%	8.6	4.7	3.9	9.5	38.4	7.1	-	-	-	3.7	19.8	4.3	
PHF			0.91			0.91			#DIV/0!			0.95	0.96

PM	Fourth Avenue Southbound			Washington Street Westbound			Fourth Avenue Northbound			Washington Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	119	42	27	49	161	18	0	0	0	27	241	24	708
16:15	118	47	27	43	198	18	0	0	0	8	247	27	733
16:30	114	32	23	48	193	20	0	0	0	12	262	21	725
16:45	112	52	23	57	178	30	0	0	0	15	297	29	793
17:00	136	35	24	71	176	32	0	0	0	15	263	31	783
17:15	130	37	21	55	165	29	0	0	0	19	279	21	756
17:30	107	46	20	49	169	20	0	0	0	19	273	20	723
17:45	103	48	22	56	165	24	0	0	0	14	225	26	683
Total	939	339	187	428	1405	191	0	0	0	129	2087	199	5904
Approach%	64.1	23.1	12.8	21.1	69.4	9.4	-	-	-	5.3	86.4	8.2	
Total%	15.9	5.7	3.2	7.2	23.8	3.2	-	-	-	2.2	35.3	3.4	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	492	156	91	231	712	111	-	-	-	61	1,101	102	3,057
Approach%	66.6	21.1	12.3	21.9	67.6	10.5	-	-	-	4.8	87.1	8.1	
Total%	16.1	5.1	3.0	7.6	23.3	3.6	-	-	-	2.0	36.0	3.3	
PHF			0.95			0.94			#DIV/0!			0.93	0.96

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

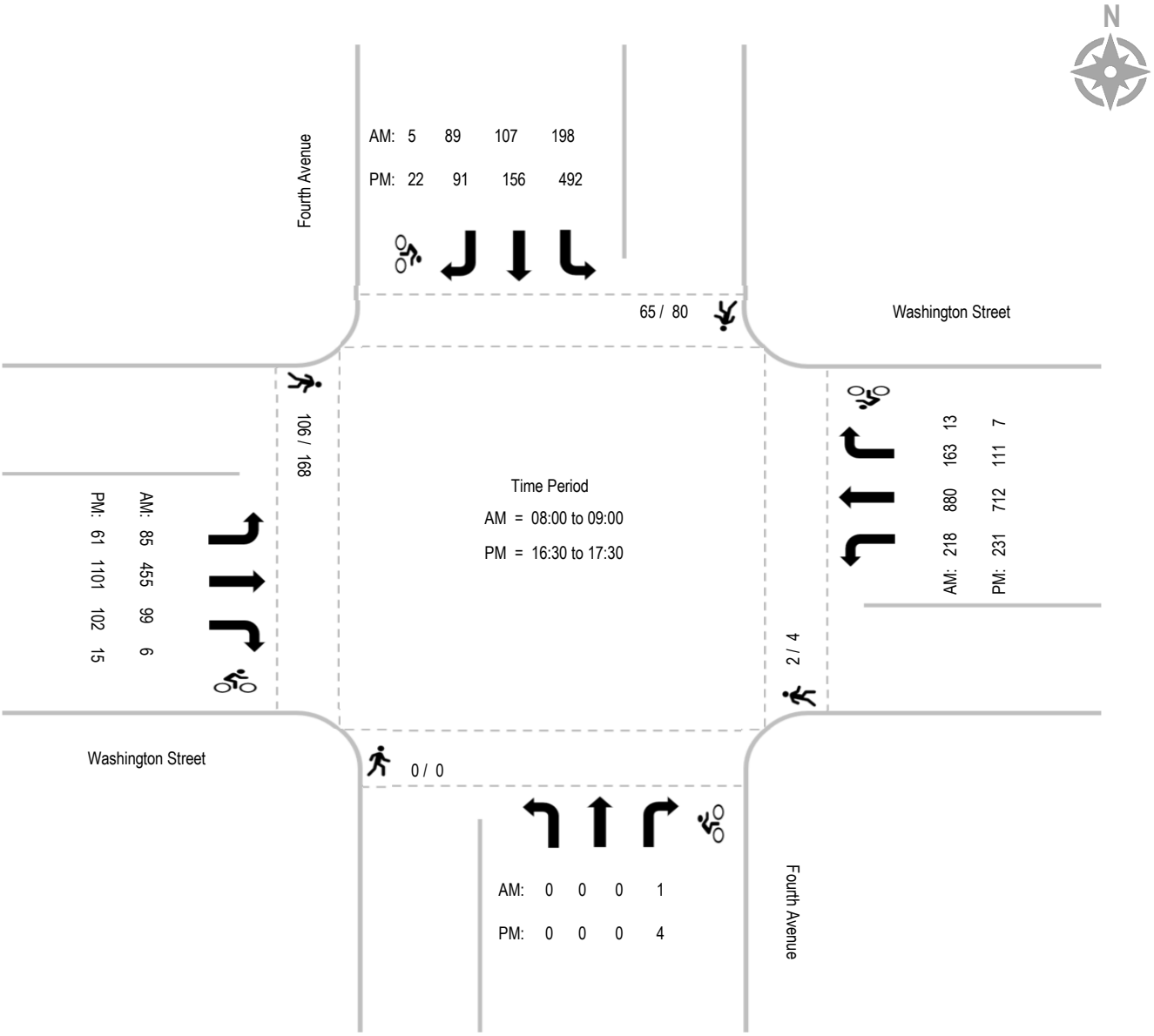
Location:	#10	File Name:	ITM-19-069-10
Intersection:	Washington Street & Fourth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, June 04, 2019		Scripps Mercy SD

AM	Fourth Avenue Southbound				Washington Street Westbound				Fourth Avenue Northbound				Washington Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	8	0	0	0	2	0	1	0	0	0	0	0	10	0	2	0	20	3
7:15	4	0	0	0	0	0	2	0	0	0	0	0	8	0	0	0	12	2
7:30	7	0	0	0	0	0	1	0	0	0	1	0	6	0	1	0	13	3
7:45	11	0	1	0	0	0	2	0	0	0	0	0	18	0	2	0	29	5
8:00	5	1	1	0	0	0	1	0	0	0	0	0	14	0	0	0	19	3
8:15	14	0	1	0	0	0	1	0	0	0	0	0	13	0	0	0	27	2
8:30	9	0	0	1	0	0	2	0	0	0	0	0	12	0	0	0	21	3
8:45	7	0	0	0	0	0	3	0	0	0	0	0	25	0	1	0	32	4
Ped Total	65				2				0				106				173	
Bike Total		1	3	1		0	13	0		0	1	0		0	6	0		25

PM	Fourth Avenue Southbound				Washington Street Westbound				Fourth Avenue Northbound				Washington Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	18	0	5	1	0	0	0	0	0	0	0	0	27	0	0	0	45	6
16:15	6	3	2	0	1	0	1	1	0	0	0	0	18	0	1	0	25	8
16:30	9	1	0	0	0	0	1	0	0	0	0	0	23	0	2	1	32	5
16:45	14	1	0	0	0	0	1	0	0	0	0	0	18	0	0	3	32	5
17:00	12	0	0	0	3	0	0	0	0	1	2	0	20	0	0	0	35	3
17:15	13	1	4	0	0	0	1	0	0	0	0	0	24	0	4	1	37	11
17:30	4	1	0	0	0	0	2	0	0	0	0	0	16	0	3	0	20	6
17:45	4	1	2	0	0	0	0	0	0	0	1	0	22	0	0	0	26	4
Ped Total	80				4				0				168				252	
Bike Total		8	13	1		0	6	1		1	3	0		0	10	5		48

Intersection Turning Movement - Peak Hour Summary

Location:	#10	File Name:	ITM-19-069-10
Intersection:	Washington Street & Fourth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, June 04, 2019		Scripps Mercy SD



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#01	File Name:	ITM-19-107-01
Intersection:	Washington Street & Fifth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, September 10, 2019		Scripps Mercy SD

AM	Fifth Avenue Southbound			Washington Street Westbound			Fifth Avenue Northbound			Washington Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	0	2	0	173	33	32	27	21	0	123	0	411
7:15	0	0	2	0	250	52	46	37	14	0	117	0	518
7:30	0	0	5	0	269	63	48	40	34	0	248	0	707
7:45	0	0	3	0	308	58	54	59	22	0	235	0	739
8:00	0	0	4	0	301	57	58	61	11	0	199	0	691
8:15	0	0	2	0	178	70	79	46	20	0	201	0	596
8:30	0	0	1	0	310	53	47	39	38	0	189	0	677
8:45	0	0	3	0	277	77	54	41	29	0	185	0	666
Total	0	0	22	0	2066	463	418	350	189	0	1497	0	5005
Approach%	-	-	100.0	-	81.7	18.3	43.7	36.6	19.7	-	100.0	-	
Total%	-	-	0.4	-	41.3	9.3	8.4	7.0	3.8	-	29.9	-	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	-	-	14	-	1,056	248	239	206	87	-	883	-	2,733
Approach%	-	-	100.0	-	81.0	19.0	44.9	38.7	16.4	-	100.0	-	
Total%	-	-	0.5	-	38.6	9.1	8.7	7.5	3.2	-	32.3	-	
PHF			0.70			0.89			0.92			0.89	0.97

PM	Fifth Avenue Southbound			Washington Street Westbound			Fifth Avenue Northbound			Washington Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	0	2	0	169	25	79	17	79	0	286	0	657
16:15	0	0	2	0	161	25	50	19	75	0	373	0	705
16:30	0	0	1	0	169	17	79	20	83	0	419	0	788
16:45	0	0	0	0	171	20	49	13	83	0	428	0	764
17:00	0	0	8	0	151	18	67	18	82	0	438	0	782
17:15	0	0	5	0	131	13	57	19	100	0	420	0	745
17:30	0	0	6	0	137	20	66	22	66	0	409	0	726
17:45	0	0	4	0	147	31	53	28	68	0	346	0	677
Total	0	0	28	0	1236	169	500	156	636	0	3119	0	5844
Approach%	-	-	100.0	-	88.0	12.0	38.7	12.1	49.2	-	100.0	-	
Total%	-	-	0.5	-	21.1	2.9	8.6	2.7	10.9	-	53.4	-	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	-	-	14	-	622	68	252	70	348	-	1,705	-	3,079
Approach%	-	-	100.0	-	90.1	9.9	37.6	10.4	51.9	-	100.0	-	
Total%	-	-	0.5	-	20.2	2.2	8.2	2.3	11.3	-	55.4	-	
PHF			0.44			0.90			0.92			0.97	0.98

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

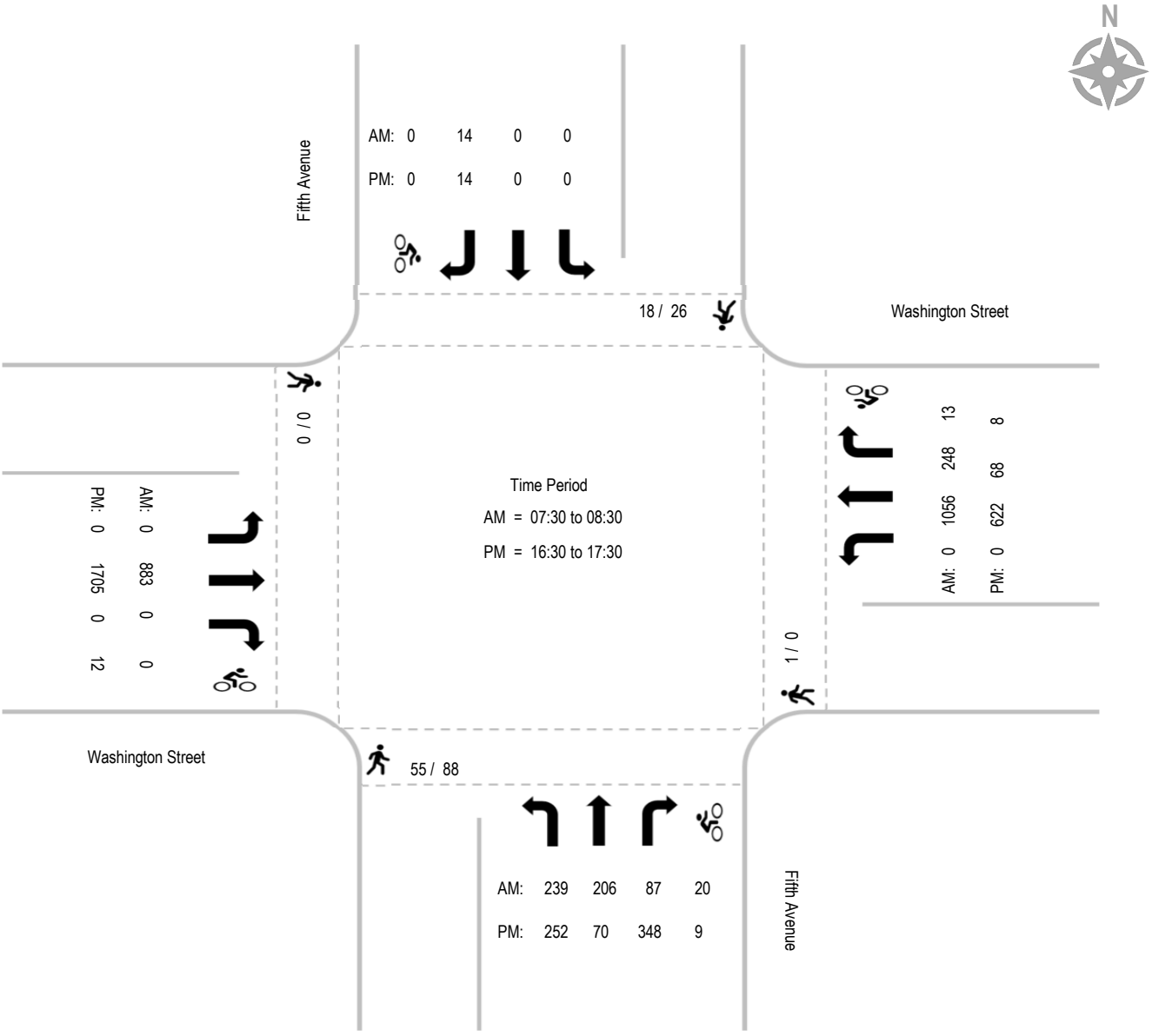
Location:	#01	File Name:	ITM-19-107-01
Intersection:	Washington Street & Fifth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, September 10, 2019		Scripps Mercy SD

AM	Fifth Avenue Southbound				Washington Street Westbound				Fifth Avenue Northbound				Washington Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	5	0	10	2	0	0	0	0	0	0	10	7
7:15	0	0	0	0	0	0	2	0	2	2	0	0	0	0	0	0	2	4
7:30	2	0	0	0	0	0	1	0	6	2	0	2	0	0	0	0	8	5
7:45	8	0	0	0	0	0	1	0	8	3	0	1	0	0	0	0	16	5
8:00	0	0	0	0	0	0	0	0	4	2	1	0	0	0	0	0	4	3
8:15	5	0	0	0	0	0	1	0	6	2	0	1	0	0	0	0	11	4
8:30	3	0	0	0	1	0	1	0	12	1	0	0	0	0	0	0	16	2
8:45	0	0	0	0	0	0	2	0	7	1	0	0	0	0	0	0	7	3
Ped Total	18				1				55				0				74	
Bike Total		0	0	0		0	13	0		15	1	4		0	0	0		33

PM	Fifth Avenue Southbound				Washington Street Westbound				Fifth Avenue Northbound				Washington Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	1	0	12	1	0	0	0	0	2	0	12	4
16:15	5	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	7	3
16:30	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0
16:45	2	0	0	0	0	0	2	0	7	1	0	0	0	0	6	0	9	9
17:00	6	0	0	0	0	0	0	0	20	3	0	0	0	0	1	0	26	4
17:15	4	0	0	0	0	0	1	0	12	2	0	0	0	0	1	0	16	4
17:30	4	0	0	0	0	0	1	0	16	1	0	0	0	0	1	0	20	3
17:45	4	0	0	0	0	0	0	0	15	1	0	0	0	0	1	0	19	2
Ped Total	26				0				88				0				114	
Bike Total		0	0	0		0	8	0		9	0	0		0	12	0		29

Intersection Turning Movement - Peak Hour Summary

Location:	#01	File Name:	ITM-19-107-01
Intersection:	Washington Street & Fifth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, September 10, 2019		Scripps Mercy SD



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#11	File Name:	ITM-19-069-11
Intersection:	Washington Street & Eighth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD

AM	Eighth Avenue Southbound			Washington Street Westbound			Eighth Avenue Northbound			Washington Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	4	5	2	0	100	0	7	0	5	0	125	15	263
7:15	3	1	2	0	169	0	8	3	6	0	167	19	378
7:30	6	1	0	1	169	1	4	3	4	0	187	23	399
7:45	5	1	2	0	189	0	8	5	6	0	161	11	388
8:00	5	4	2	0	165	2	8	4	6	0	192	14	402
8:15	7	4	2	0	170	2	11	4	7	0	163	25	395
8:30	4	0	2	0	157	1	8	2	10	0	174	15	373
8:45	5	2	1	0	170	2	8	3	10	0	194	13	408
Total	39	18	13	1	1289	8	62	24	54	0	1363	135	3006
Approach%	55.7	25.7	18.6	0.1	99.3	0.6	44.3	17.1	38.6	-	91.0	9.0	
Total%	1.3	0.6	0.4	0.0	42.9	0.3	2.1	0.8	1.8	-	45.3	4.5	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	23	10	6	1	693	5	31	16	23	-	703	73	1,584
Approach%	59.0	25.6	15.4	0.1	99.1	0.7	44.3	22.9	32.9	-	90.6	9.4	
Total%	1.5	0.6	0.4	0.1	43.8	0.3	2.0	1.0	1.5	-	44.4	4.6	
PHF			0.75			0.92			0.80			0.92	0.99

PM	Eighth Avenue Southbound			Washington Street Westbound			Eighth Avenue Northbound			Washington Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	7	2	0	0	98	5	8	4	8	0	476	49	657
16:15	5	2	0	1	111	0	4	3	3	1	424	36	590
16:30	9	1	3	0	102	0	7	1	2	0	460	46	631
16:45	5	2	2	0	139	1	8	5	7	0	441	57	667
17:00	11	5	1	0	104	0	4	1	9	0	494	46	675
17:15	4	3	0	0	103	1	5	6	7	0	477	51	657
17:30	6	3	1	0	98	1	3	7	7	0	472	36	634
17:45	4	2	0	1	102	0	11	2	4	0	372	36	534
Total	51	20	7	2	857	8	50	29	47	1	3616	357	5045
Approach%	65.4	25.6	9.0	0.2	98.8	0.9	39.7	23.0	37.3	0.0	91.0	9.0	
Total%	1.0	0.4	0.1	0.0	17.0	0.2	1.0	0.6	0.9	0.0	71.7	7.1	

PM Intersection Peak Hour: **16:45 to 17:45**

Volume	26	13	4	-	444	3	20	19	30	-	1,884	190	2,633
Approach%	60.5	30.2	9.3	-	99.3	0.7	29.0	27.5	43.5	-	90.8	9.2	
Total%	1.0	0.5	0.2	-	16.9	0.1	0.8	0.7	1.1	-	71.6	7.2	
PHF			0.63			0.80			0.86			0.96	0.98

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

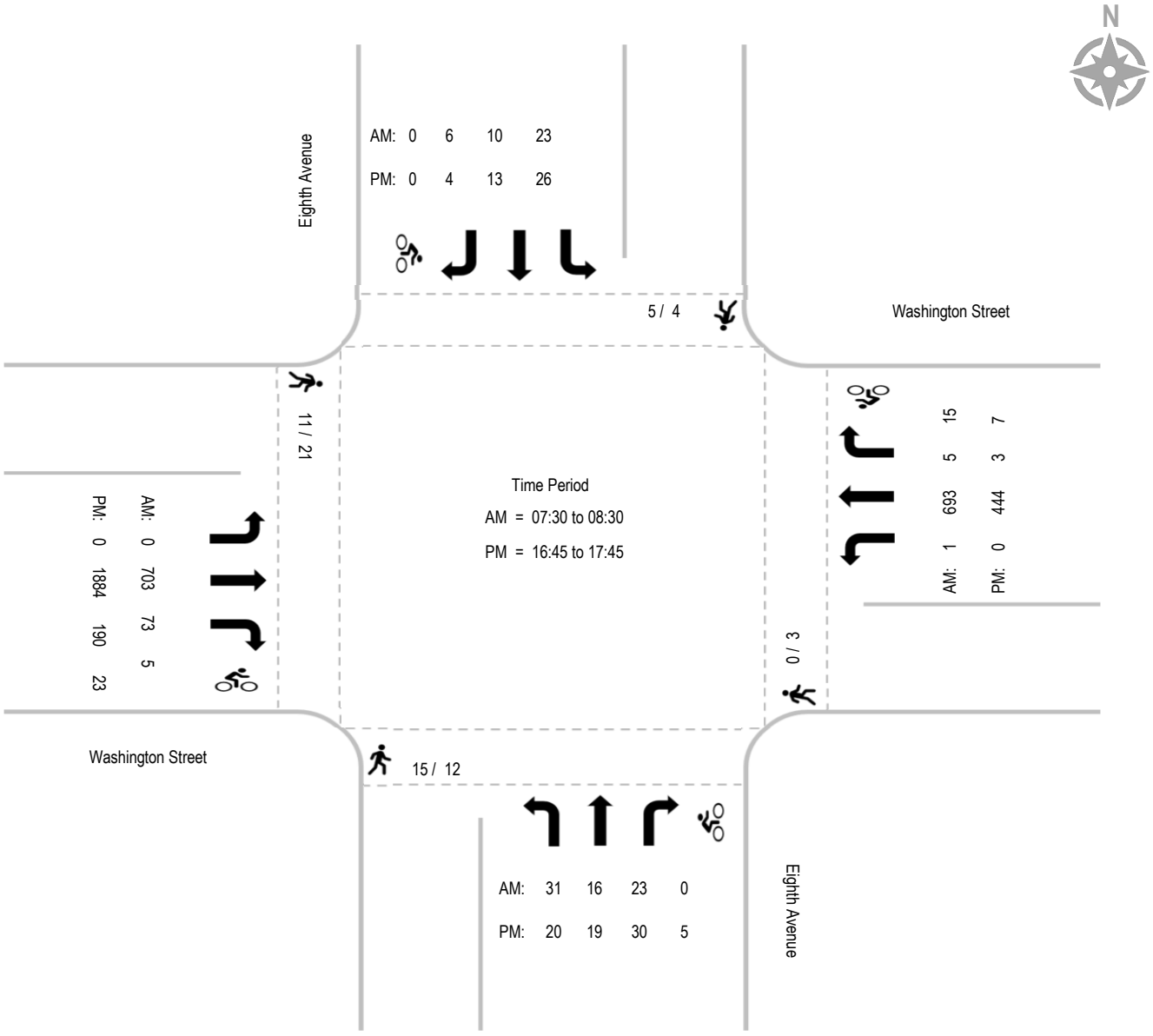
Location:	#11	File Name:	ITM-19-069-11
Intersection:	Washington Street & Eighth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD

AM	Eighth Avenue Southbound				Washington Street Westbound				Eighth Avenue Northbound				Washington Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	1	0	0	0	0	0	0	0	2	0	0	0	2	0	2	0	5	2
7:15	1	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	3	3
7:30	0	0	0	0	0	0	5	0	0	0	0	0	2	0	0	0	2	5
7:45	2	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	6	1
8:00	0	0	0	0	0	0	3	0	1	0	0	0	0	0	1	0	1	4
8:15	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	3	0
8:30	0	0	0	0	0	0	2	0	2	0	0	0	1	0	1	0	3	3
8:45	1	0	0	0	0	0	1	0	6	0	0	0	1	0	1	0	8	2
Ped Total	5				0				15				11				31	
Bike Total		0	0	0		0	15	0		0	0	0		0	5	0		20

PM	Eighth Avenue Southbound				Washington Street Westbound				Eighth Avenue Northbound				Washington Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	1	0	1	2	0	0	1	0	3	0	2	6
16:15	0	0	0	0	0	0	2	0	2	0	0	0	2	0	8	0	4	10
16:30	0	0	0	0	2	0	2	0	1	1	0	0	6	0	2	0	9	5
16:45	2	0	0	0	0	0	1	0	2	0	0	0	0	0	3	0	4	4
17:00	1	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	5	0
17:15	0	0	0	0	1	0	0	0	0	2	0	0	2	0	2	0	3	4
17:30	1	0	0	0	0	0	0	0	2	0	0	0	3	0	3	0	6	3
17:45	0	0	0	0	0	0	1	0	3	0	0	0	4	0	2	0	7	3
Ped Total	4				3				12				21				40	
Bike Total		0	0	0		0	7	0		5	0	0		0	23	0		35

Intersection Turning Movement - Peak Hour Summary

Location:	#11	File Name:	ITM-19-069-11
Intersection:	Washington Street & Eighth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#20	File Name:	ITM-19-069-20
Intersection:	SR-163 Off Ramp & Eighth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD

AM	Eighth Avenue Southbound			SR-163 Off Ramp Westbound			- Northbound			- Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	0	0	0	132	1	0	0	0	0	0	0	133
7:15	0	0	0	0	140	2	0	0	0	0	0	0	142
7:30	0	0	0	0	141	2	0	0	0	0	0	0	143
7:45	0	0	0	0	141	2	0	0	0	0	0	0	143
8:00	0	0	0	0	125	2	0	0	0	0	0	0	127
8:15	0	0	0	0	138	3	0	0	0	0	0	0	141
8:30	0	0	0	0	146	5	0	0	0	0	0	0	151
8:45	0	0	0	0	146	6	0	0	0	0	0	0	152
Total	0	0	0	0	1109	23	0	0	0	0	0	0	1132
Approach%	-	-	-	-	98.0	2.0	-	-	-	-	-	-	
Total%	-	-	-	-	98.0	2.0	-	-	-	-	-	-	

AM Intersection Peak Hour: **08:00 to 09:00**

Volume	-	-	-	-	555	16	-	-	-	-	-	-	571
Approach%	-	-	-	-	97.2	2.8	-	-	-	-	-	-	
Total%	-	-	-	-	97.2	2.8	-	-	-	-	-	-	
PHF			#DIV/0!			0.94			#DIV/0!			#DIV/0!	0.94

PM	Eighth Avenue Southbound			SR-163 Off Ramp Westbound			- Northbound			- Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	0	0	0	83	5	0	0	0	0	0	0	88
16:15	0	0	0	0	87	5	0	0	0	0	0	0	92
16:30	0	0	0	0	94	4	0	0	0	0	0	0	98
16:45	0	0	0	0	83	3	0	0	0	0	0	0	86
17:00	0	0	0	0	68	11	0	0	0	0	0	0	79
17:15	0	0	0	0	64	1	0	0	0	0	0	0	65
17:30	0	0	0	0	42	4	0	0	0	0	0	0	46
17:45	0	0	0	0	79	4	0	0	0	0	0	0	83
Total	0	0	0	0	600	37	0	0	0	0	0	0	637
Approach%	-	-	-	-	94.2	5.8	-	-	-	-	-	-	
Total%	-	-	-	-	94.2	5.8	-	-	-	-	-	-	

PM Intersection Peak Hour: **16:00 to 17:00**

Volume	-	-	-	-	347	17	-	-	-	-	-	-	364
Approach%	-	-	-	-	95.3	4.7	-	-	-	-	-	-	
Total%	-	-	-	-	95.3	4.7	-	-	-	-	-	-	
PHF			#DIV/0!			0.93			#DIV/0!			#DIV/0!	0.93

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

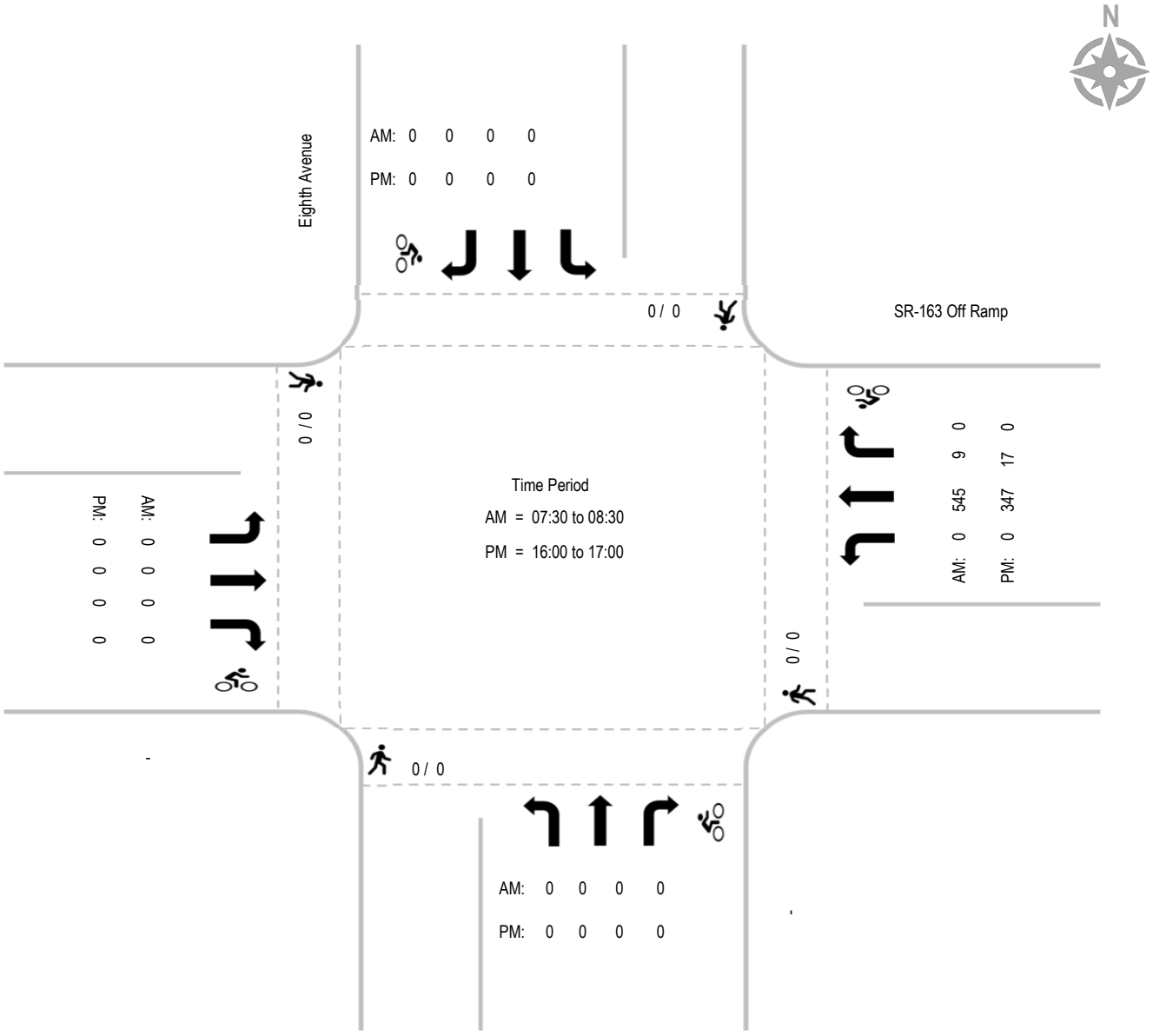
Location:	#20	File Name:	ITM-19-069-20
Intersection:	SR-163 Off Ramp & Eighth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD

AM	Eighth Avenue Southbound				SR-163 Off Ramp Westbound				- Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	Eighth Avenue Southbound				SR-163 Off Ramp Westbound				- Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#20	File Name:	ITM-19-069-20
	Intersection:	SR-163 Off Ramp & Eighth Avenue	Project:	LLG Ref. 3-19-3072
	Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#19	File Name:	ITM-19-069-19
Intersection:	SR-163 SB Off Ramp @ Washington Street & Eighth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD

AM	SR-163 SB Off Ramp Southbound			Washington Street Westbound			- Northbound			- Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	0	132	0	100	0	0	0	0	0	0	0	232
7:15	0	0	140	0	169	0	0	0	0	0	0	0	309
7:30	0	0	141	0	171	0	0	0	0	0	0	0	312
7:45	0	0	141	0	189	0	0	0	0	0	0	0	330
8:00	0	0	125	0	167	0	0	0	0	0	0	0	292
8:15	0	0	138	0	172	0	0	0	0	0	0	0	310
8:30	0	0	146	0	158	0	0	0	0	0	0	0	304
8:45	0	0	146	0	172	0	0	0	0	0	0	0	318
Total	0	0	1109	0	1298	0	0	0	0	0	0	0	2407
Approach%	-	-	100.0	-	100.0	-	-	-	-	-	-	-	
Total%	-	-	46.1	-	53.9	-	-	-	-	-	-	-	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	-	-	545	-	699	-	-	-	-	-	-	-	1,244
Approach%	-	-	100.0	-	100.0	-	-	-	-	-	-	-	
Total%	-	-	43.8	-	56.2	-	-	-	-	-	-	-	
PHF			0.97			0.92			#DIV/0!			#DIV/0!	0.94

PM	SR-163 SB Off Ramp Southbound			Washington Street Westbound			- Northbound			- Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	0	83	0	103	0	0	0	0	0	0	0	186
16:15	0	0	87	0	112	0	0	0	0	0	0	0	199
16:30	0	0	94	0	102	0	0	0	0	0	0	0	196
16:45	0	0	83	0	140	0	0	0	0	0	0	0	223
17:00	0	0	68	0	104	0	0	0	0	0	0	0	172
17:15	0	0	64	0	104	0	0	0	0	0	0	0	168
17:30	0	0	42	0	99	0	0	0	0	0	0	0	141
17:45	0	0	79	0	103	0	0	0	0	0	0	0	182
Total	0	0	600	0	867	0	0	0	0	0	0	0	1467
Approach%	-	-	100.0	-	100.0	-	-	-	-	-	-	-	
Total%	-	-	40.9	-	59.1	-	-	-	-	-	-	-	

PM Intersection Peak Hour: **16:00 to 17:00**

Volume	-	-	347	-	457	-	-	-	-	-	-	-	804
Approach%	-	-	100.0	-	100.0	-	-	-	-	-	-	-	
Total%	-	-	43.2	-	56.8	-	-	-	-	-	-	-	
PHF			0.92			0.82			#DIV/0!			#DIV/0!	0.90

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

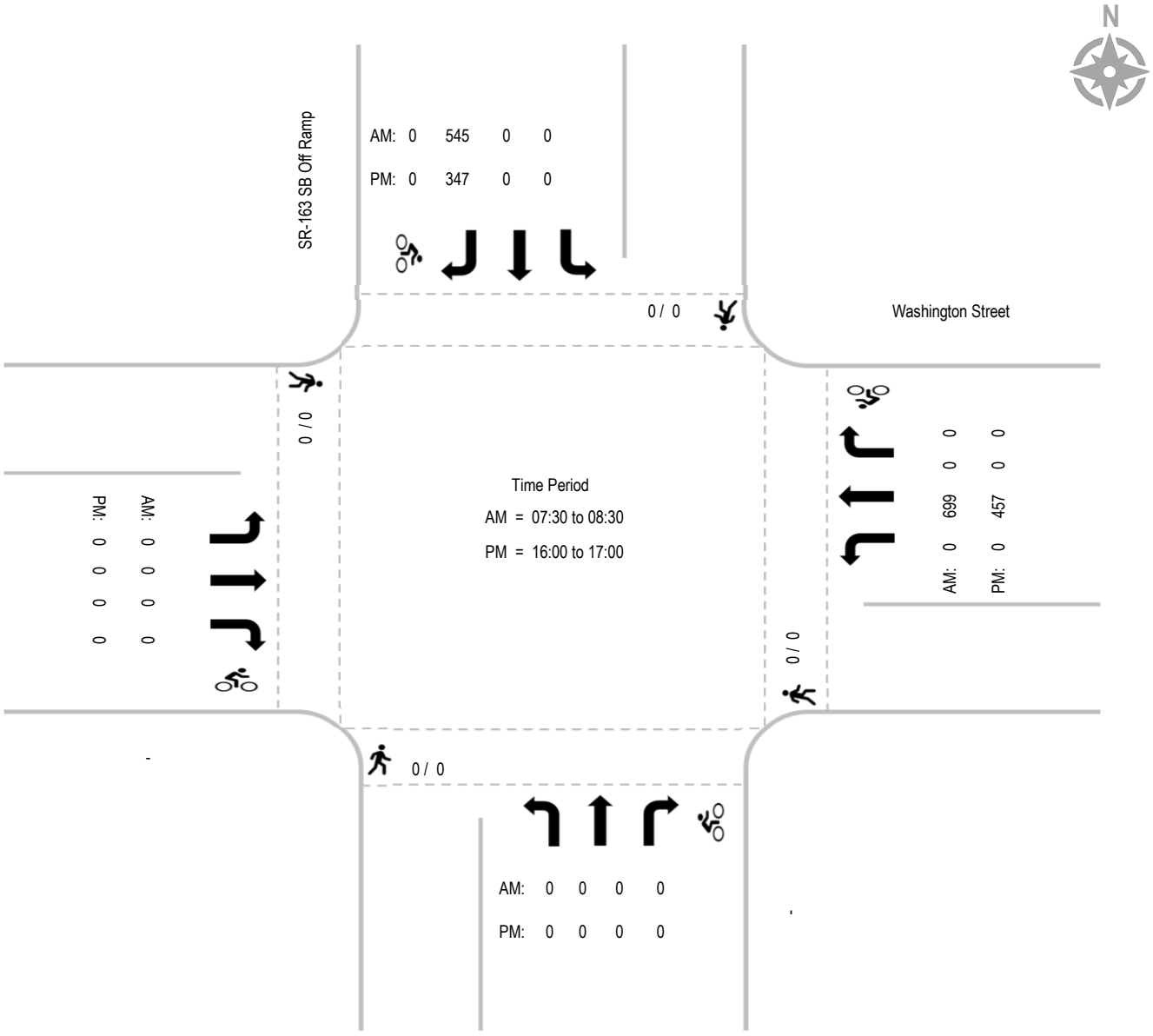
Location:	#19	File Name:	ITM-19-069-19
Intersection:	SR-163 SB Off Ramp @ Washington Street & Eighth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD

AM	SR-163 SB Off Ramp Southbound				Washington Street Westbound				- Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	SR-163 SB Off Ramp Southbound				Washington Street Westbound				- Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#19	File Name:	ITM-19-069-19
	Intersection:	SR-163 SB Off Ramp @ Washington Street & Eighth Avenue	Project:	LLG Ref. 3-19-3072
	Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#12	File Name:	ITM-19-069-12
Intersection:	Washington Street & Richmond Street & SR-163 On Ramp	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD

AM	SR-163 On Ramp Southbound			Washington Street Westbound			Richmond Street Northbound			Washington Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	0	0	0	114	348	0	0	2	73	125	55	717
7:15	0	0	0	0	140	413	0	0	3	91	142	48	837
7:30	0	0	0	0	182	454	0	0	6	120	182	45	989
7:45	0	0	0	0	209	460	0	0	1	98	157	44	969
8:00	0	0	0	0	156	435	0	0	4	89	174	43	901
8:15	0	0	0	0	181	443	0	0	7	104	167	48	950
8:30	0	0	0	0	165	413	0	0	4	94	194	58	928
8:45	0	0	0	0	192	391	0	0	7	101	189	67	947
Total	0	0	0	0	1339	3357	0	0	34	770	1330	408	7238
Approach%	-	-	-	-	28.5	71.5	-	-	100.0	30.7	53.0	16.3	
Total%	-	-	-	-	18.5	46.4	-	-	0.5	10.6	18.4	5.6	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	-	-	-	-	728	1,792	-	-	18	411	680	180	3,809
Approach%	-	-	-	-	28.9	71.1	-	-	100.0	32.3	53.5	14.2	
Total%	-	-	-	-	19.1	47.0	-	-	0.5	10.8	17.9	4.7	
PHF			#DIV/0!			0.94			0.64			0.92	0.96

PM	SR-163 On Ramp Southbound			Washington Street Westbound			Richmond Street Northbound			Washington Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	0	0	0	98	178	0	0	0	177	435	111	999
16:15	0	0	0	0	90	182	0	0	0	159	492	109	1032
16:30	0	0	0	0	96	193	0	0	0	136	577	98	1100
16:45	0	0	0	0	105	196	0	0	0	169	530	109	1109
17:00	0	0	0	0	116	189	0	0	0	175	521	88	1089
17:15	0	0	0	0	112	187	0	0	0	169	542	117	1127
17:30	0	0	0	0	112	160	0	0	0	164	554	93	1083
17:45	0	0	0	0	115	169	0	0	0	120	504	107	1015
Total	0	0	0	0	844	1454	0	0	0	1269	4155	832	8554
Approach%	-	-	-	-	36.7	63.3	-	-	-	20.3	66.4	13.3	
Total%	-	-	-	-	9.9	17.0	-	-	-	14.8	48.6	9.7	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	-	-	-	-	429	765	-	-	-	649	2,170	412	4,425
Approach%	-	-	-	-	35.9	64.1	-	-	-	20.1	67.2	12.8	
Total%	-	-	-	-	9.7	17.3	-	-	-	14.7	49.0	9.3	
PHF			#DIV/0!			0.98			#DIV/0!			0.98	0.98

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

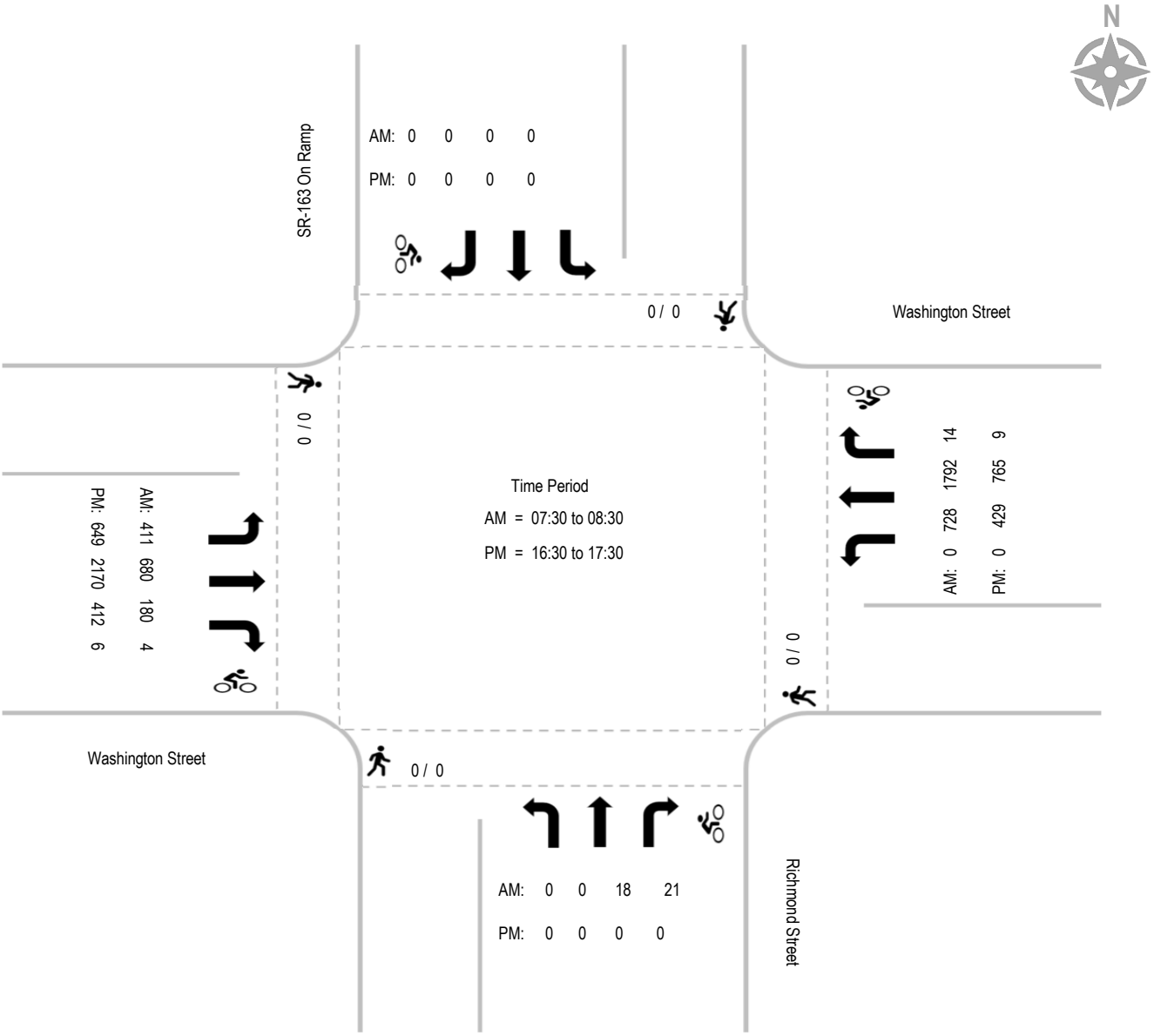
Location:	#12	File Name:	ITM-19-069-12
Intersection:	Washington Street & Richmond Street & SR-163 On Ramp	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD

AM	SR-163 On Ramp Southbound				Washington Street Westbound				Richmond Street Northbound				Washington Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	6
7:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	4
7:30	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	3
7:45	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6
8:00	0	0	0	0	0	0	2	0	0	0	0	2	0	0	1	0	0	5
8:15	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	4
8:30	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	0	0	5
8:45	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	0	0	6
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	14	0		0	0	21		0	4	0		39

PM	SR-163 On Ramp Southbound				Washington Street Westbound				Richmond Street Northbound				Washington Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
16:15	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
16:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
16:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
17:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	9	0		0	0	0		0	6	0		15

Intersection Turning Movement - Peak Hour Summary

Location:	#12	File Name:	ITM-19-069-12
Intersection:	Washington Street & Richmond Street & SR-163 On Ramp	Project:	LLG Ref. 3-19-3072
Date of Count:	Thursday, June 06, 2019		Scripps Mercy SD



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#13	File Name:	ITM-19-069-13
Intersection:	University Avenue & Fourth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tueday, June 04, 2019		Scripps Mercy SD

AM	Fourth Avenue Southbound			University Avenue Westbound			Fourth Avenue Northbound			University Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	21	27	0	22	67	0	0	0	0	0	45	6	188
7:15	14	41	7	24	65	0	0	0	0	0	75	5	231
7:30	28	56	8	34	106	7	0	0	0	0	83	7	329
7:45	22	42	4	43	79	0	0	0	0	0	67	9	266
8:00	27	68	15	48	96	1	0	0	0	0	102	9	366
8:15	35	83	11	41	96	1	0	0	0	0	84	13	364
8:30	24	65	10	40	113	0	0	0	0	0	88	10	350
8:45	29	62	2	23	64	1	0	0	0	0	64	6	251
Total	200	444	57	275	686	10	0	0	0	0	608	65	2345
Approach%	28.5	63.3	8.1	28.3	70.6	1.0	-	-	-	-	90.3	9.7	
Total%	8.5	18.9	2.4	11.7	29.3	0.4	-	-	-	-	25.9	2.8	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	108	258	40	172	384	2	-	-	-	-	341	41	1,346
Approach%	26.6	63.5	9.9	30.8	68.8	0.4	-	-	-	-	89.3	10.7	
Total%	8.0	19.2	3.0	12.8	28.5	0.1	-	-	-	-	25.3	3.0	
PHF			0.79			0.91			#DIV/0!			0.86	0.92

PM	Fourth Avenue Southbound			University Avenue Westbound			Fourth Avenue Northbound			University Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	38	69	8	40	105	0	0	0	0	2	89	9	360
16:15	41	46	9	39	107	0	0	0	0	0	98	4	344
16:30	29	51	7	28	106	0	0	0	0	0	102	10	333
16:45	43	72	13	33	99	0	0	0	0	0	117	9	386
17:00	33	76	15	40	122	0	0	0	0	1	95	10	392
17:15	40	65	5	26	109	0	0	0	0	0	100	9	354
17:30	34	67	4	38	113	0	0	0	0	0	105	10	371
17:45	38	70	10	35	121	0	0	0	0	0	77	10	361
Total	296	516	71	279	882	0	0	0	0	3	783	71	2901
Approach%	33.5	58.4	8.0	24.0	76.0	-	-	-	-	0.4	91.4	8.3	
Total%	10.2	17.8	2.4	9.6	30.4	-	-	-	-	0.1	27.0	2.4	

PM Intersection Peak Hour: **16:45 to 17:45**

Volume	150	280	37	137	443	-	-	-	-	1	417	38	1,503
Approach%	32.1	60.0	7.9	23.6	76.4	-	-	-	-	0.2	91.4	8.3	
Total%	10.0	18.6	2.5	9.1	29.5	-	-	-	-	0.1	27.7	2.5	
PHF			0.91			0.90			#DIV/0!			0.90	0.96

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

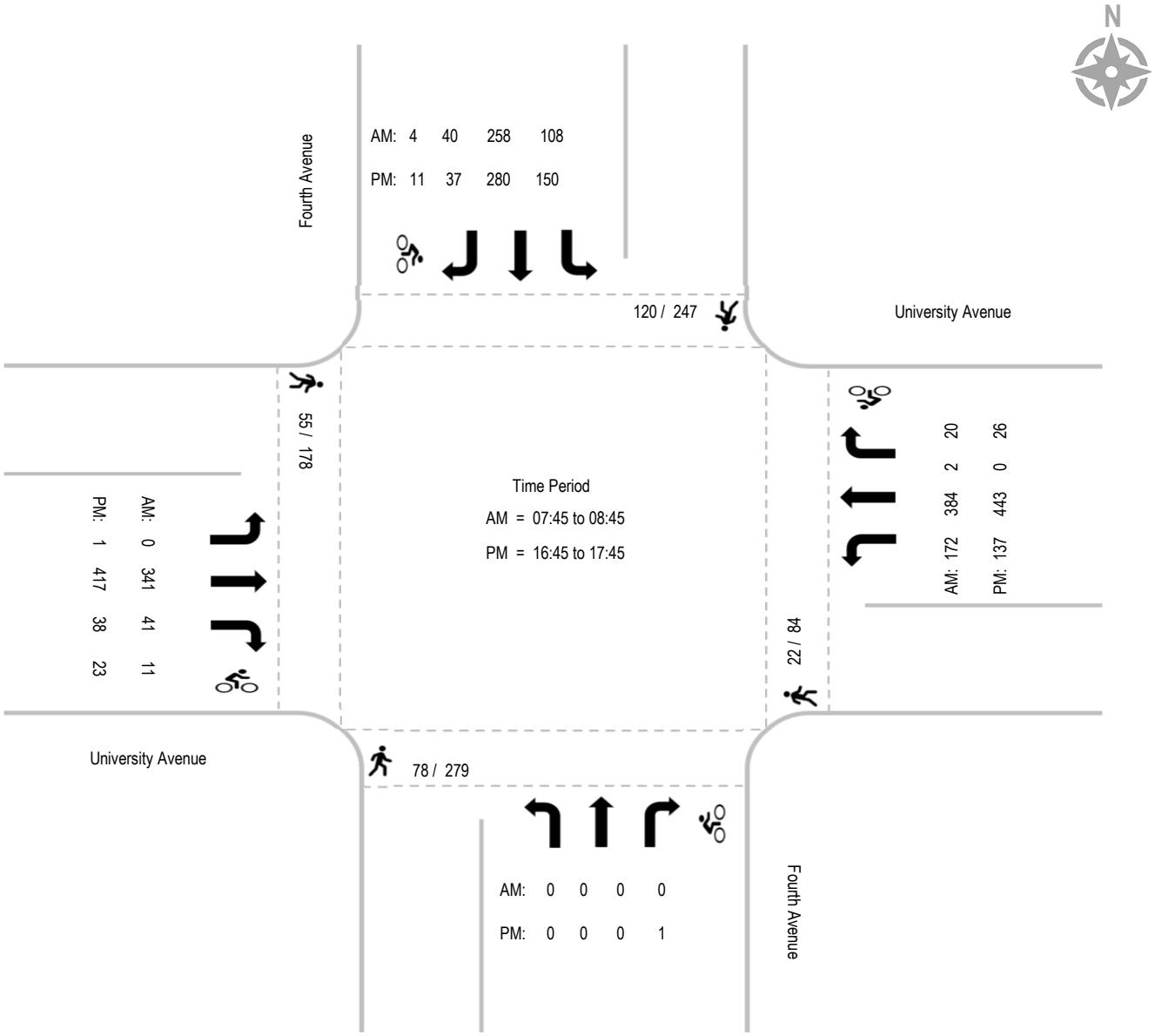
Location:	#13	File Name:	ITM-19-069-13
Intersection:	University Avenue & Fourth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tueday, June 04, 2019		Scripps Mercy SD

AM	Fourth Avenue Southbound				University Avenue Westbound				Fourth Avenue Northbound				University Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	9	0	0	0	4	0	2	0	1	0	0	0	6	0	0	1	20	3
7:15	13	0	0	0	3	0	1	0	4	0	0	0	9	0	0	1	29	2
7:30	6	0	0	0	1	1	3	0	6	0	0	0	9	0	0	0	22	4
7:45	14	0	1	0	1	0	2	0	17	0	0	0	10	0	3	1	42	7
8:00	10	0	2	0	3	0	1	0	12	0	0	0	3	0	2	0	28	5
8:15	21	0	1	0	3	0	1	0	11	0	0	0	3	0	1	0	38	3
8:30	23	0	0	0	2	0	6	0	10	0	0	0	8	0	1	0	43	7
8:45	24	0	0	0	5	0	3	0	17	0	0	0	7	0	1	0	53	4
Ped Total	120				22				78				55				275	
Bike Total		0	4	0		1	19	0		0	0	0		0	8	3		35

PM	Fourth Avenue Southbound				University Avenue Westbound				Fourth Avenue Northbound				University Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	24	0	0	0	0	0	1	0	24	0	0	0	26	0	0	1	74	2
16:15	16	1	0	0	10	0	6	0	41	0	0	0	26	0	1	0	93	8
16:30	32	0	1	0	14	0	2	0	29	0	0	0	24	0	1	0	99	4
16:45	40	1	0	0	5	0	0	3	29	0	0	0	14	0	4	0	88	8
17:00	42	1	0	0	20	0	3	0	34	0	0	0	15	0	5	0	111	9
17:15	24	2	2	0	13	0	5	0	29	0	0	0	21	0	3	1	87	13
17:30	24	0	1	0	7	0	0	1	25	0	0	0	15	0	3	0	71	5
17:45	45	1	1	0	15	0	4	1	68	0	1	0	37	0	3	1	165	12
Ped Total	247				84				279				178				788	
Bike Total		6	5	0		0	21	5		0	1	0		0	20	3		61

Intersection Turning Movement - Peak Hour Summary

Location:	#13	File Name:	ITM-19-069-13
Intersection:	University Avenue & Fourth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tueday, June 04, 2019		Scripps Mercy SD



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#14RR	File Name:	ITM-19-069-14
Intersection:	University Avenue & Fifth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, June 04, 2019		Scripps Mercy SD

AM	Fifth Avenue Southbound			University Avenue Westbound			Fifth Avenue Northbound			University Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	0	0	0	82	51	6	25	24	1	56	0	245
7:15	0	0	0	0	78	56	7	36	27	2	80	0	286
7:30	0	0	0	0	120	66	8	49	24	10	106	0	383
7:45	0	0	0	0	141	84	6	72	33	6	88	0	430
8:00	0	0	0	0	109	71	8	70	30	6	100	0	394
8:15	0	0	0	0	122	82	7	43	33	8	100	0	395
8:30	0	0	0	0	133	76	10	62	20	10	106	0	417
8:45	0	0	0	0	110	59	8	55	36	9	98	0	375
Total	0	0	0	0	895	545	60	412	227	52	734	0	2925
Approach%	-	-	-	-	62.2	37.8	8.6	58.9	32.5	6.6	93.4	-	
Total%	-	-	-	-	30.6	18.6	2.1	14.1	7.8	1.8	25.1	-	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	-	-	-	-	505	313	31	247	116	30	394	-	1,636
Approach%	-	-	-	-	61.7	38.3	7.9	62.7	29.4	7.1	92.9	-	
Total%	-	-	-	-	30.9	19.1	1.9	15.1	7.1	1.8	24.1	-	
PHF			#DIV/0!			0.91			0.89			0.91	0.95

PM	Fifth Avenue Southbound			University Avenue Westbound			Fifth Avenue Northbound			University Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	0	0	0	146	59	17	73	52	9	136	0	492
16:15	0	0	0	0	145	69	24	81	51	8	146	0	524
16:30	0	0	0	1	138	51	14	53	52	8	134	0	451
16:45	0	0	0	0	140	57	14	93	58	13	142	0	517
17:00	0	0	0	0	159	51	12	92	57	4	133	1	509
17:15	0	0	0	0	131	65	14	91	56	8	142	0	507
17:30	0	0	0	3	152	48	17	79	52	11	122	0	484
17:45	0	0	0	0	135	62	19	82	63	11	106	0	478
Total	0	0	0	4	1146	462	131	644	441	72	1061	1	3962
Approach%	-	-	-	0.2	71.1	28.7	10.8	53.0	36.3	6.3	93.6	0.1	
Total%	-	-	-	0.1	28.9	11.7	3.3	16.3	11.1	1.8	26.8	0.0	

PM Intersection Peak Hour: **16:45 to 17:45**

Volume	-	-	-	3	582	221	57	355	223	36	539	1	2,017
Approach%	-	-	-	0.4	72.2	27.4	9.0	55.9	35.1	6.3	93.6	0.2	
Total%	-	-	-	0.1	28.9	11.0	2.8	17.6	11.1	1.8	26.7	0.0	
PHF			#DIV/0!			0.96			0.96			0.93	0.98

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

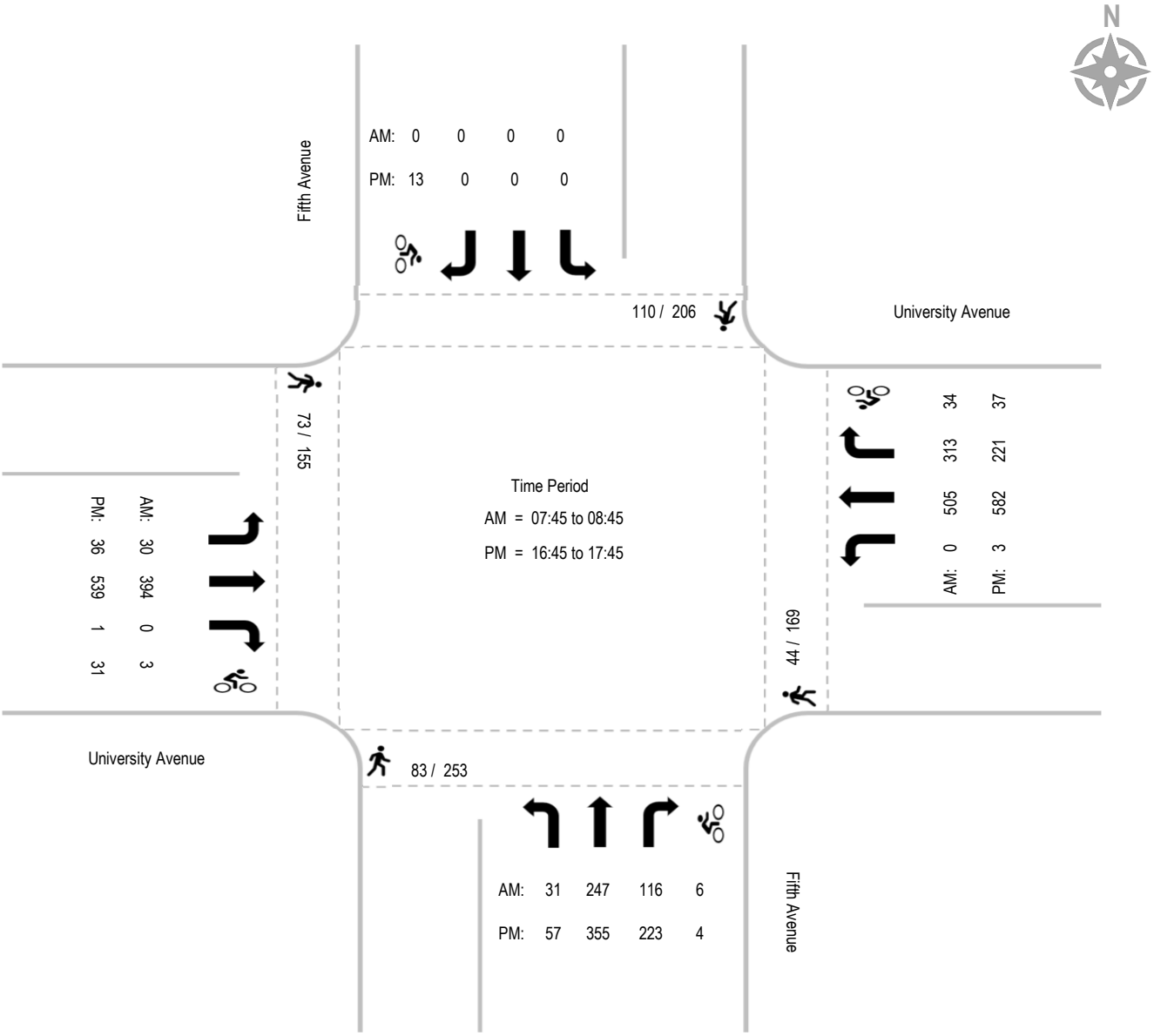
Location:	#14RR	File Name:	ITM-19-069-14
Intersection:	University Avenue & Fifth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, June 04, 2019		Scripps Mercy SD

AM	Fifth Avenue Southbound				University Avenue Westbound				Fifth Avenue Northbound				University Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	3	0	0	0	10	0	3	2	6	0	1	0	4	1	0	0	23	7
7:15	8	0	0	0	5	1	1	0	6	0	1	0	7	0	0	0	26	3
7:30	6	0	0	0	6	0	5	1	4	0	0	0	6	0	0	0	22	6
7:45	15	0	0	0	2	0	3	1	3	0	0	0	5	0	0	0	25	4
8:00	18	0	0	0	7	0	1	2	17	0	0	0	12	0	0	0	54	3
8:15	16	0	0	0	1	0	1	2	16	0	1	0	7	0	0	0	40	4
8:30	21	0	0	0	7	0	5	2	11	0	0	1	11	0	2	0	50	10
8:45	23	0	0	0	6	0	3	1	20	1	1	0	21	0	0	0	70	6
Ped Total	110				44				83				73				310	
Bike Total		0	0	0		1	22	11		1	4	1		1	2	0		43

PM	Fifth Avenue Southbound				University Avenue Westbound				Fifth Avenue Northbound				University Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	36	0	0	0	0	0	4	0	28	2	0	0	17	0	1	0	81	7
16:15	24	0	1	0	20	0	7	0	36	2	0	0	17	0	4	0	97	14
16:30	28	0	1	0	15	0	3	0	30	0	0	0	20	0	0	0	93	4
16:45	20	0	0	0	19	0	7	1	31	0	0	0	26	0	5	0	96	13
17:00	26	0	3	0	19	0	4	0	22	0	0	0	30	0	7	0	97	14
17:15	24	0	1	0	17	0	5	0	24	0	0	0	16	0	5	0	81	11
17:30	21	0	4	0	36	0	1	1	40	0	0	0	14	0	2	0	111	8
17:45	27	0	3	0	43	0	3	1	42	0	0	0	15	0	7	0	127	14
Ped Total	206				169				253				155				783	
Bike Total		0	13	0		0	34	3		4	0	0		0	31	0		85

Intersection Turning Movement - Peak Hour Summary

Location:	#14RR	File Name:	ITM-19-069-14
Intersection:	University Avenue & Fifth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, June 04, 2019		Scripps Mercy SD



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#15 R	File Name:	ITM-19-069-15
Intersection:	University Avenue & Sixth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, June 4, 2019		Scripps Mercy SD

AM	Sixth Avenue Southbound			University Avenue Westbound			Sixth Avenue Northbound			University Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	12	144	62	21	59	24	12	89	4	50	24	5	506
7:15	30	156	52	21	69	30	7	125	6	83	22	4	605
7:30	35	207	108	34	69	52	18	182	4	95	28	4	836
7:45	34	252	87	35	85	31	18	197	5	106	18	4	872
8:00	36	239	82	37	94	48	19	159	13	83	33	7	850
8:15	40	205	84	41	97	37	18	124	10	93	27	6	782
8:30	42	265	111	27	89	36	8	145	3	79	38	3	846
8:45	44	264	84	28	77	30	7	142	13	82	43	6	820
Total	273	1732	670	244	639	288	107	1163	58	671	233	39	6117
Approach%	10.2	64.7	25.0	20.8	54.6	24.6	8.1	87.6	4.4	71.2	24.7	4.1	
Total%	4.5	28.3	11.0	4.0	10.4	4.7	1.7	19.0	0.9	11.0	3.8	0.6	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	152	961	364	140	365	152	63	625	31	361	116	20	3,350
Approach%	10.3	65.1	24.6	21.3	55.6	23.1	8.8	86.9	4.3	72.6	23.3	4.0	
Total%	4.5	28.7	10.9	4.2	10.9	4.5	1.9	18.7	0.9	10.8	3.5	0.6	
PHF			0.88			0.92			0.82			0.97	0.00

PM	Sixth Avenue Southbound			University Avenue Westbound			Sixth Avenue Northbound			University Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	52	177	116	22	77	51	14	180	26	96	80	12	903
16:15	61	248	90	30	88	47	27	215	23	87	97	9	1022
16:30	70	226	117	24	79	41	9	202	19	77	94	9	967
16:45	76	202	109	26	102	47	8	212	21	93	96	13	1005
17:00	57	233	98	28	102	43	4	247	21	92	91	8	1024
17:15	58	143	113	21	89	48	8	234	14	107	83	7	925
17:30	59	184	114	26	78	51	9	169	21	88	80	8	887
17:45	62	214	75	31	107	41	10	200	21	81	82	9	933
Total	495	1627	832	208	722	369	89	1659	166	721	703	75	7666
Approach%	16.8	55.1	28.2	16.0	55.6	28.4	4.6	86.7	8.7	48.1	46.9	5.0	
Total%	6.5	21.2	10.9	2.7	9.4	4.8	1.2	21.6	2.2	9.4	9.2	1.0	

PM Intersection Peak Hour: **16:15 to 17:15**

Volume	264	909	414	108	371	178	48	876	84	349	378	39	4,018
Approach%	16.6	57.3	26.1	16.4	56.5	27.1	4.8	86.9	8.3	45.6	49.3	5.1	
Total%	6.6	22.6	10.3	2.7	9.2	4.4	1.2	21.8	2.1	8.7	9.4	1.0	
PHF			0.96			0.94			0.93			0.95	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

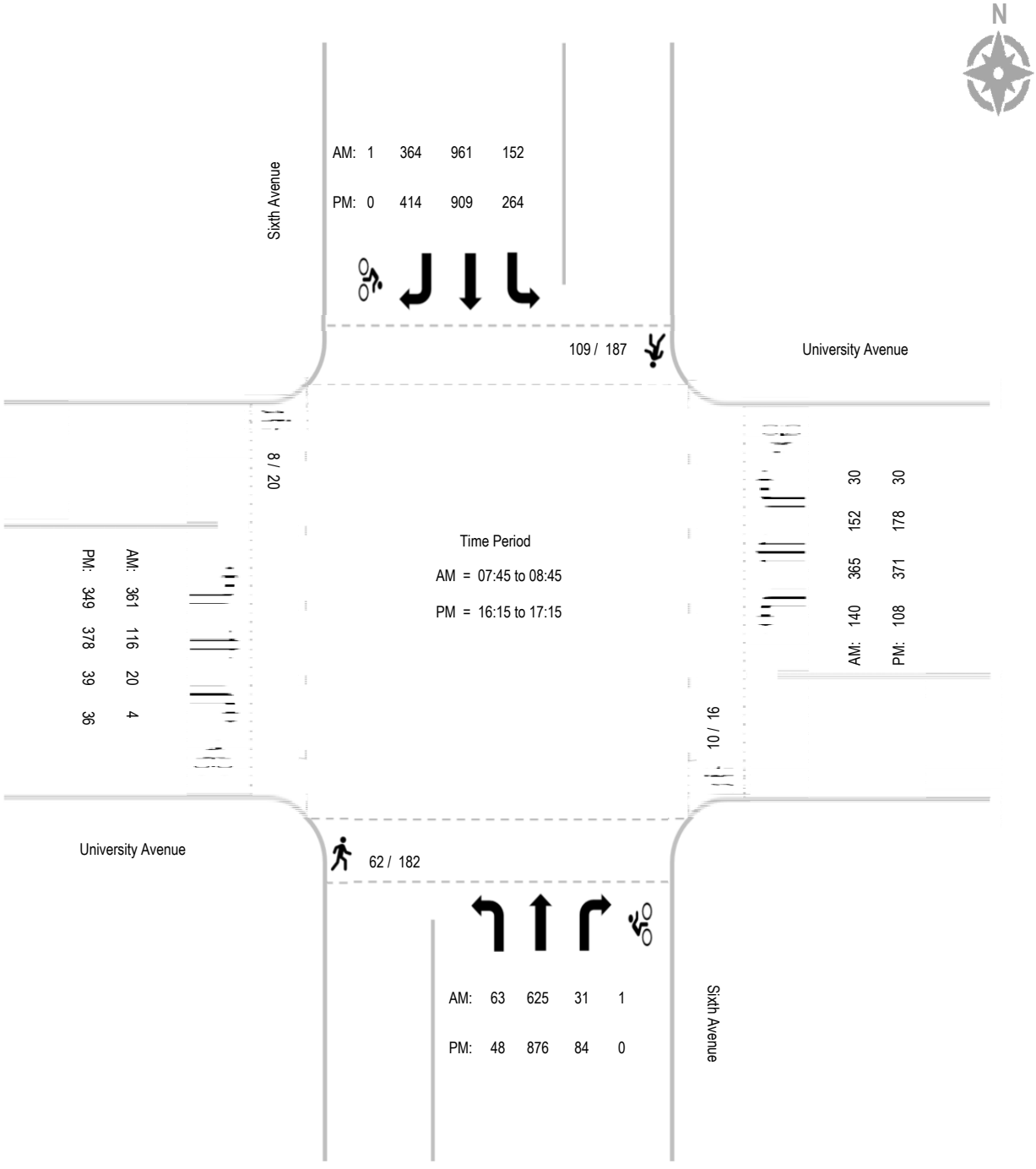
Location:	#15 R	File Name:	ITM-19-069-15
Intersection:	University Avenue & Sixth Avenue	Project:	LLG Ref. 3-19-3072
Date of Count:	Tuesday, June 4, 2019		Scripps Mercy SD

AM	Sixth Avenue Southbound				University Avenue Westbound				Sixth Avenue Northbound				University Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	15	1	0	0	1	0	5	0	5	0	0	0	1	0	0	0	22	6
7:15	3	0	0	0	1	0	3	0	3	0	0	0	1	0	0	0	8	3
7:30	10	0	0	0	2	0	4	0	7	0	0	0	0	0	0	0	19	4
7:45	10	0	0	0	4	0	2	0	13	1	0	0	2	0	1	0	29	4
8:00	17	0	0	0	1	0	4	0	10	0	0	0	2	0	1	0	30	5
8:15	22	0	0	0	1	0	2	0	5	0	0	0	0	0	0	0	28	2
8:30	17	0	0	0	0	0	7	0	12	0	0	0	1	0	2	0	30	9
8:45	15	0	0	0	0	0	3	0	7	0	0	0	1	0	0	0	23	3
Ped Total	109				10				62				8				189	
Bike Total		1	0	0		0	30	0		1	0	0		0	4	0		36

PM	Sixth Avenue Southbound				University Avenue Westbound				Sixth Avenue Northbound				University Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	18	0	0	0	0	0	2	0	23	0	0	0	5	0	4	0	46	6
16:15	29	0	0	0	4	0	6	0	21	0	0	0	0	0	5	0	54	11
16:30	20	0	0	0	2	0	3	0	26	0	0	0	3	0	3	0	51	6
16:45	8	0	0	0	3	0	6	0	24	0	0	0	0	0	8	0	35	14
17:00	32	0	0	0	0	0	3	0	19	0	0	0	3	0	4	0	54	7
17:15	39	0	0	0	0	0	4	0	24	0	0	0	6	0	3	0	69	7
17:30	29	0	0	0	1	0	3	0	31	0	0	0	1	0	6	0	62	9
17:45	12	0	0	0	6	0	3	0	14	0	0	0	2	0	3	0	34	6
Ped Total	187				16				182				20				405	
Bike Total		0	0	0		0	30	0		0	0	0		0	36	0		66

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#15 R	File Name:	ITM-19-069-15
	Intersection:	University Avenue & Sixth Avenue	Project:	LLG Ref. 3-19-3072
	Date of Count:	Tuesday, June 4, 2019		Scripps Mercy SD



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#08	File Name:	ITM-19-033-08
Intersection:	Sixth Avenue & East Parking Lot Entrance/Exit	Project:	LLG Ref. 3-19-3072
Date of Count:	Wednesday, March 27, 2019		San Diego Scripps Mercy

AM	Sixth Avenue Southbound			East Parking Lot Ent./Exit Westbound			Sixth Avenue Northbound			- Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	3	223	0	0	0	1	0	176	5	0	0	0	408
7:15	3	313	0	0	0	3	0	287	5	0	0	0	611
7:30	7	372	0	0	0	4	0	205	5	0	0	0	593
7:45	6	389	0	0	0	0	0	267	2	0	0	0	664
8:00	4	301	0	0	0	1	0	239	3	0	0	0	548
8:15	8	351	0	0	0	0	0	278	6	0	0	0	643
8:30	4	368	0	0	0	2	0	322	2	0	0	0	698
8:45	7	396	0	0	0	0	0	270	2	0	0	0	675
Total	42	2713	0	0	0	11	0	2044	30	0	0	0	4840
Approach%	1.5	98.5	-	-	-	100.0	-	98.6	1.4	-	-	-	
Total%	0.9	56.1	-	-	-	0.2	-	42.2	0.6	-	-	-	

AM Intersection Peak Hour: **08:00 to 09:00**

Volume	23	1,416	-	-	-	3	-	1,109	13	-	-	-	2,564
Approach%	1.6	98.4	-	-	-	100.0	-	98.8	1.2	-	-	-	
Total%	0.9	55.2	-	-	-	0.1	-	43.3	0.5	-	-	-	
PHF			0.89			0.38			0.87			#DIV/0!	0.00

PM	Sixth Avenue Southbound			East Parking Lot Ent./Exit Westbound			Sixth Avenue Northbound			- Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	340	0	0	0	5	0	329	0	0	0	0	674
16:15	1	340	0	0	0	8	0	347	0	0	0	0	696
16:30	0	381	0	3	0	7	0	356	0	0	0	0	747
16:45	0	342	0	1	0	6	0	320	6	0	0	0	675
17:00	2	358	0	5	0	13	0	365	0	0	0	0	743
17:15	0	377	0	2	0	8	0	359	3	0	0	0	749
17:30	1	348	0	0	0	6	0	318	0	0	0	0	673
17:45	2	406	0	0	0	6	0	278	0	0	0	0	692
Total	6	2892	0	11	0	59	0	2672	9	0	0	0	5649
Approach%	0.2	99.8	-	15.7	-	84.3	-	99.7	0.3	-	-	-	
Total%	0.1	51.2	-	0.2	-	1.0	-	47.3	0.2	-	-	-	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	2	1,458	-	11	-	34	-	1,400	9	-	-	-	2,914
Approach%	0.1	99.9	-	24.4	-	75.6	-	99.4	0.6	-	-	-	
Total%	0.1	50.0	-	0.4	-	1.2	-	48.0	0.3	-	-	-	
PHF			0.96			0.63			0.97			#DIV/0!	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#08	File Name:	ITM-19-033-08
Intersection:	Sixth Avenue & East Parking Lot Entrance/Exit	Project:	LLG Ref. 3-19-3072
Date of Count:	Wednesday, March 27, 2019		San Diego Scripps Mercy

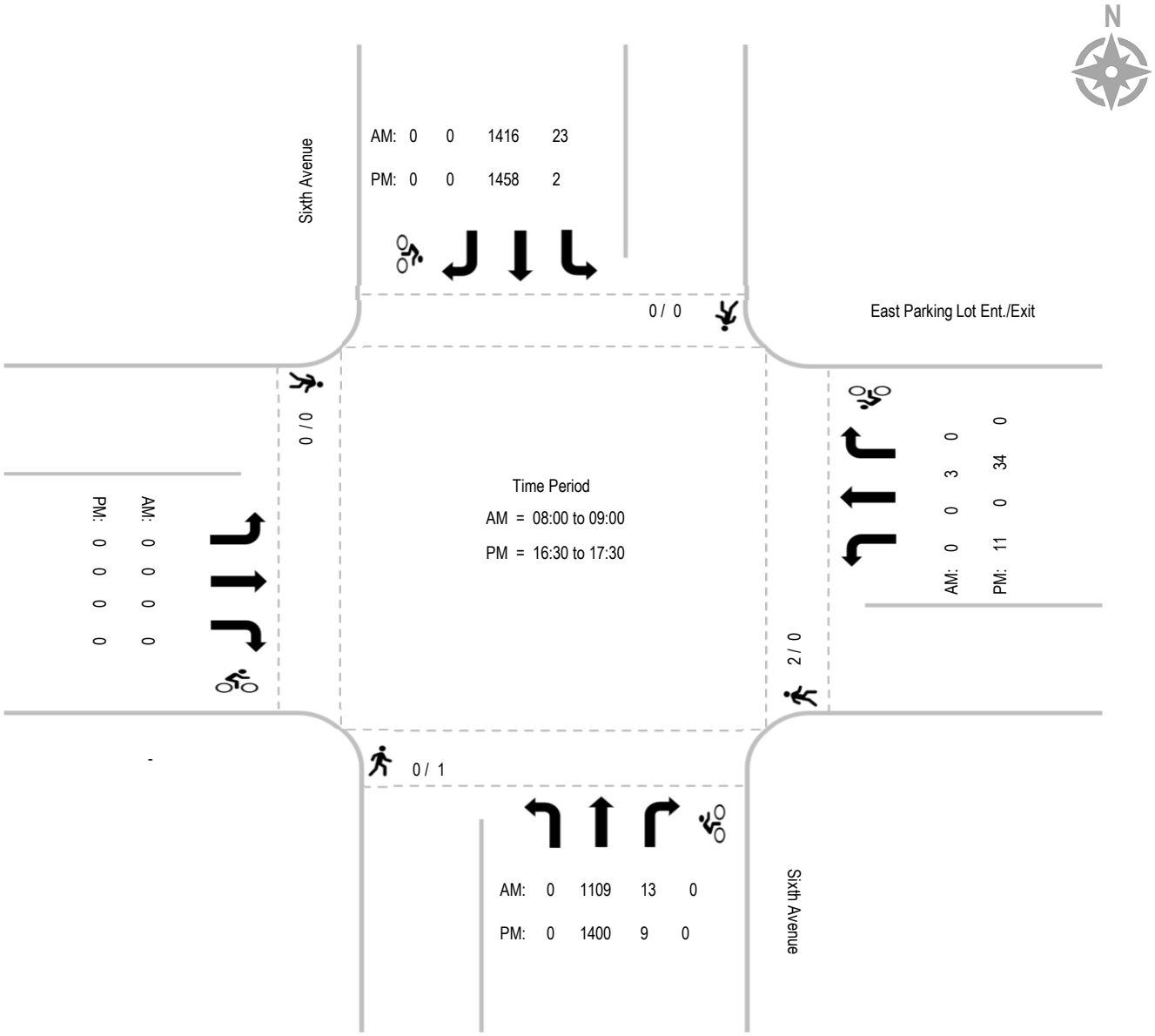
AM	Sixth Avenue Southbound				East Parking Lot Ent./Exit Westbound				Sixth Avenue Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				2				0				0				2	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	Sixth Avenue Southbound				East Parking Lot Ent./Exit Westbound				Sixth Avenue Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				1				0				1	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Report Generated by Bearcat Enterprises LLC, DBA "Count Data" | 619-987-5136 | info@yourcountdata.com

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#08	File Name: ITM-19-033-08
	Intersection:	Sixth Avenue & East Parking Lot Entrance/Exit	Project: LLG Ref. 3-19-3072
	Date of Count:	Wednesday, March 27, 2019	San Diego Scripps Mercy



Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Washington Street, between First Avenue and Fourth Avenue**

Date: **Wednesday, June 5, 2019** Total Daily Volume: **31364** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
204	125	86	90	205	397	1004	1686	1855	1690	1738	1997	2124	2048	2089	2408	2638	2694	1872	1488	1171	848	583	324
56	40	35	30	37	73	168	339	505	390	420	500	540	497	492	574	640	676	504	406	348	282	181	103
48	36	22	17	49	82	205	390	432	432	437	444	536	525	469	599	704	654	528	354	257	244	154	91
58	29	16	18	37	104	288	479	452	439	456	471	542	517	561	598	683	723	420	413	281	164	140	70
42	20	13	25	82	138	343	478	466	429	425	582	506	509	567	637	611	641	420	315	285	158	108	60

Date: **Wednesday, June 5, 2019** Total Daily Volume: **13992** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
86	69	25	29	54	106	244	530	647	694	715	789	834	868	960	1315	1607	1702	886	650	476	325	244	137
17	24	7	9	13	27	33	103	154	158	189	188	217	203	213	292	398	416	263	169	157	107	89	43
26	17	9	5	11	24	49	99	153	178	158	171	202	227	196	321	443	414	261	162	120	92	62	42
28	20	5	6	11	23	79	170	156	177	177	194	213	235	268	319	403	462	206	203	97	65	56	27
15	8	4	9	19	32	83	158	184	181	191	236	202	203	283	383	363	410	156	116	102	61	37	25

Date: **Wednesday, June 5, 2019** Total Daily Volume: **17372** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
118	56	61	61	151	291	760	1156	1208	996	1023	1208	1290	1180	1129	1093	1031	992	986	838	695	523	339	187
39	16	28	21	24	46	135	236	351	232	231	312	323	294	279	282	242	260	241	237	191	175	92	60
22	19	13	12	38	58	156	291	279	254	279	273	334	298	273	278	261	240	267	192	137	152	92	49
30	9	11	12	26	81	209	309	296	262	279	277	329	282	293	279	280	261	214	210	184	99	84	43
27	12	9	16	63	106	260	320	282	248	234	346	304	306	284	254	248	231	264	199	183	97	71	35

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Washington Street, between Fourth Avenue and Fifth Avenue**

Date: **Wednesday, June 5, 2019** Total Daily Volume: **35970** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
251	178	116	99	217	473	1130	1864	2050	2125	2159	2296	2396	2319	2437	2725	2901	2928	2188	1789	1266	968	667	428
88	48	27	26	33	65	185	365	514	499	573	557	592	536	608	699	700	747	551	456	343	294	218	126
58	50	34	23	53	93	252	422	459	529	524	550	621	559	543	678	714	750	581	435	304	260	173	120
59	46	31	21	58	131	308	537	498	541	528	571	615	608	655	683	757	723	519	526	332	203	154	99
46	34	24	29	73	184	385	540	579	556	534	618	568	616	631	665	730	708	537	372	287	211	122	83

Date: **Wednesday, June 5, 2019** Total Daily Volume: **17324** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
116	83	48	38	45	132	296	654	751	913	972	1003	1080	1059	1238	1617	1808	1851	1106	958	614	424	321	197
41	26	9	10	7	22	36	132	170	206	269	226	285	235	313	409	426	474	312	240	175	136	120	58
29	25	17	9	14	30	75	129	166	223	218	249	272	249	266	396	454	471	301	222	152	109	77	58
28	23	12	10	11	30	90	213	183	243	240	257	257	297	332	392	464	460	258	301	156	86	71	45
18	9	10	9	13	50	95	180	232	241	245	271	266	278	327	420	464	446	235	195	131	93	53	36

Date: **Wednesday, June 5, 2019** Total Daily Volume: **18646** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
135	95	68	61	172	341	834	1210	1299	1212	1187	1293	1316	1260	1199	1108	1093	1077	1082	831	652	544	346	231
47	22	18	16	26	43	149	233	344	293	304	331	307	301	295	290	274	273	239	216	168	158	98	68
29	25	17	14	39	63	177	293	293	306	306	301	349	310	277	282	260	279	280	213	152	151	96	62
31	23	19	11	47	101	218	324	315	298	288	314	358	311	323	291	293	263	261	225	176	117	83	54
28	25	14	20	60	134	290	360	347	315	289	347	302	338	304	245	266	262	302	177	156	118	69	47

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Washington Avenue, between Fifth Avenue and Eighth Avenue**

Date: **Wednesday, June 5, 2019** Total Daily Volume: **34928** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
260	183	113	102	208	482	1216	1823	1989	2038	2079	2157	2225	2282	2347	2623	2755	2865	2135	1715	1226	979	684	442
79	44	24	27	32	60	208	370	491	509	513	508	547	556	571	650	665	730	551	441	349	310	227	121
65	48	40	25	44	97	274	405	456	474	516	530	548	523	557	666	701	732	556	413	293	253	169	117
76	53	22	19	65	142	321	538	479	538	522	537	568	607	615	637	694	722	521	498	310	206	155	115
40	38	27	31	67	183	413	510	563	517	528	582	562	596	604	670	695	681	507	363	274	210	133	89

Date: **Wednesday, June 5, 2019** Total Daily Volume: **19236** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
145	103	63	54	48	143	308	682	774	933	1086	1120	1218	1216	1340	1750	1976	2084	1231	1084	707	526	387	258
43	28	11	14	7	22	51	139	180	224	278	249	318	285	314	422	472	532	355	283	211	166	144	71
37	25	25	13	12	29	69	132	173	220	266	275	306	280	297	434	496	543	330	245	169	129	87	67
41	31	11	12	14	37	96	227	181	257	268	288	292	340	365	422	505	527	292	340	177	114	83	68
24	19	16	15	15	55	92	184	240	232	274	308	302	311	364	472	503	482	254	216	150	117	73	52

Date: **Wednesday, June 5, 2019** Total Daily Volume: **15692** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
115	80	50	48	160	339	908	1141	1215	1105	993	1037	1007	1066	1007	873	779	781	904	631	519	453	297	184
36	16	13	13	25	38	157	231	311	285	235	259	229	271	257	228	193	198	196	158	138	144	83	50
28	23	15	12	32	68	205	273	283	254	250	255	242	243	260	232	205	189	226	168	124	124	82	50
35	22	11	7	51	105	225	311	298	281	254	249	276	267	250	215	189	195	229	158	133	92	72	47
16	19	11	16	52	128	321	326	323	285	254	274	260	285	240	198	192	199	253	147	124	93	60	37

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **University Avenue, between Fourth Avenue and Fifth Avenue**

Date: **Tuesday, June 4, 2019** Total Daily Volume: **17072** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
146	102	73	56	70	146	431	840	990	956	1042	1079	1201	1146	1184	1142	1295	1272	1166	880	745	497	379	234
33	26	23	19	11	20	55	153	225	247	250	275	287	284	281	267	320	346	286	214	196	146	124	66
30	32	20	12	17	47	93	176	253	231	243	273	317	266	297	291	349	312	311	240	170	121	103	74
38	26	20	15	11	38	114	251	277	233	273	211	278	288	300	320	302	324	294	218	196	134	80	55
45	18	10	10	31	41	169	260	235	245	276	320	319	308	306	264	324	290	275	208	183	96	72	39

Date: **Tuesday, June 4, 2019** Total Daily Volume: **7456** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
69	41	34	29	33	71	183	357	433	391	464	480	491	508	525	536	607	571	467	397	302	206	152	109
15	9	11	12	6	9	24	61	103	87	114	118	116	135	119	134	149	152	123	87	85	63	47	36
13	10	11	5	11	30	39	84	112	96	105	121	137	117	142	134	157	157	124	100	65	56	44	39
19	13	8	7	5	15	60	112	109	106	121	103	114	113	128	150	140	143	117	110	74	48	29	18
22	9	4	5	11	17	60	100	109	102	124	138	124	143	136	118	161	119	103	100	78	39	32	16

Date: **Tuesday, June 4, 2019** Total Daily Volume: **9616** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
77	61	39	27	37	75	248	483	557	565	578	599	710	638	659	606	688	701	699	483	443	291	227	125
18	17	12	7	5	11	31	92	122	160	136	157	171	149	162	133	171	194	163	127	111	83	77	30
17	22	9	7	6	17	54	92	141	135	138	152	180	149	155	157	192	155	187	140	105	65	59	35
19	13	12	8	6	23	54	139	168	127	152	108	164	175	172	170	162	181	177	108	122	86	51	37
23	9	6	5	20	24	109	160	126	143	152	182	195	165	170	146	163	171	172	108	105	57	40	23

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Fourth Avenue, between Montecito Way & Lewis Street**

Date: **Thursday, April 18, 2019** Total Daily Volume: **7282** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
53	45	33	25	64	184	517	554	409	356	372	349	397	385	410	399	463	443	500	518	276	210	206	114
25	12	14	1	4	19	78	117	99	92	89	85	104	98	102	101	125	127	104	144	87	51	64	31
13	9	8	12	14	30	124	148	128	81	103	78	100	103	88	86	123	112	128	104	73	64	53	29
3	15	7	7	23	55	154	165	97	83	93	93	103	101	108	90	122	103	158	163	58	56	43	27
12	9	4	5	23	80	161	124	85	100	87	93	90	83	112	122	93	101	110	107	58	39	46	27

Date: **Thursday, April 18, 2019** Total Daily Volume: **5290** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
42	29	26	22	48	162	438	404	313	249	262	260	290	282	255	279	318	303	381	321	199	177	144	86
22	5	9	1	3	17	69	86	72	65	61	66	69	79	63	69	90	84	77	90	63	43	49	24
6	8	8	11	8	27	110	117	99	59	70	54	80	68	64	59	79	84	93	72	49	58	33	23
3	9	6	5	17	46	125	107	75	54	67	76	75	74	52	61	80	67	124	90	45	46	28	18
11	7	3	5	20	72	134	94	67	71	64	64	66	61	76	90	69	68	87	69	42	30	34	21

Date: **Thursday, April 18, 2019** Total Daily Volume: **1992** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
11	16	7	3	16	22	79	150	96	107	110	89	107	103	155	120	145	140	119	197	77	33	62	28
3	7	5	0	1	2	9	31	27	27	28	19	35	19	39	32	35	43	27	54	24	8	15	7
7	1	0	1	6	3	14	31	29	22	33	24	20	35	24	27	44	28	35	32	24	6	20	6
0	6	1	2	6	9	29	58	22	29	26	17	28	27	56	29	42	36	34	73	13	10	15	9
1	2	1	0	3	8	27	30	18	29	23	29	24	22	36	32	24	33	23	38	16	9	12	6

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Fourth Avenue, between Lewis Street and Fifth Avenue**

Date: **Thursday, April 18, 2019** Total Daily Volume: **17890** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
141	89	80	57	122	255	961	1213	1168	1151	1068	1063	1126	1091	1237	1089	1158	1097	1093	905	601	400	432	293
48	26	32	11	15	23	144	257	281	247	240	273	295	253	337	266	286	274	275	233	153	116	107	87
32	16	16	16	23	47	233	292	305	287	286	254	302	277	291	236	282	284	292	197	176	82	96	77
31	32	17	16	57	82	257	374	283	303	261	272	233	271	286	296	307	275	290	284	149	101	123	74
30	15	15	14	27	103	327	290	299	314	281	264	296	290	323	291	283	264	236	191	123	101	106	55

Date: **Thursday, April 18, 2019** Total Daily Volume: **7375** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
55	25	24	31	60	186	692	644	653	551	458	402	439	416	457	349	295	287	459	290	206	181	146	69
22	4	9	5	4	10	99	129	165	136	104	110	87	112	124	94	87	68	106	74	50	42	44	20
5	5	6	9	9	39	162	185	182	130	127	100	120	114	107	72	72	86	125	71	62	47	40	19
15	10	5	4	27	55	181	157	146	131	115	96	106	101	104	78	81	60	121	89	49	43	25	15
13	6	4	13	20	82	250	173	160	154	112	96	126	89	122	105	55	73	107	56	45	49	37	15

Date: **Thursday, April 18, 2019** Total Daily Volume: **10515** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
86	64	56	26	62	69	269	569	515	600	610	661	687	675	780	740	863	810	634	615	395	219	286	224
26	22	23	6	11	13	45	128	116	111	136	163	208	141	213	172	199	206	169	159	103	74	63	67
27	11	10	7	14	8	71	107	123	157	159	154	182	163	184	164	210	198	167	126	114	35	56	58
16	22	12	12	30	27	76	217	137	172	146	176	127	170	182	218	226	215	169	195	100	58	98	59
17	9	11	1	7	21	77	117	139	160	169	168	170	201	201	186	228	191	129	135	78	52	69	40

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Fourth Avenue, between Fifth Avenue and Washington Street**

Date: **Thursday, April 18, 2019** Total Daily Volume: **14385** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
103	74	90	42	86	158	474	746	751	930	940	1010	1008	936	1099	994	1099	965	782	722	462	314	333	267
31	22	30	13	12	24	85	166	162	210	234	239	310	203	278	229	255	244	217	187	118	100	78	76
26	8	17	10	21	30	110	146	190	255	251	233	247	222	284	225	261	243	205	142	118	66	75	77
20	34	15	9	27	38	133	264	198	219	208	264	218	245	275	275	292	246	219	229	117	86	95	63
26	10	28	10	26	66	146	170	201	246	247	274	233	266	262	265	291	232	141	164	109	62	85	51

Date: **Thursday, April 18, 2019** Total Daily Volume: **3679** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
37	25	37	24	44	96	243	228	256	288	215	198	198	216	241	175	134	160	203	203	138	120	114	86
13	8	13	5	5	12	52	52	53	81	64	58	54	58	61	50	32	22	45	47	30	32	34	24
6	2	7	6	10	22	44	63	62	70	50	41	28	45	58	39	25	41	50	42	32	33	29	25
7	12	6	4	17	15	69	59	59	67	47	42	54	58	62	41	41	40	65	67	37	35	22	17
11	3	11	9	12	47	78	54	82	70	54	57	62	55	60	45	36	57	43	47	39	20	29	20

Date: **Thursday, April 18, 2019** Total Daily Volume: **10706** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
66	49	53	18	42	62	231	518	495	642	725	812	810	720	858	819	965	805	579	519	324	194	219	181
18	14	17	8	7	12	33	114	109	129	170	181	256	145	217	179	223	222	172	140	88	68	44	52
20	6	10	4	11	8	66	83	128	185	201	192	219	177	226	186	236	202	155	100	86	33	46	52
13	22	9	5	10	23	64	205	139	152	161	222	164	187	213	234	251	206	154	162	80	51	73	46
15	7	17	1	14	19	68	116	119	176	193	217	171	211	202	220	255	175	98	117	70	42	56	31

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Fourth Avenue, between Washington Street and University Avenue**

Date: **Tuesday, June 4, 2019** Total Daily Volume: **9018** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
70	46	40	25	51	80	180	319	459	576	643	772	713	694	604	663	577	704	592	395	326	184	169	136
8	12	16	8	5	9	34	56	92	162	163	202	177	195	146	160	165	189	181	91	100	26	49	57
26	9	11	2	17	20	40	86	110	115	156	192	192	157	153	174	141	185	124	100	79	56	38	32
17	13	7	4	15	30	49	85	116	146	164	185	187	156	156	161	103	165	137	104	56	58	43	27
19	12	6	11	14	21	57	92	141	153	160	193	157	186	149	168	168	165	150	100	91	44	39	20

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Fifth Avenue, between Washington Street and University Avenue**

Date: **Tuesday, June 4, 2019** Total Daily Volume: **12203** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
94	55	46	39	95	269	424	675	824	913	924	859	808	890	758	752	798	807	755	430	411	258	193	126
27	11	8	7	13	37	72	114	235	205	197	206	199	220	196	198	181	199	197	120	96	72	63	36
22	14	21	5	25	64	107	132	192	213	210	232	208	222	166	175	220	225	194	108	130	63	62	39
30	14	10	14	24	82	126	197	203	245	264	234	186	250	203	175	150	188	193	110	91	58	29	20
15	16	7	13	33	86	119	232	194	250	253	187	215	198	193	204	247	195	171	92	94	65	39	31

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Scripps Mercy Parking, East of Fourth Avenue**

Date: **Thursday, May 2, 2019** Total Daily Volume: **1596** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
4	3	0	6	20	101	271	189	71	39	42	22	40	45	102	109	93	103	104	173	17	12	16	14
2	1	0	0	2	4	38	34	21	9	10	0	10	8	22	29	26	29	24	39	10	2	5	2
1	2	0	3	2	14	68	47	18	4	9	10	8	10	16	23	22	19	22	26	3	1	1	2
1	0	0	3	5	26	90	66	18	12	11	3	11	21	41	35	29	26	35	86	3	4	9	9
0	0	0	0	11	57	75	42	14	14	12	9	11	6	23	22	16	29	23	22	1	5	1	1

Date: **Thursday, May 2, 2019** Total Daily Volume: **796** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
1	1	0	4	19	101	264	120	66	29	31	14	21	20	21	7	7	11	52	2	1	2	2	0
1	0	0	0	1	4	37	25	18	8	6	0	4	4	2	1	1	1	6	0	0	0	1	0
0	1	0	2	2	14	68	38	18	3	7	6	4	6	5	1	2	1	15	2	0	0	0	0
0	0	0	2	5	26	85	25	16	8	9	2	6	9	7	2	2	3	17	0	1	1	0	0
0	0	0	0	11	57	74	32	14	10	9	6	7	1	7	3	2	6	14	0	0	1	1	0

Date: **Thursday, May 2, 2019** Total Daily Volume: **800** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
3	2	0	2	1	0	7	69	5	10	11	8	19	25	81	102	86	92	52	171	16	10	14	14
1	1	0	0	1	0	1	9	3	1	4	0	6	4	20	28	25	28	18	39	10	2	4	2
1	1	0	1	0	0	0	9	0	1	2	4	4	4	11	22	20	18	7	24	3	1	1	2
1	0	0	1	0	0	5	41	2	4	2	1	5	12	34	33	27	23	18	86	2	3	9	9
0	0	0	0	0	0	1	10	0	4	3	3	4	5	16	19	14	23	9	22	1	4	0	1

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Scripps Lot 12 and Lot 4.1 Employee Traffic

Time	Lot 12 Inbound	Lot 4.1 Inbound	Lot 12 Outbound
5 AM – 6 AM	101	31	0
6 AM – 7 AM	264	113	7
7 AM – 8 AM	120	127	69
8 AM – 9 AM	66	104	5
9 AM – 10 AM	29	49	10
3 PM – 4 PM	31	12	102
4 PM – 5 PM	7	9	86
5 PM – 6 PM	7	19	92
6 PM – 7 PM	11	77	52
7 PM – 8 PM	52	7	171

General Notes:

1. The Lot 4.1 badge access reports provide only inbound data. Outbound data for Lot 4.1 was estimated based on the Lot 12 out split to the parking structure capacity.

For e.g.: AM Out: (69 /648) *432 = 46; PM Out: (92 /648) * 432 = 62

Trip Generation Summary

Lot	Supply	Total ADT	Trip rate per space	AM			PM		
				In	Out	Total	In	Out	Total
12	648 spaces	1,596	2.46	120	69	189	7	92	99
4.1	432 spaces	1,064		127	46	173	19	62	81
	Total	2,660		247	115	362	26	154	180

APPENDIX C

EXISTING INTERSECTION ANALYSIS CALCULATIONS SHEETS

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	62	7	0	98	107	120	0	32	24
Future Vol, veh/h	0	0	0	62	7	0	98	107	120	0	32	24
Conflicting Peds, #/hr	10	0	10	10	0	10	20	0	20	20	0	20
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	69	8	0	109	119	133	0	36	27

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	484	507	216	83	0	0	272	0	0
Stage 1	424	424	-	-	-	-	-	-	-
Stage 2	60	83	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	542	468	824	1514	-	-	1291	-	-
Stage 1	660	587	-	-	-	-	-	-	-
Stage 2	963	826	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	488	0	801	1514	-	-	1266	-	-
Mov Cap-2 Maneuver	488	0	-	-	-	-	-	-	-
Stage 1	601	0	-	-	-	-	-	-	-
Stage 2	953	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	2.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1514	-	-	488	1266	-	-
HCM Lane V/C Ratio	0.072	-	-	0.157	-	-	-
HCM Control Delay (s)	7.6	-	-	13.7	0	-	-
HCM Lane LOS	A	-	-	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	5	320	0	0	94
Future Vol, veh/h	41	5	320	0	0	94
Conflicting Peds, #/hr	10	10	0	20	20	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	6	356	0	0	104

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	470	366	0	-	-	-
Stage 1	356	-	-	-	-	-
Stage 2	114	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	552	679	-	0	0	-
Stage 1	709	-	-	0	0	-
Stage 2	911	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	546	673	-	-	-	-
Mov Cap-2 Maneuver	600	-	-	-	-	-
Stage 1	709	-	-	-	-	-
Stage 2	902	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	607	-
HCM Lane V/C Ratio	-	0.084	-
HCM Control Delay (s)	-	11.5	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	51	10	79	3	17	20	267	170	1	130	4
Future Vol, veh/h	36	51	10	79	3	17	20	267	170	1	130	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	57	11	88	3	19	22	297	189	1	144	4
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	10	10.1	16.2	10.2
HCM LOS	A	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	4%	37%	80%	100%	0%
Vol Thru, %	58%	53%	3%	0%	97%
Vol Right, %	37%	10%	17%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	457	97	99	1	134
LT Vol	20	36	79	1	0
Through Vol	267	51	3	0	130
RT Vol	170	10	17	0	4
Lane Flow Rate	508	108	110	1	149
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.653	0.174	0.179	0.002	0.235
Departure Headway (Hd)	4.633	5.803	5.842	6.219	5.691
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	767	621	616	577	633
Service Time	2.732	3.817	3.855	3.94	3.412
HCM Lane V/C Ratio	0.662	0.174	0.179	0.002	0.235
HCM Control Delay	16.2	10	10.1	9	10.2
HCM Lane LOS	C	A	B	A	B
HCM 95th-tile Q	4.9	0.6	0.6	0	0.9

Intersection	
Intersection Delay, s/veh	16.5
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	254	208	11	12	339
Future Vol, veh/h	85	254	208	11	12	339
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	306	251	13	14	408
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	16.6	13	18.5
HCM LOS	C	B	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	25%	3%
Vol Thru, %	95%	0%	97%
Vol Right, %	5%	75%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	219	339	351
LT Vol	0	85	12
Through Vol	208	0	339
RT Vol	11	254	0
Lane Flow Rate	264	408	423
Geometry Grp	1	1	1
Degree of Util (X)	0.422	0.61	0.652
Departure Headway (Hd)	5.756	5.38	5.551
Convergence, Y/N	Yes	Yes	Yes
Cap	623	670	647
Service Time	3.82	3.438	3.606
HCM Lane V/C Ratio	0.424	0.609	0.654
HCM Control Delay	13	16.6	18.5
HCM Lane LOS	B	C	C
HCM 95th-tile Q	2.1	4.2	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	455	99	218	880	163	0	0	0	198	107	89
Future Volume (veh/h)	85	455	99	218	880	163	0	0	0	198	107	89
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.90				1.00		0.86
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	89	474	103	227	917	170				158	177	93
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	113	1147	247	345	1279	237				469	493	361
Arrive On Green	0.06	0.40	0.40	0.10	0.44	0.44				0.26	0.26	0.26
Sat Flow, veh/h	1781	2868	618	3456	2932	543				1781	1870	1368
Grp Volume(v), veh/h	89	292	285	227	555	532				158	177	93
Grp Sat Flow(s),veh/h/ln	1781	1777	1709	1728	1777	1699				1781	1870	1368
Q Serve(g_s), s	4.9	11.8	12.0	6.3	25.6	25.7				7.2	7.7	5.4
Cycle Q Clear(g_c), s	4.9	11.8	12.0	6.3	25.6	25.7				7.2	7.7	5.4
Prop In Lane	1.00		0.36	1.00		0.32				1.00		1.00
Lane Grp Cap(c), veh/h	113	710	683	345	775	741				469	493	361
V/C Ratio(X)	0.78	0.41	0.42	0.66	0.72	0.72				0.34	0.36	0.26
Avail Cap(c_a), veh/h	194	757	728	411	775	741				558	585	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	21.6	21.6	43.4	23.1	23.1				29.8	30.0	29.1
Incr Delay (d2), s/veh	4.4	0.4	0.4	1.7	5.6	5.9				0.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	4.9	4.8	2.8	11.5	11.1				3.1	3.5	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	21.9	22.0	45.1	28.8	29.1				29.9	30.1	29.2
LnGrp LOS	D	C	C	D	C	C				C	C	C
Approach Vol, veh/h		666			1314						428	
Approach Delay, s/veh		25.8			31.7						29.8	
Approach LOS		C			C						C	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	14.4	44.9		31.3	10.8	48.5
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	11.3	42.6		31.3	10.9	43.6
Max Q Clear Time (g_c+I1), s	8.3	14.0		9.7	6.9	27.7
Green Ext Time (p_c), s	0.1	3.9		0.5	0.0	6.8

Intersection Summary		
HCM 6th Ctrl Delay	29.7	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	883	1295	454	0	14
Future Vol, veh/h	0	883	1295	454	0	14
Conflicting Peds, #/hr	18	0	0	18	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	910	1335	468	0	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	678
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	395
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	391
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.6
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	391
HCM Lane V/C Ratio	-	-	0.037
HCM Control Delay (s)	-	-	14.6
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	883	0	0	1304	87	445
Future Volume (veh/h)	883	0	0	1304	87	445
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1870
Adj Flow Rate, veh/h	910	0	0	1344	90	459
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	0	2	2	2
Cap, veh/h	2135	0	0	2135	1058	485
Arrive On Green	0.60	0.00	0.00	0.60	0.31	0.31
Sat Flow, veh/h	3741	0	0	3741	3456	1585
Grp Volume(v), veh/h	910	0	0	1344	90	459
Grp Sat Flow(s),veh/h/ln	1777	0	0	1777	1728	1585
Q Serve(g_s), s	13.7	0.0	0.0	24.3	1.9	28.3
Cycle Q Clear(g_c), s	13.7	0.0	0.0	24.3	1.9	28.3
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2135	0	0	2135	1058	485
V/C Ratio(X)	0.43	0.00	0.00	0.63	0.09	0.95
Avail Cap(c_a), veh/h	2135	0	0	2135	1403	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.24	0.93	0.93
Uniform Delay (d), s/veh	10.7	0.0	0.0	12.8	24.7	33.9
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	16.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	0.0	8.9	0.8	12.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.3	0.0	0.0	12.9	24.7	50.8
LnGrp LOS	B	A	A	B	C	D
Approach Vol, veh/h	910			1344	549	
Approach Delay, s/veh	11.3			12.9	46.5	
Approach LOS	B			B	D	

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	65.0				65.0	35.0
Change Period (Y+Rc), s	4.9				4.9	4.4
Max Green Setting (Gmax), s	50.1				50.1	40.6
Max Q Clear Time (g_c+I1), s	15.7				26.3	30.3
Green Ext Time (p_c), s	2.7				4.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

Movement	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SWR	SWR2
Lane Configurations												
Traffic Volume (vph)	703	73	693	5	31	16	23	23	10	6	545	9
Future Volume (vph)	703	73	693	5	31	16	23	23	10	6	545	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5			5.0			5.0		4.5	
Lane Util. Factor	0.95		0.95			1.00			1.00		1.00	
Frpb, ped/bikes	0.99		1.00			0.98			1.00		1.00	
Flpb, ped/bikes	1.00		1.00			1.00			0.99		1.00	
Frt	0.99		1.00			0.96			0.98		0.86	
Flt Protected	1.00		1.00			0.98			0.97		1.00	
Satd. Flow (prot)	3469		3534			1704			1753		1611	
Flt Permitted	1.00		1.00			0.88			0.85		1.00	
Satd. Flow (perm)	3469		3534			1538			1542		1611	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	710	74	700	5	31	16	23	23	10	6	551	9
RTOR Reduction (vph)	7	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	777	0	705	0	0	70	0	0	39	0	560	0
Confl. Peds. (#/hr)		15		10	11		10	10		11	11	10
Confl. Bikes (#/hr)		10		15			10			10	10	10
Turn Type	NA		NA		Perm	NA		Perm	NA		Prot	
Protected Phases	2		6			4			4		5	
Permitted Phases					4			4				
Actuated Green, G (s)	68.5		23.7			31.0			31.0		40.3	
Effective Green, g (s)	68.5		23.7			31.0			31.0		40.3	
Actuated g/C Ratio	0.62		0.22			0.28			0.28		0.37	
Clearance Time (s)	5.5		5.5			5.0			5.0		4.5	
Vehicle Extension (s)	2.0		2.0			2.0			2.0		3.0	
Lane Grp Cap (vph)	2160		761			433			434		590	
v/s Ratio Prot	0.22		c0.20								c0.35	
v/s Ratio Perm						c0.05			0.03			
v/c Ratio	0.36		0.93			0.16			0.09		0.95	
Uniform Delay, d1	10.1		42.3			29.7			29.1		33.9	
Progression Factor	1.00		1.00			1.00			1.00		1.00	
Incremental Delay, d2	0.5		18.9			0.8			0.4		24.7	
Delay (s)	10.6		61.2			30.5			29.5		58.6	
Level of Service	B		E			C			C		E	
Approach Delay (s)	10.6		61.2			30.5			29.5			
Approach LOS	B		E			C			C			

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	411	680	180	0	728	1792	0	0	0	0	0	0
Future Volume (veh/h)	411	680	180	0	728	1792	0	0	0	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97						
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00						
Work Zone On Approach		No			No							
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870						
Adj Flow Rate, veh/h	428	708	188	0	758	1867						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Percent Heavy Veh, %	2	2	2	0	2	2						
Cap, veh/h	349	6085	1592	0	2388	3934						
Arrive On Green	0.20	1.00	1.00	0.00	1.00	1.00						
Sat Flow, veh/h	1781	4006	1048	0	1870	3082						
Grp Volume(v), veh/h	428	600	296	0	758	1867						
Grp Sat Flow(s),veh/h/ln	1781	1702	1649	0	1870	1541						
Q Serve(g_s), s	22.5	0.0	0.0	0.0	0.0	0.0						
Cycle Q Clear(g_c), s	22.5	0.0	0.0	0.0	0.0	0.0						
Prop In Lane	1.00		0.64	0.00		1.00						
Lane Grp Cap(c), veh/h	349	5171	2505	0	2388	3934						
V/C Ratio(X)	1.23	0.12	0.12	0.00	0.32	0.47						
Avail Cap(c_a), veh/h	349	5171	2505	0	2388	3934						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	46.3	0.0	0.0	0.0	0.0	0.0						
Incr Delay (d2), s/veh	125.4	0.0	0.1	0.0	0.4	0.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	22.0	0.0	0.1	0.0	0.2	0.2						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	171.6	0.0	0.1	0.0	0.4	0.4						
LnGrp LOS	F	A	A	A	A	A						
Approach Vol, veh/h		1324			2625							
Approach Delay, s/veh		55.5			0.4							
Approach LOS		E			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		181.5			27.9	153.6						
Change Period (Y+Rc), s		* 4.9			5.4	4.9						
Max Green Setting (Gmax), s		* 1.1E2			22.5	82.2						
Max Q Clear Time (g_c+I1), s		2.0			24.5	2.0						
Green Ext Time (p_c), s		1.3			0.0	31.2						

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	341	41	172	384	0	0	0	0	108	258	40
Future Volume (veh/h)	0	341	41	172	384	0	0	0	0	108	258	40
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00				1.00		0.86
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	371	45	187	417	0				117	280	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	864	105	597	1227	0				237	594	94
Arrive On Green	0.00	0.53	0.53	0.09	0.66	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	1623	197	1781	1870	0				912	2287	363
Grp Volume(v), veh/h	0	0	416	187	417	0				234	0	206
Grp Sat Flow(s),veh/h/ln	0	0	1820	1781	1870	0				1825	0	1737
Q Serve(g_s), s	0.0	0.0	16.1	5.0	11.4	0.0				12.6	0.0	11.5
Cycle Q Clear(g_c), s	0.0	0.0	16.1	5.0	11.4	0.0				12.6	0.0	11.5
Prop In Lane	0.00		0.11	1.00		0.00				0.50		0.21
Lane Grp Cap(c), veh/h	0	0	969	597	1227	0				473	0	451
V/C Ratio(X)	0.00	0.00	0.43	0.31	0.34	0.00				0.49	0.00	0.46
Avail Cap(c_a), veh/h	0	0	969	714	1227	0				473	0	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.98	0.98	0.00				0.77	0.00	0.77
Uniform Delay (d), s/veh	0.0	0.0	16.5	10.4	8.8	0.0				36.5	0.0	36.1
Incr Delay (d2), s/veh	0.0	0.0	1.4	0.3	0.7	0.0				2.8	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.9	1.9	4.6	0.0				6.0	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	17.9	10.7	9.6	0.0				39.3	0.0	38.6
LnGrp LOS	A	A	B	B	A	A				D	A	D
Approach Vol, veh/h		416			604						440	
Approach Delay, s/veh		17.9			9.9						39.0	
Approach LOS		B			A						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.4	66.6		35.0		81.0
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9
Max Green Setting (Gmax), s	7.6	54.1		30.1		76.1
Max Q Clear Time (g_c+I1), s	7.0	18.1		14.6		13.4
Green Ext Time (p_c), s	0.4	1.8		1.6		1.8

Intersection Summary		
HCM 6th Ctrl Delay		20.9
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	394	0	0	505	313	31	247	116	0	0	0
Future Volume (veh/h)	30	394	0	0	505	313	31	247	116	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.98		1.00	1.00		0.87	1.00		0.91			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	32	415	0	0	532	329	33	260	122			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	82	1019	0	0	2209	862	524	678	303			
Arrive On Green	1.00	1.00	0.00	0.00	0.62	0.62	0.29	0.29	0.29			
Sat Flow, veh/h	78	1639	0	0	3647	1387	1781	2307	1032			
Grp Volume(v), veh/h	447	0	0	0	532	329	33	197	185			
Grp Sat Flow(s),veh/h/ln	1717	0	0	0	1777	1387	1781	1777	1562			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	7.7	13.7	1.5	10.2	11.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	7.7	13.7	1.5	10.2	11.0			
Prop In Lane	0.07		0.00	0.00		1.00	1.00		0.66			
Lane Grp Cap(c), veh/h	1101	0	0	0	2209	862	524	522	459			
V/C Ratio(X)	0.41	0.00	0.00	0.00	0.24	0.38	0.06	0.38	0.40			
Avail Cap(c_a), veh/h	1101	0	0	0	2209	862	524	522	459			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.90	0.00	0.00	0.00	0.88	0.88	1.00	1.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	9.8	10.9	29.5	32.5	32.8			
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.2	1.1	0.2	2.1	2.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.0	3.0	4.3	0.7	4.7	4.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.0	0.0	0.0	0.0	10.0	12.0	29.7	34.6	35.4			
LnGrp LOS	A	A	A	A	A	B	C	C	D			
Approach Vol, veh/h		447			861			415				
Approach Delay, s/veh		1.0			10.8			34.6				
Approach LOS		A			B			C				

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		77.0		39.0		77.0						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		72.1		34.1		72.1						
Max Q Clear Time (g_c+I1), s		2.0		13.0		15.7						
Green Ext Time (p_c), s		1.2		0.8		1.7						

Intersection Summary												
HCM 6th Ctrl Delay			14.0									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	361	116	20	140	365	152	63	625	31	152	961	364
Future Volume (veh/h)	361	116	20	140	365	152	63	625	31	152	961	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87	1.00		0.84	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	376	121	21	146	380	158	66	651	32	158	1001	379
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	832	138	174	907	506	85	1216	60	186	1031	385
Arrive On Green	0.04	0.09	0.09	0.10	0.26	0.26	0.05	0.35	0.35	0.10	0.41	0.41
Sat Flow, veh/h	3456	2974	495	1781	3554	1334	1781	3442	169	1781	2512	939
Grp Volume(v), veh/h	376	70	72	146	380	158	66	336	347	158	704	676
Grp Sat Flow(s),veh/h/ln	1728	1777	1692	1781	1777	1334	1781	1777	1834	1781	1777	1674
Q Serve(g_s), s	12.6	4.2	4.5	9.3	10.3	10.0	4.3	17.5	17.5	10.1	44.9	46.3
Cycle Q Clear(g_c), s	12.6	4.2	4.5	9.3	10.3	10.0	4.3	17.5	17.5	10.1	44.9	46.3
Prop In Lane	1.00		0.29	1.00		1.00	1.00		0.09	1.00		0.56
Lane Grp Cap(c), veh/h	423	497	473	174	907	506	85	627	648	186	729	687
V/C Ratio(X)	0.89	0.14	0.15	0.84	0.42	0.31	0.78	0.54	0.54	0.85	0.97	0.98
Avail Cap(c_a), veh/h	423	497	473	273	907	506	86	627	648	286	729	687
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	39.8	40.0	51.4	36.0	27.0	54.6	29.9	29.9	51.0	33.4	33.8
Incr Delay (d2), s/veh	18.6	0.5	0.6	7.0	1.4	1.6	32.6	1.1	1.1	8.5	25.2	30.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	2.0	2.0	4.5	4.7	3.4	2.7	7.6	7.9	4.9	23.9	24.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.5	40.4	40.6	58.4	37.5	28.6	87.2	31.0	31.0	59.5	58.6	64.1
LnGrp LOS	E	D	D	E	D	C	F	C	C	E	E	E
Approach Vol, veh/h		518			684			749			1538	
Approach Delay, s/veh		64.4			39.9			36.0			61.1	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	37.4	9.9	53.0	18.6	34.5	16.5	46.4
Change Period (Y+Rc), s	4.4	4.9	4.4	5.4	4.4	4.9	4.4	5.4
Max Green Setting (Gmax), s	7.8	25.9	5.6	47.6	14.2	29.5	18.6	34.6
Max Q Clear Time (g_c+I1), s	11.3	6.5	6.3	48.3	14.6	12.3	12.1	19.5
Green Ext Time (p_c), s	0.1	0.5	0.0	0.0	0.0	2.1	0.1	4.8

Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	1109	13	23	1416
Future Vol, veh/h	0	3	1109	13	23	1416
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	1205	14	25	1539

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2052	1232	0	0	1229	0
Stage 1	1222	-	-	-	-	-
Stage 2	830	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	54	215	-	-	565	-
Stage 1	278	-	-	-	-	-
Stage 2	389	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	51	211	-	-	560	-
Mov Cap-2 Maneuver	51	-	-	-	-	-
Stage 1	275	-	-	-	-	-
Stage 2	368	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.3	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	211	560	-
HCM Lane V/C Ratio	-	-	0.015	0.045	-
HCM Control Delay (s)	-	-	22.3	11.7	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	83	9	0	46	181	7	0	52	11
Future Vol, veh/h	0	0	0	83	9	0	46	181	7	0	52	11
Conflicting Peds, #/hr	10	0	10	10	0	10	20	0	20	20	0	20
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	89	10	0	49	195	8	0	56	12

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	389	405	229	88	0	0	223	0	0
Stage 1	317	317	-	-	-	-	-	-	-
Stage 2	72	88	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	615	535	810	1508	-	-	1346	-	-
Stage 1	738	654	-	-	-	-	-	-	-
Stage 2	951	822	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	578	0	787	1508	-	-	1320	-	-
Mov Cap-2 Maneuver	578	0	-	-	-	-	-	-	-
Stage 1	701	0	-	-	-	-	-	-	-
Stage 2	941	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1508	-	-	578	1320	-	-
HCM Lane V/C Ratio	0.033	-	-	0.171	-	-	-
HCM Control Delay (s)	7.5	-	-	12.5	0	-	-
HCM Lane LOS	A	-	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	6	228	0	0	135
Future Vol, veh/h	56	6	228	0	0	135
Conflicting Peds, #/hr	10	10	0	20	20	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	6	245	0	0	145

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	400	255	0	-	-	-
Stage 1	245	-	-	-	-	-
Stage 2	155	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	606	784	-	0	0	-
Stage 1	796	-	-	0	0	-
Stage 2	873	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	600	777	-	-	-	-
Mov Cap-2 Maneuver	650	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	864	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	660	-
HCM Lane V/C Ratio	-	0.101	-
HCM Control Delay (s)	-	11.1	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	22	30	82	4	15	16	151	42	8	178	5
Future Vol, veh/h	62	22	30	82	4	15	16	151	42	8	178	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	24	32	88	4	16	17	162	45	9	191	5
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	9.3	9.3	9.9	10.2
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	8%	54%	81%	100%	0%
Vol Thru, %	72%	19%	4%	0%	97%
Vol Right, %	20%	26%	15%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	209	114	101	8	183
LT Vol	16	62	82	8	0
Through Vol	151	22	4	0	178
RT Vol	42	30	15	0	5
Lane Flow Rate	225	123	109	9	197
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.299	0.174	0.158	0.014	0.291
Departure Headway (Hd)	4.796	5.1	5.239	5.841	5.317
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	744	697	679	609	671
Service Time	2.864	3.176	3.319	3.609	3.086
HCM Lane V/C Ratio	0.302	0.176	0.161	0.015	0.294
HCM Control Delay	9.9	9.3	9.3	8.7	10.3
HCM Lane LOS	A	A	A	A	B
HCM 95th-tile Q	1.3	0.6	0.6	0	1.2

Intersection	
Intersection Delay, s/veh	17.5
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	141	86	14	12	565
Future Vol, veh/h	56	141	86	14	12	565
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	147	90	15	13	589
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	10.5	9.1	21.3
HCM LOS	B	A	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	28%	2%
Vol Thru, %	86%	0%	98%
Vol Right, %	14%	72%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	100	197	577
LT Vol	0	56	12
Through Vol	86	0	565
RT Vol	14	141	0
Lane Flow Rate	104	205	601
Geometry Grp	1	1	1
Degree of Util (X)	0.147	0.296	0.768
Departure Headway (Hd)	5.078	5.184	4.602
Convergence, Y/N	Yes	Yes	Yes
Cap	698	687	781
Service Time	3.169	3.266	2.663
HCM Lane V/C Ratio	0.149	0.298	0.77
HCM Control Delay	9.1	10.5	21.3
HCM Lane LOS	A	B	C
HCM 95th-tile Q	0.5	1.2	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1101	102	231	712	111	0	0	0	492	156	91
Future Volume (veh/h)	61	1101	102	231	712	111	0	0	0	492	156	91
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.89				1.00		0.81
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	64	1147	106	241	742	116				337	407	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	82	1332	123	338	1389	217				529	555	381
Arrive On Green	0.05	0.41	0.41	0.10	0.46	0.46				0.30	0.30	0.30
Sat Flow, veh/h	1781	3263	301	3456	3020	472				1781	1870	1284
Grp Volume(v), veh/h	64	624	629	241	436	422				337	407	95
Grp Sat Flow(s),veh/h/ln	1781	1777	1787	1728	1777	1715				1781	1870	1284
Q Serve(g_s), s	3.6	32.6	32.8	6.9	17.9	18.0				16.7	19.9	5.7
Cycle Q Clear(g_c), s	3.6	32.6	32.8	6.9	17.9	18.0				16.7	19.9	5.7
Prop In Lane	1.00		0.17	1.00		0.28				1.00		1.00
Lane Grp Cap(c), veh/h	82	725	729	338	817	788				529	555	381
V/C Ratio(X)	0.78	0.86	0.86	0.71	0.53	0.53				0.64	0.73	0.25
Avail Cap(c_a), veh/h	164	796	800	359	817	788				550	578	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	27.5	27.6	44.6	19.7	19.7				31.1	32.2	27.2
Incr Delay (d2), s/veh	5.7	8.8	9.0	5.0	2.5	2.6				1.7	3.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	15.1	15.3	3.2	7.7	7.5				7.3	9.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	36.3	36.6	49.6	22.2	22.3				32.8	36.2	27.4
LnGrp LOS	D	D	D	D	C	C				C	D	C
Approach Vol, veh/h		1317			1099						839	
Approach Delay, s/veh		37.3			28.3						33.8	
Approach LOS		D			C						C	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	14.4	46.5		35.2	9.1	51.8
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	10.6	45.7		31.5	9.4	46.9
Max Q Clear Time (g_c+I1), s	8.9	34.8		21.9	5.6	20.0
Green Ext Time (p_c), s	0.0	6.1		0.9	0.0	6.2

Intersection Summary		
HCM 6th Ctrl Delay	33.4	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1705	874	138	0	14
Future Vol, veh/h	0	1705	874	138	0	14
Conflicting Peds, #/hr	26	0	0	26	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1740	892	141	0	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	456
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	551
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	546
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	546
HCM Lane V/C Ratio	-	-	0.026
HCM Control Delay (s)	-	-	11.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1705	0	0	690	348	322
Future Volume (veh/h)	1705	0	0	690	348	322
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1870
Adj Flow Rate, veh/h	1740	0	0	704	355	329
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	0	0	2	2	2
Cap, veh/h	2426	0	0	2426	782	359
Arrive On Green	0.68	0.00	0.00	0.68	0.23	0.23
Sat Flow, veh/h	3741	0	0	3741	3456	1585
Grp Volume(v), veh/h	1740	0	0	704	355	329
Grp Sat Flow(s),veh/h/ln	1777	0	0	1777	1728	1585
Q Serve(g_s), s	31.1	0.0	0.0	8.0	9.0	20.7
Cycle Q Clear(g_c), s	31.1	0.0	0.0	8.0	9.0	20.7
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2426	0	0	2426	782	359
V/C Ratio(X)	0.72	0.00	0.00	0.29	0.45	0.92
Avail Cap(c_a), veh/h	2426	0	0	2426	1037	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.65	0.83	0.83
Uniform Delay (d), s/veh	10.1	0.0	0.0	6.4	34.0	38.5
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.0	0.1	14.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.0	0.0	2.7	3.8	9.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.9	0.0	0.0	6.4	34.2	53.0
LnGrp LOS	B	A	A	A	C	D
Approach Vol, veh/h	1740			704	684	
Approach Delay, s/veh	11.9			6.4	43.2	
Approach LOS	B			A	D	

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	74.5				74.5	27.5
Change Period (Y+Rc), s	4.9				4.9	4.4
Max Green Setting (Gmax), s	62.1				62.1	30.6
Max Q Clear Time (g_c+I1), s	33.1				10.0	22.7
Green Ext Time (p_c), s	6.8				2.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Movement	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SWR	SWR2
Lane Configurations												
Traffic Volume (vph)	1884	190	444	3	20	19	30	26	13	4	347	17
Future Volume (vph)	1884	190	444	3	20	19	30	26	13	4	347	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5			5.0			5.0		4.5	
Lane Util. Factor	0.95		0.95			1.00			1.00		1.00	
Frpb, ped/bikes	0.99		1.00			0.98			1.00		1.00	
Flpb, ped/bikes	1.00		1.00			0.99			0.99		1.00	
Frt	0.99		1.00			0.94			0.99		0.86	
Flt Protected	1.00		1.00			0.99			0.97		1.00	
Satd. Flow (prot)	3471		3534			1681			1769		1611	
Flt Permitted	1.00		1.00			0.93			0.85		1.00	
Satd. Flow (perm)	3471		3534			1589			1543		1611	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1922	194	453	3	20	19	31	27	13	4	354	17
RTOR Reduction (vph)	7	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	2109	0	456	0	0	70	0	0	44	0	371	0
Confl. Peds. (#/hr)		12		10	21		10	10		21	21	10
Confl. Bikes (#/hr)		23		10			10			10	10	10
Turn Type	NA		NA		Perm	NA		Perm	NA		Prot	
Protected Phases	2		6			4			4		5	
Permitted Phases					4			4				
Actuated Green, G (s)	58.5		32.5			31.0			31.0		21.5	
Effective Green, g (s)	58.5		32.5			31.0			31.0		21.5	
Actuated g/C Ratio	0.58		0.32			0.31			0.31		0.22	
Clearance Time (s)	5.5		5.5			5.0			5.0		4.5	
Vehicle Extension (s)	2.0		2.0			2.0			2.0		3.0	
Lane Grp Cap (vph)	2030		1148			492			478		346	
v/s Ratio Prot	c0.61		0.13								0.23	
v/s Ratio Perm						c0.04			0.03			
v/c Ratio	1.04		0.40			0.14			0.09		1.07	
Uniform Delay, d1	20.8		26.2			24.9			24.5		39.2	
Progression Factor	1.00		1.00			1.00			1.00		1.00	
Incremental Delay, d2	30.8		1.0			0.6			0.4		68.9	
Delay (s)	51.6		27.2			25.5			24.9		108.2	
Level of Service	D		C			C			C		F	
Approach Delay (s)	51.6		27.2			25.5			24.9			
Approach LOS	D		C			C			C			

Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	649	2170	412	0	429	765	0	0	0	0	0	0
Future Volume (veh/h)	649	2170	412	0	429	765	0	0	0	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97						
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00						
Work Zone On Approach		No			No							
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870						
Adj Flow Rate, veh/h	662	2214	420	0	438	781						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98						
Percent Heavy Veh, %	2	2	2	0	2	2						
Cap, veh/h	622	6673	1209	0	2141	3529						
Arrive On Green	0.35	1.00	1.00	0.00	1.00	1.00						
Sat Flow, veh/h	1781	4326	784	0	1870	3083						
Grp Volume(v), veh/h	662	1720	914	0	438	781						
Grp Sat Flow(s),veh/h/ln	1781	1702	1705	0	1870	1541						
Q Serve(g_s), s	38.4	0.0	0.0	0.0	0.0	0.0						
Cycle Q Clear(g_c), s	38.4	0.0	0.0	0.0	0.0	0.0						
Prop In Lane	1.00		0.46	0.00		1.00						
Lane Grp Cap(c), veh/h	622	5252	2630	0	2141	3529						
V/C Ratio(X)	1.06	0.33	0.35	0.00	0.20	0.22						
Avail Cap(c_a), veh/h	622	5252	2630	0	2141	3529						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	35.8	0.0	0.0	0.0	0.0	0.0						
Incr Delay (d2), s/veh	54.5	0.2	0.4	0.0	0.2	0.1						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	25.7	0.1	0.3	0.0	0.1	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.3	0.2	0.4	0.0	0.2	0.1						
LnGrp LOS	F	A	A	A	A	A						
Approach Vol, veh/h		3296			1219							
Approach Delay, s/veh		18.3			0.2							
Approach LOS		B			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		176.5			43.8	132.7						
Change Period (Y+Rc), s		* 4.9			5.4	4.9						
Max Green Setting (Gmax), s		* 1.1E2			38.4	61.3						
Max Q Clear Time (g_c+I1), s		2.0			40.4	2.0						
Green Ext Time (p_c), s		5.7			0.0	7.0						

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	417	38	137	443	0	0	0	0	150	280	37
Future Volume (veh/h)	0	417	38	137	443	0	0	0	0	150	280	37
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87	1.00		1.00				1.00		0.67
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	434	40	143	461	0				156	292	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	844	78	528	1187	0				298	584	80
Arrive On Green	0.00	0.51	0.51	0.09	0.63	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	1663	153	1781	1870	0				1074	2104	288
Grp Volume(v), veh/h	0	0	474	143	461	0				264	0	223
Grp Sat Flow(s),veh/h/ln	0	0	1816	1781	1870	0				1817	0	1649
Q Serve(g_s), s	0.0	0.0	19.5	3.8	13.4	0.0				13.8	0.0	12.7
Cycle Q Clear(g_c), s	0.0	0.0	19.5	3.8	13.4	0.0				13.8	0.0	12.7
Prop In Lane	0.00		0.08	1.00		0.00				0.59		0.17
Lane Grp Cap(c), veh/h	0	0	921	528	1187	0				504	0	458
V/C Ratio(X)	0.00	0.00	0.51	0.27	0.39	0.00				0.52	0.00	0.49
Avail Cap(c_a), veh/h	0	0	921	555	1187	0				504	0	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.98	0.98	0.00				0.54	0.00	0.54
Uniform Delay (d), s/veh	0.0	0.0	18.4	11.5	9.9	0.0				34.2	0.0	33.8
Incr Delay (d2), s/veh	0.0	0.0	2.1	0.3	0.9	0.0				2.1	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	8.5	1.5	5.5	0.0				6.3	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	20.4	11.8	10.9	0.0				36.3	0.0	35.8
LnGrp LOS	A	A	C	B	B	A				D	A	D
Approach Vol, veh/h		474			604						487	
Approach Delay, s/veh		20.4			11.1						36.1	
Approach LOS		C			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.3	61.7		36.0		76.0
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9
Max Green Setting (Gmax), s	11.6	55.1		31.1		71.1
Max Q Clear Time (g_c+I1), s	15.8	21.5		15.8		15.4
Green Ext Time (p_c), s	0.2	2.1		1.8		2.0

Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	539	0	0	582	221	57	355	223	0	0	0
Future Volume (veh/h)	36	539	0	0	582	221	57	355	223	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.95		1.00	1.00		0.81	1.00		0.81			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	37	550	0	0	594	226	58	362	228			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	76	1047	0	0	2224	800	511	556	336			
Arrive On Green	0.21	0.21	0.00	0.00	1.00	1.00	0.29	0.29	0.29			
Sat Flow, veh/h	67	1673	0	0	3647	1278	1781	1939	1171			
Grp Volume(v), veh/h	587	0	0	0	594	226	58	330	260			
Grp Sat Flow(s),veh/h/ln	1740	0	0	0	1777	1278	1781	1777	1334			
Q Serve(g_s), s	6.5	0.0	0.0	0.0	0.0	0.0	2.7	18.3	19.3			
Cycle Q Clear(g_c), s	31.9	0.0	0.0	0.0	0.0	0.0	2.7	18.3	19.3			
Prop In Lane	0.06		0.00	0.00		1.00	1.00		0.88			
Lane Grp Cap(c), veh/h	1123	0	0	0	2224	800	511	509	382			
V/C Ratio(X)	0.52	0.00	0.00	0.00	0.27	0.28	0.11	0.65	0.68			
Avail Cap(c_a), veh/h	1123	0	0	0	2224	800	511	509	382			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.00	0.00	0.00	0.90	0.90	1.00	1.00	1.00			
Uniform Delay (d), s/veh	29.0	0.0	0.0	0.0	0.0	0.0	29.5	35.0	35.4			
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.0	0.3	0.8	0.5	6.3	9.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	16.0	0.0	0.0	0.0	0.1	0.2	1.2	8.7	7.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	0.0	0.0	0.3	0.8	29.9	41.3	44.7			
LnGrp LOS	C	A	A	A	A	A	C	D	D			
Approach Vol, veh/h		587			820			648				
Approach Delay, s/veh		30.5			0.4			41.7				
Approach LOS		C			A			D				

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	75.0	37.0	75.0
Change Period (Y+Rc), s	4.9	4.9	4.9
Max Green Setting (Gmax), s	70.1	32.1	70.1
Max Q Clear Time (g_c+I1), s	33.9	21.3	2.0
Green Ext Time (p_c), s	1.6	1.3	1.9

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	349	378	39	108	371	178	48	876	84	264	909	414
Future Volume (veh/h)	349	378	39	108	371	178	48	876	84	264	909	414
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.79	1.00		0.76	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	356	386	40	110	379	182	49	894	86	269	928	422
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	953	97	136	936	582	63	932	90	296	982	440
Arrive On Green	0.04	0.10	0.10	0.08	0.26	0.26	0.04	0.29	0.29	0.17	0.42	0.42
Sat Flow, veh/h	3456	3163	323	1781	3554	1209	1781	3262	314	1781	2359	1058
Grp Volume(v), veh/h	356	214	212	110	379	182	49	487	493	269	696	654
Grp Sat Flow(s),veh/h/ln	1728	1777	1709	1781	1777	1209	1781	1777	1798	1781	1777	1640
Q Serve(g_s), s	11.5	12.7	13.0	6.8	9.8	11.3	3.1	30.2	30.2	16.6	42.1	43.4
Cycle Q Clear(g_c), s	11.5	12.7	13.0	6.8	9.8	11.3	3.1	30.2	30.2	16.6	42.1	43.4
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.17	1.00		0.65
Lane Grp Cap(c), veh/h	395	535	515	136	936	582	63	508	514	296	740	683
V/C Ratio(X)	0.90	0.40	0.41	0.81	0.40	0.31	0.78	0.96	0.96	0.91	0.94	0.96
Avail Cap(c_a), veh/h	395	535	515	215	936	582	70	508	514	296	740	683
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	40.9	41.1	50.9	34.0	21.5	53.6	39.4	39.4	45.9	31.3	31.7
Incr Delay (d2), s/veh	19.9	1.8	2.0	5.4	1.3	1.4	33.8	29.9	29.7	29.5	20.1	24.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	6.3	6.3	3.2	4.4	3.4	2.0	17.2	17.4	9.7	21.6	21.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	42.8	43.1	56.3	35.3	22.9	87.4	69.3	69.1	75.4	51.4	56.3
LnGrp LOS	E	D	D	E	D	C	F	E	E	E	D	E
Approach Vol, veh/h		782			671			1029			1619	
Approach Delay, s/veh		56.7			35.4			70.0			57.4	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	38.6	8.4	52.0	17.2	34.4	23.0	37.4
Change Period (Y+Rc), s	4.4	4.9	4.4	5.4	4.4	4.9	4.4	5.4
Max Green Setting (Gmax), s	13.5	28.8	4.4	46.2	12.8	29.5	18.6	32.0
Max Q Clear Time (g_c+I1), s	8.8	15.0	5.1	45.4	13.5	13.3	18.6	32.2
Green Ext Time (p_c), s	0.0	1.6	0.0	0.7	0.0	2.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	34	1400	9	2	1458
Future Vol, veh/h	11	34	1400	9	2	1458
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	35	1443	9	2	1503

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2224	1468	0	0	1462	0
Stage 1	1458	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	42	156	-	-	460	-
Stage 1	213	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	41	153	-	-	456	-
Mov Cap-2 Maneuver	41	-	-	-	-	-
Stage 1	211	-	-	-	-	-
Stage 2	415	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	78.6	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	92	456	-
HCM Lane V/C Ratio	-	-	0.504	0.005	-
HCM Control Delay (s)	-	-	78.6	12.9	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	2.2	0	-

Intersection: 5: Fourth Ave & Washington St

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	TR	L	L	T	TR	L	LT	R
Maximum Queue (ft)	134	234	195	138	157	196	185	140	234	95
Average Queue (ft)	73	117	87	72	102	146	145	58	118	60
95th Queue (ft)	130	193	162	133	170	205	199	113	202	113
Link Distance (ft)		454	454			158	158		394	
Upstream Blk Time (%)				0	0	12	14			
Queuing Penalty (veh)				0	0	78	89			
Storage Bay Dist (ft)	110			150	150			280		70
Storage Blk Time (%)	2	9		0	0	13			29	1
Queuing Penalty (veh)	5	7		1	2	29			55	3

Intersection: 7: Fifth Ave (East) & Washington St

Movement	EB	EB	WB	WB	NB	NB	NB
Directions Served	T	T	T	T	L	L	R
Maximum Queue (ft)	99	99	565	561	71	112	346
Average Queue (ft)	63	55	208	251	18	37	132
95th Queue (ft)	112	107	451	491	54	87	261
Link Distance (ft)	84	84	862	862		504	504
Upstream Blk Time (%)	4	3					
Queuing Penalty (veh)	20	14					
Storage Bay Dist (ft)					90		
Storage Blk Time (%)					0	2	
Queuing Penalty (veh)					0	1	

Intersection: 8: Eighth Ave & Washington St & SR 163 SB Off-Ramp

Movement	EB	EB	WB	WB	B38	NB	SB	SW
Directions Served	T	TR	T	TR	T	LTR	LTR	R>
Maximum Queue (ft)	202	210	504	511	7	113	60	956
Average Queue (ft)	100	109	317	333	0	41	18	643
95th Queue (ft)	175	184	579	589	5	87	47	1100
Link Distance (ft)	862	862	1172	1172	616	458	444	1043
Upstream Blk Time (%)								13
Queuing Penalty (veh)								0
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 9: Richmond St/SR 163 On-Ramps & Washington St

Movement	EB	EB	EB	WB	WB	WB
Directions Served	L	T	T	T	TR	R
Maximum Queue (ft)	524	555	175	431	447	439
Average Queue (ft)	422	90	11	257	387	309
95th Queue (ft)	553	376	106	486	496	455
Link Distance (ft)		616	616	413	413	413
Upstream Blk Time (%)		0		2	12	2
Queuing Penalty (veh)		0		0	0	0
Storage Bay Dist (ft)	500					
Storage Blk Time (%)	5	0				
Queuing Penalty (veh)	10	1				

Intersection: 5: Fourth Ave & Washington St

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	TR	L	L	T	TR	L	LT	R
Maximum Queue (ft)	134	486	496	122	156	174	178	295	347	95
Average Queue (ft)	82	369	343	66	75	108	117	162	227	60
95th Queue (ft)	162	536	526	115	140	185	192	277	347	124
Link Distance (ft)		454	454			158	158		394	
Upstream Blk Time (%)		23	23		0	8	4		7	
Queuing Penalty (veh)		0	0		0	35	16		45	
Storage Bay Dist (ft)	110			150	150			280		70
Storage Blk Time (%)	1	53		0	6	8		0	56	1
Queuing Penalty (veh)	5	32		0	23	18		0	190	9

Intersection: 7: Fifth Ave (East) & Washington St

Movement	EB	EB	WB	WB	NB	NB	NB
Directions Served	T	T	T	T	L	L	R
Maximum Queue (ft)	118	124	400	418	114	268	450
Average Queue (ft)	84	84	141	144	65	109	214
95th Queue (ft)	130	134	383	342	131	228	491
Link Distance (ft)	84	84	862	862		504	504
Upstream Blk Time (%)	19	20	2	0			3
Queuing Penalty (veh)	159	172	7	1			10
Storage Bay Dist (ft)					90		
Storage Blk Time (%)					4	15	
Queuing Penalty (veh)					6	26	

Intersection: 8: Eighth Ave & Washington St & SR 163 SB Off-Ramp

Movement	EB	EB	WB	WB	NB	SB	SW
Directions Served	T	TR	T	TR	LTR	LTR	R>
Maximum Queue (ft)	880	880	210	231	106	68	1081
Average Queue (ft)	711	722	94	105	36	19	844
95th Queue (ft)	1089	1099	182	194	81	52	1284
Link Distance (ft)	862	862	1171	1171	458	444	1042
Upstream Blk Time (%)	1	2					39
Queuing Penalty (veh)	11	18					0
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: Richmond St/SR 163 On-Ramps & Washington St

Movement	EB	EB	EB	EB	B38	WB	WB	WB
Directions Served	L	T	T	TR	T	T	TR	R
Maximum Queue (ft)	524	594	519	10	15	244	346	266
Average Queue (ft)	413	159	64	0	1	111	197	135
95th Queue (ft)	469	511	318	5	8	202	293	244
Link Distance (ft)		616	616	616	1171	413	413	413
Upstream Blk Time (%)		0	0			0	0	
Queuing Penalty (veh)		2	0			0	0	
Storage Bay Dist (ft)	500							
Storage Blk Time (%)	6	0						
Queuing Penalty (veh)	40	0						

APPENDIX D

EXISTING FREEWAY ANALYSIS CALCULATIONS SHEETS

HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Existing
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 NB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.13
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.900
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6830	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1816
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2071
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	33.8
Total Ramp Density Adjustment	8.4	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Existing
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 NB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.13
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.900
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5600	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1489
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2071
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	25.2
Total Ramp Density Adjustment	8.4	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Existing
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 SB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.78
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.840
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5860	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1247
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2308
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1939
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.3
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	20.7
Total Ramp Density Adjustment	7.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.8		

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HCS7 Basic Freeway Report

Project Information

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Project Description	SR 163 SB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.78
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.840
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6420	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1366
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2308
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1939
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	23.1
Total Ramp Density Adjustment	7.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.8		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Existing
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 NB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.10
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5480	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1943
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2301
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.84
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.9
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	33.6
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Existing
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 NB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.10
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4500	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1596
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2301
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	26.6
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

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Agency		Analysis Year	Existing
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 SB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	63.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.867
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4700	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1667
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2315
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2007
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	55.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	30.1
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.5		

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HCS7 Basic Freeway Report

Project Information

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Agency		Analysis Year	Existing
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 SB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	63.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.867
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5150	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1826
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2315
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2007
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.91
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	51.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.8
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.5		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Existing
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 NB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.08
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4600	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2447
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.06
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Project Description	SR 163 NB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.08
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3770	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2006
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.87
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.1
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 SB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.64
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3940	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2096
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2312
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2312
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.91
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	56.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	37.3
Total Ramp Density Adjustment	7.3	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.2		

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Project Description	SR 163 SB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.64
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4320	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2298
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2312
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2312
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.99
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	51.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	44.4
Total Ramp Density Adjustment	7.3	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.2		

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APPENDIX E

SANDAG EMPLOYEE DENSITY RATES AND HSB PARKING STRUCTURE RE-ROUTED TRIP ASSIGNMENT

SANDAG Employee Density Rates

CODE	DESCRIPTION	FA / EMP
6008	Medical Office (greater than 100000 SF)	200
6502	Hospital - General	450

INTERSECTION	DIRECTION	HSB RE-ROUTE TRAFFIC VOLUMES FINAL						HSB RE-ROUTETRAFFIC VOLUMES IN						HSB RE-ROUTETRAFFIC VOLUMES OUT						HSB DISTRIBUTION IN (%)			HSB DISTRIBUTION OUT (%)		
		Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	R	T	L	R	T	L
1. Fourth Avenue / Parking Lot 12 Driveway	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
2. Fourth Avenue / MOB North Parking Lot Driveway	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
3. Fourth Avenue / Lewis Street	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
4. Fourth Avenue / Fifth Avenue	Sb	-	-	-	-	7	9	-	-	-	-	7	9	-	-	-	-	-	-			10%			
	Wb	9	18	-	-	-	-	-	-	-	-	-	-	9	18	-	-	-	-				10%		
	Nb	10	13	-	-	-	-	10	13	-	-	-	-	-	-	-	-	-	-	15%					
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5. Washington Street / Fourth Avenue	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
6. Washington Street / Fifth Avenue (west)	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
7. Washington Street / Fifth Avenue (east)	Sb	23	45	-	-	60	118	-	-	-	-	-	-	23	45	-	-	60	118				25%		65%
	Wb	22	27	-	-	-	-	22	27	-	-	-	-	-	-	-	-	-	-	32%					
	Nb	-	-	29	37	-	-	-	-	29	37	-	-	-	-	-	-	-	-		43%				
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8. Washington Street / Eighth Avenue	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	SWb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
9. Washington Street / Richmond Street / SR 163 On-Ramp	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
10. University Avenue / Fourth Avenue	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
11. University Avenue / Fifth Avenue	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
12. University Avenue / Sixth Avenue	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
13. Sixth Avenue / Parking Structure Driveway	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						

Trip Generation -HSB Re-Route

AM		PM	
IN	OUT	IN	OUT
68	92	85	181

Table A
Trip Generation Table - 350 space HSB parking garage

Land Use & Size	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
			In	Out	Total			In	Out	Total
HSB Parking Structure 350 stalls	0.46	43 : 57	68	92	160	0.76	32 : 68	85	181	266

Table B
Trip Generation Table - Lot 4.1 parking structure (visitors)

Land Use & Size	Rate	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
			In	Out	Total			In	Out	Total
Lot 4.1 - Visitors Only 317 stalls	0.46	43 : 57	62	83	145	0.76	32 : 68	35	75	110

APPENDIX F

SIXTH AVENUE PARKING STRUCTURE RE-ROUTED TRIP DISTRIBUTION AND ASSIGNMENT

INTERSECTION	DIRECTION	TOTAL EMPLOYEE RE-ROUTE TRAFFIC VOLUMES FINAL					
		Ram	Rpm	Tam	Tpm	Lam	Lpm
1. Fourth Avenue / Parking Lot 12 Driveway	Sb	-	-	-	-	-	-
	Wb	-	-	(7)	(9)	(62)	(83)
	Nb	(120)	(7)	-	-	(5)	(6)
	Eb	-	-	-	-	-	-
		-	-	-	-	-	-
2. Fourth Avenue / MOB North Parking Lot Driveway	Sb	-	-	(62)	(83)	-	-
	Wb	(5)	(6)	-	-	(41)	(56)
	Nb	-	-	(120)	(7)	-	-
	Eb	-	-	-	-	-	-
		-	-	-	-	-	-
3. Fourth Avenue / Lewis Street	Sb	-	-	(103)	(139)	-	-
	Wb	-	-	-	-	-	-
	Nb	(114)	(17)	(108)	(6)	-	-
	Eb	-	-	(13)	(2)	(12)	(1)
		-	-	-	-	-	-
4. Fourth Avenue / Fifth Avenue	Sb	-	-	(103)	(139)	-	-
	Wb	(126)	(14)	-	-	-	-
	Nb	-	-	(97)	(10)	-	-
	Eb	-	-	-	-	-	-
		-	-	-	-	-	-
5. Washington Street / Fourth Avenue	Sb	(5)	(8)	(40)	(54)	(58)	(77)
	Wb	(84)	(8)	5	8	-	-
	Nb	-	-	-	-	-	-
	Eb	-	-	-	-	(12)	(1)
		-	-	-	-	-	-
6. Washington Street / Fifth Avenue (west)	Sb	-	-	-	-	-	-
	Wb	(126)	(14)	(79)	-	-	-
	Nb	-	-	-	-	-	-
	Eb	-	-	(58)	(77)	-	-
		-	-	-	-	-	-
7. Washington Street / Fifth Avenue (east)	Sb	-	-	-	-	-	-
	Wb	-	-	(145)	(8)	-	-
	Nb	-	-	-	-	(59)	(7)
	Eb	-	-	(58)	(77)	-	-
		-	-	-	-	-	-
8. Washington Street / Eighth Avenue	Sb	5	7	20	27	21	28
	SWb	64	7	(103)	(11)	-	-
	Wb	12	1	(12)	(1)	-	-
	Nb	-	-	82	8	(35)	(4)
	Eb	(7)	(10)	(50)	(67)	-	-
		-	-	-	-	-	-
9. Washington Street / Richmond Street / SR 163 On-Ramp	Sb	-	-	-	-	-	-
	Wb	-	-	-	-	-	-
	Nb	-	-	-	-	-	-
	Eb	-	-	-	-	(30)	(40)
		-	-	-	-	-	-
10. University Avenue / Fourth Avenue	Sb	-	-	-	-	(40)	(54)
	Wb	-	-	-	-	-	-
	Nb	-	-	-	-	-	-
	Eb	-	-	12	1	-	-
11. University Avenue / Fifth Avenue	Sb	-	-	-	-	-	-
	Wb	(59)	(7)	-	-	-	-
	Nb	-	-	-	-	-	-
	Eb	-	-	(28)	(53)	-	-
		-	-	-	-	-	-
12. University Avenue / Sixth Avenue	Sb	-	-	-	-	-	-
	Wb	12	1	(59)	(7)	-	-
	Nb	-	-	-	-	-	-
	Eb	-	-	(13)	(17)	(16)	(36)
		-	-	-	-	-	-
13. Sixth Avenue / Parking Structure Driveway	Sb	-	-	-	-	64	7
	Wb	69	92	-	-	-	-
	Nb	25	3	(28)	(37)	-	-
	Eb	-	-	-	-	-	-

INTERSECTION	DIRECTION	Lot 12 Employee TRAFFIC VOLUMES FINAL						Lot 12 Employee TRAFFIC VOLUMES IN						Lot 12 Employee TRAFFIC VOLUMES OUT						PROJECT DISTRIBUTION IN (%)			PROJECT DISTRIBUTION OUT (%)		
		Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	R	T	L	R	T	L
1. Fourth Avenue / Parking Lot 12 Driveway	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	(7)	(9)	(62)	(83)	-	-	-	-	-	-	-	-	(7)	(9)	(62)	(83)					-10%	-90%
	Nb	(120)	(7)	-	-	-	-	(120)	(7)	-	-	-	-	-	-	-	-	-	-	-100%					
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
2. Fourth Avenue / MOB North Parking Lot Driveway	Sb	-	-	(62)	(83)	-	-	-	-	-	-	-	-	-	-	(62)	(83)	-	-					-90%	
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	(120)	(7)	-	-	-	-	(120)	(7)	-	-	-	-	-	-	-	-		-100%				
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
3. Fourth Avenue / Lewis Street	Sb	-	-	(62)	(83)	-	-	-	-	-	-	-	-	-	-	(62)	(83)	-	-					-90%	
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	(108)	(6)	-	-	-	-	(108)	(6)	-	-	-	-	-	-	-	-		-90%				
	Eb	-	-	-	-	(12)	(1)	-	-	-	-	(12)	(1)	-	-	-	-	-	-			-10%			
4. Fourth Avenue / Fifth Avenue	Sb	-	-	(62)	(83)	-	-	-	-	-	-	-	-	-	-	(62)	(83)	-	-					-90%	
	Wb	(61)	(4)	-	-	-	-	(61)	(4)	-	-	-	-	-	-	-	-	-	-	-51%					
	Nb	-	-	(47)	(3)	-	-	-	-	(47)	(3)	-	-	-	-	-	-	-	-		-39%				
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5. Washington Street / Fourth Avenue	Sb	(3)	(5)	(24)	(32)	(35)	(46)	-	-	-	-	-	-	(3)	(5)	(24)	(32)	(35)	(46)				-5%	-35%	-50%
	Wb	(41)	(2)	3	5	-	-	(41)	(2)	-	-	-	-	-	-	3	5	-	-	-34%				5%	
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	(6)	-	-	-	-	-	(6)	-	-	-	-	-	-	-			-5%			
6. Washington Street / Fifth Avenue (west)	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	(61)	(4)	(38)	3	-	-	(61)	(4)	(41)	(2)	-	-	-	-	3	5	-	-	-51%	-34%			5%	
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	(35)	(46)	-	-	-	-	-	-	-	-	-	-	(35)	(46)	-	-					-50%	
7. Washington Street / Fifth Avenue (east)	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	(70)	1	-	-	-	-	(73)	(4)	-	-	-	-	3	5	-	-		-61%			5%	
	Nb	-	-	-	-	(29)	(2)	-	-	-	-	(29)	(2)	-	-	-	-	-	-			-24%			
	Eb	-	-	(35)	(46)	-	-	-	-	-	-	-	-	-	-	(35)	(46)	-	-					-50%	
8. Washington Street / Eighth Avenue	Sb	3	4	12	16	13	17	-	-	-	-	-	-	3	5	12	16	12	17				5%	17%	18%
	SWb	31	2	(50)	(3)	-	-	31	2	(50)	(3)	-	-	-	-	-	-	-	-	26%	-42%				
	Wb	6	-	(6)	-	-	-	6	-	(6)	-	-	-	-	-	-	-	-	-	5%	-5%				
	Nb	-	-	40	2	(17)	(1)	-	-	40	2	(17)	(1)	-	-	-	-	-	-		33%	-14%			
	Eb	(4)	(6)	(30)	(40)	-	-	-	-	-	-	-	-	(4)	(6)	(30)	(40)	-	-				-6%	-44%	
9. Washington Street / Richmond Street / SR 163 On-Ramp	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		0%				
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	(18)	(24)	-	-	-	-	-	-	-	-	-	-	(18)	(24)					0%	-26%
10. University Avenue / Fourth Avenue	Sb	-	-	-	-	(24)	(32)	-	-	-	-	-	-	-	-	-	-	(24)	(32)						-35%
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	6	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-		5%				
11. University Avenue / Fifth Avenue	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	(29)	(2)	-	-	-	-	(29)	(2)	-	-	-	-	-	-	-	-	-	-	-24%					
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	(18)	(32)	-	-	-	-	6	-	-	-	-	-	(24)	(32)	-	-		5%			-35%	
12. University Avenue / Sixth Avenue	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	6	-	(29)	(2)	-	-	6	-	(29)	(2)	-	-	-	-	-	-	-	-	5%	-24%				
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	(8)	(10)	(11)	(22)	-	-	-	-	6	-	-	-	(8)	(10)	(17)	(22)			5%		-11%	-24%
13. Sixth Avenue / Parking Structure Driveway	Sb	-	-	-	-	31	2	-	-	-	-	31	2	-	-	-	-	-	-			26%			
	Wb	41	55	-	-	-	-	-	-	-	-	-	-	41	55	-	-	-	-				60%		
	Nb	12	1	(17)	(22)	-	-	12	1	-	-	-	-	-	-	(17)	(22)	-	-	10%				-24%	
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						

Lot 12 Trip Generation

AM		PM	
IN	OUT	IN	OUT
120	69	7	92

INTERSECTION	DIRECTION	Lot 4.1 Employee TRAFFIC VOLUMES FINAL						Lot 4.1 Employee TRAFFIC VOLUMES IN						Lot 4.1 Employee TRAFFIC VOLUMES OUT						PROJECT DISTRIBUTION IN (%)			PROJECT DISTRIBUTION OUT (%)		
		Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	R	T	L	R	T	L
1. Fourth Avenue / Parking Lot 12 Driveway	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	(5)	(6)	-	-	-	-	-	-	-	-	-	-	(5)	(6)						-10%
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
2. Fourth Avenue / MOB North Parking Lot Driveway	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	(5)	(6)	-	-	(41)	(56)	-	-	-	-	-	-	(5)	(6)	-	-	(41)	(56)				-10%		-90%
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
3. Fourth Avenue / Lewis Street	Sb	-	-	(41)	(56)	-	-	-	-	-	-	-	-	-	-	(41)	(56)	-	-					-90%	
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	(114)	(17)	-	-	-	-	(114)	(17)	-	-	-	-	-	-	-	-	-	-	-90%					
	Eb	-	-	(13)	(2)	-	-	-	-	(13)	(2)	-	-	-	-	-	-	-	-		-10%				
4. Fourth Avenue / Fifth Avenue	Sb	-	-	(41)	(56)	-	-	-	-	-	-	-	-	-	-	(41)	(56)	-	-					-90%	
	Wb	(65)	(10)	-	-	-	-	(65)	(10)	-	-	-	-	-	-	-	-	-	-	-51%					
	Nb	-	-	(50)	(7)	-	-	-	-	(50)	(7)	-	-	-	-	-	-	-	-		-39%				
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5. Washington Street / Fourth Avenue	Sb	(2)	(3)	(16)	(22)	(23)	(31)	-	-	-	-	-	-	(2)	(3)	(16)	(22)	(23)	(31)				-5%	-35%	-50%
	Wb	(43)	(6)	2	3	-	-	(43)	(6)	-	-	-	-	-	-	2	3	-	-	-34%				5%	
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	(6)	(1)	-	-	-	-	(6)	(1)	-	-	-	-	-	-			-5%			
6. Washington Street / Fifth Avenue (west)	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	(65)	(10)	(41)	(3)	-	-	(65)	(10)	(43)	(6)	-	-	-	-	2	3	-	-	-51%	-34%			5%	
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	(23)	(31)	-	-	-	-	-	-	-	-	-	-	(23)	(31)	-	-					-50%	
7. Washington Street / Fifth Avenue (east)	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	(75)	(9)	-	-	-	-	(77)	(12)	-	-	-	-	2	3	-	-		-61%			5%	
	Nb	-	-	-	-	(30)	(5)	-	-	-	-	(30)	(5)	-	-	-	-	-	-			-24%			
	Eb	-	-	(23)	(31)	-	-	-	-	-	-	-	-	-	-	(23)	(31)	-	-					-50%	
8. Washington Street / Eighth Avenue	Sb	2	3	8	11	8	11	-	-	-	-	-	-	2	3	8	11	8	11				5%	17%	18%
	SWb	33	5	(53)	(8)	-	-	33	5	(53)	(8)	-	-	-	-	-	-	-	-	26%	-42%				
	Wb	6	1	(6)	(1)	-	-	6	1	(6)	(1)	-	-	-	-	-	-	-	-	5%	-5%				
	Nb	-	-	42	6	(18)	(3)	-	-	42	6	(18)	(3)	-	-	-	-	-	-		33%	-14%			
	Eb	(3)	(4)	(20)	(27)	-	-	-	-	-	-	-	-	(3)	(4)	(20)	(27)	-	-				-6%	-44%	
9. Washington Street / Richmond Street / SR 163 On-Ramp	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		0%				
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	-	-	(12)	(16)	-	-	-	-	-	-	-	-	-	-	(12)	(16)					0%	-26%
10. University Avenue / Fourth Avenue	Sb	-	-	-	-	(16)	(22)	-	-	-	-	-	-	-	-	-	-	(16)	(22)						-35%
	Wb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	6	1	-	-	-	-	6	1	-	-	-	-	-	-	-	-		5%				
11. University Avenue / Fifth Avenue	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	(30)	(5)	-	-	-	-	(30)	(5)	-	-	-	-	-	-	-	-	-	-	-24%					
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	(10)	(21)	-	-	-	-	6	1	-	-	-	-	(16)	(22)	-	-		5%			-35%	
12. University Avenue / Sixth Avenue	Sb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Wb	6	1	(30)	(5)	-	-	6	1	(30)	(5)	-	-	-	-	-	-	-	-	5%	-24%				
	Nb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Eb	-	-	(5)	(7)	(5)	(14)	-	-	-	-	6	1	-	-	(5)	(7)	(11)	(15)			5%		-11%	-24%
13. Sixth Avenue / Parking Structure Driveway	Sb	-	-	-	-	33	5	-	-	-	-	33	5	-	-	-	-	-	-			26%			
	Wb	28	37	-	-	-	-	-	-	-	-	-	-	28	37	-	-	-	-				60%		
	Nb	13	2	(11)	(15)	-	-	13	2	-	-	-	-	-	-	(11)	(15)	-	-	10%				-24%	
	Eb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						

Lot 4.1 Employee Trip Generation

AM		PM	
IN	OUT	IN	OUT
127	46	19	62

Scripps Lot 12 and Lot 4.1 Employee Traffic

Time	Lot 12 Inbound	Lot 4.1 Inbound	Lot 12 Outbound
5 AM – 6 AM	101	31	0
6 AM – 7 AM	264	113	7
7 AM – 8 AM	120	127	69
8 AM – 9 AM	66	104	5
9 AM – 10 AM	29	49	10
3 PM – 4 PM	31	12	102
4 PM – 5 PM	7	9	86
5 PM – 6 PM	7	19	92
6 PM – 7 PM	11	77	52
7 PM – 8 PM	52	7	171

General Notes:

1. The Lot 4.1 badge access reports provide only inbound data. Outbound data for Lot 4.1 was estimated based on the Lot 12 out split to the parking structure capacity.

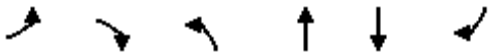
For e.g.: AM Out: (69 /648) *432 = 46; PM Out: (92 /648) * 432 = 62

Trip Generation Summary

Lot	Supply	Total ADT	Trip rate per space	AM			PM		
				In	Out	Total	In	Out	Total
12	648 spaces	1,596	2.46	120	69	189	7	92	99
4.1	432 spaces	1,064		127	46	173	19	62	81
	Total	2,660		247	115	362	26	154	180

APPENDIX G

YEAR 2035 INTERSECTION ANALYSIS CALCULATIONS SHEETS



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	140	217	65	39
Future Volume (Veh/h)	0	0	140	217	65	39
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	156	241	72	43
Pedestrians	10			10	10	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			1	1	
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	666	114	125			
vC1, stage 1 conf vol	104					
vC2, stage 2 conf vol	563					
vCu, unblocked vol	666	114	125			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	89			
cM capacity (veh/h)	487	930	1462			

Direction, Lane #	NB 1	NB 2	SB 1
Volume Total	156	241	115
Volume Left	156	0	0
Volume Right	0	0	43
cSH	1462	1700	1700
Volume to Capacity	0.11	0.14	0.07
Queue Length 95th (ft)	9	0	0
Control Delay (s)	7.8	0.0	0.0
Lane LOS	A		
Approach Delay (s)	3.0		0.0
Approach LOS			

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	43	11	88	3	19	23	309	75	1	59	5
Future Vol, veh/h	29	43	11	88	3	19	23	309	75	1	59	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	48	12	98	3	21	26	343	83	1	66	6
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	9.3	9.7	13.8	8.9
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	35%	80%	100%	0%
Vol Thru, %	76%	52%	3%	0%	92%
Vol Right, %	18%	13%	17%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	407	83	110	1	64
LT Vol	23	29	88	1	0
Through Vol	309	43	3	0	59
RT Vol	75	11	19	0	5
Lane Flow Rate	452	92	122	1	71
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.578	0.137	0.182	0.002	0.108
Departure Headway (Hd)	4.602	5.348	5.364	6.022	5.462
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	782	664	662	590	651
Service Time	2.655	3.434	3.447	3.801	3.24
HCM Lane V/C Ratio	0.578	0.139	0.184	0.002	0.109
HCM Control Delay	13.8	9.3	9.7	8.8	8.9
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	3.8	0.5	0.7	0	0.4

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	96	160	247	12	14	303
Future Vol, veh/h	96	160	247	12	14	303
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	193	298	14	17	365
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	13.1	13	15
HCM LOS	B	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	38%	4%
Vol Thru, %	95%	0%	96%
Vol Right, %	5%	62%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	259	256	317
LT Vol	0	96	14
Through Vol	247	0	303
RT Vol	12	160	0
Lane Flow Rate	312	308	382
Geometry Grp	1	1	1
Degree of Util (X)	0.465	0.464	0.562
Departure Headway (Hd)	5.36	5.414	5.298
Convergence, Y/N	Yes	Yes	Yes
Cap	671	663	680
Service Time	3.401	3.457	3.338
HCM Lane V/C Ratio	0.465	0.465	0.562
HCM Control Delay	13	13.1	15
HCM Lane LOS	B	B	B
HCM 95th-tile Q	2.5	2.5	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	604	124	481	1113	92	0	0	0	254	174	83
Future Volume (veh/h)	69	604	124	481	1113	92	0	0	0	254	174	83
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.90				1.00		0.87
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	72	629	129	501	1159	96				223	240	86
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	93	1069	219	411	1434	119				482	506	372
Arrive On Green	0.05	0.37	0.37	0.12	0.44	0.44				0.27	0.27	0.27
Sat Flow, veh/h	1781	2896	592	3456	3289	272				1781	1870	1373
Grp Volume(v), veh/h	72	385	373	501	625	630				223	240	86
Grp Sat Flow(s),veh/h/ln	1781	1777	1712	1728	1777	1784				1781	1870	1373
Q Serve(g_s), s	4.0	17.5	17.6	11.9	30.6	30.8				10.4	10.7	4.9
Cycle Q Clear(g_c), s	4.0	17.5	17.6	11.9	30.6	30.8				10.4	10.7	4.9
Prop In Lane	1.00		0.35	1.00		0.15				1.00		1.00
Lane Grp Cap(c), veh/h	93	656	632	411	775	778				482	506	372
V/C Ratio(X)	0.78	0.59	0.59	1.22	0.81	0.81				0.46	0.47	0.23
Avail Cap(c_a), veh/h	194	757	729	411	775	778				558	585	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	25.4	25.4	44.0	24.5	24.6				30.4	30.5	28.4
Incr Delay (d2), s/veh	5.2	0.9	1.0	118.5	8.8	8.9				0.3	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	7.4	7.1	11.8	14.2	14.4				4.5	4.8	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	26.3	26.4	162.5	33.3	33.5				30.7	30.8	28.5
LnGrp LOS	D	C	C	F	C	C				C	C	C
Approach Vol, veh/h		830			1756						549	
Approach Delay, s/veh		28.6			70.3						30.4	
Approach LOS		C			E						C	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	16.3	41.8		32.0	9.6	48.5
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	11.9	42.6		31.3	10.9	43.6
Max Q Clear Time (g_c+I1), s	13.9	19.6		12.7	6.0	32.8
Green Ext Time (p_c), s	0.0	5.1		0.6	0.0	6.1

Intersection Summary	
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	858	1926	631	0	25
Future Vol, veh/h	0	858	1926	631	0	25
Conflicting Peds, #/hr	18	0	0	18	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	885	1986	651	0	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1003
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	240
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	238
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	238
HCM Lane V/C Ratio	-	-	0.108
HCM Control Delay (s)	-	-	22
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	858	0	0	1521	280	190
Future Volume (veh/h)	858	0	0	1521	280	190
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1870
Adj Flow Rate, veh/h	885	0	0	1568	289	196
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	0	2	2	2
Cap, veh/h	2711	0	0	2711	498	228
Arrive On Green	0.76	0.00	0.00	0.76	0.14	0.14
Sat Flow, veh/h	3741	0	0	3741	3456	1585
Grp Volume(v), veh/h	885	0	0	1568	289	196
Grp Sat Flow(s),veh/h/ln	1777	0	0	1777	1728	1585
Q Serve(g_s), s	7.9	0.0	0.0	18.7	7.8	12.1
Cycle Q Clear(g_c), s	7.9	0.0	0.0	18.7	7.8	12.1
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2711	0	0	2711	498	228
V/C Ratio(X)	0.33	0.00	0.00	0.58	0.58	0.86
Avail Cap(c_a), veh/h	2711	0	0	2711	1403	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.09	0.85	0.85
Uniform Delay (d), s/veh	3.7	0.0	0.0	5.0	40.0	41.8
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.3	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	5.2	3.3	4.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.1	0.0	0.0	5.0	40.3	44.9
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	885			1568	485	
Approach Delay, s/veh	4.1			5.0	42.2	
Approach LOS	A			A	D	

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	81.2				81.2	18.8
Change Period (Y+Rc), s	4.9				4.9	4.4
Max Green Setting (Gmax), s	50.1				50.1	40.6
Max Q Clear Time (g_c+I1), s	9.9				20.7	14.1
Green Ext Time (p_c), s	2.6				5.8	0.3

Intersection Summary	
HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Movement	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SWR	SWR2
Lane Configurations												
Traffic Volume (vph)	1030	89	1132	21	41	93	21	97	64	27	566	80
Future Volume (vph)	1030	89	1132	21	41	93	21	97	64	27	566	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5			5.0			5.0		4.5	
Lane Util. Factor	0.95		0.95			1.00			1.00		1.00	
Frpb, ped/bikes	1.00		1.00			0.99			1.00		1.00	
Flpb, ped/bikes	1.00		1.00			1.00			1.00		1.00	
Frt	0.99		1.00			0.98			0.98		0.86	
Flt Protected	1.00		1.00			0.99			0.97		1.00	
Satd. Flow (prot)	3480		3525			1789			1766		1611	
Flt Permitted	1.00		1.00			0.89			0.73		1.00	
Satd. Flow (perm)	3480		3525			1613			1329		1611	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	1040	90	1143	21	41	94	21	98	65	27	572	81
RTOR Reduction (vph)	6	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1124	0	1164	0	0	156	0	0	190	0	653	0
Confl. Peds. (#/hr)		15		10	11		10	10		11	11	10
Confl. Bikes (#/hr)		10		15			10			10	10	10
Turn Type	NA		NA		Perm	NA		Perm	NA		Prot	
Protected Phases	2		6			4			4		5	
Permitted Phases					4			4				
Actuated Green, G (s)	68.5		22.5			31.0			31.0		41.5	
Effective Green, g (s)	68.5		22.5			31.0			31.0		41.5	
Actuated g/C Ratio	0.62		0.20			0.28			0.28		0.38	
Clearance Time (s)	5.5		5.5			5.0			5.0		4.5	
Vehicle Extension (s)	2.0		2.0			2.0			2.0		3.0	
Lane Grp Cap (vph)	2167		721			454			374		607	
v/s Ratio Prot	0.32		c0.33								c0.41	
v/s Ratio Perm						0.10			c0.14			
v/c Ratio	0.52		1.61			0.34			0.51		1.08	
Uniform Delay, d1	11.6		43.8			31.4			33.1		34.2	
Progression Factor	1.00		1.00			1.00			1.00		1.00	
Incremental Delay, d2	0.9		282.9			2.1			4.9		58.6	
Delay (s)	12.5		326.7			33.5			38.0		92.8	
Level of Service	B		F			C			D		F	
Approach Delay (s)	12.5		326.7			33.5			38.0			
Approach LOS	B		F			C			D			

Intersection Summary			
HCM 2000 Control Delay	141.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	111.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	714	973	180	0	839	1680	0	0	0	0	0	0
Future Volume (veh/h)	714	973	180	0	839	1680	0	0	0	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97						
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00						
Work Zone On Approach		No			No							
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870						
Adj Flow Rate, veh/h	744	1014	188	0	874	1750						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Percent Heavy Veh, %	2	2	2	0	2	2						
Cap, veh/h	474	6546	1211	0	2256	3715						
Arrive On Green	0.27	1.00	1.00	0.00	1.00	1.00						
Sat Flow, veh/h	1781	4309	797	0	1870	3080						
Grp Volume(v), veh/h	744	801	401	0	874	1750						
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	0	1870	1540						
Q Serve(g_s), s	30.6	0.0	0.0	0.0	0.0	0.0						
Cycle Q Clear(g_c), s	30.6	0.0	0.0	0.0	0.0	0.0						
Prop In Lane	1.00		0.47	0.00		1.00						
Lane Grp Cap(c), veh/h	474	5171	2586	0	2256	3715						
V/C Ratio(X)	1.57	0.15	0.16	0.00	0.39	0.47						
Avail Cap(c_a), veh/h	474	5171	2586	0	2256	3715						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	42.2	0.0	0.0	0.0	0.0	0.0						
Incr Delay (d2), s/veh	266.4	0.1	0.1	0.0	0.5	0.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	48.3	0.0	0.1	0.0	0.3	0.2						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	308.6	0.1	0.1	0.0	0.5	0.4						
LnGrp LOS	F	A	A	A	A	A						
Approach Vol, veh/h		1946			2624							
Approach Delay, s/veh		118.0			0.5							
Approach LOS		F			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		181.5			36.0	145.5						
Change Period (Y+Rc), s		* 4.9			5.4	4.9						
Max Green Setting (Gmax), s		* 1.1E2			30.6	74.1						
Max Q Clear Time (g_c+I1), s		2.0			32.6	2.0						
Green Ext Time (p_c), s		1.8			0.0	31.3						

Intersection Summary	
HCM 6th Ctrl Delay	50.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	81	39	88	50	0	0	0	0	42	543	23
Future Volume (veh/h)	0	81	39	88	50	0	0	0	0	42	543	23
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	0.98		1.00				1.00		0.86
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	88	42	96	54	0				46	590	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	627	299	823	1227	0				63	852	38
Arrive On Green	0.00	0.54	0.54	0.08	0.66	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	1170	558	1781	1870	0				245	3285	146
Grp Volume(v), veh/h	0	0	130	96	54	0				349	0	312
Grp Sat Flow(s),veh/h/ln	0	0	1729	1781	1870	0				1858	0	1817
Q Serve(g_s), s	0.0	0.0	4.4	2.4	1.2	0.0				19.9	0.0	17.8
Cycle Q Clear(g_c), s	0.0	0.0	4.4	2.4	1.2	0.0				19.9	0.0	17.8
Prop In Lane	0.00		0.32	1.00		0.00				0.13		0.08
Lane Grp Cap(c), veh/h	0	0	926	823	1227	0				482	0	471
V/C Ratio(X)	0.00	0.00	0.14	0.12	0.04	0.00				0.72	0.00	0.66
Avail Cap(c_a), veh/h	0	0	926	947	1227	0				482	0	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.95	0.95	0.00				0.66	0.00	0.66
Uniform Delay (d), s/veh	0.0	0.0	13.5	8.3	7.1	0.0				39.2	0.0	38.4
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.1	0.0				6.2	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.8	0.9	0.5	0.0				9.8	0.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	13.8	8.4	7.1	0.0				45.3	0.0	43.2
LnGrp LOS	A	A	B	A	A	A				D	A	D
Approach Vol, veh/h		130			150						661	
Approach Delay, s/veh		13.8			7.9						44.3	
Approach LOS		B			A						D	

Timer - Assigned Phs	1	2		4		6			
Phs Duration (G+Y+Rc), s	13.9	67.1		35.0		81.0			
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9			
Max Green Setting (Gmax), s	17.6	54.1		30.1		76.1			
Max Q Clear Time (g_c+I1), s	14.4	6.4		21.9		3.2			
Green Ext Time (p_c), s	0.2	0.5		1.8		0.2			

Intersection Summary		
HCM 6th Ctrl Delay		34.3
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	449	0	0	755	295	67	331	253	0	0	0
Future Volume (veh/h)	16	449	0	0	755	295	67	331	253	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.87	1.00		0.91			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	17	473	0	0	795	311	71	348	266			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	50	1098	0	0	2209	862	524	546	405			
Arrive On Green	1.00	1.00	0.00	0.00	0.42	0.42	0.29	0.29	0.29			
Sat Flow, veh/h	28	1767	0	0	3647	1387	1781	1857	1378			
Grp Volume(v), veh/h	490	0	0	0	795	311	71	333	281			
Grp Sat Flow(s),veh/h/ln	1795	0	0	0	1777	1387	1781	1777	1458			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	17.8	17.9	3.4	18.9	19.6			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	17.8	17.9	3.4	18.9	19.6			
Prop In Lane	0.03		0.00	0.00		1.00	1.00		0.95			
Lane Grp Cap(c), veh/h	1148	0	0	0	2209	862	524	522	429			
V/C Ratio(X)	0.43	0.00	0.00	0.00	0.36	0.36	0.14	0.64	0.66			
Avail Cap(c_a), veh/h	1148	0	0	0	2209	862	524	522	429			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.82	0.82	1.00	1.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	18.0	18.0	30.1	35.6	35.8			
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.4	1.0	0.5	5.8	7.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.0	8.0	6.4	1.5	9.0	7.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.2	0.0	0.0	0.0	18.4	19.0	30.7	41.4	43.5			
LnGrp LOS	A	A	A	A	B	B	C	D	D			
Approach Vol, veh/h		490			1106			685				
Approach Delay, s/veh		1.2			18.6			41.1				
Approach LOS		A			B			D				

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	77.0	39.0	77.0
Change Period (Y+Rc), s	4.9	4.9	4.9
Max Green Setting (Gmax), s	72.1	34.1	72.1
Max Q Clear Time (g_c+I1), s	2.0	21.6	19.9
Green Ext Time (p_c), s	1.2	1.4	2.5

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	466	204	45	164	416	196	73	698	47	175	1006	542
Future Volume (veh/h)	466	204	45	164	416	196	73	698	47	175	1006	542
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		0.84	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	485	212	47	171	433	204	76	727	49	182	1048	565
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	748	159	199	904	527	86	1148	77	211	922	475
Arrive On Green	0.04	0.09	0.09	0.11	0.25	0.25	0.05	0.34	0.34	0.12	0.41	0.41
Sat Flow, veh/h	3456	2823	601	1781	3554	1334	1781	3372	227	1781	2247	1158
Grp Volume(v), veh/h	485	130	129	171	433	204	76	383	393	182	819	794
Grp Sat Flow(s),veh/h/ln	1728	1777	1647	1781	1777	1334	1781	1777	1822	1781	1777	1628
Q Serve(g_s), s	14.2	7.9	8.5	10.9	12.0	13.1	4.9	21.0	21.0	11.6	47.6	47.6
Cycle Q Clear(g_c), s	14.2	7.9	8.5	10.9	12.0	13.1	4.9	21.0	21.0	11.6	47.6	47.6
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.12	1.00		0.71
Lane Grp Cap(c), veh/h	423	470	436	199	904	527	86	605	620	211	729	668
V/C Ratio(X)	1.15	0.28	0.30	0.86	0.48	0.39	0.88	0.63	0.63	0.86	1.12	1.19
Avail Cap(c_a), veh/h	423	470	436	273	904	527	86	605	620	286	729	668
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	42.5	42.8	50.6	36.7	27.0	54.9	32.2	32.2	50.2	34.2	34.2
Incr Delay (d2), s/veh	88.3	1.3	1.6	13.9	1.8	2.1	58.9	2.4	2.4	14.6	72.4	99.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	3.9	3.9	5.6	5.4	4.5	3.6	9.4	9.6	6.0	34.6	36.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	144.0	43.9	44.3	64.5	38.5	29.1	113.8	34.6	34.5	64.9	106.6	133.9
LnGrp LOS	F	D	D	E	D	C	F	C	C	E	F	F
Approach Vol, veh/h		744			808			852			1795	
Approach Delay, s/veh		109.2			41.7			41.6			114.5	
Approach LOS		F			D			D			F	

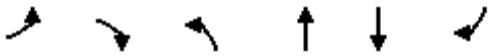
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	35.6	10.0	53.0	18.6	34.4	18.1	44.9
Change Period (Y+Rc), s	4.4	4.9	4.4	5.4	4.4	4.9	4.4	5.4
Max Green Setting (Gmax), s	13.0	25.9	5.6	47.6	14.2	29.5	18.6	34.6
Max Q Clear Time (g_c+I1), s	12.9	10.5	6.9	49.6	16.2	15.1	13.6	23.0
Green Ext Time (p_c), s	0.1	0.9	0.0	0.0	0.0	2.4	0.1	4.7

Intersection Summary	
HCM 6th Ctrl Delay	84.7
HCM 6th LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	72	1323	38	64	1723
Future Volume (vph)	0	72	1323	38	64	1723
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	0.97	0.95
Frpb, ped/bikes		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1611	1863	1555	3433	3539
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1611	1863	1555	3433	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	78	1438	41	70	1873
RTOR Reduction (vph)	0	73	0	6	0	0
Lane Group Flow (vph)	0	5	1438	35	70	1873
Confl. Peds. (#/hr)	10	10		10	10	
Confl. Bikes (#/hr)		10		10		
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	6
Permitted Phases				2		
Actuated Green, G (s)		7.8	98.2	98.2	7.8	116.0
Effective Green, g (s)		7.8	98.2	98.2	7.8	116.0
Actuated g/C Ratio		0.07	0.85	0.85	0.07	1.00
Clearance Time (s)		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		108	1577	1316	230	3539
v/s Ratio Prot		0.00	c0.77		0.02	c0.53
v/s Ratio Perm				0.02		
v/c Ratio		0.05	0.91	0.03	0.30	0.53
Uniform Delay, d1		50.6	6.0	1.4	51.5	0.0
Progression Factor		1.00	3.88	3.24	1.00	1.00
Incremental Delay, d2		0.2	6.4	0.0	0.8	0.6
Delay (s)		50.8	29.7	4.6	52.3	0.6
Level of Service		D	C	A	D	A
Approach Delay (s)	50.8		29.0			2.4
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	62	366	105	18
Future Volume (Veh/h)	0	0	62	366	105	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	67	394	113	19
Pedestrians	10			10	10	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			1	1	
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	670	142	142			
vC1, stage 1 conf vol	132					
vC2, stage 2 conf vol	538					
vCu, unblocked vol	670	142	142			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	95			
cM capacity (veh/h)	529	897	1441			

Direction, Lane #	NB 1	NB 2	SB 1
Volume Total	67	394	132
Volume Left	67	0	0
Volume Right	0	0	19
cSH	1441	1700	1700
Volume to Capacity	0.05	0.23	0.08
Queue Length 95th (ft)	4	0	0
Control Delay (s)	7.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	1.1		0.0
Approach LOS			

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	22	34	91	4	17	18	341	30	9	90	6
Future Vol, veh/h	70	22	34	91	4	17	18	341	30	9	90	6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	24	37	98	4	18	19	367	32	10	97	6
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	9.9	9.9	14.1	9.5
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	56%	81%	100%	0%
Vol Thru, %	88%	17%	4%	0%	94%
Vol Right, %	8%	27%	15%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	389	126	112	9	96
LT Vol	18	70	91	9	0
Through Vol	341	22	4	0	90
RT Vol	30	34	17	0	6
Lane Flow Rate	418	135	120	10	103
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.562	0.206	0.188	0.017	0.163
Departure Headway (Hd)	4.834	5.475	5.622	6.242	5.691
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	736	658	641	575	632
Service Time	2.932	3.487	3.634	3.96	3.409
HCM Lane V/C Ratio	0.568	0.205	0.187	0.017	0.163
HCM Control Delay	14.1	9.9	9.9	9.1	9.5
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	3.5	0.8	0.7	0.1	0.6

Intersection	
Intersection Delay, s/veh	18.6
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	145	244	16	14	538
Future Vol, veh/h	63	145	244	16	14	538
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	151	254	17	15	560
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	11.6	11.8	24.4
HCM LOS	B	B	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	30%	3%
Vol Thru, %	94%	0%	97%
Vol Right, %	6%	70%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	260	208	552
LT Vol	0	63	14
Through Vol	244	0	538
RT Vol	16	145	0
Lane Flow Rate	271	217	575
Geometry Grp	1	1	1
Degree of Util (X)	0.399	0.34	0.794
Departure Headway (Hd)	5.307	5.644	4.972
Convergence, Y/N	Yes	Yes	Yes
Cap	677	637	730
Service Time	3.344	3.684	3
HCM Lane V/C Ratio	0.4	0.341	0.788
HCM Control Delay	11.8	11.6	24.4
HCM Lane LOS	B	B	C
HCM 95th-tile Q	1.9	1.5	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1116	115	525	996	81	0	0	0	736	190	99
Future Volume (veh/h)	55	1116	115	525	996	81	0	0	0	736	190	99
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.89				1.00		0.82
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	57	1162	120	547	1038	84				482	596	103
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	73	1322	136	359	1557	126				550	578	400
Arrive On Green	0.04	0.41	0.41	0.10	0.47	0.47				0.31	0.31	0.31
Sat Flow, veh/h	1781	3223	332	3456	3294	266				1781	1870	1294
Grp Volume(v), veh/h	57	639	643	547	560	562				482	596	103
Grp Sat Flow(s),veh/h/ln	1781	1777	1778	1728	1777	1784				1781	1870	1294
Q Serve(g_s), s	3.2	33.8	34.1	10.6	24.7	24.8				26.2	31.5	6.1
Cycle Q Clear(g_c), s	3.2	33.8	34.1	10.6	24.7	24.8				26.2	31.5	6.1
Prop In Lane	1.00		0.19	1.00		0.15				1.00		1.00
Lane Grp Cap(c), veh/h	73	729	729	359	840	843				550	578	400
V/C Ratio(X)	0.78	0.88	0.88	1.52	0.67	0.67				0.88	1.03	0.26
Avail Cap(c_a), veh/h	164	796	797	359	840	843				550	578	400
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	27.7	27.8	45.7	20.7	20.7				33.4	35.3	26.5
Incr Delay (d2), s/veh	6.4	10.3	10.7	249.2	4.2	4.2				14.2	45.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	15.9	16.1	16.9	10.8	10.9				13.2	21.3	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	38.0	38.5	294.9	24.9	24.9				47.6	81.1	26.6
LnGrp LOS	D	D	D	F	C	C				D	F	C
Approach Vol, veh/h		1339			1669						1181	
Approach Delay, s/veh		39.0			113.4						62.7	
Approach LOS		D			F						E	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	15.0	46.7		36.4	8.6	53.1
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	10.6	45.7		31.5	9.4	46.9
Max Q Clear Time (g_c+I1), s	12.6	36.1		33.5	5.2	26.8
Green Ext Time (p_c), s	0.0	5.8		0.0	0.0	7.8

Intersection Summary		
HCM 6th Ctrl Delay	75.3	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1705	1516	427	0	98
Future Vol, veh/h	0	1705	1516	427	0	98
Conflicting Peds, #/hr	26	0	0	26	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1740	1547	436	0	100

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	784
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	336
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	333
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.4
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	333
HCM Lane V/C Ratio	-	-	0.3
HCM Control Delay (s)	-	-	20.4
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1705	0	0	1434	508	531
Future Volume (veh/h)	1705	0	0	1434	508	531
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1870
Adj Flow Rate, veh/h	1740	0	0	1463	518	542
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	0	0	2	2	2
Cap, veh/h	2164	0	0	2164	1037	476
Arrive On Green	0.61	0.00	0.00	0.61	0.30	0.30
Sat Flow, veh/h	3741	0	0	3741	3456	1585
Grp Volume(v), veh/h	1740	0	0	1463	518	542
Grp Sat Flow(s),veh/h/ln	1777	0	0	1777	1728	1585
Q Serve(g_s), s	38.3	0.0	0.0	27.9	12.6	30.6
Cycle Q Clear(g_c), s	38.3	0.0	0.0	27.9	12.6	30.6
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2164	0	0	2164	1037	476
V/C Ratio(X)	0.80	0.00	0.00	0.68	0.50	1.14
Avail Cap(c_a), veh/h	2164	0	0	2164	1037	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.09	0.28	0.28
Uniform Delay (d), s/veh	15.3	0.0	0.0	13.3	29.4	35.7
Incr Delay (d2), s/veh	3.3	0.0	0.0	0.1	0.0	70.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	0.0	0.0	10.2	5.2	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.6	0.0	0.0	13.3	29.4	106.3
LnGrp LOS	B	A	A	B	C	F
Approach Vol, veh/h	1740			1463	1060	
Approach Delay, s/veh	18.6			13.3	68.7	
Approach LOS	B			B	E	

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	67.0				67.0	35.0
Change Period (Y+Rc), s	4.9				4.9	4.4
Max Green Setting (Gmax), s	62.1				62.1	30.6
Max Q Clear Time (g_c+I1), s	40.3				29.9	32.6
Green Ext Time (p_c), s	6.4				5.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C

Movement	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SWR	SWR2
Lane Configurations												
Traffic Volume (vph)	2728	281	682	13	72	50	53	49	43	13	671	48
Future Volume (vph)	2728	281	682	13	72	50	53	49	43	13	671	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5			5.0			5.0		4.5	
Lane Util. Factor	0.95		0.95			1.00			1.00		1.00	
Frpb, ped/bikes	0.99		1.00			0.99			1.00		1.00	
Flpb, ped/bikes	1.00		1.00			0.99			1.00		1.00	
Frt	0.99		1.00			0.96			0.98		0.86	
Flt Protected	1.00		1.00			0.98			0.98		1.00	
Satd. Flow (prot)	3470		3526			1713			1776		1611	
Flt Permitted	1.00		1.00			0.84			0.82		1.00	
Satd. Flow (perm)	3470		3526			1463			1490		1611	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2784	287	696	13	73	51	54	50	44	13	685	49
RTOR Reduction (vph)	8	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	3063	0	709	0	0	178	0	0	107	0	734	0
Confl. Peds. (#/hr)		12		10	21		10	10		21	21	10
Confl. Bikes (#/hr)		23		10			10			10	10	10
Turn Type	NA		NA		Perm	NA		Perm	NA		Prot	
Protected Phases	2		6			4			4		5	
Permitted Phases					4			4				
Actuated Green, G (s)	58.5		37.5			31.0			31.0		16.5	
Effective Green, g (s)	58.5		37.5			31.0			31.0		16.5	
Actuated g/C Ratio	0.58		0.38			0.31			0.31		0.16	
Clearance Time (s)	5.5		5.5			5.0			5.0		4.5	
Vehicle Extension (s)	2.0		2.0			2.0			2.0		3.0	
Lane Grp Cap (vph)	2029		1322			453			461		265	
v/s Ratio Prot	c0.88		0.20								c0.46	
v/s Ratio Perm						c0.12			0.07			
v/c Ratio	1.51		0.54			0.39			0.23		2.77	
Uniform Delay, d1	20.8		24.4			27.1			25.7		41.8	
Progression Factor	1.00		1.00			1.00			1.00		1.00	
Incremental Delay, d2	231.9		1.6			2.5			1.2		806.9	
Delay (s)	252.7		26.0			29.7			26.8		848.7	
Level of Service	F		C			C			C		F	
Approach Delay (s)	252.7		26.0			29.7			26.8			
Approach LOS	F		C			C			C			

Intersection Summary			
HCM 2000 Control Delay	297.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	130.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	982	2514	587	0	577	874	0	0	0	0	0	0
Future Volume (veh/h)	982	2514	587	0	577	874	0	0	0	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97						
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00						
Work Zone On Approach		No			No							
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870						
Adj Flow Rate, veh/h	1002	2565	599	0	589	892						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98						
Percent Heavy Veh, %	2	2	2	0	2	2						
Cap, veh/h	751	6460	1385	0	2005	3303						
Arrive On Green	0.42	1.00	1.00	0.00	1.00	1.00						
Sat Flow, veh/h	1781	4188	897	0	1870	3081						
Grp Volume(v), veh/h	1002	2042	1122	0	589	892						
Grp Sat Flow(s),veh/h/ln	1781	1702	1681	0	1870	1541						
Q Serve(g_s), s	46.4	0.0	0.0	0.0	0.0	0.0						
Cycle Q Clear(g_c), s	46.4	0.0	0.0	0.0	0.0	0.0						
Prop In Lane	1.00		0.53	0.00		1.00						
Lane Grp Cap(c), veh/h	751	5252	2593	0	2005	3303						
V/C Ratio(X)	1.33	0.39	0.43	0.00	0.29	0.27						
Avail Cap(c_a), veh/h	751	5252	2593	0	2005	3303						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	31.8	0.0	0.0	0.0	0.0	0.0						
Incr Delay (d2), s/veh	159.1	0.2	0.5	0.0	0.4	0.2						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	52.4	0.2	0.4	0.0	0.2	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	190.9	0.2	0.5	0.0	0.4	0.2						
LnGrp LOS	F	A	A	A	A	A						
Approach Vol, veh/h		4166			1481							
Approach Delay, s/veh		46.2			0.3							
Approach LOS		D			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		176.5			51.8	124.7						
Change Period (Y+Rc), s		* 4.9			5.4	4.9						
Max Green Setting (Gmax), s		* 1.1E2			46.4	53.3						
Max Q Clear Time (g_c+I1), s		2.0			48.4	2.0						
Green Ext Time (p_c), s		8.8			0.0	9.8						

Intersection Summary	
HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	382	115	250	544	0	0	0	0	56	482	48
Future Volume (veh/h)	0	382	115	250	544	0	0	0	0	56	482	48
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87	1.00		1.00				1.00		0.67
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	398	120	260	567	0				58	502	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	673	203	484	1187	0				89	799	83
Arrive On Green	0.00	0.51	0.51	0.09	0.63	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	1329	401	1781	1870	0				321	2876	299
Grp Volume(v), veh/h	0	0	518	260	567	0				335	0	275
Grp Sat Flow(s),veh/h/ln	0	0	1729	1781	1870	0				1854	0	1641
Q Serve(g_s), s	0.0	0.0	23.6	7.4	17.8	0.0				17.9	0.0	16.3
Cycle Q Clear(g_c), s	0.0	0.0	23.6	7.4	17.8	0.0				17.9	0.0	16.3
Prop In Lane	0.00		0.23	1.00		0.00				0.17		0.18
Lane Grp Cap(c), veh/h	0	0	875	484	1187	0				515	0	456
V/C Ratio(X)	0.00	0.00	0.59	0.54	0.48	0.00				0.65	0.00	0.60
Avail Cap(c_a), veh/h	0	0	875	509	1187	0				515	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.94	0.94	0.00				0.09	0.00	0.09
Uniform Delay (d), s/veh	0.0	0.0	19.5	14.0	10.7	0.0				35.7	0.0	35.1
Incr Delay (d2), s/veh	0.0	0.0	2.9	0.9	1.3	0.0				0.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	9.9	2.9	7.3	0.0				8.1	0.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	22.4	14.9	12.0	0.0				36.3	0.0	35.6
LnGrp LOS	A	A	C	B	B	A				D	A	D
Approach Vol, veh/h		518			827						610	
Approach Delay, s/veh		22.4			12.9						36.0	
Approach LOS		C			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.4	61.6		36.0		76.0
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9
Max Green Setting (Gmax), s	11.6	55.1		31.1		71.1
Max Q Clear Time (g_c+I1), s	19.4	25.6		19.9		19.8
Green Ext Time (p_c), s	0.2	2.5		2.0		2.6

Intersection Summary		
HCM 6th Ctrl Delay		22.6
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	489	0	0	781	341	108	561	474	0	0	0
Future Volume (veh/h)	49	489	0	0	781	341	108	561	474	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.80	1.00		0.82			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	50	499	0	0	797	348	110	572	484			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	93	897	0	0	2129	758	558	557	409			
Arrive On Green	0.20	0.20	0.00	0.00	0.60	0.60	0.31	0.31	0.31			
Sat Flow, veh/h	97	1498	0	0	3647	1266	1781	1777	1307			
Grp Volume(v), veh/h	549	0	0	0	797	348	110	572	484			
Grp Sat Flow(s),veh/h/ln	1595	0	0	0	1777	1266	1781	1777	1307			
Q Serve(g_s), s	13.0	0.0	0.0	0.0	13.0	17.0	5.1	35.1	35.1			
Cycle Q Clear(g_c), s	32.2	0.0	0.0	0.0	13.0	17.0	5.1	35.1	35.1			
Prop In Lane	0.09		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	990	0	0	0	2129	758	558	557	409			
V/C Ratio(X)	0.55	0.00	0.00	0.00	0.37	0.46	0.20	1.03	1.18			
Avail Cap(c_a), veh/h	990	0	0	0	2129	758	558	557	409			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.74	0.00	0.00	0.00	0.68	0.68	1.00	1.00	1.00			
Uniform Delay (d), s/veh	30.1	0.0	0.0	0.0	11.6	12.4	28.1	38.5	38.5			
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.0	0.3	1.4	0.8	45.3	104.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	15.2	0.0	0.0	0.0	5.0	4.9	2.3	22.0	22.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	0.0	0.0	0.0	11.9	13.8	28.9	83.7	142.8			
LnGrp LOS	C	A	A	A	B	B	C	F	F			
Approach Vol, veh/h		549			1145			1166				
Approach Delay, s/veh		31.8			12.5			103.1				
Approach LOS		C			B			F				

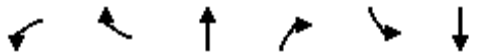
Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	72.0	40.0	72.0
Change Period (Y+Rc), s	4.9	4.9	4.9
Max Green Setting (Gmax), s	67.1	35.1	67.1
Max Q Clear Time (g_c+I1), s	34.2	37.1	19.0
Green Ext Time (p_c), s	1.7	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	53.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	443	70	165	569	172	73	946	126	273	788	515
Future Volume (veh/h)	335	443	70	165	569	172	73	946	126	273	788	515
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.76	1.00		0.76	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	342	452	71	168	581	176	74	965	129	279	804	526
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	788	122	196	936	582	70	895	120	296	844	542
Arrive On Green	0.04	0.09	0.09	0.11	0.26	0.26	0.04	0.29	0.29	0.17	0.41	0.41
Sat Flow, veh/h	3456	2944	455	1781	3554	1209	1781	3133	419	1781	2046	1314
Grp Volume(v), veh/h	342	270	253	168	581	176	74	547	547	279	696	634
Grp Sat Flow(s),veh/h/ln	1728	1777	1622	1781	1777	1209	1781	1777	1774	1781	1777	1583
Q Serve(g_s), s	11.0	16.3	16.8	10.4	16.1	10.9	4.4	32.0	32.0	17.3	42.4	43.9
Cycle Q Clear(g_c), s	11.0	16.3	16.8	10.4	16.1	10.9	4.4	32.0	32.0	17.3	42.4	43.9
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.24	1.00		0.83
Lane Grp Cap(c), veh/h	395	475	434	196	936	582	70	508	507	296	733	653
V/C Ratio(X)	0.87	0.57	0.58	0.86	0.62	0.30	1.06	1.08	1.08	0.94	0.95	0.97
Avail Cap(c_a), veh/h	395	475	434	215	936	582	70	508	507	296	733	653
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	44.8	45.1	49.0	36.3	21.3	53.8	40.0	40.0	46.2	31.8	32.2
Incr Delay (d2), s/veh	14.9	3.9	4.5	23.9	3.1	1.3	124.3	62.5	62.8	37.0	22.0	27.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	8.3	7.9	5.9	7.3	3.3	4.4	22.6	22.6	10.7	22.1	21.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.0	48.7	49.6	72.9	39.4	22.7	178.1	102.5	102.8	83.1	53.7	60.1
LnGrp LOS	E	D	D	E	D	C	F	F	F	F	D	E
Approach Vol, veh/h		865			925			1168			1609	
Approach Delay, s/veh		56.6			42.3			107.4			61.3	
Approach LOS		E			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	34.9	8.8	51.6	17.2	34.4	23.0	37.4
Change Period (Y+Rc), s	4.4	4.9	4.4	5.4	4.4	4.9	4.4	5.4
Max Green Setting (Gmax), s	13.5	28.8	4.4	46.2	12.8	29.5	18.6	32.0
Max Q Clear Time (g_c+I1), s	12.4	18.8	6.4	45.9	13.0	18.1	19.3	34.0
Green Ext Time (p_c), s	0.0	1.8	0.0	0.3	0.0	2.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	68.4
HCM 6th LOS	E



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	137	1442	12	7	1565
Future Volume (vph)	0	137	1442	12	7	1565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor		1.00	1.00	1.00	0.97	0.95
Frpb, ped/bikes		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1611	1863	1555	3433	3539
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1611	1863	1555	3433	3539
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	141	1487	12	7	1613
RTOR Reduction (vph)	0	79	0	2	0	0
Lane Group Flow (vph)	0	62	1487	10	7	1613
Confl. Peds. (#/hr)	10	10		10	10	
Confl. Bikes (#/hr)		10		10		
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	6
Permitted Phases				2		
Actuated Green, G (s)		9.7	93.3	93.3	9.7	112.0
Effective Green, g (s)		9.7	93.3	93.3	9.7	112.0
Actuated g/C Ratio		0.09	0.83	0.83	0.09	1.00
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		139	1551	1295	297	3539
v/s Ratio Prot		0.04	c0.80		0.00	c0.46
v/s Ratio Perm				0.01		
v/c Ratio		0.45	0.96	0.01	0.02	0.46
Uniform Delay, d1		48.6	7.8	1.6	46.8	0.0
Progression Factor		1.00	3.39	2.10	1.00	1.00
Incremental Delay, d2		2.3	6.8	0.0	0.0	0.4
Delay (s)		50.9	33.1	3.3	46.8	0.4
Level of Service		D	C	A	D	A
Approach Delay (s)	50.9		32.9			0.6
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	112.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 5: Fourth Ave & Washington St

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	TR	L	L	T	TR	L	LT	R
Maximum Queue (ft)	134	300	264	154	157	226	198	185	267	95
Average Queue (ft)	72	165	137	129	147	181	158	86	152	55
95th Queue (ft)	140	258	225	159	172	219	190	156	240	114
Link Distance (ft)		454	454			158	158		394	
Upstream Blk Time (%)				1	6	29	17			
Queuing Penalty (veh)				0	0	279	168			
Storage Bay Dist (ft)	110			150	150			280		70
Storage Blk Time (%)	2	19		3	12	30			35	1
Queuing Penalty (veh)	6	13		14	67	145			73	4

Intersection: 7: Fifth Ave (East) & Washington St

Movement	EB	EB	WB	WB	NB	NB	NB
Directions Served	T	T	T	T	L	L	R
Maximum Queue (ft)	102	101	341	366	114	274	211
Average Queue (ft)	58	59	167	193	74	111	58
95th Queue (ft)	110	106	304	332	128	219	166
Link Distance (ft)	84	84	862	862		504	504
Upstream Blk Time (%)	5	3					0
Queuing Penalty (veh)	19	12					0
Storage Bay Dist (ft)					90		
Storage Blk Time (%)					7	18	
Queuing Penalty (veh)					10	25	

Intersection: 8: Eighth Ave & Washington St & SR 163 SB Off-Ramp

Movement	EB	EB	WB	WB	B38	B38	NB	SB	SW
Directions Served	T	TR	T	TR	T	T	LTR	LTR	R>
Maximum Queue (ft)	342	344	1270	1270	656	657	192	195	1088
Average Queue (ft)	164	163	1168	1170	331	325	85	96	1029
95th Queue (ft)	305	292	1389	1381	771	762	160	166	1213
Link Distance (ft)	862	862	1172	1172	616	616	458	444	1042
Upstream Blk Time (%)			69	69	13	11			79
Queuing Penalty (veh)			289	291	54	45			0
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 9: Richmond St/SR 163 On-Ramps & Washington St

Movement	EB	EB	EB	B38	B38	WB	WB	WB
Directions Served	L	T	T	T	T	T	TR	R
Maximum Queue (ft)	525	705	616	221	177	458	457	448
Average Queue (ft)	510	464	153	39	15	370	423	385
95th Queue (ft)	562	936	584	158	92	525	476	499
Link Distance (ft)		616	616	1172	1172	413	413	413
Upstream Blk Time (%)		20	0			15	37	12
Queuing Penalty (veh)		74	1			0	0	0
Storage Bay Dist (ft)	500							
Storage Blk Time (%)	42	1						
Queuing Penalty (veh)	136	8						

Intersection: 13: Sixth Ave & Parking Structure Driveway (Future)

Movement	WB	NB	NB	B17	B17	SB	SB	SB	SB
Directions Served	R	T	R	T	T	L	L	T	T
Maximum Queue (ft)	126	895	171	27	29	31	155	573	572
Average Queue (ft)	55	387	26	3	2	6	94	535	537
95th Queue (ft)	109	824	208	23	21	26	203	570	566
Link Distance (ft)	167	945	945	108	108			516	516
Upstream Blk Time (%)	0	0						83	87
Queuing Penalty (veh)	0	0						0	0
Storage Bay Dist (ft)						130	130		
Storage Blk Time (%)							0	78	
Queuing Penalty (veh)							0	50	

Intersection: 5: Fourth Ave & Washington St

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	TR	L	L	T	TR	L	LT	R
Maximum Queue (ft)	134	508	501	153	157	214	183	305	405	95
Average Queue (ft)	85	471	467	133	144	165	145	272	329	63
95th Queue (ft)	171	521	516	163	177	226	195	350	432	122
Link Distance (ft)		454	454			158	158		394	
Upstream Blk Time (%)		70	74	2	14	26	7		3	
Queuing Penalty (veh)		0	0	0	0	212	60		20	
Storage Bay Dist (ft)	110			150	150			280		70
Storage Blk Time (%)	1	71		6	23	27		2	64	2
Queuing Penalty (veh)	4	39		27	114	142		16	298	20

Intersection: 7: Fifth Ave (East) & Washington St

Movement	EB	EB	WB	WB	NB	NB	NB
Directions Served	T	T	T	T	L	L	R
Maximum Queue (ft)	120	130	346	368	114	323	420
Average Queue (ft)	98	99	197	198	83	139	207
95th Queue (ft)	111	117	334	347	132	272	357
Link Distance (ft)	84	84	862	862		504	504
Upstream Blk Time (%)	33	34					0
Queuing Penalty (veh)	286	292					0
Storage Bay Dist (ft)					90		
Storage Blk Time (%)					8	23	
Queuing Penalty (veh)					21	58	

Intersection: 8: Eighth Ave & Washington St & SR 163 SB Off-Ramp

Movement	EB	EB	WB	WB	NB	SB	SW
Directions Served	T	TR	T	TR	LTR	LTR	R>
Maximum Queue (ft)	883	886	294	303	195	136	1092
Average Queue (ft)	810	821	148	156	92	54	1062
95th Queue (ft)	940	944	262	272	162	114	1078
Link Distance (ft)	862	862	1172	1172	458	444	1043
Upstream Blk Time (%)	1	3					100
Queuing Penalty (veh)	17	30					0
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: Richmond St/SR 163 On-Ramps & Washington St

Movement	EB	EB	EB	EB	WB	WB	WB
Directions Served	L	T	T	TR	T	TR	R
Maximum Queue (ft)	524	635	560	134	311	370	290
Average Queue (ft)	426	139	50	5	185	258	189
95th Queue (ft)	546	476	268	67	280	354	289
Link Distance (ft)		616	616	616	413	413	413
Upstream Blk Time (%)		0	0		0	0	
Queuing Penalty (veh)		4	0		0	0	
Storage Bay Dist (ft)	500						
Storage Blk Time (%)	5	0					
Queuing Penalty (veh)	45	0					

Intersection: 13: Sixth Ave & Parking Structure Driveway (Future)

Movement	WB	NB	NB	B17	B17	SB	SB	SB
Directions Served	R	T	R	T	T	L	T	T
Maximum Queue (ft)	184	606	30	11	15	152	567	564
Average Queue (ft)	100	200	2	0	0	17	536	534
95th Queue (ft)	174	403	13	8	11	93	561	562
Link Distance (ft)	167	945	945	108	108		516	516
Upstream Blk Time (%)	3	0					84	84
Queuing Penalty (veh)	0	0					0	0
Storage Bay Dist (ft)						130		
Storage Blk Time (%)							82	
Queuing Penalty (veh)							5	

APPENDIX H

YEAR 2035 FREEWAY ANALYSIS CALCULATIONS SHEETS

HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 NB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.13
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.900
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8187	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2178
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2071
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.05
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 NB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.13
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.900
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9442	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2511
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2071
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.21
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 SB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.78
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.840
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6923	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1473
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2308
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1939
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.76
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	25.7
Total Ramp Density Adjustment	7.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.8		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 SB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.78
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.840
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5888	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1253
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2308
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1939
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	20.8
Total Ramp Density Adjustment	7.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.8		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 NB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.10
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8169	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2897
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2301
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.26
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 NB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.10
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9330	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	3309
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2301
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.44
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 SB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	63.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.867
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6870	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2436
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2315
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2007
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.21
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.5		

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HCS7 Basic Freeway Report

Project Information

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Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 SB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	63.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.867
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5853	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2076
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2315
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2007
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.03
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.5		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 NB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.08
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3701	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1968
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.86
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	34.1
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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HCS7 Basic Freeway Report

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Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 NB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.08
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5557	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2956
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.28
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	7/31/2020
Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 SB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.64
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8262	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	4394
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2312
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2312
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.90
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.2		

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HCS7 Basic Freeway Report

Project Information

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Agency		Analysis Year	Year 2035
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 SB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.64
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4709	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2505
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2312
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2312
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.08
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.2		

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APPENDIX I

YEAR 2035 + PROJECT PHASE II (PROJECT BUILDOUT) INTERSECTION ANALYSIS CALCULATIONS SHEETS

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	33	4	0	143	217	155	0	65	39
Future Vol, veh/h	0	0	0	33	4	0	143	217	155	0	65	39
Conflicting Peds, #/hr	10	0	10	10	0	10	20	0	20	20	0	20
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	37	4	0	159	241	172	0	72	43

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	769	800	357	135	0	0	433	0	0
Stage 1	665	665	-	-	-	-	-	-	-
Stage 2	104	135	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	369	318	687	1449	-	-	1127	-	-
Stage 1	511	458	-	-	-	-	-	-	-
Stage 2	920	785	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	319	0	667	1449	-	-	1106	-	-
Mov Cap-2 Maneuver	319	0	-	-	-	-	-	-	-
Stage 1	446	0	-	-	-	-	-	-	-
Stage 2	911	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.9	2.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1449	-	-	319	1106	-	-
HCM Lane V/C Ratio	0.11	-	-	0.129	-	-	-
HCM Control Delay (s)	7.8	-	-	17.9	0	-	-
HCM Lane LOS	A	-	-	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.4	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	3	512	98	0	98
Future Vol, veh/h	21	3	512	98	0	98
Conflicting Peds, #/hr	10	10	0	20	20	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	3	569	109	0	109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	763	654	0	0	698	0
Stage 1	644	-	-	-	-	-
Stage 2	119	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	372	467	-	-	898	-
Stage 1	523	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	361	454	-	-	881	-
Mov Cap-2 Maneuver	438	-	-	-	-	-
Stage 1	513	-	-	-	-	-
Stage 2	897	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	440	881	-
HCM Lane V/C Ratio	-	-	0.061	-	-
HCM Control Delay (s)	-	-	13.7	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Intersection Delay, s/veh	32.7
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	43	11	88	3	19	23	534	75	1	114	5
Future Vol, veh/h	57	43	11	88	3	19	23	534	75	1	114	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	48	12	98	3	21	26	576	83	1	127	6
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	11.3	11.3	44.7	10.6
HCM LOS	B	B	E	B

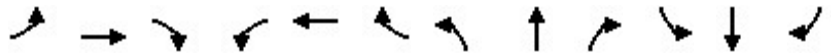
Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	4%	51%	80%	100%	0%
Vol Thru, %	84%	39%	3%	0%	96%
Vol Right, %	12%	10%	17%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	632	111	110	1	119
LT Vol	23	57	88	1	0
Through Vol	534	43	3	0	114
RT Vol	75	11	19	0	5
Lane Flow Rate	684	123	122	1	132
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.951	0.219	0.218	0.002	0.224
Departure Headway (Hd)	5.004	6.395	6.41	6.643	6.104
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	725	559	557	537	587
Service Time	3.039	4.46	4.475	4.398	3.859
HCM Lane V/C Ratio	0.943	0.22	0.219	0.002	0.225
HCM Control Delay	44.7	11.3	11.3	9.4	10.6
HCM Lane LOS	E	B	B	A	B
HCM 95th-tile Q	13.9	0.8	0.8	0	0.9

Intersection	
Intersection Delay, s/veh	30
Intersection LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	96	279	362	22	21	358
Future Vol, veh/h	96	279	362	22	21	358
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	336	436	27	25	431
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	27.7	31.3	31.1
HCM LOS	D	D	D

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	26%	6%
Vol Thru, %	94%	0%	94%
Vol Right, %	6%	74%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	384	375	379
LT Vol	0	96	21
Through Vol	362	0	358
RT Vol	22	279	0
Lane Flow Rate	463	452	457
Geometry Grp	1	1	1
Degree of Util (X)	0.812	0.778	0.808
Departure Headway (Hd)	6.322	6.2	6.373
Convergence, Y/N	Yes	Yes	Yes
Cap	574	583	566
Service Time	4.375	4.245	4.426
HCM Lane V/C Ratio	0.807	0.775	0.807
HCM Control Delay	31.3	27.7	31.1
HCM Lane LOS	D	D	D
HCM 95th-tile Q	8.1	7.2	7.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	604	124	481	1113	165	0	0	0	276	196	93
Future Volume (veh/h)	111	604	124	481	1113	165	0	0	0	276	196	93
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.90				1.00		0.87
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	116	629	129	501	1159	172				246	263	97
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	144	1154	236	411	1332	196				487	511	376
Arrive On Green	0.08	0.40	0.40	0.12	0.44	0.44				0.27	0.27	0.27
Sat Flow, veh/h	1781	2899	593	3456	3054	451				1781	1870	1375
Grp Volume(v), veh/h	116	385	373	501	671	660				246	263	97
Grp Sat Flow(s),veh/h/ln	1781	1777	1715	1728	1777	1728				1781	1870	1375
Q Serve(g_s), s	6.4	16.7	16.7	11.9	34.2	34.8				11.6	11.9	5.5
Cycle Q Clear(g_c), s	6.4	16.7	16.7	11.9	34.2	34.8				11.6	11.9	5.5
Prop In Lane	1.00		0.35	1.00		0.26				1.00		1.00
Lane Grp Cap(c), veh/h	144	707	682	411	775	753				487	511	376
V/C Ratio(X)	0.80	0.54	0.55	1.22	0.87	0.88				0.51	0.51	0.26
Avail Cap(c_a), veh/h	194	757	731	411	775	753				558	585	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	23.1	23.2	44.0	25.6	25.7				30.6	30.7	28.4
Incr Delay (d2), s/veh	11.7	0.7	0.7	118.5	12.5	13.5				0.3	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	6.9	6.7	11.8	16.5	16.5				5.0	5.3	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	23.8	23.9	162.5	38.1	39.3				30.9	31.0	28.5
LnGrp LOS	E	C	C	F	D	D				C	C	C
Approach Vol, veh/h		874			1832						606	
Approach Delay, s/veh		28.3			72.5						30.6	
Approach LOS		C			E						C	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	16.3	44.7		32.2	12.5	48.5
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	11.9	42.6		31.3	10.9	43.6
Max Q Clear Time (g_c+I1), s	13.9	18.7		13.9	8.4	36.8
Green Ext Time (p_c), s	0.0	5.2		0.6	0.0	4.5

Intersection Summary		
HCM 6th Ctrl Delay		53.2
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

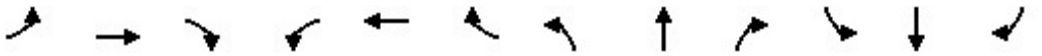
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	862	1942	655	0	25
Future Vol, veh/h	0	862	1942	655	0	25
Conflicting Peds, #/hr	18	0	0	18	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	889	2002	675	0	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1011
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	237
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	235
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22.2
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	235
HCM Lane V/C Ratio	-	-	0.11
HCM Control Delay (s)	-	-	22.2
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.4

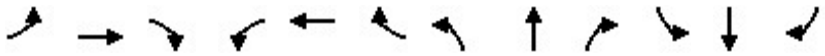


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	862	0	0	1541	22	300	29	190	60	0	23
Future Volume (veh/h)	0	862	0	0	1541	22	300	29	190	60	0	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.94	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	0	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	0	889	0	0	1589	24	309	32	196	65	0	25
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.92	0.97	0.92	0.97	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	0	0	2	2	2	2	2	2	0	2
Cap, veh/h	0	2752	0	0	2775	42	565	35	216	0	0	0
Arrive On Green	0.00	0.77	0.00	0.00	0.77	0.77	0.16	0.16	0.16	0.00	0.00	0.00
Sat Flow, veh/h	0	3741	0	0	3677	54	3456	216	1323		0	
Grp Volume(v), veh/h	0	889	0	0	787	826	309	0	228		0.0	
Grp Sat Flow(s),veh/h/ln	0	1777	0	0	1777	1861	1728	0	1539			
Q Serve(g_s), s	0.0	11.3	0.0	0.0	26.9	27.0	12.3	0.0	21.8			
Cycle Q Clear(g_c), s	0.0	11.3	0.0	0.0	26.9	27.0	12.3	0.0	21.8			
Prop In Lane	0.00		0.00	0.00		0.03	1.00		0.86			
Lane Grp Cap(c), veh/h	0	2752	0	0	1376	1441	565	0	252			
V/C Ratio(X)	0.00	0.32	0.00	0.00	0.57	0.57	0.55	0.00	0.91			
Avail Cap(c_a), veh/h	0	2752	0	0	1376	1441	728	0	324			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00	0.00	0.09	0.09	0.85	0.00	0.85			
Uniform Delay (d), s/veh	0.0	5.1	0.0	0.0	6.8	6.9	57.6	0.0	61.6			
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.0	18.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.0	0.0	0.0	9.2	9.7	5.4	0.0	9.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.4	0.0	0.0	6.9	6.9	57.9	0.0	80.2			
LnGrp LOS	A	A	A	A	A	A	E	A	F			
Approach Vol, veh/h		889			1613			537				
Approach Delay, s/veh		5.4			6.9			67.3				
Approach LOS		A			A			E				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		121.1				121.1		28.9				
Change Period (Y+Rc), s		4.9				4.9		4.4				
Max Green Setting (Gmax), s		86.6				86.6		31.6				
Max Q Clear Time (g_c+I1), s		13.3				29.0		23.8				
Green Ext Time (p_c), s		2.6				4.9		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			17.1									
HCM 6th LOS			B									

Movement	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SWR	SWR2
Lane Configurations												
Traffic Volume (vph)	1034	90	1137	24	43	102	21	98	67	27	578	84
Future Volume (vph)	1034	90	1137	24	43	102	21	98	67	27	578	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5			5.0			5.0		4.5	
Lane Util. Factor	0.95		0.95			1.00			1.00		1.00	
Frpb, ped/bikes	1.00		1.00			0.99			1.00		1.00	
Flpb, ped/bikes	1.00		1.00			1.00			1.00		1.00	
Frt	0.99		1.00			0.98			0.98		0.86	
Flt Protected	1.00		1.00			0.99			0.98		1.00	
Satd. Flow (prot)	3480		3523			1793			1768		1611	
Flt Permitted	1.00		1.00			0.89			0.72		1.00	
Satd. Flow (perm)	3480		3523			1614			1308		1611	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	1044	91	1148	24	43	103	21	99	68	27	584	85
RTOR Reduction (vph)	6	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1129	0	1172	0	0	167	0	0	194	0	669	0
Confl. Peds. (#/hr)		15		10	11		10	10		11	11	10
Confl. Bikes (#/hr)		10		15			10			10	10	10
Turn Type	NA		NA		Perm	NA		Perm	NA		Prot	
Protected Phases	2		6			4			4		5	
Permitted Phases					4			4				
Actuated Green, G (s)	68.5		22.5			31.0			31.0		41.5	
Effective Green, g (s)	68.5		22.5			31.0			31.0		41.5	
Actuated g/C Ratio	0.62		0.20			0.28			0.28		0.38	
Clearance Time (s)	5.5		5.5			5.0			5.0		4.5	
Vehicle Extension (s)	2.0		2.0			2.0			2.0		3.0	
Lane Grp Cap (vph)	2167		720			454			368		607	
v/s Ratio Prot	0.32		c0.33								c0.42	
v/s Ratio Perm						0.10			c0.15			
v/c Ratio	0.52		1.63			0.37			0.53		1.10	
Uniform Delay, d1	11.6		43.8			31.6			33.3		34.2	
Progression Factor	1.00		1.00			1.00			1.00		1.00	
Incremental Delay, d2	0.9		288.8			2.3			5.3		67.7	
Delay (s)	12.5		332.6			33.9			38.6		101.9	
Level of Service	B		F			C			D		F	
Approach Delay (s)	12.5		332.6			33.9			38.6			
Approach LOS	B		F			C			D			

Intersection Summary			
HCM 2000 Control Delay	145.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	112.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



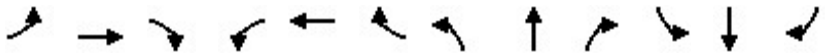
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	717	974	180	0	845	1680	0	0	0	0	0	0
Future Volume (veh/h)	717	974	180	0	845	1680	0	0	0	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97						
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00						
Work Zone On Approach		No			No							
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870						
Adj Flow Rate, veh/h	747	1015	188	0	880	1750						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Percent Heavy Veh, %	2	2	2	0	2	2						
Cap, veh/h	474	6547	1210	0	2256	3715						
Arrive On Green	0.27	1.00	1.00	0.00	1.00	1.00						
Sat Flow, veh/h	1781	4310	797	0	1870	3080						
Grp Volume(v), veh/h	747	801	402	0	880	1750						
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	0	1870	1540						
Q Serve(g_s), s	30.6	0.0	0.0	0.0	0.0	0.0						
Cycle Q Clear(g_c), s	30.6	0.0	0.0	0.0	0.0	0.0						
Prop In Lane	1.00		0.47	0.00		1.00						
Lane Grp Cap(c), veh/h	474	5171	2586	0	2256	3715						
V/C Ratio(X)	1.58	0.15	0.16	0.00	0.39	0.47						
Avail Cap(c_a), veh/h	474	5171	2586	0	2256	3715						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	42.2	0.0	0.0	0.0	0.0	0.0						
Incr Delay (d2), s/veh	269.2	0.1	0.1	0.0	0.5	0.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	48.7	0.0	0.1	0.0	0.3	0.2						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	311.4	0.1	0.1	0.0	0.5	0.4						
LnGrp LOS	F	A	A	A	A	A						
Approach Vol, veh/h		1950			2630							
Approach Delay, s/veh		119.3			0.5							
Approach LOS		F			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		181.5			36.0	145.5						
Change Period (Y+Rc), s		* 4.9			5.4	4.9						
Max Green Setting (Gmax), s		* 1.1E2			30.6	74.1						
Max Q Clear Time (g_c+I1), s		2.0			32.6	2.0						
Green Ext Time (p_c), s		1.8			0.0	31.5						

Intersection Summary	
HCM 6th Ctrl Delay	51.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

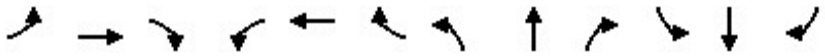
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	81	39	88	50	0	0	0	0	45	544	23
Future Volume (veh/h)	0	81	39	88	50	0	0	0	0	45	544	23
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	0.98		1.00				1.00		0.86
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	88	42	96	54	0				49	591	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	627	299	823	1227	0				67	849	38
Arrive On Green	0.00	0.54	0.54	0.08	0.66	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	1170	558	1781	1870	0				259	3271	145
Grp Volume(v), veh/h	0	0	130	96	54	0				351	0	314
Grp Sat Flow(s),veh/h/ln	0	0	1729	1781	1870	0				1857	0	1817
Q Serve(g_s), s	0.0	0.0	4.4	2.4	1.2	0.0				20.0	0.0	17.9
Cycle Q Clear(g_c), s	0.0	0.0	4.4	2.4	1.2	0.0				20.0	0.0	17.9
Prop In Lane	0.00		0.32	1.00		0.00				0.14		0.08
Lane Grp Cap(c), veh/h	0	0	926	823	1227	0				482	0	472
V/C Ratio(X)	0.00	0.00	0.14	0.12	0.04	0.00				0.73	0.00	0.66
Avail Cap(c_a), veh/h	0	0	926	947	1227	0				482	0	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.95	0.95	0.00				0.65	0.00	0.65
Uniform Delay (d), s/veh	0.0	0.0	13.5	8.3	7.1	0.0				39.2	0.0	38.4
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.1	0.0				6.2	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.8	0.9	0.5	0.0				9.9	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	13.8	8.4	7.1	0.0				45.4	0.0	43.2
LnGrp LOS	A	A	B	A	A	A				D	A	D
Approach Vol, veh/h		130			150						665	
Approach Delay, s/veh		13.8			7.9						44.4	
Approach LOS		B			A						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	13.9	67.1		35.0		81.0
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9
Max Green Setting (Gmax), s	17.6	54.1		30.1		76.1
Max Q Clear Time (g_c+I1), s	14.4	6.4		22.0		3.2
Green Ext Time (p_c), s	0.2	0.5		1.8		0.2

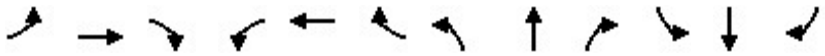
Intersection Summary		
HCM 6th Ctrl Delay		34.4
HCM 6th LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	452	0	0	755	308	67	337	253	0	0	0
Future Volume (veh/h)	16	452	0	0	755	308	67	337	253	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.87	1.00		0.91			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	17	476	0	0	795	324	71	355	266			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	49	1098	0	0	2209	862	524	551	401			
Arrive On Green	1.00	1.00	0.00	0.00	0.42	0.42	0.29	0.29	0.29			
Sat Flow, veh/h	28	1767	0	0	3647	1387	1781	1873	1366			
Grp Volume(v), veh/h	493	0	0	0	795	324	71	336	285			
Grp Sat Flow(s),veh/h/ln	1794	0	0	0	1777	1387	1781	1777	1462			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	17.8	18.8	3.4	19.1	19.8			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	17.8	18.8	3.4	19.1	19.8			
Prop In Lane	0.03		0.00	0.00		1.00	1.00		0.93			
Lane Grp Cap(c), veh/h	1147	0	0	0	2209	862	524	522	430			
V/C Ratio(X)	0.43	0.00	0.00	0.00	0.36	0.38	0.14	0.64	0.66			
Avail Cap(c_a), veh/h	1147	0	0	0	2209	862	524	522	430			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.82	0.82	1.00	1.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	18.0	18.3	30.1	35.7	35.9			
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.4	1.0	0.5	6.0	7.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.0	8.0	6.7	1.5	9.1	8.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.2	0.0	0.0	0.0	18.4	19.3	30.7	41.7	43.7			
LnGrp LOS	A	A	A	A	B	B	C	D	D			
Approach Vol, veh/h		493			1119			692				
Approach Delay, s/veh		1.2			18.7			41.4				
Approach LOS		A			B			D				

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	77.0	39.0	77.0
Change Period (Y+Rc), s	4.9	4.9	4.9
Max Green Setting (Gmax), s	72.1	34.1	72.1
Max Q Clear Time (g_c+I1), s	2.0	21.8	20.8
Green Ext Time (p_c), s	1.3	1.4	2.6

Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	467	205	45	164	423	197	73	698	47	175	1006	549
Future Volume (veh/h)	467	205	45	164	423	197	73	698	47	175	1006	549
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		0.84	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	486	214	47	171	441	205	76	727	49	182	1048	572
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	749	158	199	904	527	86	1148	77	211	918	478
Arrive On Green	0.04	0.09	0.09	0.11	0.25	0.25	0.05	0.34	0.34	0.12	0.41	0.41
Sat Flow, veh/h	3456	2829	597	1781	3554	1334	1781	3372	227	1781	2238	1165
Grp Volume(v), veh/h	486	131	130	171	441	205	76	383	393	182	822	798
Grp Sat Flow(s),veh/h/ln	1728	1777	1649	1781	1777	1334	1781	1777	1822	1781	1777	1626
Q Serve(g_s), s	14.2	8.0	8.6	10.9	12.3	13.2	4.9	21.0	21.0	11.6	47.6	47.6
Cycle Q Clear(g_c), s	14.2	8.0	8.6	10.9	12.3	13.2	4.9	21.0	21.0	11.6	47.6	47.6
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.12	1.00		0.72
Lane Grp Cap(c), veh/h	423	470	437	199	904	527	86	605	620	211	729	667
V/C Ratio(X)	1.15	0.28	0.30	0.86	0.49	0.39	0.88	0.63	0.63	0.86	1.13	1.20
Avail Cap(c_a), veh/h	423	470	437	273	904	527	86	605	620	286	729	667
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	42.6	42.8	50.6	36.8	27.0	54.9	32.2	32.2	50.2	34.2	34.2
Incr Delay (d2), s/veh	89.2	1.3	1.6	13.9	1.9	2.2	58.9	2.4	2.4	14.6	74.1	102.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	3.9	3.9	5.6	5.6	4.5	3.6	9.4	9.6	6.0	34.9	37.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	144.8	43.9	44.4	64.5	38.7	29.1	113.8	34.6	34.5	64.9	108.3	136.7
LnGrp LOS	F	D	D	E	D	C	F	C	C	E	F	F
Approach Vol, veh/h		747			817			852			1802	
Approach Delay, s/veh		109.7			41.7			41.6			116.5	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	35.6	10.0	53.0	18.6	34.4	18.1	44.9
Change Period (Y+Rc), s	4.4	4.9	4.4	5.4	4.4	4.9	4.4	5.4
Max Green Setting (Gmax), s	17.6	25.9	5.6	47.6	14.2	29.5	18.6	34.6
Max Q Clear Time (g_c+I1), s	12.9	10.6	6.9	49.6	16.2	15.2	13.6	23.0
Green Ext Time (p_c), s	0.1	0.9	0.0	0.0	0.0	2.4	0.1	4.7

Intersection Summary	
HCM 6th Ctrl Delay	85.7
HCM 6th LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	76	1330	41	73	1754
Future Volume (vph)	0	76	1330	41	73	1754
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	0.97	0.95
Frpb, ped/bikes		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1611	1863	1555	3433	3539
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1611	1863	1555	3433	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	83	1446	45	79	1907
RTOR Reduction (vph)	0	75	0	7	0	0
Lane Group Flow (vph)	0	8	1446	38	79	1907
Confl. Peds. (#/hr)	10	10		10	10	
Confl. Bikes (#/hr)		10		10		
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	6
Permitted Phases				2		
Actuated Green, G (s)		8.1	97.9	97.9	8.1	116.0
Effective Green, g (s)		8.1	97.9	97.9	8.1	116.0
Actuated g/C Ratio		0.07	0.84	0.84	0.07	1.00
Clearance Time (s)		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		112	1572	1312	239	3539
v/s Ratio Prot		0.00	c0.78		0.02	c0.54
v/s Ratio Perm				0.02		
v/c Ratio		0.07	0.92	0.03	0.33	0.54
Uniform Delay, d1		50.4	6.3	1.4	51.4	0.0
Progression Factor		1.00	3.74	3.84	1.00	1.00
Incremental Delay, d2		0.3	7.0	0.0	0.8	0.6
Delay (s)		50.7	30.7	5.6	52.2	0.6
Level of Service		D	C	A	D	A
Approach Delay (s)	50.7		29.9			2.6
Approach LOS	D		C			A

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	167	18	0	79	366	97	0	105	18
Future Vol, veh/h	0	0	0	167	18	0	79	366	97	0	105	18
Conflicting Peds, #/hr	10	0	10	10	0	10	20	0	20	20	0	20
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	180	19	0	85	394	104	0	113	19

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	769	788	476	152	0	0	518	0	0
Stage 1	636	636	-	-	-	-	-	-	-
Stage 2	133	152	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	369	323	589	1429	-	-	1048	-	-
Stage 1	527	472	-	-	-	-	-	-	-
Stage 2	893	772	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	337	0	572	1429	-	-	1028	-	-
Mov Cap-2 Maneuver	337	0	-	-	-	-	-	-	-
Stage 1	486	0	-	-	-	-	-	-	-
Stage 2	884	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30	1.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1429	-	-	337	1028	-	-
HCM Lane V/C Ratio	0.059	-	-	0.59	-	-	-
HCM Control Delay (s)	7.7	-	-	30	0	-	-
HCM Lane LOS	A	-	-	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3.6	0	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	167	18	525	61	0	308
Future Vol, veh/h	167	18	525	61	0	308
Conflicting Peds, #/hr	10	10	0	20	20	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	180	19	565	66	0	331

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	959	628	0	0	651	0
Stage 1	618	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	285	483	-	-	935	-
Stage 1	538	-	-	-	-	-
Stage 2	720	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	277	469	-	-	917	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	528	-	-	-	-	-
Stage 2	713	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	404	917	-
HCM Lane V/C Ratio	-	-	0.492	-	-
HCM Control Delay (s)	-	-	22.3	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2.6	0	-

Intersection	
Intersection Delay, s/veh	33
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	88	22	34	91	4	17	18	481	30	9	421	6
Future Vol, veh/h	88	22	34	91	4	17	18	481	30	9	421	6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	95	24	37	98	4	18	19	502	32	10	453	6
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	13.8	13.2	43.8	31.7
HCM LOS	B	B	E	D

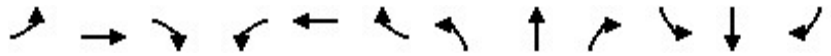
Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	3%	61%	81%	100%	0%
Vol Thru, %	91%	15%	4%	0%	99%
Vol Right, %	6%	24%	15%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	529	144	112	9	427
LT Vol	18	88	91	9	0
Through Vol	481	22	4	0	421
RT Vol	30	34	17	0	6
Lane Flow Rate	553	155	120	10	459
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.918	0.315	0.253	0.019	0.82
Departure Headway (Hd)	5.973	7.319	7.55	6.948	6.427
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	609	489	473	514	560
Service Time	4.023	5.389	5.627	4.7	4.18
HCM Lane V/C Ratio	0.908	0.317	0.254	0.019	0.82
HCM Control Delay	43.8	13.8	13.2	9.8	32.2
HCM Lane LOS	E	B	B	A	D
HCM 95th-tile Q	11.6	1.3	1	0.1	8.2

Intersection	
Intersection Delay, s/veh	136.2
Intersection LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	232	317	29	23	869
Future Vol, veh/h	63	232	317	29	23	869
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	242	330	30	24	905
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	16.9	17.8	221.6
HCM LOS	C	C	F

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	21%	3%
Vol Thru, %	92%	0%	97%
Vol Right, %	8%	79%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	346	295	892
LT Vol	0	63	23
Through Vol	317	0	869
RT Vol	29	232	0
Lane Flow Rate	360	307	929
Geometry Grp	1	1	1
Degree of Util (X)	0.578	0.514	1.436
Departure Headway (Hd)	6.407	6.858	5.562
Convergence, Y/N	Yes	Yes	Yes
Cap	566	529	660
Service Time	4.407	4.858	3.562
HCM Lane V/C Ratio	0.636	0.58	1.408
HCM Control Delay	17.8	16.9	221.6
HCM Lane LOS	C	C	F
HCM 95th-tile Q	3.7	2.9	43.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1116	115	525	996	127	0	0	0	872	322	161
Future Volume (veh/h)	82	1116	115	525	996	127	0	0	0	872	322	161
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.89				1.00		0.82
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	85	1162	120	547	1038	132				622	736	168
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	108	1343	138	359	1435	182				550	578	400
Arrive On Green	0.06	0.42	0.42	0.10	0.46	0.46				0.31	0.31	0.31
Sat Flow, veh/h	1781	3223	332	3456	3120	396				1781	1870	1294
Grp Volume(v), veh/h	85	639	643	547	590	580				622	736	168
Grp Sat Flow(s),veh/h/ln	1781	1777	1779	1728	1777	1740				1781	1870	1294
Q Serve(g_s), s	4.8	33.4	33.7	10.6	27.4	27.5				31.5	31.5	10.5
Cycle Q Clear(g_c), s	4.8	33.4	33.7	10.6	27.4	27.5				31.5	31.5	10.5
Prop In Lane	1.00		0.19	1.00		0.23				1.00		1.00
Lane Grp Cap(c), veh/h	108	740	741	359	817	800				550	578	400
V/C Ratio(X)	0.78	0.86	0.87	1.52	0.72	0.72				1.13	1.27	0.42
Avail Cap(c_a), veh/h	164	796	797	359	817	800				550	578	400
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	27.1	27.2	45.7	22.3	22.3				35.3	35.3	28.0
Incr Delay (d2), s/veh	6.4	9.2	9.5	249.2	5.5	5.7				79.7	136.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	15.5	15.7	16.9	12.2	12.0				25.5	35.8	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	36.3	36.7	294.9	27.8	28.0				115.0	171.7	28.3
LnGrp LOS	D	D	D	F	C	C				F	F	C
Approach Vol, veh/h		1367			1717						1526	
Approach Delay, s/veh		37.6			112.9						132.8	
Approach LOS		D			F						F	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	15.0	47.4		36.4	10.6	51.8
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	10.6	45.7		31.5	9.4	46.9
Max Q Clear Time (g_c+I1), s	12.8	35.7		33.5	6.8	29.5
Green Ext Time (p_c), s	0.0	5.9		0.0	0.0	7.7

Intersection Summary	
HCM 6th Ctrl Delay	97.2
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

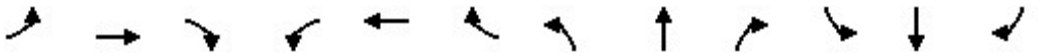
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1735	1526	442	0	98
Future Vol, veh/h	0	1735	1526	442	0	98
Conflicting Peds, #/hr	26	0	0	26	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1770	1557	451	0	100

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	789
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	0	333
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	330
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	330
HCM Lane V/C Ratio	-	-	0.303
HCM Control Delay (s)	-	-	20.6
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	1.2

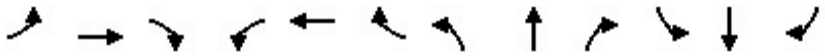


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1735	0	0	1447	27	520	37	531	118	0	45
Future Volume (veh/h)	0	1735	0	0	1447	27	520	37	531	118	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	0	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	0	1770	0	0	1477	29	531	40	542	128	0	49
Peak Hour Factor	0.92	0.98	0.98	0.98	0.98	0.92	0.98	0.92	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	0	0	2	2	2	2	2	2	0	2
Cap, veh/h	0	2307	0	0	2315	45	982	30	412	0	0	0
Arrive On Green	0.00	0.65	0.00	0.00	0.65	0.65	0.28	0.28	0.28	0.00	0.00	0.00
Sat Flow, veh/h	0	3741	0	0	3658	70	3456	107	1450		0	
Grp Volume(v), veh/h	0	1770	0	0	735	771	531	0	582		0.0	
Grp Sat Flow(s),veh/h/ln	0	1777	0	0	1777	1858	1728	0	1557			
Q Serve(g_s), s	0.0	48.7	0.0	0.0	34.7	34.8	18.2	0.0	39.8			
Cycle Q Clear(g_c), s	0.0	48.7	0.0	0.0	34.7	34.8	18.2	0.0	39.8			
Prop In Lane	0.00		0.00	0.00		0.04	1.00		0.93			
Lane Grp Cap(c), veh/h	0	2307	0	0	1154	1206	982	0	442			
V/C Ratio(X)	0.00	0.77	0.00	0.00	0.64	0.64	0.54	0.00	1.32			
Avail Cap(c_a), veh/h	0	2307	0	0	1154	1206	982	0	442			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00	0.00	0.09	0.09	0.26	0.00	0.26			
Uniform Delay (d), s/veh	0.0	17.2	0.0	0.0	14.7	14.7	42.4	0.0	50.1			
Incr Delay (d2), s/veh	0.0	2.5	0.0	0.0	0.1	0.1	0.1	0.0	146.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	19.8	0.0	0.0	13.5	14.2	7.8	0.0	33.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.7	0.0	0.0	14.8	14.8	42.5	0.0	196.3			
LnGrp LOS	A	B	A	A	B	B	D	A	F			
Approach Vol, veh/h		1770			1506			1113				
Approach Delay, s/veh		19.7			14.8			122.9				
Approach LOS		B			B			F				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		95.8				95.8		44.2				
Change Period (Y+Rc), s		4.9				4.9		4.4				
Max Green Setting (Gmax), s		68.4				68.4		39.8				
Max Q Clear Time (g_c+I1), s		50.7				36.8		41.8				
Green Ext Time (p_c), s		6.2				4.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			44.2									
HCM 6th LOS			D									

Movement	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SWR	SWR2
Lane Configurations												
Traffic Volume (vph)	2754	285	685	15	74	55	53	53	60	13	679	52
Future Volume (vph)	2754	285	685	15	74	55	53	53	60	13	679	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5			5.0			5.0		4.5	
Lane Util. Factor	0.95		0.95			1.00			1.00		1.00	
Frpb, ped/bikes	0.99		1.00			0.99			1.00		1.00	
Flpb, ped/bikes	1.00		1.00			0.99			1.00		1.00	
Frt	0.99		1.00			0.96			0.99		0.86	
Flt Protected	1.00		1.00			0.98			0.98		1.00	
Satd. Flow (prot)	3470		3524			1718			1787		1611	
Flt Permitted	1.00		1.00			0.84			0.83		1.00	
Satd. Flow (perm)	3470		3524			1473			1517		1611	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2810	291	699	15	76	56	54	54	61	13	693	53
RTOR Reduction (vph)	8	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	3093	0	714	0	0	186	0	0	128	0	746	0
Confl. Peds. (#/hr)		12		10	21		10	10		21	21	10
Confl. Bikes (#/hr)		23		10			10			10	10	10
Turn Type	NA		NA		Perm	NA		Perm	NA		Prot	
Protected Phases	2		6			4			4		5	
Permitted Phases					4			4				
Actuated Green, G (s)	58.5		37.5			31.0			31.0		16.5	
Effective Green, g (s)	58.5		37.5			31.0			31.0		16.5	
Actuated g/C Ratio	0.58		0.38			0.31			0.31		0.16	
Clearance Time (s)	5.5		5.5			5.0			5.0		4.5	
Vehicle Extension (s)	2.0		2.0			2.0			2.0		3.0	
Lane Grp Cap (vph)	2029		1321			456			470		265	
v/s Ratio Prot	c0.89		0.20								c0.46	
v/s Ratio Perm						c0.13			0.08			
v/c Ratio	1.52		0.54			0.41			0.27		2.82	
Uniform Delay, d1	20.8		24.5			27.3			26.0		41.8	
Progression Factor	1.00		1.00			1.00			1.00		1.00	
Incremental Delay, d2	238.6		1.6			2.7			1.4		827.2	
Delay (s)	259.3		26.1			29.9			27.4		868.9	
Level of Service	F		C			C			C		F	
Approach Delay (s)	259.3		26.1			29.9			27.4			
Approach LOS	F		C			C			C			

Intersection Summary			
HCM 2000 Control Delay	303.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	131.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1000	2523	587	0	581	874	0	0	0	0	0	0
Future Volume (veh/h)	1000	2523	587	0	581	874	0	0	0	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97						
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00						
Work Zone On Approach		No			No							
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870						
Adj Flow Rate, veh/h	1020	2574	599	0	593	892						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98						
Percent Heavy Veh, %	2	2	2	0	2	2						
Cap, veh/h	751	6465	1381	0	2005	3303						
Arrive On Green	0.42	1.00	1.00	0.00	1.00	1.00						
Sat Flow, veh/h	1781	4190	895	0	1870	3081						
Grp Volume(v), veh/h	1020	2048	1125	0	593	892						
Grp Sat Flow(s),veh/h/ln	1781	1702	1682	0	1870	1541						
Q Serve(g_s), s	46.4	0.0	0.0	0.0	0.0	0.0						
Cycle Q Clear(g_c), s	46.4	0.0	0.0	0.0	0.0	0.0						
Prop In Lane	1.00		0.53	0.00		1.00						
Lane Grp Cap(c), veh/h	751	5252	2594	0	2005	3303						
V/C Ratio(X)	1.36	0.39	0.43	0.00	0.30	0.27						
Avail Cap(c_a), veh/h	751	5252	2594	0	2005	3303						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	31.8	0.0	0.0	0.0	0.0	0.0						
Incr Delay (d2), s/veh	169.5	0.2	0.5	0.0	0.4	0.2						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	54.6	0.2	0.4	0.0	0.2	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	201.3	0.2	0.5	0.0	0.4	0.2						
LnGrp LOS	F	A	A	A	A	A						
Approach Vol, veh/h		4193			1485							
Approach Delay, s/veh		49.2			0.3							
Approach LOS		D			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		176.5			51.8	124.7						
Change Period (Y+Rc), s		* 4.9			5.4	4.9						
Max Green Setting (Gmax), s		* 1.1E2			46.4	53.3						
Max Q Clear Time (g_c+I1), s		2.0			48.4	2.0						
Green Ext Time (p_c), s		8.9			0.0	9.8						

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

Notes

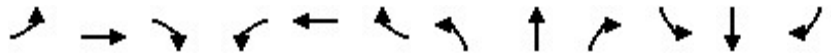
User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	382	115	250	544	0	0	0	0	76	491	48
Future Volume (veh/h)	0	382	115	250	544	0	0	0	0	76	491	48
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87	1.00		1.00				1.00		0.67
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	398	120	260	567	0				79	511	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	673	203	484	1187	0				116	777	79
Arrive On Green	0.00	0.51	0.51	0.09	0.63	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	1329	401	1781	1870	0				416	2799	286
Grp Volume(v), veh/h	0	0	518	260	567	0				351	0	289
Grp Sat Flow(s),veh/h/ln	0	0	1729	1781	1870	0				1850	0	1651
Q Serve(g_s), s	0.0	0.0	23.6	7.4	17.8	0.0				19.0	0.0	17.2
Cycle Q Clear(g_c), s	0.0	0.0	23.6	7.4	17.8	0.0				19.0	0.0	17.2
Prop In Lane	0.00		0.23	1.00		0.00				0.22		0.17
Lane Grp Cap(c), veh/h	0	0	875	484	1187	0				514	0	458
V/C Ratio(X)	0.00	0.00	0.59	0.54	0.48	0.00				0.68	0.00	0.63
Avail Cap(c_a), veh/h	0	0	875	509	1187	0				514	0	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.94	0.94	0.00				0.09	0.00	0.09
Uniform Delay (d), s/veh	0.0	0.0	19.5	14.0	10.7	0.0				36.1	0.0	35.4
Incr Delay (d2), s/veh	0.0	0.0	2.9	0.9	1.3	0.0				0.7	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	9.9	2.9	7.3	0.0				8.6	0.0	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	22.4	14.9	12.0	0.0				36.7	0.0	36.0
LnGrp LOS	A	A	C	B	B	A				D	A	D
Approach Vol, veh/h		518			827						640	
Approach Delay, s/veh		22.4			12.9						36.4	
Approach LOS		C			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.4	61.6		36.0		76.0
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9
Max Green Setting (Gmax), s	10.0	55.1		31.1		71.1
Max Q Clear Time (g_c+I1), s	9.4	25.6		21.0		19.8
Green Ext Time (p_c), s	0.2	2.5		2.1		2.6

Intersection Summary		
HCM 6th Ctrl Delay		23.0
HCM 6th LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	509	0	0	781	349	108	565	474	0	0	0
Future Volume (veh/h)	49	509	0	0	781	349	108	565	474	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.80	1.00		0.82			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	50	519	0	0	797	356	110	577	484			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	91	904	0	0	2129	758	558	557	409			
Arrive On Green	0.20	0.20	0.00	0.00	0.60	0.60	0.31	0.31	0.31			
Sat Flow, veh/h	93	1510	0	0	3647	1266	1781	1777	1307			
Grp Volume(v), veh/h	569	0	0	0	797	356	110	577	484			
Grp Sat Flow(s),veh/h/ln	1602	0	0	0	1777	1266	1781	1777	1307			
Q Serve(g_s), s	14.0	0.0	0.0	0.0	13.0	17.6	5.1	35.1	35.1			
Cycle Q Clear(g_c), s	33.5	0.0	0.0	0.0	13.0	17.6	5.1	35.1	35.1			
Prop In Lane	0.09		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	995	0	0	0	2129	758	558	557	409			
V/C Ratio(X)	0.57	0.00	0.00	0.00	0.37	0.47	0.20	1.04	1.18			
Avail Cap(c_a), veh/h	995	0	0	0	2129	758	558	557	409			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.74	0.00	0.00	0.00	0.68	0.68	1.00	1.00	1.00			
Uniform Delay (d), s/veh	30.6	0.0	0.0	0.0	11.6	12.5	28.1	38.5	38.5			
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.0	0.3	1.4	0.8	47.8	104.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.8	0.0	0.0	0.0	5.0	5.0	2.3	22.4	22.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	0.0	0.0	0.0	11.9	13.9	28.9	86.3	142.8			
LnGrp LOS	C	A	A	A	B	B	C	F	F			
Approach Vol, veh/h		569			1153			1171				
Approach Delay, s/veh		32.4			12.6			104.2				
Approach LOS		C			B			F				

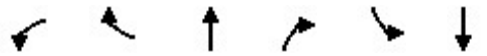
Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	72.0	40.0	72.0
Change Period (Y+Rc), s	4.9	4.9	4.9
Max Green Setting (Gmax), s	67.1	35.1	67.1
Max Q Clear Time (g_c+I1), s	35.5	37.1	19.6
Green Ext Time (p_c), s	1.8	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	53.6
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	345	453	70	165	573	172	73	946	126	273	788	519
Future Volume (veh/h)	345	453	70	165	573	172	73	946	126	273	788	519
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.76	1.00		0.76	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	352	462	71	168	585	176	74	965	129	279	804	530
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	791	120	196	936	582	70	895	120	296	841	544
Arrive On Green	0.04	0.09	0.09	0.11	0.26	0.26	0.04	0.29	0.29	0.17	0.41	0.41
Sat Flow, veh/h	3456	2956	447	1781	3554	1209	1781	3133	419	1781	2039	1320
Grp Volume(v), veh/h	352	275	258	168	585	176	74	547	547	279	699	635
Grp Sat Flow(s),veh/h/ln	1728	1777	1626	1781	1777	1209	1781	1777	1774	1781	1777	1582
Q Serve(g_s), s	11.4	16.6	17.1	10.4	16.3	10.9	4.4	32.0	32.0	17.3	42.6	44.2
Cycle Q Clear(g_c), s	11.4	16.6	17.1	10.4	16.3	10.9	4.4	32.0	32.0	17.3	42.6	44.2
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.24	1.00		0.83
Lane Grp Cap(c), veh/h	395	475	435	196	936	582	70	508	507	296	733	653
V/C Ratio(X)	0.89	0.58	0.59	0.86	0.62	0.30	1.06	1.08	1.08	0.94	0.95	0.97
Avail Cap(c_a), veh/h	395	475	435	215	936	582	70	508	507	296	733	653
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	45.0	45.2	49.0	36.4	21.3	53.8	40.0	40.0	46.2	31.8	32.3
Incr Delay (d2), s/veh	17.7	4.0	4.6	23.9	3.1	1.3	124.3	62.5	62.8	37.0	22.5	28.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	8.5	8.0	5.9	7.4	3.3	4.4	22.6	22.6	10.7	22.3	21.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.9	48.9	49.8	72.9	39.5	22.7	178.1	102.5	102.8	83.1	54.4	61.0
LnGrp LOS	E	D	D	E	D	C	F	F	F	F	D	E
Approach Vol, veh/h		885			929			1168			1613	
Approach Delay, s/veh		57.9			42.4			107.4			62.0	
Approach LOS		E			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	34.9	8.8	51.6	17.2	34.4	23.0	37.4
Change Period (Y+Rc), s	4.4	4.9	4.4	5.4	4.4	4.9	4.4	5.4
Max Green Setting (Gmax), s	13.5	28.8	4.4	46.2	12.8	29.5	18.6	32.0
Max Q Clear Time (g_c+I1), s	12.4	19.1	6.4	46.2	13.4	18.3	19.3	34.0
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	2.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	68.8
HCM 6th LOS	E



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	157	1487	14	12	1584
Future Volume (vph)	0	157	1487	14	12	1584
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5
Lane Util. Factor		1.00	1.00	1.00	0.97	0.95
Frpb, ped/bikes		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1611	1863	1554	3433	3539
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1611	1863	1554	3433	3539
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	162	1533	14	12	1633
RTOR Reduction (vph)	0	71	0	2	0	0
Lane Group Flow (vph)	0	91	1533	12	12	1633
Confl. Peds. (#/hr)	10	10		10	10	
Confl. Bikes (#/hr)		10		10		
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	6
Permitted Phases				2		
Actuated Green, G (s)		10.9	92.1	92.1	10.9	112.0
Effective Green, g (s)		10.9	92.1	92.1	10.9	112.0
Actuated g/C Ratio		0.10	0.82	0.82	0.10	1.00
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		156	1531	1277	334	3539
v/s Ratio Prot		0.06	c0.82		0.00	c0.46
v/s Ratio Perm				0.01		
v/c Ratio		0.58	1.00	0.01	0.04	0.46
Uniform Delay, d1		48.4	10.0	1.8	45.8	0.0
Progression Factor		1.00	2.86	1.97	1.00	1.00
Incremental Delay, d2		5.4	14.5	0.0	0.0	0.4
Delay (s)		53.8	43.0	3.5	45.8	0.4
Level of Service		D	D	A	D	A
Approach Delay (s)	53.8		42.6			0.8
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	112.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX A – PARKING CONTROL SERVICE RATE

Type of Control	Typical Service Rates Per Lane[4] Average Headway (Sec/Veh)	Capacity (Veh/Hr)
Entering:		
Clear aisle, no control	3.6	1,000
Ticket dispenser, no gate	5.0	720
Time stamp and handed to driver	8.5	425
Coded-card operated gate	8.9	405
Cashier, flat fee, no gate		
No information given	9.2	390
Direction-info needed	14.8	250
Ticket dispenser with gate		
Sharp turn @ approach	9.5	380
Easy direct approach	5.5	650
Coin-operated gate	20.4	175
Internal:		
Clear aisle or ramp, no parking	2.0	1,800
Straight ramp w/bend @ end	2.2	1,650
Circular ramp, 30´ R @ C/L	2.2	1,650
Aisle with adjacent 9´ x 18´ stalls		
Inbound	3.5	1,040
Outbound	8.6	420
Exiting:		
Light street congestion	7.2	500
Moderate street congestion	9.0	400
Coded card/token-operated gate	9.0	400
Cashier, flat fee with gate	13.4	270
Cashier, variable fee with gate	19.5	185
Coin operated gate	20.4	175

Applied project distribution percentages to calculate project PM peak hour traffic

[4] Assumes no significant interference by pedestrians, other traffic, etc.

Intersection: 5: Fourth Ave & Washington St

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	TR	L	L	T	TR	L	LT	R
Maximum Queue (ft)	134	323	256	151	157	231	215	261	328	95
Average Queue (ft)	102	167	135	124	144	187	163	104	171	64
95th Queue (ft)	142	261	227	162	175	222	193	181	249	115
Link Distance (ft)		454	454			158	158		394	
Upstream Blk Time (%)				0	4	28	25			
Queuing Penalty (veh)				0	0	278	243			
Storage Bay Dist (ft)	110			150	150			280		70
Storage Blk Time (%)	8	18		2	10	30		0	42	1
Queuing Penalty (veh)	24	20		11	55	143		0	97	6

Intersection: 7: Fifth Ave (East)/Driveway & Washington St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	T	T	T	TR	L	L	TR	L	R
Maximum Queue (ft)	95	104	680	690	114	461	465	184	70
Average Queue (ft)	73	74	354	390	91	192	108	71	21
95th Queue (ft)	101	109	641	663	142	395	256	148	54
Link Distance (ft)	70	70	861	861		504	504	158	158
Upstream Blk Time (%)	19	16	0	0		1		3	
Queuing Penalty (veh)	82	71	3	1		3		0	
Storage Bay Dist (ft)					90				
Storage Blk Time (%)					15	40			
Queuing Penalty (veh)					23	60			

Intersection: 8: Eighth Ave & Washington St & SR 163 SB Off-Ramp

Movement	EB	EB	WB	WB	B38	B38	NB	SB	SW
Directions Served	T	TR	T	TR	T	T	LTR	LTR	R>
Maximum Queue (ft)	332	319	1282	1284	658	669	204	206	1086
Average Queue (ft)	167	165	1236	1229	439	434	91	100	1061
95th Queue (ft)	299	290	1314	1305	870	869	159	173	1218
Link Distance (ft)	861	861	1172	1172	616	616	458	444	1043
Upstream Blk Time (%)			84	84	26	23			90
Queuing Penalty (veh)			357	355	111	96			0
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 9: Richmond St/SR 163 On-Ramps & Washington St

Movement	EB	EB	EB	EB	B38	B38	WB	WB	WB
Directions Served	L	T	T	TR	T	T	T	TR	R
Maximum Queue (ft)	525	699	615	26	191	119	439	474	467
Average Queue (ft)	511	467	155	1	44	16	405	432	405
95th Queue (ft)	564	929	576	12	187	105	505	466	502
Link Distance (ft)		616	616	616	1172	1172	413	413	413
Upstream Blk Time (%)		21	0				26	52	21
Queuing Penalty (veh)		80	1				0	0	0
Storage Bay Dist (ft)	500								
Storage Blk Time (%)	42	2							
Queuing Penalty (veh)	135	13							

Intersection: 13: Sixth Ave & Parking Structure Driveway (Future)

Movement	WB	NB	NB	B17	B17	SB	SB	SB	SB
Directions Served	R	T	R	T	T	L	L	T	T
Maximum Queue (ft)	129	775	264	18	18	42	154	572	559
Average Queue (ft)	55	235	14	1	1	5	79	533	531
95th Queue (ft)	109	499	117	10	13	27	209	608	590
Link Distance (ft)	167	945	945	108	108			516	516
Upstream Blk Time (%)	0							84	88
Queuing Penalty (veh)	0							0	0
Storage Bay Dist (ft)						130	130		
Storage Blk Time (%)							0	80	
Queuing Penalty (veh)							0	57	

Intersection: 5: Fourth Ave & Washington St

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	TR	L	L	T	TR	L	LT	R
Maximum Queue (ft)	134	506	501	154	157	216	177	305	409	95
Average Queue (ft)	85	473	473	135	148	172	147	298	380	67
95th Queue (ft)	175	488	487	162	172	228	196	353	477	122
Link Distance (ft)		454	454			158	158		394	
Upstream Blk Time (%)		68	74	1	13	27	8		17	
Queuing Penalty (veh)		0	0	0	0	221	62		157	
Storage Bay Dist (ft)	110			150	150			280		70
Storage Blk Time (%)	2	68		5	21	28		10	76	2
Queuing Penalty (veh)	14	56		24	104	145		87	453	22

Intersection: 7: Fifth Ave (East)/Driveway & Washington St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	T	T	T	TR	L	L	TR	L	R
Maximum Queue (ft)	105	133	691	715	114	333	337	168	80
Average Queue (ft)	80	87	325	336	96	171	201	103	30
95th Queue (ft)	96	108	586	605	138	300	311	169	64
Link Distance (ft)	70	70	861	861		504	504	158	158
Upstream Blk Time (%)	37	38		0				3	
Queuing Penalty (veh)	319	330		0				0	
Storage Bay Dist (ft)					90				
Storage Blk Time (%)					18	27			
Queuing Penalty (veh)					47	69			

Intersection: 8: Eighth Ave & Washington St & SR 163 SB Off-Ramp

Movement	EB	EB	WB	WB	NB	SB	SW
Directions Served	T	TR	T	TR	LTR	LTR	R>
Maximum Queue (ft)	860	872	271	285	165	151	1096
Average Queue (ft)	698	716	148	156	80	67	1063
95th Queue (ft)	864	883	267	279	138	129	1080
Link Distance (ft)	861	861	1172	1172	458	444	1044
Upstream Blk Time (%)	0	0					100
Queuing Penalty (veh)	3	5					0
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: Richmond St/SR 163 On-Ramps & Washington St

Movement	EB	EB	EB	EB	WB	WB	WB
Directions Served	L	T	T	TR	T	TR	R
Maximum Queue (ft)	525	598	519	245	348	428	363
Average Queue (ft)	457	176	66	8	188	280	213
95th Queue (ft)	546	538	314	91	308	396	315
Link Distance (ft)		616	616	616	413	413	413
Upstream Blk Time (%)		0	0		0	1	0
Queuing Penalty (veh)		2	0		0	0	0
Storage Bay Dist (ft)	500						
Storage Blk Time (%)	6	0					
Queuing Penalty (veh)	50	0					

Intersection: 13: Sixth Ave & Parking Structure Driveway (Future)

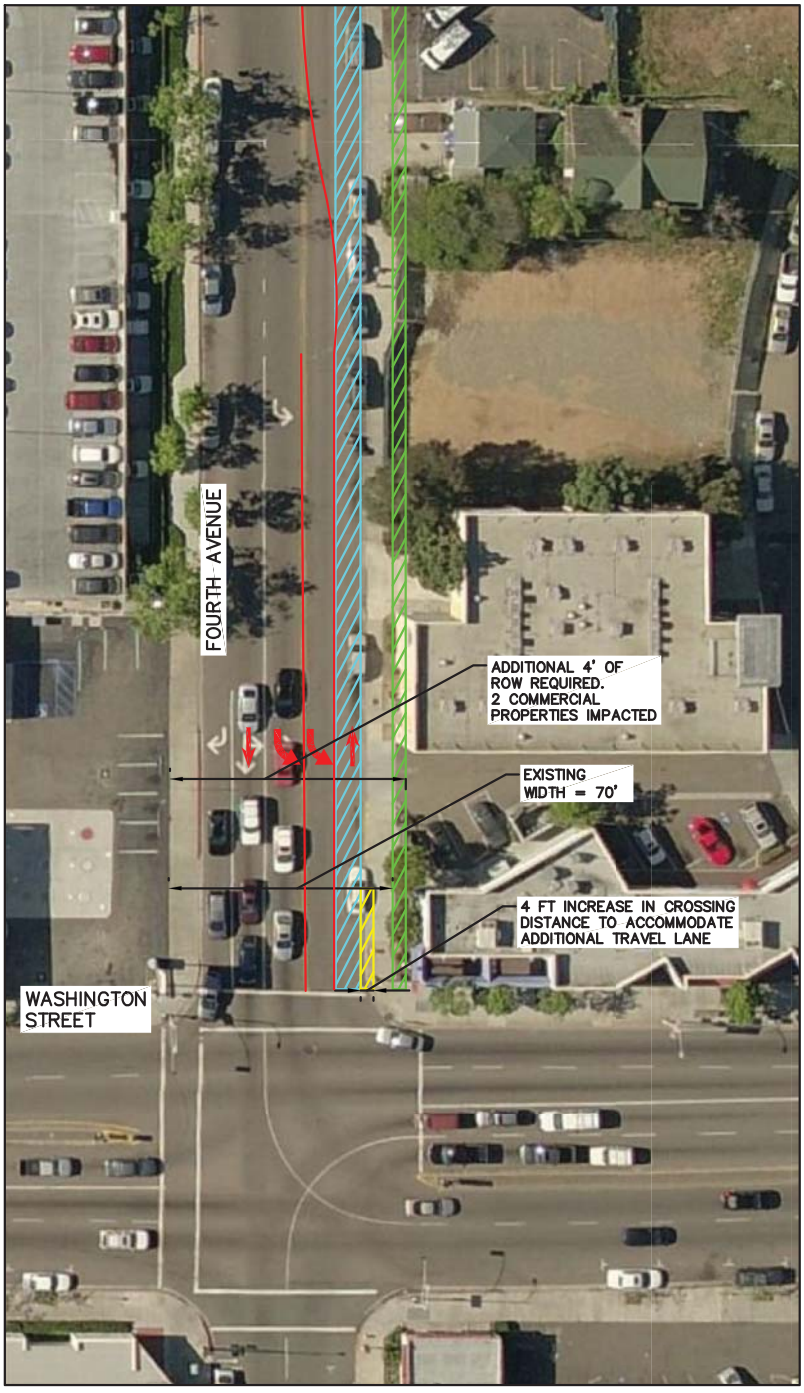
Movement	WB	NB	NB	SB	SB	SB
Directions Served	R	T	R	L	T	T
Maximum Queue (ft)	182	356	27	154	575	571
Average Queue (ft)	116	164	1	21	514	512
95th Queue (ft)	185	308	9	104	671	673
Link Distance (ft)	167	945	945		516	516
Upstream Blk Time (%)	4				81	80
Queuing Penalty (veh)	0				0	0
Storage Bay Dist (ft)				130		
Storage Blk Time (%)					79	
Queuing Penalty (veh)					9	

APPENDIX J

EXCERPTS FROM THE UPTOWN COMMUNITY PLAN EIR

IMPROVEMENT FEASIBILITY EVALUATION

All roadway segments and study intersections determined to have unacceptable LOS for the Year 2035 were further analyzed to determine what measures would be needed to return the facility to acceptable operations. **Tables 13, 14,** and **15** provide a summary of the improvement analysis for the Uptown, North Park, and Golden Hill communities, respectively. Each potential improvement was evaluated for feasibility, documenting the associated effect to the network that the change in geometry would cause. The supporting exhibits are provided in **Figures 41 - 137**.



THE ADDITION OF A SOUTHBOUND LANE WOULD BE REQUIRED TO IMPROVE OPERATIONS AT THE INTERSECTION OF WASHINGTON STREET AND FOURTH AVENUE TO LOS D OR BETTER DURING THE PM PEAK HOUR. AS SHOWN IN THE GRAPHIC, THIS ADDITIONAL LANE WOULD REQUIRE RIGHT-OF-WAY FROM ADJACENT PROPERTY, RESULT IN LOSS OF PARKING, AND INCREASE THE PEDESTRIAN CROSSING DISTANCE.

THIS CHANGE IN GEOMETRY IS NOT RECOMMENDED.

PEDESTRIAN IMPACTS

PARKING IMPACTS

RIGHT OF WAY IMPACTS

PROPOSED IMPROVEMENT

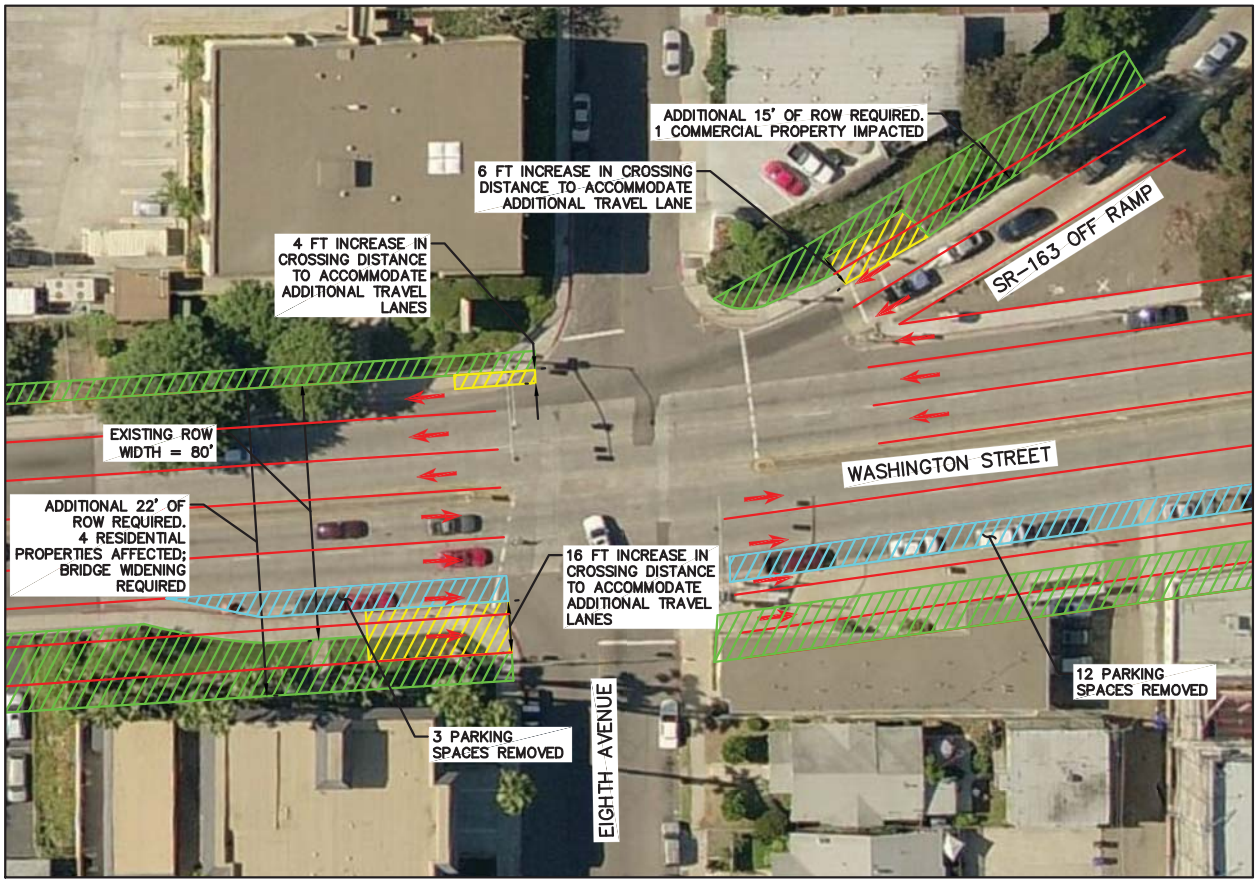
CONCEPTUAL STREET LAYOUTS, CROSS SECTIONS LANE DIMENSIONS, AND BICYCLE FACILITY CONFIGURATIONS ARE PROVIDED TO DEMONSTRATE GENERAL FEASIBILITY OF PROPOSALS ONLY. ACTUAL IMPROVEMENTS WILL REQUIRE ADDITIONAL ENGINEERING STUDIES AND DESIGN WORK AND SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.

GRAPHIC SCALE IN FEET
0 30 60 120

NORTH

IMPROVEMENT U-1

Kimley»Horn



THE ADDITION OF TWO EASTBOUND LANES, A WESTBOUND LANE, AND A SOUTH-WESTBOUND LANE WOULD BE REQUIRED TO IMPROVE OPERATIONS AT THE INTERSECTION OF WASHINGTON AVENUE, EIGHTH AVENUE, AND THE STATE ROUTE-163 OFF RAMP TO LOS D OR BETTER DURING THE AM AND PM PEAK HOURS. AS SHOWN IN THE GRAPHIC, THIS ADDITIONAL LANE WOULD REQUIRE RIGHT-OF-WAY FROM ADJACENT PROPERTY, RESULT IN LOSS OF PARKING, AND INCREASE THE PEDESTRIAN CROSSING DISTANCE.

THESE CHANGES IN GEOMETRY ARE NOT RECOMMENDED.

PEDESTRIAN IMPACTS

PARKING IMPACTS

RIGHT OF WAY IMPACTS

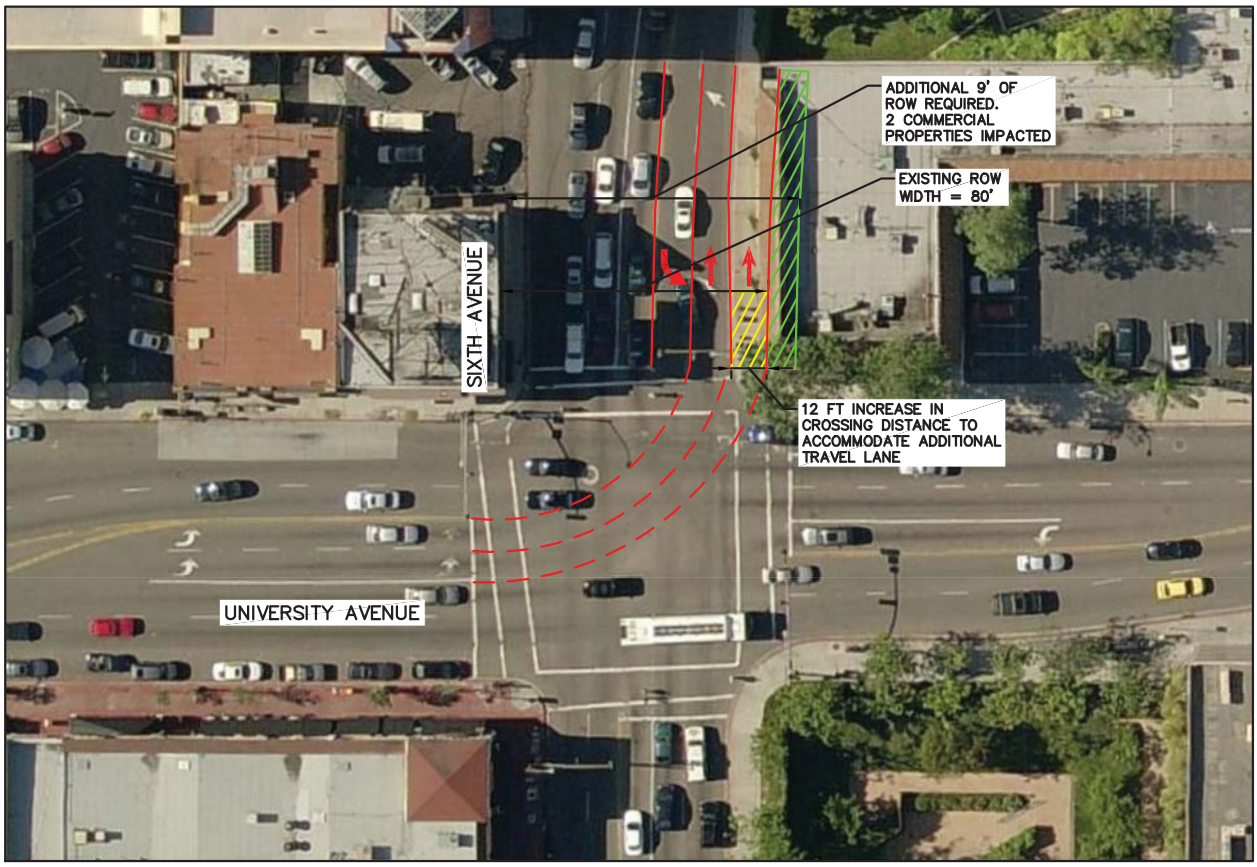
PROPOSED IMPROVEMENT

CONCEPTUAL STREET LAYOUTS, CROSS SECTIONS LANE DIMENSIONS, AND BICYCLE FACILITY CONFIGURATIONS ARE PROVIDED TO DEMONSTRATE GENERAL FEASIBILITY OF PROPOSALS ONLY. ACTUAL IMPROVEMENTS WILL REQUIRE ADDITIONAL ENGINEERING STUDIES AND DESIGN WORK AND SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.

GRAPHIC SCALE IN FEET
0 30 60 120

NORTH

IMPROVEMENT U-2



THE ADDITION OF A SOUTHBOUND LANE WOULD BE REQUIRED TO IMPROVE OPERATIONS AT THE INTERSECTION OF UNIVERSITY AVENUE AND SIXTH AVENUE TO LOS D OR BETTER DURING THE PM PEAK HOUR. AS SHOWN IN THE GRAPHIC, THIS ADDITIONAL LANE WOULD REQUIRE RIGHT-OF-WAY FROM ADJACENT PROPERTY AND INCREASE THE PEDESTRIAN CROSSING DISTANCE.

THIS CHANGE IN GEOMETRY IS NOT RECOMMENDED.

PEDESTRIAN IMPACTS

PARKING IMPACTS

RIGHT OF WAY IMPACTS

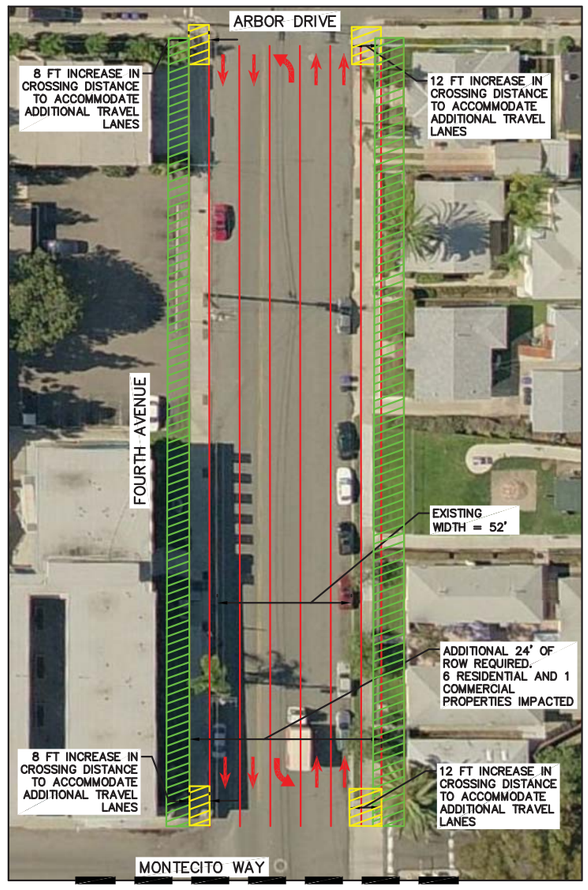
PROPOSED IMPROVEMENT

CONCEPTUAL STREET LAYOUTS, CROSS SECTIONS LANE DIMENSIONS, AND BICYCLE FACILITY CONFIGURATIONS ARE PROVIDED TO DEMONSTRATE GENERAL FEASIBILITY OF PROPOSALS ONLY. ACTUAL IMPROVEMENTS WILL REQUIRE ADDITIONAL ENGINEERING STUDIES AND DESIGN WORK AND SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.

GRAPHIC SCALE IN FEET
0 30 60 120

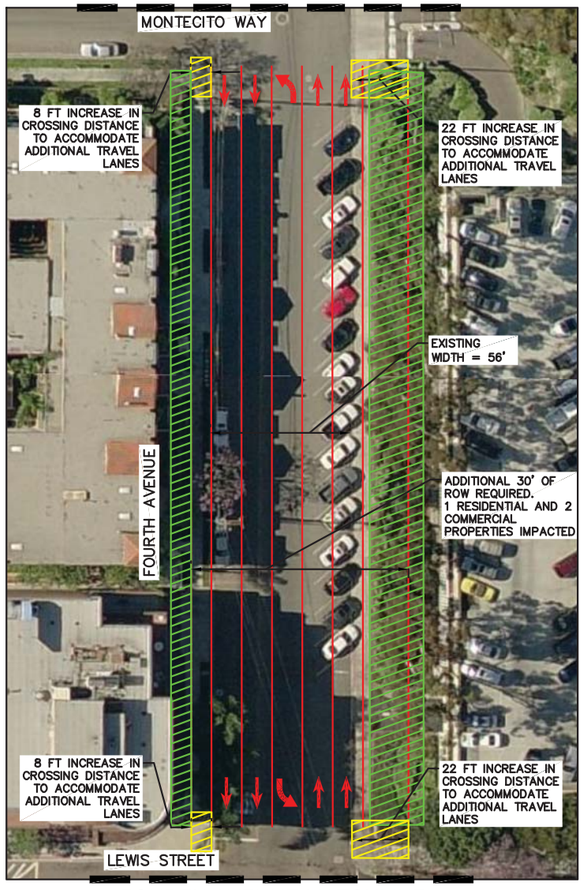
NORTH

IMPROVEMENT U-4



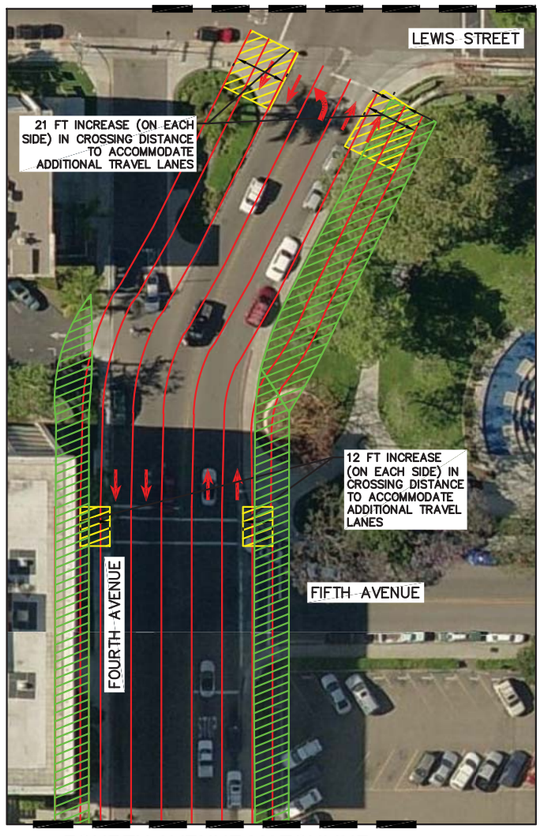
FOURTH AVENUE MATCHLINE - SEE ABOVE RIGHT

FOURTH AVENUE MATCHLINE - SEE BELOW LEFT



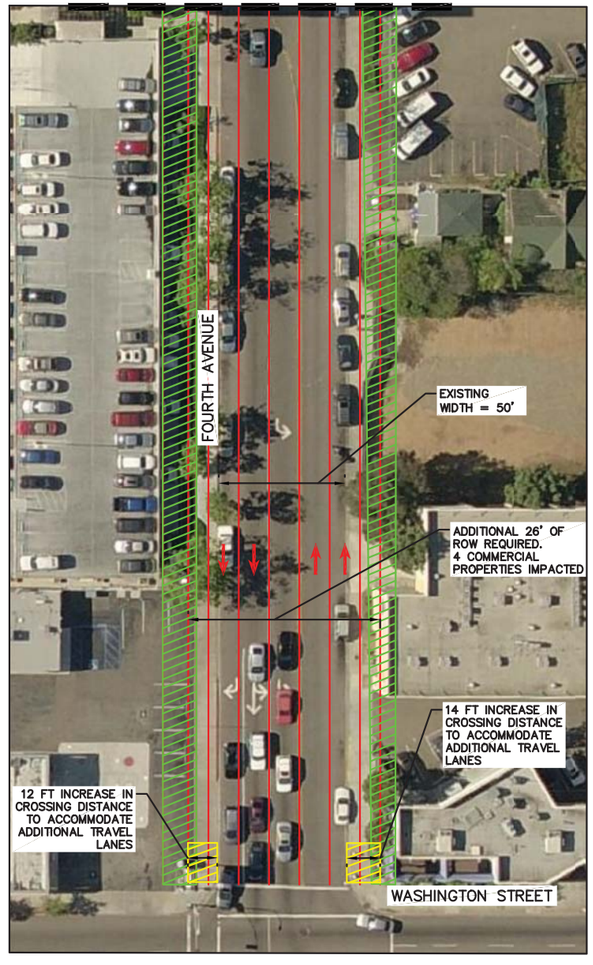
FOURTH AVENUE MATCHLINE - SEE ABOVE RIGHT

FOURTH AVENUE MATCHLINE - SEE BELOW LEFT



FOURTH AVENUE MATCHLINE - SEE ABOVE RIGHT

FOURTH AVENUE MATCHLINE - SEE BELOW LEFT



CONVERTING SEGMENTS OF FOURTH AVENUE INTO 4 LANE COLLECTORS WOULD BE REQUIRED TO IMPROVE OPERATIONS OF THE ROADWAY SEGMENTS TO LOS D OR BETTER. AS SHOWN IN THE GRAPHIC, THESE ADDITIONAL LANES WOULD REQUIRE RIGHT-OF-WAY FROM ADJACENT PROPERTY AND INCREASE THE PEDESTRIAN CROSSING DISTANCE

THESE CHANGES IN GEOMETRY ARE NOT RECOMMENDED.

PEDESTRIAN IMPACTS
PARKING IMPACTS
RIGHT OF WAY IMPACTS
PROPOSED IMPROVEMENT

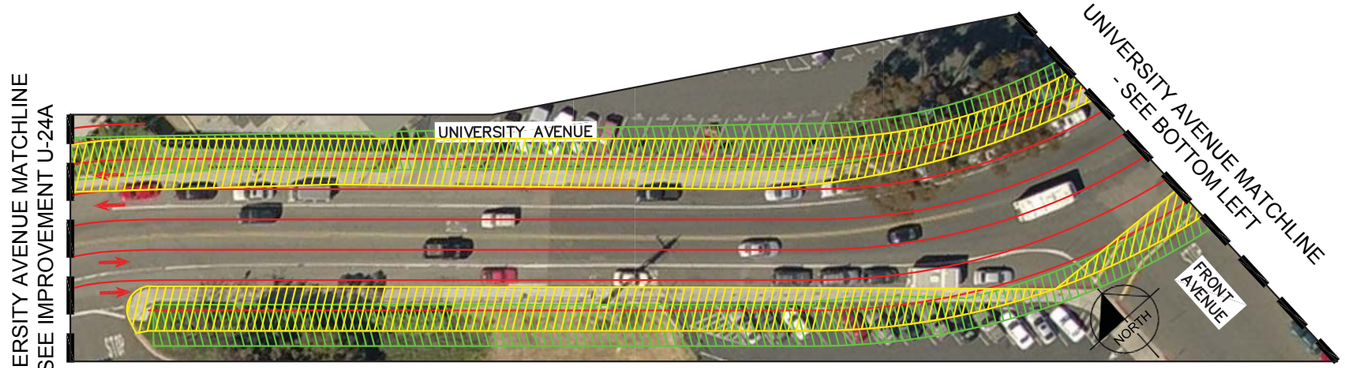
CONCEPTUAL STREET LAYOUTS, CROSS SECTIONS LANE DIMENSIONS, AND BICYCLE FACILITY CONFIGURATIONS ARE PROVIDED TO DEMONSTRATE GENERAL FEASIBILITY OF PROPOSALS ONLY. ACTUAL IMPROVEMENTS WILL REQUIRE ADDITIONAL ENGINEERING STUDIES AND DESIGN WORK AND SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.

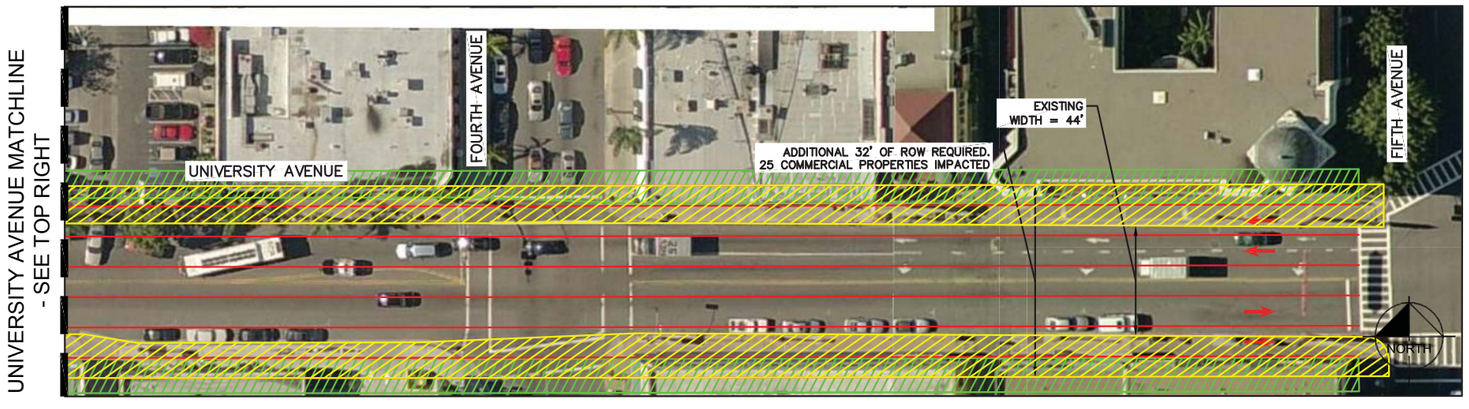
GRAPHIC SCALE IN FEET
0 30 60 120

NORTH

IMPROVEMENT U-8A

Kimley»Horn





CONVERTING SEGMENTS OF UNIVERSITY AVENUE INTO 4 LANE COLLECTORS WOULD BE REQUIRED TO IMPROVE OPERATIONS OF THE ROADWAY SEGMENTS TO LOS D OR BETTER. AS SHOWN IN THE GRAPHIC, THESE ADDITIONAL LANES WOULD REQUIRE RIGHT-OF-WAY FROM ADJACENT PROPERTY, INCREASE THE PEDESTRIAN CROSSING DISTANCE, AND IMPACT SHARED USE BICYCLE FACILITIES.

THESE CHANGES IN GEOMETRY ARE NOT RECOMMENDED.

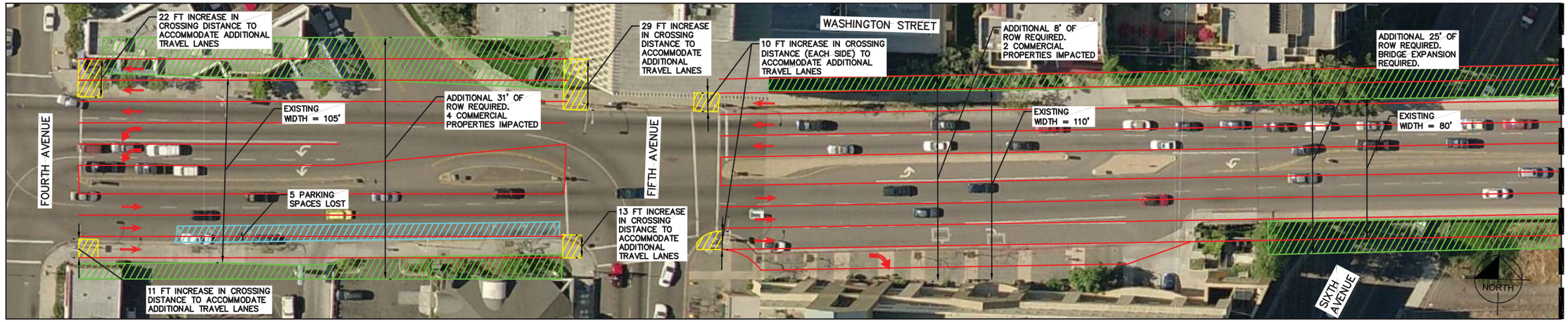
PEDESTRIAN IMPACTS
PARKING IMPACTS
RIGHT OF WAY IMPACTS
PROPOSED IMPROVEMENT

CONCEPTUAL STREET LAYOUTS, CROSS SECTIONS LANE DIMENSIONS, AND BICYCLE FACILITY CONFIGURATIONS ARE PROVIDED TO DEMONSTRATE GENERAL FEASIBILITY OF PROPOSALS ONLY. ACTUAL IMPROVEMENTS WILL REQUIRE ADDITIONAL ENGINEERING STUDIES AND DESIGN WORK AND SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.

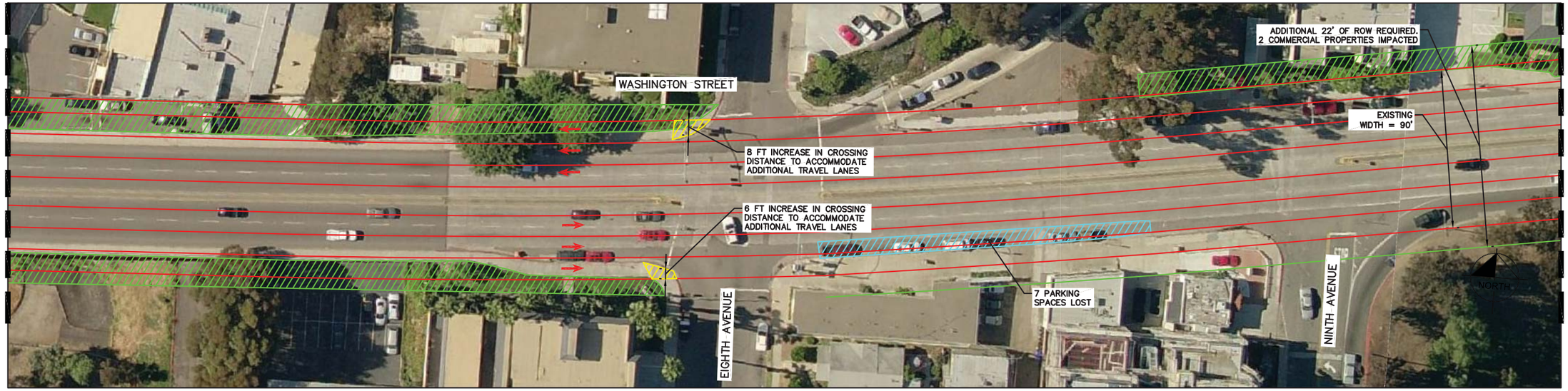
GRAPHIC SCALE IN FEET
0 30 60 120

IMPROVEMENT U-25B

Kimley»Horn



WASHINGTON STREET MATCHLINE - SEE BOTTOM LEFT



WASHINGTON STREET MATCHLINE - SEE TOP RIGHT

WASHINGTON STREET MATCHLINE - SEE IMPROVEMENT U-25B

CONVERTING SEGMENTS OF WASHINGTON STREET INTO 6 LANE MAJOR ARTERIALS WOULD BE REQUIRED TO IMPROVE OPERATIONS OF THE ROADWAY SEGMENTS TO LOS D OR BETTER. AS SHOWN IN THE GRAPHIC, THESE ADDITIONAL LANES WOULD REQUIRE RIGHT-OF-WAY FROM ADJACENT PROPERTY, INCREASE THE PEDESTRIAN CROSSING DISTANCE, AND RESULT IN LOSS OF PARKING.

THESE CHANGES IN GEOMETRY ARE NOT RECOMMENDED.

PEDESTRIAN IMPACTS
PARKING IMPACTS
RIGHT OF WAY IMPACTS
PROPOSED IMPROVEMENT

CONCEPTUAL STREET LAYOUTS, CROSS SECTIONS LANE DIMENSIONS, AND BICYCLE FACILITY CONFIGURATIONS ARE PROVIDED TO DEMONSTRATE GENERAL FEASIBILITY OF PROPOSALS ONLY. ACTUAL IMPROVEMENTS WILL REQUIRE ADDITIONAL ENGINEERING STUDIES AND DESIGN WORK AND SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.

GRAPHIC SCALE IN FEET
0 30 60 120

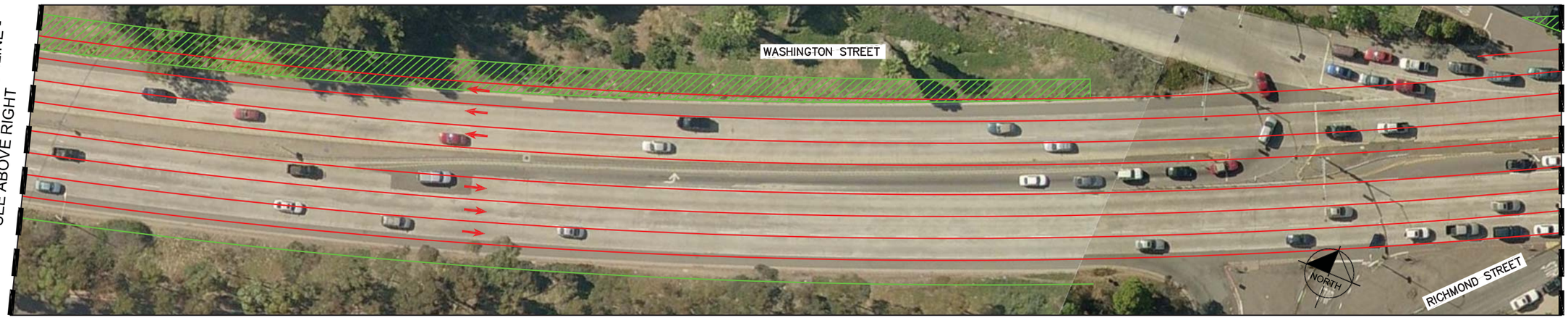
IMPROVEMENT U-26A

Kimley»Horn

WASHINGTON STREET MATCHLINE - SEE IMPROVEMENT U-25A

WASHINGTON STREET MATCHLINE - SEE BOTTOM LEFT

WASHINGTON STREET MATCHLINE - SEE ABOVE RIGHT



WASHINGTON STREET MATCHLINE - SEE IMPROVEMENT U-25C

CONVERTING SEGMENTS OF WASHINGTON STREET INTO 6 LANE MAJOR ARTERIALS WOULD BE REQUIRED TO IMPROVE OPERATIONS OF THE ROADWAY SEGMENTS TO LOS D OR BETTER. AS SHOWN IN THE GRAPHIC, THESE ADDITIONAL LANES WOULD REQUIRE RIGHT-OF-WAY FROM ADJACENT PROPERTY AND BRIDGE WIDENING.

THESE CHANGES IN GEOMETRY ARE NOT RECOMMENDED.

PEDESTRIAN IMPACTS
PARKING IMPACTS
RIGHT OF WAY IMPACTS
PROPOSED IMPROVEMENT

CONCEPTUAL STREET LAYOUTS, CROSS SECTIONS LANE DIMENSIONS, AND BICYCLE FACILITY CONFIGURATIONS ARE PROVIDED TO DEMONSTRATE GENERAL FEASIBILITY OF PROPOSALS ONLY. ACTUAL IMPROVEMENTS WILL REQUIRE ADDITIONAL ENGINEERING STUDIES AND DESIGN WORK AND SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.

GRAPHIC SCALE IN FEET
0 30 60 120

IMPROVEMENT U-26B

Kimley»Horn

APPENDIX K

YEAR 2035 + PROJECT PHASE II (PROJECT BUILDOUT) FREEWAY ANALYSIS CALCULATIONS SHEETS

HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 NB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.13
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.900
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8192	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2179
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2071
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.05
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 NB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.13
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.900
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9475	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2520
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2071
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.22
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 SB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.78
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.840
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6945	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1478
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2308
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1939
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.76
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.3
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	25.8
Total Ramp Density Adjustment	7.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.8		

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HCS7 Basic Freeway Report

Project Information

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Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 SB: I-8 to University Avenue	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.78
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.4
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.840
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5902	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1256
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2308
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1939
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	20.9
Total Ramp Density Adjustment	7.6	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.8		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 NB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.10
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8172	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2898
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2301
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.26
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 NB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.10
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9348	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	3315
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2301
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2301
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.44
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 SB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	63.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.867
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6883	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2441
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2315
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2007
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.22
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.5		

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HCS7 Basic Freeway Report

Project Information

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Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 SB: University Avenue to Washington Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	63.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.867
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5861	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2078
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2315
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2007
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.04
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.5		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 NB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.08
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3713	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1975
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.86
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.6
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	34.3
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 NB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	3.08
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	61.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5564	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2960
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.29
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	8.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak
Project Description	SR 163 SB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.64
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8264	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	4396
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2312
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2312
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.90
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.2		

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HCS7 Basic Freeway Report

Project Information

Analyst	LLG	Date	10/18/2021
Agency		Analysis Year	Year 2035 + P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak
Project Description	SR 163 SB: Robinson Avenue to Richmond Street	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	2.64
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	62.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4726	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2514
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2312
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2312
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.09
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	61.2		

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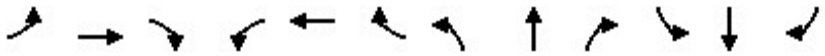
APPENDIX L

YEAR 2035 + PROJECT PHASE II (PROJECT BUILDOUT) INTERSECTION IMPROVEMENT ANALYSIS CALCULATIONS SHEETS, YEAR 2035 SIGNAL WARRANT ANALYSIS SHEETS, AND IMPROVEMENTS CONCEPT PLANS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	96	279	362	22	21	358
Future Volume (veh/h)	96	279	362	22	21	358
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.92	0.98	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	336	436	27	25	431
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	526	468	737	46	172	2022
Arrive On Green	0.30	0.30	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1781	1585	1733	107	104	4908
Grp Volume(v), veh/h	116	336	0	463	171	285
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1840	1761	1549
Q Serve(g_s), s	1.6	6.1	0.0	6.2	0.0	1.9
Cycle Q Clear(g_c), s	1.6	6.1	0.0	6.2	1.9	1.9
Prop In Lane	1.00	1.00		0.06	0.15	
Lane Grp Cap(c), veh/h	526	468	0	782	877	1317
V/C Ratio(X)	0.22	0.72	0.00	0.59	0.19	0.22
Avail Cap(c_a), veh/h	2834	2522	0	2266	2182	3814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.6	10.2	0.0	7.1	5.9	5.9
Incr Delay (d2), s/veh	0.2	2.1	0.0	0.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.7	0.0	1.6	0.5	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.8	12.2	0.0	7.8	6.0	5.9
LnGrp LOS	A	B	A	A	A	A
Approach Vol, veh/h	452		463			456
Approach Delay, s/veh	11.3		7.8			6.0
Approach LOS	B		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	18.2			18.2	14.0
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	39.7			39.7	51.3
Max Q Clear Time (g_c+I1), s	8.2			3.9	8.1
Green Ext Time (p_c), s	3.2			3.2	1.6

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A



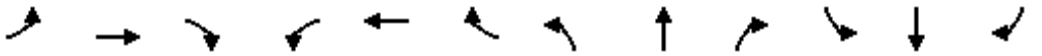
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	604	124	481	1113	165	0	0	0	276	196	93
Future Volume (veh/h)	111	604	124	481	1113	165	0	0	0	276	196	93
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.92				1.00		0.82
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	116	629	129	501	1159	172				288	204	97
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	137	1522	311	546	1854	274				702	369	257
Arrive On Green	0.08	0.52	0.52	0.16	0.60	0.60				0.20	0.20	0.20
Sat Flow, veh/h	1781	2907	595	3456	3067	453				3563	1870	1302
Grp Volume(v), veh/h	116	384	374	501	669	662				288	204	97
Grp Sat Flow(s),veh/h/ln	1781	1777	1724	1728	1777	1742				1781	1870	1302
Q Serve(g_s), s	9.6	19.7	19.8	21.4	35.8	36.3				10.6	14.7	9.7
Cycle Q Clear(g_c), s	9.6	19.7	19.8	21.4	35.8	36.3				10.6	14.7	9.7
Prop In Lane	1.00		0.34	1.00		0.26				1.00		1.00
Lane Grp Cap(c), veh/h	137	931	903	546	1074	1054				702	369	257
V/C Ratio(X)	0.84	0.41	0.41	0.92	0.62	0.63				0.41	0.55	0.38
Avail Cap(c_a), veh/h	162	931	903	719	1074	1054				748	393	274
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				0.98	0.98	0.98
Uniform Delay (d), s/veh	68.3	21.7	21.7	62.2	18.8	18.9				52.6	54.3	52.2
Incr Delay (d2), s/veh	25.1	0.3	0.3	12.2	2.7	2.8				0.1	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	8.4	8.2	10.4	15.4	15.4				4.8	7.1	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.4	22.0	22.0	74.3	21.5	21.7				52.7	54.9	52.6
LnGrp LOS	F	C	C	E	C	C				D	D	D
Approach Vol, veh/h		874			1832						589	
Approach Delay, s/veh		31.5			36.0						53.5	
Approach LOS		C			D						D	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	28.1	83.5		34.5	16.0	95.6
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	23.7	73.1		31.5	13.6	90.7
Max Q Clear Time (g_c+I1), s	23.4	21.8		16.7	11.6	38.3
Green Ext Time (p_c), s	0.3	5.8		0.7	0.0	13.8

Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	467	205	45	164	423	197	73	698	47	175	1006	549
Future Volume (veh/h)	467	205	45	164	423	197	73	698	47	175	1006	549
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.86	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	486	214	47	171	441	205	76	727	49	182	1048	572
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	557	941	199	200	1002	569	97	925	62	210	1201	777
Arrive On Green	0.05	0.11	0.11	0.11	0.28	0.28	0.05	0.27	0.27	0.12	0.34	0.34
Sat Flow, veh/h	3456	2845	602	1781	3554	1356	1781	3371	227	1781	3554	1542
Grp Volume(v), veh/h	486	131	130	171	441	205	76	383	393	182	1048	572
Grp Sat Flow(s),veh/h/ln	1728	1777	1670	1781	1777	1356	1781	1777	1821	1781	1777	1542
Q Serve(g_s), s	16.2	7.8	8.3	10.9	11.8	12.4	4.9	23.1	23.2	11.6	32.1	34.3
Cycle Q Clear(g_c), s	16.2	7.8	8.3	10.9	11.8	12.4	4.9	23.1	23.2	11.6	32.1	34.3
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	557	588	552	200	1002	569	97	488	500	210	1201	777
V/C Ratio(X)	0.87	0.22	0.24	0.86	0.44	0.36	0.79	0.79	0.79	0.87	0.87	0.74
Avail Cap(c_a), veh/h	614	588	552	307	1002	569	101	488	500	244	1219	784
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	38.0	38.3	50.6	34.1	24.6	54.2	38.9	38.9	50.3	36.0	23.1
Incr Delay (d2), s/veh	11.3	0.8	0.9	8.7	1.4	1.8	28.5	8.6	8.5	21.8	7.3	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	3.7	3.8	5.3	5.3	4.3	3.0	11.2	11.4	6.4	14.9	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	38.8	39.2	59.3	35.6	26.4	82.7	47.5	47.4	72.1	43.3	27.0
LnGrp LOS	E	D	D	E	D	C	F	D	D	E	D	C
Approach Vol, veh/h		747			817			852			1802	
Approach Delay, s/veh		55.9			38.2			50.6			41.0	
Approach LOS		E			D			D			D	

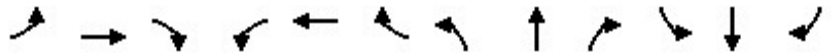
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	43.3	10.7	44.6	23.1	37.6	18.1	37.2
Change Period (Y+Rc), s	4.4	4.9	4.4	5.4	4.4	4.9	4.4	5.4
Max Green Setting (Gmax), s	20.0	30.5	6.6	39.8	20.6	29.9	15.9	30.5
Max Q Clear Time (g_c+I1), s	12.9	10.3	6.9	36.3	18.2	14.4	13.6	25.2
Green Ext Time (p_c), s	0.1	1.0	0.0	3.0	0.5	2.5	0.1	2.7

Intersection Summary	
HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	63	232	317	29	23	869
Future Volume (veh/h)	63	232	317	29	23	869
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.94	0.98	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	242	330	30	24	905
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	401	357	771	70	157	2241
Arrive On Green	0.22	0.22	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1781	1585	1679	153	47	5033
Grp Volume(v), veh/h	66	242	0	360	348	581
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1832	1830	1549
Q Serve(g_s), s	0.8	4.0	0.0	3.8	0.0	3.6
Cycle Q Clear(g_c), s	0.8	4.0	0.0	3.8	3.5	3.6
Prop In Lane	1.00	1.00		0.08	0.07	
Lane Grp Cap(c), veh/h	401	357	0	841	975	1422
V/C Ratio(X)	0.16	0.68	0.00	0.43	0.36	0.41
Avail Cap(c_a), veh/h	2757	2453	0	3015	3070	5098
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	10.1	0.0	5.2	5.1	5.1
Incr Delay (d2), s/veh	0.2	2.3	0.0	0.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.2	0.0	0.7	0.7	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.1	12.4	0.0	5.5	5.3	5.3
LnGrp LOS	A	B	A	A	A	A
Approach Vol, veh/h	308		360			929
Approach Delay, s/veh	11.7		5.5			5.3
Approach LOS	B		A			A

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	17.6				17.6	10.9
Change Period (Y+Rc), s	4.5				4.5	4.5
Max Green Setting (Gmax), s	46.9				46.9	44.1
Max Q Clear Time (g_c+I1), s	5.8				5.6	6.0
Green Ext Time (p_c), s	2.5				7.5	1.0

Intersection Summary	
HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A



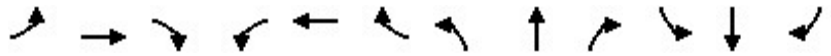
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1116	115	525	996	127	0	0	0	872	322	161
Future Volume (veh/h)	82	1116	115	525	996	127	0	0	0	872	322	161
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.89				1.00		0.80
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	85	1162	120	547	1038	132				908	335	168
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	108	1236	127	565	1521	193				1002	526	357
Arrive On Green	0.06	0.38	0.38	0.16	0.49	0.49				0.28	0.28	0.28
Sat Flow, veh/h	1781	3221	332	3456	3123	397				3563	1870	1268
Grp Volume(v), veh/h	85	639	643	547	590	580				908	335	168
Grp Sat Flow(s),veh/h/ln	1781	1777	1776	1728	1777	1743				1781	1870	1268
Q Serve(g_s), s	5.2	38.1	38.4	17.3	28.0	28.2				27.0	17.2	12.1
Cycle Q Clear(g_c), s	5.2	38.1	38.4	17.3	28.0	28.2				27.0	17.2	12.1
Prop In Lane	1.00		0.19	1.00		0.23				1.00		1.00
Lane Grp Cap(c), veh/h	108	682	682	565	865	849				1002	526	357
V/C Ratio(X)	0.79	0.94	0.94	0.97	0.68	0.68				0.91	0.64	0.47
Avail Cap(c_a), veh/h	139	693	693	565	865	849				1130	593	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				0.93	0.93	0.93
Uniform Delay (d), s/veh	51.0	32.6	32.7	45.7	21.7	21.7				38.1	34.6	32.7
Incr Delay (d2), s/veh	15.2	20.3	21.1	29.5	4.3	4.4				8.5	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	19.8	20.0	9.7	12.3	12.2				12.8	7.9	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	52.9	53.8	75.2	26.0	26.1				46.7	35.7	33.1
LnGrp LOS	E	D	D	E	C	C				D	D	C
Approach Vol, veh/h		1367			1717						1411	
Approach Delay, s/veh		54.2			41.7						42.4	
Approach LOS		D			D						D	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	12.4	47.1		35.8	11.1	58.5
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	8.0	42.9		34.9	8.6	52.3
Max Q Clear Time (g_c+I1), s	9.3	40.4		29.0	7.2	30.2
Green Ext Time (p_c), s	0.0	1.8		1.2	0.0	8.7

Intersection Summary	
HCM 6th Ctrl Delay	45.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	345	453	70	165	573	172	73	946	126	273	788	519
Future Volume (veh/h)	345	453	70	165	573	172	73	946	126	273	788	519
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.76	1.00		0.75	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	352	462	71	168	585	176	74	965	129	279	804	530
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	407	762	115	197	892	551	95	946	126	283	1448	812
Arrive On Green	0.04	0.09	0.09	0.11	0.25	0.25	0.05	0.30	0.30	0.16	0.41	0.41
Sat Flow, veh/h	3456	2951	446	1781	3554	1192	1781	3133	419	1781	3554	1535
Grp Volume(v), veh/h	352	275	258	168	585	176	74	547	547	279	804	530
Grp Sat Flow(s),veh/h/ln	1728	1777	1620	1781	1777	1192	1781	1777	1775	1781	1777	1535
Q Serve(g_s), s	11.3	16.7	17.2	10.4	16.5	11.4	4.6	33.8	33.8	17.5	19.4	28.0
Cycle Q Clear(g_c), s	11.3	16.7	17.2	10.4	16.5	11.4	4.6	33.8	33.8	17.5	19.4	28.0
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	407	459	419	197	892	551	95	536	536	283	1448	812
V/C Ratio(X)	0.86	0.60	0.62	0.85	0.66	0.32	0.78	1.02	1.02	0.99	0.56	0.65
Avail Cap(c_a), veh/h	407	459	419	232	892	551	159	536	536	283	1448	812
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	45.6	45.9	48.9	37.6	22.9	52.4	39.1	39.1	47.0	25.4	19.3
Incr Delay (d2), s/veh	14.5	4.6	5.4	20.2	3.8	1.5	5.2	44.1	44.3	49.2	0.6	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	8.6	8.1	5.7	7.6	3.4	2.2	21.0	21.0	11.6	8.2	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.4	50.3	51.3	69.1	41.4	24.4	57.6	83.2	83.4	96.2	26.0	21.3
LnGrp LOS	E	D	D	E	D	C	E	F	F	F	C	C
Approach Vol, veh/h		885			929			1168			1613	
Approach Delay, s/veh		57.4			43.2			81.6			36.6	
Approach LOS		E			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	33.8	10.4	51.0	17.6	33.0	22.2	39.2
Change Period (Y+Rc), s	4.4	4.9	4.4	5.4	4.4	4.9	4.4	5.4
Max Green Setting (Gmax), s	14.6	26.7	10.0	41.6	13.2	28.1	17.8	33.8
Max Q Clear Time (g_c+I1), s	12.4	19.2	6.6	30.0	13.3	18.5	19.5	35.8
Green Ext Time (p_c), s	0.1	1.5	0.0	7.2	0.0	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Intersection: 5: Fourth Ave & Washington St

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB	SB
Directions Served	L	T	TR	L	L	T	TR	L	LT	T	R
Maximum Queue (ft)	135	345	303	154	158	232	200	234	237	200	88
Average Queue (ft)	98	170	144	133	148	193	151	136	146	102	42
95th Queue (ft)	135	298	265	163	173	226	208	205	210	176	76
Link Distance (ft)		442	442			158	158	394	394	394	394
Upstream Blk Time (%)		0		2	15	46	9				
Queuing Penalty (veh)		0		0	0	455	90				
Storage Bay Dist (ft)	110			150	150						
Storage Blk Time (%)	16	15		6	25	48					
Queuing Penalty (veh)	47	17		35	140	229					

Intersection: 9: Richmond St/SR 163 On-Ramps & Washington St

Movement	EB	EB	WB	WB	WB
Directions Served	L	T	T	TR	R
Maximum Queue (ft)	212	9	457	466	458
Average Queue (ft)	87	0	429	432	430
95th Queue (ft)	159	7	441	449	444
Link Distance (ft)		616	413	413	413
Upstream Blk Time (%)			62	91	58
Queuing Penalty (veh)			0	0	0
Storage Bay Dist (ft)	500				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Fourth Ave & Washington St

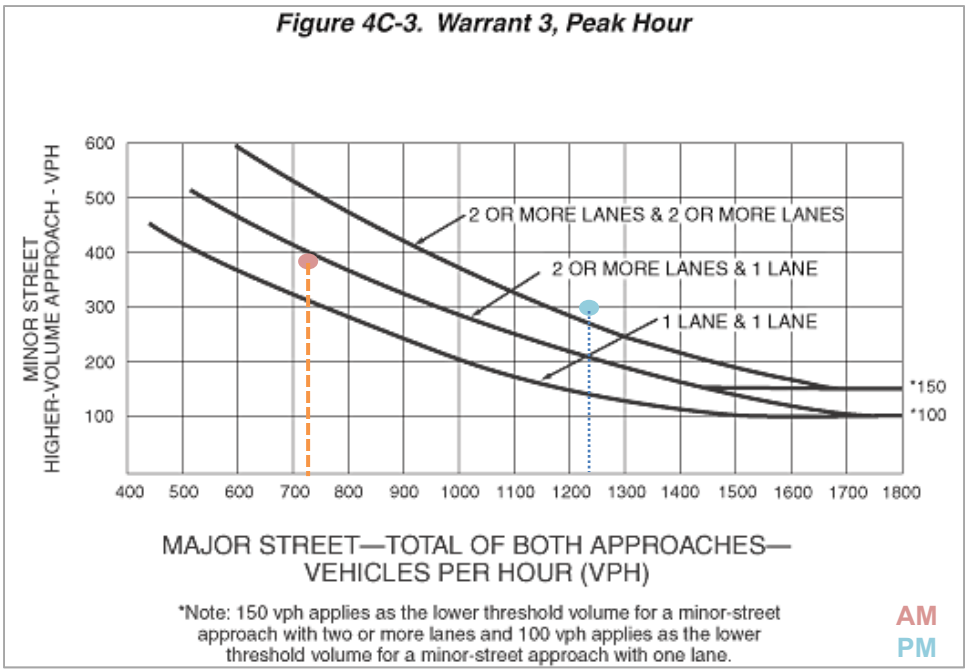
Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB	SB
Directions Served	L	T	TR	L	L	T	TR	L	LT	T	R
Maximum Queue (ft)	135	487	474	154	158	218	185	423	430	405	139
Average Queue (ft)	72	459	458	133	146	176	157	390	393	262	57
95th Queue (ft)	155	471	470	161	175	212	188	371	371	459	111
Link Distance (ft)		442	442			158	158	394	394	394	394
Upstream Blk Time (%)		73	76	1	7	20	13	35	35	3	
Queuing Penalty (veh)		0	0	0	0	164	105	82	81	7	
Storage Bay Dist (ft)	110			150	150						
Storage Blk Time (%)	3	71		4	13	21					
Queuing Penalty (veh)	17	58		22	64	112					

Intersection: 9: Richmond St/SR 163 On-Ramps & Washington St

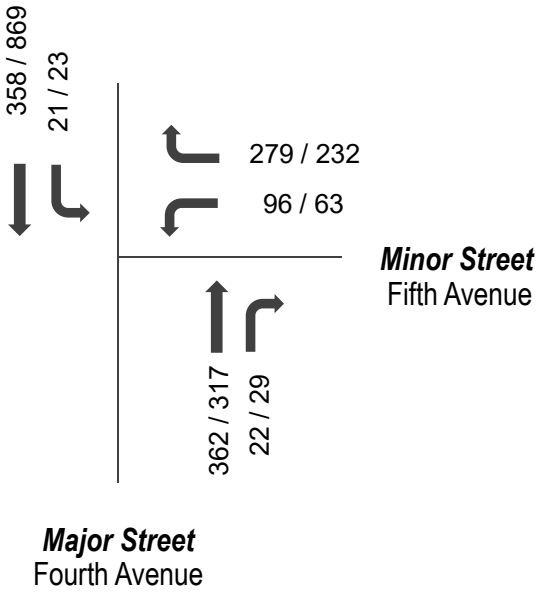
Movement	EB	EB	EB	WB	WB	WB
Directions Served	L	T	TR	T	TR	R
Maximum Queue (ft)	342	18	22	454	468	456
Average Queue (ft)	171	1	1	428	432	429
95th Queue (ft)	288	10	11	439	447	449
Link Distance (ft)		616	616	413	413	413
Upstream Blk Time (%)				61	85	48
Queuing Penalty (veh)				0	0	0
Storage Bay Dist (ft)	500					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Reduced Development Intensity Alt B: Intersection #4
Fourth Avenue / Fifth Avenue

Year 2035 + Project Traffic Volumes



Year 2035 + Project



AM Peak Hour

Minor Street:	375
Major Street:	725

PM Peak Hour

Minor Street:	295
Major Street:	1,238

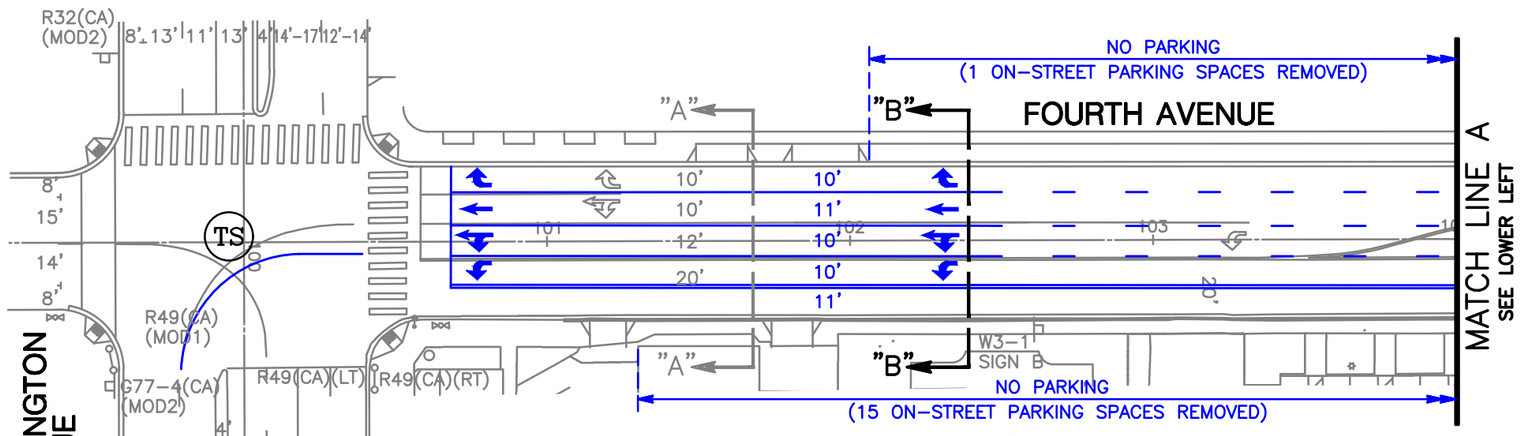
RESULT: SIGNAL IS WARRANTED IN THE AM AND PM PEAK HOURS

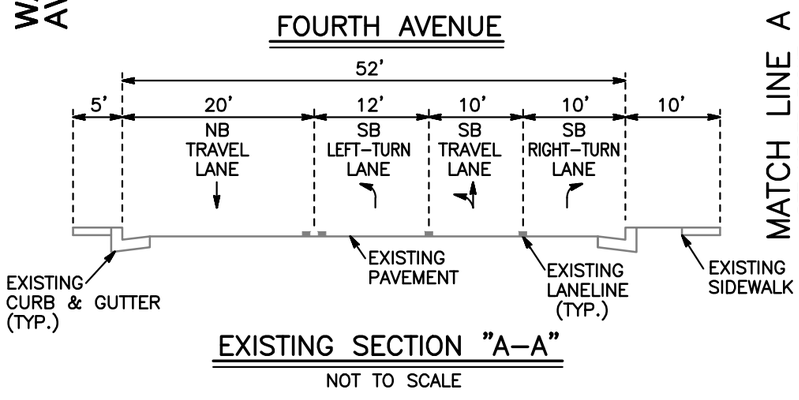
NOTES:

- Remove existing on-street parking spaces
- New striping geometry along Fourth Avenue
- New left-turn and right-turn lanes along Fifth Avenue

LEGEND

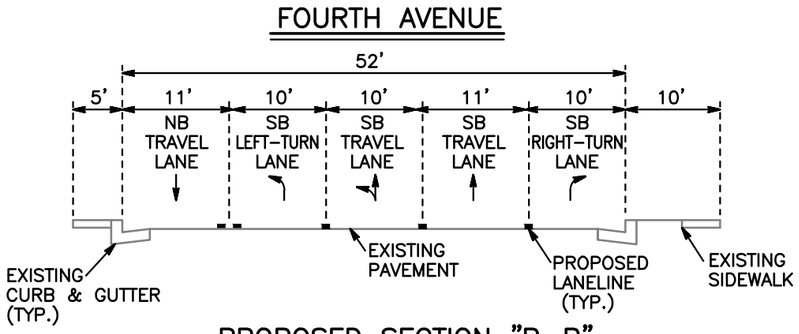
- EXISTING CONDITIONS
- PROPOSED STRIPING
- PROPOSED PAVEMENT ARROW
- TS TRAFFIC SIGNAL
- PROPOSED TRAFFIC SIGNAL





EXISTING SECTION "A-A"

NOT TO SCALE



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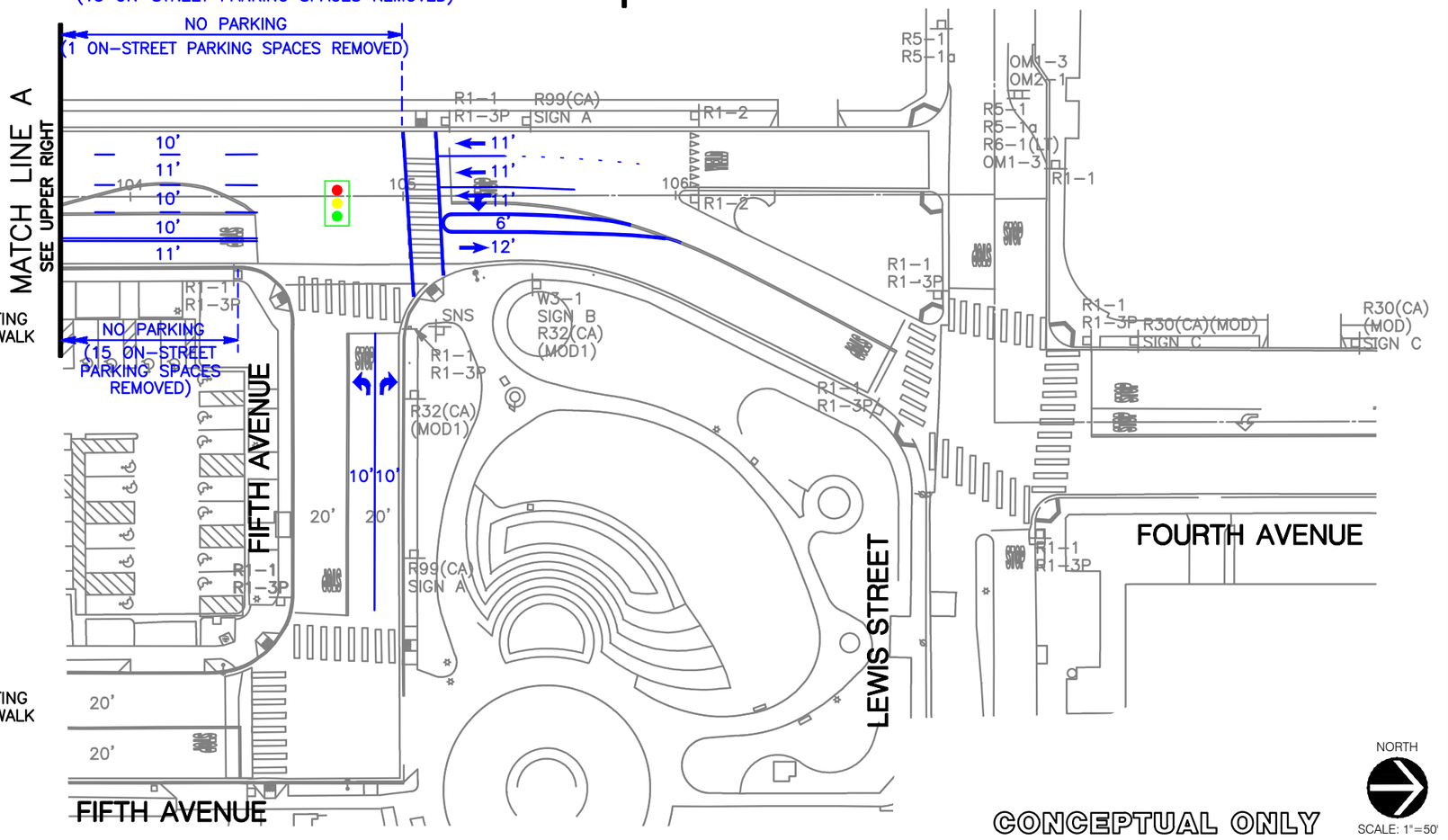

NORTH

SCALE: 1"=50'

CONCEPTUAL ONLY

REV. 11/25/2020

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LINSCOTT LAW & GREENSPAN engineers

Exhibit A

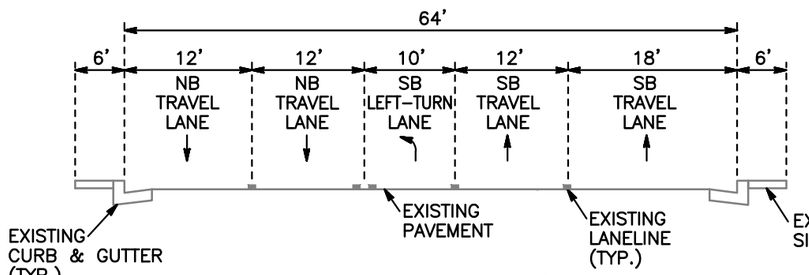
Fourth Avenue - Washington Avenue to Lewis Street

SCRIPPS MERCY HOSPITAL

NOTES:
– New southbound right–turn lane

LEGEND
EXISTING CONDITIONS
PROPOSED STRIPING
PROPOSED PAVEMENT ARROW
TS TRAFFIC SIGNAL

SIXTH AVENUE



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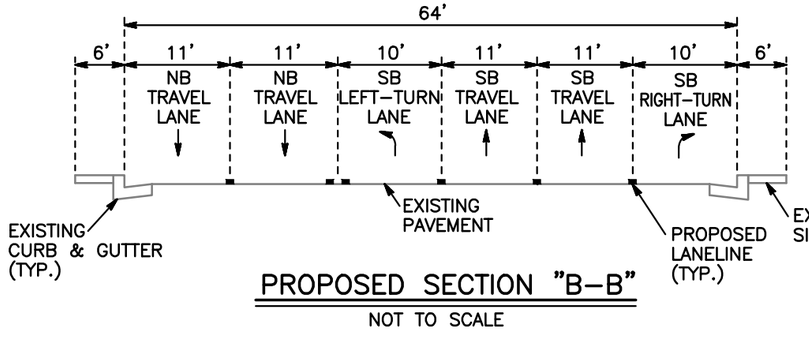
SIXTH AVENUE



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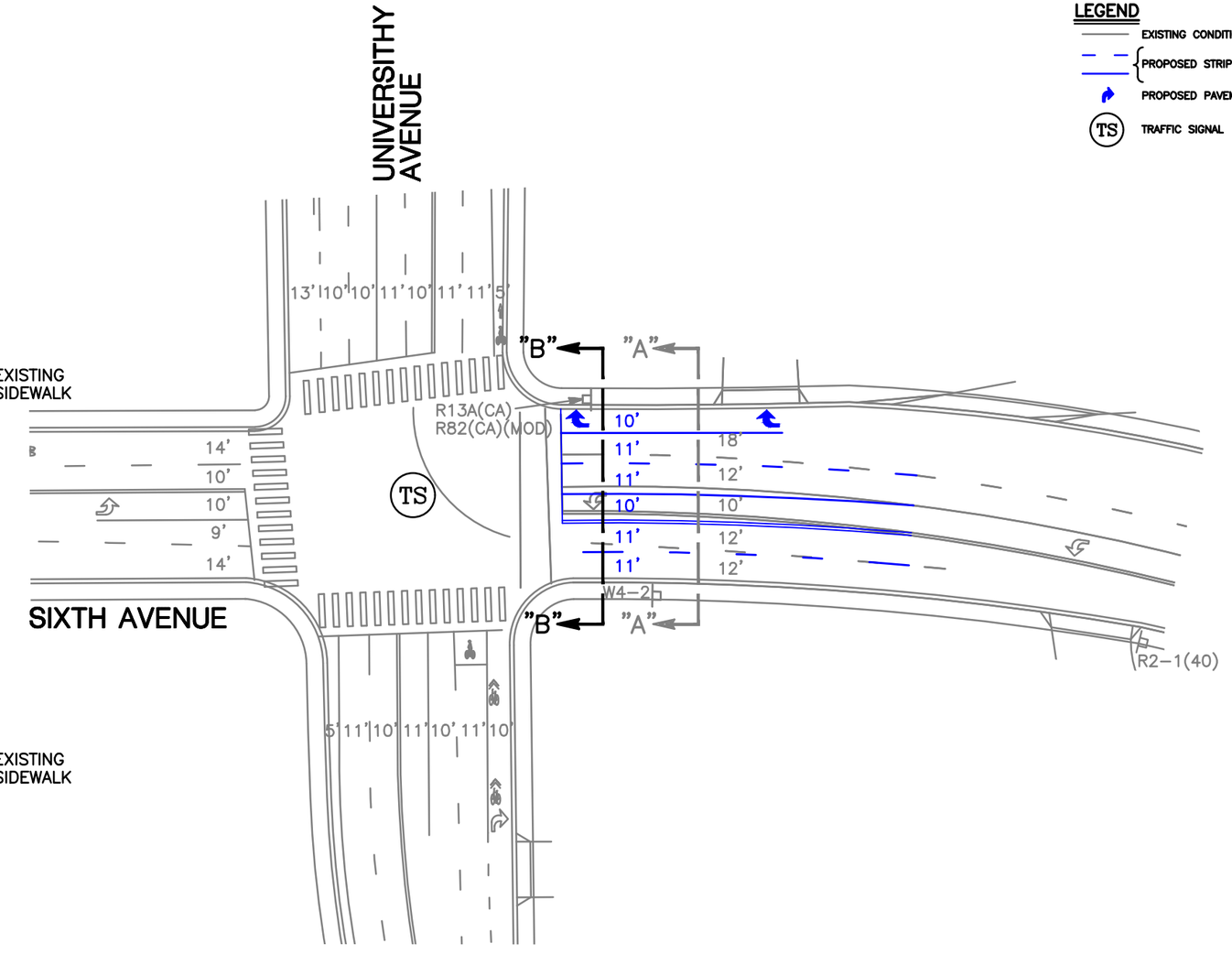

NORTH
SCALE: 1"=50'

CONCEPTUAL ONLY

REV. 11/25/2020
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LINSCOTT LAW & GREENSPAN engineers

Exhibit B

Sixth Avenue and University Avenue

SCRIPPS MERCY HOSPITAL

APPENDIX M

BUS ROUTE SCHEDULES AND EXCERPTS FROM THE DRAFT 2021 REGIONAL PLAN

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	$2.50
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	$1.25
Youth (ages 6-18)* Jóvenes (edades 6-18)*	$2.50

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	$6.00
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	$3.00
Youth (ages 6-18)* Jóvenes (edades 6-18)*	$3.00

MONTHLY PASSES / Pases mensual

Adult / Adulto	$72.00
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	$23.00
Youth (ages 6-18)* Jóvenes (edades 6-18)*	$23.00

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
*Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
There is a $2 charge for Compass Cards, which can be reloaded for future use.
Hay un costo de $2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

COMPASS CLOUD
Download the free Compass Cloud app on your Apple or Android phone.
Descargue la aplicación gratis Compass Cloud en su teléfono Apple o Android.

Visit sdmts.com/fares for more info. Visite sdmts.com/fares para más información.

DIRECTORY / *Directorio*

MTS Information & Trip Planning / *MTS Información y planeo de viaje*	511 or/ó (619) 233-3004
TTY/TDD (teletype for hearing impaired) / *Teletipo para sordos*	(619) 234-5005 or/ó (888) 722-4889
InfoExpress (24-hour info via Touch-Tone phone) / *Información las 24 horas (via teléfono de teclas)*	(619) 685-4900
Customer Service / Suggestions / *Servicio al cliente / Sugerencias*	(619) 557-4555
MTS Security / *MTS Seguridad*	(619) 595-4960
Lost & Found / *Objetos extraviados*	(619) 233-3004
Transit Store	(619) 234-1060 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning / *Planificación de viajes por Internet*	sdmts.com

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com**.
Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a ***sdmts.com***.

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective JANUARY 26, 2020

1

Fashion Valley Transit Ctr. – Downtown La Mesa
via El Cajon Bl.

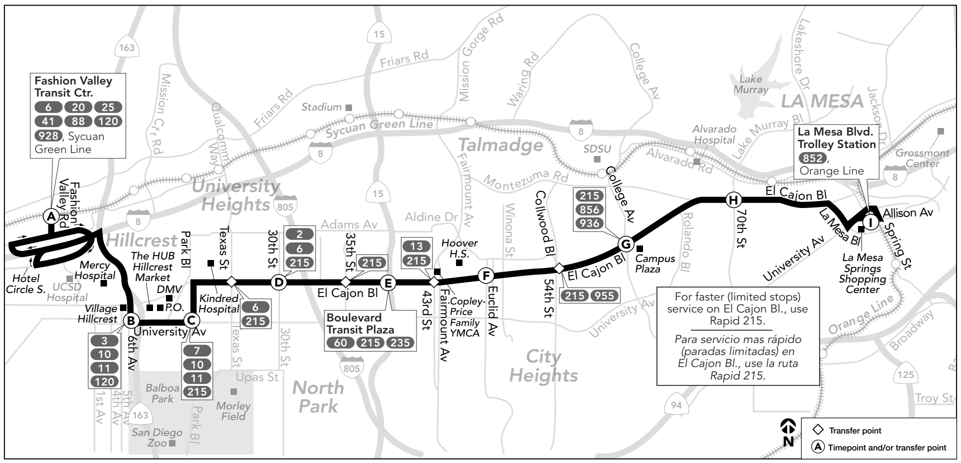
DESTINATIONS
- Campus Plaza
- Copley-Price Family YMCA
- Hillcrest DMV
- Hoover High School
- The HUB Hillcrest Market

TROLLEY CONNECTIONS
- La Mesa Bl.
- Fashion Valley

01/20

sdmts.com
Route Alerts, Updated Schedules, Connections & More

Alternative formats available upon request. Please call: (619) 557-4555 / *Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555*



A Saturday or Sunday schedule will be operated on the following holidays and observed holidays
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados
New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Route 1 – Monday through Friday / *lunes a viernes*

Fashion Valley ➡ City Heights ➡ La Mesa

(A) FashionValley Transit Ctr. DEPART	(B) University Av. & 6th Av.	(C) Park Bl. & University Av.	(D) El Cajon Bl. & 30th St.	(E) El Cajon Bl. & I-15	(F) El Cajon Bl. & Euclid Av.	(G) El Cajon Bl. & College Av.	(H) El Cajon Bl. & 70th St.	(I) La Mesa Bl. Trolley Station ARRIVE
5:03a	5:09a	5:14a	5:20a	5:25a	5:30a	5:36a	5:41a	5:49a
5:33	5:39	5:44	5:50	5:55	6:00	6:06	6:11	6:19
6:03	6:09	6:14	6:20	6:26	6:31	6:38	6:43	6:51
6:25	6:31	6:36	6:42	6:48	6:54	7:01	7:06	7:15
6:40	6:46	6:52	6:58	7:05	7:11	7:18	7:23	7:32
6:55	7:01	7:07	7:14	7:21	7:28	7:35	7:41	7:51
7:10	7:16	7:22	7:29	7:36	7:43	7:50	7:56	8:06
7:25	7:31	7:37	7:44	7:51	7:58	8:05	8:11	8:21
7:40	7:46	7:52	7:59	8:06	8:13	8:20	8:26	8:36
7:55	8:01	8:07	8:14	8:21	8:28	8:35	8:41	8:51
8:10	8:16	8:22	8:29	8:36	8:43	8:50	8:56	9:06
8:25	8:31	8:37	8:44	8:51	8:58	9:05	9:11	9:21
8:38	8:44	8:51	8:58	9:05	9:12	9:20	9:26	9:36
8:53	8:59	9:06	9:13	9:20	9:27	9:35	9:41	9:51
9:08	9:14	9:21	9:28	9:35	9:42	9:50	9:56	10:06
9:23	9:29	9:36	9:43	9:50	9:57	10:05	10:11	10:21
9:38	9:44	9:51	9:58	10:05	10:12	10:20	10:26	10:36
9:52	9:58	10:05	10:13	10:20	10:28	10:36	10:43	10:53
10:07	10:13	10:20	10:28	10:35	10:43	10:51	10:58	11:08
10:22	10:28	10:35	10:43	10:50	10:58	11:06	11:13	11:23
10:40	10:47	10:54	11:02	11:09	11:17	11:26	11:34	11:45
10:55	11:02	11:09	11:17	11:24	11:32	11:41	11:49	**12:00p**
11:10	11:17	11:24	11:32	11:39	11:47	11:56	**12:04p**	**12:15**
11:25	11:32	11:39	11:47	11:54	**12:02p**	**12:11p**	**12:19**	**12:30**
11:40	11:47	11:54	**12:02p**	**12:09p**	**12:17**	**12:26**	**12:34**	**12:45**
11:55	**12:02p**	**12:09p**	**12:17**	**12:24**	**12:32**	**12:41**	**12:49**	**1:00**
12:07p	**12:14**	**12:22**	**12:31**	**12:39**	**12:47**	**12:56**	**1:04**	**1:15**
12:22	**12:29**	**12:37**	**12:46**	**12:54**	**1:02**	**1:11**	**1:19**	**1:30**
12:37	**12:44**	**12:52**	**1:01**	**1:09**	**1:17**	**1:26**	**1:34**	**1:45**
12:52	**12:59**	**1:07**	**1:16**	**1:24**	**1:32**	**1:41**	**1:49**	**2:00**
1:07	**1:14**	**1:22**	**1:31**	**1:39**	**1:47**	**1:56**	**2:04**	**2:15**
1:22	**1:29**	**1:37**	**1:46**	**1:54**	**2:02**	**2:11**	**2:19**	**2:30**
1:37	**1:44**	**1:52**	**2:01**	**2:09**	**2:17**	**2:26**	**2:34**	**2:45**
1:53	**2:00**	**2:08**	**2:17**	**2:25**	**2:34**	**2:43**	**2:51**	**3:03**
2:08	**2:16**	**2:24**	**2:34**	**2:42**	**2:51**	**3:00**	**3:08**	**3:20**
2:23	**2:31**	**2:39**	**2:49**	**2:57**	**3:06**	**3:15**	**3:23**	**3:35**
2:38	**2:46**	**2:54**	**3:04**	**3:12**	**3:21**	**3:30**	**3:38**	**3:50**
2:53	**3:01**	**3:09**	**3:19**	**3:27**	**3:36**	**3:45**	**3:53**	**4:05**
3:08	**3:17**	**3:26**	**3:36**	**3:44**	**3:53**	**4:02**	**4:10**	**4:22**
3:23	**3:32**	**3:41**	**3:51**	**3:59**	**4:08**	**4:17**	**4:25**	**4:37**
3:38	**3:47**	**3:56**	**4:06**	**4:14**	**4:23**	**4:32**	**4:40**	**4:52**
3:53	**4:02**	**4:11**	**4:21**	**4:29**	**4:38**	**4:47**	**4:55**	**5:07**
4:08	**4:17**	**4:26**	**4:36**	**4:44**	**4:53**	**5:02**	**5:10**	**5:22**
4:23	**4:32**	**4:41**	**4:51**	**4:59**	**5:08**	**5:17**	**5:25**	**5:37**
4:38	**4:47**	**4:56**	**5:06**	**5:14**	**5:23**	**5:32**	**5:40**	**5:52**
4:53	**5:02**	**5:11**	**5:21**	**5:29**	**5:38**	**5:47**	**5:55**	**6:07**
5:06	**5:15**	**5:24**	**5:34**	**5:42**	**5:51**	**5:59**	**6:07**	**6:18**
5:21	**5:30**	**5:39**	**5:49**	**5:57**	**6:06**	**6:14**	**6:22**	**6:33**
5:36	**5:45**	**5:54**	**6:04**	**6:12**	**6:20**	**6:28**	**6:35**	**6:46**
5:51	**6:00**	**6:09**	**6:19**	**6:27**	**6:35**	**6:43**	**6:50**	**7:01**
6:10	**6:18**	**6:27**	**6:36**	**6:44**	**6:51**	**6:58**	**7:05**	**7:15**
6:25	**6:33**	**6:42**	**6:51**	**6:59**	**7:06**	**7:13**	**7:20**	**7:30**
6:40	**6:48**	**6:57**	**7:06**	**7:14**	**7:21**	**7:28**	**7:35**	**7:45**
7:05	**7:13**	**7:21**	**7:30**	**7:37**	**7:44**	**7:51**	**7:58**	**8:08**
7:40	**7:47**	**7:54**	**8:03**	**8:09**	**8:16**	**8:23**	**8:29**	**8:38**
8:10	**8:17**	**8:24**	**8:33**	**8:39**	**8:46**	**8:53**	**8:59**	**9:08**
8:42	**8:49**	**8:56**	**9:04**	**9:10**	**9:17**	**9:24**	**9:29**	**9:38**
9:14	**9:20**	**9:27**	**9:34**	**9:40**	**9:46**	**9:52**	**9:57**	**10:05**
9:44	**9:50**	**9:57**	**10:04**	**10:10**	**10:16**	**10:22**	**10:27**	**10:35**
10:16	**10:22**	**10:28**	**10:35**	**10:40**	**10:46**	**10:52**	**10:57**	**11:05**
10:46	**10:52**	**10:57**	**11:03**	**11:08**	**11:14**	**11:20**	**11:25**	**11:32**
11:16	**11:22**	**11:27**	**11:33**	**11:38**	**11:44**	**11:50**	**11:55**	12:02a

La Mesa ➡ City Heights ➡ Fashion Valley

(I) La Mesa Bl. Trolley Station DEPART	(H) El Cajon Bl. & 70th St.	(G) El Cajon Bl. & College Av.	(F) El Cajon Bl. & Euclid Av.	(E) El Cajon Bl. & I-15	(D) El Cajon Bl. & 30th St.	(C) Park Bl. & University Av.	(B) University Av. & 7th Av.	(A) FashionValley Transit Ctr. ARRIVE
–	–	4:46a	4:51a	4:58a	5:02a	5:08a	5:12a	5:19a
5:03a	5:09a	5:16	5:21	5:28	5:32	5:38	5:42	5:49
5:33	5:39	5:46	5:52	6:00	6:04	6:11	6:15	6:22
6:00	6:07	6:15	6:22	6:30	6:35	6:42	6:46	6:54
6:20	6:27	6:35	6:42	6:51	6:57	7:05	7:10	7:18
6:35	6:42	6:50	6:57	7:06	7:12	7:20	7:25	7:33
6:50	6:57	7:05	7:12	7:21	7:27	7:35	7:40	7:48
7:05	7:13	7:21	7:28	7:37	7:43	7:51	7:56	8:05
7:20	7:28	7:36	7:43	7:52	7:58	8:06	8:11	8:20
7:35	7:43	7:51	7:58	8:07	8:13	8:21	8:26	8:35
7:50	7:58	8:06	8:13	8:22	8:28	8:36	8:41	8:50
8:05	8:13	8:21	8:28	8:36	8:42	8:50	8:55	9:04
8:20	8:28	8:36	8:43	8:51	8:57	9:05	9:10	9:19
8:35	8:43	8:51	8:58	9:06	9:12	9:20	9:25	9:34
8:50	8:58	9:06	9:13	9:21	9:27	9:35	9:40	9:49
9:05	9:13	9:21	9:28	9:36	9:42	9:50	9:55	10:04
9:20	9:28	9:36	9:43	9:51	9:57	10:05	10:10	10:19
9:35	9:43	9:51	9:58	10:06	10:12	10:20	10:25	10:34
9:50	9:58	10:06	10:13	10:21	10:27	10:35	10:40	10:49
10:05	10:13	10:21	10:28	10:36	10:42	10:50	10:55	11:04
10:20	10:28	10:36	10:43	10:51	10:57	11:05	11:10	11:19
10:35	10:43	10:51	10:58	11:06	11:12	11:20	11:25	11:34
10:50	10:58	11:06	11:13	11:21	11:27	11:35	11:40	11:49
11:05	11:13	11:21	11:29	11:37	11:43	11:52	11:57	**12:06p**
11:20	11:28	11:36	11:44	11:52	11:58	**12:07p**	**12:12p**	**12:21**
11:35	11:43	11:51	11:59	**12:07p**	**12:13p**	**12:22**	**12:27**	**12:36**
11:50	11:58	**12:06p**	**12:14p**	**12:22**	**12:28**	**12:37**	**12:42**	**12:51**
12:05p	**12:13p**	**12:21**	**12:29**	**12:37**	**12:43**	**12:52**	**12:57**	**1:06**
12:20	**12:28**	**12:36**	**12:44**	**12:52**	**12:58**	**1:07**	**1:12**	**1:21**
12:35	**12:43**	**12:51**	**12:59**	**1:07**	**1:13**	**1:22**	**1:27**	**1:36**
12:50	**12:58**	**1:06**	**1:14**	**1:22**	**1:28**	**1:37**	**1:42**	**1:51**
1:05	**1:13**	**1:21**	**1:29**	**1:37**	**1:43**	**1:52**	**1:57**	**2:06**
1:20	**1:28**	**1:36**	**1:44**	**1:52**	**1:58**	**2:07**	**2:12**	**2:21**
1:35	**1:43**	**1:51**	**1:59**	**2:07**	**2:13**	**2:22**	**2:27**	**2:36**
1:50	**1:58**	**2:06**	**2:14**	**2:22**	**2:28**	**2:37**	**2:42**	**2:51**
2:02	**2:11**	**2:19**	**2:27**	**2:36**	**2:43**	**2:52**	**2:57**	**3:06**
2:17	**2:26**	**2:34**	**2:42**	**2:51**	**2:58**	**3:07**	**3:12**	**3:21**
2:32	**2:41**	**2:49**	**2:57**	**3:06**	**3:13**	**3:22**	**3:27**	**3:36**
2:47	**2:56**	**3:04**	**3:12**	**3:21**	**3:28**	**3:37**	**3:42**	**3:51**
3:02	**3:11**	**3:19**	**3:27**	**3:36**	**3:43**	**3:52**	**3:57**	**4:06**
3:17	**3:26**	**3:34**	**3:42**	**3:51**	**3:58**	**4:07**	**4:12**	**4:21**
3:32	**3:41**	**3:49**	**3:57**	**4:06**	**4:13**	**4:22**	**4:27**	**4:36**
3:47	**3:56**	**4:04**	**4:12**	**4:21**	**4:28**	**4:37**	**4:42**	**4:51**
4:02	**4:11**	**4:19**	**4:27**	**4:36**	**4:43**	**4:52**	**4:57**	**5:06**
4:17	**4:26**	**4:34**	**4:42**	**4:51**	**4:58**	**5:07**	**5:12**	**5:21**
4:32	**4:41**	**4:49**	**4:57**	**5:06**	**5:13**	**5:22**	**5:27**	**5:36**
4:47	**4:56**	**5:04**	**5:12**	**5:21**	**5:28**	**5:37**	**5:42**	**5:51**
5:02	**5:11**	**5:19**	**5:27**	**5:36**	**5:43**	**5:52**	**5:57**	**6:06**
5:17	**5:25**	**5:33**	**5:40**	**5:48**	**5:55**	**6:04**	**6:09**	**6:18**
5:32	**5:40**	**5:48**	**5:55**	**6:03**	**6:10**	**6:19**	**6:24**	**6:33**
5:47	**5:55**	**6:03**	**6:10**	**6:18**	**6:25**	**6:34**	**6:39**	**6:48**
6:02	**6:10**	**6:18**	**6:25**	**6:33**	**6:40**	**6:49**	**6:54**	**7:03**
6:17	**6:25**	**6:33**	**6:40**	**6:48**	**6:55**	**7:04**	**7:09**	**7:18**
6:32	**6:40**	**6:48**	**6:55**	**7:03**	**7:10**	**7:19**	**7:24**	**7:33**
7:02	**7:10**	**7:18**	**7:25**	**7:33**	**7:40**	**7:49**	**7:54**	**8:03**
7:32	**7:39**	**7:47**	**7:53**	**8:00**	**8:06**	**8:14**	**8:19**	**8:27**
8:02	**8:09**	**8:16**	**8:22**	**8:29**	**8:34**	**8:41**	**8:45**	**8:53**
8:32	**8:39**	**8:46**	**8:52**	**8:59**	**9:04**	**9:11**	**9:15**	**9:23**
9:02	**9:09**	**9:16**	**9:22**	**9:29**	**9:34**	**9:41**	**9:45**	**9:53**
9:32	**9:38**	**9:45**	**9:51**	**9:58**	**10:03**	**10:10**	**10:14**	**10:21**
10:05	**10:11**	**10:17**	**10:22**	**10:29**	**10:33**	**10:40**	**10:44**	**10:51**
10:35	**10:41**	**10:47**	**10:52**	**10:59**	**11:03**	**11:10**	**11:14**	**11:21**
11:07	**11:13**	**11:19**	**11:24**	**11:30**	**11:34**	**11:40**	**11:44**	**11:51**
11:37	**11:43**	**11:49**	**11:54**	12:00a	12:04a	12:10a	12:14a	–

Route 1 – Saturday / *sábado*

Fashion Valley ➡ City Heights ➡ La Mesa

(A) FashionValley Transit Ctr. DEPART	(B) University Av. & 6th Av.	(C) Park Bl. & University Av.	(D) El Cajon Bl. & 30th St.	(E) El Cajon Bl. & I-15	(F) El Cajon Bl. & Euclid Av.	(G) El Cajon Bl. & College Av.	(H) El Cajon Bl. & 70th St.	(I) La Mesa Bl. Trolley Station ARRIVE
5:22a	5:28a	5:33a	5:39a	5:44a	5:49a	5:55a	6:00a	6:08a
6:03	6:09	6:14	6:20	6:26	6:32	6:39	6:44	6:53
6:40	6:46	6:51	6:57	7:03	7:09	7:16	7:21	7:30
7:10	7:16	7:22	7:29	7:36	7:43	7:50	7:56	8:06
7:40	7:46	7:52	7:59	8:06	8:13	8:20	8:26	8:36
8:10	8:16	8:22	8:29	8:36	8:43	8:50	8:56	9:06
8:37	8:43	8:50	8:57	9:04	9:11	9:19	9:25	9:35
9:07	9:13	9:20	9:27	9:34	9:41	9:49	9:55	10:05
9:37	9:43	9:50	9:57	10:04	10:11	10:19	10:25	10:35
10:07	10:13	10:20	10:28	10:35	10:43	10:51	10:58	11:08
10:40	10:47	10:54	11:02	11:09	11:17	11:26	11:34	11:45
11:10	11:17	11:24	11:32	11:39	11:47	11:56	**12:04p**	**12:15p**
11:40	11:47	11:54	**12:02p**	**12:09p**	**12:17p**	**12:26p**	**12:34**	**12:45**
12:08p	**12:16p**	**12:24p**	**12:33**	**12:41**	**12:49**	**12:58**	**1:06**	**1:17**
12:38	**12:46**	**12:54**	**1:03**	**1:11**	**1:19**	**1:28**	**1:36**	**1:47**
1:08	**1:16**	**1:24**	**1:33**	**1:41**	**1:49**	**1:58**	**2:06**	**2:17**
1:38	**1:46**	**1:54**	**2:03**	**2:11**	**2:19**	**2:28**	**2:36**	**2:47**
2:08	**2:16**	**2:24**	**2:33**	**2:41**	**2:49**	**2:58**	**3:06**	**3:17**
2:38	**2:46**	**2:54**	**3:03**	**3:11**	**3:19**	**3:28**	**3:36**	**3:47**
3:08	**3:16**	**3:24**	**3:33**	**3:41**	**3:49**	**3:58**	**4:06**	**4:17**
3:38	**3:46**	**3:54**	**4:03**	**4:11**	**4:19**	**4:28**	**4:36**	**4:47**
4:08	**4:16**	**4:24**	**4:33**	**4:41**	**4:49**	**4:58**	**5:06**	**5:17**
4:38	**4:46**	**4:54**	**5:03**	**5:11**	**5:19**	**5:28**	**5:36**	**5:47**
5:08	**5:16**	**5:24**	**5:33**	**5:41**	**5:49**	**5:58**	**6:06**	**6:17**
5:40	**5:48**	**5:56**	**6:05**	**6:13**	**6:21**	**6:29**	**6:36**	**6:47**
6:10	**6:18**	**6:26**	**6:35**	**6:43**	**6:50**	**6:57**	**7:04**	**7:14**
6:40	**6:48**	**6:56**	**7:05**	**7:13**	**7:20**	**7:27**	**7:34**	**7:44**
7:10	**7:17**	**7:25**	**7:34**	**7:41**	**7:48**	**7:55**	**8:02**	**8:12**
7:42	**7:49**	**7:56**	**8:05**	**8:11**	**8:18**	**8:25**	**8:31**	**8:40**
8:12	**8:19**	**8:26**	**8:35**	**8:41**	**8:48**	**8:55**	**9:01**	**9:10**
8:42	**8:49**	**8:56**	**9:04**	**9:10**	**9:17**	**9:24**	**9:29**	**9:38**
9:14	**9:20**	**9:27**	**9:34**	**9:40**	**9:46**	**9:52**	**9:57**	**10:05**
9:44	**9:50**	**9:57**	**10:04**	**10:10**	**10:16**	**10:22**	**10:27**	**10:35**
10:16	**10:22**	**10:28**	**10:35**	**10:40**	**10:46**	**10:52**	**10:57**	**11:05**
10:46	**10:52**	**10:57**	**11:03**	**11:08**	**11:14**	**11:20**	**11:25**	**11:32**
11:16	**11:22**	**11:27**	**11:33**	**11:38**	**11:44**	**11:50**	**11:55**	12:02a

La Mesa ➡ City Heights ➡ Fashion Valley

(I) La Mesa Bl. Trolley Station DEPART	(H) El Cajon Bl. & 70th St.	(G) El Cajon Bl. & College Av.	(F) El Cajon Bl. & Euclid Av.	(E) El Cajon Bl. & I-15	(D) El Cajon Bl. & 30th St.	(C) Park Bl. & University Av.	(B) University Av. & 7th Av.	(A) FashionValley Transit Ctr. ARRIVE
5:32a	5:38a	5:45a	5:50a	5:57a	6:01a	6:07a	6:11a	6:18a
6:15	6:21	6:28	6:34	6:41	6:46	6:53	6:57	7:05
6:45	6:51	6:58	7:04	7:11	7:16	7:23	7:27	7:35
7:15	7:22	7:29	7:35	7:42	7:48	7:55	7:59	8:07
7:45	7:53	8:00	8:06	8:13	8:19	8:27	8:32	8:41
8:20	8:28	8:36	8:43	8:51	8:57	9:05	9:10	9:19
8:50	8:58	9:06	9:13	9:21	9:27	9:35	9:40	9:49
9:20	9:28	9:36	9:43	9:51	9:57	10:05	10:10	10:19
9:50	9:58	10:06	10:13	10:21	10:27	10:35	10:40	10:49
10:20	10:28	10:36	10:43	10:51	10:57	11:05	11:10	11:19
10:50	10:58	11:06	11:13	11:21	11:27	11:35	11:40	11:49
11:18	11:26	11:34	11:42	11:50	11:56	**12:05p**	**12:10p**	**12:19p**
11:48	11:56	**12:04p**	**12:12p**	**12:20p**	**12:26p**	**12:35**	**12:40**	**12:49**
12:18p	**12:26p**	**12:34**	**12:42**	**12:50**	**12:56**	**1:05**	**1:10**	**1:19**
12:48	**12:56**	**1:04**	**1:12**	**1:20**	**1:26**	**1:35**	**1:40**	**1:49**
1:18	**1:26**	**1:34**	**1:42**	**1:50**	**1:56**	**2:05**	**2:10**	**2:19**
1:48	**1:56**	**2:04**	**2:12**	**2:20**	**2:26**	**2:35**	**2:40**	**2:49**
2:18	**2:26**	**2:34**	**2:42**	**2:50**	**2:56**	**3:05**	**3:10**	**3:19**
2:48	**2:56**	**3:04**	**3:12**	**3:20**	**3:26**	**3:35**	**3:40**	**3:49**
3:18	**3:26**	**3:34**	**3:42**	**3:50**	**3:56**	**4:05**	**4:10**	**4:19**
3:48	**3:56**	**4:04**	**4:12**	**4:20**	**4:26**	**4:35**	**4:40**	**4:49**
4:18	**4:26**	**4:34**	**4:42**	**4:50**	**4:56**	**5:05**	**5:10**	**5:19**
4:48	**4:56**	**5:04**	**5:12**	**5:20**	**5:26**	**5:35**	**5:40**	**5:49**
5:20	**5:28**	**5:36**	**5:43**	**5:50**	**5:56**	**6:05**	**6:10**	**6:19**
5:50	**5:58**	**6:06**	**6:13**	**6:20**	**6:26**	**6:35**	**6:40**	**6:49**
6:20	**6:28**	**6:36**	**6:43**	**6:50**	**6:56**	**7:05**	**7:10**	**7:19**
6:50	**6:58**	**7:06**	**7:13**	**7:20**	**7:26**	**7:35**	**7:40**	**7:49**
7:20	**7:27**	**7:35**	**7:41**	**7:48**	**7:54**	**8:02**	**8:07**	**8:15**
7:50	**7:57**	**8:05**	**8:11**	**8:18**	**8:24**	**8:32**	**8:37**	**8:45**
8:20	**8:27**	**8:34**	**8:40**	**8:47**	**8:52**	**8:59**	**9:03**	**9:11**
8:50	**8:57**	**9:04**	**9:10**	**9:17**	**9:22**	**9:29**	**9:33**	**9:41**
9:20	**9:26**	**9:33**	**9:39**	**9:46**	**9:51**	**9:58**	**10:02**	**10:09**
9:50	**9:56**	**10:02**	**10:07**	**10:14**	**10:18**	**10:25**	**10:29**	**10:36**
10:20	**10:26**	**10:32**	**10:37**	**10:44**	**10:48**	**10:55**	**10:59**	**11:06**
10:50	**10:56**	**11:02**	**11:07**	**11:14**	**11:18**	**11:25**	**11:29**	**11:36**
11:37	**11:43**	**11:49**	**11:54**	12:00a	12:04a	12:10a	12:14a	–

Route 1 – Sunday / *domingo*

Fashion Valley ➡ City Heights ➡ La Mesa

(A) FashionValley Transit Ctr. DEPART	(B) University Av. & 6th Av.	(C) Park Bl. & University Av.	(D) El Cajon Bl. & 30th St.	(E) El Cajon Bl. & I-15	(F) El Cajon Bl. & Euclid Av.	(G) El Cajon Bl. & College Av.	(H) El Cajon Bl. & 70th St.	(I) La Mesa Bl. Trolley Station ARRIVE
6:16a	6:22a	6:27a	6:33a	6:39a	6:45a	6:52a	6:57a	7:06a
7:10	7:16	7:22	7:29	7:36	7:43	7:50	7:56	8:06
8:10	8:16	8:22	8:29	8:36	8:43	8:50	8:56	9:06
8:37	8:43	8:50	8:57	9:04	9:11	9:19	9:25	9:35
9:07	9:13	9:20	9:27	9:34	9:41	9:49	9:55	10:05
9:37	9:43	9:50	9:57	10:04	10:11	10:19	10:25	10:35
10:07	10:13	10:20	10:28	10:35	10:43	10:51	10:58	11:08
10:40	10:47	10:54	11:02	11:09	11:17	11:26	11:34	11:45
11:10	11:17	11:24	11:32	11:39	11:47	11:56	**12:04p**	**12:15p**
11:40	11:47	11:54	**12:02p**	**12:09p**	**12:17p**	**12:26p**	**12:34**	**12:45**
12:08p	**12:16p**	**12:24p**	**12:33**	**12:41**	**12:49**	**12:58**	**1:06**	**1:17**
12:38	**12:46**	**12:54**	**1:03**	**1:11**	**1:19**	**1:28**	**1:36**	**1:47**
1:08	**1:16**	**1:24**	**1:33**	**1:41**	**1:49**	**1:58**	**2:06**	**2:17**
1:38	**1:46**	**1:54**	**2:03**	**2:11**	**2:19**	**2:28**	**2:36**	**2:47**
2:08	**2:16**	**2:24**	**2:33**	**2:41**	**2:49**	**2:58**	**3:06**	**3:17**
2:38	**2:46**	**2:54**	**3:03**	**3:11**	**3:19**	**3:28**	**3:36**	**3:47**
3:08	**3:16**	**3:24**	**3:33**	**3:41**	**3:49**	**3:58**	**4:06**	**4:17**
3:38	**3:46**	**3:54**	**4:03**	**4:11**	**4:19**	**4:28**	**4:36**	**4:47**
4:08	**4:16**	**4:24**	**4:33**	**4:41**	**4:49**	**4:58**	**5:06**	**5:17**
4:38	**4:46**	**4:54**	**5:03**	**5:11**	**5:19**	**5:28**	**5:36**	**5:47**
5:08	**5:16**	**5:24**	**5:33**	**5:41**	**5:49**	**5:58**	**6:06**	**6:17**
5:40	**5:48**	**5:56**	**6:05**	**6:13**	**6:21**	**6:29**	**6:36**	**6:47**
6:10	**6:18**	**6:26**	**6:35**	**6:43**	**6:50**	**6:57**	**7:04**	**7:14**
6:40	**6:48**	**6:56**	**7:05**	**7:13**	**7:20**	**7:27**	**7:34**	**7:44**
7:10	**7:17**	**7:25**	**7:34**	**7:41**	**7:48**	**7:55**	**8:02**	**8:12**
8:12	**8:19**	**8:26**	**8:35**	**8:41**	**8:48**	**8:55**	**9:01**	**9:10**

La Mesa ➡ City Heights ➡ Fashion Valley

(I) La Mesa Bl. Trolley Station DEPART	(H) El Cajon Bl. & 70th St.	(G) El Cajon Bl. & College Av.	(F) El Cajon Bl. & Euclid Av.	(E) El Cajon Bl. & I-15	(D) El Cajon Bl. & 30th St.	(C) Park Bl. & University Av.	(B) University Av. & 7th Av.	(A) FashionValley Transit Ctr. ARRIVE
5:39a	5:45a	5:52a	5:57a	6:04a	6:08a	6:14a	6:18a	6:25a
6:45	6:51	6:58	7:04	7:11	7:16	7:23	7:27	7:35
7:45	7:53	8:00	8:06	8:13	8:19	8:27	8:32	8:41
8:20	8:28	8:36	8:43	8:51	8:57	9:05	9:10	9:19
8:50	8:58	9:06	9:13	9:21	9:27	9:35	9:40	9:49
9:20	9:28	9:36	9:43	9:51	9:57	10:05	10:10	10:19
9:50	9:58	10:06	10:13	10:21	10:27	10:35	10:40	10:49
10:20	10:28	10:36	10:43	10:51	10:57	11:05	11:10	11:19
10:50	10:58	11:06	11:13	11:21	11:27	11:35	11:40	11:49
11:18	11:26	11:34	11:42	11:50	11:56	**12:05p**	**12:10p**	**12:19p**
11:48	11:56	**12:04p**	**12:12p**	**12:20p**	**12:26p**	**12:35**	**12:40**	**12:49**
12:18p	**12:26p**	**12:34**	**12:42**	**12:50**	**12:56**	**1:05**	**1:10**	**1:19**
12:48	**12:56**	**1:04**	**1:12**	**1:20**	**1:26**	**1:35**	**1:40**	**1:49**
1:18	**1:26**	**1:34**	**1:42**	**1:50**	**1:56**	**2:05**	**2:10**	**2:19**
1:48	**1:56**	**2:04**	**2:12**	**2:20**	**2:26**	**2:35**	**2:40**	**2:49**
2:18	**2:26**	**2:34**	**2:42**	**2:50**	**2:56**	**3:05**	**3:10**	**3:19**
2:48	**2:56**	**3:04**	**3:12**	**3:20**	**3:26**	**3:35**	**3:40**	**3:49**
3:18	**3:26**	**3:34**	**3:42**	**3:50**	**3:56**	**4:05**	**4:10**	**4:19**
3:48	**3:56**	**4:04**	**4:12**	**4:20**	**4:26**	**4:35**	**4:40**	**4:49**
4:18	**4:26**	**4:34**	**4:42**	**4:50**	**4:56**	**5:05**	**5:10**	**5:19**
4:48	**4:56**	**5:04**	**5:12**	**5:20**	**5:26**	**5:35**	**5:40**	**5:49**
5:20	**5:28**	**5:36**	**5:43**	**5:50**	**5:56**	**6:05**	**6:10**	**6:19**
5:50	**5:58**	**6:06**	**6:13**	**6:20**	**6:26**	**6:35**	**6:40**	**6:49**
6:20	**6:28**	**6:36**	**6:43**	**6:50**	**6:56**	**7:05**	**7:10**	**7:19**
6:50	**6:58**	**7:06**	**7:13**	**7:20**	**7:26**	**7:35**	**7:40**	**7:49**
7:50	**7:57**	**8:05**	**8:11**	**8:18**	**8:24**	**8:32**	**8:37**	**8:45**

The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.
Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	**$2.50**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$1.25**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$2.50**

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	**$6.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$3.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$3.00**

MONTHLY PASSES / Pases mensual

Adult / Adulto	**$72.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$23.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959. *Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
There is a $2 charge for Compass Cards, which can be reloaded for future use. Hay un costo de $2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

COMPASS CLOUD
Download the free Compass Cloud app on your Apple or Android phone. Descargue la aplicación gratis Compass Cloud en su teléfono Apple o Android.

Visit sdmts.com/fares for more info. Visite sdmts.com/fares para más información.

DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** or/*o* **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/*o* **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (vía teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 233-3004**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M-F 8am-5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com.** *Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a* **sdmts.com.**

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective JANUARY 26, 2020

3

Euclid Transit Center – UCSD Med. Ctr. / Hillcrest

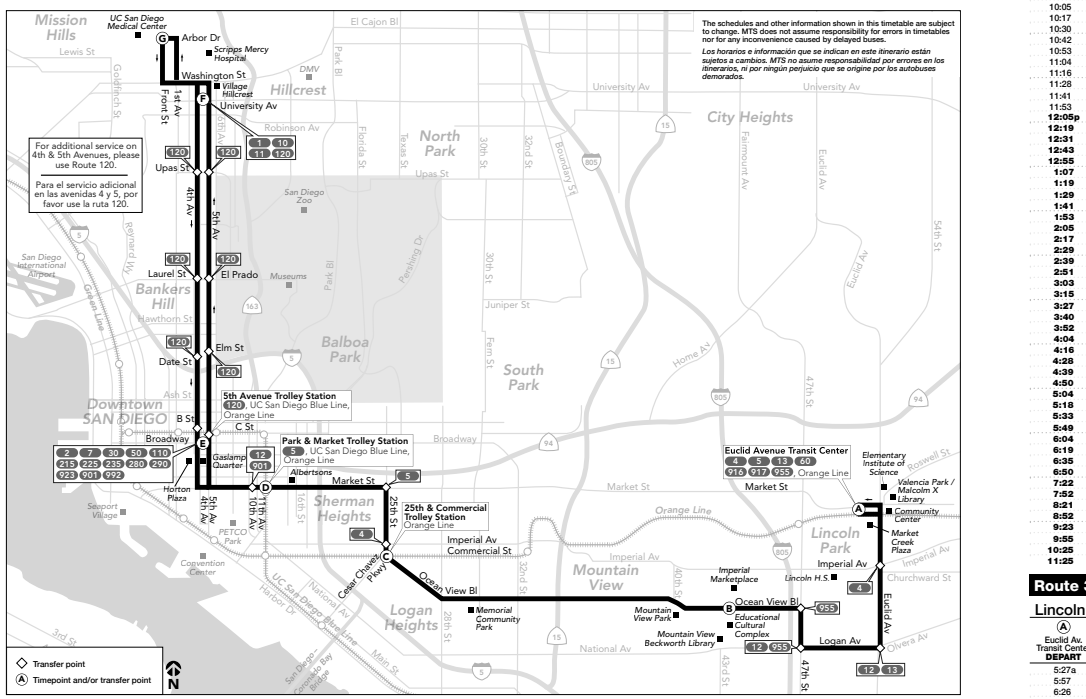
via Ocean View Bl. / Downtown

DESTINATIONS
- Balboa Park
- Bankers Hill
- Educational Cultural Complex
- Gaslamp Quarter
- Market Creek Plaza

TROLLEY CONNECTIONS
- 5th Av.
- Park & Market
- 25th & Commercial
- Euclid Av.

01/20

sdmts.com
Route Alerts, Updated Schedules, Connections & More



Alternative formats available upon request. Please call: (619) 557-4555 / ***Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555***

Route 3 – Sunday / *domingo*

Lincoln Park ➡ Downtown ➡ Hillcrest

A Euclid Av. Transit Center **DEPART**	B Educational Cultural Complex	C 25th & Commercial Trolley Station	D Park & Market Trolley Station	E 5th Av. & Broadway	F 5th Av. & University Av.	G UCSD Medical Center **ARRIVE**
5:57a	6:05a	6:15a	6:23a	6:29a	6:42a	6:48a
6:55	7:04	7:15	7:23	7:30	7:44	7:50
7:22	7:31	7:43	7:52	8:00	8:15	8:21
7:50	7:59	8:11	8:20	8:28	8:43	8:49
8:20	8:29	8:41	8:50	8:58	9:13	9:19
8:50	8:59	9:11	9:20	9:28	9:43	9:49
9:21	9:30	9:42	9:51	9:59	10:14	10:20
9:51	10:00	10:12	10:21	10:29	10:44	10:50
10:19	10:29	10:41	10:51	10:59	11:15	11:21
10:49	10:59	11:11	11:21	11:29	11:45	11:51
11:19	11:29	11:41	11:51	11:59	**12:15p**	**12:21p**
11:49	11:59	**12:11p**	**12:21p**	**12:29p**	12:45	12:51
12:19p	**12:29p**	12:41	12:51	12:59	1:15	1:21
12:49	12:59	1:11	1:21	1:29	1:45	1:51
1:20	1:30	1:42	1:52	2:00	2:16	2:22
1:50	2:00	2:12	2:22	2:30	2:46	2:52
2:20	2:30	2:42	2:52	3:00	3:16	3:22
2:50	3:00	3:12	3:22	3:30	3:46	3:52
3:20	3:30	3:42	3:52	4:00	4:16	4:22
3:50	4:00	4:12	4:22	4:30	4:46	4:52
4:20	4:30	4:42	4:52	5:00	5:16	5:22
4:50	5:00	5:11	5:21	5:29	5:44	5:50
5:51	6:00	6:10	6:19	6:27	6:41	6:47
6:52	7:01	7:11	7:20	7:28	7:42	7:48
7:52	8:01	8:11	8:20	8:28	8:42	8:48

Hillcrest ➡ Downtown ➡ Lincoln Park

G UCSD Medical Center **DEPART**	F 4th Av. & University Av.	E 4th Av. & B St.	D Park & Market Trolley Station	C 25th & Commercial Trolley Station	B Educational Cultural Complex	A Euclid Av. Transit Center **ARRIVE**
6:16a	6:20a	6:32a	6:37a	6:44a	6:53a	7:03a
7:15	7:20	7:33	7:38	7:45	7:55	8:05
7:58	8:03	8:16	8:21	8:28	8:38	8:48
8:37	8:42	8:56	9:02	9:10	9:20	9:31
9:11	9:16	9:30	9:37	9:45	9:55	10:07
9:41	9:46	10:00	10:07	10:15	10:25	10:37
10:11	10:16	10:30	10:37	10:45	10:55	11:07
10:41	10:46	11:00	11:07	11:15	11:25	11:37
11:10	11:15	11:30	11:37	11:45	11:56	**12:08p**
11:38	11:44	11:59	**12:07p**	**12:16p**	**12:27p**	**12:39**
12:08p	**12:14p**	**12:29p**	12:37	12:46	12:57	1:10
12:38	12:44	12:59	1:07	1:16	1:27	1:40
1:08	1:14	1:29	1:37	1:46	1:57	2:10
1:38	1:44	1:59	2:07	2:16	2:27	2:40
2:08	2:14	2:29	2:37	2:46	2:57	3:10
2:38	2:44	2:59	3:07	3:16	3:27	3:40
3:08	3:14	3:29	3:37	3:46	3:57	4:10
3:38	3:44	3:59	4:07	4:16	4:27	4:40
4:08	4:14	4:29	4:37	4:46	4:57	5:10
4:39	4:45	5:00	5:07	5:16	5:27	5:39
5:09	5:15	5:30	5:37	5:46	5:57	6:09
5:40	5:46	6:00	6:07	6:15	6:25	6:37
6:13	6:19	6:32	6:39	6:47	6:57	7:08
7:13	7:19	7:32	7:39	7:47	7:57	8:08
8:14	8:19	8:32	8:39	8:46	8:55	9:06

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Route 3 – Monday through Friday / *lunes a viernes*

Lincoln Park ➡ Downtown ➡ Hillcrest

A Euclid Av. Transit Center **DEPART**	B Educational Cultural Complex	C 25th & Commercial Trolley Station	D Park & Market Trolley Station	E 5th Av. & Broadway	F 5th Av. & University Av.	G UCSD Medical Center **ARRIVE**
4:40a	4:48a	4:58a	5:06a	5:12a	5:25a	5:31a
5:08	5:17	5:28	5:36	5:42	5:56	6:02
5:23	5:32	5:43	5:51	5:57	6:11	6:17
5:38	5:47	5:58	6:06	6:12	6:26	6:32
5:53	6:02	6:14	6:23	6:29	6:43	6:49
6:06	6:15	6:27	6:36	6:42	6:56	7:02
6:18	6:27	6:39	6:48	6:55	7:10	7:16
6:29	6:38	6:51	7:00	7:07	7:23	7:29
6:41	6:51	7:05	7:14	7:21	7:37	7:43
6:52	7:03	7:17	7:27	7:34	7:50	7:56
7:03	7:14	7:28	7:38	7:45	8:01	8:07
7:15	7:26	7:40	7:50	7:57	8:13	8:19
7:27	7:38	7:52	8:02	8:09	8:25	8:31
7:39	7:50	8:04	8:14	8:21	8:37	8:43
7:51	8:02	8:16	8:26	8:33	8:49	8:55
8:06	8:17	8:31	8:41	8:48	9:04	9:10
8:18	8:29	8:43	8:53	9:00	9:16	9:22
8:30	8:41	8:53	9:03	9:10	9:26	9:32
8:42	8:53	9:05	9:15	9:22	9:38	9:44
8:54	9:05	9:17	9:27	9:34	9:50	9:56
9:06	9:17	9:29	9:39	9:46	10:02	10:08
9:18	9:29	9:41	9:51	9:58	10:14	10:20
9:30	9:41	9:53	10:03	10:10	10:26	10:32
9:41	9:52	10:04	10:14	10:21	10:37	10:43
9:53	10:04	10:16	10:26	10:33	10:49	10:55
10:05	10:16	10:28	10:38	10:45	11:01	11:07
10:17	10:28	10:40	10:50	10:57	11:13	11:19
10:30	10:41	10:53	11:03	11:10	11:26	11:32
10:42	10:53	11:05	11:15	11:22	11:38	11:44
10:53	11:04	11:16	11:26	11:33	11:49	11:55
11:04	11:15	11:27	11:37	11:44	**12:00p**	**12:06p**
11:16	11:27	11:39	11:49	11:56	**12:12**	**12:18**
11:28	11:39	11:51	**12:01p**	**12:08p**	12:24	12:30
11:41	11:52	**12:04p**	12:14	12:21	12:37	12:43
11:53	**12:04p**	12:16	12:26	12:33	12:49	12:55
12:05p	12:16	12:28	12:38	12:45	1:01	1:07
12:19	12:30	12:42	12:52	12:59	1:15	1:21
12:31	12:42	12:54	1:04	1:11	1:27	1:33
12:43	12:54	1:06	1:16	1:23	1:39	1:45
12:55	1:06	1:18	1:28	1:35	1:51	1:57
1:07	1:18	1:30	1:40	1:47	2:03	2:09
1:19	1:30	1:42	1:52	1:59	2:15	2:21
1:29	1:40	1:52	2:02	2:09	2:25	2:31
1:41	1:52	2:04	2:14	2:21	2:37	2:43
1:53	2:04	2:16	2:26	2:33	2:49	2:55
2:05	2:17	2:29	2:39	2:47	3:03	3:10
2:17	2:29	2:41	2:51	2:59	3:15	3:22
2:29	2:41	2:53	3:03	3:11	3:27	3:34
2:39	2:51	3:03	3:13	3:21	3:37	3:44
2:51	3:03	3:15	3:25	3:33	3:49	3:56
3:03	3:15	3:27	3:37	3:45	4:01	4:08
3:15	3:27	3:39	3:49	3:57	4:13	4:20
3:27	3:39	3:51	4:01	4:09	4:25	4:32
3:40	3:52	4:04	4:14	4:22	4:38	4:45
3:52	4:04	4:16	4:26	4:34	4:50	4:57
4:04	4:16	4:28	4:38	4:46	5:02	5:09
4:16	4:28	4:40	4:50	4:58	5:14	5:21
4:28	4:40	4:52	5:02	5:10	5:26	5:33
4:39	4:51	5:03	5:13	5:21	5:37	5:44
4:50	5:02	5:14	5:24	5:32	5:48	5:55
5:04	5:16	5:28	5:38	5:45	6:00	6:06
5:18	5:30	5:42	5:52	5:59	6:14	6:20
5:33	5:44	5:56	6:05	6:12	6:26	6:32
5:49	6:00	6:12	6:21	6:28	6:42	6:48
6:04	6:15	6:27	6:36	6:43	6:57	7:03
6:19	6:30	6:42	6:51	6:58	7:12	7:18
6:35	6:46	6:58	7:07	7:14	7:28	7:34
6:50	7:01	7:13	7:22	7:29	7:43	7:49
7:22	7:32	7:43	7:52	7:59	8:13	8:19
7:52	8:02	8:13	8:22	8:29	8:43	8:49
8:21	8:31	8:42	8:51	8:58	9:12	9:18
8:52	9:02	9:12	9:21	9:28	9:41	9:47
9:23	9:33	9:43	9:51	9:58	10:11	10:16
9:55	10:04	10:14	10:21	10:28	10:41	10:46
10:25	10:34	10:44	10:51	10:58	11:11	11:16
11:25	11:34	11:44	11:51	11:58	12:11a	12:16a

Hillcrest ➡ Downtown ➡ Lincoln Park

G UCSD Medical Center **DEPART**	F 4th Av. & University Av.	E 4th Av. & B St.	D Park & Market Trolley Station	C 25th & Commercial Trolley Station	B Educational Cultural Complex	A Euclid Av. Transit Center **ARRIVE**
4:41a	4:45a	4:56a	5:01a	5:07a	5:16a	5:27a
5:11	5:15	5:26	5:31	5:37	5:46	5:57
5:41	5:45	5:56	6:02	6:09	6:19	6:31
6:10	6:14	6:26	6:32	6:39	6:49	7:02
6:26	6:30	6:42	6:48	6:55	7:05	7:18
6:42	6:47	7:00	7:06	7:13	7:23	7:36
6:55	7:00	7:13	7:19	7:26	7:36	7:49
7:08	7:13	7:27	7:33	7:41	7:51	8:05
7:20	7:25	7:39	7:45	7:53	8:03	8:17
7:32	7:37	7:51	7:57	8:05	8:15	8:29
7:44	7:49	8:03	8:09	8:17	8:27	8:41
7:56	8:01	8:15	8:21	8:29	8:39	8:53
8:09	8:14	8:28	8:34	8:42	8:52	9:06
8:21	8:26	8:40	8:46	8:54	9:04	9:18
8:32	8:37	8:51	8:57	9:05	9:15	9:29
8:44	8:49	9:03	9:09	9:17	9:27	9:41
8:56	9:01	9:15	9:21	9:29	9:39	9:53
9:08	9:13	9:27	9:33	9:41	9:51	10:05
9:22	9:27	9:41	9:47	9:55	10:05	10:19
9:34	9:39	9:53	9:59	10:07	10:17	10:31
9:45	9:50	10:04	10:10	10:18	10:28	10:42
9:56	10:01	10:15	10:21	10:29	10:39	10:53
10:08	10:13	10:27	10:33	10:41	10:51	11:05
10:20	10:25	10:39	10:45	10:53	11:03	11:17
10:33	10:38	10:52	10:58	11:06	11:16	11:30
10:44	10:49	11:03	11:10	11:18	11:29	11:43
10:54	11:00	11:15	11:22	11:30	11:41	11:55
11:06	11:12	11:27	11:34	11:43	11:54	**12:08p**
11:18	11:24	11:39	11:46	11:55	**12:06p**	**12:20**
11:30	11:36	11:51	11:58	**12:07p**	**12:18**	**12:32**
11:42	11:48	**12:03p**	**12:10p**	**12:19**	**12:30**	**12:44**
11:54	**12:00p**	**12:15**	**12:22**	**12:31**	**12:42**	**12:56**
12:06p	**12:12**	**12:27**	**12:34**	**12:43**	**12:54**	**1:08**
12:17	**12:23**	**12:38**	**12:45**	**12:54**	**1:05**	**1:19**
12:29	**12:35**	**12:50**	**12:57**	**1:06**	**1:17**	**1:31**
12:41	**12:47**	**1:02**	**1:09**	**1:18**	**1:29**	**1:43**
12:53	**12:59**	**1:14**	**1:21**	**1:30**	**1:41**	**1:55**
1:05	**1:11**	**1:26**	**1:33**	**1:42**	**1:53**	**2:07**
1:17	**1:23**	**1:38**	**1:45**	**1:54**	**2:05**	**2:19**
1:31	**1:37**	**1:52**	**1:59**	**2:08**	**2:19**	**2:33**
1:45	**1:51**	**2:07**	**2:14**	**2:23**	**2:35**	**2:49**
1:57	**2:03**	**2:19**	**2:26**	**2:35**	**2:47**	**3:01**
2:09	**2:15**	**2:31**	**2:38**	**2:47**	**2:59**	**3:13**
2:21	**2:27**	**2:43**	**2:50**	**3:00**	**3:13**	**3:27**
2:33	**2:39**	**2:55**	**3:02**	**3:12**	**3:25**	**3:39**
2:45	**2:51**	**3:07**	**3:14**	**3:24**	**3:37**	**3:51**
2:57	**3:03**	**3:19**	**3:26**	**3:36**	**3:49**	**4:03**
3:09	**3:15**	**3:31**	**3:38**	**3:48**	**4:01**	**4:15**
3:21	**3:27**	**3:43**	**3:50**	**4:00**	**4:13**	**4:27**
3:33	**3:39**	**3:55**	**4:02**	**4:12**	**4:25**	**4:39**
3:45	**3:51**	**4:07**	**4:14**	**4:24**	**4:37**	**4:51**
3:57	**4:03**	**4:19**	**4:26**	**4:36**	**4:49**	**5:03**
4:09	**4:15**	**4:31**	**4:38**	**4:48**	**5:01**	**5:15**
4:21	**4:27**	**4:43**	**4:50**	**5:00**	**5:13**	**5:27**
4:34	**4:40**	**4:55**	**5:02**	**5:11**	**5:23**	**5:37**
4:46	**4:52**	**5:07**	**5:14**	**5:23**	**5:35**	**5:49**
4:58	**5:04**	**5:19**	**5:26**	**5:35**	**5:47**	**6:01**
5:10	**5:16**	**5:31**	**5:38**	**5:47**	**5:59**	**6:13**
5:22	**5:28**	**5:43**	**5:50**	**5:59**	**6:11**	**6:25**
5:37	**5:43**	**5:57**	**6:04**	**6:13**	**6:25**	**6:38**
5:50	**5:56**	**6:10**	**6:17**	**6:26**	**6:38**	**6:51**
6:05	**6:11**	**6:25**	**6:31**	**6:40**	**6:51**	**7:04**
6:20	**6:26**	**6:40**	**6:46**	**6:54**	**7:05**	**7:17**
6:35	**6:41**	**6:54**	**7:00**	**7:08**	**7:18**	**7:30**
6:57	**7:03**	**7:16**	**7:22**	**7:30**	**7:40**	**7:52**
7:27	**7:33**	**7:46**	**7:52**	**8:00**	**8:10**	**8:22**
7:58	**8:03**	**8:16**	**8:22**	**8:30**	**8:40**	**8:51**
8:30	**8:34**	**8:46**	**8:52**	**9:00**	**9:10**	**9:21**
9:00	**9:04**	**9:16**	**9:22**	**9:30**	**9:40**	**9:51**
9:27	**9:31**	**9:43**	**9:49**	**9:56**	**10:05**	**10:16**
9:57	**10:01**	**10:13**	**10:19**	**10:26**	**10:35**	**10:46**
10:27	**10:31**	**10:43**	**10:49**	**10:56**	**11:05**	**11:16**
11:27	**11:31**	**11:43**	**11:49**	**11:56**	12:05a	12:16a

Route 3 – Saturday / *sábado*

Lincoln Park ➡ Downtown ➡ Hillcrest

A Euclid Av. Transit Center **DEPART**	B Educational Cultural Complex	C 25th & Commercial Trolley Station	D Park & Market Trolley Station	E 5th Av. & Broadway	F 5th Av. & University Av.	G UCSD Medical Center **ARRIVE**
5:27a	5:35a	5:45a	5:53a	5:59a	6:12a	6:18a
5:57	6:05	6:15	6:23	6:29	6:42	6:48
6:26	6:35	6:45	6:53	6:59	7:13	7:19
6:55	7:04	7:15	7:23	7:30	7:44	7:50
7:24	7:33	7:45	7:54	8:02	8:17	8:23
7:45	7:54	8:06	8:15	8:23	8:38	8:44
8:05	8:14	8:26	8:35	8:43	8:58	9:04
8:25	8:34	8:46	8:55	9:03	9:18	9:24
8:45	8:54	9:06	9:15	9:23	9:38	9:44
9:05	9:14	9:26	9:35	9:43	9:58	10:04
9:25	9:34	9:46	9:55	10:03	10:18	10:24
9:45	9:54	10:06	10:15	10:23	10:38	10:44
10:05	10:15	10:27	10:37	10:45	11:01	11:07
10:24	10:34	10:46	10:56	11:04	11:20	11:26
10:44	10:54	11:06	11:16	11:24	11:40	11:46
11:04	11:14	11:26	11:36	11:44	**12:00p**	**12:06p**
11:24	11:34	11:46	11:56	**12:04p**	**12:20**	**12:26**
11:45	11:55	**12:07p**	**12:17p**	**12:25**	**12:41**	**12:47**
12:05p	**12:15p**	**12:27**	**12:37**	**12:45**	1:01	1:07
12:25	**12:35**	**12:47**	**12:57**	1:05	1:21	1:27
12:45	**12:55**	1:07	1:17	1:25	1:41	1:47
1:05	1:15	1:27	1:37	1:45	2:01	2:07
1:27	1:37	1:49	1:59	2:07	2:23	2:29
1:47	1:57	2:09	2:19	2:27	2:43	2:49
2:07	2:17	2:29	2:39	2:47	3:03	3:09
2:28	2:38	2:50	3:00	3:08	3:24	3:30
2:48	2:58	3:10	3:20	3:28	3:44	3:50
3:08	3:18	3:30	3:40	3:48	4:04	4:10
3:28	3:38	3:50	4:00	4:08	4:24	4:30
3:53	4:03	4:15	4:25	4:33	4:49	4:55
4:18	4:28	4:40	4:50	4:58	5:14	5:20
4:48	4:58	5:09	5:19	5:27	5:42	5:48
5:20	5:29	5:40	5:49	5:57	6:12	6:18
5:51	6:00	6:10	6:19	6:27	6:41	6:47
6:21	6:30	6:40	6:49	6:57	7:11	7:17
6:52	7:01	7:11	7:20	7:28	7:42	7:48
7:22	7:31	7:41	7:50	7:58	8:12	8:18
8:22	8:31	8:41	8:50	8:58	9:12	9:18
9:23	9:31	9:41	9:49	9:58	10:11	10:16
10:25	10:33	10:42	10:49	10:58	11:11	11:16

Hillcrest ➡ Downtown ➡ Lincoln Park

G UCSD Medical Center **DEPART**	F 4th Av. & University Av.	E 4th Av. & B st.	D Park & Market Trolley Station	C 25th & Commercial Trolley Station	B Educational Cultural Complex	A Euclid Av. Transit Center **ARRIVE**
6:16a	6:20a	6:32a	6:37a	6:44a	6:53a	7:03a
6:45	6:50	7:03	7:08	7:15	7:25	7:35
7:15	7:20	7:33	7:38	7:45	7:55	8:05
7:49	7:54	8:07	8:12	8:19	8:29	8:39
8:23	8:28	8:41	8:46	8:53	9:03	9:13
8:48	8:53	9:07	9:13	9:21	9:31	9:42
9:08	9:13	9:27	9:34	9:42	9:52	10:04
9:27	9:32	9:46	9:53	10:01	10:11	10:23
9:47	9:52	10:06	10:13	10:21	10:31	10:43
10:07	10:12	10:26	10:33	10:41	10:51	11:03
10:27	10:32	10:46	10:53	11:01	11:11	11:23
10:46	10:51	11:06	11:13	11:21	11:32	11:44
11:06	11:11	11:26	11:33	11:41	11:52	**12:04p**
11:26	11:31	11:46	11:53	**12:01p**	**12:12p**	**12:24**
11:46	11:51	**12:06p**	**12:14p**	**12:23**	**12:34**	**12:46**
12:06p	**12:12p**	**12:27**	**12:35**	**12:44**	**12:55**	**1:08**
12:26	**12:32**	**12:47**	**12:55**	1:04	1:15	1:28
12:46	**12:52**	1:07	1:15	1:24	1:35	1:48
1:07	1:13	1:28	1:36	1:45	1:56	2:09
1:27	1:33	1:48	1:56	2:05	2:16	2:29
1:47	1:53	2:08	2:16	2:25	2:36	2:49
2:07	2:13	2:28	2:36	2:45	2:56	3:09
2:27	2:33	2:48	2:56	3:05	3:16	3:29
2:47	2:53	3:08	3:16	3:25	3:36	3:49
3:07	3:13	3:28	3:36	3:45	3:56	4:09
3:27	3:33	3:48	3:56	4:05	4:16	4:29
3:50	3:56	4:11	4:19	4:28	4:39	4:52
4:10	4:16	4:31	4:39	4:48	4:59	5:12
4:30	4:36	4:51	4:58	5:07	5:18	5:30
4:50	4:56	5:11	5:18	5:27	5:38	5:50
5:09	5:15	5:30	5:37	5:46	5:57	6:09
5:32	5:38	5:52	5:59	6:07	6:17	6:29
5:56	6:02	6:15	6:22	6:30	6:40	6:51
6:26	6:32	6:45	6:52	7:00	7:10	7:21
6:56	7:02	7:15	7:22	7:30	7:40	7:51
7:26	7:32	7:45	7:52	8:00	8:10	8:21
7:57	8:02	8:15	8:22	8:30	8:39	8:49
8:27	8:32	8:45	8:52	9:00	9:09	9:19
9:27	9:31	9:43	9:49	9:56	10:05	10:15
10:27	10:31	10:43	10:49	10:56	11:05	11:15
11:27	11:31	11:43	11:49	11:56	12:05a	12:15a

Effective JUNE 28, 2020

10

Old Town – University & College Limited Stops

via University Av.

DESTINATIONS
- City Heights Retail Village
- City Heights Transit Plaza
- Hillcrest DMV
- The HUB Hillcrest Market
- Scripps Mercy Hospital
- Village Hillcrest

TROLLEY CONNECTIONS
- Old Town
- Washington St.

06/20

sdmts.com
Route Alerts, Updated Schedules, Connections & More

MTS

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	$2.50
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	$1.25
Youth (ages 6-18)* Jóvenes (edades 6-18)*	$2.50

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	$6.00
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	$3.00
Youth (ages 6-18)* Jóvenes (edades 6-18)*	$3.00

MONTHLY PASSES / Pases mensual

Adult / Adulto	$72.00
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	$23.00
Youth (ages 6-18)* Jóvenes (edades 6-18)*	$23.00

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
*Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
There is a $2 charge for Compass Cards, which can be reloaded for future use.
Hay un costo de $2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

COMPASS CLOUD
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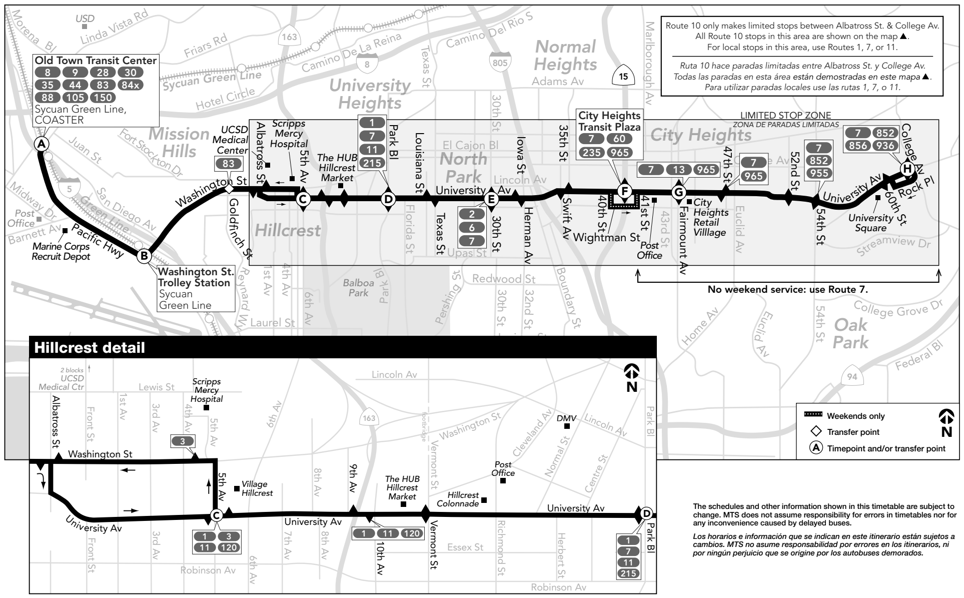
DIRECTORY / *Directorio*

MTS Information & Trip Planning / *MTS Información y planeo de viaje*	511 or/ó (619) 233-3004
TTY/TDD (teletype for hearing impaired) / *Teletipo para sordos*	(619) 234-5005 or/ó (888) 722-4889
InfoExpress (24-hour info via Touch-Tone phone) / *Información las 24 horas (via teléfono de teclas)*	(619) 685-4900
Customer Service / Suggestions / *Servicio al cliente / Sugerencias*	(619) 557-4555
MTS Security / *MTS Seguridad*	(619) 595-4960
Lost & Found / *Objetos extraviados*	(619) 233-3004
Transit Store	(619) 234-1060 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning / *Planificación de viajes por Internet*	sdmts.com

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com**.
Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a sdmts.com.

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Alternative formats available upon request. Please call: (619) 557-4555 / *Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555*



The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.

Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

Route 10 – Monday through Friday / *lunes a viernes*

Old Town ➡ Hillcrest ➡ North Park ➡ City Heights

(A) Old Town Transit Center DEPART	(B) Washington St. & Pacific Hwy.	(C) University Av. & 5th Av.	(D) University Av. & Park Bl.	(E) University Av. & 30th St.	(F) City Heights Transit Plaza @ 15-Fwy.	(G) University Av. & Fairmount Av.	(H) University Av. & College Av. ARRIVE
5:52a	5:58a	6:06a	6:11a	6:16a	6:22a	6:24a	6:33a
6:07	6:13	6:21	6:26	6:31	6:37	6:39	6:48
6:22	6:28	6:36	6:41	6:46	6:52	6:54	7:03
6:37	6:43	6:51	6:56	7:01	7:07	7:09	7:18
6:52	6:58	7:06	7:11	7:16	7:22	7:24	7:33
7:07	7:13	7:21	7:26	7:31	7:38	7:41	7:51
7:22	7:28	7:36	7:41	7:46	7:53	7:56	8:06
7:38	7:44	7:52	7:57	8:02	8:09	8:12	8:22
7:53	7:59	8:07	8:12	8:17	8:24	8:27	8:37
8:08	8:14	8:22	8:27	8:32	8:39	8:42	8:52
8:23	8:29	8:37	8:42	8:47	8:54	8:57	9:07
8:38	8:44	8:52	8:57	9:02	9:09	9:12	9:22
8:53	8:59	9:07	9:12	9:17	9:24	9:27	9:37
9:08	9:14	9:22	9:27	9:32	9:39	9:42	9:52
9:23	9:29	9:37	9:42	9:47	9:54	9:57	10:07
9:38	9:44	9:52	9:57	10:02	10:09	10:12	10:22
9:51	9:57	10:05	10:10	10:15	10:22	10:25	10:35
10:06	10:12	10:21	10:26	10:32	10:40	10:43	10:53
10:21	10:27	10:36	10:41	10:47	10:55	10:58	11:08
10:36	10:42	10:51	10:56	11:02	11:10	11:13	11:23
10:51	10:57	11:06	11:11	11:17	11:25	11:28	11:38
11:06	11:12	11:21	11:26	11:32	11:40	11:43	11:53
11:21	11:27	11:37	11:42	11:48	11:56	11:59	12:10p
11:35	11:41	11:51	11:56	12:02p	12:10p	12:13p	12:24
11:50	11:56	12:06p	12:11p	12:17	12:25	12:28	12:39
12:05p	12:11p	12:21	12:26	12:32	12:40	12:43	12:54
12:20	12:26	12:36	12:41	12:47	12:55	12:58	1:09
12:35	12:41	12:51	12:56	1:02	1:10	1:13	1:24
12:50	12:56	1:06	1:11	1:17	1:25	1:28	1:39
1:04	1:10	1:21	1:26	1:32	1:41	1:44	1:55
1:19	1:25	1:36	1:41	1:47	1:56	1:59	2:10
1:34	1:40	1:51	1:56	2:02	2:11	2:14	2:25
1:49	1:55	2:06	2:11	2:17	2:26	2:29	2:40
2:04	2:10	2:21	2:26	2:32	2:41	2:44	2:55
2:19	2:25	2:36	2:41	2:47	2:56	2:59	3:10
2:34	2:40	2:51	2:57	3:03	3:12	3:16	3:27
2:45	2:51	3:02	3:08	3:14	3:23	3:27	3:38
2:57	3:03	3:14	3:20	3:26	3:35	3:39	3:50
3:10	3:16	3:28	3:34	3:40	3:49	3:53	4:05
3:24	3:30	3:42	3:48	3:54	4:03	4:07	4:19
3:36	3:42	3:54	4:00	4:06	4:15	4:19	4:31
3:48	3:54	4:06	4:12	4:18	4:27	4:31	4:43
4:00	4:06	4:18	4:24	4:30	4:39	4:43	4:55
4:12	4:18	4:30	4:36	4:42	4:51	4:55	5:07
4:24	4:30	4:42	4:48	4:54	5:03	5:07	5:19
4:36	4:42	4:54	5:00	5:06	5:15	5:19	5:31
4:48	4:54	5:06	5:12	5:18	5:27	5:31	5:43
5:00	5:06	5:18	5:24	5:30	5:39	5:43	5:55
5:12	5:18	5:30	5:36	5:42	5:51	5:55	6:07
5:24	5:30	5:42	5:48	5:54	6:03	6:07	6:19
5:37	5:43	5:54	6:00	6:06	6:14	6:18	6:30
5:51	5:57	6:08	6:14	6:20	6:28	6:31	6:42
6:06	6:12	6:23	6:29	6:35	6:43	6:46	6:57
6:21	6:27	6:38	6:44	6:50	6:58	7:01	7:12
6:36	6:42	6:53	6:59	7:05	7:13	7:16	7:27
6:51	6:57	7:07	7:12	7:17	7:25	7:28	7:39
7:07	7:13	7:23	7:28	7:33	7:40	7:43	7:53
7:22	7:28	7:37	7:42	7:47	7:54	7:57	8:06
7:38	7:43	7:51	7:56	8:01	8:07	8:10	8:19
7:53	7:58	8:06	8:11	8:16	8:22	8:25	8:34
8:08	8:13	8:21	8:26	8:31	8:37	8:40	8:49
8:23	8:28	8:36	8:41	8:46	8:52	8:55	9:04
8:39	8:44	8:52	8:57	9:02	9:08	9:11	9:20
9:09	9:14	9:22	9:27	9:31	9:37	9:39	9:48
9:39	9:44	9:52	9:57	10:01	10:07	10:09	10:18
10:10	10:15	10:23	10:28	10:32	10:38	10:40	10:49
10:47	10:52	11:00	11:05	11:09	11:15	11:17	11:26
11:17	11:22	11:30	11:35	11:39	11:44	11:46	11:54
11:47	11:52	12:00a	12:05a	12:09a	12:14a	12:16a	12:24a

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

City Heights ➡ North Park ➡ Hillcrest ➡ Old Town

(H) University Av. & College Av. DEPART	(G) University Av. & Fairmount Av.	(F) City Heights Transit Plaza @ 15-Fwy.	(E) University Av. & 30th St.	(D) University Av. & Park Bl.	(C) University Av. & 5th Av.	(B) Washington St. & Pacific Hwy.	(A) Old Town Transit Center ARRIVE
4:42a	4:51a	4:54a	4:59a	5:03a	5:07a	5:16a	5:21a
5:12	5:21	5:24	5:29	5:33	5:37	5:46	5:51
5:27	5:36	5:39	5:44	5:48	5:52	6:01	6:06
5:41	5:51	5:54	6:00	6:04	6:09	6:19	6:24
5:56	6:06	6:09	6:15	6:19	6:24	6:34	6:39
6:08	6:18	6:21	6:27	6:31	6:36	6:46	6:51
6:19	6:29	6:33	6:39	6:43	6:48	6:58	7:03
6:30	6:41	6:45	6:52	6:56	7:01	7:12	7:17
6:40	6:52	6:56	7:03	7:08	7:13	7:24	7:29
6:52	7:05	7:09	7:16	7:21	7:26	7:37	7:43
7:02	7:15	7:20	7:28	7:33	7:38	7:49	7:55
7:14	7:27	7:32	7:40	7:45	7:50	8:01	8:07
7:25	7:38	7:43	7:51	7:56	8:01	8:12	8:18
7:37	7:50	7:55	8:03	8:08	8:13	8:24	8:30
7:48	8:01	8:06	8:14	8:19	8:24	8:35	8:41
8:02	8:14	8:18	8:26	8:31	8:36	8:47	8:53
8:14	8:26	8:30	8:38	8:43	8:48	8:59	9:05
8:26	8:38	8:42	8:50	8:55	9:00	9:11	9:17
8:37	8:49	8:53	9:01	9:06	9:11	9:22	9:28
8:47	8:59	9:03	9:11	9:16	9:21	9:32	9:38
9:02	9:14	9:18	9:26	9:31	9:36	9:47	9:53
9:17	9:29	9:33	9:41	9:46	9:51	10:02	10:08
9:32	9:44	9:48	9:56	10:01	10:06	10:17	10:23
9:47	9:59	10:03	10:11	10:16	10:21	10:32	10:38
10:02	10:14	10:18	10:26	10:31	10:36	10:47	10:53
10:17	10:29	10:33	10:41	10:46	10:51	11:02	11:08
10:32	10:44	10:48	10:56	11:01	11:06	11:17	11:23
10:47	10:59	11:03	11:11	11:16	11:21	11:32	11:38
11:02	11:14	11:18	11:26	11:31	11:36	11:47	11:53
11:17	11:29	11:33	11:41	11:46	11:51	12:02p	12:08p
11:32	11:44	11:48	11:56	12:01p	12:06p	12:17	12:23
11:47	11:59	12:03p	12:11p	12:16	12:21	12:32	12:38
12:03p	12:15p	12:19	12:27	12:32	12:37	12:48	12:54
12:18	12:30	12:34	12:42	12:47	12:52	1:03	1:09
12:33	12:45	12:49	12:57	1:02	1:07	1:18	1:24
12:48	1:00	1:04	1:12	1:17	1:22	1:33	1:39
1:03	1:15	1:19	1:27	1:32	1:37	1:48	1:54
1:18	1:30	1:34	1:42	1:47	1:52	2:03	2:09
1:33	1:45	1:49	1:57	2:02	2:07	2:18	2:24
1:50	2:02	2:06	2:14	2:19	2:24	2:35	2:41
2:05	2:17	2:21	2:29	2:34	2:39	2:50	2:56
2:20	2:32	2:36	2:44	2:49	2:54	3:05	3:11
2:34	2:46	2:50	2:58	3:03	3:08	3:19	3:25
2:49	3:01	3:05	3:13	3:18	3:23	3:34	3:40
3:06	3:18	3:22	3:30	3:35	3:40	3:51	3:57
3:21	3:33	3:37	3:45	3:50	3:55	4:06	4:12
3:36	3:48	3:52	4:00	4:05	4:10	4:21	4:27
3:49	4:01	4:05	4:13	4:18	4:23	4:34	4:40
4:02	4:14	4:18	4:26	4:31	4:36	4:47	4:53
4:17	4:29	4:33	4:41	4:46	4:51	5:02	5:08
4:32	4:44	4:48	4:56	5:01	5:06	5:17	5:23
4:47	4:59	5:03	5:11	5:16	5:21	5:32	5:38
5:05	5:17	5:21	5:29	5:34	5:39	5:50	5:56
5:20	5:32	5:36	5:44	5:49	5:54	6:05	6:11
5:38	5:49	5:53	6:00	6:05	6:10	6:21	6:26
5:53	6:04	6:08	6:15	6:20	6:25	6:36	6:41
6:08	6:19	6:23	6:30	6:35	6:40	6:51	6:56
6:23	6:34	6:38	6:45	6:50	6:55	7:06	7:11
6:39	6:50	6:54	7:01	7:06	7:11	7:22	7:27
7:06	7:16	7:19	7:26	7:31	7:36	7:46	7:51
7:36	7:46	7:49	7:56	8:01	8:06	8:16	8:21
8:14	8:24	8:27	8:33	8:37	8:42	8:52	8:57
8:44	8:54	8:57	9:03	9:07	9:12	9:22	9:27
9:18	9:28	9:31	9:37	9:41	9:46	9:56	10:01
9:57	10:06	10:09	10:14	10:18	10:22	10:32	10:37
10:27	10:36	10:39	10:44	10:48	10:52	11:02	11:07

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

Route 10 – Saturday / *sábado*

Old Town ➡ Hillcrest ➡ North Park ➡ City Heights

(A) Old Town Transit Center DEPART	(B) Washington St. & Pacific Hwy.	(C) University Av. & 5th Av.	(D) University Av. & Park Bl.	(E) University Av. & 30th St.	(F) City Heights Transit Plaza @ 15-Fwy.	(G) University Av. & Fairmount Av.	(H) University Av. & College Av. ARRIVE
5:51a	5:56a	6:04a	6:08a	6:12a	6:23a	–	–
6:21	6:26	6:34	6:38	6:42	6:53	–	–
6:54	6:59	7:07	7:11	7:15	7:26	–	–
7:24	7:29	7:37	7:41	7:46	7:57	–	–
7:54	7:59	8:07	8:12	8:17	8:28	–	–
8:24	8:29	8:37	8:42	8:47	8:58	–	–
8:47	8:52	9:00	9:05	9:10	9:21	–	–
9:10	9:15	9:23	9:28	9:33	9:45	–	–
9:33	9:38	9:46	9:51	9:56	10:08	–	–
9:55	10:00	10:08	10:13	10:18	10:30	–	–
10:15	10:20	10:29	10:34	10:40	10:52	–	–
10:35	10:40	10:49	10:54	11:00	11:12	–	–
10:55	11:00	11:09	11:14	11:20	11:32	–	–
11:15	11:20	11:30	11:35	11:41	11:53	–	–
11:35	11:40	11:50	11:55	12:01p	12:13p	–	–
11:55	12:00p	12:10p	12:15p	12:21	12:33	–	–
12:15p	12:20	12:30	12:35	12:41	12:53	–	–
12:35	12:40	12:50	12:55	1:01	1:13	–	–
12:55	1:00	1:10	1:15	1:21	1:33	–	–
1:15	1:20	1:30	1:35	1:41	1:53	–	–
1:35	1:40	1:50	1:55	2:01	2:13	–	–
1:55	2:00	2:10	2:15	2:21	2:33	–	–
2:15	2:20	2:30	2:35	2:41	2:53	–	–
2:35	2:40	2:50	2:56	3:02	3:14	–	–
2:55	3:00	3:10	3:16	3:22	3:34	–	–
3:15	3:20	3:30	3:36	3:42	3:54	–	–
3:35	3:40	3:50	3:56	4:02	4:14	–	–
3:55	4:00	4:10	4:16	4:22	4:34	–	–
4:15	4:20	4:30	4:36	4:42	4:54	–	–
4:35	4:40	4:50	4:56	5:02	5:14	–	–
4:55	5:00	5:10	5:16	5:22	5:34	–	–
5:15	5:20	5:30	5:36	5:42	5:54	–	–
5:35	5:40	5:50	5:56	6:02	6:14	–	–
5:55	6:00	6:10	6:16	6:22	6:34	–	–
6:17	6:22	6:32	6:38	6:44	6:56	–	–
6:39	6:44	6:54	7:00	7:06	7:18	–	–
7:09	7:14	7:23	7:28	7:33	7:45	–	–
7:39	7:44	7:52	7:57	8:02	8:13	–	–
8:09	8:14	8:22	8:27	8:32	8:43	–	–
8:39	8:44	8:52	8:57	9:02	9:13	–	–
9:09	9:14	9:22	9:27	9:31	9:42	–	–
9:39	9:44	9:52	9:57	10:01	10:12	–	–
10:10	10:15	10:23	10:28	10:32	10:43	–	–
10:47	10:52	11:00	11:05	11:09	11:20	–	–
11:17	11:22	11:30	11:35	11:39	11:50	–	–
11:47	11:52	12:00a	12:05a	12:09a	12:20a	–	–

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

City Heights ➡ North Park ➡ Hillcrest ➡ Old Town

(H) University Av. & College Av. DEPART	(G) University Av. & Fairmount Av.	(F) City Heights Transit Plaza @ 15-Fwy.	(E) University Av. & 30th St.	(D) University Av. & Park Bl.	(C) University Av. & 5th Av.	(B) Washington St. & Pacific Hwy.	(A) Old Town Transit Center ARRIVE
–	–	5:08a	5:13a	5:17a	5:21a	5:30a	5:35a
–	–	5:36	5:41	5:45	5:50	6:00	6:05
–	–	6:06	6:11	6:15	6:20	6:30	6:35
–	–	6:35	6:41	6:45	6:50	7:00	7:05
–	–	7:06	7:12	7:16	7:21	7:31	7:36
–	–	7:36	7:42	7:46	7:51	8:01	8:06
–	–	8:05	8:11	8:15	8:20	8:30	8:35
–	–	8:27	8:33	8:37	8:42	8:52	8:57
–	–	8:50	8:56	9:00	9:05	9:15	9:20
–	–	9:07	9:14	9:19	9:24	9:35	9:40
–	–	9:27	9:34	9:39	9:44	9:55	10:00
–	–	9:45	9:53	9:58	10:03	10:14	10:20
–	–	10:05	10:13	10:18	10:23	10:34	10:40
–	–	10:25	10:33	10:38	10:43	10:54	11:00
–	–	10:45	10:53	10:58	11:03	11:14	11:20
–	–	11:05	11:13	11:18	11:23	11:34	11:40
–	–	11:25	11:33	11:38	11:43	11:54	12:00p
–	–	11:45	11:53	11:58	12:03p	12:14p	12:20
–	–	12:05p	12:13p	12:18p	12:23	12:34	12:40
–	–	12:25	12:33	12:38	12:43	12:54	1:00
–	–	12:45	12:53	12:58	1:03	1:14	1:20
–	–	1:05	1:13	1:18	1:23	1:34	1:40
–	–	1:25	1:33	1:38	1:43	1:54	2:00
–	–	1:45	1:53	1:58	2:03	2:14	2:20
–	–	2:05	2:13	2:18	2:23	2:34	2:40
–	–	2:25	2:33	2:38	2:43	2:54	3:00
–	–	2:45	2:53	2:58	3:03	3:14	3:20
–	–	3:05	3:13	3:18	3:23	3:34	3:40
–	–	3:25	3:33	3:38	3:43	3:54	4:00
–	–	3:45	3:53	3:58	4:03	4:14	4:20
–	–	4:05	4:13	4:18	4:23	4:34	4:40
–	–	4:25	4:33	4:38	4:43	4:54	5:00
–	–	4:45	4:53	4:58	5:03	5:14	5:20
–	–	5:05	5:13	5:18	5:23	5:34	5:40
–	–	5:23	5:31	5:36	5:41	5:52	5:58
–	–	5:55	6:02	6:07	6:12	6:23	6:28
–	–	6:24	6:31	6:36	6:41	6:52	6:57
–	–	6:54	7:01	7:06	7:11	7:22	7:27
–	–	7:25	7:32	7:37	7:42	7:52	7:57
–	–	7:55	8:02	8:07	8:12	8:22	8:27
–	–	8:27	8:33	8:37	8:42	8:52	8:57
–	–	8:57	9:03	9:07	9:12	9:22	9:27
–	–	9:31	9:37	9:41	9:46	9:56	10:01
–	–	10:10	10:15	10:19	10:23	10:32	10:37
–	–	10:40	10:45	10:49	10:53	11:02	11:07

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

Route 10 – Sunday / *domingo*

Old Town ➡ Hillcrest ➡ North Park ➡ City Heights

(A) Old Town Transit Center DEPART	(B) Washington St. & Pacific Hwy.	(C) University Av. & 5th Av.	(D) University Av. & Park Bl.	(E) University Av. & 30th St.	(F) City Heights Transit Plaza @ 15-Fwy.	(G) University Av. & Fairmount Av.	(H) University Av. & College Av. ARRIVE
6:30a	6:35a	6:43a	6:47a	6:51a	7:02a	–	–
7:30	7:35	7:43	7:47	7:52	8:03	–	–
8:31	8:36	8:44	8:49	8:54	9:05	–	–
9:01	9:06	9:14	9:19	9:24	9:36	–	–
9:31	9:36	9:44	9:49	9:54	10:06	–	–
10:01	10:06	10:15	10:20	10:26	10:38	–	–
10:31	10:36	10:45	10:50	10:56	11:08	–	–
11:01	11:06	11:15	11:20	11:26	11:38	–	–
11:31	11:36	11:46	11:51	11:57	12:09p	–	–
12:01p	12:06p	12:16p	12:21p	12:27p	12:39	–	–
12:31	12:36	12:46	12:51	12:57	1:09	–	–
1:01	1:06	1:16	1:21	1:27	1:39	–	–
1:31	1:36	1:46	1:51	1:57	2:09	–	–
2:01	2:06	2:16	2:21	2:27	2:39	–	–
2:31	2:36	2:46	2:52	2:58	3:10	–	–
3:01	3:06	3:16	3:22	3:28	3:40	–	–
3:31	3:36	3:46	3:52	3:58	4:10	–	–
4:01	4:06	4:16	4:22	4:28	4:40	–	–
4:31	4:36	4:46	4:52	4:58	5:10	–	–
5:01	5:06	5:16	5:22	5:28	5:40	–	–
5:31	5:36	5:46	5:52	5:58	6:10	–	–
6:01	6:06	6:16	6:22	6:28	6:40	–	–
6:31	6:36	6:46	6:52	6:58	7:10	–	–
6:59	7:04	7:13	7:18	7:23	7:35	–	–
7:29	7:34	7:43	7:48	7:53	8:05	–	–
7:56	8:01	8:09	8:14	8:19	8:30	–	–
8:26	8:31	8:39	8:44	8:49	9:00	–	–
8:56	9:01	9:09	9:14	9:19	9:30	–	–
9:56	10:01	10:09	10:14	10:18	10:29	–	–

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

City Heights ➡ North Park ➡ Hillcrest ➡ Old Town

(H) University Av. & College Av. DEPART	(G) University Av. & Fairmount Av.	(F) City Heights Transit Plaza @ 15-Fwy.	(E) University Av. & 30th St.	(D) University Av. & Park Bl.	(C) University Av. & 5th Av.	(B) Washington St. & Pacific Hwy.	(A) Old Town Transit Center ARRIVE
–	–	5:22a	5:27a	5:31a	5:35a	5:44a	5:49a
–	–	5:50	5:55	5:59	6:04	6:14	6:19
–	–	6:20	6:25	6:29	6:34	6:44	6:49
–	–	6:49	6:55	6:59	7:04	7:14	7:19
–	–	7:19	7:25	7:29	7:34	7:44	7:49
–	–	7:49	7:55	7:59	8:04	8:14	8:19
–	–	8:19	8:25	8:29	8:34	8:44	8:49
–	–	8:49	8:55	8:59	9:04	9:14	9:19
–	–	9:16	9:23	9:28	9:33	9:44	9:49
–	–	9:47	9:55	10:00	10:05	10:16	10:22
–	–	10:17	10:25	10:30	10:35	10:46	10:52
–	–	10:47	10:55	11:00	11:05	11:16	11:22
–	–	11:17	11:25	11:30	11:35	11:46	11:52
–	–	11:48	11:56	12:01p	12:06p	12:17p	12:23p
–	–	12:18p	12:26p	12:31	12:36	12:47	12:53
–	–	12:48	12:56	1:01	1:06	1:17	1:23
–	–	1:18	1:26	1:31	1:36	1:47	1:53
–	–	1:48	1:56	2:01	2:06	2:17	2:23
–	–	2:18	2:26	2:31	2:36	2:47	2:53
–	–	2:48	2:56	3:01	3:06	3:17	3:23
–	–	3:18	3:26	3:31	3:36	3:47	3:53
–	–	3:48	3:56	4:01	4:06	4:17	4:23
–	–	4:18	4:26	4:31	4:36	4:47	4:53
–	–	4:48	4:56	5:01	5:06	5:17	5:23
–	–	5:18	5:26	5:31	5:36	5:47	5:53
–	–	5:48	5:55	6:00	6:05	6:16	6:21
–	–	6:18	6:25	6:30	6:35	6:46	6:51
–	–	6:48	6:55	7:00	7:05	7:16	7:21
–	–	7:47	7:54	7:59	8:04	8:14	8:19

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	**$2.50**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$1.25**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$2.50**

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	**$6.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$3.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$3.00**

MONTHLY PASSES / Pases mensual

Adult / Adulto	**$72.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$23.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959. *Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
There is a $2 charge for Compass Cards, which can be reloaded for future use. Hay un costo de $2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

COMPASS CLOUD
Download the free Compass Cloud app on your Apple or Android phone. Descargue la aplicación gratis Compass Cloud en su teléfono Apple o Android.

Visit sdmts.com/fares for more info. Visite sdmts.com/fares para más información.

DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** or/o **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/o **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 233-3004**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M-F 8am-5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com**.
Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a **sdmts.com**.

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective JANUARY 26, 2020

11

SDSU – Downtown
via Adams Av. / First Av.

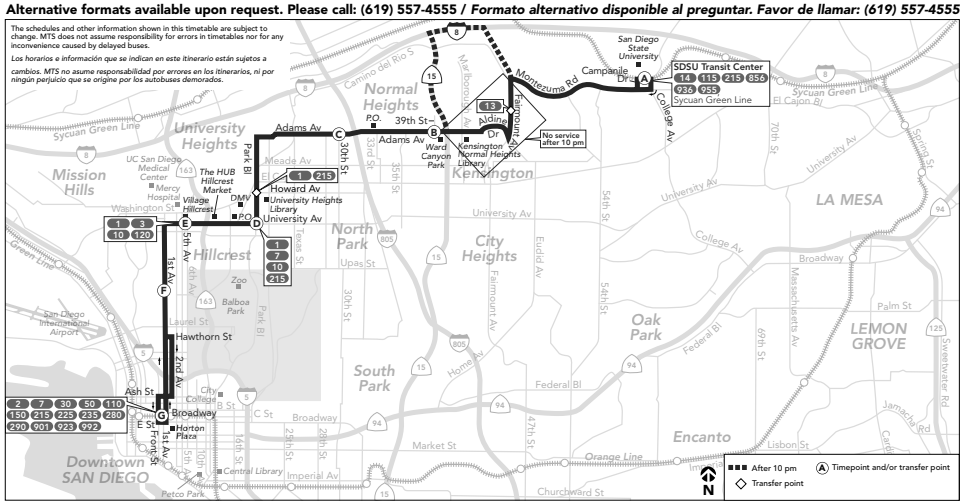
DESTINATIONS
- Hillcrest DMV
- Horton Plaza
- The HUB Hillcrest Market
- Village Hillcrest

TROLLEY CONNECTIONS
- SDSU
- Downtown

01/20

sdmts.com
Route Alerts, Updated Schedules, Connections & More

Alternative formats available upon request. Please call: (619) 557-4555 / ***Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555***



Route 11 – Sunday / *domingo*

SDSU ➡ Downtown

Ⓐ SDSU Transit Center **DEPART**	Ⓑ Adams Av. & 39th St.	Ⓒ Adams Av. & 30th St.	Ⓓ Park Bl. & University Av.	Ⓔ University Av. & 5th Av.	Ⓕ 1st Av. & Nutmeg St.	Ⓖ 1st Av. & Broadway **ARRIVE**
—	6:23a	6:28a	6:36a	6:41a	6:47a	6:58a
7:12a	7:23	7:29	7:37	7:43	7:49	8:01
8:12	8:24	8:30	8:39	8:45	8:51	9:04
9:12	9:24	9:30	9:39	9:45	9:51	10:04
—	9:54	10:00	10:09	10:15	10:21	10:34
10:12	10:24	10:30	10:39	10:45	10:51	11:04
10:42	10:54	11:00	11:09	11:15	11:21	11:34
11:10	11:22	11:28	11:38	11:45	11:51	**12:04p**
11:40	11:52	11:58	**12:08p**	**12:15p**	**12:21p**	**12:34**
12:10p	**12:22p**	**12:28p**	**12:38**	**12:45**	**12:51**	**1:04**
12:40	**12:52**	**12:58**	**1:08**	**1:15**	**1:21**	**1:34**
1:10	**1:22**	**1:28**	**1:38**	**1:45**	**1:51**	**2:04**
1:40	**1:52**	**1:58**	**2:08**	**2:15**	**2:21**	**2:34**
2:10	**2:22**	**2:28**	**2:38**	**2:45**	**2:51**	**3:04**
2:40	**2:52**	**2:58**	**3:08**	**3:15**	**3:21**	**3:34**
3:10	**3:22**	**3:28**	**3:38**	**3:45**	**3:51**	**4:04**
3:40	**3:52**	**3:58**	**4:08**	**4:15**	**4:21**	**4:34**
4:12	**4:24**	**4:30**	**4:40**	**4:47**	**4:53**	**5:06**
4:42	**4:54**	**5:00**	**5:10**	**5:17**	**5:23**	**5:36**
5:12	**5:24**	**5:30**	**5:39**	**5:45**	**5:51**	**6:04**
5:52	**6:04**	**6:10**	**6:19**	**6:25**	**6:31**	**6:44**
6:52	**7:04**	**7:10**	**7:19**	**7:25**	**7:31**	**7:44**
7:52	**8:04**	**8:10**	**8:18**	**8:24**	**8:30**	**8:42**

Downtown ➡ SDSU

Ⓖ 1st Av. & Broadway **DEPART**	Ⓕ 1st Av. & Nutmeg St.	Ⓔ University Av. & 5th Av.	Ⓓ Park Bl. & University Av.	Ⓒ Adams Av. & 30th St.	Ⓑ Adams Av. & 39th St.	Ⓐ SDSU Transit Center **ARRIVE**
6:20a	6:25a	6:31a	6:37a	6:46a	6:51a	7:02a
7:20	7:25	7:31	7:37	7:46	7:51	8:02
8:18	8:24	8:30	8:37	8:46	8:51	9:02
9:16	9:22	9:29	9:37	9:46	9:51	10:02
9:46	9:52	9:59	10:07	10:16	10:21	10:32
10:16	10:22	10:29	10:37	10:46	10:51	11:02
10:46	10:52	10:59	11:07	11:16	11:21	11:32
11:16	11:22	11:29	11:37	11:46	11:51	**12:02p**
11:46	11:52	11:59	**12:07p**	**12:16p**	**12:21p**	**12:32**
12:14p	**12:20p**	**12:27p**	**12:36**	**12:45**	**12:50**	**1:02**
12:44	**12:50**	**12:57**	**1:06**	**1:15**	**1:20**	**1:32**
1:14	**1:20**	**1:27**	**1:36**	**1:45**	**1:50**	**2:02**
1:43	**1:50**	**1:57**	**2:06**	**2:15**	**2:20**	**2:32**
2:14	**2:20**	**2:27**	**2:36**	**2:45**	**2:50**	**3:02**
2:43	**2:50**	**2:57**	**3:06**	**3:15**	**3:20**	**3:32**
3:15	**3:22**	**3:29**	**3:38**	**3:45**	**3:51**	**4:04**
3:45	**3:52**	**3:59**	**4:08**	**4:17**	**4:22**	**4:34**
4:15	**4:22**	**4:29**	**4:38**	**4:47**	**4:52**	**5:04**
4:45	**4:52**	**4:59**	**5:08**	**5:17**	**5:22**	**5:34**
5:18	**5:24**	**5:31**	**5:40**	**5:49**	**5:54**	**6:06**
5:52	**5:58**	**6:05**	**6:13**	**6:22**	**6:27**	**6:38**
6:54	**7:00**	**7:06**	**7:13**	**7:22**	**7:27**	**7:38**
7:54	**8:00**	**8:06**	**8:13**	**8:22**	**8:27**	**8:38**

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

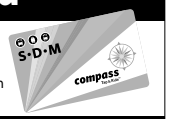
S/D/M and Youth Compass Card

All riders using reduced fares must comply with one of the following options:

compass card

Option 1 *(Recommended by MTS)*
MTS offers a picture ID on a Compass Card to eliminate the need to carry multiple identifications for proof of eligibility.

Option 2
Riders using a standard S/D/M or Youth Compass Card or a one-way ticket must carry supporting identification to prove eligibility.



For additional benefits of ***Option 1*** *and/or list of valid forms of ID for* ***Option 2*** *go to:* ***sdmts.com/reduced-fares***

Route 11 – Monday through Friday / *lunes a viernes*

SDSU ➡ Downtown

Ⓐ SDSU Transit Center **DEPART**	Ⓑ Adams Av. & 39th St.	Ⓒ Adams Av. & 30th St.	Ⓓ Park Bl. & University Av.	Ⓔ University Av. & 5th Av.	Ⓕ 1st Av. & Nutmeg St.	Ⓖ 1st Av. & Broadway **ARRIVE**
—	4:37a	4:42a	4:49a	4:54a	4:59a	5:10a
—	5:07	5:12	5:19	5:24	5:29	5:40
—	5:37	5:42	5:50	5:55	6:01	6:12
5:57a	6:08	6:13	6:21	6:26	6:32	6:43
—	6:23	6:29	6:37	6:42	6:48	7:00
6:27	6:38	6:44	6:52	6:57	7:03	7:15
—	6:54	7:00	7:09	7:14	7:20	7:32
6:57	7:09	7:15	7:25	7:30	7:37	7:49
7:12	7:25	7:31	7:41	7:47	7:54	8:07
7:27	7:40	7:46	7:56	8:02	8:09	8:22
7:42	7:55	8:01	8:11	8:17	8:24	8:37
7:56	8:09	8:15	8:25	8:31	8:38	8:51
8:11	8:23	8:29	8:38	8:44	8:51	9:04
8:26	8:38	8:44	8:53	8:59	9:06	9:19
8:41	8:53	8:59	9:08	9:14	9:21	9:34
8:56	9:08	9:14	9:23	9:29	9:36	9:49
9:11	9:23	9:29	9:38	9:44	9:51	10:04
9:26	9:38	9:44	9:53	9:59	10:06	10:19
9:41	9:53	9:59	10:08	10:14	10:21	10:34
9:56	10:08	10:14	10:23	10:29	10:36	10:49
10:11	10:23	10:29	10:38	10:44	10:51	11:04
10:26	10:38	10:44	10:53	10:59	11:06	11:19
10:41	10:53	10:59	11:08	11:14	11:21	11:34
10:56	11:08	11:14	11:23	11:29	11:36	11:49
11:10	11:22	11:28	11:38	11:45	11:52	**12:06p**
11:25	11:37	11:43	11:53	**12:00p**	**12:07p**	**12:21**
11:40	11:52	11:58	**12:08p**	**12:15**	**12:22**	**12:36**
11:55	**12:07p**	**12:13p**	**12:23**	**12:30**	**12:37**	**12:51**
12:12p	**12:24**	**12:30**	**12:40**	**12:47**	**12:54**	**1:08**
12:27	**12:39**	**12:45**	**12:55**	**1:02**	**1:09**	**1:23**
12:42	**12:54**	**1:00**	**1:10**	**1:17**	**1:24**	**1:38**
12:57	**1:09**	**1:15**	**1:25**	**1:32**	**1:39**	**1:53**
1:12	**1:24**	**1:30**	**1:40**	**1:47**	**1:54**	**2:08**
1:27	**1:39**	**1:45**	**1:55**	**2:02**	**2:09**	**2:23**
1:42	**1:54**	**2:00**	**2:10**	**2:17**	**2:24**	**2:38**
1:57	**2:09**	**2:15**	**2:25**	**2:32**	**2:39**	**2:53**
2:12	**2:25**	**2:31**	**2:41**	**2:48**	**2:55**	**3:10**
2:27	**2:40**	**2:46**	**2:56**	**3:03**	**3:10**	**3:25**
2:42	**2:55**	**3:01**	**3:11**	**3:18**	**3:25**	**3:40**
2:57	**3:10**	**3:16**	**3:26**	**3:33**	**3:40**	**3:55**
3:12	**3:25**	**3:31**	**3:41**	**3:48**	**3:55**	**4:10**
3:27	**3:40**	**3:46**	**3:56**	**4:03**	**4:10**	**4:25**
3:42	**3:55**	**4:01**	**4:11**	**4:18**	**4:25**	**4:40**
3:57	**4:10**	**4:16**	**4:26**	**4:33**	**4:40**	**4:55**
4:12	**4:25**	**4:31**	**4:41**	**4:48**	**4:55**	**5:10**
4:27	**4:40**	**4:46**	**4:56**	**5:03**	**5:10**	**5:25**
4:42	**4:55**	**5:01**	**5:11**	**5:18**	**5:25**	**5:40**
4:57	**5:10**	**5:16**	**5:26**	**5:33**	**5:40**	**5:55**
5:12	**5:25**	**5:31**	**5:41**	**5:48**	**5:55**	**6:10**
5:27	**5:39**	**5:45**	**5:54**	**6:01**	**6:08**	**6:23**
5:42	**5:54**	**6:00**	**6:09**	**6:16**	**6:23**	**6:38**
5:57	**6:09**	**6:15**	**6:24**	**6:31**	**6:38**	**6:53**
6:20	**6:32**	**6:38**	**6:47**	**6:54**	**7:00**	**7:13**
6:50	**7:02**	**7:08**	**7:17**	**7:24**	**7:30**	**7:43**
7:20	**7:32**	**7:38**	**7:47**	**7:54**	**8:00**	**8:13**
7:52	**8:04**	**8:10**	**8:18**	**8:24**	**8:30**	**8:42**
8:22	**8:34**	**8:40**	**8:48**	**8:54**	**9:00**	**9:12**
8:52	**9:03**	**9:09**	**9:16**	**9:22**	**9:27**	**9:39**
9:22	**9:33**	**9:38**	**9:45**	**9:51**	**9:56**	**10:07**
9:52 §	**10:03**	**10:08**	**10:15**	**10:21**	**10:26**	**10:37**
10:22 §	**10:33**	**10:38**	**10:45**	**10:50**	**10:55**	**11:05**

Downtown ➡ SDSU

Ⓖ 1st Av. & Broadway **DEPART**	Ⓕ 1st Av. & Nutmeg St.	Ⓔ University Av. & 5th Av.	Ⓓ Park Bl. & University Av.	Ⓒ Adams Av. & 30th St.	Ⓑ Adams Av. & 39th St.	Ⓐ SDSU Transit Center **ARRIVE**
5:10a	5:15a	5:21a	5:26a	5:33a	5:37a	5:47a
5:40	5:45	5:51	5:56	6:03	6:07	6:17
6:06	6:11	6:17	6:22	6:30	6:35	6:47
6:21	6:26	6:32	6:37	6:45	6:50	7:02
6:36	6:41	6:47	6:52	7:00	7:05	7:17
6:49	6:54	7:00	7:06	7:15	7:20	7:32
7:04	7:09	7:15	7:21	7:30	7:35	7:47
7:19	7:24	7:30	7:36	7:45	7:50	8:02
7:34	7:39	7:45	7:51	8:00	8:05	8:17
7:49	7:54	8:00	8:06	8:15	8:20	8:32
8:02	8:08	8:14	8:21	8:30	8:35	8:47
8:17	8:23	8:29	8:36	8:45	8:50	9:02
8:32	8:38	8:44	8:51	9:00	9:05	9:17
8:47	8:53	8:59	9:06	9:15	9:20	9:32
9:00	9:06	9:13	9:21	9:30	9:35	9:47
9:15	9:21	9:28	9:36	9:45	9:50	10:02
9:30	9:36	9:43	9:51	10:00	10:05	10:17
9:45	9:51	9:58	10:06	10:15	10:20	10:32
10:00	10:06	10:13	10:21	10:30	10:35	10:47
10:15	10:21	10:28	10:36	10:45	10:50	11:02
10:30	10:36	10:43	10:51	11:00	11:05	11:17
10:45	10:51	10:58	11:06	11:15	11:20	11:32
11:00	11:06	11:13	11:21	11:30	11:35	11:47
11:15	11:21	11:28	11:36	11:45	11:50	**12:02p**
11:30	11:36	11:43	11:51	**12:00p**	**12:05p**	**12:17**
11:45	11:51	11:58	**12:06p**	**12:15**	**12:20**	**12:32**
12:00p	**12:06p**	**12:13p**	**12:21**	**12:30**	**12:35**	**12:47**
12:15	**12:21**	**12:28**	**12:36**	**12:45**	**12:50**	**1:02**
12:30	**12:36**	**12:43**	**12:51**	**1:00**	**1:05**	**1:17**
12:42	**12:48**	**12:55**	**1:04**	**1:14**	**1:19**	**1:32**
12:57	**1:03**	**1:10**	**1:19**	**1:29**	**1:34**	**1:47**
1:12	**1:18**	**1:25**	**1:34**	**1:44**	**1:49**	**2:02**
1:27	**1:33**	**1:40**	**1:49**	**1:59**	**2:04**	**2:17**
1:40	**1:47**	**1:54**	**2:03**	**2:13**	**2:19**	**2:32**
1:55	**2:02**	**2:09**	**2:18**	**2:28**	**2:34**	**2:47**
2:10	**2:17**	**2:24**	**2:33**	**2:43**	**2:49**	**3:02**
2:25	**2:32**	**2:39**	**2:48**	**2:58**	**3:04**	**3:17**
2:40	**2:47**	**2:54**	**3:03**	**3:13**	**3:19**	**3:32**
2:55	**3:02**	**3:09**	**3:18**	**3:28**	**3:34**	**3:47**
3:10	**3:17**	**3:24**	**3:33**	**3:43**	**3:49**	**4:02**
3:25	**3:32**	**3:39**	**3:48**	**3:58**	**4:04**	**4:17**
3:40	**3:47**	**3:54**	**4:03**	**4:13**	**4:19**	**4:32**
3:55	**4:02**	**4:09**	**4:18**	**4:28**	**4:34**	**4:47**
4:10	**4:17**	**4:24**	**4:33**	**4:43**	**4:49**	**5:02**
4:25	**4:32**	**4:39**	**4:48**	**4:58**	**5:04**	**5:17**
4:40	**4:47**	**4:54**	**5:03**	**5:13**	**5:19**	**5:32**
4:55	**5:02**	**5:09**	**5:18**	**5:28**	**5:34**	**5:47**
5:10	**5:17**	**5:24**	**5:33**	**5:43**	**5:49**	**6:02**
5:25	**5:32**	**5:39**	**5:48**	**5:58**	**6:04**	**6:17**
5:42	**5:48**	**5:55**	**6:04**	**6:14**	**6:19**	**6:32**
5:57	**6:03**	**6:10**	**6:19**	**6:29**	**6:34**	**6:47**
6:12	**6:18**	**6:25**	**6:34**	**6:44**	**6:49**	**7:02**
6:27	**6:33**	**6:40**	**6:49**	**6:59**	**7:04**	**7:17**
6:52	**6:58**	**7:04**	**7:12**	**7:22**	**7:27**	**7:39**
7:22	**7:28**	**7:34**	**7:42**	**7:52**	**7:57**	**8:09**
7:54	**8:00**	**8:06**	**8:13**	**8:22**	**8:27**	**8:38**
8:24	**8:30**	**8:36**	**8:43**	**8:52**	**8:57**	**9:08**
8:54	**9:00**	**9:06**	**9:13**	**9:22**	**9:26**	**9:36**
9:27	**9:32**	**9:38**	**9:44**	**9:52**	**9:56 §**	**10:06**
9:57	**10:02**	**10:08**	**10:14**	**10:22**	**10:26 §**	**10:36**
10:27	**10:32**	**10:38**	**10:44**	**10:52**	**10:56 §**	**11:06**

§ = Trip does not serve Adams Av. east of I-15 (Kensington), Aldine Dr., or Fairmount Av. / *Viaje que no ofrece servicio en Adams Av. al este de I-15 (Kensington), en Aldine Dr., ni Fairmount Av.*

Route 11 – Saturday / *sábado*

SDSU ➡ Downtown

Ⓐ SDSU Transit Center **DEPART**	Ⓑ Adams Av. & 39th St.	Ⓒ Adams Av. & 30th St.	Ⓓ Park Bl. & University Av.	Ⓔ University Av. & 5th Av.	Ⓕ 1st Av. & Nutmeg St.	Ⓖ 1st Av. & Broadway **ARRIVE**
—	5:37a	5:42a	5:50a	5:55a	6:01a	6:12a
6:12a	6:23	6:28	6:36	6:41	6:47	6:58
6:42	6:53	6:58	7:06	7:11	7:17	7:28
7:12	7:23	7:29	7:37	7:43	7:49	8:01
7:42	7:53	7:59	8:07	8:13	8:19	8:31
8:12	8:24	8:30	8:39	8:45	8:51	9:04
8:42	8:54	9:00	9:09	9:15	9:21	9:34
9:12	9:24	9:30	9:39	9:45	9:51	10:04
9:42	9:54	10:00	10:09	10:15	10:21	10:34
10:12	10:24	10:30	10:39	10:45	10:51	11:04
10:42	10:54	11:00	11:09	11:15	11:21	11:34
11:10	11:22	11:28	11:38	11:45	11:51	**12:04p**
11:40	11:52	11:58	**12:08p**	**12:15p**	**12:21p**	**12:34**
12:10p	**12:22p**	**12:28p**	**12:38**	**12:45**	**12:51**	**1:04**
12:40	**12:52**	**12:58**	**1:08**	**1:15**	**1:21**	**1:34**
1:10	**1:22**	**1:28**	**1:38**	**1:45**	**1:51**	**2:04**
1:40	**1:52**	**1:58**	**2:08**	**2:15**	**2:21**	**2:34**
2:10	**2:22**	**2:28**	**2:38**	**2:45**	**2:51**	**3:04**
2:40	**2:52**	**2:58**	**3:08**	**3:15**	**3:21**	**3:34**
3:10	**3:22**	**3:28**	**3:38**	**3:45**	**3:51**	**4:04**
3:40	**3:52**	**3:58**	**4:08**	**4:15**	**4:21**	**4:34**
4:12	**4:24**	**4:30**	**4:40**	**4:47**	**4:53**	**5:06**
4:42	**4:54**	**5:00**	**5:10**	**5:17**	**5:23**	**5:36**
5:12	**5:24**	**5:30**	**5:39**	**5:45**	**5:51**	**6:04**
5:42	**5:54**	**6:00**	**6:09**	**6:15**	**6:21**	**6:34**
6:12	**6:24**	**6:30**	**6:39**	**6:45**	**6:51**	**7:04**
6:42	**6:54**	**7:00**	**7:09**	**7:15**	**7:21**	**7:34**
7:12	**7:24**	**7:30**	**7:39**	**7:45**	**7:51**	**8:04**
7:47	**7:59**	**8:05**	**8:13**	**8:19**	**8:25**	**8:37**
8:22	**8:34**	**8:40**	**8:48**	**8:54**	**9:00**	**9:12**
8:52	**9:03**	**9:09**	**9:16**	**9:22**	**9:27**	**9:39**
9:22	**9:33**	**9:38**	**9:45**	**9:51**	**9:56**	**10:07**
9:52 §	**10:03**	**10:08**	**10:15**	**10:21**	**10:26**	**10:37**

Downtown ➡ SDSU

Ⓖ 1st Av. & Broadway **DEPART**	Ⓕ 1st Av. & Nutmeg St.	Ⓔ University Av. & 5th Av.	Ⓓ Park Bl. & University Av.	Ⓒ Adams Av. & 30th St.	Ⓑ Adams Av. & 39th St.	Ⓐ SDSU Transit Center **ARRIVE**
5:53a	5:58a	6:04a	6:09a	6:17a	6:21a	6:32a
6:20	6:25	6:31	6:37	6:46	6:51	7:02
6:50	6:55	7:01	7:07	7:16	7:21	7:32
7:20	7:25	7:31	7:37	7:46	7:51	8:02
7:50	7:55	8:01	8:07	8:16	8:21	8:32
8:18	8:24	8:30	8:37	8:46	8:51	9:02
8:48	8:54	9:00	9:07	9:16	9:21	9:32
9:16	9:22	9:29	9:37	9:46	9:51	10:02
9:46	9:52	9:59	10:07	10:16	10:21	10:32
10:16	10:22	10:29	10:37	10:46	10:51	11:02
10:46	10:52	10:59	11:07	11:16	11:21	11:32
11:16	11:22	11:29	11:37	11:46	11:51	**12:02p**
11:46	11:52	11:59	**12:07p**	**12:16p**	**12:21p**	**12:32**
12:14p	**12:20p**	**12:27p**	**12:36**	**12:45**	**12:50**	**1:02**
12:44	**12:50**	**12:57**	**1:06**	**1:15**	**1:20**	**1:32**
1:14	**1:20**	**1:27**	**1:36**	**1:45**	**1:50**	**2:02**
1:43	**1:50**	**1:57**	**2:06**	**2:15**	**2:20**	**2:32**
2:13	**2:20**	**2:27**	**2:36**	**2:45**	**2:50**	**3:02**
2:43	**2:50**	**2:57**	**3:06**	**3:15**	**3:20**	**3:32**
3:15	**3:22**	**3:29**	**3:38**	**3:47**	**3:52**	**4:04**
3:45	**3:52**	**3:59**	**4:08**	**4:17**	**4:22**	**4:34**
4:15	**4:22**	**4:29**	**4:38**	**4:47**	**4:52**	**5:04**
4:45	**4:52**	**4:59**	**5:08**	**5:17**	**5:22**	**5:34**
5:16	**5:22**	**5:29**	**5:38**	**5:47**	**5:52**	**6:04**
5:46	**5:52**	**5:59**	**6:07**	**6:16**	**6:21**	**6:32**
6:16	**6:22**	**6:29**	**6:37**	**6:46**	**6:51**	**7:02**
6:48	**6:54**	**7:00**	**7:07**	**7:16**	**7:21**	**7:32**
7:21	**7:27**	**7:33**	**7:40**	**7:49**	**7:54**	**8:05**
7:54	**8:00**	**8:06**	**8:13**	**8:22**	**8:27**	**8:38**
8:24	**8:30**	**8:36**	**8:43**	**8:52**	**8:57**	**9:08**
8:54	**9:00**	**9:06**	**9:13**	**9:22**	**9:26**	**9:36**
9:27	**9:32**	**9:38**	**9:44**	**9:52**	**9:56 §**	**10:06**
9:57	**10:02**	**10:08**	**10:14**	**10:22**	**10:26 §**	**10:36**

§ = Trip does not serve Adams Av. east of I-15 (Kensington), Aldine Dr., or Fairmount Av. / *Viaje que no ofrece servicio en Adams Av. al este de I-15 (Kensington), en Aldine Dr., ni Fairmount Av.*

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	**$2.50**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$1.25**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$2.50**

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	**$6.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$3.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$3.00**

MONTHLY PASSES / Pases mensual

Adult / Adulto	**$72.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$23.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
*Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
There is a $2 charge for Compass Cards, which can be reloaded for future use.
Hay un costo de $2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

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Descargue la aplicación gratis Compass Cloud en su teléfono Apple o Android.

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DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** *or/ó* **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** *or/ó* **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 233-3004**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com**.
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Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective SEPTEMBER 1, 2019

83

Old Town – Downtown
via Reynard Way / Mission Hills

DESTINATIONS
- America Plaza
- Lewis St.
- Little Italy
- Old Town State Historic Park
- Reynaed Way

TROLLEY CONNECTIONS
- America Plaza
- Old Town

09/19

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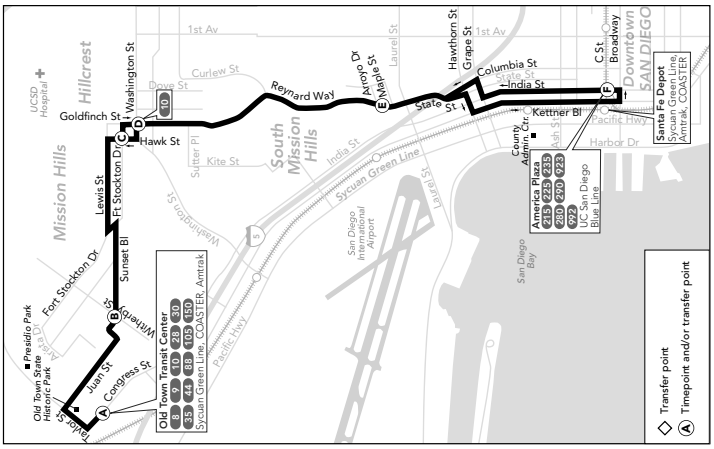
Route Alerts, Updated Schedules, Connections & More



compass card

S/D/M and Youth Compass Card
All riders using reduced fares must comply with one of the following options:

Option 1 *(Recommended by MTS)*
MTS offers a picture ID on a Compass Card to eliminate the need to carry multiple identifications for proof of eligibility.

Option 2
Riders using a standard S/D/M or Youth Compass Card or a one-way ticket must carry supporting identification to prove eligibility.

*For additional benefits of **Option 1** and or list of valid forms of ID for **Option 2** go to: **sdmts.com/reduced-fares***

Alternative formats available upon request.
Please call: (619) 557-4555
Formato alternativo disponible al preguntar.
Favor de llamar: (619) 557-4555

Route 83 – Monday through Friday / *lunes a viernes*

Old Town ➡ Mission Hills ➡ Downtown

Ⓐ Old Town Transit Center **DEPART**	Ⓑ Sunset Bl. & Witherby St.	Ⓓ Goldfinch St. & Washington St.	Ⓔ State St. & Maple St.	Ⓕ America Plaza Trolley Station **ARRIVE**
—	—	6:11a	6:16a	6:26a
7:08a	7:13a	7:21	7:26	7:36
8:18	8:23	8:31	8:36	8:46
9:30	9:34	9:42	9:46	9:56
10:40	10:44	10:52	10:56	11:06
11:50	11:54	**12:02p**	**12:06p**	**12:16p**
1:00p	**1:04p**	**1:12**	**1:16**	**1:26**
2:08	**2:13**	**2:21**	**2:26**	**2:36**
3:18	**3:23**	**3:31**	**3:36**	**3:46**
4:33	**4:38**	**4:46**	**4:51**	**5:01**
5:48	**5:53**	**6:01**	**6:06**	**6:16**

Downtown ➡ Mission Hills ➡ Old Town

Ⓕ America Plaza Trolley Station **ARRIVE**	Ⓔ State St. & Maple St.	Ⓒ Hawk St. & Ft. Stockton Dr.	Ⓑ Sunset Bl. & Witherby St.	Ⓐ Old Town Transit Center **DEPART**
6:34a	6:41a	6:48a	6:53a	7:00a
7:44	7:51	7:58	8:03	8:10
8:54	9:01	9:08	9:13	9:20
10:04	10:10	10:17	10:22	10:28
11:14	11:20	11:27	11:32	11:38
12:24p	**12:30p**	**12:37p**	**12:42p**	**12:48p**
1:34	**1:40**	**1:47**	**1:52**	**1:58**
2:44	**2:51**	**2:58**	**3:03**	**3:10**
3:59	**4:06**	**4:13**	**4:18**	**4:25**
5:14	**5:21**	**5:28**	**5:33**	**5:40**
6:29	**6:35**	**6:42**	**6:47**	**6:53**

Route 83 does not operate on weekends or on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas
La ruta 83 no ofrece servicio durante el fin de semana ó durante los siguientes días festivos y feriados observados

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Follow prompts on machine to load value.
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ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	**$2.50**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$1.25**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$2.50**

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	**$6.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$3.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$3.00**

MONTHLY PASSES / Pases mensual

Adult / Adulto	**$72.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$23.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959. *Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
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COMPASS CLOUD
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Visit sdmts.com/fares for more info. Visite sdmts.com/fares para más información.

DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** or/o **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/o **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 233-3004**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M-F 8am-5pm
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Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective JANUARY 26, 2020

120

Downtown – Kearny Mesa Transit Center
via Hillcrest / Fashion Valley / Linda Vista

DESTINATIONS
- Fashion Valley Mall
- Horton Plaza
- Juvenile Hall
- Kearny Mesa Courthouse
- Mercy Hospital
- Sharp & Children's Hospitals

01/20

TROLLEY CONNECTIONS
- 5th Avenue
- Fashion Valley

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A Saturday or Sunday schedule will be operated on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

Alternative formats available upon request. Please call: (619) 557-4555 / *Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555*

Route 120 – Sunday / *domingo*

Downtown ➡ Hillcrest ➡ Fashion Valley ➡ Sharp Hospital

Ⓐ 4th Av. & B St. DEPART	Ⓑ 5th Av. & Broadway	Ⓒ 5th Av. & University Av.	Ⓓ Fashion Valley Transit Center ARRIVE	Ⓓ Fashion Valley Transit Center DEPART	Ⓔ Comstock St. & Linda Vista Rd.	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓖ Kearny Mesa Transit Center ARRIVE
6:13a	6:15a	6:25a	6:33a	6:35a	6:42a	6:56a	—
7:13	7:15	7:25	7:33	7:35	7:43	7:57	—
8:13	8:15	8:25	8:33	8:35	8:43	8:57	—
9:12	9:14	9:25	9:33	9:35	9:43	9:57	—
9:40	9:42	9:54	10:03	10:05	10:13	10:27	—
10:10	10:12	10:24	10:33	10:35	10:43	10:57	—
10:40	10:42	10:54	11:03	11:05	11:14	11:28	—
11:10	11:12	11:24	11:33	11:35	11:44	11:58	—
11:40	11:42	11:54	**12:03p**	**12:05p**	**12:14p**	**12:28p**	—
12:10p	**12:12p**	**12:24p**	**12:33**	**12:35**	**12:44**	**12:58**	—
12:40	**12:42**	**12:54**	**1:03**	**1:05**	**1:14**	**1:28**	—
1:10	**1:12**	**1:24**	**1:33**	**1:35**	**1:44**	**1:58**	—
1:40	**1:42**	**1:54**	**2:03**	**2:05**	**2:15**	**2:29**	—
2:10	**2:12**	**2:24**	**2:33**	**2:35**	**2:45**	**2:59**	—
2:40	**2:42**	**2:54**	**3:03**	**3:05**	**3:15**	**3:29**	—
3:10	**3:12**	**3:24**	**3:33**	**3:35**	**3:45**	**3:59**	—
3:40	**3:42**	**3:54**	**4:03**	**4:05**	**4:15**	**4:29**	—
4:10	**4:12**	**4:24**	**4:33**	**4:35**	**4:45**	**4:59**	—
4:40	**4:42**	**4:54**	**5:03**	**5:05**	**5:15**	**5:29**	—
5:10	**5:12**	**5:24**	**5:33**	**5:35**	**5:45**	**5:59**	—
5:41	**5:43**	**5:54**	**6:03**	**6:05**	**6:14**	**6:28**	—
6:11	**6:13**	**6:24**	**6:33**	**6:35**	**6:44**	**6:58**	—
7:13	**7:15**	**7:25**	**7:34**	**7:36**	**7:45**	**7:58**	—
8:13	**8:15**	**8:25**	**8:34**	**8:36**	**8:44**	**8:57**	—
9:14	**9:16**	**9:25**	**9:34**	**9:36**	**9:44**	**9:57**	—

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

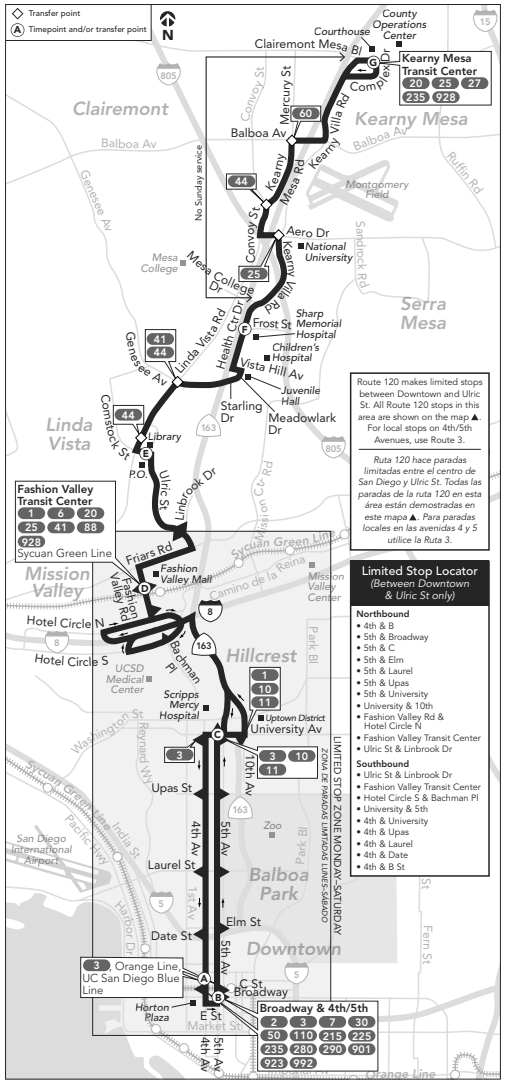
Route 120 – Sunday / *domingo*

Sharp Hospital ➡ Fashion Valley ➡ Hillcrest ➡ Downtown

Ⓖ Kearny Mesa Transit Center DEPART	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓔ Comstock St. & Linda Vista Rd.	Ⓓ Fashion Valley Transit Center ARRIVE	Ⓓ Fashion Valley Transit Center DEPART	Ⓒ University Av. & 5th Av.	Ⓐ 4th Av. & B St. ARRIVE
—	6:23a	6:32a	6:38a	6:40a	6:46a	6:57a
—	7:23	7:32	7:38	7:40	7:47	7:58
—	8:23	8:33	8:39	8:41	8:48	8:59
—	9:23	9:33	9:39	9:41	9:48	9:59
—	9:49	10:00	10:06	10:08	10:15	10:26
—	10:19	10:30	10:36	10:38	10:45	10:56
—	10:49	11:00	11:06	11:08	11:15	11:26
—	11:19	11:30	11:36	11:38	11:46	11:58
—	11:49	**12:00p**	**12:06p**	**12:08p**	**12:16p**	**12:28p**
—	**12:19p**	**12:30**	**12:36**	**12:38**	**12:46**	**12:58**
—	**12:49**	**1:00**	**1:06**	**1:08**	**1:16**	**1:28**
—	**1:19**	**1:30**	**1:36**	**1:38**	**1:46**	**1:58**
—	**1:49**	**2:00**	**2:06**	**2:08**	**2:16**	**2:28**
—	**2:19**	**2:30**	**2:36**	**2:38**	**2:46**	**2:58**
—	**2:48**	**2:59**	**3:06**	**3:08**	**3:16**	**3:28**
—	**3:18**	**3:29**	**3:36**	**3:38**	**3:46**	**3:58**
—	**3:48**	**3:59**	**4:06**	**4:08**	**4:16**	**4:28**
—	**4:18**	**4:29**	**4:36**	**4:38**	**4:46**	**4:58**
—	**4:50**	**5:00**	**5:06**	**5:08**	**5:16**	**5:27**
—	**5:20**	**5:30**	**5:36**	**5:38**	**5:46**	**5:57**
—	**5:50**	**6:00**	**6:06**	**6:08**	**6:16**	**6:27**
—	**6:21**	**6:30**	**6:36**	**6:38**	**6:45**	**6:56**
—	**7:26**	**7:35**	**7:41**	**7:43**	**7:50**	**8:01**
—	**8:25**	**8:34**	**8:40**	**8:42**	**8:49**	**9:00**
—	**9:24**	**9:33**	**9:39**	**9:41**	**9:48**	**9:59**

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.
Los horarios e información que se indican en esta inerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.



Route 120 – Monday through Friday / *lunes a viernes*

Downtown ➡ Hillcrest ➡ Fashion Valley ➡ Kearny Mesa

Ⓐ 4th Av. & B St. DEPART	Ⓑ 5th Av. & Broadway	Ⓒ 5th Av. & University Av.	Ⓓ Fashion Valley Transit Center ARRIVE	Ⓓ Fashion Valley Transit Center DEPART	Ⓔ Comstock St. & Linda Vista Rd.	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓖ Kearny Mesa Transit Center ARRIVE
4:59a	5:01a	5:10a	5:18a	5:20a	5:27a	5:36a	5:48a
5:29	5:31	5:40	5:48	5:50	5:57	6:06	6:18
5:59	6:01	6:10	6:18	6:20	6:27	6:36	6:48
6:13	6:15	6:25	6:33	—	—	—	—
6:28	6:30	6:40	6:48	6:50	6:57	7:07	7:20
6:43	6:45	6:55	7:03	—	—	—	—
6:57	6:59	7:10	7:18	7:20	7:28	7:39	7:53
7:12	7:14	7:25	7:33	—	—	—	—
7:26	7:28	7:39	7:48	7:50	7:59	8:12	8:28
7:41	7:43	7:54	8:03	—	—	—	—
7:56	7:58	8:09	8:18	8:20	8:29	8:42	8:58
8:11	8:13	8:24	8:33	—	—	—	—
8:26	8:28	8:39	8:48	8:50	8:58	9:10	9:25
8:41	8:43	8:54	9:03	—	—	—	—
8:57	8:59	9:10	9:19	9:21	9:29	9:41	9:56
9:12	9:14	9:25	9:34	—	—	—	—
9:27	9:29	9:40	9:49	9:51	9:59	10:11	10:26
9:42	9:44	9:55	10:04	—	—	—	—
9:57	9:59	10:10	10:19	10:21	10:29	10:41	10:56
10:12	10:14	10:25	10:34	—	—	—	—
10:27	10:29	10:40	10:49	10:51	10:59	11:11	11:26
10:42	10:44	10:55	11:04	—	—	—	—
10:57	10:59	11:10	11:19	11:21	11:29	11:41	11:56
11:11	11:13	11:25	11:34	—	—	—	—
11:26	11:28	11:40	11:49	11:51	**12:00p**	**12:12p**	**12:27p**
11:41	11:43	11:55	**12:04p**	—	—	—	—
11:56	11:58	**12:10p**	**12:19**	**12:21p**	**12:30**	**12:42**	**12:57**
12:11p	**12:13p**	**12:25**	**12:34**	—	—	—	—
12:26	**12:28**	**12:40**	**12:49**	**12:51**	**1:00**	**1:12**	**1:27**
12:41	**12:43**	**12:55**	**1:04**	—	—	—	—
12:56	**12:58**	**1:10**	**1:19**	**1:21**	**1:30**	**1:42**	**1:57**
1:11	**1:13**	**1:25**	**1:34**	—	—	—	—
1:26	**1:28**	**1:40**	**1:49**	**1:51**	**2:00**	**2:12**	**2:27**
1:41	**1:43**	**1:55**	**2:04**	—	—	—	—
1:56	**1:58**	**2:10**	**2:19**	**2:21**	**2:31**	**2:43**	**3:00**
2:11	**2:13**	**2:25**	**2:34**	—	—	—	—
2:26	**2:28**	**2:40**	**2:49**	**2:51**	**3:01**	**3:13**	**3:30**
2:41	**2:43**	**2:55**	**3:04**	—	—	—	—
2:56	**2:58**	**3:10**	**3:19**	**3:21**	**3:32**	**3:45**	**4:03**
3:11	**3:13**	**3:25**	**3:34**	—	—	—	—
3:26	**3:28**	**3:40**	**3:49**	**3:51**	**4:02**	**4:15**	**4:33**
3:41	**3:43**	**3:55**	**4:04**	—	—	—	—
3:56	**3:58**	**4:10**	**4:19**	**4:21**	**4:32**	**4:45**	**5:03**
4:11	**4:13**	**4:25**	**4:34**	—	—	—	—
4:26	**4:28**	**4:40**	**4:49**	**4:51**	**5:02**	**5:15**	**5:33**
4:41	**4:43**	**4:55**	**5:04**	—	—	—	—
4:56	**4:58**	**5:10**	**5:19**	**5:21**	**5:32**	**5:45**	**6:03**
5:11	**5:13**	**5:25**	**5:34**	—	—	—	—
5:26	**5:28**	**5:40**	**5:49**	**5:51**	**6:02**	**6:15**	**6:33**
5:42	**5:44**	**5:55**	**6:04**	—	—	—	—
5:57	**5:59**	**6:10**	**6:19**	**6:21**	**6:32**	**6:44**	**7:01**
6:30	**6:32**	**6:42**	**6:51**	**6:53**	**7:02**	**7:12**	**7:25**
7:00	**7:02**	**7:12**	**7:21**	**7:23**	**7:32**	**7:42**	**7:55**
7:27	**7:29**	**7:39**	**7:48**	**7:50**	**7:58**	**8:07**	**8:20**
7:57	**7:59**	**8:09**	**8:18**	**8:20**	**8:28**	**8:37**	**8:49**
8:28	**8:30**	**8:40**	**8:49**	**8:51**	**8:59**	**9:08**	**9:20**
9:01	**9:03**	**9:12**	**9:21**	**9:23**	**9:31**	**9:39**	**9:51**
9:31	**9:33**	**9:42**	**9:51**	**9:53**	**10:01**	**10:09**	**10:21**
10:02	**10:04**	**10:13**	**10:21**	**10:23**	**10:30**	**10:38**	**10:49**
10:32	**10:34**	**10:43**	**10:51**	—	—	—	—
11:02	**11:04**	**11:13**	**11:21**	—	—	—	—

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

Kearny Mesa ➡ Fashion Valley ➡ Hillcrest ➡ Downtown

Ⓖ Kearny Mesa Transit Center DEPART	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓔ Comstock St. & Linda Vista Rd.	Ⓓ Fashion Valley Transit Center ARRIVE	Ⓓ Fashion Valley Transit Center DEPART	Ⓒ University Av. & 5th Av.	Ⓐ 4th Av. & B St. ARRIVE
5:28a	5:38a	5:49a	5:55a	6:04a	6:11a	6:22a
5:57	6:07	6:18	6:24	6:26	6:33	6:44
—	—	—	—	6:41	6:48	6:59
6:25	6:36	6:48	6:54	6:56	7:03	7:14
—	—	—	—	7:10	7:17	7:28
6:51	7:04	7:17	7:23	7:25	7:32	7:43
—	—	—	—	7:40	7:47	7:59
7:18	7:33	7:47	7:53	7:55	8:02	8:14
—	—	—	—	8:10	8:17	8:29
7:48	8:03	8:17	8:23	8:25	8:32	8:44
—	—	—	—	8:40	8:47	8:59
8:19	8:34	8:47	8:53	8:55	9:02	9:14
—	—	—	—	9:10	9:17	9:29
8:49	9:04	9:17	9:23	9:25	9:32	9:44
—	—	—	—	9:40	9:47	9:59
9:19	9:34	9:47	9:53	9:55	10:02	10:14
—	—	—	—	10:10	10:17	10:29
9:49	10:04	10:17	10:23	10:25	10:32	10:44
—	—	—	—	10:40	10:47	10:59
10:19	10:34	10:47	10:53	10:55	11:02	11:14
—	—	—	—	11:10	11:17	11:31
10:49	11:04	11:17	11:23	11:25	11:32	11:44
—	—	—	—	11:40	11:48	**12:01p**
11:19	11:34	11:47	11:53	11:55	**12:03p**	**12:16**
—	—	—	—	**12:10p**	**12:18**	**12:31**
11:49	**12:04p**	**12:17p**	**12:23p**	**12:25**	**12:33**	**12:46**
—	—	—	—	**12:40**	**12:48**	**1:01**
12:19p	**12:34**	**12:47**	**12:53**	**12:55**	**1:03**	**1:16**
—	—	—	—	**1:10**	**1:18**	**1:31**
12:49	**1:04**	**1:17**	**1:23**	**1:25**	**1:33**	**1:46**
—	—	—	—	**1:40**	**1:48**	**2:01**
1:19	**1:34**	**1:47**	**1:53**	**1:55**	**2:03**	**2:16**
—	—	—	—	**2:10**	**2:18**	**2:31**
1:49	**2:04**	**2:17**	**2:23**	**2:25**	**2:33**	**2:46**
—	—	—	—	**2:40**	**2:48**	**3:01**
2:17	**2:33**	**2:47**	**2:53**	**2:55**	**3:03**	**3:16**
—	—	—	—	**3:10**	**3:18**	**3:31**
2:44	**3:01**	**3:16**	**3:23**	**3:25**	**3:33**	**3:46**
—	—	—	—	**3:40**	**3:48**	**4:01**
3:14	**3:31**	**3:46**	**3:53**	**3:55**	**4:03**	**4:16**
—	—	—	—	**4:10**	**4:18**	**4:32**
3:44	**4:01**	**4:16**	**4:23**	**4:25**	**4:34**	**4:46**
—	—	—	—	**4:40**	**4:49**	**5:03**
4:13	**4:31**	**4:46**	**4:53**	**4:55**	**5:04**	**5:17**
—	—	—	—	**5:10**	**5:19**	**5:33**
4:42	**5:01**	**5:17**	**5:24**	**5:26**	**5:35**	**5:49**
—	—	—	—	**5:41**	**5:50**	**6:03**
5:16	**5:32**	**5:46**	**5:53**	**5:55**	**6:04**	**6:17**
—	—	—	—	**6:10**	**6:18**	**6:30**
5:46	**6:02**	**6:16**	**6:23**	**6:25**	**6:33**	**6:47**
6:20	**6:35**	**6:47**	**6:53**	**6:55**	**7:03**	**7:15**
6:53	**7:06**	**7:17**	**7:23**	**7:25**	**7:33**	**7:44**
7:25	**7:38**	**7:49**	**7:55**	**8:03**	**8:11**	**8:22**
7:55	**8:08**	**8:19**	**8:25**	**8:34**	**8:42**	**8:53**
8:27	**8:39**	**8:49**	**8:55**	**9:04**	**9:12**	**9:23**
8:57	**9:09**	**9:19**	**9:25**	**9:34**	**9:42**	**9:53**
9:27	**9:39**	**9:49**	**9:55**	**10:04**	**10:12**	**10:23**
9:59	**10:10**	**10:19**	**10:25**	**10:34**	**10:41**	**10:52**
10:29	**10:40**	**10:49**	**10:55**	**11:04**	**11:11**	**11:22**
—	—	—	—	**11:36**	**11:43**	**11:54**

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

Route 120 – Saturday / *sábado*

Downtown ➡ Hillcrest ➡ Fashion Valley ➡ Kearny Mesa

Ⓐ 4th Av. & B St. DEPART	Ⓑ 5th Av. & Broadway	Ⓒ 5th Av. & University Av.	Ⓓ Fashion Valley Transit Center ARRIVE	Ⓓ Fashion Valley Transit Center DEPART	Ⓔ Comstock St. & Linda Vista Rd.	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓖ Kearny Mesa Transit Center ARRIVE
5:43a	5:45a	5:55a	6:03a	6:05a	6:12a	6:21a	6:31a
6:13	6:15	6:25	6:33	6:35	6:42	6:51	7:01
6:43	6:45	6:55	7:03	7:05	7:12	7:21	7:31
7:13	7:15	7:25	7:33	7:35	7:43	7:52	8:03
7:43	7:45	7:55	8:03	8:05	8:13	8:22	8:33
8:13	8:15	8:25	8:33	8:35	8:43	8:52	9:03
8:42	8:44	8:55	9:03	9:05	9:13	9:22	9:34
9:12	9:14	9:25	9:33	9:35	9:43	9:52	10:04
9:40	9:42	9:54	10:03	10:05	10:13	10:22	10:34
10:10	10:12	10:24	10:33	10:35	10:43	10:52	11:04
10:40	10:42	10:54	11:03	11:05	11:14	11:23	11:36
11:10	11:12	11:24	11:33	11:35	11:44	11:53	**12:06p**
11:40	11:42	11:54	**12:03p**	**12:05p**	**12:14p**	**12:23p**	**12:36**
12:10p	**12:12p**	**12:24p**	**12:33**	**12:35**	**12:44**	**12:53**	**1:06**
12:40	**12:42**	**12:54**	**1:03**	**1:05**	**1:14**	**1:23**	**1:36**
1:10	**1:12**	**1:24**	**1:33**	**1:35**	**1:44**	**1:53**	**2:06**
1:40	**1:42**	**1:54**	**2:03**	**2:05**	**2:15**	**2:24**	**2:37**
2:10	**2:12**	**2:24**	**2:33**	**2:35**	**2:45**	**2:54**	**3:07**
2:40	**2:42**	**2:54**	**3:03**	**3:05**	**3:15**	**3:24**	**3:37**
3:10	**3:12**	**3:24**	**3:33**	**3:35**	**3:45**	**3:54**	**4:07**
3:40	**3:42**	**3:54**	**4:03**	**4:05**	**4:15**	**4:24**	**4:37**
4:10	**4:12**	**4:24**	**4:33**	**4:35**	**4:45**	**4:54**	**5:07**
4:40	**4:42**	**4:54**	**5:03**	**5:05**	**5:15**	**5:24**	**5:37**
5:10	**5:12**	**5:24**	**5:33**	**5:35**	**5:45**	**5:54**	**6:07**
5:41	**5:43**	**5:54**	**6:03**	**6:05**	**6:14**	**6:23**	**6:35**
6:11	**6:13**	**6:24**	**6:33**	**6:35**	**6:44**	**6:53**	**7:05**
6:43	**6:45**	**6:55**	**7:04**	**7:06**	**7:15**	**7:23**	**7:34**
7:13	**7:15**	**7:25**	**7:34**	**7:36**	**7:45**	**7:53**	**8:04**
7:43	**7:45**	**7:55**	**8:04**	**8:06**	**8:15**	**8:23**	**8:34**
8:13	**8:15**	**8:25**	**8:34**	**8:36**	**8:44**	**8:52**	**9:03**
8:44	**8:46**	**8:55**	**9:04**	**9:06**	**9:14**	**9:22**	**9:33**
9:44	**9:46**	**9:55**	**10:04**	**10:06**	**10:14**	**10:22**	**10:33**

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

Kearny Mesa ➡ Fashion Valley ➡ Hillcrest ➡ Downtown

Ⓖ Kearny Mesa Transit Center DEPART	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓔ Comstock St. & Linda Vista Rd.	Ⓓ Fashion Valley Transit Center ARRIVE	Ⓓ Fashion Valley Transit Center DEPART	Ⓒ University Av. & 5th Av.	Ⓐ 4th Av. & B St. ARRIVE
—	5:53a	6:02a	6:08a	6:10a	6:16a	6:27a
6:13a	6:23	6:32	6:38	6:40	6:46	6:57
6:42	6:53	7:02	7:08	7:10	7:17	7:28
7:12	7:23	7:32	7:38	7:40	7:47	7:58
7:42	7:53	8:02	8:08	8:10	8:17	8:28
8:12	8:23	8:33	8:39	8:41	8:48	8:59
8:42	8:53	9:03	9:09	9:11	9:18	9:29
9:12	9:23	9:33	9:39	9:41	9:48	9:59
9:37	9:49	10:00	10:06	10:08	10:15	10:26
10:07	10:19	10:30	10:36	10:38	10:45	10:56
10:37	10:49	11:00	11:06	11:08	11:15	11:26
11:06	11:19	11:30	11:36	11:38	11:46	11:58
11:36	11:49	**12:00p**	**12:06p**	**12:08p**	**12:16p**	**12:28p**
12:06p	**12:19p**	**12:30**	**12:36**	**12:38**	**12:46**	**12:58**
12:36	**12:49**	**1:00**	**1:06**	**1:08**	**1:16**	**1:28**
1:06	**1:19**	**1:30**	**1:36**	**1:38**	**1:46**	**1:58**
1:36	**1:49**	**2:00**	**2:06**	**2:08**	**2:16**	**2:28**
2:06	**2:19**	**2:30**	**2:36**	**2:38**	**2:46**	**2:58**
2:35	**2:48**	**2:59**	**3:06**	**3:08**	**3:16**	**3:28**
3:05	**3:18**	**3:29**	**3:36**	**3:38**	**3:46**	**3:58**
3:35	**3:48**	**3:59**	**4:06**	**4:08**	**4:16**	**4:28**
4:05	**4:18**	**4:29**	**4:36**	**4:38**	**4:46**	**4:58**
4:37	**4:50**	**5:00**	**5:06**	**5:08**	**5:16**	**5:27**
5:07	**5:20**	**5:30**	**5:36**	**5:38**	**5:46**	**5:57**
5:37	**5:50**	**6:00**	**6:06**	**6:08**	**6:16**	**6:27**
6:09	**6:21**	**6:30**	**6:36**	**6:38**	**6:45**	**6:56**
6:44	**6:56**	**7:05**	**7:11**	**7:13**	**7:20**	**7:31**
7:14	**7:26**	**7:35**	**7:41**	**7:43**	**7:50**	**8:01**
7:44	**7:55**	**8:04**	**8:10**	**8:12**	**8:19**	**8:30**
8:14	**8:25**	**8:34**	**8:40**	**8:42**	**8:49**	**9:00**
8:44	**8:55**	**9:04**	**9:10**	**9:12**	**9:19**	**9:30**
9:13	**9:24**	**9:33**	**9:39**	**9:41**	**9:48**	**9:59**
9:43	**9:54**	**10:03**	**10:09**	**10:11**	**10:18**	**10:29**

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

Appendix A:

Transportation Projects, Programs, and Phasing

Final

December 2021

Appendix A: Transportation Projects, Programs, and Phasing

San Diego Forward: The 2021 Regional Plan (2021 Regional Plan) re-envisions the regional transportation system that connects us to where we want to go. This appendix breaks down the system into its components—projects, programs, and operations. It details how each project is phased, when specific improvements are expected to be completed, and their cost. Details on cost estimation are included in Appendix U: Cost Estimation Methodology.

California Assembly Bill 805 (Gonzalez Fletcher, 2017) (Chapter 658, Statutes of 2017) requires, among other things, that the 2021 Regional Plan identify disadvantaged communities and include transportation strategies to reduce pollution in these communities. Appendix A, Attachment 2 shows the location of disadvantaged communities and identifies specific transportation strategies to reduce exposure to pollution in these communities.

The tables that detail projects in this appendix include information such as the name of the project, a description of the project, and the cost of the project in 2020 dollars as part of the financially constrained plan. Table A.19 shows several illustrative goods movement projects for which funding has not yet been identified (i.e., they are considered part of a financially "unconstrained" plan).

This appendix is organized generally as follows:

1. A description of the types of transportation improvements that make up the transportation system.
2. A series of tables that identify specific transportation improvements by corridor (**Tables A.1–A.11:** Major Corridors)
3. A series of tables that identify specific transportation improvements by type:
    - **Table A.12:** Rural Corridors
    - **Table A.13:** Arterials
    - **Table A.14:** Mobility Hubs and Flexible Fleets
    - **Table A.15:** Next Operating System
    - **Table A.16:** Systemwide Transit Supportive Services
    - **Table A.17:** Supporting Policies and Programs
    - **Table A.18:** Other Systemwide Programs
    - **Table A.19:** Unconstrained Goods Movement Projects
4. A series of maps that show the progression of improvement through the implementation phases

Types of Transportation Improvements

Transportation improvements identified for each of the major corridors in Table A.1 through Table A.11 are grouped into the following project types and include a year-built phasing period (2025, 2035, and 2050) for each project.

Active Transportation

Active transportation projects include both on- and off-street improvements to create safe and comfortable paths for walking and biking. The costs reflect the comprehensive nature of active transportation projects, which often include retrofitting existing streets and roadways to meet the needs of users of all ages and abilities.

Complete Corridor: Active Transportation and Demand Management/Smart Intersection Systems

Active Transportation and Demand Management (ATDM) and Smart Intersection Systems (SIS) use technology to improve traffic flow and safety on our roadways. These technologies have been applied to freeways and arterial roadways in the regional transportation system.

Complete Corridor: Managed Lanes

Managed Lanes (MLs) offer priority access to people using transit, carpooling, riding motorcycles, or vanpooling along with emergency vehicles and some low-emission vehicles with appropriate decals. An example of MLs is currently on I-15 between SR 163 and SR 78. In the 2021 Regional Plan, MLs are expanded by repurposing shoulders or existing travel lanes, as feasible. Maps and tables in this appendix use descriptions of MLs to indicate the number of MLs in addition to the freeway lanes included in the total configuration for that phase. For example, a freeway segment labeled “8F+2ML” would represent eight freeway lanes plus two MLs on that segment. Many of the MLs will be fully built by 2035.

ML improvements are planned for both interregional and urban corridors. Interregional corridors connect us to neighboring counties and beyond and account for about 70% of vehicle miles driven on the region’s freeways. Urban corridors connect local cities and account for 27% of vehicle miles driven on the region’s freeways. Interregional corridor trips are typically longer than 20 miles while trips made on urban corridors are often between 5 and 20 miles.

Complete Corridor: Managed Lanes Connectors and Direct Access Ramps

Managed Lane Connectors (MLCs) seamlessly connect MLs, for example connecting an ML on I-15 to a future ML on SR 78. Direct Access Ramps (DARs) are freeway on-ramps that connect a local road directly to an ML on the freeway. These improvements could take the form of a transit-only lane, ramp modification, or technology enhancement. Also, some projects are included as Interchange and Arterial Operation Improvements which are improvements to facilities and adjacent roadways that connect two intersecting facilities.

Transit Leap

Transit Leap improvements make public transit a compelling option to driving—fast, convenient, and safe. Improvements include commuter rail, light rail, *Rapid*, local bus, and ferry service. Next Generation *Rapid* Service is a *Rapid* bus service operating in priority travel lanes and/or separated guideways and is given traffic signal priority. Many of the *Rapid* routes will be fully built in 2035 and 2050 as described in the tables, while some of the *Rapid* routes will be expedited to open sooner in 2025 with a "light version" (Phase 1). The light version of *Rapid* is meant to allow for a *Rapid* route to operate with minimal capital investment using existing bus stops. The full version of *Rapid* will build up the route's amenities with improved shelters, bus guideways, and/or other transit priority measures. Commuter rail includes new and significantly upgraded rail service with high-speed trains that are fast and convenient and provide a compelling alternative to driving. Light Rail Transit (LRT) includes improvements to existing light rail services and new tram services. Ferry service operating in San Diego Bay is also included here.

Goods Movement

Projects in this category support goods movement improvements at freight gateways (land border crossings, maritime terminals, and air cargo terminals), on rail lines, and on roadways. Goods movement supportive projects are sometimes aligned with ML or other Complete Corridor and Transit Leap projects and are indicated in the tables; others are stand-alone projects for goods movement improvements.

Transportation System Phasing

The transportation system in the 2021 Regional Plan and its phasing by 2025, 2035, and 2050 are designed to address social equity, congestion, and state/federal mandates. Project "phasing" is a reference to the specific time periods when projects are anticipated to be in service and available to the public. For the 2021 Regional Plan, the 2025 phase year includes projects planned to be in service between 2021 and 2025; the 2035 phase year references the time period where projects would be in service between 2026 and 2035; and the 2050 phase year references the time period where projects would be in service between 2036 and 2050. The intent of the project phasing is to advance as many Transit Leap projects as possible first along with their associated supportive roadway improvements (such as MLs) based on the anticipated revenues.

Additionally, staff considered various factors and inputs in both the development and phasing of the projects and programs included in the 2021 Regional Plan, which are summarized as follows (and further described in Appendix T: Network Development and Performance):

- **Project Readiness:** A review and understanding of project readiness to help ensure that projects are ready for development and implementation as planned. This includes the evaluation of project construction duration by project type (e.g., Complete Corridor, Transit Leap, etc.), which often varies by mode type (e.g.,

commuter rail, *Rapid*, etc.). Timeframe observed on current or previous projects of similar type help to inform this component.

- **Project Connectivity:** Project connectivity is considered largely to leverage synergies among projects (e.g., MLCs for intersecting MLs or *Rapid* service on MLs) and timelines of adjacent supportive projects, and to ensure that projects are phased in consecutive segments.
- **Evaluation Criteria:** Evaluation criteria is a helpful tool to showcase the merits of projects or a group of projects. For the 2021 Regional Plan, SANDAG applied a project "bundle" (grouped projects by corridor) evaluation criteria approach to rank corridors according to anticipated benefit. The criteria included prioritizing access to transit for the region's social equity focus populations among other things.
- **Phased Revenues:** Anticipated revenues are essential to determining what projects are included in the financially constrained 2021 Regional Plan and when those projects can be anticipated for construction and operation. The type of funding available is also critical because, for example, some funding sources only can be used for capital or construction projects and other sources for operating transit services or road maintenance.

Each of these factors was scored in order to help phase individual projects in the transportation system according to the type of project. For transit projects, projected ridership on individual routes (estimated by initial travel modeling) was considered in order to further clarify project phasing. This helped determine which transit projects to advance in earlier phases, particularly by 2035, based on the availability of revenues. Emphasis was placed on aligning flexible funding with transit projects and operational improvements, given the need to meet federal and state mandates for social equity, air quality, and greenhouse gas reductions.

Major Corridors

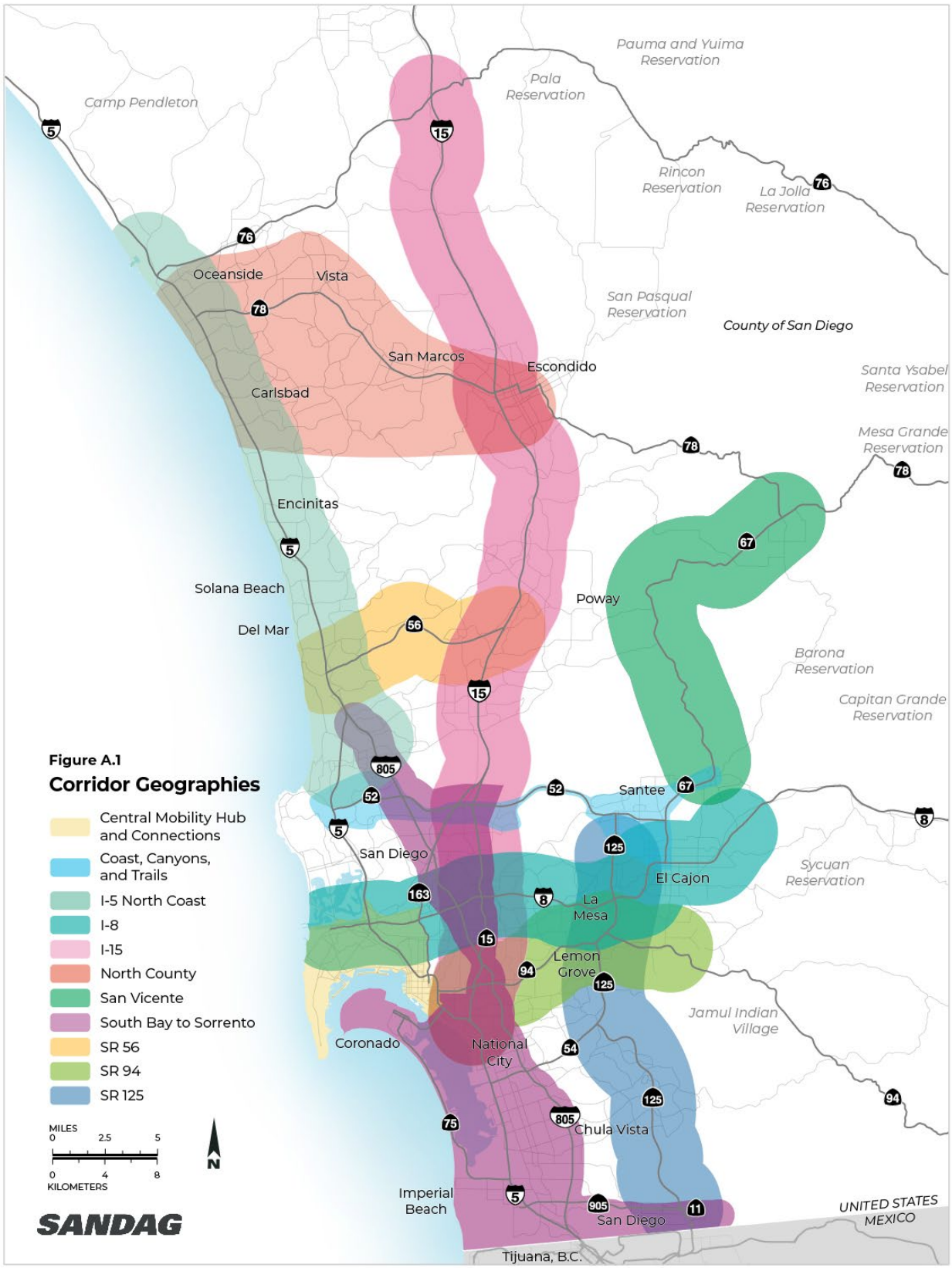
Our region's 3.3 million residents, and others who visit to do business here, vacation, visit family, and even just pass through the area on their way to somewhere else, rely on major corridors for travel. They make up the primary circulatory system that keeps people moving as they seek economic opportunity, pursue education and training, and travel for a myriad of other reasons that enhance their quality of life.

The 2021 Regional Plan charts a course for "Complete Corridors" that will make travel along them safer and more efficient, while offering people more alternatives to driving alone—including more transit options, more rideshare options, and more opportunities for biking, walking, and other forms of active transportation. Along these major corridors of travel, mobility hubs will be strategically placed to offer people vital connections to a variety of transportation options for both short and long trips. Mobility hubs will be places of connectivity where people work, live, and connect with one another and the modes of travel they need to reach their destinations.

The 2021 Regional Plan has identified 11 major corridors of travel in our region, as well as improvements for each corridor. This appendix details those improvements. Tables A.1 through A.11 include detailed listings of the transit, roadway, active transportation, and technology improvements for each of the corridors. Figure A.1 depicts the 11 major corridors of travel in our region. Plans for a regional Central Mobility Hub north of Downtown San Diego, and the connections it will provide to the San Diego International Airport and numerous other destinations, is included in this list as it will serve as a major corridor of travel in its own right. The 11 major corridors discussed in the 2021 Regional Plan are:

1. South Bay to Sorrento Corridor
2. Central Mobility Hub and Connections
3. State Route 125 Corridor
4. Interstate 15 Corridor
5. Interstate 5 North Coast Corridor
6. State Route 94 Corridor
7. Interstate 8 Corridor
8. Coast, Canyons, and Trails Corridor
9. State Route 56 Corridor
10. San Vicente Corridor
11. North County Corridor

Figure A.1: Corridor Geographies



South Bay to Sorrento Corridor

Essential to international trade with Mexico and a key north-south corridor for people who live in communities throughout the South Bay and work in San Diego, the South Bay to Sorrento Corridor is vital for the region's economic prosperity. As a result, the 28 miles it covers are some of the region's most congested. The South Bay to Sorrento Corridor features significant transportation infrastructure designed to move people and goods between the U.S. and Mexico, through densely populated South Bay and Central San Diego communities, and to the region's largest employment centers in Kearny Mesa and Sorrento Valley. The corridor traverses several cities in San Diego County, including San Diego, Chula Vista, Coronado, National City, and Imperial Beach. Major roadways include I-5, I-8, I-805, SR 52, SR 54, SR 94, and SR 905. Travelers along this corridor are also served by major arterials and the Bayshore Bikeway. People who travel using public transportation can ride the COASTER, the UC San Diego Blue Line Trolley, multiple *Rapid* lines, and more than 25 local bus lines. The Orange and Green Line Trolley also bisect this corridor. Given the importance of this heavily traveled corridor to regional and international mobility, a variety of transportation improvements are planned. Some of these improvements include the following:

Active Transportation

Nearly 30 projects are planned to build up the interconnected bikeway systems along this corridor.

Complete Corridor: Managed Lanes and Goods Movement

MLs added to I-5 and I-805 will ease congestion—in part by giving priority access to *Rapid* transit vehicles—and promote seamless travel throughout the region. The movement of freight and other goods within the region and across the international border will become more efficient through improvements to SR 11, SR 905, I-5, and I-805; Harbor Drive; and new and improved facilities at land and sea ports of entry (POEs).

Transit Leap/Mobility Hubs

The much-anticipated commuter rail project in this corridor is the Purple Line at the heart of the South Bay to Sorrento Corridor. It will connect nearly the entire corridor, from San Ysidro to many of our region's urban communities and major job centers in Kearny Mesa, University City, and Sorrento Valley. Additionally, there are plans to enhance existing Trolley lines, including the Blue Line, to allow for higher speeds, broader spans of service, and more capacity. Complementing the expanded Trolley lines and providing travelers with additional public transit choices, the *Rapid* transit program will include more than 20 routes along the South Bay to Sorrento Corridor—many of which are scheduled to be in service before 2035. Mobility hubs are places of connectivity where mobility services, technology, and a variety of amenities create a landing spot for travelers to connect with high-frequency transit services, bike and rideshare options, and a variety of other modes of travel. One of the largest mobility hubs in the region is being planned at the San Ysidro Intermodal Transit Center at the international border with Mexico. Other mobility hubs are planned for urban communities and major education and employment centers throughout the corridor.

Projects in Table A.1 are organized by project type (Active Transportation, Complete Corridor: ATDM/SIS, Complete Corridor: ML, Complete Corridor: ML/Goods Movement, Complete Corridor: Connectors [DAR, Transit Operational Improvement, MLC], Goods Movement: Border, Goods Movement: Roadways, Transit Leap, Transit Leap/Mobility Hubs, and Transit Leap/Goods Movement) and by phasing period (2025, 2035, and 2050) within those project types.

South Bay to Sorrento						
Project ID	**Year Built**	**Category**	**Project Name**	**Description**	**Connecting Corridor(s)**	**Cost ($2020) Millions**
TL22	2035	Transit Leap	*Rapid* 12 Phase 2	Spring Valley to Downtown via Southeast San Diego (full version of *Rapid*)	I-15, SR 94, SR 125, CMH	$73
TL25	2035	Transit Leap	*Rapid* 41	Fashion Valley to UTC/ UC San Diego via Linda Vista and Clairemont	I-8, CCT, CMH	$58
TL28	2035	Transit Leap	*Rapid* 120	Kearny Mesa to Downtown via Mission Valley	I-8, I-15, CCT, CMH	$109
TL35	2035	Transit Leap	*Rapid* 295	Spring Valley to Clairemont via La Mesa and Kearny Mesa	I-8, I-15, SR 94, SR 125, CCT	$91
TL43	2035	Transit Leap	*Rapid* 625	San Diego State University (SDSU) to Palomar Station via East San Diego, Southeast San Diego, National City	I-8, I-15, SR 94	$197
TL44	2035	Transit Leap	*Rapid* 630	Iris Trolley/Palomar to Kearny Mesa via I-5/ SR 163 and City College	I-8, I-15, SR 94, CCT, CMH	$36
TL46	2035	Transit Leap	*Rapid* 637	North Park to 32nd Street Trolley Station via Golden Hill	I-8, I-15, SR 94	$103
TL48	2035	Transit Leap	*Rapid* 640	San Ysidro to Central Mobility Hub via I-5 and City College	I-8, I-15, SR 94, CMH	$28
TL49	2035	Transit Leap	*Rapid* 709	H Street Trolley Station to Millennia via H Street Corridor, Southwestern College	SR 125	$99
TL53	2025	Transit Leap	*Rapid* 950 Phase 1	Otay Mesa POE to Imperial Beach via SR 905 (light version of *Rapid*)	SR 125	$6
TL58	2035	Transit Leap	Ferry	San Diego – Coronado – Military Ferry	SR 94, CMH	$—
TL59	2035	Transit Leap	*Rapid* 950 Phase 2	Otay Mesa POE to Imperial Beach via SR 905 (full version of *Rapid*)	SR 125	$22
TL03[2]	2050	Transit Leap	Commuter Rail 582	National City to U.S. Border	I-15, SR 94	$2,977
TL04	2050	Transit Leap	Commuter Rail 583	Central Mobility Hub to U.S. Border via Downtown San Diego	I-8, I-15, SR 94, CMH	$7,581

Figure A.2: South Bay to Sorrento

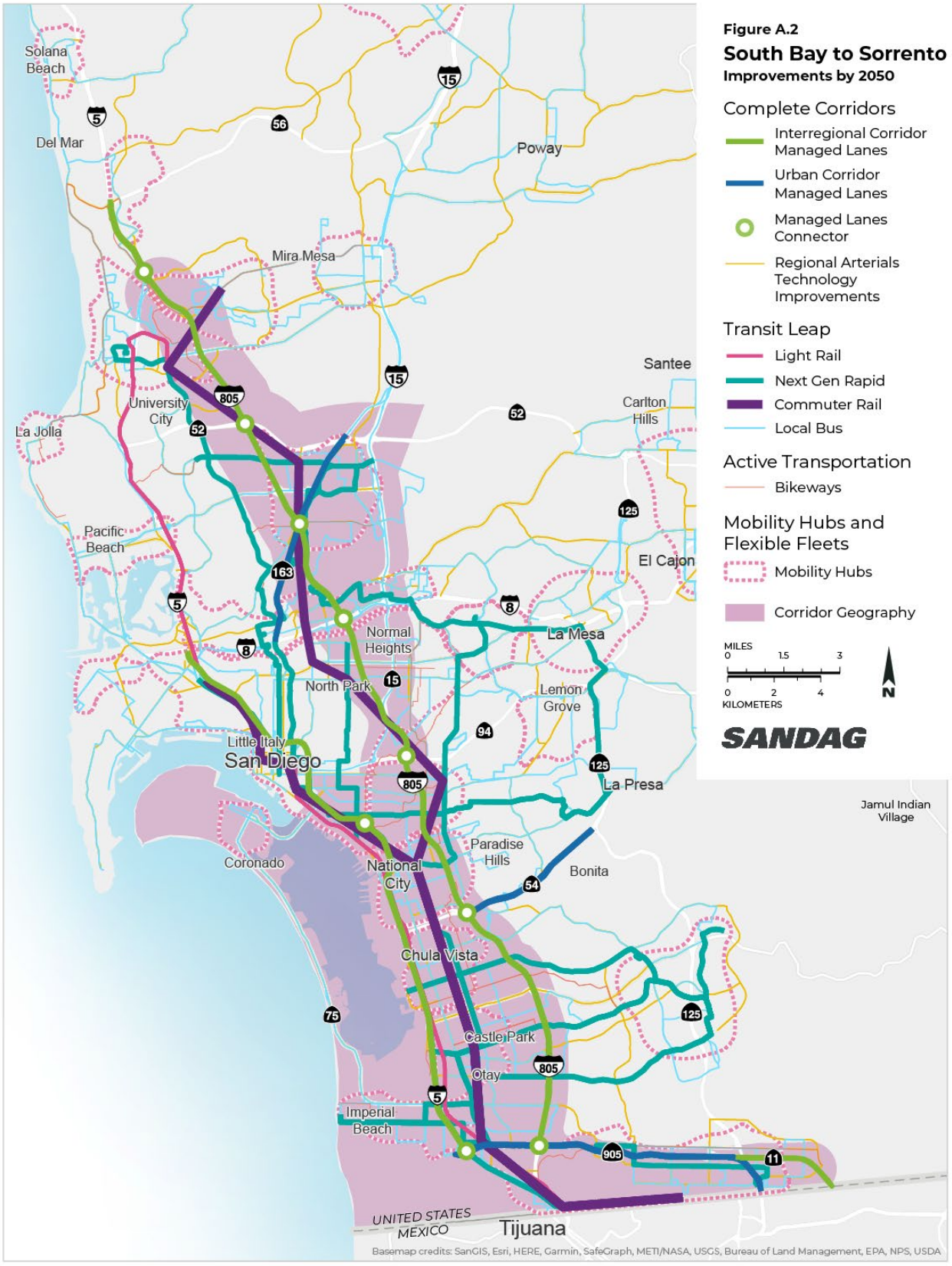


Figure shows improvements along this corridor. Investments in other corridors are shown in corresponding maps.

Interstate 8 Corridor

The I-8 Corridor is a major east-west connector for the region and links the urban, coastal areas of San Diego with the rural, mountainous, and desert regions to the east. San Diego State University, one of our region's major institutions of higher learning, is situated along this corridor in the College area. At its west end, the corridor connects travelers through Mission Valley and to the I-5 and several of the region's beach communities and other family attractions. At its east end the corridor provides travelers with access to Alpine, Pine Valley, and other east county rural communities; camping and hiking in the Laguna Mountains; Anza-Borrego Desert State Park; tribal nation lands; Imperial County; and other points east. The corridor is especially valuable for the movement of goods heading to other parts of the nation in the Southwest and beyond. Existing transit services include the Green and Orange Line Trolley and multiple local bus routes. Improvements to this corridor include the following:

Active Transportation

The 2021 Regional Plan approach for this corridor prioritizes active transportation bikeway projects in San Diego connecting residents and visitors with beach communities, jobs, and the scenic San Diego River Trail.

Complete Corridor: Active Transportation and Demand Management/Smart Intersection Systems

ATDM and SIS technology improvements will be added along the I-8 providing for some key Complete Corridors, MLs, and connectors to allow for a dynamic use of the freeway to accommodate changing roadway demands.

Transit Leap/Mobility Hubs

Communities will benefit from the development of an east-west commuter rail route that will connect El Cajon to the main campus at San Diego State University, urban communities in City Heights and University Heights, and the future Central Mobility Hub. Enhancements to existing Trolley services and Next Generation *Rapid* transit routes in this corridor will provide competitive alternatives to private auto travel and be connected via the Regional Mobility Hub Network. These new connectivity centers feature streamlined multimodal options and include access to high-speed transit, secure bike parking, and rideshare options.

Projects in Table A.7 are organized by project type (Active Transportation, Complete Corridor: ATDM/SIS, Complete Corridor: ML/Goods Movement, Complete Corridor: Connectors [MLC], and Transit Leap) and by phasing period (2025, 2035, and 2050) within those project types.

Interstate 8						
Project ID	**Year Built**	**Category**	**Project Name**	**Description**	**Connecting Corridor(s)**	**Cost ($2020) Millions**
TL19	2025	Transit Leap	*Rapid* 10 Phase 1	La Mesa to Ocean Beach via Mid-City, Hillcrest, Old Town (light version of *Rapid*)	I-15, CMH, SR 94, SR 125, SB2S	$36
TL16	2035	Transit Leap	LRT 530	Green Line (Santee to Downtown, double/third tracking and grade separations)	I-15, SR 94, SR 125, CCT, CMH, SB2S	$384
TL20	2035	Transit Leap	*Rapid* 10 Phase 2	La Mesa to Ocean Beach via Mid-City, Hillcrest, Central Mobility Hub (full version of *Rapid*)	I-15, SR 94, SR 125, CMH, S2BS	$146
TL01	2050	Transit Leap	Commuter Rail 581	581: Downtown to El Cajon via SDSU and La Mesa 581B: Central Mobility Hub to El Cajon via SDSU and La Mesa	I-15, SR 94, SR 125, CMH, SB2S	$9,774
TL17	2050	Transit Leap	LRT 530	Green Line (Santee to Downtown, double/third tracking and grade separations)	I-15, SR 94, SR 125, CCT, CMH, SB2S	$384

Figure A.8: I-8

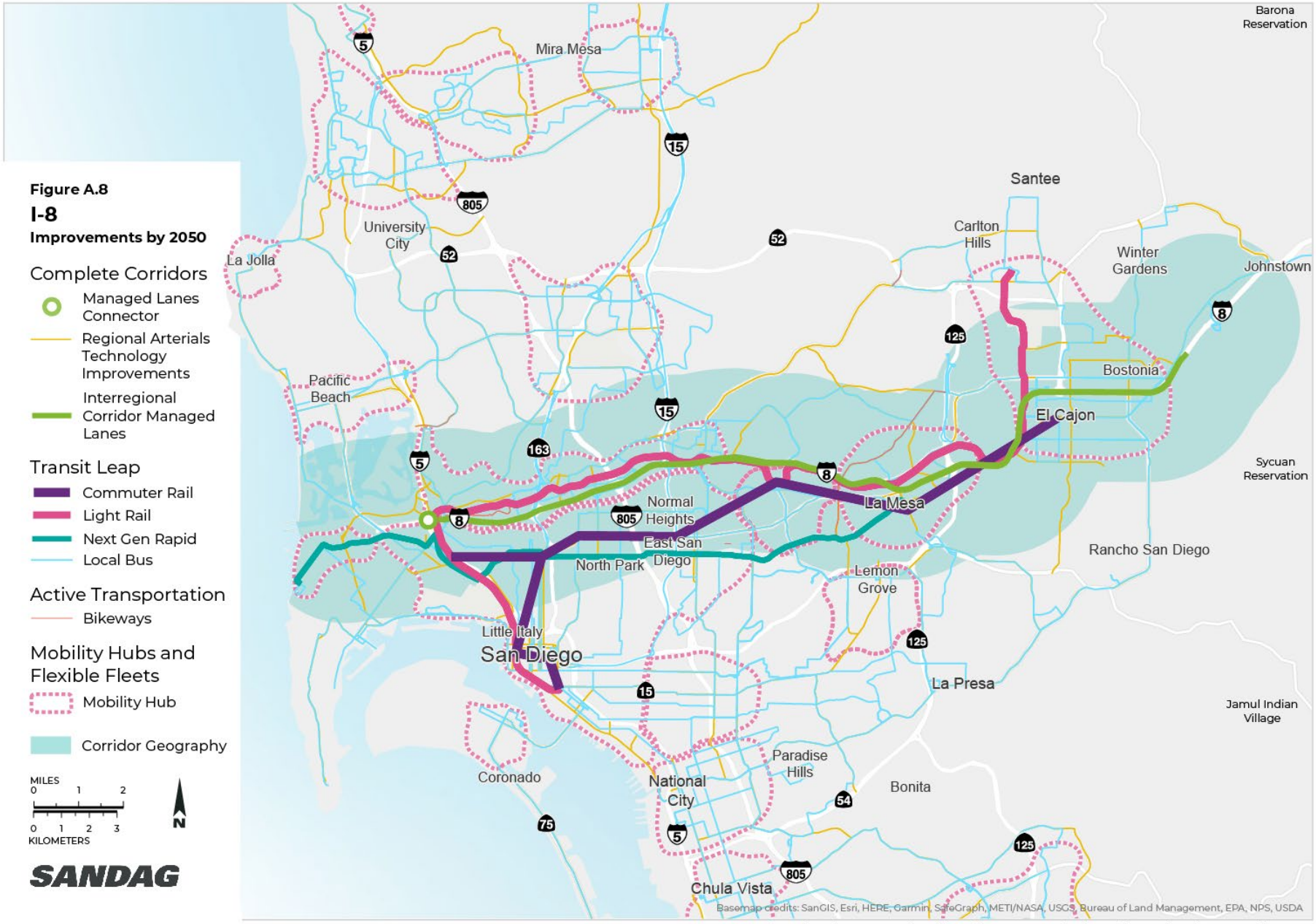


Figure shows improvements along this corridor. Investments in other corridors are shown in corresponding maps.

Mobility Hubs and Flexible Fleets

Mobility hubs are centers of connectivity that allow for a high concentration of travel choices. Flexible Fleets are shared, on-demand transportation services that provide convenient and personalized travel options, generally for short trips to neighborhood destinations such as schools, shopping, dining, parks, grocery stores, as well as connections to high-speed transit options.

A mobility hub's area of influence includes Complete Street treatments for improved on- and off-street accessibility typically spanning one, two, or a few miles around the hub. Facilities will be uniquely designed and based on community characteristics to fulfill a variety of travel needs while strengthening a sense of place. Investments in mobility hubs include land acquisition, amenities (e.g., secure micromobility parking and e-charging, interactive travel kiosks, electric vehicle (EV) charging infrastructure, passenger loading zones, parcel delivery lockers, and carshare parking), pedestrian improvements, and traffic calming treatments.

Figure A.14 shows the Regional Mobility Hub Network designed to connect to, from, and within our core urban communities. Table A.14 details the projects for all mobility hubs in the region, except for the San Ysidro Mobility Hub and Central Mobility Hub which are included in Table A.1 and Table A.2, respectively.

Flexible Fleets build on the popularity of services such as rideshare, bikeshare, and scootershare, and fleets can also include neighborhood shuttles and local delivery services. Many of these services are accessible through mobile apps, and they can be operated by public and private agencies or through partnerships between the two. These fleets provide people with services for all types of trips, 24/7, which can reduce the need to own a car. They also provide important connections between high-speed Transit Leap services and key destinations such as work or home, making it easier for commuters to choose transit.

The elements of the Flexible Fleet investments are included in Table A.14 for the entire region.

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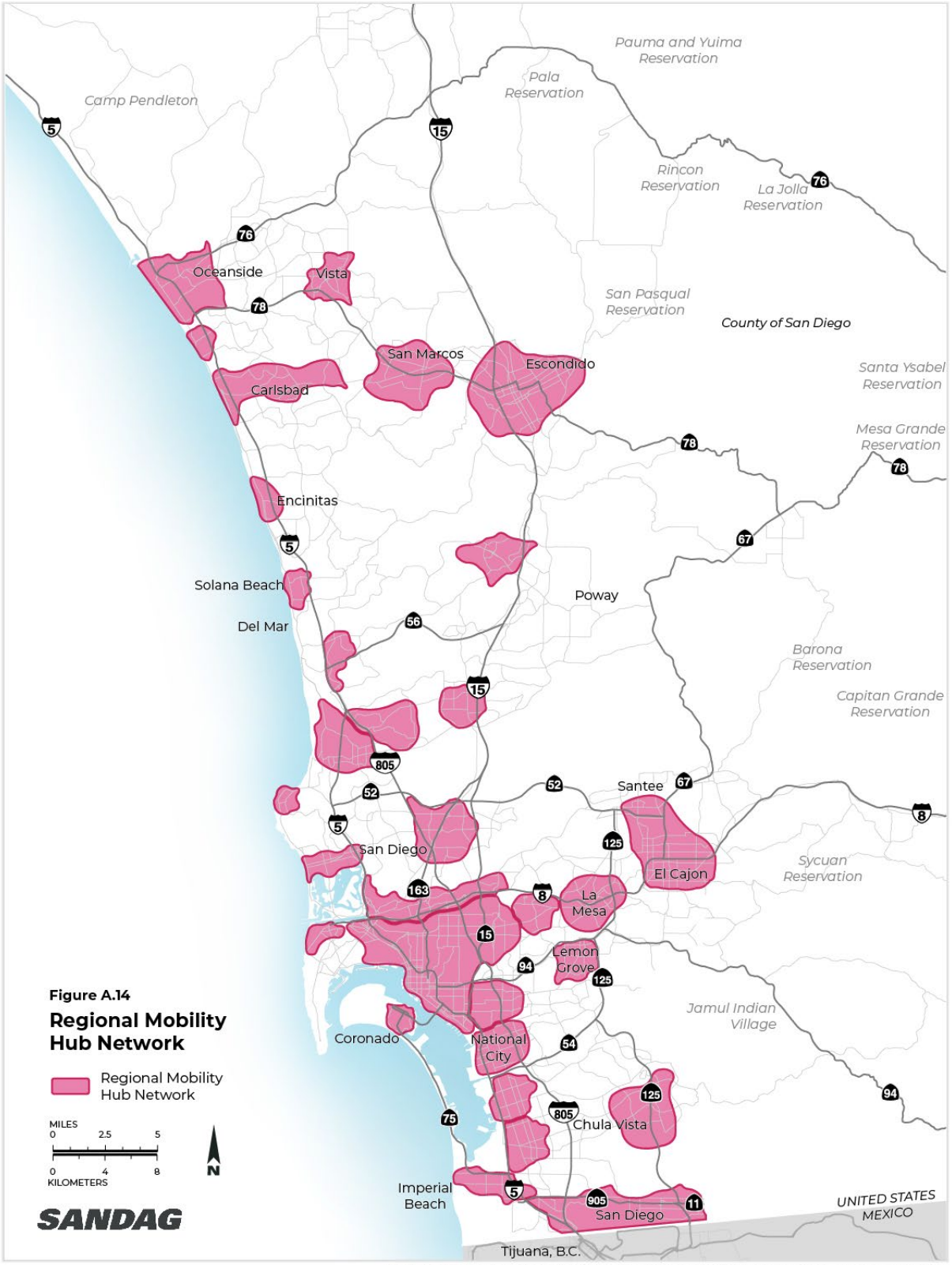
Table A.14: Mobility Hubs and Flexible Fleets

Mobility Hubs and Flexible Fleets					
Project ID	**Year Built**	**Category**	**Project Name**	**Description**	**Cost ($2020) Millions**
MH1	2025	Mobility Hubs	Mobility Hub Amenities	Mobility hub amenities including secure micromobility parking and e-charging, interactive travel kiosks, EV charging infrastructure, passenger loading zones, parcel delivery lockers, and carshare parking	$152
MH2	2035	Mobility Hubs	Mobility Hub Amenities	Mobility hub amenities including secure micromobility parking and e-charging, interactive travel kiosks, EV charging infrastructure, passenger loading zones, parcel delivery lockers, and carshare parking	$247
MH3	2050	Mobility Hubs	Mobility Hub Amenities	Mobility hub amenities including secure micromobility parking and e-charging, interactive travel kiosks, EV charging infrastructure, passenger loading zones, parcel delivery lockers, and carshare parking	$285
MHLA2	2035	Mobility Hubs	Other Mobility Hub Land Acquisition	Land acquisition for additional future mobility hub anchor stations	$66
CCSI1	2035	Mobility Hubs	Complete Streets Improvements	Complete streets improvements within mobility hubs such as pedestrian, micromobility, and other traffic calming treatments that complement the Adopted Regional Bike Network	$1,857
CCSI2	2050	Mobility Hubs	Complete Streets Improvements	Complete streets improvements within mobility hubs such as pedestrian, micromobility, and other traffic calming treatments that complement the Adopted Regional Bike Network	$619
FF1	2025	Flexible Fleets	Flexible Fleets Operations	Operations for Flexible Fleet services including micromobility, ridehail/carshare, rideshare microtransit, and last-mile delivery	$161
FF2	2035	Flexible Fleets	Flexible Fleets Operations	Operations for Flexible Fleet services including micromobility, ridehail/carshare, rideshare microtransit, and last-mile delivery	$538
FF3	2050	Flexible Fleets	Flexible Fleets Operations	Operations for Flexible Fleet services including micromobility, ridehail/carshare, rideshare microtransit, and last-mile delivery	$1,094

Figure A.14: Regional Mobility Hub Network



Next Operating System

The Next Operating System (Next OS) is the “brain” of the entire transportation system. It is a digital platform that compiles information from sources such as passenger vehicles, buses, ridesharing vehicles, delivery trucks, bikes, and scooters into a centralized data hub. Analysis of this data will improve how transportation is planned, operated, and experienced. Transportation operators will be able to better manage supply and demand by modifying how infrastructure and services are used throughout the day. The result will be a modernized transportation system with roads and transit services that operate smoothly and serve people better. The elements of Next OS are included in Table A.15.

Table A.15: Next Operating System

Next Operating System					
Project ID	**Year Built**	**Category**	**Project Name**	**Description**	**Cost ($2020) Millions**
NO01	2025	Next OS	Data Hub	High-speed data analytics, data repository, and data performance management platform that will bring together public transportation data and develop a public–private information exchange with companies such as transportation network companies	$32
NO02	2035	Next OS	Curb Access and Parking	Dynamic management of curbs including access and pricing rules	$12
NO03	2035	Next OS	Transit Optimization	Dynamic transit routing, scheduling, and communications	$7
NO04	2035	Next OS	Mobility as a Service	Application to plan, book, and pay across public and private shared services	$10
NO05	2025	Next OS	Smart Intersections	Intersection safety and signal timing systems that give priority to transit, freight, and emergency vehicles and reduce intersection vehicle and pedestrian conflicts	$19
NO06	2035	Next OS	Next Generation Integrated Corridor Management System	Provide coordinated response and control for real-time operations across freeway, arterials, and transit networks	$7
NO07	2025	Next OS/ Goods Movement	Regional Border Management System	Regional Border Management System with wait times and dynamic tolling to reduce crossborder wait times	$15
NO08	2035	Next OS	Systems and Software	Enables regional transportation system operators to collect, analyze, and share data to improve transportation systems management and operations	$65
NO09	2035	Next OS	Operations	Next OS ongoing operations and future system upgrades	$65

Systemwide Transit Support Services

In addition to the transit capital projects shown in the major corridor tables, there are also several other supporting transit services and programs that make up the breadth of the transit investments included in the 2021 Regional Plan. Collectively, these services and programs support the Transit Leap component of the 2021 Regional Plan as the region prepares to leap into a future of greater connectivity and high-speed services.

These systemwide transit support services are:

- **Transit Operations Costs:** Based on vehicle, revenue hours, and service spans by service type
- **Transit Frequency Enhancements:** Those routes where frequencies are increased to support more robust local bus service on select corridors
- **Commuter Rail Maintenance Facilities:** Maintenance facilities to enable the operations of the additional commuter rail routes being planned in the system
- **Transit Fare Subsidies:** Subsidies to reduce the fares paid by transit riders

These systemwide transit investments are shown in Table A.16. The specific transit frequency and service span enhancements (by route) are shown in Attachment 1: Transit Leap Frequency and Span of Service.

Table A.16: Systemwide Transit Support Services

Systemwide Transit Support Services				
Project ID	**Year Built**	**Category**	**Project Name**	**Cost ($2020) Millions**
—	2025	Transit Leap	Systemwide Operations Costs	$2,551
TL60	2025	Transit Leap	Vehicle Purchases and Replacements (including spares)	$466
TL63	2025	Transit Leap	Local Bus Route Enhanced Frequencies – ten minutes in key corridors	Included with operations costs
—	2035	Transit Leap	Systemwide Operations Costs	$6,636
TL08	2035	Transit Leap	Commuter Rail Maintenance Facilities	$344
TL61	2035	Transit Leap	Vehicle Purchases and Replacements (including spares)	$1,274
TL64	2035	Transit Leap	Local Bus Route Enhanced Frequencies – ten minutes in key corridors	Included with operations costs
TL66	2035	Transit Leap	Transit Fare Subsidies	$752
—	2050	Transit Leap	Systemwide Operations Costs	$13,776
TL09	2050	Transit Leap	Commuter Rail Maintenance Facilities	$344
TL62	2050	Transit Leap	Vehicle Purchases and Replacements (including spares)	$2,541
TL65	2050	Transit Leap	Local Bus Route Enhanced Frequencies – ten minutes in key corridors	Included with operations costs
TL67	2050	Transit Leap	Transit Fare Subsidies	$3,923

Transportation Network Maps

To gain a sense of the full picture of the regional Transportation Network, the following maps show the progression of improvement through the implementation phases. Figures A.16 through A.27 depict the 2016, 2025, 2035, and 2050 Transit Network, Complete Corridors, and Active Transportation Network, respectively. Figure A.28 is the National Highway Freight Network.

Figure A.16: 2016 Transit Network

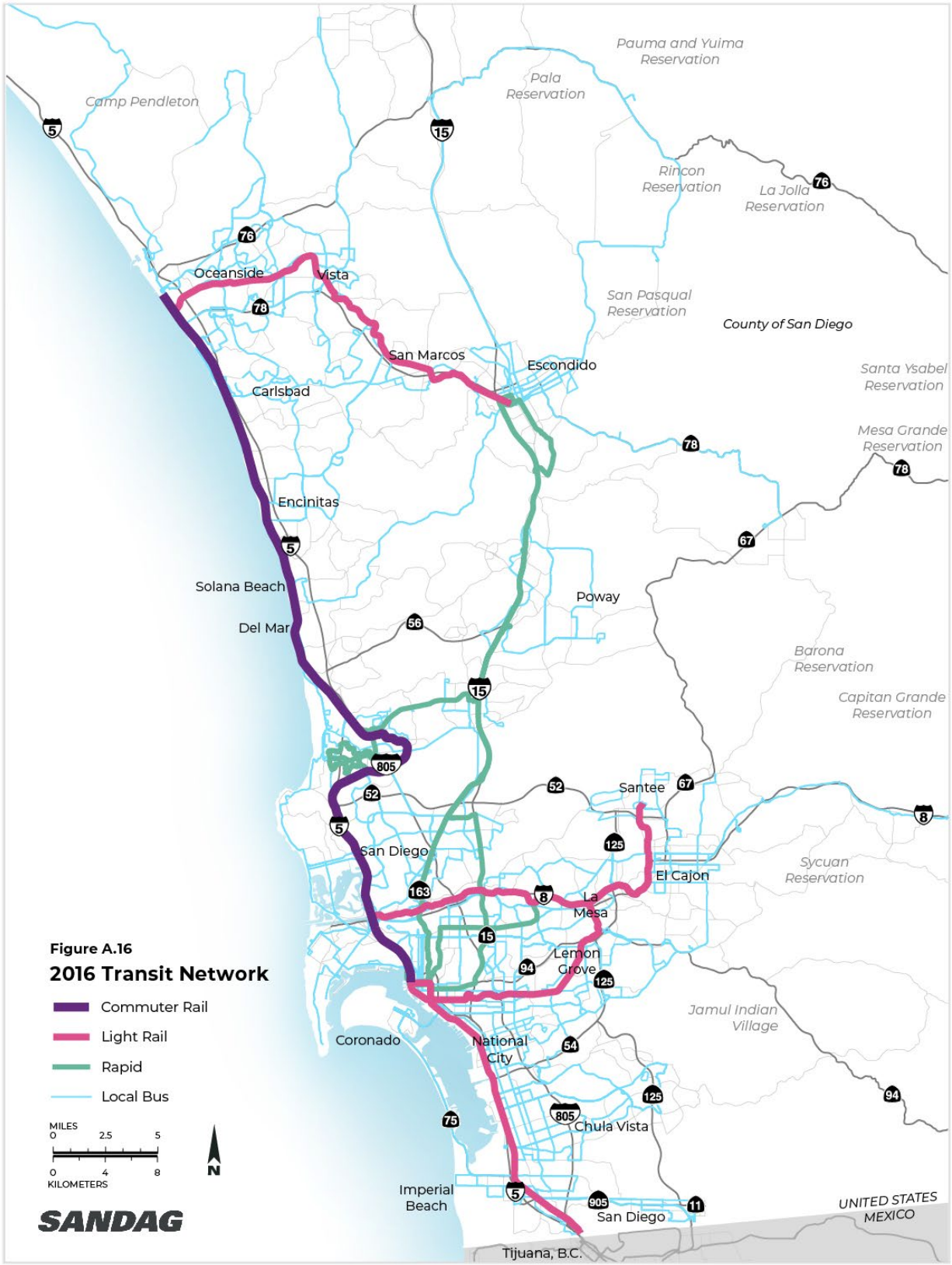


Figure A.17: 2025 Transit Network

Figure A.18: 2035 Transit Network

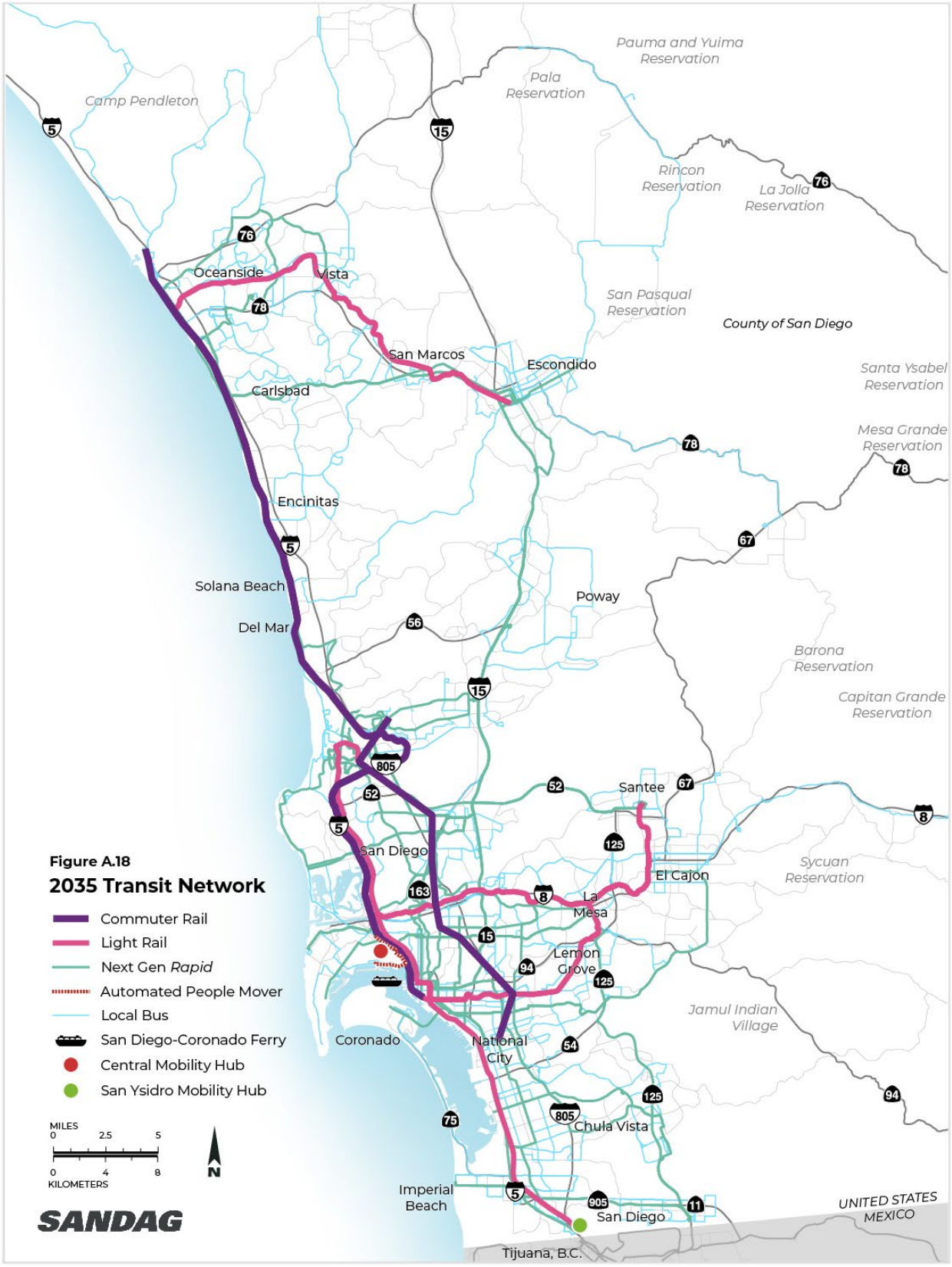


Figure A.19: 2050 Transit Network