

TECHNICAL APPENDICES TO THE
TRANSPORTATION IMPACT ANALYSIS
ESCONDIDO NORTH LLC.

Escondido, California
October 6, 2022

LLG Ref. 3-21-3356

**Linscott, Law &
Greenspan, Engineers**

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APPENDICES

APPENDIX

- A. Intersection Manual and Segment Count Sheets, Traffic Volume Adjustments and City of Escondido Circulation Element, and a volume comparison table with City-provided counts
- B. SANDAG Screening Map, sidewalk VMT reduction calculations and excerpts from the CAPCOA GHG Handbook
- C. Peak Hour Intersection Analysis Worksheets – Existing
- D. Individual Project Distributions and Cumulative Project Locations
- E. Peak Hour Intersection Analysis Worksheets – Existing + Project
- F. Peak Hour Intersection Analysis Worksheets – Opening Year (2023) without Project
- G. Peak Hour Intersection Analysis Worksheets – Opening Year (2023) with Project
- H. Peak Hour Intersection Analysis Worksheets – Long-Term (Year 2035) without Project
- I. Peak Hour Intersection Analysis Worksheets – Long-Term (Year 2035) with Project
- J. Bus Routes 358, 359 and 235 Map and Schedule

APPENDIX A

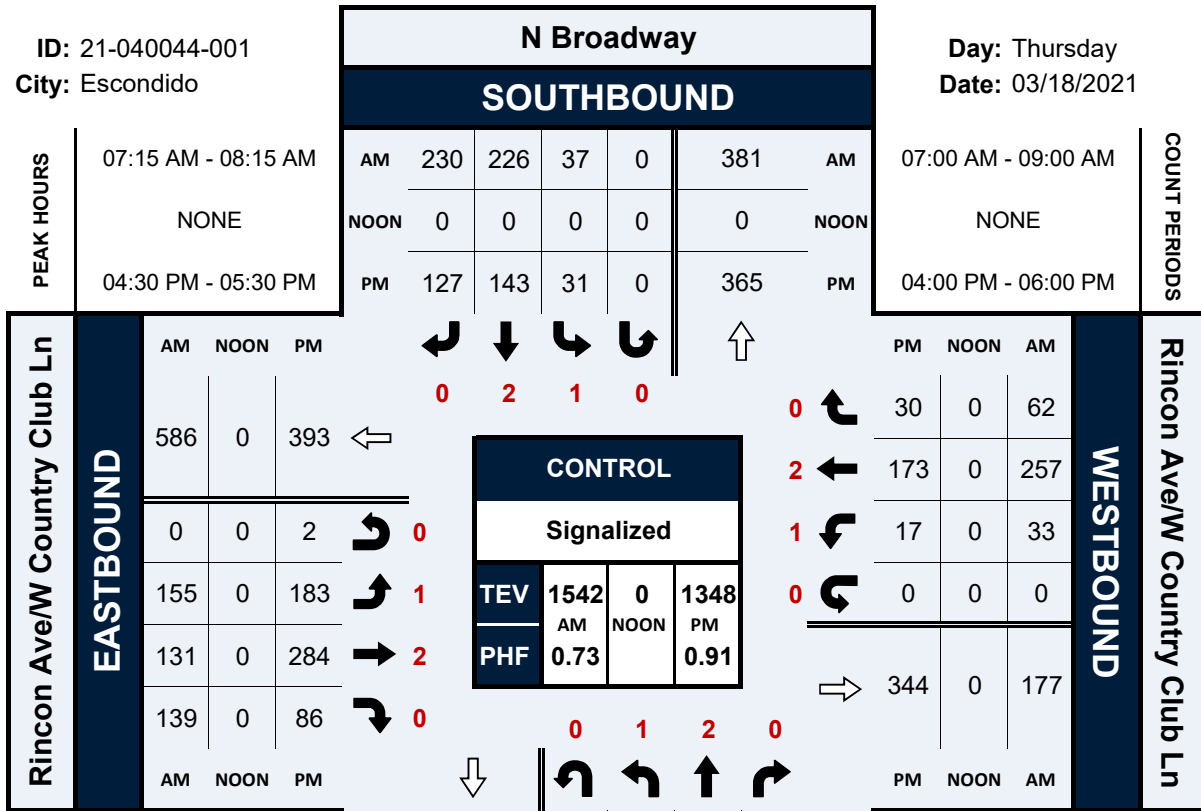
INTERSECTION MANUAL AND SEGMENT COUNT SHEETS, TRAFFIC VOLUME ADJUSTMENTS AND CITY OF ESCONDIDO CIRCULATION ELEMENT, AND A VOLUME COMPARISON TABLE WITH CITY-PROVIDED COUNTS

N Broadway & Rincon Ave/W Country Club Ln

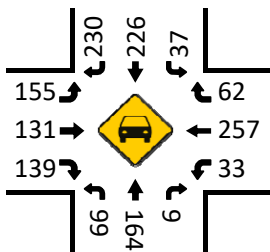
Peak Hour Turning Movement Count

ID: 21-040044-001
City: Escondido

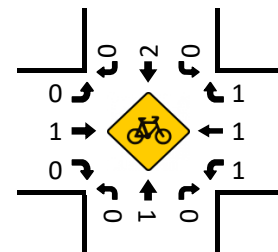
Day: Thursday
Date: 03/18/2021



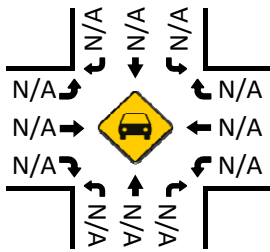
Total Vehicles (AM)



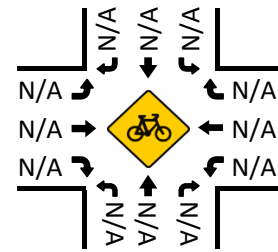
Bikes (AM)



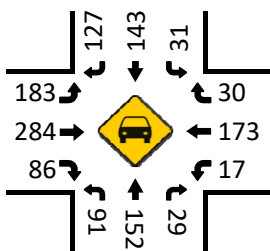
Total Vehicles (Noon)



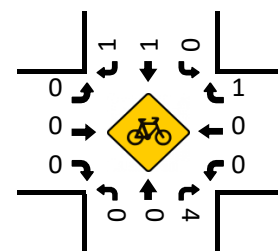
Bikes (NOON)



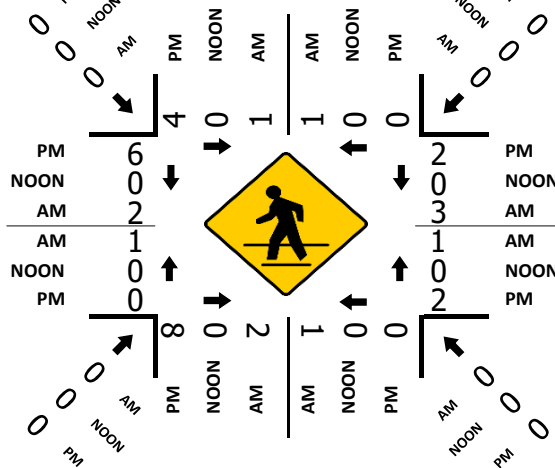
Total Vehicles (PM)



Bikes (PM)



Pedestrians (Crosswalks)

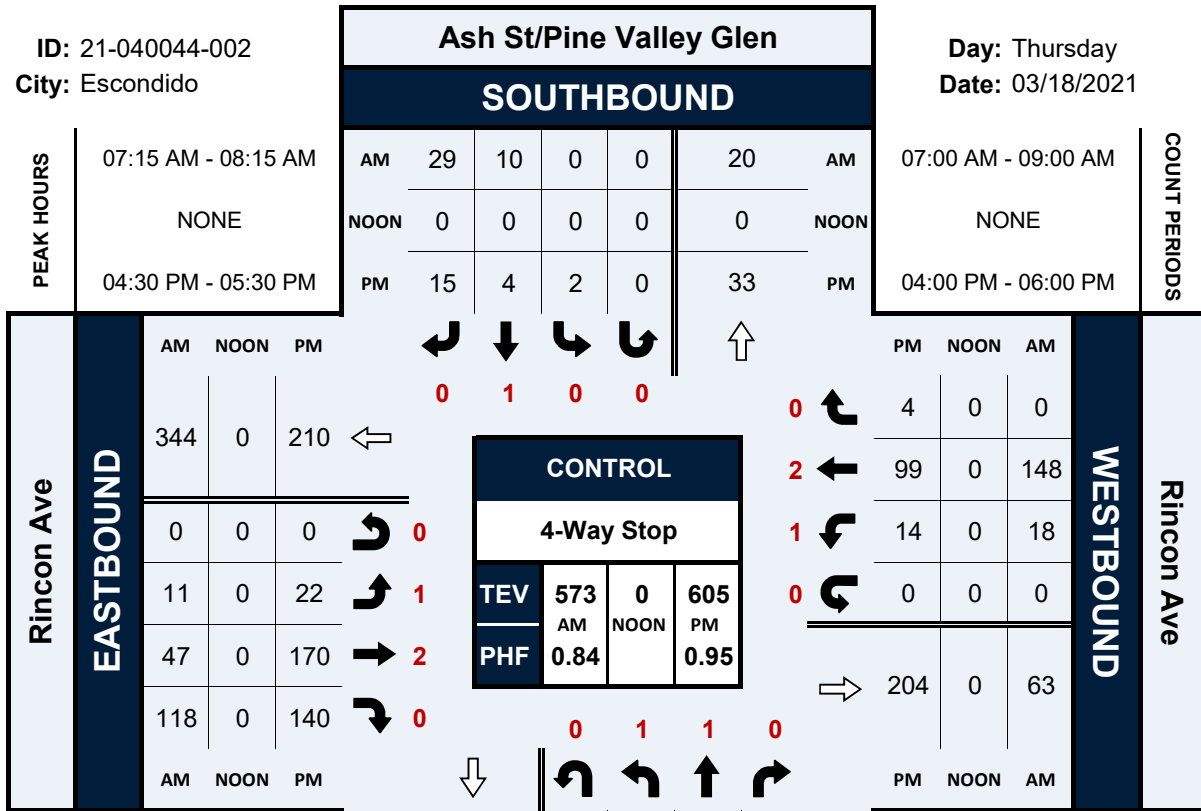


Ash St/Pine Valley Glen & Rincon Ave

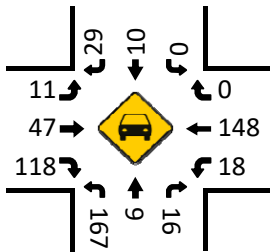
Peak Hour Turning Movement Count

ID: 21-040044-002
City: Escondido

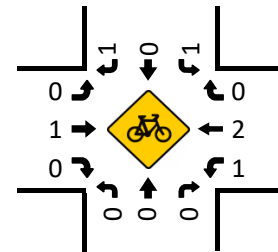
Day: Thursday
Date: 03/18/2021



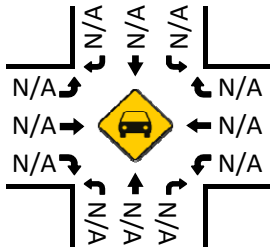
Total Vehicles (AM)



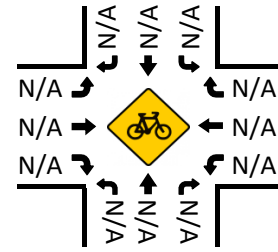
Bikes (AM)



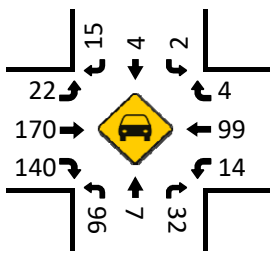
Total Vehicles (Noon)



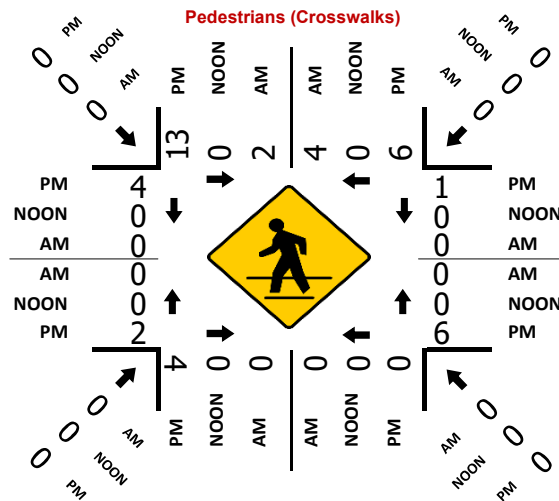
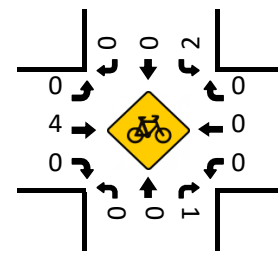
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)

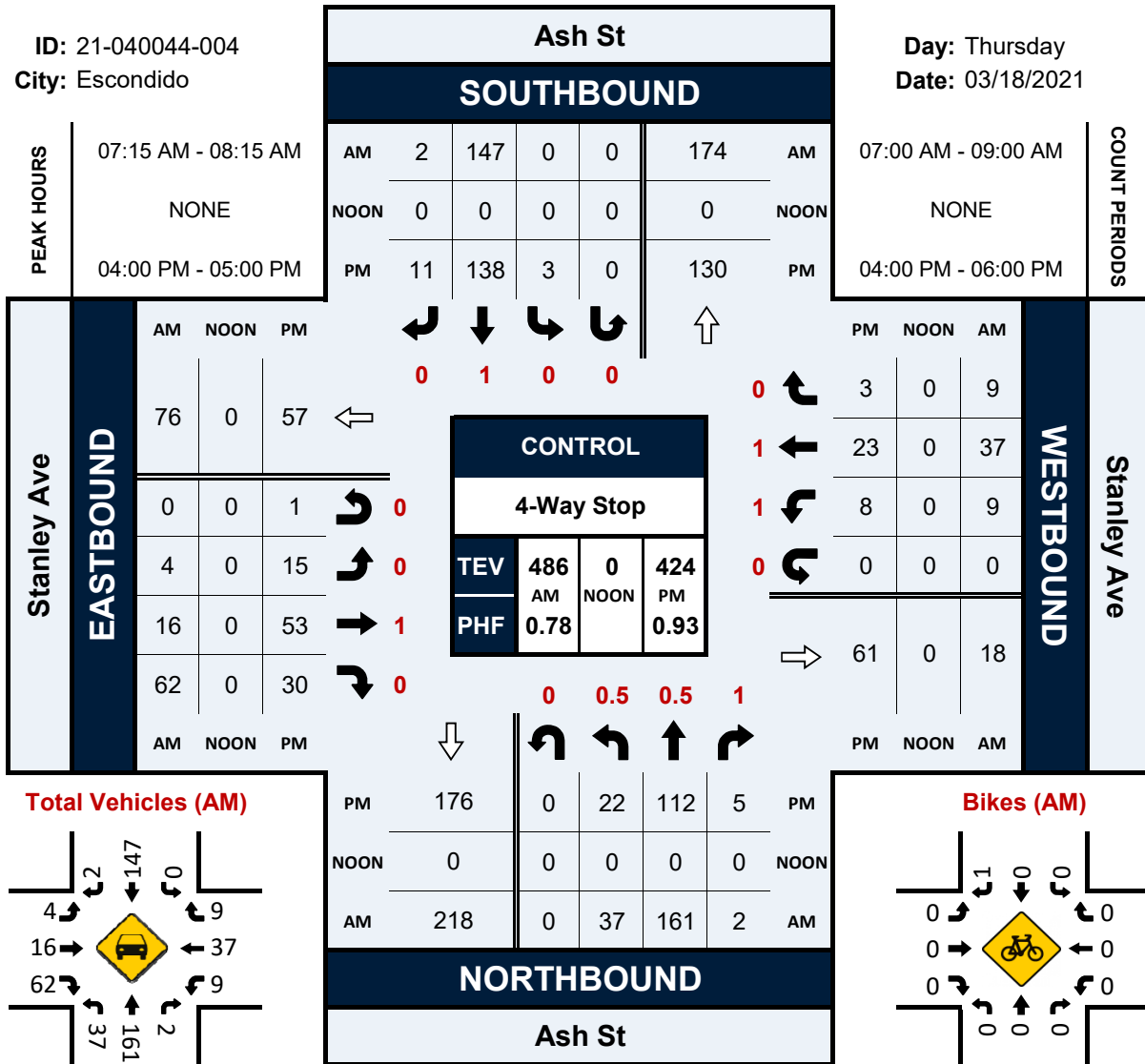


Ash St & Stanley Ave

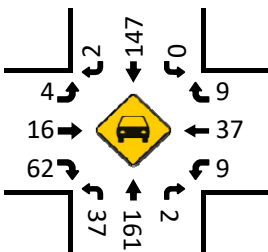
Peak Hour Turning Movement Count

ID: 21-040044-004
City: Escondido

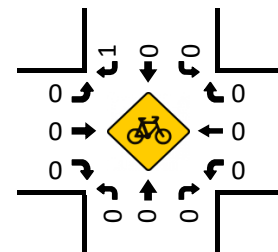
Day: Thursday
Date: 03/18/2021



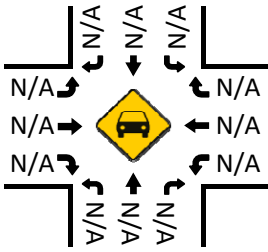
Total Vehicles (AM)



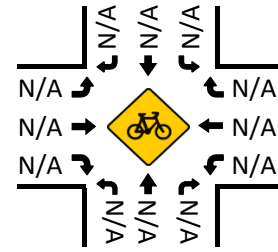
Bikes (AM)



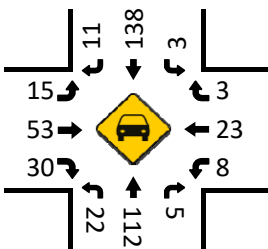
Total Vehicles (Noon)



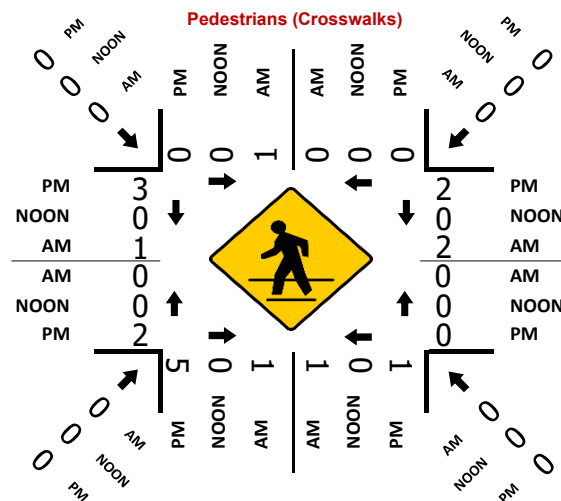
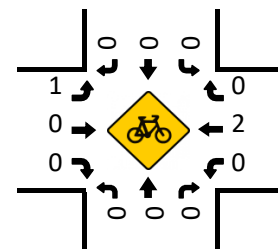
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)

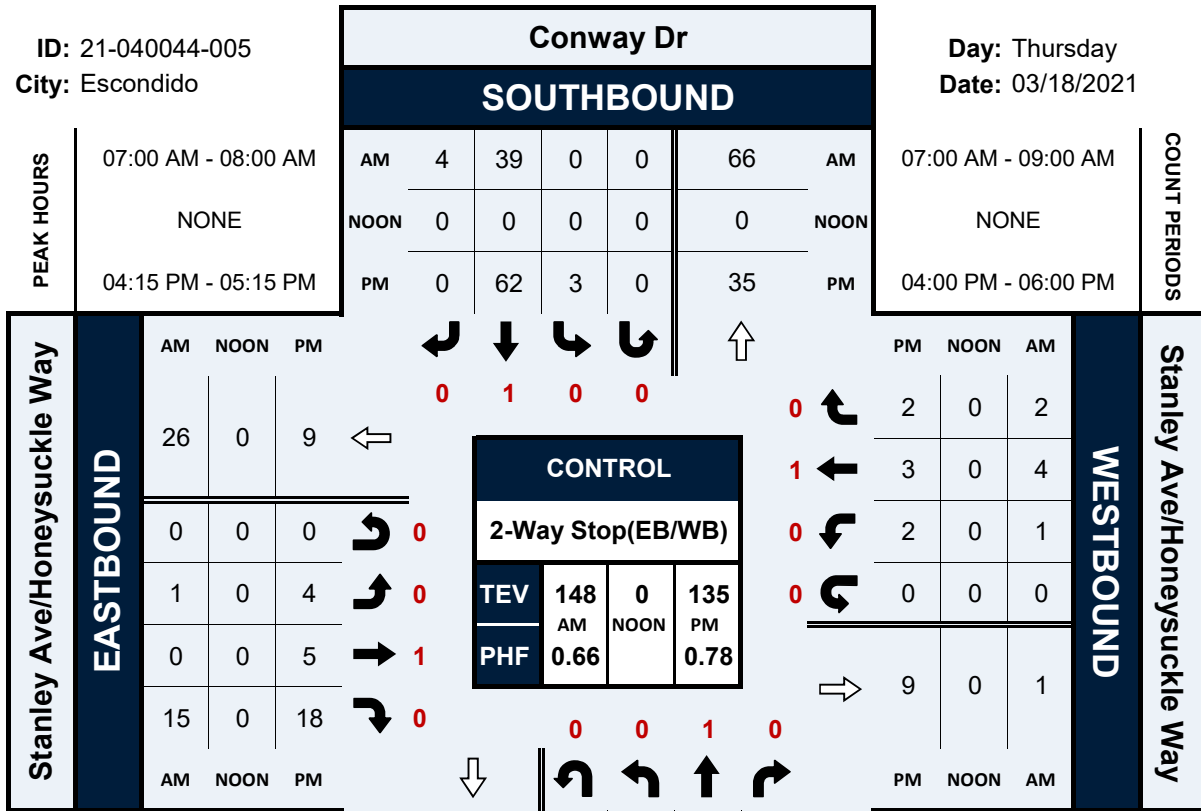


Conway Dr & Stanley Ave/Honeysuckle Way

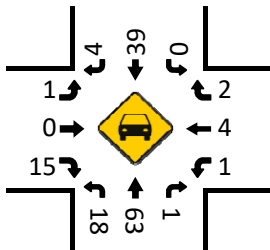
Peak Hour Turning Movement Count

ID: 21-040044-005
City: Escondido

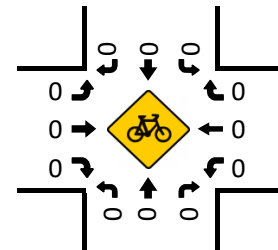
Day: Thursday
Date: 03/18/2021



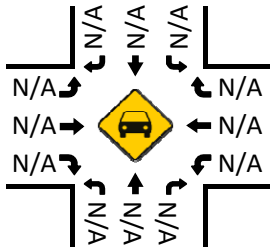
Total Vehicles (AM)



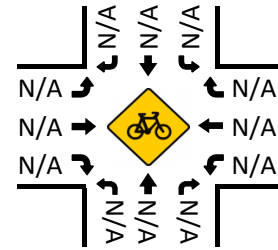
Bikes (AM)



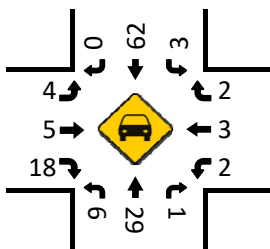
Total Vehicles (Noon)



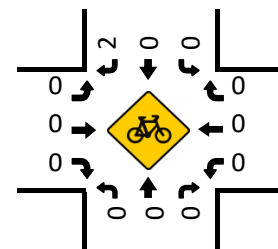
Bikes (NOON)



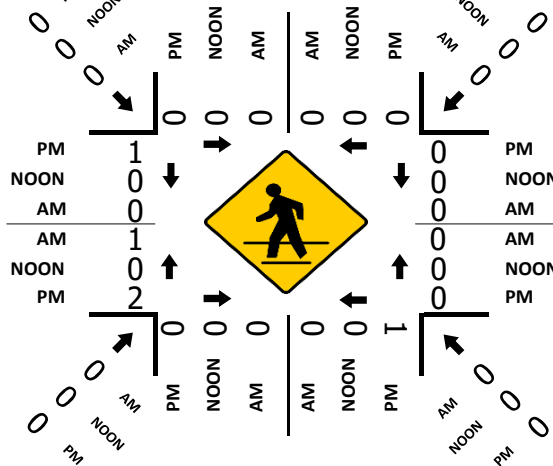
Total Vehicles (PM)



Bikes (PM)

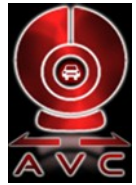


Pedestrians (Crosswalks)



Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Lehner Ave @ N. Ash St

Date of Count: Tuesday, December 03, 2013

Analysts: LV/CD

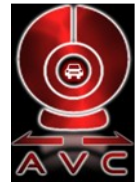
Weather: Sunny

AVC Proj No: 13-0128



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Lehner Ave @ N. Ash St

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	25	54	5	21	20	12	1	27	20	0	25	1	211
7:15 AM	34	52	4	28	30	27	1	35	34	2	51	1	299
7:30 AM	59	26	4	35	34	26	1	28	48	2	58	11	332
7:45 AM	49	28	6	39	42	22	1	26	34	1	43	6	297
8:00 AM	3	51	3	11	14	3	0	40	4	1	3	0	133
8:15 AM	2	41	0	4	5	2	1	21	2	1	1	0	80
8:30 AM	2	28	0	3	4	0	2	16	4	2	3	0	64
8:45 AM	0	22	0	1	2	1	0	20	2	0	1	0	49
Total	174	302	22	142	151	93	7	213	148	9	185	19	1,465

AM Intersection Peak Hour : **7:00 AM - 8:00 AM**

Intersection PHF : **0.86**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	167	160	19	123	126	87	4	116	136	5	177	19	1,139
PHF	0.71	0.74	0.79	0.79	0.75	0.81	1.00	0.83	0.71	0.63	0.76	0.43	0.86
Movement PHF	0.96			0.82			0.83			0.71			0.86

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	6	40	1	17	7	8	1	40	10	2	11	1	144
4:15 PM	5	54	3	9	9	5	0	42	8	5	13	2	155
4:30 PM	9	52	2	20	25	16	0	44	18	0	15	0	201
4:45 PM	10	52	4	11	7	9	1	41	7	0	11	0	153
5:00 PM	7	44	2	13	6	12	3	35	6	4	6	2	140
5:15 PM	11	46	3	15	9	7	0	38	14	0	10	0	153
5:30 PM	5	48	2	11	10	8	0	41	11	0	9	1	146
5:45 PM	4	30	0	11	13	6	0	43	7	1	7	0	122
Total	57	366	17	107	86	71	5	324	81	12	82	6	1,214

PM Intersection Peak Hour : **4:00 PM - 5:00 PM**

Intersection PHF : **0.81**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Volume	30	198	10	57	48	38	2	167	43	7	50	3	653
PHF	0.75	0.917	0.625	0.713	0.48	0.594	0.5	0.949	0.597	0.35	0.833	0.375	0.81
Movement PHF	0.90			0.59			0.85			0.75			0.81

VOLUME

Rincon Ave Bet. Broadway & Ash St

Day: Thursday
Date: 3/18/2021

City: Escondido
Project #: CA21_040045_001

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	3,131	3,184	6,315					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			6	6	12	12:00			43	40	83			
00:15			3	3	6	12:15			22	23	45			
00:30			4	2	6	12:30			40	38	78			
00:45			4	17	2	12:45		13	42	147	36	137	78	284
01:00			2	2	4	13:00			40	34	74			
01:15			3	6	9	13:15			42	39	81			
01:30			0	5	5	13:30			43	44	87			
01:45			2	7	0	13:45		13	43	168	38	155	81	323
02:00			2	1	3	14:00			45	48	93			
02:15			2	1	3	14:15			50	59	109			
02:30			3	4	7	14:30			64	59	123			
02:45			1	8	4	14:45		10	82	241	91	257	173	498
03:00			1	2	3	15:00			69	83	152			
03:15			2	2	4	15:15			68	71	139			
03:30			1	3	4	15:30			87	63	150			
03:45			0	4	1	15:45		8	94	318	55	272	149	590
04:00			1	2	3	16:00			79	64	143			
04:15			0	7	7	16:15			78	34	112			
04:30			4	13	17	16:30			79	48	127			
04:45			1	6	11	16:45		33	84	320	45	191	129	511
05:00			1	13	14	17:00			88	59	147			
05:15			7	23	30	17:15			83	61	144			
05:30			6	29	35	17:30			64	51	115			
05:45			8	22	25	17:45		90	77	312	57	228	134	540
06:00			8	34	42	18:00			76	60	136			
06:15			17	35	52	18:15			75	56	131			
06:30			17	42	59	18:30			54	39	93			
06:45			42	84	57	18:45		168	63	268	39	194	102	462
07:00			35	51	86	19:00			51	31	82			
07:15			41	70	111	19:15			47	32	79			
07:30			41	103	144	19:30			66	34	100			
07:45			63	180	96	19:45		320	42	206	14	111	56	317
08:00			29	74	103	20:00			38	25	63			
08:15			31	60	91	20:15			40	24	64			
08:30			26	62	88	20:30			33	18	51			
08:45			36	122	41	20:45		237	37	148	18	85	55	233
09:00			23	44	67	21:00			30	13	43			
09:15			34	44	78	21:15			18	13	31			
09:30			26	36	62	21:30			19	16	35			
09:45			18	101	55	21:45		179	17	84	11	53	28	137
10:00			29	29	58	22:00			17	15	32			
10:15			32	39	71	22:15			17	16	33			
10:30			22	51	73	22:30			12	9	21			
10:45			34	117	51	22:45		170	8	54	4	44	12	98
11:00			38	43	81	23:00			10	8	18			
11:15			37	58	95	23:15			7	4	11			
11:30			47	42	89	23:30			10	2	12			
11:45			43	165	53	23:45		196	5	32	6	20	11	52
TOTALS			833	1437	2270	TOTALS			2298	1747	4045			
SPLIT %			36.7%	63.3%	35.9%	SPLIT %			56.8%	43.2%	64.1%			

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	3,131	3,184	6,315

AM Peak Hour			07:00	07:15	07:15	PM Peak Hour			15:30	14:45	14:45
AM Pk Volume			180	343	517	PM Pk Volume			338	308	614
Pk Hr Factor			0.714	0.833	0.813	Pk Hr Factor			0.899	0.846	0.887
7 - 9 Volume	0	0	302	557	859	4 - 6 Volume	0	0	632	419	1051
7 - 9 Peak Hour			07:00	07:15	07:15	4 - 6 Peak Hour			16:30	17:00	16:30
7 - 9 Pk Volume	0	0	180	343	517	4 - 6 Pk Volume	0	0	334	228	547
Pk Hr Factor	0.000	0.000	0.714	0.833	0.813	Pk Hr Factor	0.000	0.000	0.949	0.934	0.930

VOLUME

Rincon Ave Bet. Ash St & Conway Dr

Day: Thursday
Date: 3/18/2021

City: Escondido
Project #: CA21_040045_002

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	1,915	1,808	3,723			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			4	3	7	12:00			24	26	50	
00:15			1	2	3	12:15			20	21	41	
00:30			0	1	1	12:30			21	30	51	
00:45			4	9	2	8	12:45		24	89	29	106
01:00			2	1	3	13:00			26	26	52	
01:15			1	4	5	13:15			29	17	46	
01:30			1	4	5	13:30			27	25	52	
01:45			3	7	0	9	13:45		42	124	23	91
02:00			4	2	6	14:00			33	30	63	
02:15			1	0	1	14:15			25	27	52	
02:30			2	2	4	14:30			42	32	74	
02:45			2	9	3	7	14:45		39	139	48	137
03:00			1	1	2	15:00			43	24	67	
03:15			2	1	3	15:15			43	28	71	
03:30			0	2	2	15:30			46	47	93	
03:45			0	3	1	5	15:45		60	192	35	134
04:00			0	2	2	16:00			53	36	89	
04:15			1	5	6	16:15			43	23	66	
04:30			4	8	12	16:30			48	32	80	
04:45			0	5	8	23	16:45		49	193	27	118
05:00			0	14	14	17:00			51	27	78	
05:15			7	15	22	17:15			58	31	89	
05:30			0	24	24	17:30			48	24	72	
05:45			2	9	15	68	17:45		48	205	32	114
06:00			0	15	15	18:00			40	33	73	
06:15			13	16	29	18:15			52	25	77	
06:30			8	20	28	18:30			36	18	54	
06:45			29	50	30	81	18:45		43	171	18	94
07:00			14	40	54	19:00			30	19	49	
07:15			8	37	45	19:15			25	15	40	
07:30			18	47	65	19:30			40	23	63	
07:45			22	62	53	177	19:45		24	119	10	67
08:00			15	30	45	20:00			24	20	44	
08:15			14	26	40	20:15			31	15	46	
08:30			20	50	70	20:30			28	13	41	
08:45			21	70	26	132	20:45		22	105	10	58
09:00			11	27	38	21:00			22	4	26	
09:15			15	31	46	21:15			11	10	21	
09:30			20	26	46	21:30			14	9	23	
09:45			10	56	26	110	21:45		10	57	7	30
10:00			16	22	38	22:00			14	5	19	
10:15			17	24	41	22:15			12	7	19	
10:30			13	32	45	22:30			8	4	12	
10:45			17	63	26	104	22:45		10	44	3	19
11:00			26	28	54	23:00			6	4	10	
11:15			24	27	51	23:15			6	1	7	
11:30			33	23	56	23:30			8	1	9	
11:45			30	113	32	110	23:45		1	21	0	6
TOTALS			456	834	1290	TOTALS			1459	974	2433	
SPLIT %			35.3%	64.7%	34.6%	SPLIT %			60.0%	40.0%	65.4%	

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	1,915	1,808	3,723

AM Peak Hour			11:00	07:00	07:00	PM Peak Hour			16:30	14:45	15:15
AM Pk Volume			113	177	239	PM Pk Volume			206	147	348
Pk Hr Factor			0.856	0.835	0.797	Pk Hr Factor			0.888	0.766	0.916
7 - 9 Volume	0	0	132	309	441	4 - 6 Volume	0	0	398	232	630
7 - 9 Peak Hour			07:45	07:00	07:00	4 - 6 Peak Hour			16:30	16:00	16:30
7 - 9 Pk Volume	0	0	71	177	239	4 - 6 Pk Volume	0	0	206	118	323
Pk Hr Factor	0.000	0.000	0.807	0.835	0.797	Pk Hr Factor	0.000	0.000	0.888	0.819	0.907

VOLUME

Rincon Ave E/O Conway Dr

Day: Thursday
Date: 3/18/2021

City: Escondido
Project #: CA21_040045_003

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	505	502	1,007		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			8	6	14
00:15			1	0	1	12:15			6	6	12
00:30			0	1	1	12:30			6	11	17
00:45			0	1	0	12:45			9	29	31
01:00			0	0	0	13:00			9	7	16
01:15			0	2	2	13:15			8	4	12
01:30			0	0	0	13:30			8	10	18
01:45			1	1	0	13:45			16	41	57
02:00			0	1	1	14:00			9	10	19
02:15			0	0	0	14:15			2	9	11
02:30			1	1	2	14:30			10	7	17
02:45			0	1	1	14:45			6	27	33
03:00			0	0	0	15:00			12	8	20
03:15			0	0	0	15:15			15	11	26
03:30			0	0	0	15:30			14	30	44
03:45			0	0	0	15:45			14	55	69
04:00			1	2	3	16:00			9	10	19
04:15			0	2	2	16:15			9	6	15
04:30			1	1	2	16:30			13	12	25
04:45			0	2	1	16:45			10	41	51
05:00			0	3	3	17:00			10	3	13
05:15			7	3	10	17:15			14	5	19
05:30			1	12	13	17:30			15	6	21
05:45			0	8	2	17:45			13	52	65
06:00			0	3	3	18:00			9	11	20
06:15			13	2	15	18:15			17	6	23
06:30			9	5	14	18:30			6	5	11
06:45			18	40	17	18:45			6	38	44
07:00			9	20	29	19:00			6	5	11
07:15			5	7	12	19:15			4	3	7
07:30			1	10	11	19:30			11	5	16
07:45			7	22	16	19:45			4	25	29
08:00			5	4	9	20:00			6	2	8
08:15			6	9	15	20:15			6	2	8
08:30			5	13	18	20:30			4	3	7
08:45			9	25	6	20:45			5	21	26
09:00			3	7	10	21:00			3	0	3
09:15			5	8	13	21:15			0	3	3
09:30			4	8	12	21:30			2	0	2
09:45			5	17	5	21:45			2	7	9
10:00			3	8	11	22:00			2	0	2
10:15			4	6	10	22:15			0	2	2
10:30			1	8	9	22:30			1	0	1
10:45			5	13	7	22:45			1	4	5
11:00			6	5	11	23:00			0	0	0
11:15			7	10	17	23:15			0	0	0
11:30			8	5	13	23:30			1	1	2
11:45			13	34	12	23:45			0	1	1
TOTALS			164	233	397	TOTALS			341	269	610
SPLIT %			41.3%	58.7%	39.4%	SPLIT %			55.9%	44.1%	60.6%

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	505	502	1,007

AM Peak Hour			06:15	06:45	06:15	PM Peak Hour			15:00	15:15	15:00
AM Pk Volume			49	54	93	PM Pk Volume			55	73	126
Pk Hr Factor			0.681	0.675	0.664	Pk Hr Factor			0.917	0.608	0.716
7 - 9 Volume	0	0	47	85	132	4 - 6 Volume	0	0	93	53	146
7 - 9 Peak Hour			08:00	07:00	07:00	4 - 6 Peak Hour			17:00	16:00	16:00
7 - 9 Pk Volume	0	0	25	53	75	4 - 6 Pk Volume	0	0	52	35	76
Pk Hr Factor	0.000	0.000	0.694	0.663	0.647	Pk Hr Factor	0.000	0.000	0.867	0.729	0.760

VOLUME

Conway Dr Bet. Rincon Ave & Stanley Ave

Day: Thursday
Date: 3/18/2021

City: Escondido
Project #: CA21_040045_005

DAILY TOTALS					NB	SB	EB	WB	Total		
					533	585	0	0	1,118		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	1			2	12:00	5	7			12
00:15	0	1			1	12:15	11	7			18
00:30	0	0			0	12:30	7	8			15
00:45	1	2	0	2	1 4	12:45	7	30	7	29	14 59
01:00	1	0			1	13:00	9	7			16
01:15	0	0			0	13:15	4	6			10
01:30	1	0			1	13:30	3	6			9
01:45	0	2	1	1	1 3	13:45	3	19	5	24	8 43
02:00	0	2			2	14:00	8	12			20
02:15	0	1			1	14:15	7	12			19
02:30	0	0			0	14:30	11	13			24
02:45	1	1	1	4	2 5	14:45	26	52	20	57	46 109
03:00	0	0			0	15:00	9	12			21
03:15	0	1			1	15:15	10	10			20
03:30	0	0			0	15:30	13	13			26
03:45	0	0	1		0 1	15:45	10	42	20	55	30 97
04:00	1	1			2	16:00	13	14			27
04:15	0	2			2	16:15	10	13			23
04:30	3	2			5	16:30	3	16			19
04:45	0	4	0	5	0 9	16:45	10	36	15	58	25 94
05:00	2	0			2	17:00	7	19			26
05:15	5	0			5	17:15	8	20			28
05:30	1	2			3	17:30	11	9			20
05:45	2	10	5	7	7 17	17:45	12	38	17	65	29 103
06:00	4	1			5	18:00	3	12			15
06:15	4	3			7	18:15	3	12			15
06:30	10	3			13	18:30	8	7			15
06:45	12	30	10	17	22 47	18:45	9	23	11	42	20 65
07:00	8	7			15	19:00	5	9			14
07:15	12	2			14	19:15	1	7			8
07:30	17	15			32	19:30	10	4			14
07:45	24	61	15	39	39 100	19:45	5	21	7	27	12 48
08:00	9	9			18	20:00	7	4			11
08:15	7	5			12	20:15	9	5			14
08:30	10	4			14	20:30	2	4			6
08:45	11	37	4	22	15 59	20:45	3	21	4	17	7 38
09:00	4	5			9	21:00	1	2			3
09:15	6	7			13	21:15	2	5			7
09:30	1	5			6	21:30	2	2			4
09:45	10	21	3	20	13 41	21:45	2	7	1	10	3 17
10:00	3	9			12	22:00	2	4			6
10:15	7	6			13	22:15	3	2			5
10:30	6	3			9	22:30	1	1			2
10:45	10	26	9	27	19 53	22:45	4	10	1	8	5 18
11:00	7	14			21	23:00	1	2			3
11:15	9	5			14	23:15	1	0			1
11:30	11	10			21	23:30	2	4			6
11:45	9	36	12	41	21 77	23:45	0	4	1	7	1 11
TOTALS	230	186			416	TOTALS	303	399			702
SPLIT %	55.3%	44.7%			37.2%	SPLIT %	43.2%	56.8%			62.8%

DAILY TOTALS					NB	SB	EB	WB	Total
					533	585	0	0	1,118

AM Peak Hour	07:15	07:30			07:15	PM Peak Hour	14:45	16:30			14:45
AM Pk Volume	62	44			103	PM Pk Volume	58	70			113
Pk Hr Factor	0.646	0.733			0.660	Pk Hr Factor	0.558	0.875			0.614
7 - 9 Volume	98	61	0	0	159	4 - 6 Volume	74	123	0	0	197
7 - 9 Peak Hour	07:15	07:30			07:15	4 - 6 Peak Hour	17:00	16:30			17:00
7 - 9 Pk Volume	62	44	0	0	103	4 - 6 Pk Volume	38	70	0	0	103
Pk Hr Factor	0.646	0.733	0.000	0.000	0.660	Pk Hr Factor	0.792	0.875	0.000	0.000	0.888

VOLUME

Stanley Ave Bet. Ash St & Conway Dr

Day: Thursday
Date: 3/18/2021

City: Escondido
Project #: CA21_040045_004

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	381	309	690		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			9	8	17
00:15			0	2	2	12:15			5	3	8
00:30			0	0	0	12:30			4	3	7
00:45			0	0	0	12:45		2	4	6	20
01:00			0	0	0	13:00			5	3	8
01:15			0	0	0	13:15			6	5	11
01:30			0	0	0	13:30			6	6	12
01:45			0	0	0	13:45		2	4	4	18
02:00			0	0	0	14:00			4	1	5
02:15			0	0	0	14:15			5	6	11
02:30			0	0	0	14:30			10	7	17
02:45			0	0	0	14:45		3	24	43	13
03:00			2	0	2	15:00			14	9	23
03:15			0	3	3	15:15			9	7	16
03:30			0	0	0	15:30			6	4	10
03:45			0	2	1	15:45		1	6	35	2
04:00			0	0	0	16:00			9	3	12
04:15			0	2	2	16:15			13	4	17
04:30			0	1	1	16:30			4	3	7
04:45			0	0	0	16:45		3	12	38	8
05:00			0	0	0	17:00			8	3	11
05:15			0	2	2	17:15			9	5	14
05:30			0	2	2	17:30			13	5	18
05:45			0	5	5	17:45		1	5	35	7
06:00			0	4	4	18:00			3	5	8
06:15			0	4	4	18:15			6	4	10
06:30			0	4	4	18:30			10	1	11
06:45			1	1	8	18:45		2	12	31	1
07:00			4	5	9	19:00			5	1	6
07:15			1	5	6	19:15			11	2	13
07:30			7	13	20	19:30			8	7	15
07:45			6	18	15	19:45		3	6	30	3
08:00			5	8	13	20:00			7	2	9
08:15			6	3	9	20:15			9	1	10
08:30			1	6	7	20:30			2	0	2
08:45			4	16	4	20:45		3	4	22	0
09:00			3	4	7	21:00			2	1	3
09:15			6	2	8	21:15			3	0	3
09:30			2	4	6	21:30			3	3	6
09:45			3	14	1	21:45		1	1	9	1
10:00			2	3	5	22:00			2	3	5
10:15			1	2	3	22:15			4	2	6
10:30			2	2	4	22:30			2	0	2
10:45			2	7	4	22:45		1	1	9	1
11:00			3	5	8	23:00			1	1	2
11:15			2	9	11	23:15			1	0	1
11:30			8	8	16	23:30			2	2	4
11:45			10	23	2	23:45		3	1	5	0
TOTALS			81	143	224	TOTALS			300	166	466
SPLIT %			36.2%	63.8%	32.5%	SPLIT %			64.4%	35.6%	67.5%

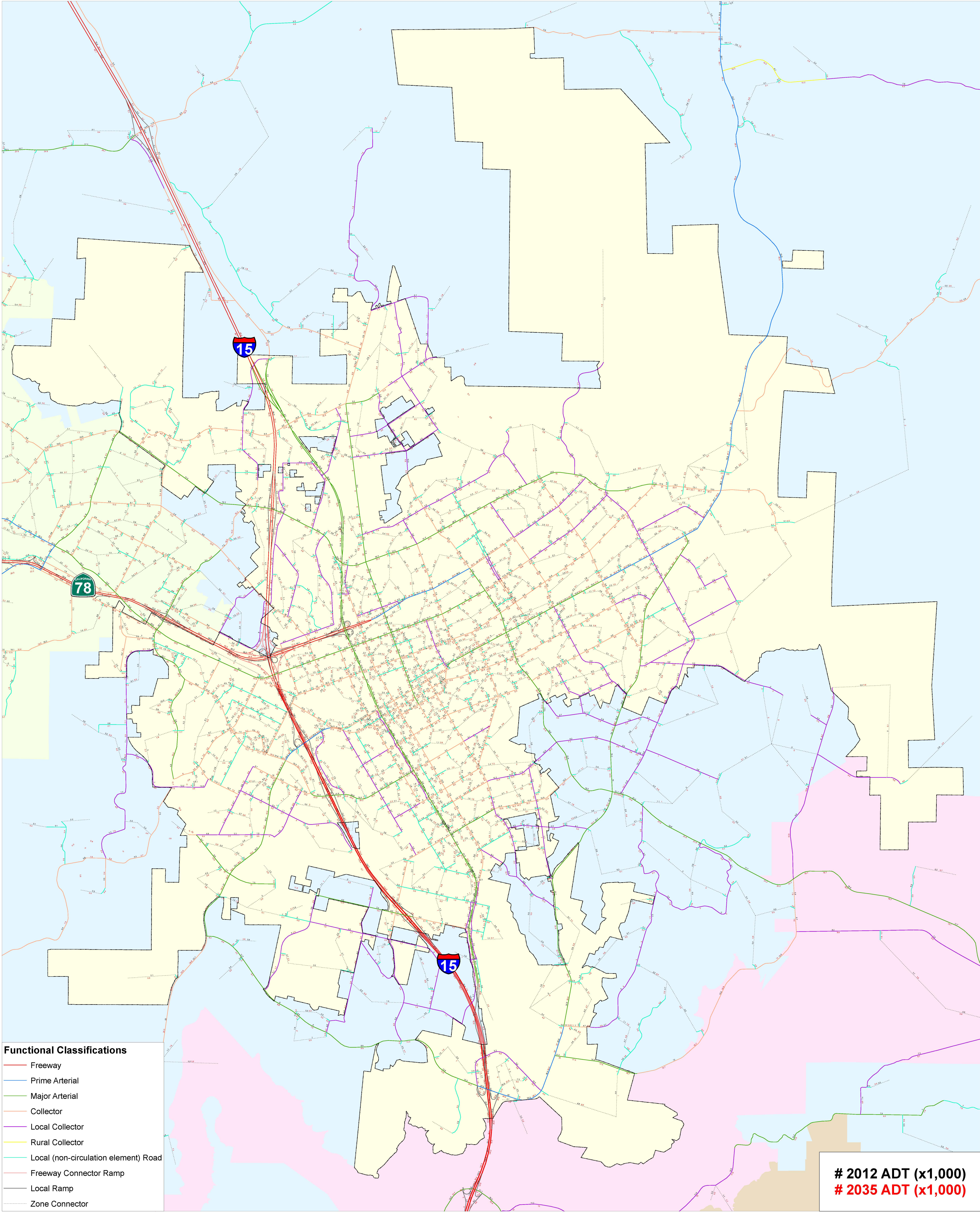
DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	381	309	690

AM Peak Hour			11:30	07:15	07:30	PM Peak Hour			14:30	14:30	14:30
AM Pk Volume			32	41	63	PM Pk Volume			57	36	93
Pk Hr Factor			0.800	0.683	0.750	Pk Hr Factor			0.594	0.692	0.628
7 - 9 Volume	0	0	34	59	93	4 - 6 Volume	0	0	73	38	111
7 - 9 Peak Hour			07:30	07:15	07:30	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	24	41	63	4 - 6 Pk Volume	0	0	42	21	63
Pk Hr Factor	0.000	0.000	0.857	0.683	0.750	Pk Hr Factor	0.000	0.000	0.808	0.656	0.788

INTERSECTION	DIRECTION	LEG	EXISTING TRAFFIC VOLUMES (COVID COUNTS)						COVID ADT			NON-COVID ADT*			GROWTH FACTOR	FINAL EXISTING TRAFFIC VOLUMES (NON-COVID)									
			Ram	Rpm	Tam	Tpm	Lam	Lpm	COUNTED	K-FACTOR	SELECTED	SANDAG	ASSUMED	SELECTED		Ram	Rpm	Tam	Tpm	Lam	Lpm				
1. N. Broadway / Rincon Avenue	Sb	North	230	127	226	143	37	31	6320	8900	8900	6200	9900	9900	1.11	250	140	270	170	50	40				
	Wb	East	62	30	257	173	33	17								8400	8400	8400	1.33	80	40	320	220	40	20
	Nb	South	9	29	164	152	99	91								6200	8500	8500	1.24	10	40	190	180	120	110
	Eb	West	139	86	131	284	155	183								7400	12400	12400	1.10	160	100	160	350	170	200
2. Rincon Avenue / N. Ash Street	Sb	North	29	15	10	4	0	2	3720	670	670	300	740	740	1.10	30	20	10	10	10	10				
	Wb	East	0	4	148	99	18	14								8100	8100	8100	2.18	10	10	270	180	30	20
	Nb	South	16	32	9	7	167	96								1000	4150	4150	1.10	30	50	10	10	190	110
	Eb	West	118	140	47	170	11	22								8000	8000	8000	1.27	140	160	90	310	20	30
3. Rincon Avenue / Conway Drive	Sb	North	99	83	19	23	0	1	1010	2730	2730	1200	3000	3000	1.10	150	130	30	30	10	10				
	Wb	East	2	2	43	17	7	0								6200	2500	2500	2.48	10	10	100	40	10	10
	Nb	South	8	3	17	15	37	17								1700	1700	1700	1.52	20	10	20	20	60	30
	Eb	West	15	40	13	45	34	114								8100	8100	8100	2.18	30	70	30	110	50	180
4. Rincon Avenue / Rincon Lot Driveway	Sb	North	0	0	0	0	0	0			0		0	#DIV/0!	0	0	0	0	0	0					
	Wb	East	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Nb	South	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Eb	West	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
5. Conway Drive / H Lot Driveway #1	Sb	North	0	0	0	0	0	0			0		0	#DIV/0!	0	0	0	0	0	0					
	Wb	East	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Nb	South	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Eb	West	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
6. Stanley Avenue / N. Ash Street	Sb	North	2	11	147	138	0	3	690	2480	2480	800	2740	2740	1.10	10	20	160	150	10	10				
	Wb	East	9	3	37	23	9	8								1500	1500	1500	2.17	20	10	70	50	20	20
	Nb	South	2	5	161	112	37	22								1200	3300	3300	1.10	10	10	180	120	50	30
	Eb	West	62	30	16	53	4	15								2100	2100	2100	1.64	90	40	30	110	10	20
7. Stanley Avenue / H Lot Driveway #2	Sb	North	0	0	0	0	0	0			0		0	#DIV/0!	0	0	0	0	0	0					
	Wb	East	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Nb	South	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Eb	West	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
8. Stanley Avenue / Conway Drive	Sb	North	4	0	39	62	0	3	1120	130	130	1700	150	1700	1.52	10	10	70	120	10	10				
	Wb	East	2	2	4	3	1	2								100	150	150	1.15	10	10	10	10	10	10
	Nb	South	1	1	63	29	18	6								3300	3300	3300	2.41	10	10	120	60	40	10
	Eb	West	15	18	0	5	1	4								1500	1500	1500	2.17	30	40	10	10	10	10
9. Lehner Avenue / N. Ash Street	Sb	North	0	0	0	0	0	0			0		0	#DIV/0!	0	0	0	0	0	0					
	Wb	East	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Nb	South	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Eb	West	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
10. Lehner Avenue / F Lot Driveway	Sb	North	0	0	0	0	0	0			0		0	#DIV/0!	0	0	0	0	0	0					
	Wb	East	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Nb	South	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	
	Eb	West	0	0	0	0	0	0							0	0	0	#DIV/0!	0	0	0	0	0	0	

*Source: SANDAG Transportation Forecast Information Center (TFIC) Year 2020 Model

Segment	SANDAG Series 13	SANDAG Series 14	City of Escondido Circulation		
	Year 2035	Year 2035	Year 2012	Year 2021 (Interpolation)	Year 2035
Rincon Avenue					
N Broadway to N Ash Street	9300	12400	8400	9870	11900
N Ash Street to Conway Drive	8900	9900	7400	9120	11400
East of Conway Drive	6900	8400	3600	5740	8000
Conway Drive					
Rincon Avenue to Stanley Avenue	1900	1300	2800	2540	2100
Stanley Avenue					
N Ash Avenue to Conway Drive	1400	700	1100	1100	1100



- Functional Classifications**
- Freeway
 - Prime Arterial
 - Major Arterial
 - Collector
 - Local Collector
 - Rural Collector
 - Local (non-circulation element) Road
 - Freeway Connector Ramp
 - Local Ramp
 - Zone Connector

2012 ADT (x1,000)
2035 ADT (x1,000)

Source: City of Escondido GIS, SANDAG



Escondido Traffic Modeling 2012 vs 2035 ADT



City of Escondido

adtlk	Primary Street	First Cross Street	Second Cross Street	Escondido North LLC.	2012	2013 DATA	2021	Latest ADT count	Year	Project name
6707	ASH ST	RINCON AVE	VISTA AVE	5360				3944		2015 Boer Residential (2014), Pickering Residential (2014), Pradera Truck Hauling (2015)
6795	ASH ST	VISTA AVE	EL NORTE PKWY	11920		7040		5143		2020 Covid related
6810	CONWAY DR	RINCON AVE	VISTA AVE	3830		N		1482		2015 Pradera Truck Hauling
6708	RINCON AVE	N BROADWAY	ASH ST	9870		5000		6386		2015 Pradera Truck Hauling
6814	RINCON AVE	ASH ST	CONWAY DR	9120		N		4380		2015 Pradera Truck Hauling
6817	VISTA AVE	ASH ST	CONWAY DR	3500		N		4820		2017 Individual Count - data likely high (doubled) 3030 (2005) 2400 (2009)

APPENDIX B

SANDAG SCREENING MAP, SIDEWALK VMT REDUCTION CALCULATIONS AND EXCERPTS FROM THE CAPCOA GHG HANDBOOK



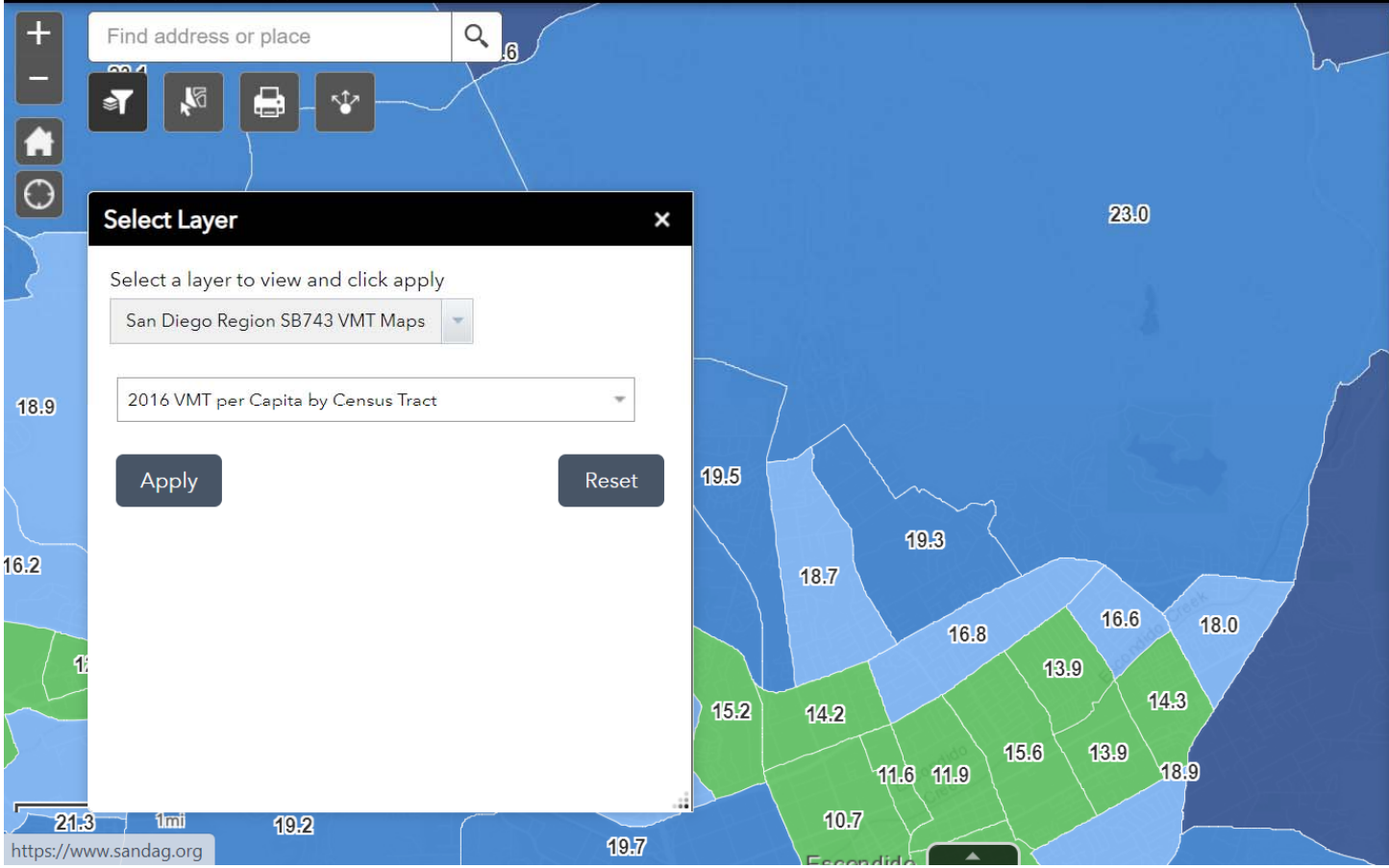
Find address or place

Select Layer

Select a layer to view and click apply

San Diego Region SB743 VMT Maps

2016 VMT per Capita by Census Tract



Map Legend / Disclaimer

- Map Legend**
- Percent of Mean
- More than 125% of Regional Mean
 - 100% to 125% of Regional Mean
 - 85% to 100% of Regional Mean
 - 50% to 85% of Regional Mean
 - Less than 50% of Regional Mean
 - No VMT

Current Data

2016 - Series 14 (Scenario ID 434)

Regional Mean = 19.0 VMT per Resident
Regional Mean = 27.2 VMT per Employee

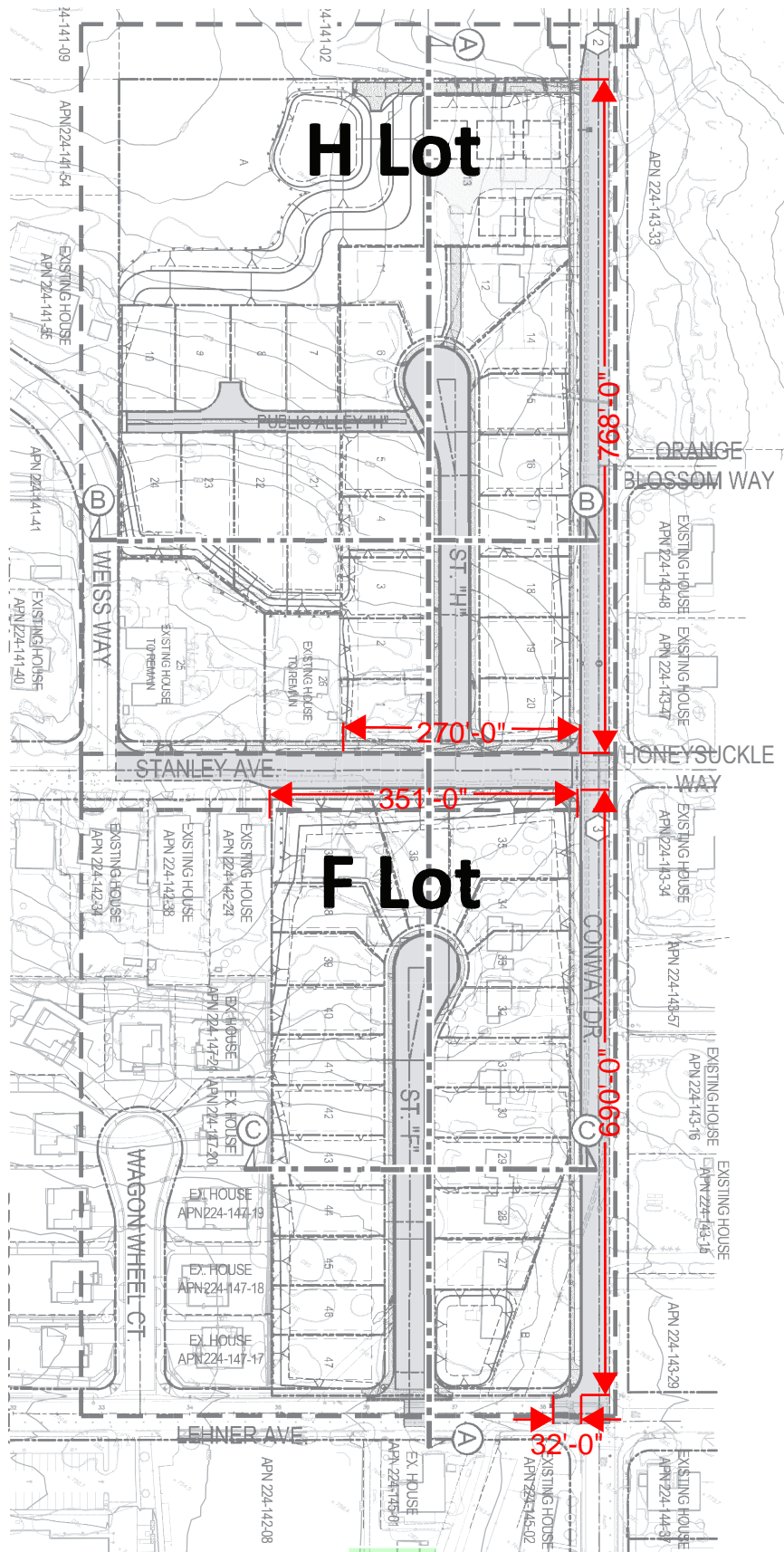
Archived Data

2012 - Series 13 (Scenario ID 720)

Regional Mean = 17.6 VMT per Resident
Regional Mean = 25.9 VMT per Employee

Disclaimer

The maps provided by SANDAG are an interpretation of the Senate Bill 743 Technical Advisory guidelines published by the California Office of Planning and Research and are provided as a resource to the jurisdictions in the San Diego region to use as they see fit. Users of the data should exercise their professional judgment in reviewing, evaluating, and applying VMT



768' + 270' + 351' + 690' + 32' = 2,111'
 (approximate new sidewalk required to be constructed for VMT reduction)



$$\frac{303 \text{ VMT}}{5,280 \text{ feet}} = \frac{X}{2,111 \text{ feet}}$$

$x = 121 \text{ VMT}$

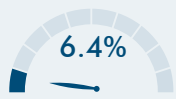
Figure 2-3

Project Site Plan

T-18. Provide Pedestrian Network Improvement



GHG Mitigation Potential



Up to 6.4% of GHG emissions from vehicle travel in the plan/community

Co-Benefits (icon key on pg. 34)



Climate Resilience

Improving pedestrian networks increases accessibility of outdoor spaces, which can provide health benefits and thus improve community resilience. This can also improve connectivity between residents and resources that may be needed in an extreme weather event.

Health and Equity Considerations

Ensure that the improvements also include accessibility features to allow for people of all abilities to use the network safely and conveniently. Ensure that sidewalks connect to nearby community assets, such as schools, retail, and healthcare.

Measure Description

This measure will increase the sidewalk coverage to improve pedestrian access. Providing sidewalks and an enhanced pedestrian network encourages people to walk instead of drive. This mode shift results in a reduction in VMT and GHG emissions.

Subsector

Neighborhood Design

Locational Context

Urban, suburban, rural

Scale of Application

Plan/Community

Implementation Requirements

The GHG reduction of this measure is based on the VMT reduction associated with expansion of sidewalk coverage expansion, which includes not only building of new sidewalks but also improving degraded or substandard sidewalk (e.g., damaged from street tree roots). However, pedestrian network enhancements with non-quantifiable GHG reductions are encouraged to be implemented, as discussed under *Expanded Mitigation Options*.

Cost Considerations

Depending on the improvement, capital and infrastructure costs may be high. However, improvements to the pedestrian network will increase pedestrian activity, which can increase businesses patronage and provide a local economic benefit. The local municipality may achieve cost savings through a reduction of cars on the road leading to lower infrastructure and roadway maintenance costs.

Expanded Mitigation Options

When improving sidewalks, a best practice is to ensure they are contiguous and link externally with existing and planned pedestrian facilities. Barriers to pedestrian access and interconnectivity, such as walls, landscaping buffers, slopes, and unprotected crossings should be minimized. Other best practice features could include high-visibility crosswalks, pedestrian hybrid beacons, and other pedestrian signals, mid-block crossing walks, pedestrian refuge islands, speed tables, bulb-outs (curb extensions), curb ramps, signage, pavement markings, pedestrian-only connections and districts, landscaping, and other improvements to pedestrian safety (see Measure T-35, *Provide Traffic Calming Measures*).





GHG Reduction Formula

$$A = \left(\frac{C}{B} - 1 \right) \times D$$

GHG Calculation Variables

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from household vehicle travel in plan/community	0–6.4	%	calculated
User Inputs				
B	Existing sidewalk length in study area	[]	miles	user input
C	Sidewalk length in study area with measure	[]	miles	user input
Constants, Assumptions, and Available Defaults				
D	Elasticity of household VMT with respect to the ratio of sidewalks-to-streets	-0.05	unitless	Frank et al. 2011

Further explanation of key variables:

- (B and C) – Sidewalk length should be measured on both sides of the street. For example, if one 0.5-mile-long street has full sidewalk coverage, the sidewalk length would be 1.0 mile. If there is only sidewalk on one side of the street, the sidewalk length would be 0.5 mile. The recommended study area is 0.6 mile around the pedestrian network improvement. This represents a 6- to 10-minute walking time.
- (D) – A study found that a 0.05 percent decrease in household vehicle travel occurs for every 1 percent increase in the sidewalk-to-street ratio (Frank et al. 2011; Handy et al. 2014).

GHG Calculation Caps or Maximums

Measure Maximum

(A_{\max}) The percent reduction in GHG emissions (A) is capped at 3.4 percent, which is based on the following assumptions:

- 35.2 percent of vehicle trips are short trips (2 mile or less, average of 1.29 miles) and thus could easily shift to walking (FHWA 2019).
- 64.8 percent of vehicle trips are longer trips that are unlikely to shift to walking (2 miles or more, average of 10.93 miles) (FHWA 2019).
- So $A_{\max} = \frac{35.2\% \times 1.29 \text{ miles}}{64.8\% \times 10.93 \text{ miles}} = 6.4\%$



Subsector Maximum

($\sum A_{\text{max}_{T-18 \text{ through } T-22-C}} \leq 10\%$) This measure is in the Neighborhood Design subsector. This subcategory includes Measures T-18 through T-22-C. The VMT reduction from the combined implementation of all measures within this subsector is capped at 10 percent.

Example GHG Reduction Quantification

The user reduces household VMT by improving the pedestrian network in the study area. In this example, the existing sidewalk length (B) is 9 miles, and the sidewalk length with the measure (C) would be 10 miles. With these conditions, the user would reduce GHG emissions from household VMT within the study area by 0.6 percent.

$$A = \left(\frac{10 \text{ miles}}{9 \text{ miles}} - 1 \right) \times -0.05 = -0.6\%$$

Quantified Co-Benefits



Improved Local Air Quality

The percent reduction in GHG emissions (A) would be the same as the percent reduction in NO_x, CO, NO₂, SO₂, and PM. Reductions in ROG emissions can be calculated by multiplying the percent reduction in GHG emissions (A) by an adjustment factor of 87 percent. See *Adjusting VMT Reductions to Emission Reductions* above for further discussion.



Energy and Fuel Savings

The percent reduction in vehicle fuel consumption would be the same as the percent reduction in GHG emissions (A).



VMT Reductions

The percent reduction in household VMT would be the same as the percent reduction in GHG emissions (A).



Improved Public Health

Users are directed to the Integrated Transport and Health Impact Model (ITHIM) (CARB et al. 2020). The ITHIM can quantify the annual change in health outcomes associated with active transportation, including deaths, years of life lost, years of living with disability, and incidence of community and individual disease.

Sources

- California Air Resources Board (CARB), California Department of Public Health (CDPH), and Nicholas Linesch Legacy Fund. 2020. Integrated Transport and Health Impact Model. Available: <https://skylab.cdph.ca.gov/HealthyMobilityOptionTool-ITHIM/#Home>. Accessed: September 17, 2021.
- Federal Highway Administration (FHWA). 2019. 2017 National Household Travel Survey Popular Vehicle Trip Statistics. Available: <https://nhts.ornl.gov/vehicle-trips>. Accessed: January 2021.



- Frank, L., M. Greenwald, S. Kavage, and A. Devlin. 2011. *An Assessment of Urban Form and Pedestrian and Transit Improvements as an Integrated GHG Reduction Strategy*. WSDOT Research Report WA-RD 765.1, Washington State Department of Transportation. April. Available: www.wsdot.wa.gov/research/reports/fullreports/765.1.pdf. Accessed: January 2021.
- Handy, S., S. Glan-Claudia, and M. Boarnet. 2014. *Impacts of Pedestrian Strategies on Passenger Vehicle Use and Greenhouse Gas Emissions: Policy Brief*. September. Available: https://ww2.arb.ca.gov/sites/default/files/2020-06/Impacts_of_Pedestrian_Strategies_on_Passenger_Vehicle_Use_and_Greenhouse_Gas_Emissions_Policy_Brief.pdf. Accessed: January 2021.

APPENDIX C
PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS –
EXISTING

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Ex AM
 09/22/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	170	160	160	40	320	80	120	190	10	50	270	250
Future Volume (veh/h)	170	160	160	40	320	80	120	190	10	50	270	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	233	219	219	55	438	110	164	260	14	68	370	342
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	729	635	71	850	211	192	1121	60	87	478	413
Arrive On Green	0.15	0.41	0.41	0.04	0.30	0.30	0.11	0.33	0.33	0.05	0.27	0.27
Sat Flow, veh/h	1781	1777	1546	1781	2801	697	1781	3425	183	1781	1777	1536
Grp Volume(v), veh/h	233	219	219	55	276	272	164	134	140	68	370	342
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1721	1781	1777	1831	1781	1777	1536
Q Serve(g_s), s	14.8	9.6	11.2	3.5	14.8	15.1	10.4	6.3	6.4	4.4	22.2	24.2
Cycle Q Clear(g_c), s	14.8	9.6	11.2	3.5	14.8	15.1	10.4	6.3	6.4	4.4	22.2	24.2
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	261	729	635	71	539	522	192	582	600	87	478	413
V/C Ratio(X)	0.89	0.30	0.35	0.78	0.51	0.52	0.86	0.23	0.23	0.78	0.77	0.83
Avail Cap(c_a), veh/h	309	729	635	139	539	522	216	582	600	154	478	413
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	22.9	23.4	54.9	33.1	33.2	50.6	28.2	28.2	54.2	38.9	39.7
Incr Delay (d2), s/veh	21.6	1.1	1.5	6.6	3.5	3.7	22.9	0.9	0.9	5.5	11.6	17.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	4.2	4.3	1.7	6.9	6.8	5.9	2.9	3.0	2.1	11.1	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.9	23.9	24.8	61.5	36.6	36.9	73.5	29.1	29.2	59.7	50.6	56.9
LnGrp LOS	E	C	C	E	D	D	E	C	C	E	D	E
Approach Vol, veh/h		671			603			438			780	
Approach Delay, s/veh		40.2			39.0			45.7			54.1	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	53.3	16.4	37.0	20.9	41.0	9.6	43.8				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	9.0	46.0	14.0	31.0	20.0	35.0	10.0	* 36				
Max Q Clear Time (g_c+I1), s	5.5	13.2	12.4	26.2	16.8	17.1	6.4	8.4				
Green Ext Time (p_c), s	0.0	3.0	0.0	2.0	0.1	3.2	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

Notes

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

Intersection												
Intersection Delay, s/veh	12.7											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕		↵	↕			↕	
Traffic Vol, veh/h	20	90	140	30	270	10	190	10	30	10	10	30
Future Vol, veh/h	20	90	140	30	270	10	190	10	30	10	10	30
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	107	167	36	321	12	226	12	36	12	12	36
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	11.7	12.4	14.8	10.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	0%	25%	0%	100%	18%	0%	100%	90%	20%
Vol Right, %	0%	75%	0%	0%	82%	0%	0%	10%	60%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	40	20	60	170	30	180	100	50
LT Vol	190	0	20	0	0	30	0	0	10
Through Vol	0	10	0	60	30	0	180	90	10
RT Vol	0	30	0	0	140	0	0	10	30
Lane Flow Rate	226	48	24	71	202	36	214	119	60
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.453	0.082	0.048	0.134	0.346	0.07	0.391	0.215	0.117
Departure Headway (Hd)	7.205	6.177	7.254	6.745	6.158	7.071	6.562	6.491	7.1
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	498	576	491	528	579	504	544	550	508
Service Time	4.986	3.958	5.04	4.531	3.943	4.853	4.344	4.273	4.8
HCM Lane V/C Ratio	0.454	0.083	0.049	0.134	0.349	0.071	0.393	0.216	0.118
HCM Control Delay	15.9	9.5	10.4	10.6	12.2	10.4	13.5	11.1	10.7
HCM Lane LOS	C	A	B	B	B	B	B	B	B
HCM 95th-tile Q	2.3	0.3	0.2	0.5	1.5	0.2	1.8	0.8	0.4

Intersection

Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	60	35	35	10	100	10	60	20	20	10	30	150
Future Vol, veh/h	60	35	35	10	100	10	60	20	20	10	30	150
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	45	45	13	130	13	78	26	26	13	39	195
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	9.6	9.5	9.4	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	60%	46%	8%	25%	0%
Vol Thru, %	20%	27%	83%	75%	0%
Vol Right, %	20%	27%	8%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	130	120	40	150
LT Vol	60	60	10	10	0
Through Vol	20	35	100	30	0
RT Vol	20	35	10	0	150
Lane Flow Rate	130	169	156	52	195
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.186	0.233	0.217	0.081	0.258
Departure Headway (Hd)	5.147	4.969	5.021	5.603	4.771
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	691	716	709	635	746
Service Time	3.229	3.045	3.099	3.376	2.542
HCM Lane V/C Ratio	0.188	0.236	0.22	0.082	0.261
HCM Control Delay	9.4	9.6	9.5	8.9	9.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.7	0.9	0.8	0.3	1

Intersection	
Intersection Delay, s/veh	14.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	10	30	121	27	70	20	50	180	10	10	215	10
Future Vol, veh/h	10	30	121	27	70	20	50	180	10	10	215	10
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	38	155	35	90	26	64	231	13	13	276	13
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	12.9	11.1	15.3	16
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	0%	6%	100%	0%	4%
Vol Thru, %	78%	0%	19%	0%	78%	91%
Vol Right, %	0%	100%	75%	0%	22%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	230	10	161	27	90	235
LT Vol	50	0	10	27	0	10
Through Vol	180	0	30	0	70	215
RT Vol	0	10	121	0	20	10
Lane Flow Rate	295	13	206	35	115	301
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.514	0.019	0.361	0.07	0.213	0.523
Departure Headway (Hd)	6.28	5.458	6.293	7.311	6.642	6.248
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	572	652	568	487	537	575
Service Time	4.049	3.227	4.376	5.101	4.431	4.318
HCM Lane V/C Ratio	0.516	0.02	0.363	0.072	0.214	0.523
HCM Control Delay	15.6	8.3	12.9	10.7	11.2	16
HCM Lane LOS	C	A	B	B	B	C
HCM 95th-tile Q	2.9	0.1	1.6	0.2	0.8	3

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	10	10	30	10	10	10	40	120	10	10	70	10
Future Vol, veh/h	10	10	30	10	10	10	40	120	10	10	70	10
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	15	45	15	15	15	61	182	15	15	106	15

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	491	483	134	506	483	210	131	0	0	207	0	0
Stage 1	154	154	-	322	322	-	-	-	-	-	-	-
Stage 2	337	329	-	184	161	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	488	483	915	477	483	830	1454	-	-	1364	-	-
Stage 1	848	770	-	690	651	-	-	-	-	-	-	-
Stage 2	677	646	-	818	765	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	437	445	898	413	445	814	1440	-	-	1351	-	-
Mov Cap-2 Maneuver	437	445	-	413	445	-	-	-	-	-	-	-
Stage 1	800	753	-	651	613	-	-	-	-	-	-	-
Stage 2	611	609	-	745	748	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		12.8		1.8		0.9	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1440	-	-	635	509	1351	-
HCM Lane V/C Ratio	0.042	-	-	0.119	0.089	0.011	-
HCM Control Delay (s)	7.6	0	-	11.4	12.8	7.7	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-

Intersection	
Intersection Delay, s/veh	22.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	6	186	20	129	132	100	4	134	143	175	168	20
Future Vol, veh/h	6	186	20	129	132	100	4	134	143	175	168	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	216	23	150	153	116	5	156	166	203	195	23
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	22.1	23.2	25.9	18.3
HCM LOS	C	C	D	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	3%	49%	0%	100%	0%
Vol Thru, %	0%	48%	88%	51%	0%	0%	89%
Vol Right, %	0%	52%	9%	0%	100%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	277	212	261	100	175	188
LT Vol	4	0	6	129	0	175	0
Through Vol	0	134	186	132	0	0	168
RT Vol	0	143	20	0	100	0	20
Lane Flow Rate	5	322	247	303	116	203	219
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.011	0.691	0.573	0.691	0.233	0.48	0.479
Departure Headway (Hd)	8.614	7.722	8.362	8.191	7.215	8.488	7.893
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	416	467	431	443	498	425	457
Service Time	6.361	5.468	6.413	5.936	4.96	6.238	5.643
HCM Lane V/C Ratio	0.012	0.69	0.573	0.684	0.233	0.478	0.479
HCM Control Delay	11.5	26.1	22.1	27.4	12.2	18.9	17.7
HCM Lane LOS	B	D	C	D	B	C	C
HCM 95th-tile Q	0	5.2	3.5	5.1	0.9	2.5	2.5

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Ex PM
 09/22/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	200	350	100	20	220	40	110	180	40	40	170	140
Future Volume (veh/h)	200	350	100	20	220	40	110	180	40	40	170	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	220	385	110	22	242	44	121	198	44	44	187	154
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	1216	343	31	973	174	148	949	206	56	523	402
Arrive On Green	0.14	0.45	0.45	0.02	0.32	0.32	0.08	0.33	0.33	0.03	0.28	0.28
Sat Flow, veh/h	1781	2721	767	1781	2998	535	1781	2888	626	1781	1885	1448
Grp Volume(v), veh/h	220	250	245	22	142	144	121	120	122	44	176	165
Grp Sat Flow(s),veh/h/ln	1781	1777	1711	1781	1777	1756	1781	1777	1737	1781	1777	1556
Q Serve(g_s), s	13.8	10.3	10.6	1.4	6.7	6.9	7.6	5.5	5.8	2.8	9.0	9.8
Cycle Q Clear(g_c), s	13.8	10.3	10.6	1.4	6.7	6.9	7.6	5.5	5.8	2.8	9.0	9.8
Prop In Lane	1.00		0.45	1.00		0.30	1.00		0.36	1.00		0.93
Lane Grp Cap(c), veh/h	249	794	764	31	577	570	148	584	571	56	493	432
V/C Ratio(X)	0.88	0.31	0.32	0.70	0.25	0.25	0.82	0.21	0.21	0.78	0.36	0.38
Avail Cap(c_a), veh/h	328	794	764	78	577	570	203	584	571	109	493	432
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	20.3	20.4	55.8	28.3	28.4	51.5	27.6	27.7	54.9	33.1	33.3
Incr Delay (d2), s/veh	16.4	1.0	1.1	10.1	1.0	1.1	12.3	0.8	0.9	8.4	2.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	4.5	4.4	0.7	3.0	3.1	3.9	2.5	2.6	1.4	4.2	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	21.3	21.5	65.8	29.3	29.4	63.8	28.4	28.5	63.2	35.1	35.9
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h		715			308			363			385	
Approach Delay, s/veh		34.7			32.0			40.2			38.7	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	57.0	13.5	37.7	20.0	43.0	7.6	43.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	5.0	51.0	13.0	31.0	21.0	35.0	7.0	* 38				
Max Q Clear Time (g_c+I1), s	3.4	12.6	9.6	11.8	15.8	8.9	4.8	7.8				
Green Ext Time (p_c), s	0.0	3.4	0.0	2.0	0.1	1.7	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

Notes

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

Intersection

Intersection Delay, s/veh 11.5

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕		↵	↕			↕	
Traffic Vol, veh/h	30	310	160	20	180	10	110	10	50	10	10	20
Future Vol, veh/h	30	310	160	20	180	10	110	10	50	10	10	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	326	168	21	189	11	116	11	53	11	11	21
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	12	10.7	11.2	10.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	25%
Vol Thru, %	0%	17%	0%	100%	39%	0%	100%	86%	25%
Vol Right, %	0%	83%	0%	0%	61%	0%	0%	14%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	60	30	207	263	20	120	70	40
LT Vol	110	0	30	0	0	20	0	0	10
Through Vol	0	10	0	207	103	0	120	60	10
RT Vol	0	50	0	0	160	0	0	10	20
Lane Flow Rate	116	63	32	218	277	21	126	74	42
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.231	0.107	0.057	0.359	0.424	0.041	0.228	0.131	0.08
Departure Headway (Hd)	7.189	6.105	6.442	5.937	5.507	6.991	6.485	6.384	6.841
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	499	585	556	605	654	512	553	561	522
Service Time	4.943	3.858	4.182	3.677	3.247	4.742	4.236	4.134	4.604
HCM Lane V/C Ratio	0.232	0.108	0.058	0.36	0.424	0.041	0.228	0.132	0.08
HCM Control Delay	12.1	9.6	9.6	12	12.3	10	11.2	10.1	10.2
HCM Lane LOS	B	A	A	B	B	A	B	B	B
HCM 95th-tile Q	0.9	0.4	0.2	1.6	2.1	0.1	0.9	0.4	0.3

Intersection

Intersection Delay, s/veh 10.7

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	185	113	72	10	42	10	31	20	10	10	30	137
Future Vol, veh/h	185	113	72	10	42	10	31	20	10	10	30	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	195	119	76	11	44	11	33	21	11	11	32	144
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	12.2	8.5	9	9
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	51%	50%	16%	25%	0%
Vol Thru, %	33%	31%	68%	75%	0%
Vol Right, %	16%	19%	16%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	370	62	40	137
LT Vol	31	185	10	10	0
Through Vol	20	113	42	30	0
RT Vol	10	72	10	0	137
Lane Flow Rate	64	389	65	42	144
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.096	0.5	0.09	0.068	0.2
Departure Headway (Hd)	5.38	4.623	4.967	5.82	4.986
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	661	775	715	612	715
Service Time	3.459	2.671	3.039	3.586	2.752
HCM Lane V/C Ratio	0.097	0.502	0.091	0.069	0.201
HCM Control Delay	9	12.2	8.5	9	9
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.3	2.8	0.3	0.2	0.7

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	20	110	48	24	50	10	42	166	14	10	179	20
Future Vol, veh/h	20	110	48	24	50	10	42	166	14	10	179	20
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	22	118	52	26	54	11	45	178	15	11	192	22
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	11.6	9.7	11.5	12
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	20%	0%	11%	100%	0%	5%
Vol Thru, %	80%	0%	62%	0%	83%	86%
Vol Right, %	0%	100%	27%	0%	17%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	208	14	178	24	60	209
LT Vol	42	0	20	24	0	10
Through Vol	166	0	110	0	50	179
RT Vol	0	14	48	0	10	20
Lane Flow Rate	224	15	191	26	65	225
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.361	0.021	0.314	0.048	0.109	0.359
Departure Headway (Hd)	5.806	4.996	5.903	6.695	6.07	5.743
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	620	717	609	535	590	627
Service Time	3.536	2.726	3.937	4.434	3.808	3.773
HCM Lane V/C Ratio	0.361	0.021	0.314	0.049	0.11	0.359
HCM Control Delay	11.8	7.8	11.6	9.8	9.6	12
HCM Lane LOS	B	A	B	A	A	B
HCM 95th-tile Q	1.6	0.1	1.3	0.2	0.4	1.6

HCM 6th TWSC
7: Conway Drive & Stanley Avenue

Ex PM
09/22/2021

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	10	40	10	10	10	10	60	10	10	120	10
Future Vol, veh/h	10	10	40	10	10	10	10	60	10	10	120	10
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	13	51	13	13	13	13	77	13	13	154	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	330	323	181	349	323	104	177	0	0	100	0	0
Stage 1	197	197	-	120	120	-	-	-	-	-	-	-
Stage 2	133	126	-	229	203	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	623	595	862	606	595	951	1399	-	-	1493	-	-
Stage 1	805	738	-	884	796	-	-	-	-	-	-	-
Stage 2	870	792	-	774	733	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	584	572	846	541	572	933	1386	-	-	1479	-	-
Mov Cap-2 Maneuver	584	572	-	541	572	-	-	-	-	-	-	-
Stage 1	790	723	-	867	780	-	-	-	-	-	-	-
Stage 2	828	776	-	700	718	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	11	1	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1386	-	-	733	643	1479	-
HCM Lane V/C Ratio	0.009	-	-	0.105	0.06	0.009	-
HCM Control Delay (s)	7.6	0	-	10.5	11	7.5	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

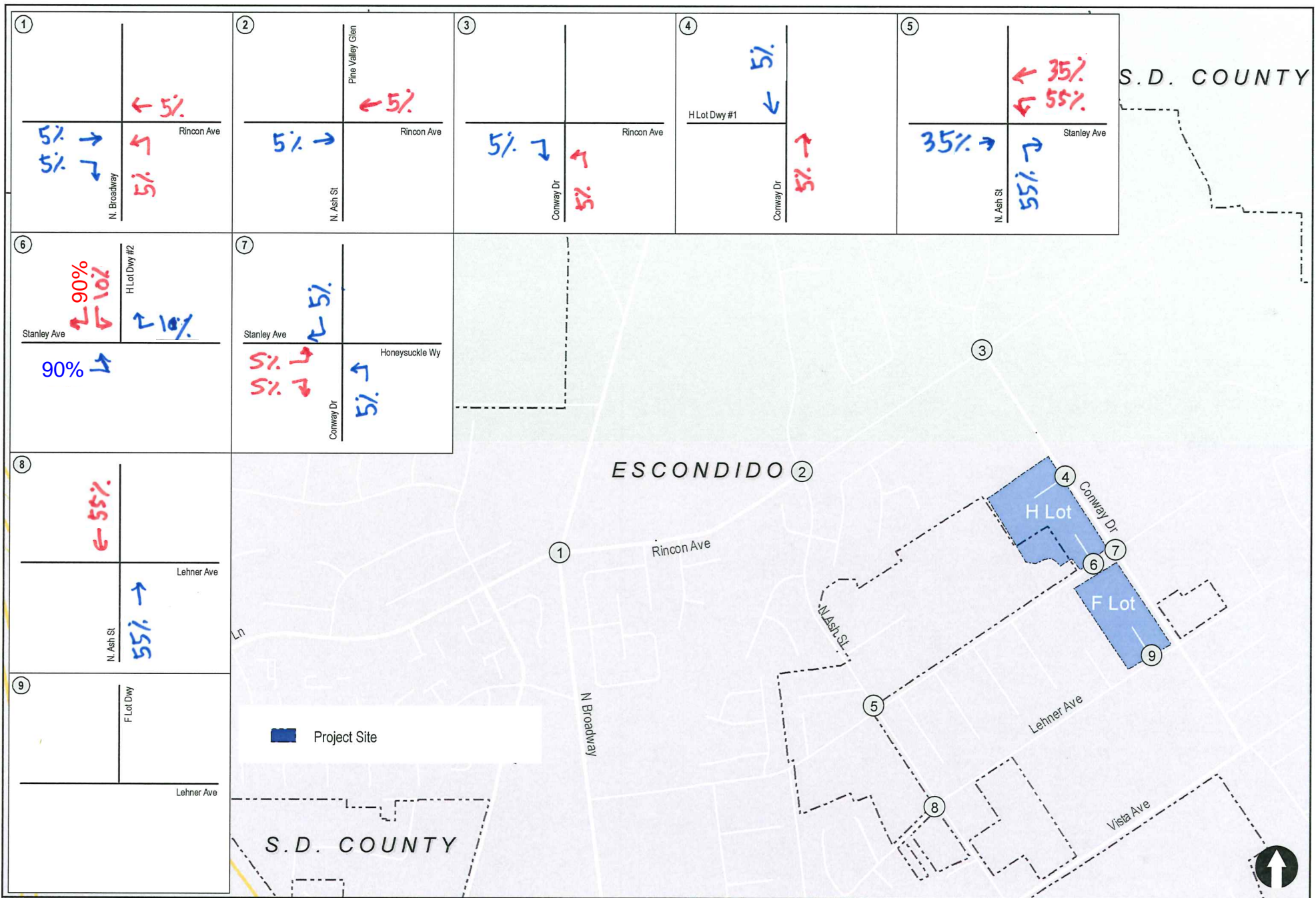
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	7	53	3	60	50	40	2	175	45	32	208	11
Future Vol, veh/h	7	53	3	60	50	40	2	175	45	32	208	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	65	4	74	62	49	2	216	56	40	257	14
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

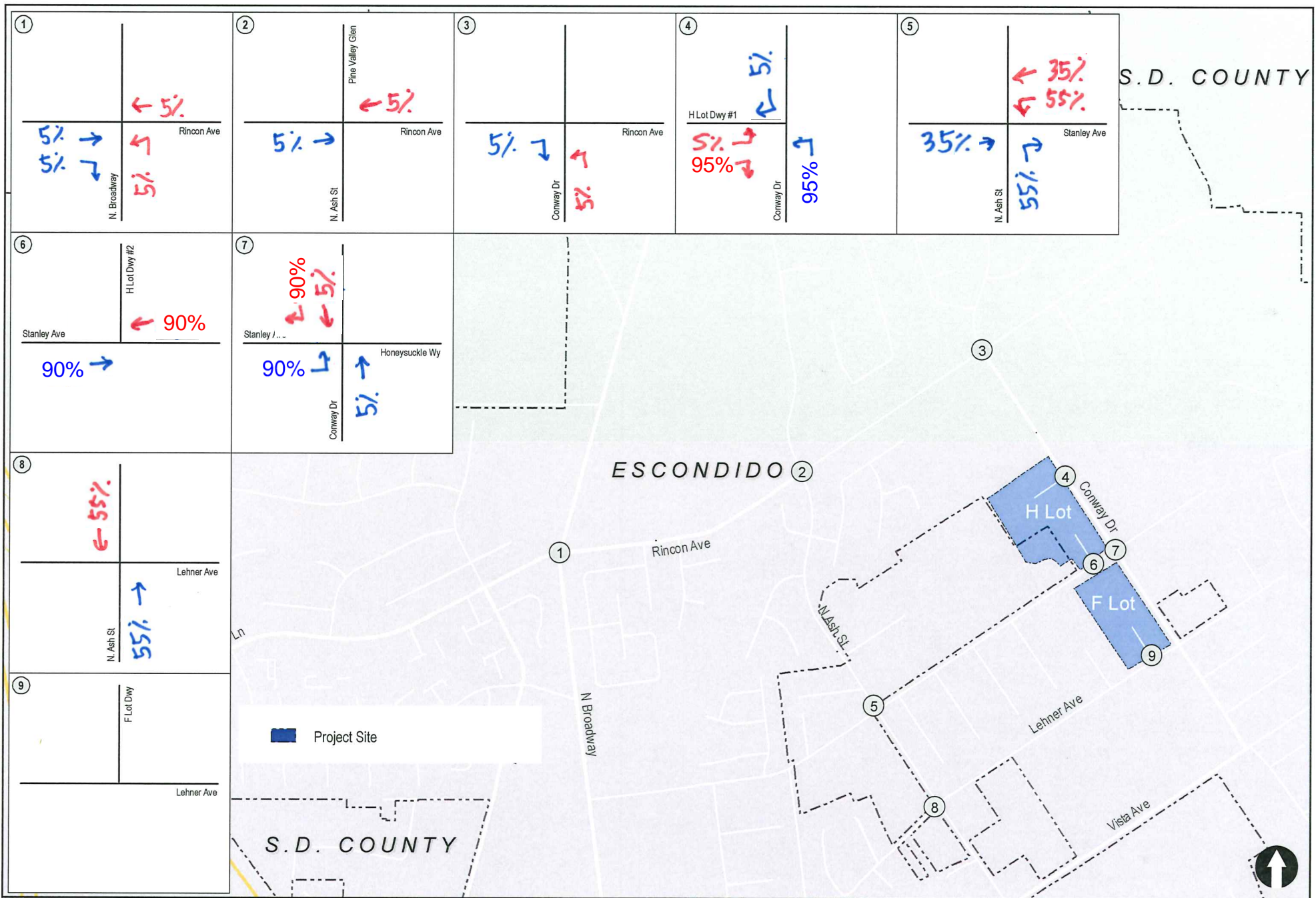
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	10.6	10.7	12.5	12.2
HCM LOS	B	B	B	B

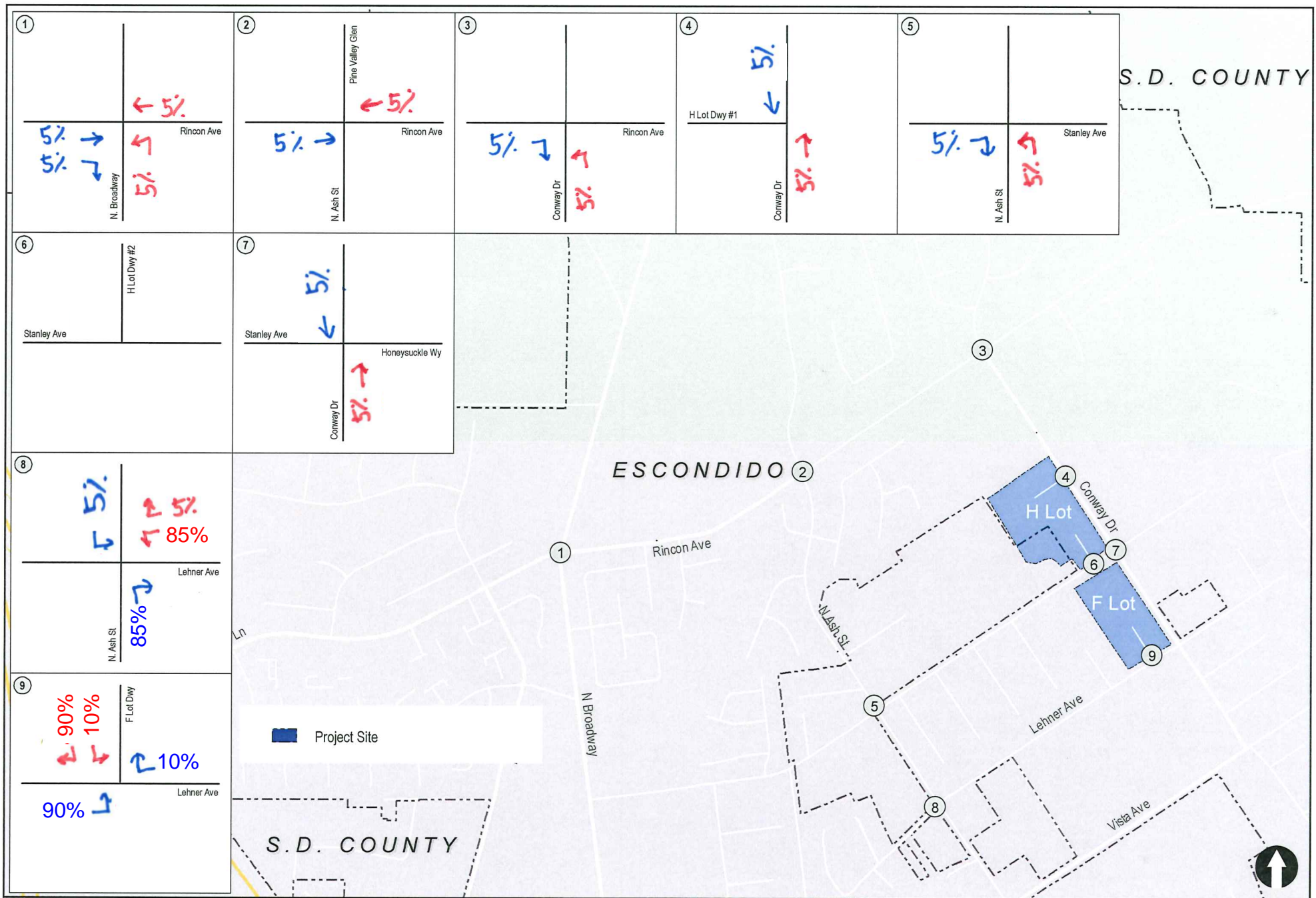
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	11%	55%	0%	100%	0%
Vol Thru, %	0%	80%	84%	45%	0%	0%	95%
Vol Right, %	0%	20%	5%	0%	100%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	220	63	110	40	32	219
LT Vol	2	0	7	60	0	32	0
Through Vol	0	175	53	50	0	0	208
RT Vol	0	45	3	0	40	0	11
Lane Flow Rate	2	272	78	136	49	40	270
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.004	0.426	0.141	0.247	0.076	0.068	0.428
Departure Headway (Hd)	6.291	5.64	6.518	6.555	5.57	6.236	5.695
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	569	638	550	547	642	575	633
Service Time	4.023	3.372	4.565	4.296	3.31	3.967	3.426
HCM Lane V/C Ratio	0.004	0.426	0.142	0.249	0.076	0.07	0.427
HCM Control Delay	9	12.5	10.6	11.4	8.8	9.4	12.6
HCM Lane LOS	A	B	B	B	A	A	B
HCM 95th-tile Q	0	2.1	0.5	1	0.2	0.2	2.1

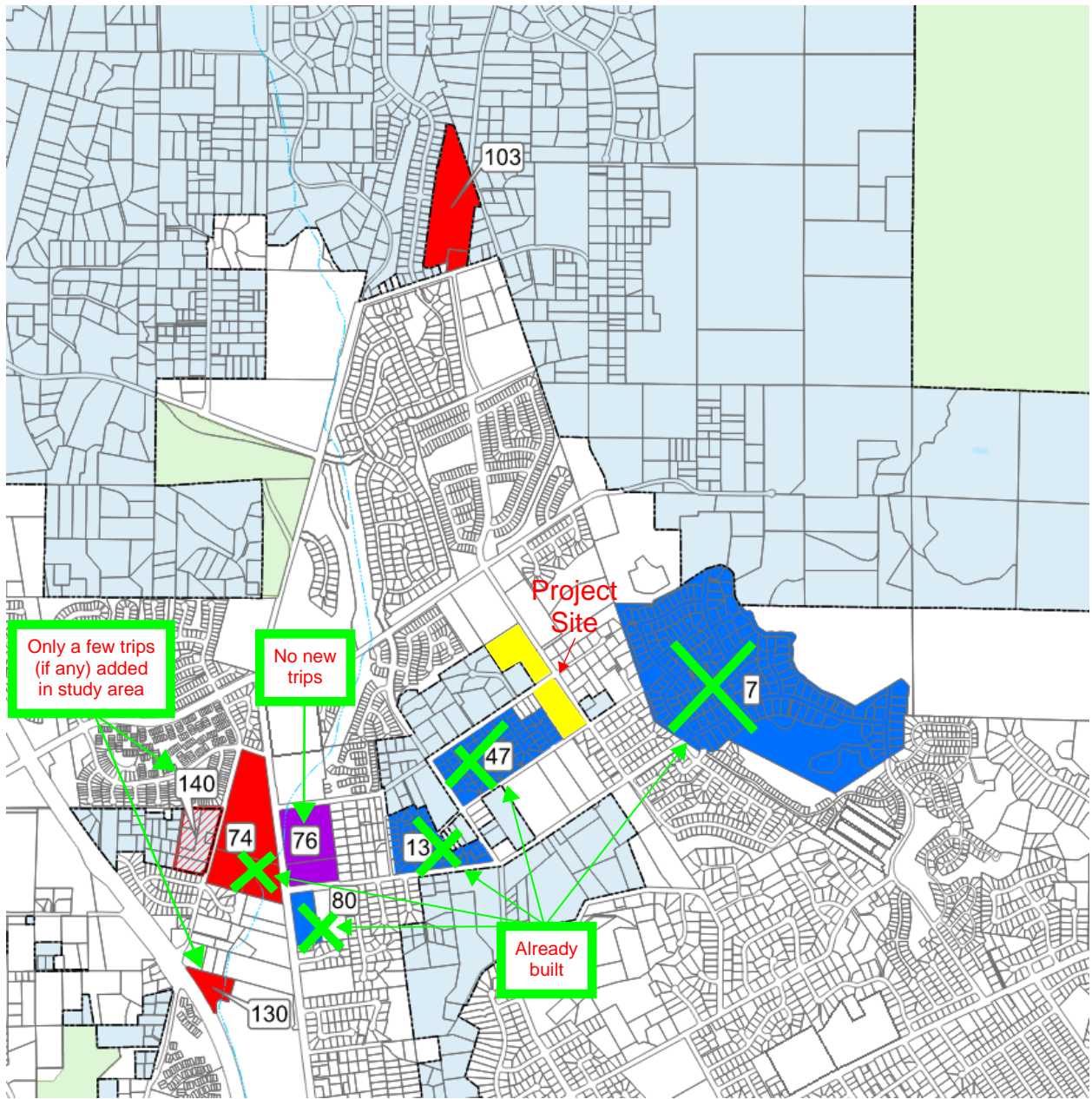
APPENDIX D

INDIVIDUAL PROJECT DISTRIBUTIONS AND CUMULATIVE PROJECT LOCATIONS









Major Development Project Processing

Aug-20

MAP LEGEND NUMBER	PROJECT	PROJECT DESCRIPTION	ENTITLEMENT STATUS
1	ADM 15-0106 - ERTC Medical Office (EAST)	74,400 SF Medical Office	Approved 11-3-15. Complete.
2	PHG 14-0035 - Westminster Student Housing	72 student housing units on 18.07 ac. Campus	Completed.
3	ADM 13-0127 - Centerpointe	43,681 SF grocery store and 3,200 SF drive-through	Approved 12-9-15. Completed.
4	PHG 14-0030 - Emmanuel Faith	Phased expansion of campus to add 191,813 SF on 17.6 ac. site	Under construction.
5	SUB 13-0008 - 15th	4 SFR lots on 0.95 ac.	Approved.
6	SUB 15-0002 - Latitude II	112 condominium units on 3.44 ac.	CC approved 8-19-15. Complete.
7	Tract 932 - Hidden Valley Ranch	179 SFR lots on 111.54 ac.	Under construction.
8	PHG 15-0010 - EDI CUP	Expansion of Materials Recovery Facility	Phase 1 and 3 approved 8-25-15 and completed. Phase 2 and 4 planning in review. See no. 124.
9	PHG 14-0032 - Ford/Hyundai dealership	2 new showrooms + wash/detail building	Complete. Hyundai componet deleted.
10	PHG 14-0020 - Veterans Village	48 new units (54 total) + 1,500 SF commercial on 1.8 ac.	Under construction. Near completion.
11	SUB 13-0002 - Oak Creek "KB Homes"	65 SFR lots on 41.39 ac.	Approved. LAFCO approved annexation 10/05/15.
12	SUB 13-0007 - Amanda Estates	21 SFR lots on 11.2 ac.	Approved. LAFCO approved annexation on 8/3/15.
13	SUB 14-0002 - Zenner "KB Homes"	40 SFR lots on 13.97 ac.	Completed.
14	PHG 14-0022 - La Terraza Office Building/Parking Lot	36,614 SF office	Approved. Grading and landscape plans approved. Permit expired.
15	TPM 2006-08 - E. Mission	3 SFR lots on 0.88 ac.	Approved.
16	Tract 877 - Bernardo	13 SFR lots on 0.9 ac.	Completed.
17	Tract 848 - Idaho Ave	9 SFR lots on 3.55 ac.	Approved. Final map in review.
18	2007-18-PD - Springhill Suites (La Terraza Hotel)	105-room hotel	Completed.
19	SUB 08-0030 - Reed Rd	4 SFR lots on 14.37 ac.	Approved - building and grading permits in review.
20	TPM 2004-16 - Tulip	3 SFR on 1.03 ac.	Approved.
21	Tract 951 - Jacks Creek	12 SFR lots on 3.31 ac.	Approved. Map Recorded, building plans in review
22	SUB 13-0005 - El Norte	6 SFR lots on 1.15 ac.	Approved.
23	SUB 09-0005 - 1221 N. Gamble St.	3 SFR lots on 0.64 ac.	Approved.
24	Tract 934 - 1207 N. Gamble St.	5 SFR lots on 1.19 ac.	Final Map recorded.
25	SUB 15-0019 - Safari Highlands	Specific Plan for 550 SFR lots on 1,100 ac.	Submitted; under review.

28	PHG 15-0026 - Westfield Theater	Multi-plex theater	BEZ- CC approved 11-4-15.
29	Escondido Country Club - The Villages	392 SFR, recreational amenities, and urban farm	Approved on 11-15-17.
30	SUB 15-0002 - Wohlford, 661 Bear Valley Pkwy	55 SFR lots on 40.9 ac.	Under construction
31	SUB 14-0018 - Kaen	65 townhomes on 2.29 ac.	Completed.
33	PHG 15-0009 - Solutions for Change Housing	33 affordable units & 1,120 SF commercial	PC approved 10-13-15. Completed.
36	Tract 933/TM SUB14-0010 - Moser	16 SFR lots on 6.4 ac. (revised submittal)	Tentative Map Expired. See no. 127.
37	Tract 878 - Lion Valley	11 SFR lots on 2.3 ac.	Tentative Map extension approved. DA approved to extend map 18 months.
38	Tract 890 - Midway Dr. SUB15-0010.	10 SFR lots on 2.3 ac.	Tentative Map extension requested. Awaiting revisions.
43	TM SUB 13-0001 Cranston	6 SFR lots on 7.41 ac.	Approved - pursue zone chg only.
44			
45	Tract 895 - Boyle. SUB15-0030	8 SFR lots on 5.42 ac.	Tentative Map extension requested. Approved.
46	PHG 15-0016 Wismer - Felicita Hotels	140-unit hotel, 80-unit extended stay hotel, 120-bed assisted living facility and gas station on 6.9 ac.	Project expired/withdrawn.
47	Pradera - Tracts 889 & 894, SUB 13-0003, SUB 13-0010, SUB 13-0011	70 SFR lots on 21.3 ac.	Under construction.
49	Tract 956 - Silva	12 SFR lots on 4.19 ac.	Project expired/withdrawn.
50	SUB 09-0002 Harmony Grove Specific Plan (Dentt/Ray)	Industrial subdivision	In review.
51			
52	Del Prado- North & South (Woody's site); SUB 15-0023 & SUB15-0022	Mixed-use residential - 113 units	Approved. Improvement plans and final submitted for review.
53			
56	Sager Ranch Specific Plan & Annexation	Residential subdivision and density transfer	Not yet submitted. Contract Planner assigned. Anticipated in early 2018.
57	Integral Communities/Lyon Living (SUB 16-0001)	Mixed-use residential - 126 units	Approved. 10-12-16. Complete.
58			
59			
60			
61	Self-storage facility (220 W. Mission)	Self Storage Units	Copmplete.
62	LaCaze (Grand Ave)(PHG 17-0019)	Mixed-use	Building and grading plans in review.
63	TM 220 S. Citrus (SUB 17-0013)	8 SFR lots	Approved.
64	ADM 15-0121 (Valley/Ivy)	Mixed-use 2,378 SF retail + 20 apartment units	Expired. See entry 145.

65	PHG 12-0015 - Talk of the Town	4,156 SF Restaurant and Carwash	Completed. Superseded by no. 108
66	2007-11-SP/PD/DA - City Plaza	9,356 SF commercial + 56 residential units	Completed.
67	SUB13-0009 - Zak/2412 S. Escondido Blvd.	76 condominium units on 2.53 ac.	Completed.
68			
69	PHG15-0018 - HARRF Collections Facility	3 new maintenance buildings (14,875 SF)	Approved.
70	ADM 14-0013 - Trafalgar Square	Shopping center renovation + new grocery store	Completed.
71	ADM13-0176 - Taco Bell	New regional office and restaurant renovation	Completed.
72	PHG15-0002 - Escondido Sports/Banquet Facility	Convert gym to banquet hall	Completed.
73	PHG14-0019 - Redwood Terrace	Convert daycare facility to 24-hour memory care center	Completed.
74	PHG13-0010 - Meadowbrook	66 unit senior apartments	Approved; building permits issued.
75	PHG15-0011 - Champine Manor, Tobacco Rd.	Expand existing residential care facility from 6 to 12 beds	Project expired/withdrawn.
76	PHG15-0001 - Calvin Christian	New 15,515SF auditorium	Completed.
77	PHG10-0023 - St. Mary's Parish Center	New 18,400 SF parish center	Completed.
78	ADM14-0043 - 130 N. Hale - Southland Paving	3,509 SF office, 1,717 wash bay & 6,991 maintenance shop	Approved. Phase 1 completed.
79	TPM 2003-07 - W. Lincoln	4 units on 0.45 ac.	Approved.
80	PHG 14-0021 - United Reformed Church	New 12,243 SF sanctuary & 5,250 SF classroom building	Approved. Under construction.
81			
82	TPM 2006-06 Farr Ave	4 SFR lots on 0.93 ac.	Approved - no recent action.
83	SUB 15-0005 - Birch	3 SFR lots on 0.95 ac.	Substantial conformance submitted. In review.
84	Tract 900 - Self storage PD	4 SFR lots on 1.38 ac. & 1 commercial lot on 1.82 ac.	TM approved and recorded.
85	PHG 16-0020 - Self Realization Fellowship Expansion		Approved 2-13-18.
87	ENV 13-0005 - Lake Wohlford Dam Reconstruction	Dam reconstruction	DEIR underway.
88	Family Dollar ADM18-0178	Convert building to new retail store (14,000 SF)	Under construction.
89			
91	PHG 16-0012 Innovative Industrial	210,000 SF Industrial	Complete.
92	ADM 16-0101 Office Condos		Approved.
93	PHG 15-0041 OAAI	Mini-Market expansion	Approved. Expired building permit.
94	PHG 16-0017 Starbucks	2,200 SF drive through	Completed.
95			
96	ADM 16-0138 - Apartments	10 units above parking	Submitted; under review.
97	PHG 15-0013	New MBH space @ Casa Grande	Denied at Planning Commission
98	PHG 15-0039 - Chalice Unitarian Universalist	Congregating expansion	Completed.

99	Touchstone - Aspire	6 story, 106 new units above 5,000 SF of commercial	In review.
100	SUB 17-0001 Centre City Shopping Center	16,000 SF of commercial with car wash and drive-thrus	Project complete.
101			
102	PHG 17-0016 Home Depot MDP Modification	Outdoor storage/display	Approved 2-27-18
103	SUB 17-0007 North Avenue Estates	34 homes	Approved. Building and grading plans in review.
104	Touchstone - Ivy	4 story, 95 new units	In review.
105	Touchstone - Parking Garage	New multi-level parking garage	Withdrawn.
106	PHG 17-0028 Quince Senior Housing	145 unit affordable senior housing	Approved.
107	PPH Redevelopment. SUB18-0011.	424 units.	Under review.
108			
109	SUB 18-0005 Nutmeg residences	137 townhomes	Approved.
110	PHG 17-0014 Starbucks	1,900 SF and drive through	Completed.
111	ADM 18-0051 ERTC Crisis Center	6,700 SF Medical Office	Under construction.
112	ADM 17-0127 ERTC Rehab Center	56,000 SF Medical Office	Under construction.
113	ADM 18-0047 Superior Ready Mix	20,000 SF Office	Under construction.
114	ADM 18-0039 Cal Bank & Trust	5,000 SF Bank	Approved. Under construction.
115	PHG 18-0012 Blue Night Hall	4,900 SF expansion	Withdrawn.
116	2525 Reed Road	Care Facility on 4.24 acres	In review.
117	510 W. 2nd. ADM 18-0126 Mixed Use	12,000 SF with residential (5 units)	Approved.
118	209 N. Tulip. SUB18-0017.	4-Lot TPM	Approved.
119	340 Waverly Place. ADM 18-0037	3,700 SF 4-unit townhomes	Withdrawn.
120	ADM 17-0144	4,200 SF Retail building	Completed.
121	PHG 17-0005 Ritz/Grand	Theater refurbishment and 10,000 SF new office and studio space	Under construction.
122			
123		Shell car-wash expansion	Completed.
124	ADM 18-0168, EDI. 1044 W. Mission	Modification in anaerobic digester	Approved. Under construction.
125	ADM 18-0004, 658 N. Grape.	Adding 3 units, R-3-18	In review.
126	PHG 18-0050, 1906 E. Valley	1100 SF drive-through	Approved.
127	SUB 18-0007, 1361 Valle Lindo	TPM og 6.64 acres	Approved.
128	ADM 18-0003, 316 E. Pennsylvania	Mixed use, 1 residential unit	Approved.
129	ADM 18-0230, 715 E. Washington	Adding 2 units	Approved.
130	PHG 17-0025, 1802 N. Centre City Parkway	96-bed residential care facility	Approved.
131	PHG 18-0021, 555 W. Grand	32 Condo units and mixed use	Approved.
132	TR 920 2355 E. Lincoln Avenue	98 SFR on 74 acres "Henry Ranch"	TM approved. Under construction.
133	PHG 19-0003 1809 Centre City Parkway	Drive-through CUP "Better Buzz"	Completed.
134	SUB 15-0025, 701 San Pasqual Valley Road	18-lot TM and PD on 7 acres	In review.
135	SUB 20-0002, Habitat for Humanity	10 condos at 245 E. El Norte	In review.
136	SUB20-0007, Nutmeg homes south portion	97 units	In review.
137	ADM 19-0092, 1860 S. Escondido Vermont Apts.	44 apartments	In review.
138	ADM 20-0085, 322 S. Escondido	172 units	In review.
139	ADM 20-0011, 118 S. Orange	Add 3 units	In review.
140	PHG 20-0032	North Iris Annexation, 75 units	In review.
141	Apollo Assisted Living	residential care facility	In review.
142	Solaris Business Park, 657 N. Country Club Lane	Industrial and medical office annexation	In review.
143	ADM 17-0217, 350 W. 10th Avenue	8 unit apartment complex	Approved.
144	PHG 20-0036, 829 S. Escondido Blvd.	70 residential units	In review.
145	ADM 20-0070, 337 E. Valley Pkwy	50 unit affordable housing	In review.
146	ADM 20-0136 664 N. Fig Street	15 apartment buildings	In review.
147	PHG 19-0058, 1280 W. Valley Parkway	Drive-through CUP for Raising Canes	Approved.

148	ADM 19-0004, 990 N. Broadway	Toyota used car sales improvements	Approved. In construction.
149	ADM 15-0133, 2855 Progress Place	Industrial building expansion	Completed.
150	ADM 19-0043 1220 W. Washington	commercial store expansion.	Approved.

APPENDIX E
PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS –
EXISTING + PROJECT

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Ex + P AM
 07/26/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	161	160	40	322	80	121	190	10	50	270	250
Future Volume (veh/h)	170	161	160	40	322	80	121	190	10	50	270	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	233	221	219	55	441	110	166	260	14	68	370	342
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	728	634	71	850	210	194	1124	60	87	477	412
Arrive On Green	0.15	0.41	0.41	0.04	0.30	0.30	0.11	0.33	0.33	0.05	0.27	0.27
Sat Flow, veh/h	1781	1777	1546	1781	2805	693	1781	3425	183	1781	1777	1536
Grp Volume(v), veh/h	233	221	219	55	278	273	166	134	140	68	370	342
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1721	1781	1777	1831	1781	1777	1536
Q Serve(g_s), s	14.8	9.7	11.2	3.5	14.9	15.2	10.6	6.3	6.4	4.4	22.2	24.2
Cycle Q Clear(g_c), s	14.8	9.7	11.2	3.5	14.9	15.2	10.6	6.3	6.4	4.4	22.2	24.2
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	261	728	634	71	539	522	194	583	601	87	477	412
V/C Ratio(X)	0.89	0.30	0.35	0.78	0.52	0.52	0.86	0.23	0.23	0.78	0.78	0.83
Avail Cap(c_a), veh/h	308	728	634	139	539	522	216	583	601	154	477	412
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	23.0	23.4	54.9	33.2	33.3	50.6	28.2	28.2	54.3	39.0	39.8
Incr Delay (d2), s/veh	21.7	1.1	1.5	6.6	3.5	3.7	23.5	0.9	0.9	5.5	11.7	17.3
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	8.1	4.3	4.4	1.7	6.9	6.9	6.0	2.9	3.0	2.1	11.2	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.0	24.0	24.9	61.6	36.7	37.1	74.1	29.1	29.1	59.8	50.7	57.1
LnGrp LOS	E	C	C	E	D	D	E	C	C	E	D	E
Approach Vol, veh/h		673			606			440			780	
Approach Delay, s/veh		40.2			39.1			46.1			54.3	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	53.3	16.5	37.0	20.9	41.0	9.7	43.9				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	9.0	46.0	14.0	31.0	20.0	35.0	10.0	* 36				
Max Q Clear Time (g_c+I1), s	5.5	13.2	12.6	26.2	16.8	17.2	6.4	8.4				
Green Ext Time (p_c), s	0.0	3.0	0.0	2.0	0.1	3.2	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	45.4
HCM 6th LOS	D

Notes

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

Intersection												
Intersection Delay, s/veh	12.8											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕		↵	↕			↕	
Traffic Vol, veh/h	20	91	140	30	272	10	190	10	30	10	10	30
Future Vol, veh/h	20	91	140	30	272	10	190	10	30	10	10	30
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	108	167	36	324	12	226	12	36	12	12	36
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	11.7	12.5	14.8	10.8
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	0%	25%	0%	100%	18%	0%	100%	90%	20%
Vol Right, %	0%	75%	0%	0%	82%	0%	0%	10%	60%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	40	20	61	170	30	181	101	50
LT Vol	190	0	20	0	0	30	0	0	10
Through Vol	0	10	0	61	30	0	181	91	10
RT Vol	0	30	0	0	140	0	0	10	30
Lane Flow Rate	226	48	24	72	203	36	216	120	60
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.453	0.082	0.048	0.135	0.347	0.07	0.394	0.216	0.118
Departure Headway (Hd)	7.215	6.188	7.261	6.752	6.166	7.075	6.567	6.496	7.109
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	498	575	490	527	578	504	544	549	507
Service Time	4.996	3.968	5.048	4.538	3.952	4.858	4.349	4.278	4.809
HCM Lane V/C Ratio	0.454	0.083	0.049	0.137	0.351	0.071	0.397	0.219	0.118
HCM Control Delay	15.9	9.5	10.4	10.6	12.2	10.4	13.6	11.1	10.8
HCM Lane LOS	C	A	B	B	B	B	B	B	B
HCM 95th-tile Q	2.3	0.3	0.2	0.5	1.5	0.2	1.9	0.8	0.4

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	60	35	36	10	100	10	62	20	20	10	30	150
Future Vol, veh/h	60	35	36	10	100	10	62	20	20	10	30	150
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	45	47	13	130	13	81	26	26	13	39	195
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	9.6	9.5	9.5	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	61%	46%	8%	25%	0%
Vol Thru, %	20%	27%	83%	75%	0%
Vol Right, %	20%	27%	8%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	131	120	40	150
LT Vol	62	60	10	10	0
Through Vol	20	35	100	30	0
RT Vol	20	36	10	0	150
Lane Flow Rate	132	170	156	52	195
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.19	0.235	0.218	0.081	0.258
Departure Headway (Hd)	5.153	4.972	5.03	5.609	4.776
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	689	716	708	634	744
Service Time	3.239	3.049	3.109	3.385	2.552
HCM Lane V/C Ratio	0.192	0.237	0.22	0.082	0.262
HCM Control Delay	9.5	9.6	9.5	8.9	9.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.7	0.9	0.8	0.3	1

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	2	0	142	91	0
Future Vol, veh/h	0	2	0	142	91	0
Conflicting Peds, #/hr	10	10	10	0	0	10
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	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	0	215	138	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	373	158	148	0	-	0
Stage 1	148	-	-	-	-	-
Stage 2	225	-	-	-	-	-
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	628	887	1434	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	615	870	1420	-	-	-
Mov Cap-2 Maneuver	615	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	804	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1420	-	870	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	0	-	9.2	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	10	31	121	35	75	20	50	180	13	10	215	10
Future Vol, veh/h	10	31	121	35	75	20	50	180	13	10	215	10
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	40	155	45	96	26	64	231	17	13	276	13
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	13.1	11.3	15.5	16.4
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	0%	6%	100%	0%	4%
Vol Thru, %	78%	0%	19%	0%	79%	91%
Vol Right, %	0%	100%	75%	0%	21%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	230	13	162	35	95	235
LT Vol	50	0	10	35	0	10
Through Vol	180	0	31	0	75	215
RT Vol	0	13	121	0	20	10
Lane Flow Rate	295	17	208	45	122	301
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.521	0.026	0.367	0.092	0.226	0.529
Departure Headway (Hd)	6.355	5.533	6.362	7.344	6.683	6.325
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	563	642	561	485	532	566
Service Time	4.133	3.31	4.455	5.141	4.48	4.406
HCM Lane V/C Ratio	0.524	0.026	0.371	0.093	0.229	0.532
HCM Control Delay	15.9	8.5	13.1	10.9	11.4	16.4
HCM Lane LOS	C	A	B	B	B	C
HCM 95th-tile Q	3	0.1	1.7	0.3	0.9	3.1

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	
Traffic Vol, veh/h	4	50	62	1	1	11
Future Vol, veh/h	4	50	62	1	1	11
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	76	94	2	2	17

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	106	0	-	0	203
Stage 1	-	-	-	-	105
Stage 2	-	-	-	-	98
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1485	-	-	-	786
Stage 1	-	-	-	-	919
Stage 2	-	-	-	-	926
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1471	-	-	-	767
Mov Cap-2 Maneuver	-	-	-	-	767
Stage 1	-	-	-	-	906
Stage 2	-	-	-	-	917

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1471	-	-	-	904
HCM Lane V/C Ratio	0.004	-	-	-	0.02
HCM Control Delay (s)	7.5	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 6th TWSC
7: Conway Drive & Stanley Avenue

Ex + P AM
07/26/2022

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	11	10	30	10	10	10	40	121	10	10	70	13
Future Vol, veh/h	11	10	30	10	10	10	40	121	10	10	70	13
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	15	45	15	15	15	61	183	15	15	106	20

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	494	486	136	509	489	211	136	0	0	208	0	0
Stage 1	156	156	-	323	323	-	-	-	-	-	-	-
Stage 2	338	330	-	186	166	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	486	481	913	475	480	829	1448	-	-	1363	-	-
Stage 1	846	769	-	689	650	-	-	-	-	-	-	-
Stage 2	676	646	-	816	761	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	435	443	896	411	443	813	1434	-	-	1350	-	-
Mov Cap-2 Maneuver	435	443	-	411	443	-	-	-	-	-	-	-
Stage 1	798	752	-	650	612	-	-	-	-	-	-	-
Stage 2	610	609	-	743	744	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	12.8	1.8	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1434	-	-	627	507	1350	-	-
HCM Lane V/C Ratio	0.042	-	-	0.123	0.09	0.011	-	-
HCM Control Delay (s)	7.6	0	-	11.5	12.8	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	23.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	6	186	20	136	132	100	4	137	146	175	176	20
Future Vol, veh/h	6	186	20	136	132	100	4	137	146	175	176	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	216	23	158	153	116	5	159	170	203	205	23
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	22.7	24.9	27.7	18.9
HCM LOS	C	C	D	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	3%	51%	0%	100%	0%
Vol Thru, %	0%	48%	88%	49%	0%	0%	90%
Vol Right, %	0%	52%	9%	0%	100%	0%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	283	212	268	100	175	196
LT Vol	4	0	6	136	0	175	0
Through Vol	0	137	186	132	0	0	176
RT Vol	0	146	20	0	100	0	20
Lane Flow Rate	5	329	247	312	116	203	228
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.011	0.714	0.581	0.718	0.236	0.485	0.506
Departure Headway (Hd)	8.707	7.814	8.492	8.289	7.305	8.587	7.994
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	411	464	424	436	492	419	451
Service Time	6.456	5.562	6.549	6.035	5.051	6.339	5.746
HCM Lane V/C Ratio	0.012	0.709	0.583	0.716	0.236	0.484	0.506
HCM Control Delay	11.6	27.9	22.7	29.6	12.3	19.2	18.7
HCM Lane LOS	B	D	C	D	B	C	C
HCM 95th-tile Q	0	5.6	3.6	5.6	0.9	2.6	2.8

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	3	504	361	0	1	7
Future Vol, veh/h	3	504	361	0	1	7
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	586	420	0	1	8






















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	430	0	-	0	1032 440
Stage 1	-	-	-	-	430 -
Stage 2	-	-	-	-	602 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1129	-	-	-	258 617
Stage 1	-	-	-	-	656 -
Stage 2	-	-	-	-	547 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1118	-	-	-	252 605
Mov Cap-2 Maneuver	-	-	-	-	252 -
Stage 1	-	-	-	-	647 -
Stage 2	-	-	-	-	542 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1118	-	-	-	515
HCM Lane V/C Ratio	0.003	-	-	-	0.018
HCM Control Delay (s)	8.2	0	-	-	12.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Ex + P PM
 07/26/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	352	102	20	220	40	110	180	40	40	170	140
Future Volume (veh/h)	200	352	102	20	220	40	110	180	40	40	170	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	220	387	112	22	242	44	121	198	44	44	187	154
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	1212	346	31	973	174	148	949	206	56	523	402
Arrive On Green	0.14	0.45	0.45	0.02	0.32	0.32	0.08	0.33	0.33	0.03	0.28	0.28
Sat Flow, veh/h	1781	2712	774	1781	2998	535	1781	2888	626	1781	1885	1448
Grp Volume(v), veh/h	220	252	247	22	142	144	121	120	122	44	176	165
Grp Sat Flow(s),veh/h/ln	1781	1777	1709	1781	1777	1756	1781	1777	1737	1781	1777	1556
Q Serve(g_s), s	13.8	10.4	10.7	1.4	6.7	6.9	7.6	5.5	5.8	2.8	9.0	9.8
Cycle Q Clear(g_c), s	13.8	10.4	10.7	1.4	6.7	6.9	7.6	5.5	5.8	2.8	9.0	9.8
Prop In Lane	1.00		0.45	1.00		0.30	1.00		0.36	1.00		0.93
Lane Grp Cap(c), veh/h	249	794	764	31	577	570	148	584	571	56	493	432
V/C Ratio(X)	0.88	0.32	0.32	0.70	0.25	0.25	0.82	0.21	0.21	0.78	0.36	0.38
Avail Cap(c_a), veh/h	328	794	764	78	577	570	203	584	571	109	493	432
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	20.3	20.4	55.8	28.3	28.4	51.5	27.6	27.7	54.9	33.1	33.3
Incr Delay (d2), s/veh	16.4	1.0	1.1	10.1	1.0	1.1	12.3	0.8	0.9	8.4	2.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	4.5	4.5	0.7	3.0	3.1	3.9	2.5	2.6	1.4	4.2	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	21.4	21.5	65.8	29.3	29.4	63.8	28.4	28.5	63.2	35.1	35.9
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h		719			308			363			385	
Approach Delay, s/veh		34.6			32.0			40.2			38.7	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	57.0	13.5	37.7	20.0	43.0	7.6	43.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	5.0	51.0	13.0	31.0	21.0	35.0	7.0	* 38				
Max Q Clear Time (g_c+I1), s	3.4	12.7	9.6	11.8	15.8	8.9	4.8	7.8				
Green Ext Time (p_c), s	0.0	3.4	0.0	2.0	0.1	1.7	0.0	1.4				
Intersection Summary												
HCM 6th Ctrl Delay				36.2								
HCM 6th LOS				D								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection

Intersection Delay, s/veh 11.5

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↗			↕↗	
Traffic Vol, veh/h	30	312	160	20	180	10	110	10	50	10	10	20
Future Vol, veh/h	30	312	160	20	180	10	110	10	50	10	10	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	328	168	21	189	11	116	11	53	11	11	21
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	12	10.7	11.2	10.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	25%
Vol Thru, %	0%	17%	0%	100%	39%	0%	100%	86%	25%
Vol Right, %	0%	83%	0%	0%	61%	0%	0%	14%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	60	30	208	264	20	120	70	40
LT Vol	110	0	30	0	0	20	0	0	10
Through Vol	0	10	0	208	104	0	120	60	10
RT Vol	0	50	0	0	160	0	0	10	20
Lane Flow Rate	116	63	32	219	278	21	126	74	42
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.231	0.107	0.057	0.361	0.425	0.041	0.228	0.131	0.08
Departure Headway (Hd)	7.193	6.109	6.442	5.937	5.508	6.995	6.489	6.387	6.846
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	499	585	556	606	653	511	552	560	522
Service Time	4.947	3.862	4.182	3.677	3.248	4.746	4.239	4.138	4.608
HCM Lane V/C Ratio	0.232	0.108	0.058	0.361	0.426	0.041	0.228	0.132	0.08
HCM Control Delay	12.1	9.6	9.6	12	12.3	10	11.2	10.1	10.2
HCM Lane LOS	B	A	A	B	B	A	B	B	B
HCM 95th-tile Q	0.9	0.4	0.2	1.6	2.1	0.1	0.9	0.4	0.3

Intersection

Intersection Delay, s/veh 10.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	185	113	74	10	42	10	31	20	10	10	30	137
Future Vol, veh/h	185	113	74	10	42	10	31	20	10	10	30	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	195	119	78	11	44	11	33	21	11	11	32	144
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	12.3	8.5	9	9
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	51%	50%	16%	25%	0%
Vol Thru, %	33%	30%	68%	75%	0%
Vol Right, %	16%	20%	16%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	372	62	40	137
LT Vol	31	185	10	10	0
Through Vol	20	113	42	30	0
RT Vol	10	74	10	0	137
Lane Flow Rate	64	392	65	42	144
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.096	0.502	0.09	0.068	0.2
Departure Headway (Hd)	5.384	4.619	4.969	5.823	4.99
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	660	775	715	612	714
Service Time	3.463	2.668	3.041	3.59	2.756
HCM Lane V/C Ratio	0.097	0.506	0.091	0.069	0.202
HCM Control Delay	9	12.3	8.5	9	9
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.3	2.9	0.3	0.2	0.7

HCM 6th TWSC
4: Conway Drive & H Lot Driveway #1

Ex + P PM
07/26/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Traffic Vol, veh/h	0	0	1	80	142	0
Future Vol, veh/h	0	0	1	80	142	0
Conflicting Peds, #/hr	10	10	10	0	0	10
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1	103	182	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	307	202	192	0	-	0
Stage 1	192	-	-	-	-	-
Stage 2	115	-	-	-	-	-
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	685	839	1381	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	671	823	1368	-	-	-
Mov Cap-2 Maneuver	671	-	-	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	901	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1368	-	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-
HCM Control Delay (s)	7.6	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	20	115	48	28	52	10	42	166	23	10	179	20
Future Vol, veh/h	20	115	48	28	52	10	42	166	23	10	179	20
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	22	124	52	30	56	11	45	178	25	11	192	22
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	11.8	9.7	11.5	12.1
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	20%	0%	11%	100%	0%	5%
Vol Thru, %	80%	0%	63%	0%	84%	86%
Vol Right, %	0%	100%	26%	0%	16%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	208	23	183	28	62	209
LT Vol	42	0	20	28	0	10
Through Vol	166	0	115	0	52	179
RT Vol	0	23	48	0	10	20
Lane Flow Rate	224	25	197	30	67	225
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.364	0.035	0.325	0.056	0.113	0.362
Departure Headway (Hd)	5.855	5.045	5.947	6.737	6.115	5.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	615	710	604	532	586	620
Service Time	3.585	2.774	3.982	4.478	3.855	3.832
HCM Lane V/C Ratio	0.364	0.035	0.326	0.056	0.114	0.363
HCM Control Delay	11.9	8	11.8	9.9	9.6	12.1
HCM Lane LOS	B	A	B	A	A	B
HCM 95th-tile Q	1.7	0.1	1.4	0.2	0.4	1.6

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	
Traffic Vol, veh/h	13	61	30	2	1	6
Future Vol, veh/h	13	61	30	2	1	6
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	78	38	3	1	8

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	51	0	-	0	172 60
Stage 1	-	-	-	-	50 -
Stage 2	-	-	-	-	122 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1555	-	-	-	818 1005
Stage 1	-	-	-	-	972 -
Stage 2	-	-	-	-	903 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1540	-	-	-	792 986
Mov Cap-2 Maneuver	-	-	-	-	792 -
Stage 1	-	-	-	-	951 -
Stage 2	-	-	-	-	894 -

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1540	-	-	-	953
HCM Lane V/C Ratio	0.011	-	-	-	0.009
HCM Control Delay (s)	7.4	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	10	41	10	10	10	11	60	10	10	121	11
Future Vol, veh/h	11	10	41	10	10	10	11	60	10	10	121	11
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	13	53	13	13	13	14	77	13	13	155	14

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	333	326	182	353	327	104	179	0	0	100	0	0
Stage 1	198	198	-	122	122	-	-	-	-	-	-	-
Stage 2	135	128	-	231	205	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	620	592	861	602	591	951	1397	-	-	1493	-	-
Stage 1	804	737	-	882	795	-	-	-	-	-	-	-
Stage 2	868	790	-	772	732	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	580	568	845	536	567	933	1384	-	-	1479	-	-
Mov Cap-2 Maneuver	580	568	-	536	567	-	-	-	-	-	-	-
Stage 1	788	722	-	864	778	-	-	-	-	-	-	-
Stage 2	825	773	-	697	717	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	11	1	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1384	-	-	729	638	1479	-	-
HCM Lane V/C Ratio	0.01	-	-	0.109	0.06	0.009	-	-
HCM Control Delay (s)	7.6	0	-	10.5	11	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

Intersection

Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	7	53	3	64	50	40	2	184	54	32	212	11
Future Vol, veh/h	7	53	3	64	50	40	2	184	54	32	212	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	65	4	79	62	49	2	227	67	40	262	14
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	10.8	11	13.2	12.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	11%	56%	0%	100%	0%
Vol Thru, %	0%	77%	84%	44%	0%	0%	95%
Vol Right, %	0%	23%	5%	0%	100%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	238	63	114	40	32	223
LT Vol	2	0	7	64	0	32	0
Through Vol	0	184	53	50	0	0	212
RT Vol	0	54	3	0	40	0	11
Lane Flow Rate	2	294	78	141	49	40	275
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.004	0.462	0.143	0.26	0.078	0.069	0.44
Departure Headway (Hd)	6.333	5.666	6.625	6.648	5.654	6.298	5.757
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	565	635	541	540	633	569	625
Service Time	4.069	3.402	4.676	4.39	3.396	4.034	3.493
HCM Lane V/C Ratio	0.004	0.463	0.144	0.261	0.077	0.07	0.44
HCM Control Delay	9.1	13.2	10.8	11.7	8.9	9.5	13
HCM Lane LOS	A	B	B	B	A	A	B
HCM 95th-tile Q	0	2.4	0.5	1	0.3	0.2	2.2

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	9	130	150	1	0	4
Future Vol, veh/h	9	130	150	1	0	4
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	160	185	1	0	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	196	0	0	388	206
Stage 1	-	-	-	196	-
Stage 2	-	-	-	192	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1377	-	-	616	835
Stage 1	-	-	-	837	-
Stage 2	-	-	-	841	-
Platoon blocked, %		-	-		
Mov Cap-1 Maneuver	1364	-	-	598	819
Mov Cap-2 Maneuver	-	-	-	598	-
Stage 1	-	-	-	821	-
Stage 2	-	-	-	833	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1364	-	-	-	819
HCM Lane V/C Ratio	0.008	-	-	-	0.006
HCM Control Delay (s)	7.7	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

APPENDIX F

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – OPENING YEAR (2023) WITHOUT PROJECT

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Ex + C AM
 09/22/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	173	163	163	41	326	82	122	194	10	51	275	255
Future Volume (veh/h)	173	163	163	41	326	82	122	194	10	51	275	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	237	223	223	56	447	112	167	266	14	70	377	349
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	729	634	72	846	210	194	1119	59	90	475	411
Arrive On Green	0.15	0.41	0.41	0.04	0.30	0.30	0.11	0.33	0.33	0.05	0.27	0.27
Sat Flow, veh/h	1781	1777	1546	1781	2802	696	1781	3429	180	1781	1777	1536
Grp Volume(v), veh/h	237	223	223	56	282	277	167	137	143	70	377	349
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1721	1781	1777	1832	1781	1777	1536
Q Serve(g_s), s	15.1	9.8	11.5	3.6	15.3	15.5	10.7	6.5	6.6	4.5	22.9	25.0
Cycle Q Clear(g_c), s	15.1	9.8	11.5	3.6	15.3	15.5	10.7	6.5	6.6	4.5	22.9	25.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	265	729	634	72	537	520	194	580	598	90	475	411
V/C Ratio(X)	0.89	0.31	0.35	0.78	0.53	0.53	0.86	0.24	0.24	0.78	0.79	0.85
Avail Cap(c_a), veh/h	307	729	634	138	537	520	215	580	598	154	475	411
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	23.0	23.6	55.1	33.6	33.6	50.7	28.5	28.5	54.4	39.5	40.2
Incr Delay (d2), s/veh	22.6	1.1	1.5	6.5	3.7	3.9	24.0	1.0	0.9	5.4	12.8	19.3
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	8.4	4.3	4.5	1.7	7.1	7.0	6.1	2.9	3.1	2.2	11.6	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	24.1	25.1	61.6	37.2	37.5	74.8	29.5	29.5	59.8	52.2	59.5
LnGrp LOS	E	C	C	E	D	D	E	C	C	E	D	E
Approach Vol, veh/h		683			615			447			796	
Approach Delay, s/veh		40.7			39.6			46.4			56.1	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	53.5	16.7	37.0	21.2	41.0	9.8	43.8				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	9.0	46.0	14.0	31.0	20.0	35.0	10.0	* 36				
Max Q Clear Time (g_c+I1), s	5.6	13.5	12.7	27.0	17.1	17.5	6.5	8.6				
Green Ext Time (p_c), s	0.0	3.1	0.0	1.7	0.1	3.2	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

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

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕		↵	↕			↕	
Traffic Vol, veh/h	20	92	143	31	275	10	194	10	31	10	10	31
Future Vol, veh/h	20	92	143	31	275	10	194	10	31	10	10	31
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	110	170	37	327	12	231	12	37	12	12	37
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	11.9	12.6	15.1	10.8
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	0%	24%	0%	100%	18%	0%	100%	90%	20%
Vol Right, %	0%	76%	0%	0%	82%	0%	0%	10%	61%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	41	20	61	174	31	183	102	51
LT Vol	194	0	20	0	0	31	0	0	10
Through Vol	0	10	0	61	31	0	183	92	10
RT Vol	0	31	0	0	143	0	0	10	31
Lane Flow Rate	231	49	24	73	207	37	218	121	61
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.466	0.084	0.048	0.138	0.357	0.073	0.401	0.22	0.121
Departure Headway (Hd)	7.258	6.226	7.31	6.8	6.213	7.125	6.616	6.546	7.166
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	494	572	487	524	575	500	541	545	503
Service Time	5.042	4.009	5.102	4.592	4.004	4.912	4.403	4.332	4.866
HCM Lane V/C Ratio	0.468	0.086	0.049	0.139	0.36	0.074	0.403	0.222	0.121
HCM Control Delay	16.3	9.6	10.5	10.7	12.5	10.5	13.8	11.2	10.8
HCM Lane LOS	C	A	B	B	B	B	B	B	B
HCM 95th-tile Q	2.4	0.3	0.2	0.5	1.6	0.2	1.9	0.8	0.4

Intersection

Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	61	36	36	10	102	10	61	20	20	10	31	153
Future Vol, veh/h	61	36	36	10	102	10	61	20	20	10	31	153
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	47	47	13	132	13	79	26	26	13	40	199
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	9.7	9.6	9.5	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	60%	46%	8%	24%	0%
Vol Thru, %	20%	27%	84%	76%	0%
Vol Right, %	20%	27%	8%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	133	122	41	153
LT Vol	61	61	10	10	0
Through Vol	20	36	102	31	0
RT Vol	20	36	10	0	153
Lane Flow Rate	131	173	158	53	199
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.189	0.239	0.222	0.083	0.264
Departure Headway (Hd)	5.175	4.989	5.045	5.62	4.79
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	686	713	705	633	743
Service Time	3.261	3.068	3.125	3.397	2.567
HCM Lane V/C Ratio	0.191	0.243	0.224	0.084	0.268
HCM Control Delay	9.5	9.7	9.6	8.9	9.3
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.7	0.9	0.8	0.3	1.1

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	10	31	123	28	71	20	51	184	10	10	219	10
Future Vol, veh/h	10	31	123	28	71	20	51	184	10	10	219	10
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	40	158	36	91	26	65	236	13	13	281	13
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	13.2	11.3	15.8	16.5
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	0%	6%	100%	0%	4%
Vol Thru, %	78%	0%	19%	0%	78%	92%
Vol Right, %	0%	100%	75%	0%	22%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	235	10	164	28	91	239
LT Vol	51	0	10	28	0	10
Through Vol	184	0	31	0	71	219
RT Vol	0	10	123	0	20	10
Lane Flow Rate	301	13	210	36	117	306
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.529	0.02	0.371	0.074	0.217	0.536
Departure Headway (Hd)	6.325	5.503	6.352	7.373	6.705	6.297
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	566	646	561	482	531	570
Service Time	4.099	3.277	4.44	5.169	4.501	4.373
HCM Lane V/C Ratio	0.532	0.02	0.374	0.075	0.22	0.537
HCM Control Delay	16.1	8.4	13.2	10.8	11.4	16.5
HCM Lane LOS	C	A	B	B	B	C
HCM 95th-tile Q	3.1	0.1	1.7	0.2	0.8	3.2

HCM 6th TWSC
7: Conway Drive & Stanley Avenue

Ex + C AM
09/22/2021

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	10	10	31	10	10	10	41	122	10	10	71	10
Future Vol, veh/h	10	10	31	10	10	10	41	122	10	10	71	10
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	15	47	15	15	15	62	185	15	15	108	15

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	498	490	136	514	490	213	133	0	0	210	0	0
Stage 1	156	156	-	327	327	-	-	-	-	-	-	-
Stage 2	342	334	-	187	163	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	483	479	913	471	479	827	1452	-	-	1361	-	-
Stage 1	846	769	-	686	648	-	-	-	-	-	-	-
Stage 2	673	643	-	815	763	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	432	441	896	407	441	811	1438	-	-	1348	-	-
Mov Cap-2 Maneuver	432	441	-	407	441	-	-	-	-	-	-	-
Stage 1	797	752	-	646	610	-	-	-	-	-	-	-
Stage 2	607	605	-	741	746	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	11.5		12.9		1.8		0.8			
HCM LOS	B		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1438	-	-	634	504	1348	-
HCM Lane V/C Ratio	0.043	-	-	0.122	0.09	0.011	-
HCM Control Delay (s)	7.6	0	-	11.5	12.9	7.7	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-

Intersection	
Intersection Delay, s/veh	23.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	6	190	20	132	135	102	4	137	146	179	171	20
Future Vol, veh/h	6	190	20	132	135	102	4	137	146	179	171	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	221	23	153	157	119	5	159	170	208	199	23
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	23.3	24.8	28	19
HCM LOS	C	C	D	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	3%	49%	0%	100%	0%
Vol Thru, %	0%	48%	88%	51%	0%	0%	90%
Vol Right, %	0%	52%	9%	0%	100%	0%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	283	216	267	102	179	191
LT Vol	4	0	6	132	0	179	0
Through Vol	0	137	190	135	0	0	171
RT Vol	0	146	20	0	102	0	20
Lane Flow Rate	5	329	251	310	119	208	222
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.011	0.717	0.593	0.716	0.241	0.498	0.495
Departure Headway (Hd)	8.732	7.839	8.5	8.304	7.327	8.615	8.021
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	410	461	424	435	490	418	449
Service Time	6.481	5.588	6.559	6.056	5.079	6.368	5.774
HCM Lane V/C Ratio	0.012	0.714	0.592	0.713	0.243	0.498	0.494
HCM Control Delay	11.6	28.2	23.3	29.5	12.4	19.7	18.4
HCM Lane LOS	B	D	C	D	B	C	C
HCM 95th-tile Q	0	5.6	3.7	5.5	0.9	2.7	2.7

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Ex + C PM
 09/22/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	357	102	20	224	41	112	184	41	41	173	143
Future Volume (veh/h)	204	357	102	20	224	41	112	184	41	41	173	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	224	392	112	22	246	45	123	202	45	45	190	157
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	1215	343	31	964	173	150	948	206	58	520	402
Arrive On Green	0.14	0.45	0.45	0.02	0.32	0.32	0.08	0.33	0.33	0.03	0.28	0.28
Sat Flow, veh/h	1781	2720	767	1781	2994	538	1781	2886	627	1781	1881	1451
Grp Volume(v), veh/h	224	254	250	22	144	147	123	122	125	45	179	168
Grp Sat Flow(s),veh/h/ln	1781	1777	1710	1781	1777	1755	1781	1777	1736	1781	1777	1555
Q Serve(g_s), s	14.1	10.6	10.8	1.4	6.8	7.1	7.8	5.7	5.9	2.9	9.2	10.0
Cycle Q Clear(g_c), s	14.1	10.6	10.8	1.4	6.8	7.1	7.8	5.7	5.9	2.9	9.2	10.0
Prop In Lane	1.00		0.45	1.00		0.31	1.00		0.36	1.00		0.93
Lane Grp Cap(c), veh/h	253	793	764	31	572	565	150	583	570	58	492	430
V/C Ratio(X)	0.89	0.32	0.33	0.70	0.25	0.26	0.82	0.21	0.22	0.78	0.36	0.39
Avail Cap(c_a), veh/h	328	793	764	78	572	565	203	583	570	109	492	430
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	20.4	20.5	55.8	28.6	28.6	51.5	27.7	27.8	54.8	33.2	33.5
Incr Delay (d2), s/veh	17.2	1.1	1.1	10.1	1.1	1.1	13.1	0.8	0.9	8.2	2.1	2.7
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	7.4	4.6	4.5	0.7	3.1	3.2	4.0	2.6	2.6	1.4	4.3	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	21.5	21.6	65.9	29.6	29.8	64.6	28.5	28.6	63.0	35.3	36.2
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h		728			313			370			392	
Approach Delay, s/veh		35.0			32.2			40.5			38.9	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	57.0	13.6	37.6	20.2	42.8	7.7	43.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	5.0	51.0	13.0	31.0	21.0	35.0	7.0	* 38				
Max Q Clear Time (g_c+I1), s	3.4	12.8	9.8	12.0	16.1	9.1	4.9	7.9				
Green Ext Time (p_c), s	0.0	3.4	0.0	2.0	0.1	1.7	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

Notes

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

Intersection												
Intersection Delay, s/veh	11.6											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕		↵	↕			↕	
Traffic Vol, veh/h	31	316	163	20	184	10	112	10	51	10	10	20
Future Vol, veh/h	31	316	163	20	184	10	112	10	51	10	10	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	333	172	21	194	11	118	11	54	11	11	21
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	12.2	10.8	11.3	10.3
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	25%
Vol Thru, %	0%	16%	0%	100%	39%	0%	100%	86%	25%
Vol Right, %	0%	84%	0%	0%	61%	0%	0%	14%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	61	31	211	268	20	123	71	40
LT Vol	112	0	31	0	0	20	0	0	10
Through Vol	0	10	0	211	105	0	123	61	10
RT Vol	0	51	0	0	163	0	0	10	20
Lane Flow Rate	118	64	33	222	282	21	129	75	42
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.237	0.11	0.059	0.367	0.434	0.041	0.234	0.134	0.081
Departure Headway (Hd)	7.231	6.144	6.47	5.965	5.535	7.03	6.524	6.424	6.892
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	496	582	553	603	650	508	549	556	518
Service Time	4.985	3.898	4.215	3.709	3.279	4.786	4.279	4.18	4.659
HCM Lane V/C Ratio	0.238	0.11	0.06	0.368	0.434	0.041	0.235	0.135	0.081
HCM Control Delay	12.2	9.7	9.6	12.2	12.5	10.1	11.3	10.2	10.3
HCM Lane LOS	B	A	A	B	B	B	B	B	B
HCM 95th-tile Q	0.9	0.4	0.2	1.7	2.2	0.1	0.9	0.5	0.3

Intersection

Intersection Delay, s/veh 10.9

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	189	115	73	10	43	10	32	20	10	10	31	140
Future Vol, veh/h	189	115	73	10	43	10	32	20	10	10	31	140
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	199	121	77	11	45	11	34	21	11	11	33	147
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	12.5	8.6	9.1	9.1
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	52%	50%	16%	24%	0%
Vol Thru, %	32%	31%	68%	76%	0%
Vol Right, %	16%	19%	16%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	377	63	41	140
LT Vol	32	189	10	10	0
Through Vol	20	115	43	31	0
RT Vol	10	73	10	0	140
Lane Flow Rate	65	397	66	43	147
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.098	0.511	0.092	0.07	0.205
Departure Headway (Hd)	5.411	4.638	4.993	5.84	5.009
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	656	774	711	610	710
Service Time	3.496	2.69	3.069	3.61	2.779
HCM Lane V/C Ratio	0.099	0.513	0.093	0.07	0.207
HCM Control Delay	9.1	12.5	8.6	9.1	9.1
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.3	2.9	0.3	0.2	0.8

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	20	112	49	24	51	10	43	169	14	10	183	20
Future Vol, veh/h	20	112	49	24	51	10	43	169	14	10	183	20
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	22	120	53	26	55	11	46	182	15	11	197	22
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	11.8	9.7	11.7	12.1
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	20%	0%	11%	100%	0%	5%
Vol Thru, %	80%	0%	62%	0%	84%	86%
Vol Right, %	0%	100%	27%	0%	16%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	212	14	181	24	61	213
LT Vol	43	0	20	24	0	10
Through Vol	169	0	112	0	51	183
RT Vol	0	14	49	0	10	20
Lane Flow Rate	228	15	195	26	66	229
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.369	0.021	0.321	0.048	0.111	0.367
Departure Headway (Hd)	5.835	5.025	5.938	6.738	6.114	5.774
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	618	713	605	532	586	623
Service Time	3.562	2.752	3.967	4.473	3.849	3.801
HCM Lane V/C Ratio	0.369	0.021	0.322	0.049	0.113	0.368
HCM Control Delay	11.9	7.9	11.8	9.8	9.6	12.1
HCM Lane LOS	B	A	B	A	A	B
HCM 95th-tile Q	1.7	0.1	1.4	0.2	0.4	1.7

HCM 6th TWSC
7: Conway Drive & Stanley Avenue

Ex + C PM
09/22/2021

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	10	41	10	10	10	10	61	10	10	122	10
Future Vol, veh/h	10	10	41	10	10	10	10	61	10	10	122	10
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	13	53	13	13	13	13	78	13	13	156	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	333	326	183	353	326	105	179	0	0	101	0	0
Stage 1	199	199	-	121	121	-	-	-	-	-	-	-
Stage 2	134	127	-	232	205	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	620	592	859	602	592	949	1397	-	-	1491	-	-
Stage 1	803	736	-	883	796	-	-	-	-	-	-	-
Stage 2	869	791	-	771	732	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	581	569	843	536	569	931	1384	-	-	1477	-	-
Mov Cap-2 Maneuver	581	569	-	536	569	-	-	-	-	-	-	-
Stage 1	788	721	-	866	780	-	-	-	-	-	-	-
Stage 2	827	775	-	696	717	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	10.5		11		0.9		0.5			
HCM LOS	B		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1384	-	-	731	639	1477	-
HCM Lane V/C Ratio	0.009	-	-	0.107	0.06	0.009	-
HCM Control Delay (s)	7.6	0	-	10.5	11	7.5	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-

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	7	54	3	61	51	41	2	179	46	33	212	11
Future Vol, veh/h	7	54	3	61	51	41	2	179	46	33	212	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	67	4	75	63	51	2	221	57	41	262	14
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	10.7	10.8	12.8	12.5
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	11%	54%	0%	100%	0%
Vol Thru, %	0%	80%	84%	46%	0%	0%	95%
Vol Right, %	0%	20%	5%	0%	100%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	225	64	112	41	33	223
LT Vol	2	0	7	61	0	33	0
Through Vol	0	179	54	51	0	0	212
RT Vol	0	46	3	0	41	0	11
Lane Flow Rate	2	278	79	138	51	41	275
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.004	0.438	0.144	0.253	0.079	0.071	0.438
Departure Headway (Hd)	6.326	5.675	6.572	6.599	5.614	6.271	5.73
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	566	636	545	545	637	572	628
Service Time	4.059	3.407	4.62	4.34	3.355	4.002	3.461
HCM Lane V/C Ratio	0.004	0.437	0.145	0.253	0.08	0.072	0.438
HCM Control Delay	9.1	12.8	10.7	11.6	8.8	9.5	12.9
HCM Lane LOS	A	B	B	B	A	A	B
HCM 95th-tile Q	0	2.2	0.5	1	0.3	0.2	2.2

APPENDIX G

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – OPENING YEAR (2023) WITH PROJECT

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Ex + C + P AM
 07/26/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	173	164	163	41	328	82	123	194	10	51	275	255
Future Volume (veh/h)	173	164	163	41	328	82	123	194	10	51	275	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	237	225	223	56	449	112	168	266	14	70	377	349
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	729	634	72	846	209	195	1120	59	90	475	410
Arrive On Green	0.15	0.41	0.41	0.04	0.30	0.30	0.11	0.33	0.33	0.05	0.27	0.27
Sat Flow, veh/h	1781	1777	1546	1781	2805	693	1781	3429	180	1781	1777	1536
Grp Volume(v), veh/h	237	225	223	56	283	278	168	137	143	70	377	349
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1721	1781	1777	1832	1781	1777	1536
Q Serve(g_s), s	15.2	9.9	11.5	3.6	15.3	15.6	10.8	6.5	6.6	4.5	22.9	25.0
Cycle Q Clear(g_c), s	15.2	9.9	11.5	3.6	15.3	15.6	10.8	6.5	6.6	4.5	22.9	25.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	265	729	634	72	536	519	195	580	598	90	475	410
V/C Ratio(X)	0.89	0.31	0.35	0.78	0.53	0.54	0.86	0.24	0.24	0.78	0.79	0.85
Avail Cap(c_a), veh/h	307	729	634	138	536	519	215	580	598	154	475	410
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	23.1	23.6	55.1	33.6	33.7	50.7	28.5	28.5	54.4	39.5	40.3
Incr Delay (d2), s/veh	22.6	1.1	1.5	6.5	3.7	3.9	24.3	1.0	0.9	5.4	12.8	19.3
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	8.4	4.4	4.5	1.7	7.1	7.1	6.1	2.9	3.1	2.2	11.6	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.1	24.2	25.1	61.6	37.3	37.6	75.1	29.4	29.5	59.9	52.3	59.6
LnGrp LOS	E	C	C	E	D	D	E	C	C	E	D	E
Approach Vol, veh/h		685			617			448			796	
Approach Delay, s/veh		40.7			39.7			46.6			56.2	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	53.5	16.7	37.0	21.2	41.0	9.8	43.9				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	9.0	46.0	14.0	31.0	20.0	35.0	10.0	* 36				
Max Q Clear Time (g_c+I1), s	5.6	13.5	12.8	27.0	17.2	17.6	6.5	8.6				
Green Ext Time (p_c), s	0.0	3.1	0.0	1.7	0.1	3.2	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

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

Intersection												
Intersection Delay, s/veh	13											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕		↵	↕			↕	
Traffic Vol, veh/h	20	93	143	31	277	10	194	10	31	10	10	31
Future Vol, veh/h	20	93	143	31	277	10	194	10	31	10	10	31
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	111	170	37	330	12	231	12	37	12	12	37
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	11.9	12.7	15.1	10.9
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	0%	24%	0%	100%	18%	0%	100%	90%	20%
Vol Right, %	0%	76%	0%	0%	82%	0%	0%	10%	61%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	41	20	62	174	31	185	102	51
LT Vol	194	0	20	0	0	31	0	0	10
Through Vol	0	10	0	62	31	0	185	92	10
RT Vol	0	31	0	0	143	0	0	10	31
Lane Flow Rate	231	49	24	74	207	37	220	122	61
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.466	0.085	0.048	0.14	0.358	0.073	0.404	0.222	0.121
Departure Headway (Hd)	7.269	6.236	7.319	6.81	6.223	7.132	6.623	6.553	7.179
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	492	570	486	523	574	499	541	545	502
Service Time	5.054	4.021	5.11	4.6	4.013	4.917	4.408	4.338	4.879
HCM Lane V/C Ratio	0.47	0.086	0.049	0.141	0.361	0.074	0.407	0.224	0.122
HCM Control Delay	16.3	9.6	10.5	10.7	12.5	10.5	13.9	11.2	10.9
HCM Lane LOS	C	A	B	B	B	B	B	B	B
HCM 95th-tile Q	2.4	0.3	0.2	0.5	1.6	0.2	1.9	0.8	0.4

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	61	36	37	10	102	10	63	20	20	10	31	153
Future Vol, veh/h	61	36	37	10	102	10	63	20	20	10	31	153
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	47	48	13	132	13	82	26	26	13	40	199
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	9.7	9.6	9.5	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	61%	46%	8%	24%	0%
Vol Thru, %	19%	27%	84%	76%	0%
Vol Right, %	19%	28%	8%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	134	122	41	153
LT Vol	63	61	10	10	0
Through Vol	20	36	102	31	0
RT Vol	20	37	10	0	153
Lane Flow Rate	134	174	158	53	199
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.193	0.241	0.222	0.083	0.265
Departure Headway (Hd)	5.183	4.993	5.055	5.627	4.797
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	685	712	703	632	741
Service Time	3.27	3.073	3.137	3.404	2.574
HCM Lane V/C Ratio	0.196	0.244	0.225	0.084	0.269
HCM Control Delay	9.5	9.7	9.6	8.9	9.3
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.7	0.9	0.8	0.3	1.1

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	0	145	93	0
Future Vol, veh/h	0	2	0	145	93	0
Conflicting Peds, #/hr	10	10	10	0	0	10
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	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	0	220	141	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	381	161	151	0	0
Stage 1	151	-	-	-	-
Stage 2	230	-	-	-	-
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	621	884	1430	-	-
Stage 1	877	-	-	-	-
Stage 2	808	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	609	867	1416	-	-
Mov Cap-2 Maneuver	609	-	-	-	-
Stage 1	868	-	-	-	-
Stage 2	800	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1416	-	867	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	0	-	9.2	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	15
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	10	32	123	36	76	20	51	184	13	10	219	10
Future Vol, veh/h	10	32	123	36	76	20	51	184	13	10	219	10
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	41	158	46	97	26	65	236	17	13	281	13
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	13.5	11.4	16.1	16.9
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	22%	0%	6%	100%	0%	4%
Vol Thru, %	78%	0%	19%	0%	79%	92%
Vol Right, %	0%	100%	75%	0%	21%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	235	13	165	36	96	239
LT Vol	51	0	10	36	0	10
Through Vol	184	0	32	0	76	219
RT Vol	0	13	123	0	20	10
Lane Flow Rate	301	17	212	46	123	306
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.536	0.026	0.383	0.096	0.234	0.543
Departure Headway (Hd)	6.505	5.682	6.526	7.51	6.85	6.482
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	557	634	554	480	527	561
Service Time	4.205	3.382	4.526	5.219	4.558	4.482
HCM Lane V/C Ratio	0.54	0.027	0.383	0.096	0.233	0.545
HCM Control Delay	16.5	8.5	13.5	11	11.6	16.9
HCM Lane LOS	C	A	B	B	B	C
HCM 95th-tile Q	3.2	0.1	1.8	0.3	0.9	3.2

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	
Traffic Vol, veh/h	4	51	63	1	1	11
Future Vol, veh/h	4	51	63	1	1	11
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	77	95	2	2	17

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	107	0	0 205 116
Stage 1	-	-	- 106 -
Stage 2	-	-	- 99 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1484	-	- 783 936
Stage 1	-	-	- 918 -
Stage 2	-	-	- 925 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1470	-	- 764 918
Mov Cap-2 Maneuver	-	-	- 764 -
Stage 1	-	-	- 905 -
Stage 2	-	-	- 916 -

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1470	-	-	-	903
HCM Lane V/C Ratio	0.004	-	-	-	0.02
HCM Control Delay (s)	7.5	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
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	11	10	31	10	10	10	41	123	10	10	71	13
Future Vol, veh/h	11	10	31	10	10	10	41	123	10	10	71	13
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	15	47	15	15	15	62	186	15	15	108	20

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	501	493	138	517	496	214	138	0	0	211	0	0
Stage 1	158	158	-	328	328	-	-	-	-	-	-	-
Stage 2	343	335	-	189	168	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	480	477	910	469	475	826	1446	-	-	1360	-	-
Stage 1	844	767	-	685	647	-	-	-	-	-	-	-
Stage 2	672	643	-	813	759	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	429	439	893	405	437	810	1432	-	-	1347	-	-
Mov Cap-2 Maneuver	429	439	-	405	437	-	-	-	-	-	-	-
Stage 1	795	750	-	645	609	-	-	-	-	-	-	-
Stage 2	606	605	-	739	742	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.6		12.9		1.8		0.8	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1432	-	-	625	501	1347	-	-
HCM Lane V/C Ratio	0.043	-	-	0.126	0.091	0.011	-	-
HCM Control Delay (s)	7.6	0	-	11.6	12.9	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	24.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	6	190	20	139	135	102	4	140	149	179	179	20
Future Vol, veh/h	6	190	20	139	135	102	4	140	149	179	179	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	221	23	162	157	119	5	163	173	208	208	23
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	24	26.7	29.9	19.8
HCM LOS	C	D	D	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	3%	51%	0%	100%	0%
Vol Thru, %	0%	48%	88%	49%	0%	0%	90%
Vol Right, %	0%	52%	9%	0%	100%	0%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	289	216	274	102	179	199
LT Vol	4	0	6	139	0	179	0
Through Vol	0	140	190	135	0	0	179
RT Vol	0	149	20	0	102	0	20
Lane Flow Rate	5	336	251	319	119	208	231
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.011	0.741	0.602	0.744	0.244	0.504	0.522
Departure Headway (Hd)	8.827	7.933	8.635	8.405	7.42	8.717	8.125
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	406	457	417	430	484	414	444
Service Time	6.579	5.685	6.7	6.159	5.174	6.475	5.883
HCM Lane V/C Ratio	0.012	0.735	0.602	0.742	0.246	0.502	0.52
HCM Control Delay	11.7	30.2	24	32	12.6	20.1	19.5
HCM Lane LOS	B	D	C	D	B	C	C
HCM 95th-tile Q	0	6.1	3.8	6	0.9	2.8	2.9

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	3	514	368	0	1	7
Future Vol, veh/h	3	514	368	0	1	7
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	598	428	0	1	8

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	438	0	-	0	1052 448
Stage 1	-	-	-	-	438 -
Stage 2	-	-	-	-	614 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1122	-	-	-	251 611
Stage 1	-	-	-	-	651 -
Stage 2	-	-	-	-	540 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1111	-	-	-	245 599
Mov Cap-2 Maneuver	-	-	-	-	245 -
Stage 1	-	-	-	-	642 -
Stage 2	-	-	-	-	535 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1111	-	-	-	507
HCM Lane V/C Ratio	0.003	-	-	-	0.018
HCM Control Delay (s)	8.3	0	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Ex + C + P PM
 07/26/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	359	104	20	224	41	112	184	41	41	173	143
Future Volume (veh/h)	204	359	104	20	224	41	112	184	41	41	173	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	224	395	114	22	246	45	123	202	45	45	190	157
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	1212	345	31	964	173	150	948	206	58	520	402
Arrive On Green	0.14	0.45	0.45	0.02	0.32	0.32	0.08	0.33	0.33	0.03	0.28	0.28
Sat Flow, veh/h	1781	2713	773	1781	2994	538	1781	2886	627	1781	1881	1451
Grp Volume(v), veh/h	224	257	252	22	144	147	123	122	125	45	179	168
Grp Sat Flow(s),veh/h/ln	1781	1777	1709	1781	1777	1755	1781	1777	1736	1781	1777	1555
Q Serve(g_s), s	14.1	10.7	10.9	1.4	6.8	7.1	7.8	5.7	5.9	2.9	9.2	10.0
Cycle Q Clear(g_c), s	14.1	10.7	10.9	1.4	6.8	7.1	7.8	5.7	5.9	2.9	9.2	10.0
Prop In Lane	1.00		0.45	1.00		0.31	1.00		0.36	1.00		0.93
Lane Grp Cap(c), veh/h	253	793	763	31	572	565	150	583	570	58	492	430
V/C Ratio(X)	0.89	0.32	0.33	0.70	0.25	0.26	0.82	0.21	0.22	0.78	0.36	0.39
Avail Cap(c_a), veh/h	328	793	763	78	572	565	203	583	570	109	492	430
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	20.4	20.5	55.8	28.6	28.6	51.5	27.7	27.8	54.8	33.2	33.5
Incr Delay (d2), s/veh	17.2	1.1	1.2	10.1	1.1	1.1	13.1	0.8	0.9	8.2	2.1	2.7
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	7.4	4.6	4.6	0.7	3.1	3.2	4.0	2.6	2.6	1.4	4.3	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	21.5	21.7	65.9	29.6	29.8	64.6	28.5	28.6	63.0	35.3	36.2
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h		733			313			370			392	
Approach Delay, s/veh		34.9			32.2			40.5			38.9	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	57.0	13.6	37.6	20.2	42.8	7.7	43.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	5.0	51.0	13.0	31.0	21.0	35.0	7.0	* 38				
Max Q Clear Time (g_c+I1), s	3.4	12.9	9.8	12.0	16.1	9.1	4.9	7.9				
Green Ext Time (p_c), s	0.0	3.5	0.0	2.0	0.1	1.7	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

Notes

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

Intersection												
Intersection Delay, s/veh	11.6											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↗			↕↗	
Traffic Vol, veh/h	31	318	163	20	184	10	112	10	51	10	10	20
Future Vol, veh/h	31	318	163	20	184	10	112	10	51	10	10	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	335	172	21	194	11	118	11	54	11	11	21
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	12.2	10.8	11.3	10.3
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	25%
Vol Thru, %	0%	16%	0%	100%	39%	0%	100%	86%	25%
Vol Right, %	0%	84%	0%	0%	61%	0%	0%	14%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	61	31	212	269	20	123	71	40
LT Vol	112	0	31	0	0	20	0	0	10
Through Vol	0	10	0	212	106	0	123	61	10
RT Vol	0	51	0	0	163	0	0	10	20
Lane Flow Rate	118	64	33	223	283	21	129	75	42
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.237	0.11	0.059	0.37	0.435	0.041	0.234	0.134	0.081
Departure Headway (Hd)	7.236	6.149	6.47	5.965	5.536	7.035	6.528	6.429	6.898
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	495	581	553	603	648	508	549	556	517
Service Time	4.991	3.904	4.215	3.709	3.28	4.79	4.284	4.184	4.664
HCM Lane V/C Ratio	0.238	0.11	0.06	0.37	0.437	0.041	0.235	0.135	0.081
HCM Control Delay	12.2	9.7	9.6	12.2	12.5	10.1	11.3	10.2	10.3
HCM Lane LOS	B	A	A	B	B	B	B	B	B
HCM 95th-tile Q	0.9	0.4	0.2	1.7	2.2	0.1	0.9	0.5	0.3

Intersection

Intersection Delay, s/veh 10.9

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	189	115	75	10	43	10	32	20	10	10	31	140
Future Vol, veh/h	189	115	75	10	43	10	32	20	10	10	31	140
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	199	121	79	11	45	11	34	21	11	11	33	147
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	12.5	8.6	9.1	9.1
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2	
Vol Left, %		52%	50%	16%	24%	0%
Vol Thru, %		32%	30%	68%	76%	0%
Vol Right, %		16%	20%	16%	0%	100%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		62	379	63	41	140
LT Vol		32	189	10	10	0
Through Vol		20	115	43	31	0
RT Vol		10	75	10	0	140
Lane Flow Rate		65	399	66	43	147
Geometry Grp		5	2	2	7	7
Degree of Util (X)		0.098	0.514	0.092	0.07	0.205
Departure Headway (Hd)		5.416	4.637	4.997	5.844	5.013
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		655	774	711	609	710
Service Time		3.502	2.687	3.072	3.616	2.785
HCM Lane V/C Ratio		0.099	0.516	0.093	0.071	0.207
HCM Control Delay		9.1	12.5	8.6	9.1	9.1
HCM Lane LOS		A	B	A	A	A
HCM 95th-tile Q		0.3	3	0.3	0.2	0.8

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	0	1	82	145	0
Future Vol, veh/h	0	0	1	82	145	0
Conflicting Peds, #/hr	10	10	10	0	0	10
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1	105	186	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	313	206	196	0	-	0
Stage 1	196	-	-	-	-	-
Stage 2	117	-	-	-	-	-
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	680	835	1377	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	666	819	1364	-	-	-
Mov Cap-2 Maneuver	666	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	899	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1364	-	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-
HCM Control Delay (s)	7.6	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	20	117	49	28	53	10	43	169	23	10	183	20
Future Vol, veh/h	20	117	49	28	53	10	43	169	23	10	183	20
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	22	126	53	30	57	11	46	182	25	11	197	22
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	12	9.8	11.7	12.3
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	20%	0%	11%	100%	0%	5%
Vol Thru, %	80%	0%	63%	0%	84%	86%
Vol Right, %	0%	100%	26%	0%	16%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	212	23	186	28	63	213
LT Vol	43	0	20	28	0	10
Through Vol	169	0	117	0	53	183
RT Vol	0	23	49	0	10	20
Lane Flow Rate	228	25	200	30	68	229
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.373	0.035	0.332	0.057	0.116	0.371
Departure Headway (Hd)	5.884	5.073	5.982	6.78	6.16	5.831
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	611	706	602	528	582	618
Service Time	3.616	2.805	4.018	4.521	3.9	3.864
HCM Lane V/C Ratio	0.373	0.035	0.332	0.057	0.117	0.371
HCM Control Delay	12.1	8	12	9.9	9.7	12.3
HCM Lane LOS	B	A	B	A	A	B
HCM 95th-tile Q	1.7	0.1	1.4	0.2	0.4	1.7

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	
Traffic Vol, veh/h	13	62	31	2	1	6
Future Vol, veh/h	13	62	31	2	1	6
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	79	40	3	1	8

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	53	0	0
Stage 1	-	-	52
Stage 2	-	-	123
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1553	-	815
Stage 1	-	-	970
Stage 2	-	-	902
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1538	-	789
Mov Cap-2 Maneuver	-	-	789
Stage 1	-	-	949
Stage 2	-	-	893

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1538	-	-	-	950
HCM Lane V/C Ratio	0.011	-	-	-	0.009
HCM Control Delay (s)	7.4	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	10	42	10	10	10	11	61	10	10	123	11
Future Vol, veh/h	11	10	42	10	10	10	11	61	10	10	123	11
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	13	54	13	13	13	14	78	13	13	158	14

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	337	330	185	358	331	105	182	0	0	101	0	0
Stage 1	201	201	-	123	123	-	-	-	-	-	-	-
Stage 2	136	129	-	235	208	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	617	589	857	597	588	949	1393	-	-	1491	-	-
Stage 1	801	735	-	881	794	-	-	-	-	-	-	-
Stage 2	867	789	-	768	730	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	578	565	841	530	564	931	1380	-	-	1477	-	-
Mov Cap-2 Maneuver	578	565	-	530	564	-	-	-	-	-	-	-
Stage 1	785	720	-	863	777	-	-	-	-	-	-	-
Stage 2	824	772	-	692	715	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	11	1	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1380	-	-	727	634	1477	-	-
HCM Lane V/C Ratio	0.01	-	-	0.111	0.061	0.009	-	-
HCM Control Delay (s)	7.6	0	-	10.6	11	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	7	54	3	65	51	41	2	188	55	33	216	11
Future Vol, veh/h	7	54	3	65	51	41	2	188	55	33	216	11
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	67	4	80	63	51	2	232	68	41	267	14
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	10.9	11.1	13.5	12.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	11%	56%	0%	100%	0%
Vol Thru, %	0%	77%	84%	44%	0%	0%	95%
Vol Right, %	0%	23%	5%	0%	100%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	243	64	116	41	33	227
LT Vol	2	0	7	65	0	33	0
Through Vol	0	188	54	51	0	0	216
RT Vol	0	55	3	0	41	0	11
Lane Flow Rate	2	300	79	143	51	41	280
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.004	0.475	0.147	0.266	0.08	0.072	0.451
Departure Headway (Hd)	6.368	5.701	6.679	6.691	5.698	6.333	5.792
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	562	633	536	537	627	566	622
Service Time	4.106	3.439	4.734	4.439	3.445	4.07	3.529
HCM Lane V/C Ratio	0.004	0.474	0.147	0.266	0.081	0.072	0.45
HCM Control Delay	9.1	13.5	10.9	11.9	8.9	9.6	13.2
HCM Lane LOS	A	B	B	B	A	A	B
HCM 95th-tile Q	0	2.6	0.5	1.1	0.3	0.2	2.3

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	9	133	153	1	0	4
Future Vol, veh/h	9	133	153	1	0	4
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	164	189	1	0	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	200	0	-	0	396 210
Stage 1	-	-	-	-	200 -
Stage 2	-	-	-	-	196 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1372	-	-	-	609 830
Stage 1	-	-	-	-	834 -
Stage 2	-	-	-	-	837 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1359	-	-	-	591 814
Mov Cap-2 Maneuver	-	-	-	-	591 -
Stage 1	-	-	-	-	818 -
Stage 2	-	-	-	-	829 -

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1359	-	-	-	814
HCM Lane V/C Ratio	0.008	-	-	-	0.006
HCM Control Delay (s)	7.7	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

APPENDIX H

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – LONG-TERM (YEAR 2035) WITHOUT PROJECT

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Year 2035 AM
 09/22/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	190	180	180	50	360	90	130	210	20	60	300	280
Future Volume (veh/h)	190	180	180	50	360	90	130	210	20	60	300	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	260	247	247	68	493	123	178	288	27	82	411	384
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	286	722	629	87	826	205	205	1041	97	104	464	401
Arrive On Green	0.16	0.41	0.41	0.05	0.29	0.29	0.11	0.32	0.32	0.06	0.26	0.26
Sat Flow, veh/h	1781	1777	1546	1781	2803	695	1781	3277	305	1781	1777	1535
Grp Volume(v), veh/h	260	247	247	68	311	305	178	155	160	82	411	384
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1721	1781	1777	1805	1781	1777	1535
Q Serve(g_s), s	17.0	11.4	13.4	4.5	17.8	18.0	11.7	7.7	7.9	5.4	26.4	29.3
Cycle Q Clear(g_c), s	17.0	11.4	13.4	4.5	17.8	18.0	11.7	7.7	7.9	5.4	26.4	29.3
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	286	722	629	87	524	507	205	565	574	104	464	401
V/C Ratio(X)	0.91	0.34	0.39	0.78	0.59	0.60	0.87	0.27	0.28	0.79	0.89	0.96
Avail Cap(c_a), veh/h	300	722	629	135	524	507	210	565	574	150	464	401
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	24.3	24.9	55.8	35.8	35.9	51.7	30.3	30.3	55.2	42.2	43.2
Incr Delay (d2), s/veh	28.0	1.3	1.8	6.0	4.9	5.2	28.5	1.2	1.2	9.8	21.3	35.5
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	9.8	5.0	5.2	2.2	8.4	8.3	6.8	3.5	3.6	2.7	14.2	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.0	25.6	26.7	61.8	40.7	41.1	80.1	31.5	31.5	65.0	63.4	78.8
LnGrp LOS	E	C	C	E	D	D	F	C	C	E	E	E
Approach Vol, veh/h		754			684			493			877	
Approach Delay, s/veh		43.7			42.9			49.1			70.3	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	54.3	17.6	37.0	23.1	41.0	10.9	43.7				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	9.0	46.0	14.0	31.0	20.0	35.0	10.0	* 36				
Max Q Clear Time (g_c+I1), s	6.5	15.4	13.7	31.3	19.0	20.0	7.4	9.9				
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	3.4	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	52.8
HCM 6th LOS	D

Notes

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

Intersection												
Intersection Delay, s/veh	15											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↗			↕↗	
Traffic Vol, veh/h	30	100	150	40	300	20	210	20	40	20	20	40
Future Vol, veh/h	30	100	150	40	300	20	210	20	40	20	20	40
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	119	179	48	357	24	250	24	48	24	24	48
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	13.5	14.6	17.7	12.6
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	25%
Vol Thru, %	0%	33%	0%	100%	18%	0%	100%	83%	25%
Vol Right, %	0%	67%	0%	0%	82%	0%	0%	17%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	210	60	30	67	183	40	200	120	80
LT Vol	210	0	30	0	0	40	0	0	20
Through Vol	0	20	0	67	33	0	200	100	20
RT Vol	0	40	0	0	150	0	0	20	40
Lane Flow Rate	250	71	36	79	218	48	238	143	95
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.545	0.136	0.079	0.164	0.417	0.102	0.477	0.282	0.207
Departure Headway (Hd)	7.846	6.873	7.974	7.461	6.873	7.729	7.217	7.097	7.812
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	460	521	449	480	524	464	500	506	459
Service Time	5.597	4.623	5.725	5.211	4.623	5.477	4.965	4.845	5.571
HCM Lane V/C Ratio	0.543	0.136	0.08	0.165	0.416	0.103	0.476	0.283	0.207
HCM Control Delay	19.7	10.7	11.4	11.7	14.5	11.4	16.4	12.6	12.6
HCM Lane LOS	C	B	B	B	B	B	C	B	B
HCM 95th-tile Q	3.2	0.5	0.3	0.6	2	0.3	2.5	1.1	0.8

Intersection

Intersection Delay, s/veh 10.5

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	70	40	40	20	110	20	70	30	30	20	40	170
Future Vol, veh/h	70	40	40	20	110	20	70	30	30	20	40	170
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	52	52	26	143	26	91	39	39	26	52	221
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	10.7	10.7	10.5	10.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	54%	47%	13%	33%	0%
Vol Thru, %	23%	27%	73%	67%	0%
Vol Right, %	23%	27%	13%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	150	150	60	170
LT Vol	70	70	20	20	0
Through Vol	30	40	110	40	0
RT Vol	30	40	20	0	170
Lane Flow Rate	169	195	195	78	221
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.26	0.293	0.293	0.13	0.315
Departure Headway (Hd)	5.535	5.409	5.423	6.02	5.142
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	648	664	662	596	700
Service Time	3.572	3.446	3.46	3.754	2.876
HCM Lane V/C Ratio	0.261	0.294	0.295	0.131	0.316
HCM Control Delay	10.5	10.7	10.7	9.7	10.2
HCM Lane LOS	B	B	B	A	B
HCM 95th-tile Q	1	1.2	1.2	0.4	1.3

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	20	40	140	30	80	30	60	200	20	20	240	20
Future Vol, veh/h	20	40	140	30	80	30	60	200	20	20	240	20
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	51	179	38	103	38	77	256	26	26	308	26
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	17.1	12.9	20.9	24.2
HCM LOS	C	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	23%	0%	10%	100%	0%	7%
Vol Thru, %	77%	0%	20%	0%	73%	86%
Vol Right, %	0%	100%	70%	0%	27%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	260	20	200	30	110	280
LT Vol	60	0	20	30	0	20
Through Vol	200	0	40	0	80	240
RT Vol	0	20	140	0	30	20
Lane Flow Rate	333	26	256	38	141	359
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.647	0.044	0.503	0.087	0.291	0.691
Departure Headway (Hd)	6.986	6.152	7.069	8.138	7.427	6.925
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	517	580	508	439	482	521
Service Time	4.746	3.912	5.138	5.912	5.2	4.987
HCM Lane V/C Ratio	0.644	0.045	0.504	0.087	0.293	0.689
HCM Control Delay	21.8	9.2	17.1	11.7	13.2	24.2
HCM Lane LOS	C	A	C	B	B	C
HCM 95th-tile Q	4.6	0.1	2.8	0.3	1.2	5.3

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	20	40	20	20	20	50	130	20	20	80	20
Future Vol, veh/h	20	20	40	20	20	20	50	130	20	20	80	20
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	30	61	30	30	30	76	197	30	30	121	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	610	595	156	626	595	232	161	0	0	237	0	0
Stage 1	206	206	-	374	374	-	-	-	-	-	-	-
Stage 2	404	389	-	252	221	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	407	417	890	397	417	807	1418	-	-	1330	-	-
Stage 1	796	731	-	647	618	-	-	-	-	-	-	-
Stage 2	623	608	-	752	720	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	337	374	873	318	374	792	1404	-	-	1317	-	-
Mov Cap-2 Maneuver	337	374	-	318	374	-	-	-	-	-	-	-
Stage 1	739	705	-	601	574	-	-	-	-	-	-	-
Stage 2	527	565	-	647	695	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.4		15.8		1.9		1.3	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1404	-	-	504	424	1317	-
HCM Lane V/C Ratio	0.054	-	-	0.241	0.214	0.023	-
HCM Control Delay (s)	7.7	0	-	14.4	15.8	7.8	0
HCM Lane LOS	A	A	-	B	C	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.9	0.8	0.1	-

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	10	210	30	135	160	110	10	150	150	190	175	30
Future Vol, veh/h	10	210	30	135	160	110	10	150	150	190	175	30
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	244	35	157	186	128	12	174	174	221	203	35
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	33.9	36.3	39.1	23.2
HCM LOS	D	E	E	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	4%	46%	0%	100%	0%
Vol Thru, %	0%	50%	84%	54%	0%	0%	85%
Vol Right, %	0%	50%	12%	0%	100%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	300	250	295	110	190	205
LT Vol	10	0	10	135	0	190	0
Through Vol	0	150	210	160	0	0	175
RT Vol	0	150	30	0	110	0	30
Lane Flow Rate	12	349	291	343	128	221	238
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.03	0.82	0.736	0.845	0.281	0.571	0.574
Departure Headway (Hd)	9.355	8.467	9.109	8.87	7.906	9.297	8.668
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	382	426	395	408	453	387	415
Service Time	7.133	6.245	7.197	6.649	5.685	7.083	6.454
HCM Lane V/C Ratio	0.031	0.819	0.737	0.841	0.283	0.571	0.573
HCM Control Delay	12.4	40	33.9	44.7	13.8	23.9	22.6
HCM Lane LOS	B	E	D	E	B	C	C
HCM 95th-tile Q	0.1	7.6	5.8	8	1.1	3.4	3.5

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Year 2035 PM
 09/22/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	220	390	110	30	250	50	120	200	50	50	190	160
Future Volume (veh/h)	220	390	110	30	250	50	120	200	50	50	190	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	242	429	121	33	275	55	132	220	55	55	209	176
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	270	1201	335	42	919	181	159	911	222	71	509	403
Arrive On Green	0.15	0.44	0.44	0.02	0.31	0.31	0.09	0.32	0.32	0.04	0.27	0.27
Sat Flow, veh/h	1781	2727	761	1781	2944	579	1781	2815	686	1781	1857	1471
Grp Volume(v), veh/h	242	278	272	33	164	166	132	137	138	55	199	186
Grp Sat Flow(s),veh/h/ln	1781	1777	1712	1781	1777	1746	1781	1777	1724	1781	1777	1551
Q Serve(g_s), s	15.4	12.0	12.2	2.1	8.1	8.4	8.4	6.5	6.8	3.5	10.6	11.4
Cycle Q Clear(g_c), s	15.4	12.0	12.2	2.1	8.1	8.4	8.4	6.5	6.8	3.5	10.6	11.4
Prop In Lane	1.00		0.44	1.00		0.33	1.00		0.40	1.00		0.95
Lane Grp Cap(c), veh/h	270	782	754	42	554	545	159	575	558	71	487	425
V/C Ratio(X)	0.90	0.36	0.36	0.79	0.30	0.30	0.83	0.24	0.25	0.78	0.41	0.44
Avail Cap(c_a), veh/h	323	782	754	77	554	545	200	575	558	108	487	425
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	21.5	21.6	56.3	30.2	30.3	51.9	28.7	28.8	55.1	34.3	34.6
Incr Delay (d2), s/veh	21.2	1.3	1.3	11.8	1.4	1.4	17.0	1.0	1.1	8.2	2.5	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	5.3	5.2	1.1	3.7	3.7	4.5	3.0	3.0	1.8	4.9	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	22.8	22.9	68.1	31.5	31.7	68.9	29.7	29.8	63.3	36.9	37.9
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h		792			363			407			440	
Approach Delay, s/veh		37.1			34.9			42.4			40.6	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	57.0	14.3	37.8	21.6	42.1	8.6	43.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	5.0	51.0	13.0	31.0	21.0	35.0	7.0	* 38				
Max Q Clear Time (g_c+I1), s	4.1	14.2	10.4	13.4	17.4	10.4	5.5	8.8				
Green Ext Time (p_c), s	0.0	3.8	0.0	2.2	0.1	2.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

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

Intersection												
Intersection Delay, s/veh	13											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↗			↕↗	
Traffic Vol, veh/h	40	340	180	30	200	20	120	20	60	20	20	30
Future Vol, veh/h	40	340	180	30	200	20	120	20	60	20	20	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	358	189	32	211	21	126	21	63	21	21	32
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	14	11.7	12.3	11.5
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	29%
Vol Thru, %	0%	25%	0%	100%	39%	0%	100%	77%	29%
Vol Right, %	0%	75%	0%	0%	61%	0%	0%	23%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	80	40	227	293	30	133	87	70
LT Vol	120	0	40	0	0	30	0	0	20
Through Vol	0	20	0	227	113	0	133	67	20
RT Vol	0	60	0	0	180	0	0	20	30
Lane Flow Rate	126	84	42	239	309	32	140	91	74
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.269	0.155	0.08	0.421	0.508	0.066	0.271	0.172	0.153
Departure Headway (Hd)	7.659	6.63	6.864	6.357	5.921	7.467	6.958	6.794	7.486
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	466	536	519	563	605	477	512	524	482
Service Time	5.454	4.424	4.643	4.136	3.699	5.262	4.752	4.588	5.186
HCM Lane V/C Ratio	0.27	0.157	0.081	0.425	0.511	0.067	0.273	0.174	0.154
HCM Control Delay	13.3	10.7	10.2	13.7	14.7	10.8	12.4	11	11.5
HCM Lane LOS	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	1.1	0.5	0.3	2.1	2.9	0.2	1.1	0.6	0.5

Intersection

Intersection Delay, s/veh 12.3

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	210	120	80	20	50	20	40	30	20	20	40	150
Future Vol, veh/h	210	120	80	20	50	20	40	30	20	20	40	150
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	221	126	84	21	53	21	42	32	21	21	42	158
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	14.9	9.2	9.8	9.7
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	44%	51%	22%	33%	0%
Vol Thru, %	33%	29%	56%	67%	0%
Vol Right, %	22%	20%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	410	90	60	150
LT Vol	40	210	20	20	0
Through Vol	30	120	50	40	0
RT Vol	20	80	20	0	150
Lane Flow Rate	95	432	95	63	158
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.151	0.593	0.14	0.109	0.234
Departure Headway (Hd)	5.732	4.948	5.333	6.222	5.343
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	625	734	672	577	673
Service Time	3.77	2.948	3.368	3.955	3.076
HCM Lane V/C Ratio	0.152	0.589	0.141	0.109	0.235
HCM Control Delay	9.8	14.9	9.2	9.7	9.7
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.5	3.9	0.5	0.4	0.9

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	30	120	50	30	60	20	50	190	20	20	210	30
Future Vol, veh/h	30	120	50	30	60	20	50	190	20	20	210	30
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	32	129	54	32	65	22	54	204	22	22	226	32
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	13.2	10.4	13.3	14.4
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	21%	0%	15%	100%	0%	8%
Vol Thru, %	79%	0%	60%	0%	75%	81%
Vol Right, %	0%	100%	25%	0%	25%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	240	20	200	30	80	260
LT Vol	50	0	30	30	0	20
Through Vol	190	0	120	0	60	210
RT Vol	0	20	50	0	20	30
Lane Flow Rate	258	22	215	32	86	280
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.441	0.032	0.378	0.064	0.154	0.471
Departure Headway (Hd)	6.149	5.333	6.334	7.13	6.442	6.062
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	583	669	566	501	554	593
Service Time	3.901	3.085	4.395	4.899	4.211	4.114
HCM Lane V/C Ratio	0.443	0.033	0.38	0.064	0.155	0.472
HCM Control Delay	13.7	8.3	13.2	10.4	10.4	14.4
HCM Lane LOS	B	A	B	B	B	B
HCM 95th-tile Q	2.2	0.1	1.8	0.2	0.5	2.5

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	20	50	20	20	20	20	70	20	20	130	20
Future Vol, veh/h	20	20	50	20	20	20	20	70	20	20	130	20
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	26	64	26	26	26	26	90	26	26	167	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	433	420	200	452	420	123	203	0	0	126	0	0
Stage 1	242	242	-	165	165	-	-	-	-	-	-	-
Stage 2	191	178	-	287	255	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	533	525	841	518	525	928	1369	-	-	1460	-	-
Stage 1	762	705	-	837	762	-	-	-	-	-	-	-
Stage 2	811	752	-	720	696	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	473	494	825	436	494	910	1356	-	-	1446	-	-
Mov Cap-2 Maneuver	473	494	-	436	494	-	-	-	-	-	-	-
Stage 1	739	684	-	812	738	-	-	-	-	-	-	-
Stage 2	738	729	-	620	675	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12		12.5		1.4		0.9	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1356	-	-	628	554	1446	-
HCM Lane V/C Ratio	0.019	-	-	0.184	0.139	0.018	-
HCM Control Delay (s)	7.7	0	-	12	12.5	7.5	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.5	0.1	-

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	10	70	10	70	70	50	10	190	50	40	230	20
Future Vol, veh/h	10	70	10	70	70	50	10	190	50	40	230	20
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	86	12	86	86	62	12	235	62	49	284	25
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	11.9	12.2	14.7	14.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	11%	50%	0%	100%	0%
Vol Thru, %	0%	79%	78%	50%	0%	0%	92%
Vol Right, %	0%	21%	11%	0%	100%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	240	90	140	50	40	250
LT Vol	10	0	10	70	0	40	0
Through Vol	0	190	70	70	0	0	230
RT Vol	0	50	10	0	50	0	20
Lane Flow Rate	12	296	111	173	62	49	309
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.023	0.501	0.214	0.333	0.102	0.091	0.523
Departure Headway (Hd)	6.743	6.087	6.945	6.934	5.968	6.666	6.101
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	529	590	513	517	597	536	590
Service Time	4.508	3.851	5.031	4.706	3.739	4.429	3.864
HCM Lane V/C Ratio	0.023	0.502	0.216	0.335	0.104	0.091	0.524
HCM Control Delay	9.7	14.9	11.9	13.2	9.4	10.1	15.4
HCM Lane LOS	A	B	B	B	A	B	C
HCM 95th-tile Q	0.1	2.8	0.8	1.4	0.3	0.3	3

APPENDIX I

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – LONG-TERM (YEAR 2035) WITH PROJECT

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Year 2035 + P AM
 07/26/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗		↖	↖↗	
Traffic Volume (veh/h)	190	181	180	50	362	90	131	210	20	60	300	280
Future Volume (veh/h)	190	181	180	50	362	90	131	210	20	60	300	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	260	248	247	68	496	123	179	288	27	82	411	384
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	286	722	628	87	827	204	206	1043	97	104	464	401
Arrive On Green	0.16	0.41	0.41	0.05	0.29	0.29	0.12	0.32	0.32	0.06	0.26	0.26
Sat Flow, veh/h	1781	1777	1546	1781	2807	691	1781	3277	305	1781	1777	1535
Grp Volume(v), veh/h	260	248	247	68	313	306	179	155	160	82	411	384
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1721	1781	1777	1805	1781	1777	1535
Q Serve(g_s), s	17.0	11.4	13.4	4.5	17.9	18.1	11.7	7.7	7.9	5.4	26.4	29.3
Cycle Q Clear(g_c), s	17.0	11.4	13.4	4.5	17.9	18.1	11.7	7.7	7.9	5.4	26.4	29.3
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	286	722	628	87	524	507	206	565	574	104	464	401
V/C Ratio(X)	0.91	0.34	0.39	0.78	0.60	0.60	0.87	0.27	0.28	0.79	0.89	0.96
Avail Cap(c_a), veh/h	300	722	628	135	524	507	210	565	574	150	464	401
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	24.3	24.9	55.9	35.9	35.9	51.7	30.3	30.3	55.2	42.2	43.3
Incr Delay (d2), s/veh	28.1	1.3	1.8	6.1	5.0	5.3	28.8	1.2	1.2	9.8	21.4	35.7
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	9.8	5.1	5.2	2.2	8.5	8.3	6.9	3.5	3.6	2.7	14.2	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.1	25.6	26.8	61.9	40.8	41.2	80.4	31.5	31.5	65.1	63.6	79.0
LnGrp LOS	E	C	C	E	D	D	F	C	C	E	E	E
Approach Vol, veh/h		755			687			494			877	
Approach Delay, s/veh		43.7			43.1			49.2			70.4	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	54.3	17.7	37.0	23.1	41.0	10.9	43.8				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	9.0	46.0	14.0	31.0	20.0	35.0	10.0	* 36				
Max Q Clear Time (g_c+I1), s	6.5	15.4	13.7	31.3	19.0	20.1	7.4	9.9				
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	3.4	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	52.9
HCM 6th LOS	D

Notes

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

Intersection	
Intersection Delay, s/veh	15
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↗			↕↗	
Traffic Vol, veh/h	30	101	150	40	302	20	210	20	40	20	20	40
Future Vol, veh/h	30	101	150	40	302	20	210	20	40	20	20	40
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	120	179	48	360	24	250	24	48	24	24	48
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	13.5	14.7	17.7	12.6
HCM LOS	B	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	25%	
Vol Thru, %	0%	33%	0%	100%	18%	0%	100%	83%	25%	
Vol Right, %	0%	67%	0%	0%	82%	0%	0%	17%	50%	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	210	60	30	67	184	40	201	121	80	
LT Vol	210	0	30	0	0	40	0	0	20	
Through Vol	0	20	0	67	34	0	201	101	20	
RT Vol	0	40	0	0	150	0	0	20	40	
Lane Flow Rate	250	71	36	80	219	48	240	144	95	
Geometry Grp	8	8	8	8	8	8	8	8	8	
Degree of Util (X)	0.546	0.137	0.079	0.166	0.418	0.102	0.481	0.284	0.207	
Departure Headway (Hd)	7.862	6.888	7.985	7.472	6.885	7.738	7.226	7.107	7.828	
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cap	460	520	449	480	523	463	499	506	458	
Service Time	5.609	4.635	5.736	5.222	4.635	5.485	4.972	4.853	5.587	
HCM Lane V/C Ratio	0.543	0.137	0.08	0.167	0.419	0.104	0.481	0.285	0.207	
HCM Control Delay	19.7	10.7	11.4	11.7	14.5	11.4	16.5	12.7	12.6	
HCM Lane LOS		C	B	B	B	B	C	B	B	
HCM 95th-tile Q		3.2	0.5	0.3	0.6	2	0.3	2.6	1.2	0.8

Intersection												
Intersection Delay, s/veh	10.5											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	70	40	41	20	110	20	72	30	30	20	40	170
Future Vol, veh/h	70	40	41	20	110	20	72	30	30	20	40	170
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	52	53	26	143	26	94	39	39	26	52	221
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	10.7	10.7	10.6	10.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	55%	46%	13%	33%	0%
Vol Thru, %	23%	26%	73%	67%	0%
Vol Right, %	23%	27%	13%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	151	150	60	170
LT Vol	72	70	20	20	0
Through Vol	30	40	110	40	0
RT Vol	30	41	20	0	170
Lane Flow Rate	171	196	195	78	221
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.264	0.295	0.294	0.131	0.316
Departure Headway (Hd)	5.545	5.415	5.433	6.03	5.152
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	648	663	660	595	698
Service Time	3.584	3.454	3.473	3.764	2.886
HCM Lane V/C Ratio	0.264	0.296	0.295	0.131	0.317
HCM Control Delay	10.6	10.7	10.7	9.7	10.3
HCM Lane LOS	B	B	B	A	B
HCM 95th-tile Q	1.1	1.2	1.2	0.4	1.4

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	2	0	172	121	0
Future Vol, veh/h	0	2	0	172	121	0
Conflicting Peds, #/hr	10	10	10	0	0	10
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	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	0	261	183	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	464	203	193	0	-	0
Stage 1	193	-	-	-	-	-
Stage 2	271	-	-	-	-	-
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	556	838	1380	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	545	822	1367	-	-	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1367	-	822	-	-
HCM Lane V/C Ratio	-	-	0.004	-	-
HCM Control Delay (s)	0	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	20.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	20	41	140	38	85	30	60	200	23	20	240	20
Future Vol, veh/h	20	41	140	38	85	30	60	200	23	20	240	20
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	53	179	49	109	38	77	256	29	26	308	26
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	17.6	13.2	21.4	25
HCM LOS	C	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	23%	0%	10%	100%	0%	7%
Vol Thru, %	77%	0%	20%	0%	74%	86%
Vol Right, %	0%	100%	70%	0%	26%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	260	23	201	38	115	280
LT Vol	60	0	20	38	0	20
Through Vol	200	0	41	0	85	240
RT Vol	0	23	140	0	30	20
Lane Flow Rate	333	29	258	49	147	359
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.656	0.051	0.513	0.111	0.307	0.7
Departure Headway (Hd)	7.082	6.247	7.163	8.189	7.487	7.025
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	510	571	503	436	478	513
Service Time	4.85	4.015	5.237	5.968	5.265	5.096
HCM Lane V/C Ratio	0.653	0.051	0.513	0.112	0.308	0.7
HCM Control Delay	22.5	9.4	17.6	12	13.6	25
HCM Lane LOS	C	A	C	B	B	C
HCM 95th-tile Q	4.7	0.2	2.9	0.4	1.3	5.4

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	
Traffic Vol, veh/h	4	80	92	1	1	11
Future Vol, veh/h	4	80	92	1	1	11
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	121	139	2	2	17

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	151	0	-	0	293
Stage 1	-	-	-	-	150
Stage 2	-	-	-	-	143
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1430	-	-	-	698
Stage 1	-	-	-	-	878
Stage 2	-	-	-	-	884
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1416	-	-	-	681
Mov Cap-2 Maneuver	-	-	-	-	681
Stage 1	-	-	-	-	865
Stage 2	-	-	-	-	875

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1416	-	-	-	849
HCM Lane V/C Ratio	0.004	-	-	-	0.021
HCM Control Delay (s)	7.6	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	20	40	20	20	20	50	131	20	20	80	23
Future Vol, veh/h	21	20	40	20	20	20	50	131	20	20	80	23
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	30	61	30	30	30	76	198	30	30	121	35

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	614	599	159	629	601	233	166	0	0	238	0	0
Stage 1	209	209	-	375	375	-	-	-	-	-	-	-
Stage 2	405	390	-	254	226	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	404	415	886	395	414	806	1412	-	-	1329	-	-
Stage 1	793	729	-	646	617	-	-	-	-	-	-	-
Stage 2	622	608	-	750	717	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	334	372	869	316	371	791	1399	-	-	1316	-	-
Mov Cap-2 Maneuver	334	372	-	316	371	-	-	-	-	-	-	-
Stage 1	737	703	-	600	573	-	-	-	-	-	-	-
Stage 2	526	565	-	645	692	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	15.9	1.9	1.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1399	-	-	498	421	1316	-	-
HCM Lane V/C Ratio	0.054	-	-	0.246	0.216	0.023	-	-
HCM Control Delay (s)	7.7	0	-	14.6	15.9	7.8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1	0.8	0.1	-	-

Intersection	
Intersection Delay, s/veh	34.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	10	210	30	142	160	110	10	153	153	190	183	30
Future Vol, veh/h	10	210	30	142	160	110	10	153	153	190	183	30
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	244	35	165	186	128	12	178	174	221	213	35
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	35.1	39.9	41.5	24.2
HCM LOS	E	E	E	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	4%	47%	0%	100%	0%
Vol Thru, %	0%	50%	84%	53%	0%	0%	86%
Vol Right, %	0%	50%	12%	0%	100%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	306	250	302	110	190	213
LT Vol	10	0	10	142	0	190	0
Through Vol	0	153	210	160	0	0	183
RT Vol	0	153	30	0	110	0	30
Lane Flow Rate	12	352	291	351	128	221	248
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.031	0.837	0.745	0.874	0.284	0.576	0.603
Departure Headway (Hd)	9.446	8.558	9.229	8.955	7.984	9.389	8.763
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	378	423	390	404	448	382	411
Service Time	7.228	6.339	7.323	6.738	5.766	7.18	6.554
HCM Lane V/C Ratio	0.032	0.832	0.746	0.869	0.286	0.579	0.603
HCM Control Delay	12.5	42.5	35.1	49.4	13.9	24.3	24.1
HCM Lane LOS	B	E	E	E	B	C	C
HCM 95th-tile Q	0.1	8	5.9	8.7	1.2	3.5	3.8

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	3	550	405	0	1	7
Future Vol, veh/h	3	550	405	0	1	7
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	640	471	0	1	8

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	481	0	-	0	1137 491
Stage 1	-	-	-	-	481 -
Stage 2	-	-	-	-	656 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1082	-	-	-	223 578
Stage 1	-	-	-	-	622 -
Stage 2	-	-	-	-	516 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1072	-	-	-	218 567
Mov Cap-2 Maneuver	-	-	-	-	218 -
Stage 1	-	-	-	-	613 -
Stage 2	-	-	-	-	511 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1072	-	-	-	472
HCM Lane V/C Ratio	0.003	-	-	-	0.02
HCM Control Delay (s)	8.4	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 6th Signalized Intersection Summary
 1: N Broadway & W Country Club Lane/Rincon Avenue

Year 2035 + P PM
 07/26/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕		↖	↕	
Traffic Volume (veh/h)	220	392	112	30	250	50	120	200	50	50	190	160
Future Volume (veh/h)	220	392	112	30	250	50	120	200	50	50	190	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	242	431	123	33	275	55	132	220	55	55	209	176
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	270	1197	338	42	919	181	159	911	222	71	509	403
Arrive On Green	0.15	0.44	0.44	0.02	0.31	0.31	0.09	0.32	0.32	0.04	0.27	0.27
Sat Flow, veh/h	1781	2719	768	1781	2944	579	1781	2815	686	1781	1857	1471
Grp Volume(v), veh/h	242	280	274	33	164	166	132	137	138	55	199	186
Grp Sat Flow(s),veh/h/ln	1781	1777	1710	1781	1777	1746	1781	1777	1724	1781	1777	1551
Q Serve(g_s), s	15.4	12.1	12.4	2.1	8.1	8.4	8.4	6.5	6.8	3.5	10.6	11.4
Cycle Q Clear(g_c), s	15.4	12.1	12.4	2.1	8.1	8.4	8.4	6.5	6.8	3.5	10.6	11.4
Prop In Lane	1.00		0.45	1.00		0.33	1.00		0.40	1.00		0.95
Lane Grp Cap(c), veh/h	270	782	753	42	555	545	159	575	558	71	487	425
V/C Ratio(X)	0.90	0.36	0.36	0.79	0.30	0.30	0.83	0.24	0.25	0.78	0.41	0.44
Avail Cap(c_a), veh/h	321	782	753	77	555	545	200	575	558	108	487	425
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	21.5	21.6	56.3	30.2	30.3	51.9	28.7	28.8	55.1	34.3	34.6
Incr Delay (d2), s/veh	21.4	1.3	1.4	11.8	1.4	1.4	17.0	1.0	1.1	8.2	2.5	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	5.3	5.2	1.1	3.7	3.7	4.5	3.0	3.0	1.8	4.9	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.6	22.8	23.0	68.1	31.5	31.7	68.9	29.7	29.8	63.3	36.9	37.9
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h		796			363			407			440	
Approach Delay, s/veh		37.1			34.9			42.4			40.6	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	57.0	14.3	37.8	21.6	42.1	8.6	43.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	* 6				
Max Green Setting (Gmax), s	5.0	51.0	13.0	31.0	20.9	35.1	7.0	* 38				
Max Q Clear Time (g_c+I1), s	4.1	14.4	10.4	13.4	17.4	10.4	5.5	8.8				
Green Ext Time (p_c), s	0.0	3.8	0.0	2.2	0.1	2.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

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

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕		↵	↕			↕	
Traffic Vol, veh/h	40	342	180	30	200	20	120	20	60	20	20	30
Future Vol, veh/h	40	342	180	30	200	20	120	20	60	20	20	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	360	189	32	211	21	126	21	63	21	21	32
Number of Lanes	1	2	0	1	2	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	14.1	11.7	12.3	11.5
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	29%
Vol Thru, %	0%	25%	0%	100%	39%	0%	100%	77%	29%
Vol Right, %	0%	75%	0%	0%	61%	0%	0%	23%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	80	40	228	294	30	133	87	70
LT Vol	120	0	40	0	0	30	0	0	20
Through Vol	0	20	0	228	114	0	133	67	20
RT Vol	0	60	0	0	180	0	0	20	30
Lane Flow Rate	126	84	42	240	309	32	140	91	74
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.269	0.155	0.08	0.424	0.509	0.066	0.272	0.172	0.153
Departure Headway (Hd)	7.666	6.636	6.864	6.357	5.922	7.472	6.964	6.799	7.493
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	466	536	519	564	603	476	512	524	482
Service Time	5.461	4.431	4.645	4.137	3.702	5.266	4.757	4.592	5.193
HCM Lane V/C Ratio	0.27	0.157	0.081	0.426	0.512	0.067	0.273	0.174	0.154
HCM Control Delay	13.3	10.7	10.2	13.8	14.8	10.8	12.4	11	11.5
HCM Lane LOS	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	1.1	0.5	0.3	2.1	2.9	0.2	1.1	0.6	0.5

Intersection												
Intersection Delay, s/veh	12.4											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	210	120	82	20	50	20	40	30	20	20	40	150
Future Vol, veh/h	210	120	82	20	50	20	40	30	20	20	40	150
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	221	126	86	21	53	21	42	32	21	21	42	158
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

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	15	9.3	9.8	9.7
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	44%	51%	22%	33%	0%
Vol Thru, %	33%	29%	56%	67%	0%
Vol Right, %	22%	20%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	412	90	60	150
LT Vol	40	210	20	20	0
Through Vol	30	120	50	40	0
RT Vol	20	82	20	0	150
Lane Flow Rate	95	434	95	63	158
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.151	0.596	0.141	0.109	0.235
Departure Headway (Hd)	5.74	4.948	5.34	6.229	5.35
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	624	733	672	576	671
Service Time	3.779	2.948	3.373	3.963	3.084
HCM Lane V/C Ratio	0.152	0.592	0.141	0.109	0.235
HCM Control Delay	9.8	15	9.3	9.7	9.7
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.5	4	0.5	0.4	0.9

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	TT			TT	TT	
Traffic Vol, veh/h	0	0	1	110	172	0
Future Vol, veh/h	0	0	1	110	172	0
Conflicting Peds, #/hr	10	10	10	0	0	10
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1	141	221	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	384	241	231	0	-	0
Stage 1	231	-	-	-	-	-
Stage 2	153	-	-	-	-	-
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	619	798	1337	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	606	783	1324	-	-	-
Mov Cap-2 Maneuver	606	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	866	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1324	-	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-
HCM Control Delay (s)	7.7	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕	↕		↕	
Traffic Vol, veh/h	30	125	50	34	62	20	50	190	29	20	210	30
Future Vol, veh/h	30	125	50	34	62	20	50	190	29	20	210	30
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	32	134	54	37	67	22	54	204	31	22	226	32
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay	13.5	10.5	13.3	14.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	21%	0%	15%	100%	0%	8%
Vol Thru, %	79%	0%	61%	0%	76%	81%
Vol Right, %	0%	100%	24%	0%	24%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	240	29	205	34	82	260
LT Vol	50	0	30	34	0	20
Through Vol	190	0	125	0	62	210
RT Vol	0	29	50	0	20	30
Lane Flow Rate	258	31	220	37	88	280
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.444	0.047	0.391	0.073	0.159	0.475
Departure Headway (Hd)	6.199	5.383	6.379	7.175	6.492	6.12
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	578	662	562	497	550	587
Service Time	3.959	3.143	4.444	4.948	4.264	4.18
HCM Lane V/C Ratio	0.446	0.047	0.391	0.074	0.16	0.477
HCM Control Delay	13.9	8.4	13.5	10.5	10.5	14.6
HCM Lane LOS	B	A	B	B	B	B
HCM 95th-tile Q	2.3	0.1	1.8	0.2	0.6	2.5

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	
Traffic Vol, veh/h	13	91	60	2	1	6
Future Vol, veh/h	13	91	60	2	1	6
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	117	77	3	1	8

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	90	0	-	0	250 99
Stage 1	-	-	-	-	89 -
Stage 2	-	-	-	-	161 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1505	-	-	-	739 957
Stage 1	-	-	-	-	934 -
Stage 2	-	-	-	-	868 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1491	-	-	-	715 939
Mov Cap-2 Maneuver	-	-	-	-	715 -
Stage 1	-	-	-	-	913 -
Stage 2	-	-	-	-	859 -

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1491	-	-	-	899
HCM Lane V/C Ratio	0.011	-	-	-	0.01
HCM Control Delay (s)	7.4	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	20	51	20	20	20	21	70	20	20	131	21
Future Vol, veh/h	21	20	51	20	20	20	21	70	20	20	131	21
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	26	65	26	26	26	27	90	26	26	168	27

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	437	424	202	456	424	123	205	0	0	126	0	0
Stage 1	244	244	-	167	167	-	-	-	-	-	-	-
Stage 2	193	180	-	289	257	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	530	522	839	515	522	928	1366	-	-	1460	-	-
Stage 1	760	704	-	835	760	-	-	-	-	-	-	-
Stage 2	809	750	-	719	695	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	470	491	823	433	491	910	1353	-	-	1446	-	-
Mov Cap-2 Maneuver	470	491	-	433	491	-	-	-	-	-	-	-
Stage 1	737	683	-	810	736	-	-	-	-	-	-	-
Stage 2	736	727	-	618	674	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.1		12.6		1.5		0.9	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1353	-	-	624	551	1446	-	-
HCM Lane V/C Ratio	0.02	-	-	0.189	0.14	0.018	-	-
HCM Control Delay (s)	7.7	0	-	12.1	12.6	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.5	0.1	-	-

Intersection	
Intersection Delay, s/veh	14.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	10	70	10	74	70	50	10	199	59	40	234	20
Future Vol, veh/h	10	70	10	74	70	50	10	199	59	40	234	20
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	86	12	91	86	62	12	246	73	49	289	25
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	12.1	12.5	15.7	15.2
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	11%	51%	0%	100%	0%
Vol Thru, %	0%	77%	78%	49%	0%	0%	92%
Vol Right, %	0%	23%	11%	0%	100%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	258	90	144	50	40	254
LT Vol	10	0	10	74	0	40	0
Through Vol	0	199	70	70	0	0	234
RT Vol	0	59	10	0	50	0	20
Lane Flow Rate	12	319	111	178	62	49	314
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.023	0.541	0.218	0.347	0.104	0.092	0.538
Departure Headway (Hd)	6.791	6.12	7.062	7.031	6.057	6.74	6.176
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	586	504	508	588	529	580
Service Time	4.564	3.892	5.159	4.812	3.838	4.51	3.945
HCM Lane V/C Ratio	0.023	0.544	0.22	0.35	0.105	0.093	0.541
HCM Control Delay	9.7	15.9	12.1	13.5	9.5	10.2	16
HCM Lane LOS	A	C	B	B	A	B	C
HCM 95th-tile Q	0.1	3.2	0.8	1.5	0.3	0.3	3.2

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	9	160	190	1	0	4
Future Vol, veh/h	9	160	190	1	0	4
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	198	235	1	0	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	246	0	-	0	476 256
Stage 1	-	-	-	-	246 -
Stage 2	-	-	-	-	230 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1320	-	-	-	548 783
Stage 1	-	-	-	-	795 -
Stage 2	-	-	-	-	808 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1307	-	-	-	532 768
Mov Cap-2 Maneuver	-	-	-	-	532 -
Stage 1	-	-	-	-	780 -
Stage 2	-	-	-	-	800 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1307	-	-	-	768
HCM Lane V/C Ratio	0.009	-	-	-	0.006
HCM Control Delay (s)	7.8	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

APPENDIX J

BUS ROUTES 358, 359 AND 235 MAP AND SCHEDULE

358/359

N. Broadway, Country Club & El Norte Pkwy.

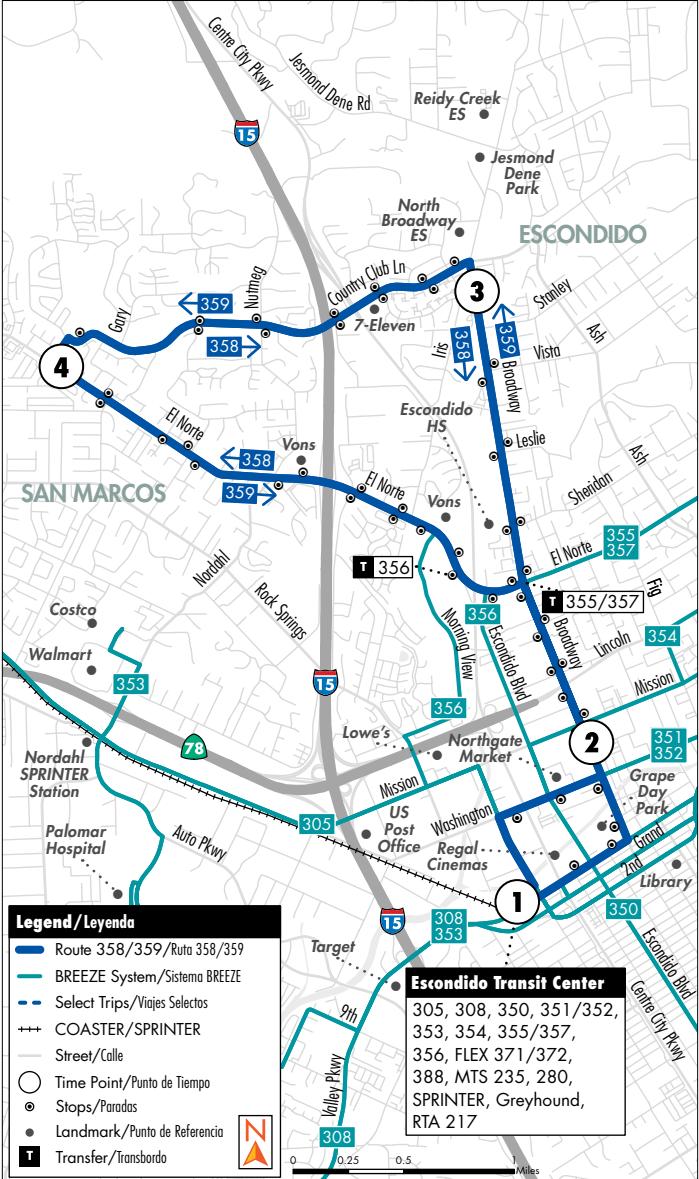
N. Broadway, Country Club y El Norte Pkwy.

M-F
L-V

Destinations/Destinos

- Escondido Civic Center
- Kaiser Permanente
- Regal Cinemas
- Escondido Senior Center

- Escondido High School
- YMCA
- Vons
- Stater Brothers



358/359

N. Broadway, Country Club & El Norte Pkwy.

N. Broadway, Country Club y El Norte Pkwy.

See pg. 6 for Holiday schedules/Ver pág. 244 para obtener los horarios de días festivos



358 Monday - Friday El Norte Pkwy. then N. Broadway 358 Lunes a Viernes • El Norte Pkwy. luego N. Broadway

Escondido Transit Center	N. Broadway & Park Ave.	El Norte Pkwy. & Country Club Ln.	Country Club Ln. & N. Broadway	N. Broadway & Park Ave.	Escondido Transit Center
1	2	4	3	2	1
6:02	6:06	6:18	6:24	6:35	6:42 ^a
8:02	8:06	8:21	8:27	8:39	8:46
10:02	10:06	10:20	10:27	10:38	10:45
12:02	12:07	12:21	12:27	12:39	12:46^p
2:02	2:08	2:23	2:30	2:45	2:53
4:02	4:08	4:23	4:30	4:42	4:49
6:02	6:07	6:21	6:28	6:37	6:44
8:02	8:06	8:19	8:24	8:33	8:38



359 Monday - Friday N. Broadway then El Norte Pkwy. 359 Lunes a Viernes • N. Broadway luego El Norte Pkwy.

Escondido Transit Center	N. Broadway & Park Ave.	Country Club Ln. & N. Broadway	El Norte Pkwy. & Country Club Ln.	N. Broadway & Park Ave.	Escondido Transit Center
1	2	3	4	2	1
5:02	5:06	5:12	5:17	5:29	5:35 ^a
7:02	7:07	7:20	7:29	7:46	7:53
9:02	9:08	9:17	9:24	9:39	9:45
11:02	11:08	11:16	11:24	11:40	11:47
1:02	1:08	1:18	1:25	1:41	1:49^p
3:02	3:08	3:18	3:25	3:42	3:49
5:02	5:08	5:18	5:26	5:42	5:49
7:02	7:07	7:15	7:22	7:35	7:41

Route 358/359 does not operate on Saturdays, Sundays, or holidays.
La Ruta 358/359 no opera los sábados, domingos o en días festivos.

Exact fare, please Favor de pagar la cantidad exacta

Fares Tarifas	Adult Adulto	Senior/Disabled/Medicare/Youth* Personas Mayores/con Discapacidades/Medicare/Jóvenes*
ONE-WAY FARES Tarifas Sencillas	\$2.50	\$1.25
EARNED DAY PASS Pase del Día Ganado	\$6.00	\$3.00
MONTH PASS Pase mensual	\$72.00	\$23.00

Load money into your PRONTO account to earn Day Passes and Month Passes. Tap your PRONTO card (\$2) or scan your PRONTO mobile app (free) to ride. Carga dinero a tu cuenta de PRONTO para ganar Pases del Día y Pases Mensuales. Toca tu tarjeta PRONTO (\$2) o escanea tu aplicación móvil PRONTO (gratis) para viajar.

• One-ways with PRONTO receive free transfers for two hours. No free transfers for cash. Los viajes de ida con PRONTO reciben transbordos gratuitos por dos horas. No se permiten transbordos gratuitos con pagos en efectivo.

• Day Passes not sold in advance. Earned with PRONTO. Los pases diarios no se venden por adelantado. Se obtienen con PRONTO.

• A month pass can be purchased in advanced or earned with PRONTO. Good from first day to last day of the month. El Pase Mensual se puede comprar por adelantado o se obtiene mientras viaja con PRONTO. Válido desde el primer día hasta el último día del mes.

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959. Youth Eligibility: Ages 6-18. *Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959. Elegibilidad para Jóvenes: edades 6-18

For more information, visit: / Para más información, visite: sdmts.com/fares

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

Effective SEPTEMBER 1, 2021

Rapid

235

Escondido - Downtown San Diego
via I-15

DESTINATIONS

- Boulevard Transit Plaza
- City Heights Transit Plaza
- Del Lago Transit Station
- Kearny Mesa Transit Center
- Miramar College Transit Station
- Rancho Bernardo Transit Station
- Sabre Springs/Peñasquitos Transit Station

TROLLEY CONNECTIONS

- City College
- America Plaza
- Santa Fe Depot



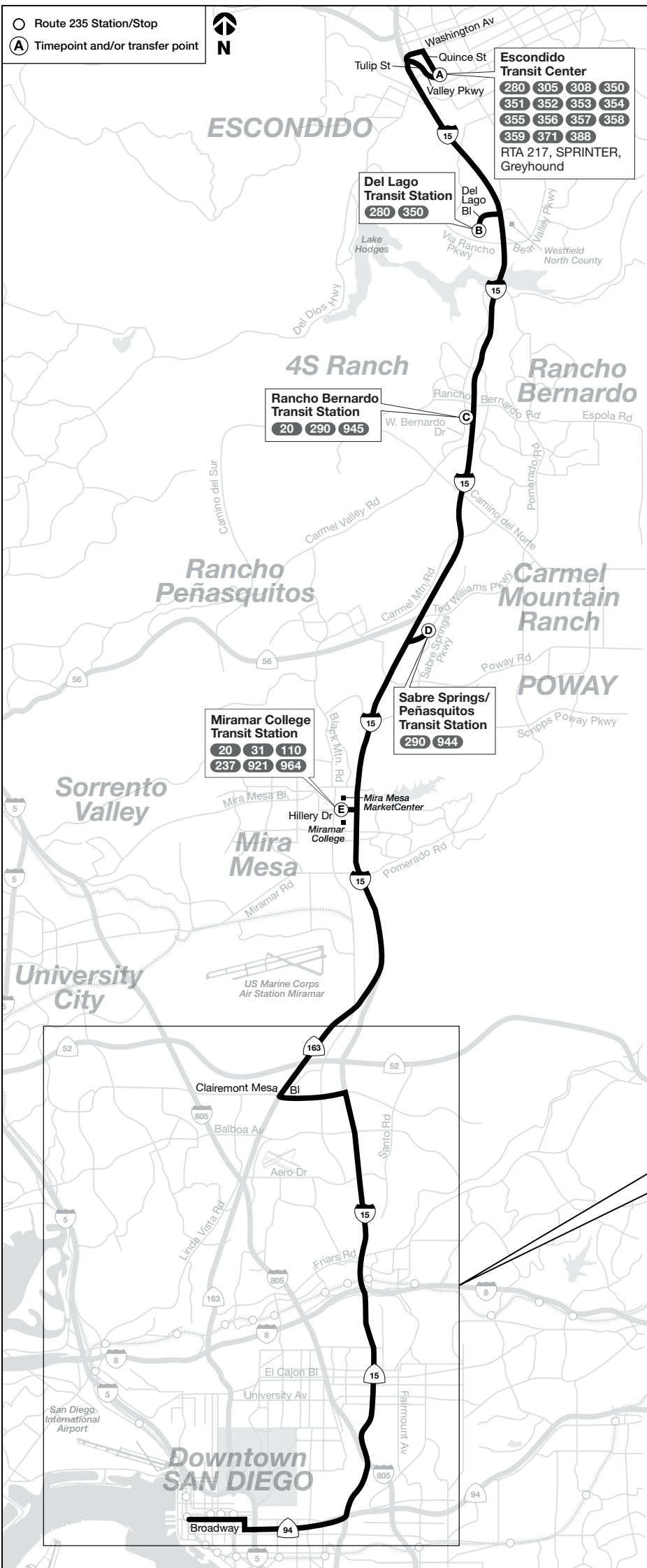
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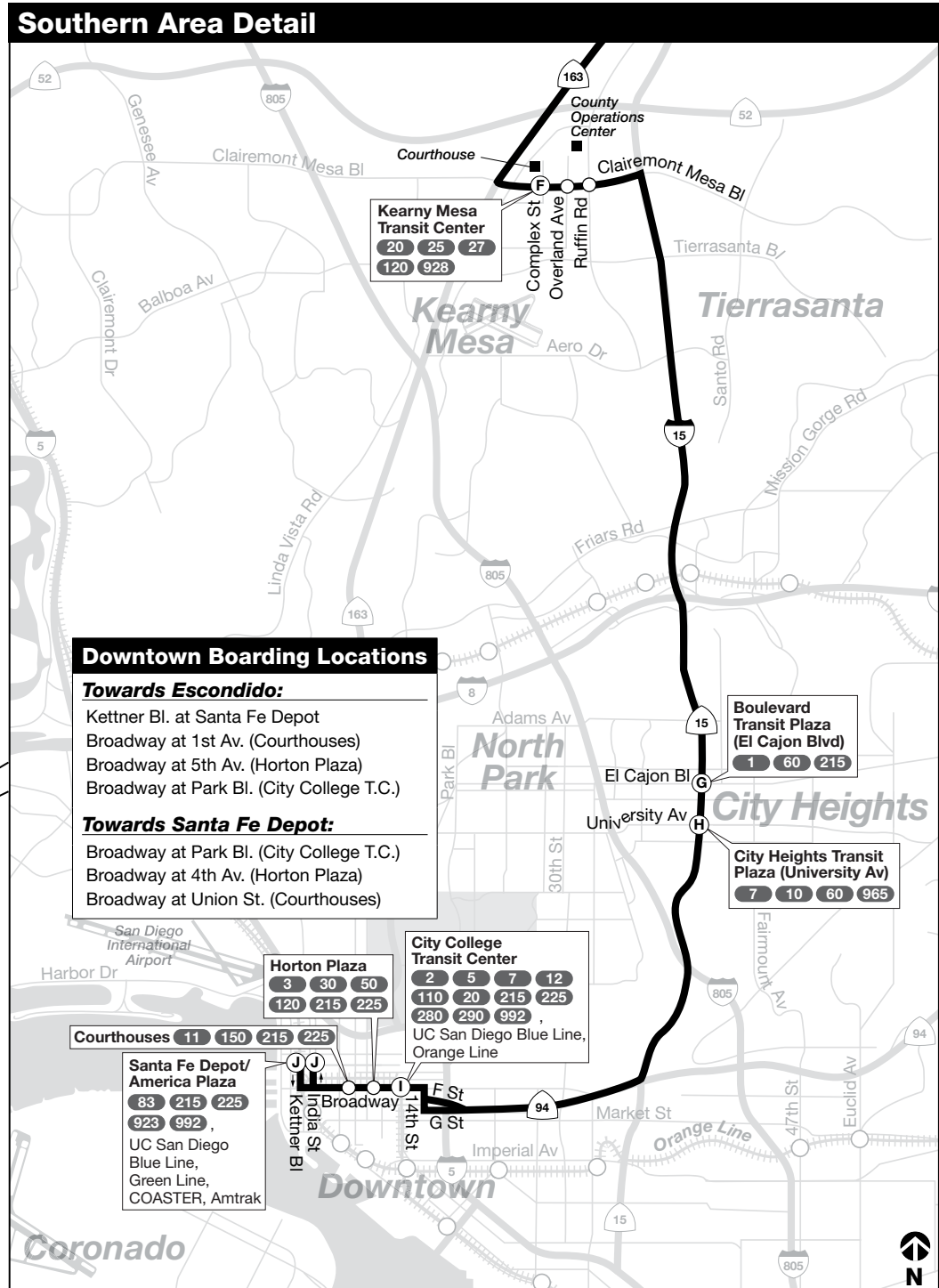
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Route 235 – Monday through Friday / lunes a viernes

Escondido → Downtown San Diego

(A) Escondido Transit Center DEPART	(B) Del Lago Transit Station	(C) Rancho Bernardo Transit Station	(D) Sabre Springs/ Peñasquitos T.S.	(E) Miramar College Transit Station	(F) Kearny Mesa Transit Center	(G) Boulevard Transit Plaza (El Cajon Bl.)	(H) City Heights Transit Plaza (Univ. Av.)	(I) City College Transit Station (Broadway)	(J) America Plaza Trolley Station ARRIVE
—	—	—	—	—	4:58a	5:08a	5:10a	5:19a	5:26a
—	—	—	—	—	5:13	5:23	5:25	5:34	5:41
—	—	—	—	5:18a	5:28	5:38	5:40	5:49	5:56
5:00a	5:09a	5:17a	5:24a	5:33	5:43	5:53	5:55	6:04	6:11
—	—	—	—	5:48	5:59	6:09	6:11	6:21	6:28
5:33	5:42	5:50	5:57	6:06	6:17	6:27	6:29	6:40	6:47
—	—	—	—	6:21	6:32	6:43	6:45	6:57	7:05
6:03	6:12	6:20	6:27	6:36	6:47	6:58	7:00	7:12	7:20
6:18	6:27	6:35	6:42	6:51	7:02	7:13	7:15	7:27	7:35
6:30	6:40	6:48	6:55	7:04	7:15	7:26	7:28	7:41	7:50
6:46	6:56	7:04	7:11	7:20	7:31	7:42	7:44	7:57	8:06
7:01	7:11	7:19	7:26	7:35	7:46	7:57	7:59	8:12	8:21
7:16	7:26	7:34	7:41	7:50	8:01	8:12	8:14	8:27	8:36
7:31	7:41	7:49	7:56	8:05	8:16	8:27	8:29	8:42	8:51
7:46	7:56	8:04	8:11	8:20	8:31	8:42	8:44	8:57	9:06
8:01	8:11	8:19	8:26	8:35	8:46	8:57	8:59	9:11	9:20
8:17	8:26	8:34	8:41	8:50	9:01	9:12	9:14	9:26	9:35
8:33	8:42	8:50	8:57	9:06	9:17	9:28	9:30	9:41	9:50
8:48	8:57	9:05	9:12	9:21	9:32	9:43	9:45	9:56	10:05
9:03	9:12	9:20	9:27	9:36	9:47	9:58	10:00	10:11	10:20
9:18	9:27	9:35	9:42	9:51	10:02	10:13	10:15	10:26	10:35
9:33	9:42	9:50	9:57	10:06	10:17	10:28	10:30	10:41	10:50
9:48	9:57	10:05	10:12	10:21	10:32	10:43	10:45	10:56	11:05
10:03	10:12	10:20	10:27	10:36	10:47	10:58	11:00	11:11	11:20
10:18	10:27	10:35	10:42	10:51	11:02	11:13	11:15	11:26	11:35
10:33	10:42	10:50	10:57	11:06	11:17	11:29	11:31	11:42	11:51
10:48	10:57	11:05	11:12	11:21	11:32	11:44	11:46	11:57	12:06p
11:03	11:12	11:20	11:27	11:36	11:47	11:59	12:01p	12:12p	12:21
11:18	11:27	11:35	11:42	11:51	12:02p	12:14p	12:16	12:27	12:36
11:33	11:42	11:50	11:57	12:06p	12:17	12:29	12:31	12:42	12:51
11:48	11:57	12:05p	12:12p	12:21	12:32	12:44	12:46	12:57	1:06
12:03p	12:12p	12:20	12:27	12:36	12:47	12:59	1:01	1:12	1:21
12:19	12:28	12:36	12:43	12:52	1:03	1:15	1:17	1:28	1:37
12:34	12:43	12:51	12:58	1:07	1:18	1:30	1:32	1:43	1:52
12:49	12:58	1:06	1:13	1:22	1:33	1:45	1:47	1:58	2:07
1:03	1:12	1:20	1:27	1:36	1:47	1:59	2:01	2:12	2:21
1:18	1:27	1:35	1:42	1:51	2:02	2:14	2:16	2:27	2:36
1:33	1:42	1:50	1:57	2:06	2:17	2:29	2:31	2:42	2:51
1:47	1:56	2:04	2:11	2:20	2:31	2:43	2:45	2:56	3:05
2:00	2:09	2:17	2:24	2:33	2:44	2:56	2:58	3:09	3:18
2:13	2:22	2:30	2:37	2:46	2:57	3:09	3:11	3:22	3:31
2:28	2:37	2:45	2:52	3:01	3:12	3:25	3:27	3:39	3:48
2:42	2:52	3:00	3:07	3:16	3:28	3:42	3:44	3:57	4:06
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3:23	3:33	3:41	3:48	3:57	4:10	4:26	4:28	4:43	4:52
3:39	3:49	3:57	4:04	4:13	4:26	4:42	4:44	4:59	5:08
3:54	4:04	4:12	4:19	4:28	4:41	4:58	5:00	5:15	5:24
4:09	4:19	4:27	4:34	4:43	4:56	5:13	5:15	5:30	5:39
4:24	4:34	4:42	4:49	4:58	5:11	5:28	5:30	5:45	5:54
4:39	4:49	4:57	5:04	5:13	5:26	5:43	5:45	6:00	6:09
4:54	5:04	5:12	5:19	5:28	5:41	5:58	6:00	6:15	6:23
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5:27	5:37	5:45	5:52	6:01	6:13	6:27	6:29	6:43	6:51
5:45	5:54	6:02	6:09	6:18	6:29	6:42	6:44	6:57	7:05
6:02	6:11	6:19	6:26	6:35	6:46	6:58	7:00	7:11	7:19
6:17	6:26	6:34	6:41	6:50	7:01	7:13	7:15	7:26	7:34
6:32	6:41	6:49	6:56	7:05	7:16	7:28	7:30	7:41	7:49
6:47	6:56	7:04	7:11	7:20	7:31	7:43	7:45	7:56	8:04
7:06	7:15	7:23	7:30	7:39	7:49	8:00	8:02	8:12	8:20
7:36	7:45	7:53	8:00	8:09	8:19	8:30	8:32	8:42	8:50
8:05	8:14	8:22	8:29	8:38	8:48	8:59	9:01	9:11	9:19
8:35	8:44	8:52	8:59	9:08	9:18	9:29	9:31	9:40	9:47
9:05	9:14	9:22	9:29	9:38	9:48	9:59	10:01	10:10	10:17
9:35	9:44	9:52	9:59	10:08	10:18	10:29	10:31	10:40	10:47
10:05	10:14	10:22	10:29	10:38	10:48	10:58	11:00	11:09	11:16
10:35	10:44	10:52	10:59	11:08	11:18	11:28	11:30	11:39	11:46

Downtown San Diego → Escondido

(J) Santa Fe Depot Transit Ctr. DEPART	(I) City College Transit Station (Broadway)	(H) City Heights Transit Plaza (Univ. Av.)	(G) Boulevard Transit Plaza (El Cajon Bl.)	(F) Kearny Mesa Transit Center	(E) Miramar College Transit Station	(D) Sabre Springs/ Peñasquitos T.S.	(C) Rancho Bernardo Transit Station	(B) Del Lago Transit Station	(A) Escondido Transit Center ARRIVE
4:43a	4:50a	5:00a	5:02a	5:13a	5:24a	5:31a	5:39a	5:46a	5:57a
5:03	5:10	5:20	5:22	5:33	5:44	5:51	5:59	6:06	6:17
5:18	5:25	5:35	5:37	5:49	6:00	6:07	6:15	6:22	6:34
5:33	5:40	5:50	5:52	6:04	6:15	6:22	6:30	6:37	6:49
5:46	5:53	6:03	6:05	6:17	6:28	6:35	6:43	6:50	7:02
5:59	6:06	6:16	6:18	6:30	6:41	6:48	6:56	7:03	7:15
6:12	6:19	6:29	6:31	6:44	6:55	7:02	7:10	7:17	7:29
6:26	6:34	6:44	6:46	6:58	7:12	7:19	7:27	7:34	7:46
6:41	6:49	6:59	7:01	7:15	7:27	7:34	7:42	7:49	8:01
6:55	7:03	7:14	7:16	7:32	7:44	7:51	7:59	8:06	8:18
7:10	7:18	7:29	7:31	7:47	7:59	8:06	8:14	8:21	8:33
7:25	7:33	7:44	7:46	8:02	8:14	8:21	8:29	8:36	8:48
7:40	7:48	7:59	8:01	8:17	8:29	8:36	8:44	8:51	9:03
7:55	8:03	8:14	8:16	8:32	8:44	8:51	8:59	9:06	9:18
8:10	8:18	8:29	8:31	8:47	8:59	9:06	9:14	9:21	9:33
8:25	8:33	8:43	8:45	9:00	9:12	9:19	9:27	9:34	9:46
8:40	8:48	8:58	9:00	9:14	9:26	9:33	9:41	9:48	10:00
8:55	9:03	9:13	9:15	9:28	9:39	9:46	9:54	10:01	10:13
9:10	9:18	9:28	9:30	9:43	9:54	10:01	10:09	10:16	10:28
9:23	9:31	9:41	9:43	9:56	10:07	10:14	10:22	10:29	10:41
9:38	9:46	9:56	9:58	10:11	10:22	10:29	10:37	10:44	10:56
9:53	10:01	10:11	10:13	10:26	10:37	10:44	10:52	10:59	11:11
10:08	10:16	10:26	10:28	10:41	10:52	10:59	11:07	11:14	11:26
10:23	10:31	10:41	10:43	10:56	11:07	11:14	11:22	11:29	11:41
10:38	10:46	10:56	10:58	11:11	11:22	11:29	11:37	11:44	11:56
10:53	11:01	11:11	11:13	11:26	11:37	11:44	11:52	11:59	12:11p
11:08	11:16	11:26	11:28	11:41	11:52	11:59	12:07p	12:14p	12:26
11:23	11:31	11:41	11:43	11:56	12:07p	12:14p	12:22	12:29	12:41
11:38	11:46	11:56	11:58	12:11p	12:22	12:29	12:37	12:44	12:56
11:53	12:02p	12:12p	12:14p	12:27	12:38	12:45	12:53	1:00	1:12
12:08p	12:17	12:27	12:29	12:42	12:53	1:00	1:08	1:15	1:27
12:23	12:32	12:42	12:44	12:57	1:08	1:15	1:23	1:30	1:42
12:38	12:47	12:57	12:59	1:12	1:23	1:30	1:38	1:45	1:57
12:53	1:02	1:12	1:14	1:27	1:38	1:45	1:53	2:00	2:12
1:07	1:16	1:26	1:28	1:41	1:52	1:59	2:07	2:14	2:26
1:24	1:33	1:43	1:45	1:58	2:09	2:16	2:24	2:31	2:43
1:39	1:48	1:58	2:00	2:13	2:24	2:31	2:39	2:46	2:58
1:55	2:04	2:14	2:16	2:29	2:40	2:47	2:55	3:02	3:14
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2:56	3:05	3:16	3:18	3:31	3:43	3:50	3:58	4:05	4:18
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4:09	4:19	4:32	4:34	4:47	5:00	5:07	5:15	5:22	5:35
4:25	4:35	4:48	4:50	5:03	5:16	5:23	5:31	5:38	5:51
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5:26	5:35	5:48	5:50	6:02	6:15	6:22	6:30	6:37	6:50
5:41	5:50	6:02	6:04	6:16	6:28				