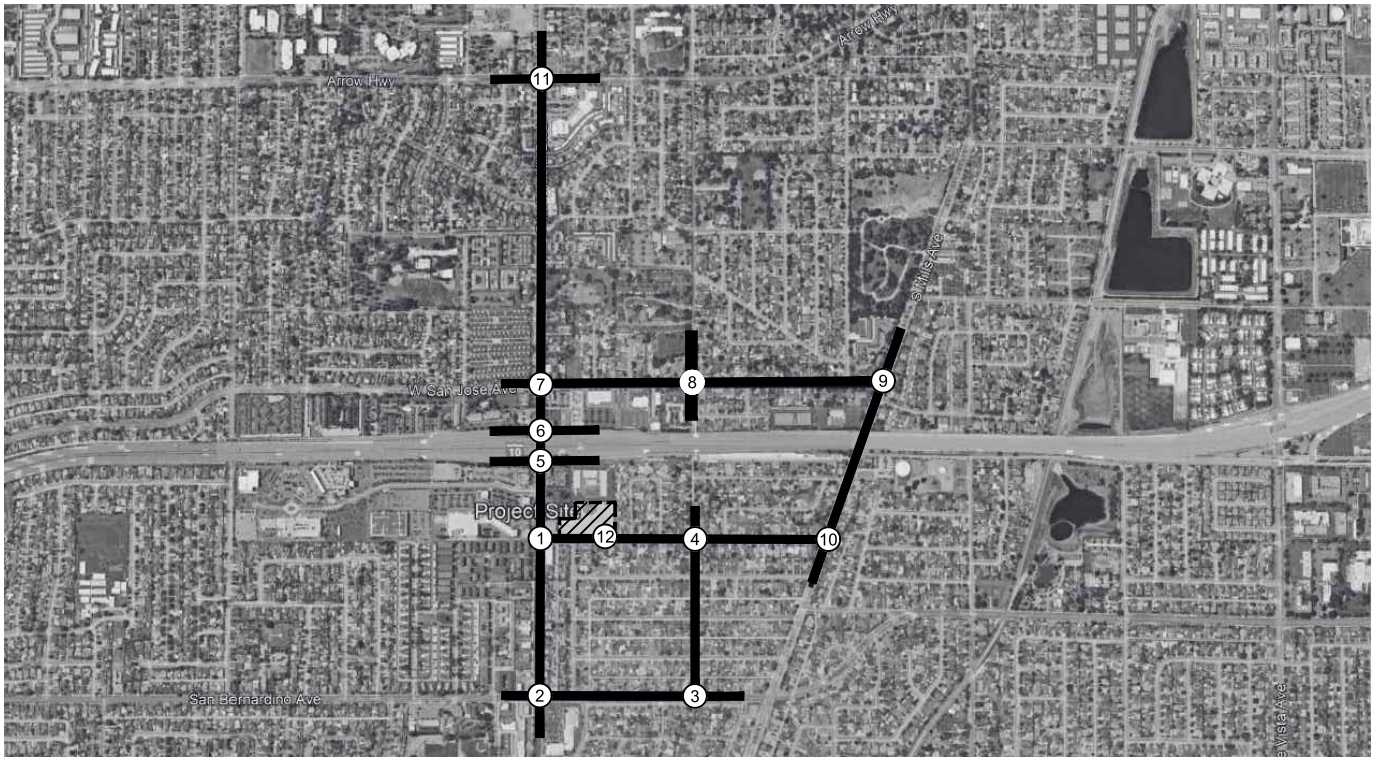
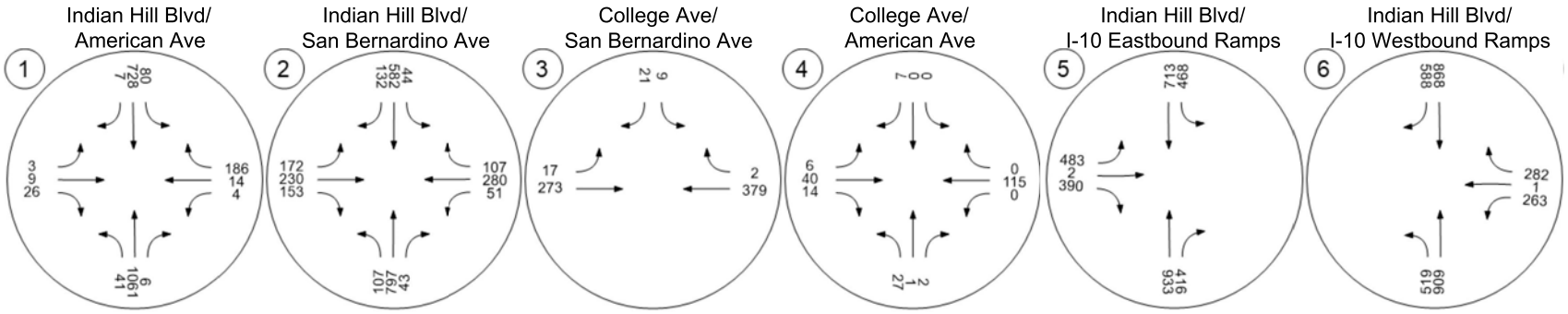
Errata for Rev. to the Rev. Traffic Study for the Project – TJW Engineering Inc. (Attachment I)

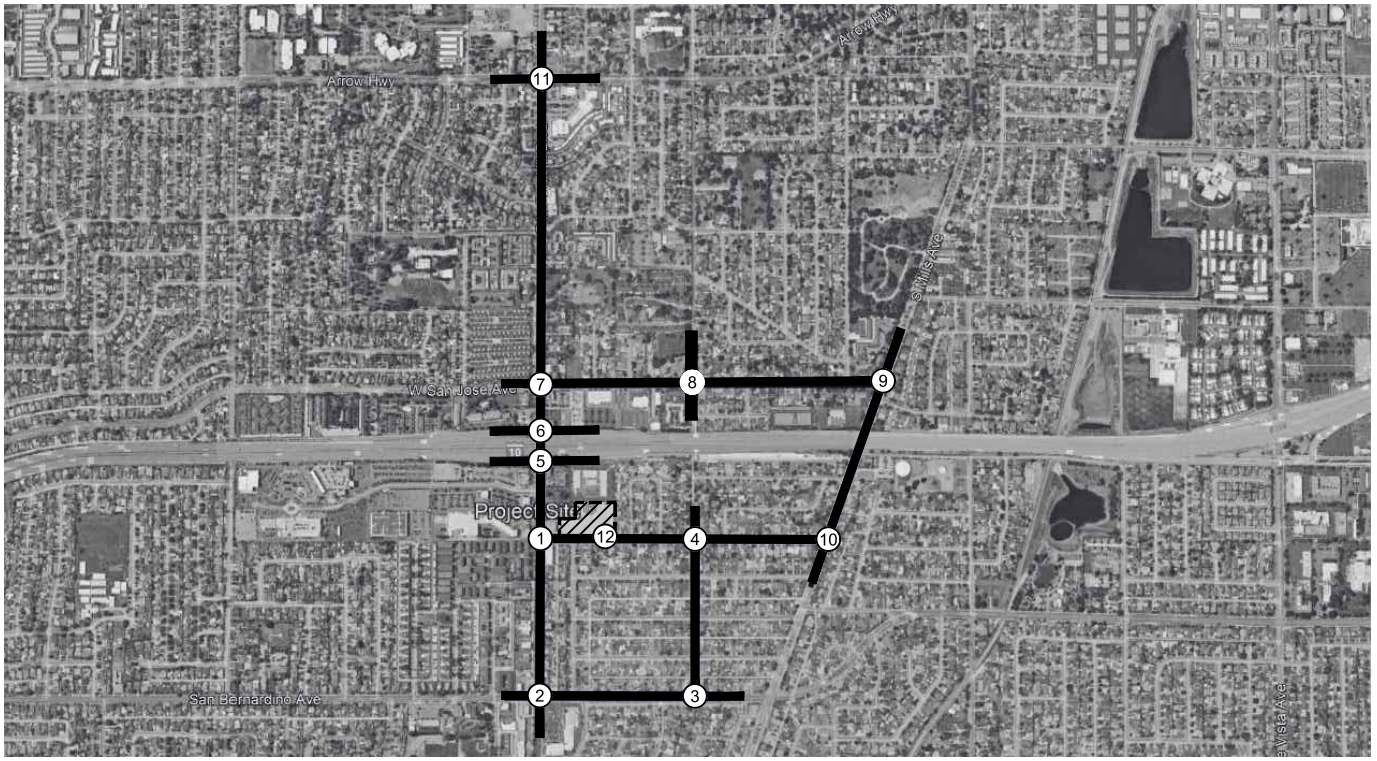
Table 12:
Intersection Analysis – HY & HYP Conditions

Intersection			Control Type[1]	LOS	Peak Hour	HY Conditions		HYP Conditions	
						Delay[2]	LOS	Delay[2]	LOS
1	Indian Hill Boulevard	West American Avenue	Signal	E	AM	11.84	B	12.57	B
					PM	10.13	B	10.29	B
2	South Indian Hill Boulevard	San Bernardino Avenue	Signal	E	AM	20.76	C	20.82	C
					PM	23.25	C	23.70	C
3	College Avenue	San Bernardino Avenue	OWSC	D	AM	12.49	B	12.60	B
					PM	11.65	B	12.11	B
4	South College Avenue	West-East American Avenue	AWSC	D	AM	7.66	A	7.67	A
					PM	7.67	A	7.70	A
5	South Indian Hill Boulevard	I-10 Eastbound Ramps	Signal	E	AM	27.27	C	27.43	C
					PM	20.71	C	21.83	C
6	South Indian Hill Boulevard	I-10 Westbound Ramps	Signal	E	AM	37.15	D	37.60	D
					PM	37.73	D	40.03	D
7	South Indian Hill Boulevard	West San Jose Avenue	Signal	E	AM	23.81	C	23.84	C
					PM	24.01	C	24.08	C
8	South College Avenue	West-East San Jose Avenue	AWSC	D	AM	14.32	B	14.32	B
					PM	11.47	B	11.47	B
9	North Mills Avenue	East San Jose Avenue	OWSC	D	AM	**65.11**	**F**	**65.84**	**F**
					PM	**44.49**	**E**	**45.08**	**E**
10	North Mills Avenue	East American Avenue	OWSC	D	AM	24.59	C	27.73	D
					PM	21.12	C	21.76	C
11	South Indian Hill Boulevard	West Arrow Highway	Signal	E	AM	42.95	D	43.02	D
					PM	51.37	D	53.04	D
12	Project Driveway	West American Avenue	OWSC	C	AM	-	-	9.59	A
					PM	-	-	9.33	A

1: AWSC = All-Way Stop-Control, OWSC = One-Way Stop-Control.
2: Delay shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one- or two-way stop-control, the delay and LOS for the worst individual movement is shown.


Arrow Hwy
W San Jose Ave
San Bernardino Ave
S Vista Ave
Project Site
1
2
3
4
5
6
7
8
9
10
11
12


1
Indian Hill Blvd/
American Ave
80
728
7
3
9
26
186
14
4
6
1061
41
2
Indian Hill Blvd/
San Bernardino Ave
44
582
132
172
230
153
107
280
51
34
767
107
3
College Ave/
San Bernardino Ave
9
21
17
273
2
379
4
College Ave/
American Ave
0
0
7
6
40
14
0
115
0
2
1
27
5
Indian Hill Blvd/
I-10 Eastbound Ramps
894
317
483
2
390
416
933
6
Indian Hill Blvd/
I-10 Westbound Ramps
868
588
282
1
263
606
619
7
Indian Hill Blvd/
San Jose Ave
44
1017
69
49
90
203
69
115
242
100
990
113
8
College Ave/
San Jose Ave
88
3
42
39
89
2
52
308
6
4
2
9
Mills Ave/
San Jose Ave
101
544
32
124
244
733
10
Mills Ave/
American Ave
27
481
12
28
82
728
11
Indian Hill Blvd/
Arrow Hwy
100
179
68
76
434
183
109
779
170
226
695
176



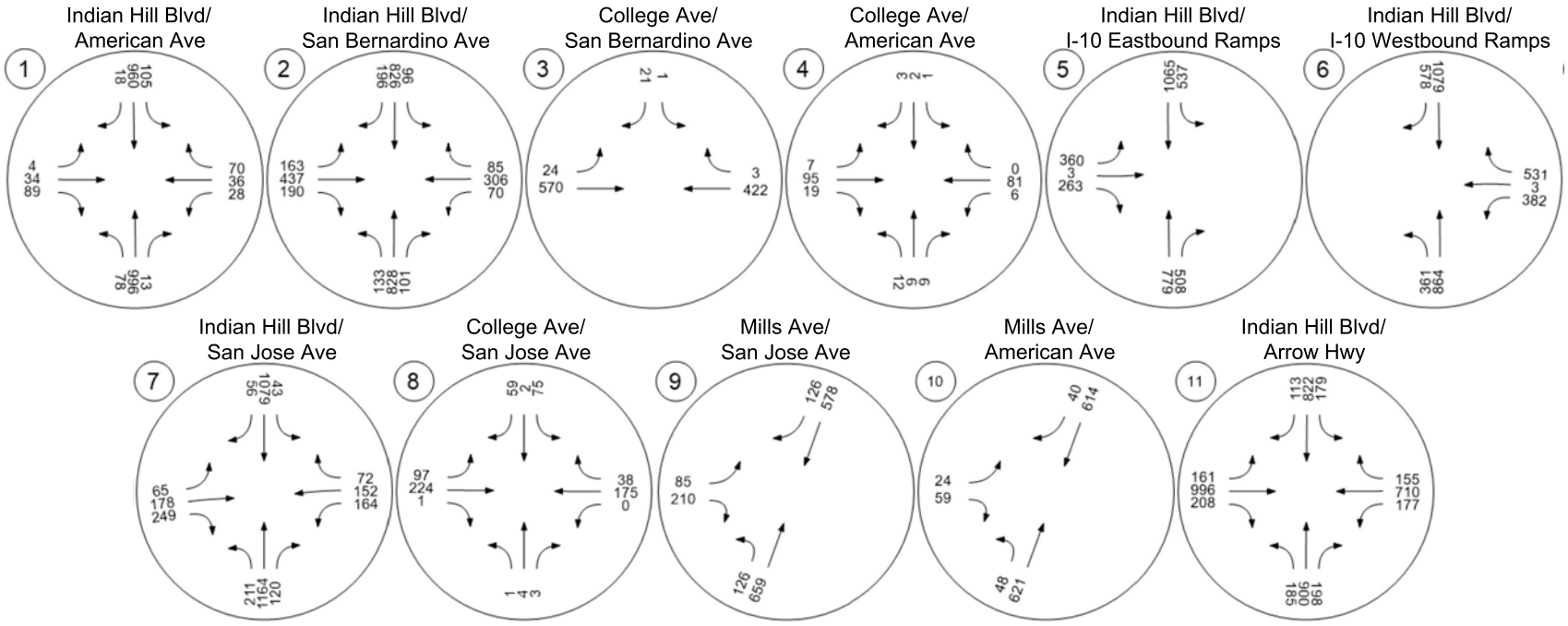
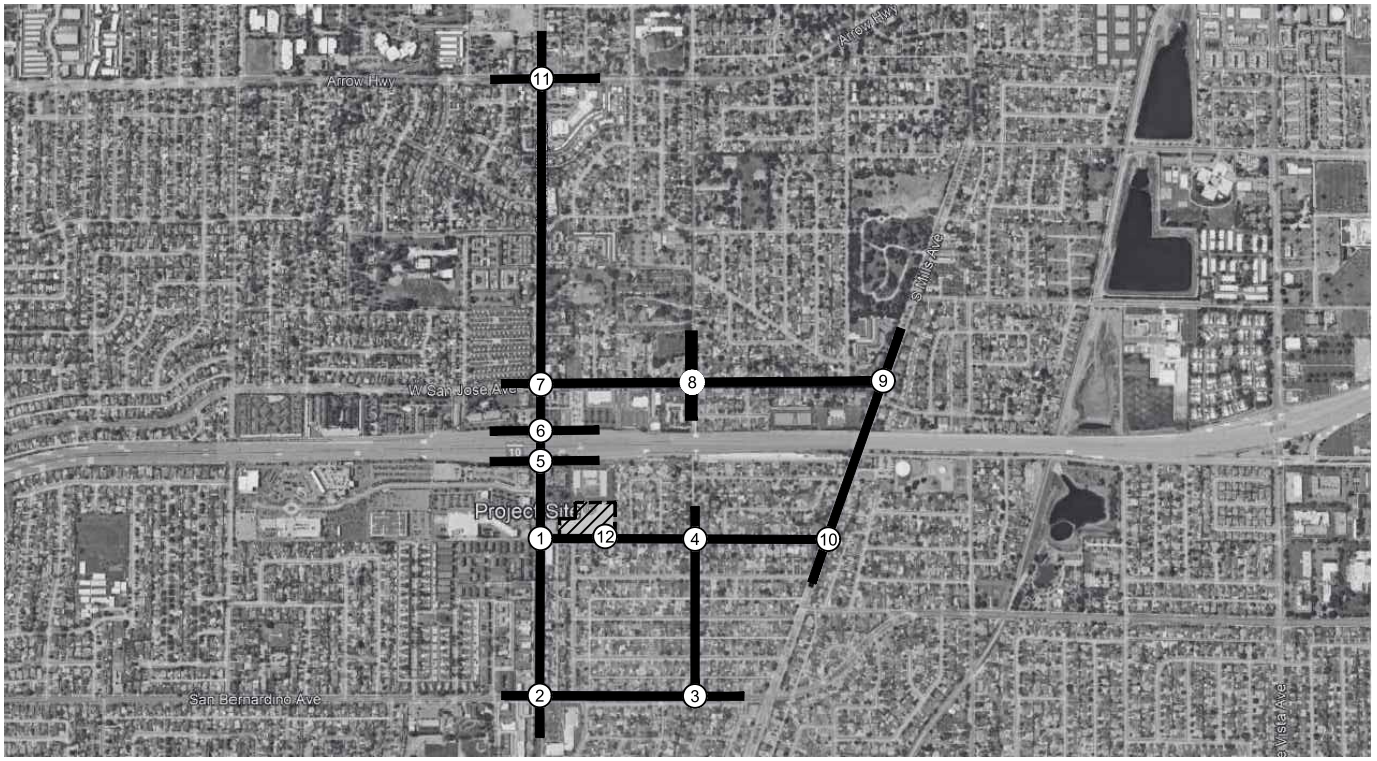


Exhibit 16: Horizon Year PM Peak Hour Volumes

Traffic Impact Analysis

CVR-24-003

Not to Scale



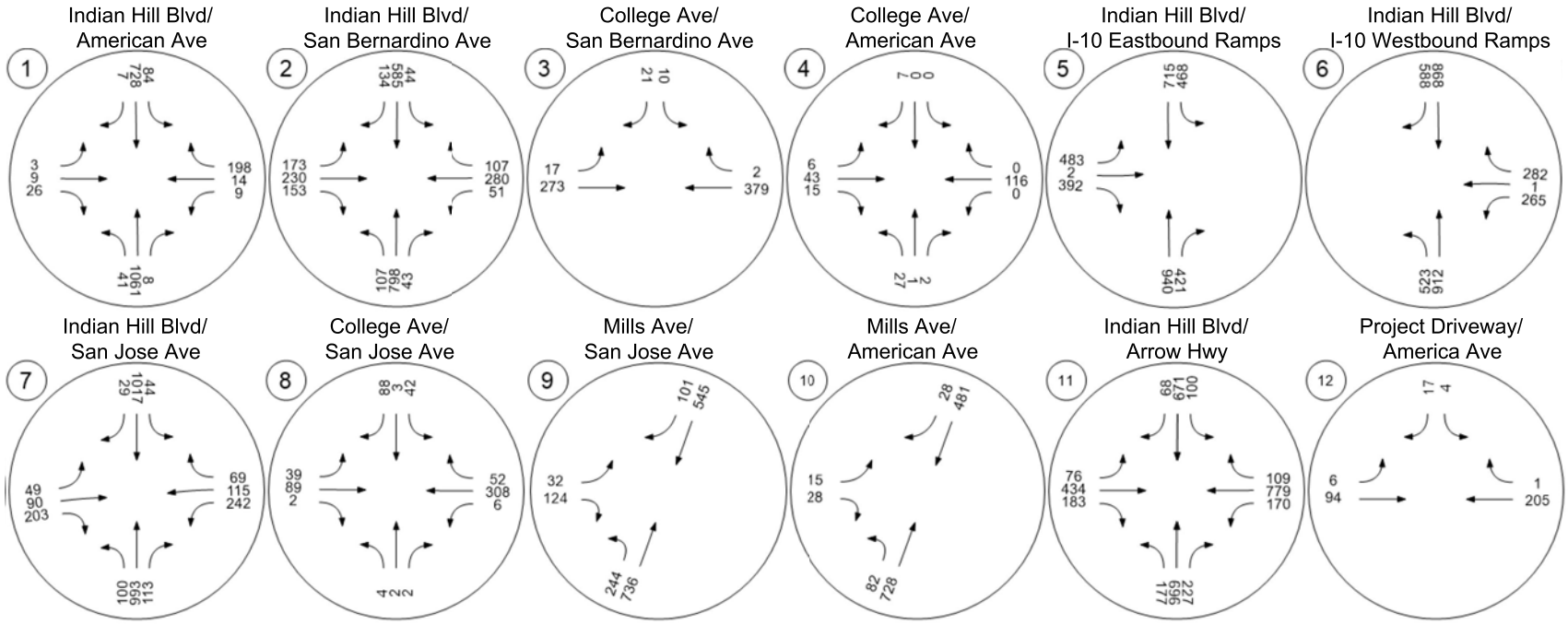
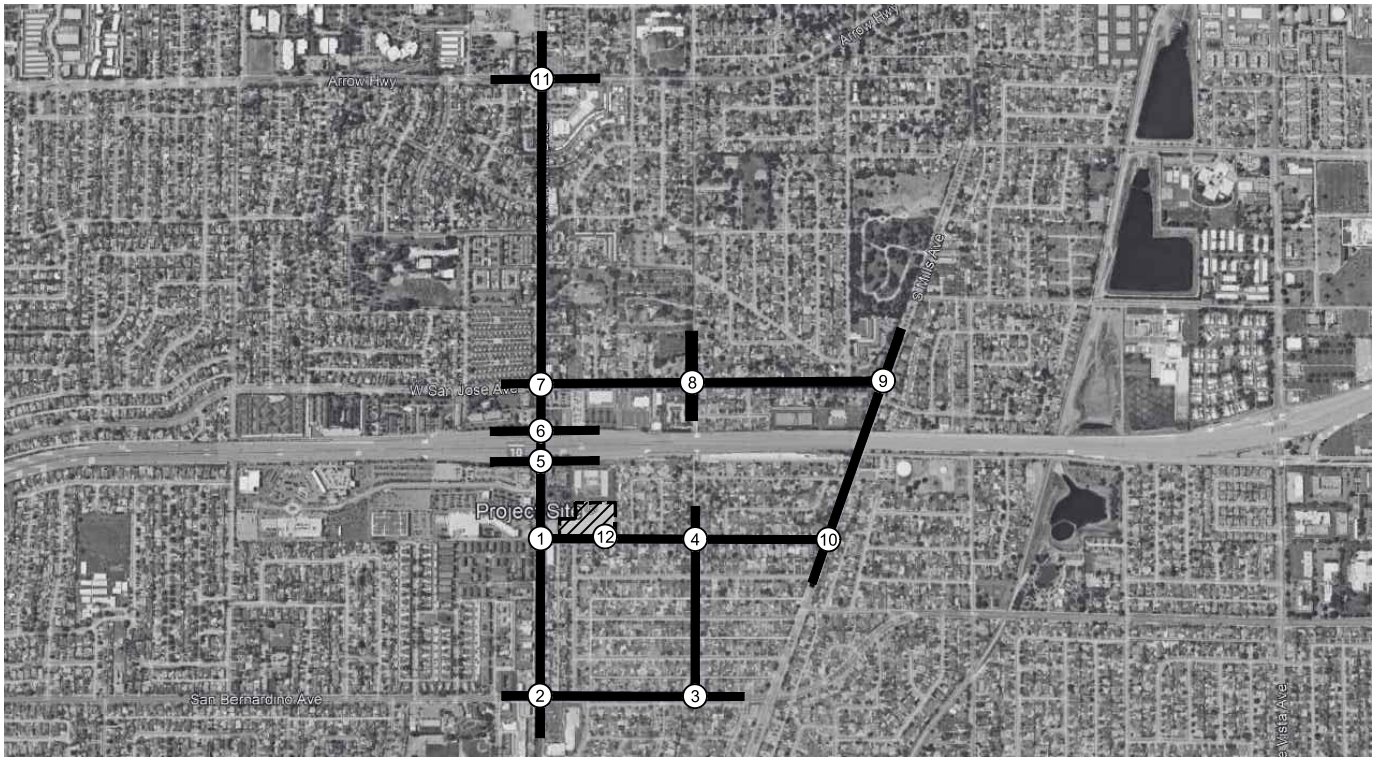


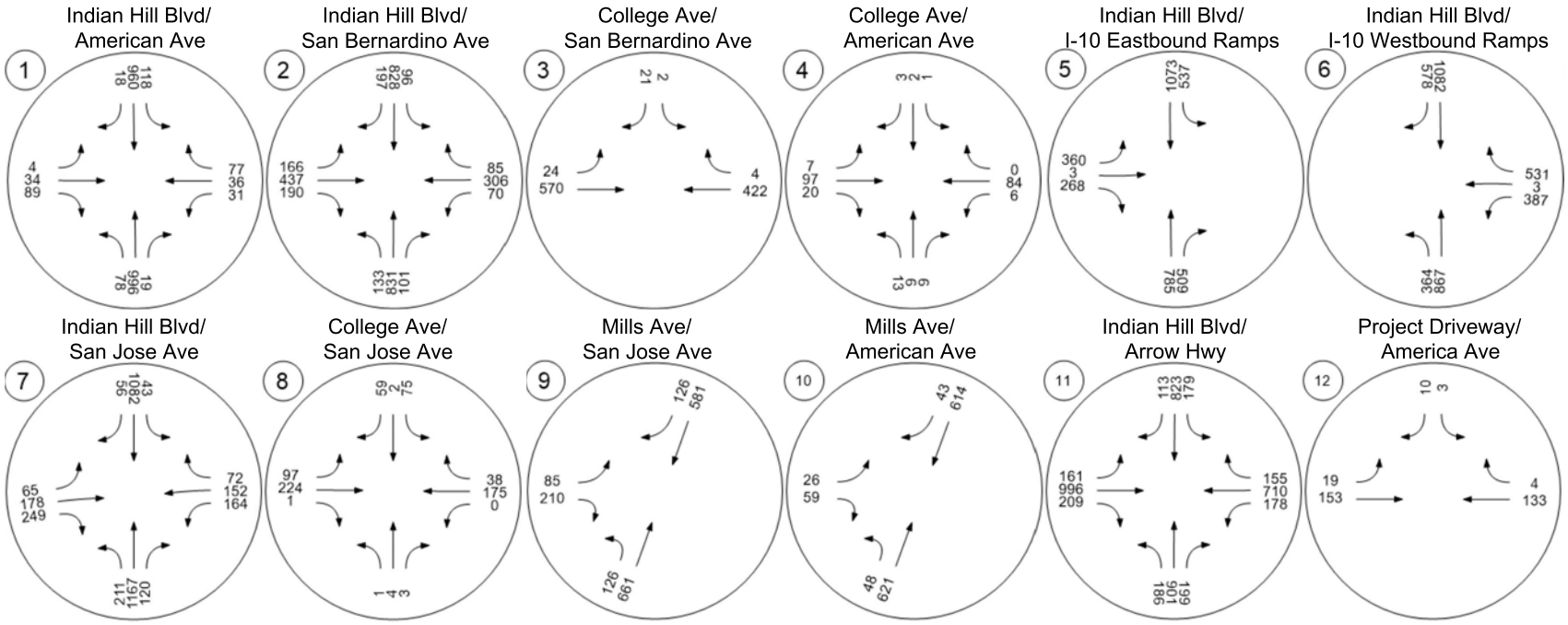
Exhibit 17: Horizon Year Plus Project AM Peak Hour Volumes

Traffic Impact Analysis

CVR-24-003

Not to Scale


Arrow Hwy
W San Jose Ave
Project Site
San Bernardino Ave
S Mills Ave
11
7
8
9
6
5
1
12
4
10
2
3


1
Indian Hill Blvd/
American Ave
4
34
89
18
960
118
77
36
31
78
966
19
2
Indian Hill Blvd/
San Bernardino Ave
166
437
190
96
828
197
85
306
70
133
831
101
3
College Ave/
San Bernardino Ave
24
570
2
21
4
422
4
College Ave/
American Ave
7
97
20
3
21
0
84
6
6
6
13
5
Indian Hill Blvd/
I-10 Eastbound Ramps
360
3
268
1073
537
531
3
387
509
786
6
Indian Hill Blvd/
I-10 Westbound Ramps
1082
578
364
867
7
Indian Hill Blvd/
San Jose Ave
65
178
249
96
1082
43
72
152
164
211
1167
120
8
College Ave/
San Jose Ave
97
224
1
59
2
75
38
175
0
1
4
3
9
Mills Ave/
San Jose Ave
85
210
126
581
126
661
10
Mills Ave/
American Ave
26
59
43
614
48
621
11
Indian Hill Blvd/
Arrow Hwy
161
996
209
113
823
179
155
710
178
199
901
186
12
Project Driveway/
America Ave
19
153
10
3
4
133

APPENDIX E

HCM ANALYSIS WORKSHEETS

HORIZON YEAR CONDITIONS

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	37	929	5	72	623	6	3	8	23	4	13	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	0	0	36	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	1061	6	80	728	7	3	9	26	4	14	186
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	285	2	21	195	2	1	2	7	1	4	50
Total Analysis Volume [veh/h]	44	1140	6	86	782	8	3	10	28	4	15	200
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	5	17	0	0	46	0	0	46	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	41.0	0.0	9.0	41.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	58.1	49.8	49.8	58.1	51.0	51.0	13.9	13.9
g / C, Green / Cycle	0.73	0.62	0.62	0.73	0.64	0.64	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.34	0.34	0.15	0.24	0.01	0.03	0.15
s, saturation flow rate [veh/h]	716	1710	1707	576	3256	1454	1562	1473
c, Capacity [veh/h]	572	1065	1063	458	2073	925	320	302
d1, Uniform Delay [s]	3.76	8.57	8.57	5.19	6.95	5.31	28.05	32.06
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	1.95	1.96	0.91	0.52	0.02	0.18	3.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.54	0.54	0.19	0.38	0.01	0.13	0.73
d, Delay for Lane Group [s/veh]	3.82	10.52	10.53	6.10	7.47	5.32	28.23	35.38
Lane Group LOS	A	B	B	A	A	A	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.13	4.93	4.92	0.38	2.70	0.04	0.70	4.32
50th-Percentile Queue Length [ft/ln]	3.33	123.15	122.97	9.62	67.47	1.10	17.41	107.92
95th-Percentile Queue Length [veh/ln]	0.24	8.57	8.56	0.69	4.86	0.08	1.25	7.72
95th-Percentile Queue Length [ft/ln]	5.99	214.15	213.90	17.32	121.45	1.99	31.34	193.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.82	10.53	10.53	6.10	7.47	5.32	28.23	28.23	28.23	35.38	35.38	35.38
Movement LOS	A	B	B	A	A	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	10.28			7.32			28.23			35.38		
Approach LOS	B			A			C			D		
d_I, Intersection Delay [s/veh]	11.84											
Intersection LOS	B											
Intersection V/C	0.591											

Emissions

Vehicle Miles Traveled [mph]	11.15	145.33	145.07	11.11	101.03	1.03	0.97	21.69
Stops [stops/h]	5.99	221.67	221.34	17.32	242.91	1.99	31.34	194.25
Fuel consumption [US gal/h]	0.49	8.61	8.60	0.66	6.87	0.06	0.33	3.30
CO [g/h]	34.42	601.95	600.97	46.17	480.02	4.41	23.21	230.46
NOx [g/h]	6.70	117.12	116.93	8.98	93.39	0.86	4.52	44.84
VOC [g/h]	7.98	139.51	139.28	10.70	111.25	1.02	5.38	53.41

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.873	1.778	1.920
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	925	650	650
d_b, Bicycle Delay [s]	11.56	11.56	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.541	2.282	1.627	1.921
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.577

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	96	697	39	36	496	118	153	207	138	46	252	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	0	4	31	1	2	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	797	43	44	582	132	172	230	153	51	280	107
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	221	12	12	162	37	48	64	43	14	78	30
Total Analysis Volume [veh/h]	119	886	48	49	647	147	191	256	170	57	311	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	27	0	5	23	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15.0	27.0	0.0	12.0	24.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.0	28.7	28.7	3.1	25.9	25.9	26.1	26.1	26.1	26.1	26.1	26.1
g / C, Green / Cycle	0.09	0.41	0.41	0.04	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.07	0.25	0.25	0.03	0.22	0.22	0.20	0.13	0.11	0.06	0.16	0.07
s, saturation flow rate [veh/h]	1810	1900	1866	1810	1900	1780	973	1900	1615	977	1900	1615
c, Capacity [veh/h]	157	781	767	83	704	659	317	706	600	342	706	600
d1, Uniform Delay [s]	31.25	16.15	16.15	32.74	17.69	17.69	26.49	15.98	15.45	21.17	16.53	14.92
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.32	3.44	3.50	6.42	3.50	3.74	1.84	0.31	0.26	0.23	0.43	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.60	0.60	0.59	0.58	0.58	0.60	0.36	0.28	0.17	0.44	0.20
d, Delay for Lane Group [s/veh]	38.58	19.59	19.65	39.16	21.19	21.43	28.33	16.29	15.71	21.40	16.96	15.08
Lane Group LOS	D	B	B	D	C	C	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.16	5.84	5.74	0.92	5.34	5.05	3.02	2.75	1.77	0.72	3.46	1.19
50th-Percentile Queue Length [ft/ln]	53.95	145.88	143.61	22.90	133.51	126.33	75.50	68.72	44.21	18.00	86.57	29.84
95th-Percentile Queue Length [veh/ln]	3.88	9.80	9.68	1.65	9.13	8.74	5.44	4.95	3.18	1.30	6.23	2.15
95th-Percentile Queue Length [ft/ln]	97.12	244.92	241.88	41.22	228.26	218.50	135.91	123.69	79.58	32.40	155.82	53.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.58	19.62	19.65	39.16	21.28	21.43	28.33	16.29	15.71	21.40	16.96	15.08
Movement LOS	D	B	B	D	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.76			22.34			19.86			17.02		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.76											
Intersection LOS	C											
Intersection V/C	0.577											

Emissions

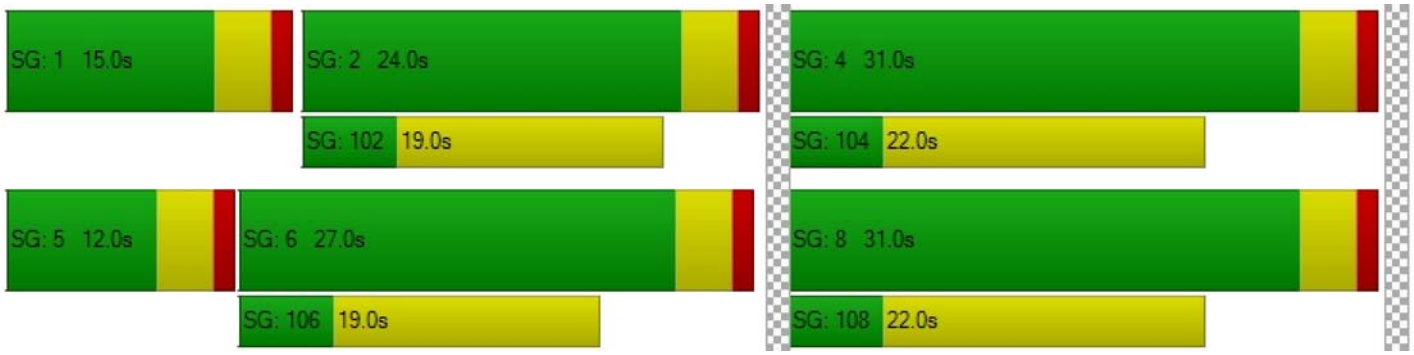
Vehicle Miles Traveled [mph]	9.19	36.37	35.72	12.42	103.83	97.37	12.20	16.35	10.86	14.20	77.48	29.65
Stops [stops/h]	110.99	300.09	295.43	47.11	274.66	259.88	155.32	141.36	90.95	37.03	178.08	61.38
Fuel consumption [US gal/h]	2.35	6.13	6.03	1.30	8.18	7.72	2.73	2.54	1.64	1.07	5.37	1.96
CO [g/h]	164.51	428.44	421.69	90.73	572.05	539.41	191.12	177.21	114.73	74.65	375.10	136.80
NOx [g/h]	32.01	83.36	82.04	17.65	111.30	104.95	37.19	34.48	22.32	14.52	72.98	26.62
VOC [g/h]	38.13	99.30	97.73	21.03	132.58	125.01	44.29	41.07	26.59	17.30	86.93	31.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.871	3.091	2.459	2.359
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	657	571	771	771
d_b, Bicycle Delay [s]	15.78	17.86	13.21	13.21
l_b,int, Bicycle LOS Score for Intersection	2.428	2.255	2.578	2.363
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	8	19	15	242	337	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	4	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	21	17	273	379	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	5	78	108	1
Total Analysis Volume [veh/h]	10	24	19	310	431	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.04	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.51	11.23	8.19	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.21	0.21	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.29	5.29	0.80	0.80	0.00	0.00
d_A, Approach Delay [s/veh]	12.49		0.47		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.73					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.158

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	24	1	2	0	0	6	5	36	13	0	104	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	1	2	0	0	7	6	40	14	0	115	0
Peak Hour Factor	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	0	1	0	0	2	2	12	4	0	35	0
Total Analysis Volume [veh/h]	33	1	2	0	0	9	7	49	17	0	140	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	797	949	896	883
Degree of Utilization, x	0.05	0.01	0.08	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.14	0.03	0.27	0.56
95th-Percentile Queue Length [ft]	3.54	0.72	6.64	14.04
Approach Delay [s/veh]	7.73	6.83	7.38	7.84
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.66			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.792

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	420.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	814	374	351	610	0	388	2	351	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	1	78	36	0	52	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	933	416	468	713	0	483	2	390	0	0	0
Peak Hour Factor	1.0000	0.9220	0.9220	0.9220	0.9220	1.0000	0.9220	0.9220	0.9220	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	253	113	127	193	0	131	1	106	0	0	0
Total Analysis Volume [veh/h]	0	1012	451	508	773	0	524	2	423	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	12	0	30	46	0	0	16	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	26.0	49.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	20.9	20.9	20.9	21.3	46.2	15.8	15.8	15.8	
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.66	0.23	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.22	0.23	0.28	0.21	0.18	0.18	0.19	
s, saturation flow rate [veh/h]	3618	1633	1615	1810	3618	1810	1738	1615	
c, Capacity [veh/h]	1075	485	480	552	2385	410	394	366	
d1, Uniform Delay [s]	21.67	22.27	22.35	23.51	5.17	25.41	25.61	26.01	
k, delay calibration	0.50	0.50	0.50	0.33	0.50	0.22	0.24	0.28	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.48	10.36	10.90	17.00	0.36	6.41	8.35	13.74	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.68	0.75	0.76	0.92	0.32	0.78	0.80	0.86	
d, Delay for Lane Group [s/veh]	25.15	32.63	33.24	40.51	5.53	31.82	33.96	39.75	
Lane Group LOS	C	C	C	D	A	C	C	D	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.35	6.36	6.44	10.11	1.95	5.25	5.45	5.97	
50th-Percentile Queue Length [ft/ln]	133.80	159.12	160.93	252.83	48.78	131.28	136.29	149.20	
95th-Percentile Queue Length [veh/ln]	9.15	10.50	10.60	15.33	3.51	9.01	9.28	9.97	
95th-Percentile Queue Length [ft/ln]	228.65	262.56	264.95	383.21	87.80	225.24	232.01	249.36	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.42	33.13	40.51	5.53	0.00	32.67	33.96	38.28	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	C	D			
d_A, Approach Delay [s/veh]	29.04			19.40			35.16			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	27.27											
Intersection LOS	C											
Intersection V/C	0.792											

Emissions

Vehicle Miles Traveled [mph]	94.51	47.25	47.25	22.92	34.87	27.34	27.23	27.01
Stops [stops/h]	550.50	327.33	331.05	520.10	200.69	270.07	280.36	306.93
Fuel consumption [US gal/h]	11.49	6.69	6.77	8.00	3.41	5.69	5.92	6.52
CO [g/h]	802.88	467.77	472.90	559.49	238.64	397.87	413.69	456.06
NOx [g/h]	156.21	91.01	92.01	108.86	46.43	77.41	80.49	88.73
VOC [g/h]	186.07	108.41	109.60	129.67	55.31	92.21	95.88	105.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.340	2.172
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1286	486	0
d_b, Bicycle Delay [s]	18.58	4.46	20.06	35.00
l_b,int, Bicycle LOS Score for Intersection	2.364	2.616	3.125	4.132
Bicycle LOS	B	B	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	37.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.941

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	468	746	0	0	679	460	0	0	0	237	1	206
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	81	0	0	114	77	0	0	0	0	0	53
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	519	909	0	0	868	588	0	0	0	263	1	282
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	147	257	0	0	245	166	0	0	0	74	0	80
Total Analysis Volume [veh/h]	587	1028	0	0	982	665	0	0	0	298	1	319
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	33	79	0	0	42	0	0	0	0	0	13	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	33.0	73.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	90	90	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	29.1	69.2	36.1	36.1		12.8	12.8	12.8
g / C, Green / Cycle	0.32	0.77	0.40	0.40		0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.32	0.28	0.19	0.41		0.12	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1687	1615
c, Capacity [veh/h]	584	2782	2078	648		257	240	230
d1, Uniform Delay [s]	30.47	3.36	19.90	26.93		37.65	37.67	37.68
k, delay calibration	0.45	0.50	0.50	0.50		0.28	0.29	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	36.42	0.38	0.77	42.03		17.44	19.02	20.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	0.37	0.47	1.03		0.85	0.85	0.85
d, Delay for Lane Group [s/veh]	66.88	3.74	20.67	68.96		55.09	56.69	57.73
Lane Group LOS	F	A	C	F		E	E	E
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	18.02	2.22	5.03	20.67		5.73	5.47	5.32
50th-Percentile Queue Length [ft/ln]	450.47	55.45	125.82	516.64		143.35	136.87	132.97
95th-Percentile Queue Length [veh/ln]	25.05	3.99	8.71	28.64		9.66	9.31	9.10
95th-Percentile Queue Length [ft/ln]	626.31	99.81	217.80	715.92		241.53	232.81	227.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.88	3.74	0.00	0.00	20.67	68.96	0.00	0.00	0.00	55.56	56.69	57.35
Movement LOS	F	A			C	F				E	E	E
d_A, Approach Delay [s/veh]	26.69			40.17			0.00			56.45		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	37.15											
Intersection LOS	D											
Intersection V/C	0.941											

Emissions

Vehicle Miles Traveled [mph]	26.48	46.37	36.41	24.66		18.19	17.04	16.36
Stops [stops/h]	720.75	177.44	603.95	826.62		229.37	219.00	212.75
Fuel consumption [US gal/h]	13.06	3.67	8.97	14.91		5.35	5.12	4.98
CO [g/h]	912.96	256.60	626.75	1042.43		373.77	357.66	347.95
NOx [g/h]	177.63	49.92	121.94	202.82		72.72	69.59	67.70
VOC [g/h]	211.59	59.47	145.25	241.59		86.62	82.89	80.64

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.327	2.210
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1533	800	0	289
d_b, Bicycle Delay [s]	2.45	16.20	45.00	32.94
l_b,int, Bicycle LOS Score for Intersection	2.892	2.465	4.132	2.579
Bicycle LOS	C	B	D	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	23.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	71	790	102	40	760	20	41	79	183	216	101	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	113	0	0	173	7	3	2	0	2	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	990	113	44	1017	29	49	90	203	242	115	69
Peak Hour Factor	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	293	33	13	301	9	14	27	60	72	34	20
Total Analysis Volume [veh/h]	118	1172	134	52	1204	34	58	107	240	286	136	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	27	0	5	23	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	19.0	36.0	0.0	12.0	29.0	0.0	0.0	32.0	0.0	0.0	32.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.8	36.5	36.5	3.5	33.2	33.2	28.0	28.0	28.0	28.0	28.0	28.0
g / C, Green / Cycle	0.08	0.46	0.46	0.04	0.42	0.42	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.07	0.35	0.35	0.03	0.23	0.23	0.05	0.06	0.15	0.27	0.07	0.05
s, saturation flow rate [veh/h]	1810	1900	1833	1810	3618	1873	1182	1900	1615	1050	1900	1615
c, Capacity [veh/h]	156	865	835	81	1497	775	415	665	565	391	665	565
d1, Uniform Delay [s]	35.73	18.21	18.29	37.59	17.75	17.75	22.12	17.91	19.85	28.01	18.20	17.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.29	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.26	6.40	6.82	8.29	1.43	2.74	0.15	0.11	0.51	6.81	0.15	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.77	0.77	0.64	0.54	0.54	0.14	0.16	0.42	0.73	0.20	0.15
d, Delay for Lane Group [s/veh]	42.99	24.61	25.11	45.89	19.18	20.49	22.27	18.02	20.36	34.82	18.35	17.92
Lane Group LOS	D	C	C	D	B	C	C	B	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.52	10.89	10.71	1.15	5.38	5.86	0.81	1.31	3.27	5.84	1.72	1.02
50th-Percentile Queue Length [ft/ln]	62.93	272.25	267.71	28.63	134.60	146.51	20.27	32.64	81.86	145.99	43.03	25.42
95th-Percentile Queue Length [veh/ln]	4.53	16.30	16.07	2.06	9.19	9.83	1.46	2.35	5.89	9.80	3.10	1.83
95th-Percentile Queue Length [ft/ln]	113.27	407.54	401.87	51.53	229.73	245.77	36.48	58.76	147.35	245.06	77.45	45.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.99	24.83	25.11	45.89	19.60	20.49	22.27	18.02	20.36	34.82	18.35	17.92
Movement LOS	D	C	C	D	B	C	C	B	C	C	B	B
d_A, Approach Delay [s/veh]	26.36			20.68			20.01			27.63		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.81											
Intersection LOS	C											
Intersection V/C	0.767											

Emissions

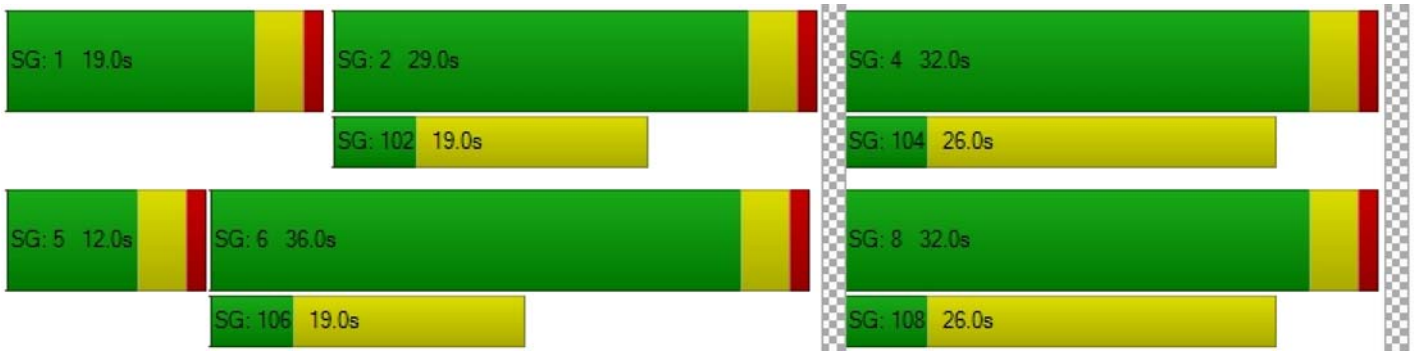
Vehicle Miles Traveled [mph]	5.04	28.27	27.48	25.84	405.20	209.88	3.46	6.39	14.33	16.37	7.78	4.69
Stops [stops/h]	113.27	490.04	481.87	51.53	484.55	263.72	36.48	58.76	147.35	262.78	77.45	45.76
Fuel consumption [US gal/h]	1.87	7.19	7.08	1.92	22.46	11.87	0.67	1.08	2.65	4.15	1.26	0.75
CO [g/h]	130.39	502.47	495.08	134.01	1569.79	829.73	46.78	75.35	185.15	290.23	87.82	52.08
NOx [g/h]	25.37	97.76	96.33	26.07	305.42	161.44	9.10	14.66	36.02	56.47	17.09	10.13
VOC [g/h]	30.22	116.45	114.74	31.06	363.81	192.30	10.84	17.46	42.91	67.26	20.35	12.07

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.368	3.095	2.324	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	625	700	700
d_b, Bicycle Delay [s]	14.40	18.91	16.90	16.90
l_b,int, Bicycle LOS Score for Intersection	2.734	2.269	2.228	2.391
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.679

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	4	2	2	38	3	79	35	77	2	5	275	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	4	0	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	2	2	42	3	88	39	89	2	6	308	52
Peak Hour Factor	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	15	1	31	14	31	1	2	108	18
Total Analysis Volume [veh/h]	6	3	3	59	4	123	55	125	3	8	432	73
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	603	677	628	739	756
Degree of Utilization, x	0.02	0.27	0.29	0.00	0.68

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.06	1.12	1.18	0.01	5.38
95th-Percentile Queue Length [ft]	1.52	27.91	29.50	0.31	134.52
Approach Delay [s/veh]	9.09	10.32	10.66		17.20
Approach LOS	A	B	B		C
Intersection Delay [s/veh]	14.32				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	259.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.899

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	220	660	490	88	26	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	3	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	244	733	544	101	32	124
Peak Hour Factor	0.8580	0.8580	0.8580	0.8580	0.8580	0.8580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	71	214	159	29	9	36
Total Analysis Volume [veh/h]	284	854	634	118	37	145
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.33	0.01	0.01	0.00	0.90	0.30
d_M, Delay for Movement [s/veh]	11.16	0.00	0.00	0.00	259.00	15.63
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	1.43	0.00	0.00	0.00	3.47	1.25
95th-Percentile Queue Length [ft/ln]	35.84	0.00	0.00	0.00	86.82	31.27
d_A, Approach Delay [s/veh]	2.79		0.00		65.11	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	7.25					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	45.2
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.141

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	74	656	432	24	11	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	728	481	27	12	28
Peak Hour Factor	0.8370	0.8370	0.8370	0.8370	0.8370	0.8370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	217	144	8	4	8
Total Analysis Volume [veh/h]	98	870	575	32	14	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.01	0.00	0.14	0.06
d_M, Delay for Movement [s/veh]	9.08	0.00	0.00	0.00	45.16	15.87
Movement LOS	A	A	A	A	E	C
95th-Percentile Queue Length [veh/ln]	0.33	0.00	0.00	0.00	0.74	0.74
95th-Percentile Queue Length [ft/ln]	8.30	0.00	0.00	0.00	18.62	18.62
d_A, Approach Delay [s/veh]	0.92		0.00		24.59	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.26					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	42.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.839

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	159	523	202	64	447	35	51	391	163	150	702	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	114	2	29	175	29	19	0	2	3	0	19
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	176	695	226	100	671	68	76	434	183	170	779	109
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	207	67	30	200	20	23	129	55	51	232	33
Total Analysis Volume [veh/h]	210	829	270	119	801	81	91	518	218	203	930	130
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	31	49	0	8	26	0	5	22	0	5	22	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21.0	37.0	0.0	15.0	31.0	0.0	13.0	26.0	0.0	22.0	35.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13.5	32.7	32.7	8.2	27.5	27.5	6.5	29.8	29.8	13.2	36.5	36.5
g / C, Green / Cycle	0.14	0.33	0.33	0.08	0.27	0.27	0.06	0.30	0.30	0.13	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.12	0.30	0.30	0.07	0.24	0.24	0.05	0.14	0.13	0.11	0.28	0.29
s, saturation flow rate [veh/h]	1810	1900	1743	1810	1900	1839	1810	3618	1615	1810	1900	1820
c, Capacity [veh/h]	245	622	570	149	522	505	118	1076	481	240	694	664
d1, Uniform Delay [s]	42.29	32.34	32.48	45.04	34.44	34.44	46.01	28.80	28.52	42.37	28.17	28.21
k, delay calibration	0.19	0.34	0.35	0.11	0.29	0.29	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.13	15.50	17.95	9.59	10.38	10.68	10.18	1.54	3.07	7.97	8.44	8.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.92	0.93	0.80	0.86	0.86	0.77	0.48	0.45	0.85	0.78	0.78
d, Delay for Lane Group [s/veh]	56.42	47.84	50.43	54.63	44.82	45.12	56.20	30.34	31.60	50.34	36.61	37.13
Lane Group LOS	E	D	D	D	D	D	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.88	15.19	14.48	3.25	11.50	11.17	2.48	5.05	4.43	5.28	12.42	12.04
50th-Percentile Queue Length [ft/ln]	146.92	379.66	362.05	81.23	287.38	279.28	62.02	126.17	110.64	132.00	310.46	300.89
95th-Percentile Queue Length [veh/ln]	9.85	21.58	20.72	5.85	17.06	16.65	4.47	8.73	7.88	9.05	18.20	17.72
95th-Percentile Queue Length [ft/ln]	246.31	539.43	518.08	146.21	426.39	416.31	111.64	218.28	196.89	226.21	454.94	443.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.42	48.65	50.43	54.63	44.96	45.12	56.20	30.34	31.60	50.34	36.83	37.13
Movement LOS	E	D	D	D	D	D	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	50.26			46.12			33.51			39.03		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	42.95											
Intersection LOS	D											
Intersection V/C	0.839											

Emissions

Vehicle Miles Traveled [mph]	104.34	283.44	262.59	8.05	30.33	29.37	10.73	61.07	25.70	19.71	52.47	50.45
Stops [stops/h]	211.56	546.71	521.35	116.96	413.83	402.16	89.31	363.37	159.32	190.08	447.06	433.28
Fuel consumption [US gal/h]	8.23	21.08	19.95	2.51	8.36	8.13	2.52	9.81	4.26	4.65	10.30	9.99
CO [g/h]	575.04	1473.29	1394.55	175.41	584.08	568.12	176.06	685.66	298.02	325.23	719.83	698.23
NOx [g/h]	111.88	286.65	271.33	34.13	113.64	110.54	34.25	133.40	57.98	63.28	140.05	135.85
VOC [g/h]	133.27	341.45	323.20	40.65	135.37	131.67	40.80	158.91	69.07	75.37	166.83	161.82

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.965	2.773	2.959	2.871
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	540	440	620
d_b, Bicycle Delay [s]	22.45	26.65	30.42	23.81
l_b,int, Bicycle LOS Score for Intersection	2.640	2.385	2.242	2.602
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	70	837	12	95	815	16	4	31	80	25	32	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	0	0	55	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	996	13	105	960	18	4	34	89	28	36	70
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	265	3	28	256	5	1	9	24	7	10	19
Total Analysis Volume [veh/h]	83	1061	14	112	1022	19	4	36	95	30	38	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	29	0	5	29	0	0	34	0	0	34	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	33.0	0.0	9.0	33.0	0.0	0.0	38.0	0.0	0.0	38.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	62.3	53.7	53.7	62.3	54.1	54.1	9.7	9.7
g / C, Green / Cycle	0.78	0.67	0.67	0.78	0.68	0.68	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.14	0.32	0.32	0.19	0.31	0.01	0.09	0.09
s, saturation flow rate [veh/h]	609	1710	1702	601	3256	1454	1564	1551
c, Capacity [veh/h]	522	1146	1141	518	2198	981	237	244
d1, Uniform Delay [s]	3.39	6.34	6.34	3.59	6.15	4.28	33.82	33.91
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	1.38	1.39	0.96	0.71	0.04	2.13	2.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.16	0.47	0.47	0.22	0.46	0.02	0.57	0.59
d, Delay for Lane Group [s/veh]	3.53	7.72	7.73	4.55	6.86	4.31	35.96	36.14
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.16	3.55	3.54	0.35	3.26	0.09	2.71	2.81
50th-Percentile Queue Length [ft/ln]	3.95	88.84	88.50	8.85	81.41	2.21	67.69	70.14
95th-Percentile Queue Length [veh/ln]	0.28	6.40	6.37	0.64	5.86	0.16	4.87	5.05
95th-Percentile Queue Length [ft/ln]	7.11	159.91	159.31	15.93	146.53	3.98	121.84	126.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.53	7.73	7.73	4.55	6.86	4.31	35.96	35.96	35.96	36.14	36.14	36.14
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.43			6.60			35.96			36.14		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.13											
Intersection LOS	B											
Intersection V/C	0.504											

Emissions

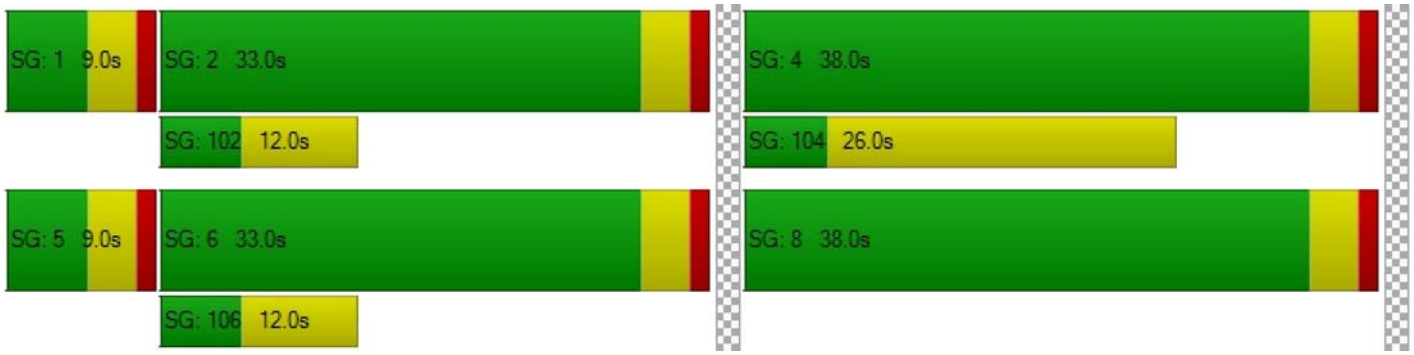
Vehicle Miles Traveled [mph]	21.03	136.50	135.90	14.47	132.04	2.45	3.20	14.16
Stops [stops/h]	7.11	159.91	159.31	15.93	293.06	3.98	121.84	126.25
Fuel consumption [US gal/h]	0.88	7.31	7.28	0.78	8.66	0.14	1.33	2.17
CO [g/h]	61.71	510.79	508.66	54.18	605.65	9.80	93.07	151.88
NOx [g/h]	12.01	99.38	98.97	10.54	117.84	1.91	18.11	29.55
VOC [g/h]	14.30	118.38	117.89	12.56	140.37	2.27	21.57	35.20

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.889	1.860	1.945
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	725	725	850	850
d_b, Bicycle Delay [s]	16.26	16.26	13.23	13.23
l_b,int, Bicycle LOS Score for Intersection	2.515	2.511	1.782	1.796
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.730

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	120	692	91	82	701	175	145	394	171	63	276	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	60	0	5	48	2	2	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	133	828	101	96	826	196	163	437	190	70	306	85
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	215	26	25	214	51	42	113	49	18	79	22
Total Analysis Volume [veh/h]	138	860	105	100	858	204	169	454	197	73	318	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	10	27	0	8	25	0	0	23	0	0	23	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	14.0	31.0	0.0	12.0	29.0	0.0	0.0	27.0	0.0	0.0	27.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.9	29.9	29.9	5.1	28.1	28.1	23.0	23.0	23.0	23.0	23.0	23.0
g / C, Green / Cycle	0.10	0.43	0.43	0.07	0.40	0.40	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.08	0.26	0.26	0.06	0.29	0.29	0.17	0.24	0.12	0.09	0.17	0.05
s, saturation flow rate [veh/h]	1810	1900	1828	1810	1900	1776	995	1900	1615	793	1900	1615
c, Capacity [veh/h]	179	810	780	133	762	712	267	624	531	174	624	531
d1, Uniform Delay [s]	30.75	15.54	15.54	31.79	17.66	17.67	29.39	20.73	17.97	31.97	18.95	16.69
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.24	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.81	3.36	3.50	8.19	5.80	6.24	2.47	3.59	0.43	1.62	0.64	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.61	0.61	0.75	0.72	0.72	0.63	0.73	0.37	0.42	0.51	0.17
d, Delay for Lane Group [s/veh]	37.57	18.90	19.04	39.99	23.46	23.91	31.86	24.33	18.40	33.59	19.60	16.83
Lane Group LOS	D	B	B	D	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.46	5.93	5.74	1.86	7.62	7.23	2.86	6.56	2.29	1.25	3.91	0.95
50th-Percentile Queue Length [ft/ln]	61.52	148.15	143.41	46.47	190.41	180.63	71.39	163.89	57.37	31.29	97.75	23.68
95th-Percentile Queue Length [veh/ln]	4.43	9.92	9.66	3.35	12.14	11.63	5.14	10.75	4.13	2.25	7.04	1.70
95th-Percentile Queue Length [ft/ln]	110.74	247.95	241.61	83.65	303.56	290.84	128.50	268.87	103.27	56.33	175.95	42.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.57	18.96	19.04	39.99	23.62	23.91	31.86	24.33	18.40	33.59	19.60	16.83
Movement LOS	D	B	B	D	C	C	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	21.30			25.08			24.46			21.22		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.25											
Intersection LOS	C											
Intersection V/C	0.730											

Emissions

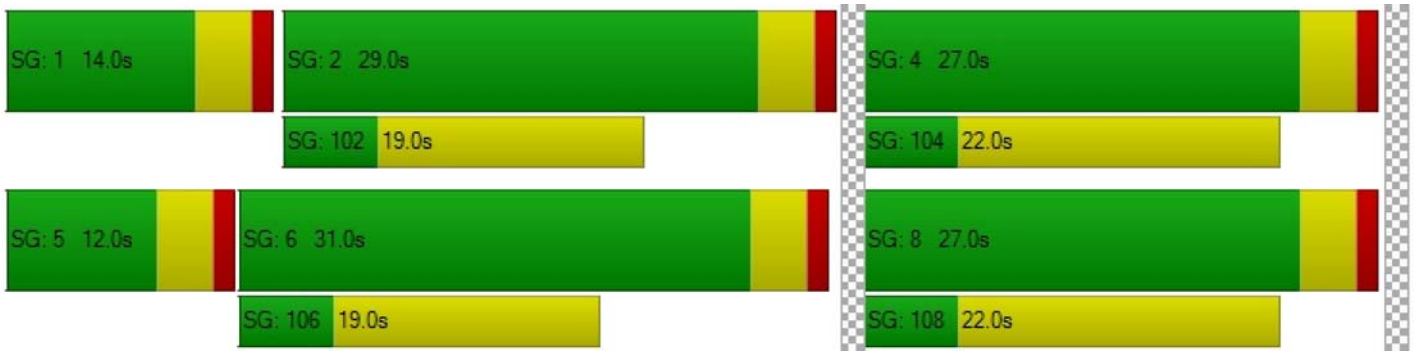
Vehicle Miles Traveled [mph]	10.65	37.94	36.54	25.34	138.94	130.17	10.80	29.00	12.59	18.19	79.23	21.92
Stops [stops/h]	126.56	304.76	295.01	95.60	391.70	371.58	146.85	337.15	118.03	64.37	201.08	48.71
Fuel consumption [US gal/h]	2.68	6.24	6.04	2.66	11.44	10.81	2.61	5.89	2.11	1.68	5.80	1.50
CO [g/h]	187.32	436.45	422.29	185.98	799.84	755.82	182.56	411.61	147.15	117.18	405.44	105.09
NOx [g/h]	36.44	84.92	82.16	36.18	155.62	147.06	35.52	80.08	28.63	22.80	78.88	20.45
VOC [g/h]	43.41	101.15	97.87	43.10	185.37	175.17	42.31	95.40	34.10	27.16	93.96	24.36

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.973	3.122	2.541	2.444
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	771	714	657	657
d_b, Bicycle Delay [s]	13.21	14.46	15.78	15.78
l_b,int, Bicycle LOS Score for Intersection	2.470	2.518	2.913	2.350
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	1	19	22	509	376	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	21	24	570	422	3
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	7	154	114	1
Total Analysis Volume [veh/h]	1	23	26	618	457	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.04	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	21.67	11.22	8.27	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.32	3.32	1.10	1.10	0.00	0.00
d_A, Approach Delay [s/veh]	11.65		0.33		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.155

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	11	5	5	1	2	3	6	86	17	5	73	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	6	6	1	2	3	7	95	19	6	81	0
Peak Hour Factor	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	2	0	1	1	2	28	6	2	23	0
Total Analysis Volume [veh/h]	14	7	7	1	2	3	8	110	22	7	94	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	824	862	901	873
Degree of Utilization, x	0.03	0.01	0.16	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.11	0.02	0.55	0.39
95th-Percentile Queue Length [ft]	2.64	0.53	13.71	9.77
Approach Delay [s/veh]	7.52	7.21	7.73	7.66
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.67			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	420.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	641	458	377	910	0	194	3	237	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	0	119	55	0	145	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	779	508	537	1065	0	360	3	263	0	0	0
Peak Hour Factor	1.0000	0.9530	0.9530	0.9530	0.9530	1.0000	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	204	133	141	279	0	94	1	69	0	0	0
Total Analysis Volume [veh/h]	0	817	533	563	1118	0	378	3	276	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	12	0	26	42	0	0	10	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	16.0	0.0	30.0	46.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	17.3	17.3	17.3	20.7	42.0	10.0	10.0	10.0	
g / C, Green / Cycle	0.29	0.29	0.29	0.35	0.70	0.17	0.17	0.17	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.21	0.31	0.31	0.13	0.13	0.13	
s, saturation flow rate [veh/h]	3618	1615	1615	1810	3618	1810	1745	1615	
c, Capacity [veh/h]	1036	463	463	628	2532	302	291	269	
d1, Uniform Delay [s]	18.78	19.31	19.31	18.58	3.91	23.85	23.86	23.89	
k, delay calibration	0.50	0.50	0.50	0.24	0.50	0.21	0.21	0.22	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.18	9.72	9.72	9.84	0.56	7.42	7.87	8.90	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.65	0.73	0.73	0.90	0.44	0.76	0.76	0.77	
d, Delay for Lane Group [s/veh]	21.96	29.02	29.02	28.42	4.47	31.27	31.73	32.79	
Lane Group LOS	C	C	C	C	A	C	C	C	
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.09	4.98	4.98	8.28	1.91	3.38	3.31	3.17	
50th-Percentile Queue Length [ft/ln]	102.26	124.60	124.60	206.90	47.72	84.61	82.82	79.18	
95th-Percentile Queue Length [veh/ln]	7.36	8.65	8.65	12.99	3.44	6.09	5.96	5.70	
95th-Percentile Queue Length [ft/ln]	184.07	216.13	216.13	324.85	85.90	152.30	149.08	142.52	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.96	29.02	28.42	4.47	0.00	31.46	31.73	32.56	0.00	0.00	0.00
Movement LOS		C	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	25.49			12.49			31.90			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	20.71											
Intersection LOS	C											
Intersection V/C	0.748											

Emissions

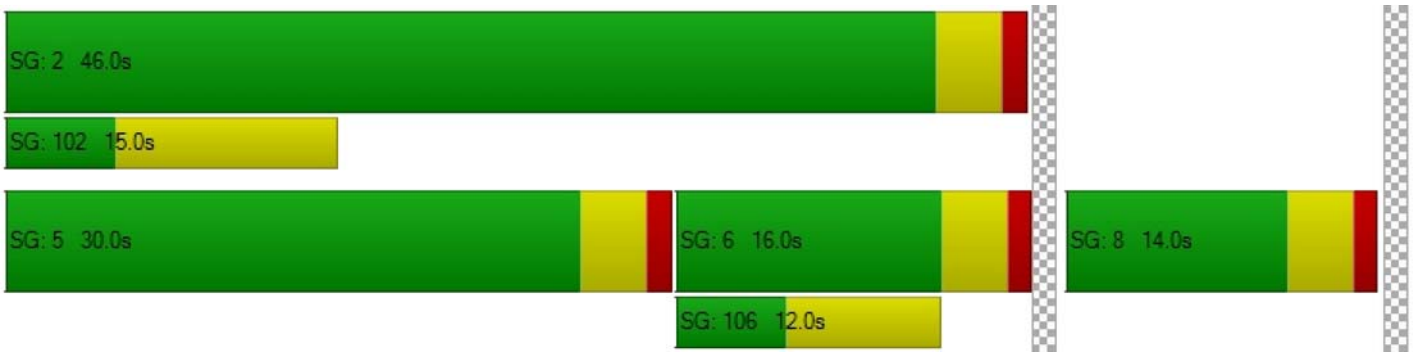
Vehicle Miles Traveled [mph]	87.21	43.61	43.61	25.40	50.43	19.66	19.04	17.77
Stops [stops/h]	490.84	299.04	299.04	496.56	229.07	203.06	198.77	190.03
Fuel consumption [US gal/h]	10.03	5.90	5.90	7.04	4.36	4.15	4.07	3.88
CO [g/h]	701.23	412.73	412.73	492.41	304.65	290.41	284.16	271.43
NOx [g/h]	136.43	80.30	80.30	95.81	59.27	56.50	55.29	52.81
VOC [g/h]	162.52	95.65	95.65	114.12	70.61	67.31	65.86	62.91

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.206	2.231
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	1400	333	0
d_b, Bicycle Delay [s]	19.20	2.70	20.83	30.00
l_b,int, Bicycle LOS Score for Intersection	2.302	2.946	2.644	4.132
Bicycle LOS	B	C	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	37.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.938

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	325	587	0	0	815	416	0	0	0	344	3	346
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	212	0	0	174	116	0	0	0	0	0	147
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	361	864	0	0	1079	578	0	0	0	382	3	531
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	102	244	0	0	305	163	0	0	0	108	1	150
Total Analysis Volume [veh/h]	408	977	0	0	1221	654	0	0	0	432	3	601
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	18	55	0	0	33	0	0	0	0	0	17	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	22.0	59.0	0.0	0.0	37.0	0.0	0.0	0.0	0.0	0.0	21.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	80	80	80	80		80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	18.0	55.0	33.0	33.0		17.0	17.0	17.0
g / C, Green / Cycle	0.23	0.69	0.41	0.41		0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.23	0.27	0.24	0.40		0.19	0.21	0.21
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1662	1615
c, Capacity [veh/h]	407	2487	2135	666		385	353	343
d1, Uniform Delay [s]	31.00	5.35	18.07	23.20		30.66	31.31	31.50
k, delay calibration	0.42	0.50	0.50	0.50		0.35	0.40	0.42
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	41.55	0.47	1.12	30.68		19.90	37.75	46.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	0.39	0.57	0.98		0.90	0.98	1.01
d, Delay for Lane Group [s/veh]	72.55	5.82	19.19	53.88		50.56	69.07	77.69
Lane Group LOS	F	A	B	D		D	E	F
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	12.23	2.88	5.64	16.86		8.17	9.88	10.58
50th-Percentile Queue Length [ft/ln]	305.79	71.97	140.98	421.40		204.26	246.93	264.39
95th-Percentile Queue Length [veh/ln]	17.99	5.18	9.53	23.59		12.86	15.03	15.96
95th-Percentile Queue Length [ft/ln]	449.71	129.54	238.35	589.73		321.45	375.79	399.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.55	5.82	0.00	0.00	19.19	53.88	0.00	0.00	0.00	54.27	69.07	74.02
Movement LOS	F	A			B	D				D	E	E
d_A, Approach Delay [s/veh]	25.48			31.29			0.00			65.77		
Approach LOS	C			C			A			E		
d_I, Intersection Delay [s/veh]	37.73											
Intersection LOS	D											
Intersection V/C	0.938											

Emissions

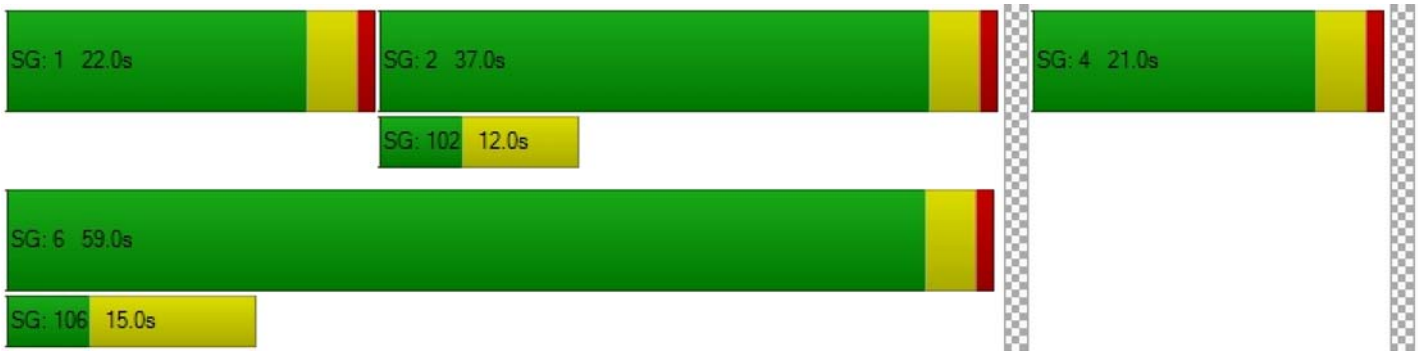
Vehicle Miles Traveled [mph]	18.40	44.07	45.28	24.25		28.83	28.83	28.83
Stops [stops/h]	550.42	259.09	761.30	758.52		367.66	444.47	475.89
Fuel consumption [US gal/h]	9.82	4.40	10.84	12.36		8.20	10.25	11.17
CO [g/h]	686.54	307.76	757.59	863.91		573.00	716.63	780.58
NOx [g/h]	133.58	59.88	147.40	168.09		111.48	139.43	151.87
VOC [g/h]	159.11	71.33	175.58	200.22		132.80	166.09	180.91

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.230	2.385
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1375	825	0	425
d_b, Bicycle Delay [s]	3.91	13.81	40.00	24.81
l_b,int, Bicycle LOS Score for Intersection	2.702	2.591	4.132	3.269
Bicycle LOS	B	B	D	C

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.699

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	169	748	106	39	732	43	53	157	224	147	133	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	334	2	0	266	8	6	4	0	1	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	211	1164	120	43	1079	56	65	178	249	164	152	72
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	318	33	12	295	15	18	49	68	45	42	20
Total Analysis Volume [veh/h]	231	1272	131	47	1179	61	71	195	272	179	166	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	17	37	0	5	25	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21.0	41.0	0.0	9.0	29.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12.2	39.6	39.6	3.3	30.7	30.7	25.1	25.1	25.1	25.1	25.1	25.1
g / C, Green / Cycle	0.15	0.50	0.50	0.04	0.38	0.38	0.31	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.37	0.38	0.03	0.23	0.23	0.06	0.10	0.17	0.19	0.09	0.05
s, saturation flow rate [veh/h]	1810	1900	1839	1810	3618	1853	1153	1900	1615	941	1900	1615
c, Capacity [veh/h]	278	941	911	76	1388	711	348	594	505	288	594	505
d1, Uniform Delay [s]	32.85	16.24	16.38	37.70	19.66	19.66	25.69	21.05	22.72	30.77	20.70	19.86
k, delay calibration	0.12	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.14	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.82	5.53	6.03	8.00	1.86	3.59	0.29	0.32	0.89	2.86	0.25	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.75	0.76	0.62	0.59	0.59	0.20	0.33	0.54	0.62	0.28	0.16
d, Delay for Lane Group [s/veh]	39.66	21.76	22.42	45.70	21.51	23.25	25.98	21.37	23.61	33.63	20.95	20.00
Lane Group LOS	D	C	C	D	C	C	C	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.75	10.85	10.84	1.04	5.85	6.33	1.10	2.69	4.10	3.46	2.29	1.05
50th-Percentile Queue Length [ft/ln]	118.75	271.13	271.12	25.89	146.18	158.35	27.41	67.27	102.42	86.61	57.28	26.18
95th-Percentile Queue Length [veh/ln]	8.32	16.25	16.25	1.86	9.81	10.46	1.97	4.84	7.37	6.24	4.12	1.89
95th-Percentile Queue Length [ft/ln]	208.11	406.15	406.14	46.60	245.32	261.54	49.33	121.09	184.35	155.89	103.11	47.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.66	22.05	22.42	45.70	22.04	23.25	25.98	21.37	23.61	33.63	20.95	20.00
Movement LOS	D	C	C	D	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	24.57			22.96			23.11			26.13		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.01											
Intersection LOS	C											
Intersection V/C	0.699											

Emissions

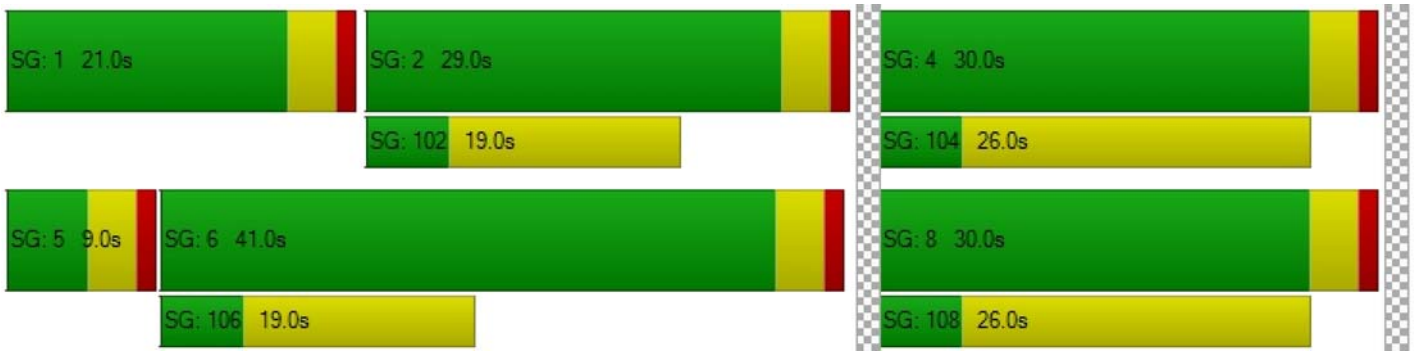
Vehicle Miles Traveled [mph]	9.86	30.21	29.68	23.35	407.39	208.69	4.24	11.65	16.24	10.25	9.50	4.52
Stops [stops/h]	213.75	488.04	488.02	46.60	526.25	285.03	49.33	121.09	184.35	155.89	103.11	47.13
Fuel consumption [US gal/h]	3.45	7.07	7.09	1.73	23.35	12.26	0.91	2.20	3.31	2.51	1.67	0.77
CO [g/h]	241.25	494.50	495.57	121.02	1632.30	857.17	63.47	153.96	231.54	175.31	116.64	53.69
NOx [g/h]	46.94	96.21	96.42	23.55	317.59	166.77	12.35	29.96	45.05	34.11	22.69	10.45
VOC [g/h]	55.91	114.61	114.85	28.05	378.30	198.66	14.71	35.68	53.66	40.63	27.03	12.44

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.234	3.136	2.410	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	625	650	650
d_b, Bicycle Delay [s]	11.56	18.91	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.908	2.267	2.447	2.259
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	1	4	3	68	2	53	87	198	1	0	152	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	4	0	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	4	3	75	2	59	97	224	1	0	175	38
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	20	1	16	26	61	0	0	47	10
Total Analysis Volume [veh/h]	1	4	3	81	2	64	105	242	1	0	189	41
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	662	690	680	812	752
Degree of Utilization, x	0.01	0.21	0.51	0.00	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.04	0.80	2.92	0.00	1.30
95th-Percentile Queue Length [ft]	0.92	20.08	73.02	0.09	32.40
Approach Delay [s/veh]	8.50	9.63	13.36		9.88
Approach LOS	A	A	B		A
Intersection Delay [s/veh]	11.47				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	111.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	113	594	521	109	73	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	5	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	126	659	578	126	85	210
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	171	150	33	22	54
Total Analysis Volume [veh/h]	130	682	598	130	88	217
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.01	0.01	0.00	0.80	0.43
d_M, Delay for Movement [s/veh]	9.77	0.00	0.00	0.00	111.40	17.35
Movement LOS	A	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.51	0.00	0.00	0.00	4.56	2.13
95th-Percentile Queue Length [ft/ln]	12.85	0.00	0.00	0.00	113.92	53.19
d_A, Approach Delay [s/veh]	1.56		0.00		44.49	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	8.04					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	32.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.152

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	43	559	553	36	22	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	621	614	40	24	59
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	157	156	10	6	15
Total Analysis Volume [veh/h]	49	630	623	41	24	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.15	0.12
d_M, Delay for Movement [s/veh]	9.07	0.00	0.00	0.00	32.11	16.73
Movement LOS	A	A	A	A	D	C
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	1.09	1.09
95th-Percentile Queue Length [ft/ln]	4.14	0.00	0.00	0.00	27.25	27.25
d_A, Approach Delay [s/veh]	0.65		0.00		21.12	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.55					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	51.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.944

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	167	508	175	122	499	62	95	897	186	156	640	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	336	4	44	268	44	56	0	2	4	0	56
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	185	900	198	179	822	113	161	996	208	177	710	155
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	231	51	46	211	29	41	256	53	45	182	40
Total Analysis Volume [veh/h]	190	925	203	184	845	116	165	1024	214	182	730	159
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	15	32	0	11	28	0	15	30	0	11	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	19.0	36.0	0.0	15.0	32.0	0.0	19.0	34.0	0.0	15.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12.4	32.0	32.0	11.0	30.6	30.6	11.0	30.0	30.0	11.0	30.0	30.0
g / C, Green / Cycle	0.12	0.32	0.32	0.11	0.31	0.31	0.11	0.30	0.30	0.11	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.11	0.31	0.31	0.10	0.26	0.26	0.09	0.28	0.13	0.10	0.24	0.24
s, saturation flow rate [veh/h]	1810	1900	1783	1810	1900	1821	1810	3618	1615	1810	1900	1784
c, Capacity [veh/h]	225	608	571	199	581	557	201	1085	485	199	568	533
d1, Uniform Delay [s]	42.84	33.27	33.38	44.09	32.49	32.50	43.47	34.17	28.24	44.03	32.39	32.40
k, delay calibration	0.20	0.42	0.42	0.33	0.34	0.34	0.14	0.50	0.50	0.32	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.44	23.80	26.35	35.59	10.00	10.48	9.96	16.72	2.91	33.38	11.69	12.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.95	0.96	0.92	0.84	0.85	0.82	0.94	0.44	0.91	0.81	0.81
d, Delay for Lane Group [s/veh]	57.28	57.07	59.73	79.68	42.49	42.98	53.43	50.89	31.15	77.41	44.08	44.80
Lane Group LOS	E	E	E	E	D	D	D	D	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.36	16.99	16.49	6.39	12.30	11.87	4.40	13.86	4.31	6.17	11.58	10.98
50th-Percentile Queue Length [ft/ln]	134.03	424.78	412.25	159.86	307.39	296.87	109.92	346.50	107.71	154.32	289.45	274.55
95th-Percentile Queue Length [veh/ln]	9.16	23.75	23.15	10.54	18.05	17.53	7.84	19.97	7.71	10.25	17.16	16.42
95th-Percentile Queue Length [ft/ln]	228.96	593.79	578.74	263.53	451.16	438.15	195.89	499.14	192.81	256.18	428.96	410.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.28	58.06	59.73	79.68	42.70	42.98	53.43	50.89	31.15	77.41	44.35	44.80
Movement LOS	E	E	E	E	D	D	D	D	C	E	D	D
d_A, Approach Delay [s/veh]	58.21			48.67			48.18			50.03		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	51.37											
Intersection LOS	D											
Intersection V/C	0.944											

Emissions

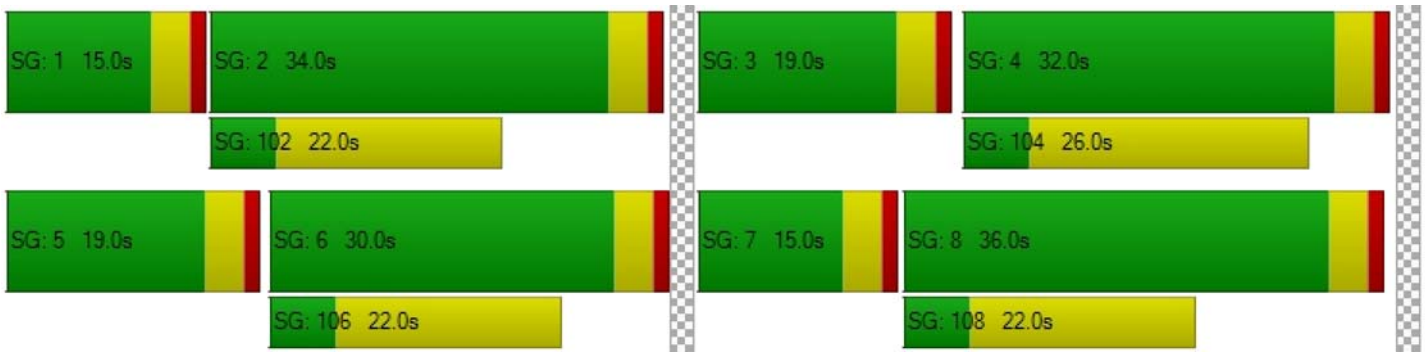
Vehicle Miles Traveled [mph]	94.40	287.99	272.43	12.45	33.19	31.85	19.45	120.72	25.23	17.67	44.51	41.81
Stops [stops/h]	193.00	611.69	593.64	230.19	442.64	427.49	158.28	997.92	155.10	222.22	416.81	395.36
Fuel consumption [US gal/h]	7.49	23.06	22.26	5.19	8.83	8.54	4.43	27.15	4.15	5.68	9.80	9.31
CO [g/h]	523.68	1611.65	1555.63	362.71	617.53	597.29	309.57	1897.74	290.06	397.22	685.07	650.55
NOx [g/h]	101.89	313.57	302.67	70.57	120.15	116.21	60.23	369.23	56.43	77.29	133.29	126.57
VOC [g/h]	121.37	373.52	360.53	84.06	143.12	138.43	71.75	439.82	67.22	92.06	158.77	150.77

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.972	2.851	3.054	2.952
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	560	600	520
d_b, Bicycle Delay [s]	23.12	25.92	24.50	27.38
l_b,int, Bicycle LOS Score for Intersection	2.647	2.504	2.717	2.443
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



HORIZON YEAR PLUS PROJECT CONDITIONS

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	37	929	5	72	623	6	3	8	23	4	13	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	2	4	36	0	0	0	0	5	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	1061	8	84	728	7	3	9	26	9	14	198
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	285	2	23	195	2	1	2	7	2	4	53
Total Analysis Volume [veh/h]	44	1140	9	90	782	8	3	10	28	10	15	213
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	12	0	5	12	0	0	51	0	0	51	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	41.0	0.0	9.0	41.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57.0	48.7	48.7	57.0	49.9	49.9	15.0	15.0
g / C, Green / Cycle	0.71	0.61	0.61	0.71	0.62	0.62	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.34	0.34	0.16	0.24	0.01	0.03	0.16
s, saturation flow rate [veh/h]	718	1710	1705	579	3256	1454	1561	1470
c, Capacity [veh/h]	561	1041	1038	450	2029	906	341	322
d1, Uniform Delay [s]	4.11	9.24	9.24	5.68	7.47	5.71	27.15	31.50
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	2.12	2.12	1.00	0.55	0.02	0.16	3.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.55	0.55	0.20	0.39	0.01	0.12	0.74
d, Delay for Lane Group [s/veh]	4.16	11.35	11.36	6.68	8.02	5.72	27.30	34.82
Lane Group LOS	A	B	B	A	A	A	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.15	5.25	5.24	0.44	2.86	0.05	0.68	4.67
50th-Percentile Queue Length [ft/ln]	3.67	131.31	131.02	10.90	71.43	1.17	17.07	116.75
95th-Percentile Queue Length [veh/ln]	0.26	9.01	9.00	0.78	5.14	0.08	1.23	8.21
95th-Percentile Queue Length [ft/ln]	6.60	225.28	224.88	19.62	128.58	2.10	30.73	205.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.16	11.36	11.36	6.68	8.02	5.72	27.30	27.30	27.30	34.82	34.82	34.82
Movement LOS	A	B	B	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.09			7.87			27.30			34.82		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	12.57											
Intersection LOS	B											
Intersection V/C	0.610											

Emissions

Vehicle Miles Traveled [mph]	11.15	145.77	145.39	11.63	101.03	1.03	0.97	23.57
Stops [stops/h]	6.60	236.36	235.84	19.62	257.16	2.10	30.73	210.15
Fuel consumption [US gal/h]	0.50	8.87	8.85	0.71	7.06	0.06	0.32	3.55
CO [g/h]	35.06	620.21	618.71	49.85	493.65	4.51	22.62	248.31
NOx [g/h]	6.82	120.67	120.38	9.70	96.05	0.88	4.40	48.31
VOC [g/h]	8.12	143.74	143.39	11.55	114.41	1.05	5.24	57.55

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.877	1.777	1.933
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	925	650	650
d_b, Bicycle Delay [s]	11.56	11.56	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.544	2.286	1.627	1.952
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	96	697	39	36	496	118	153	207	138	46	252	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	4	34	3	3	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	798	43	44	585	134	173	230	153	51	280	107
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	222	12	12	163	37	48	64	43	14	78	30
Total Analysis Volume [veh/h]	119	887	48	49	650	149	192	256	170	57	311	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	27	0	6	24	0	0	25	0	0	25	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15.0	27.0	0.0	12.0	24.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.0	28.7	28.7	3.1	25.8	25.8	26.2	26.2	26.2	26.2	26.2	26.2
g / C, Green / Cycle	0.09	0.41	0.41	0.04	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.07	0.25	0.25	0.03	0.22	0.22	0.20	0.13	0.11	0.06	0.16	0.07
s, saturation flow rate [veh/h]	1810	1900	1866	1810	1900	1779	973	1900	1615	977	1900	1615
c, Capacity [veh/h]	157	779	765	83	702	658	318	707	601	343	707	601
d1, Uniform Delay [s]	31.25	16.20	16.20	32.74	17.77	17.77	26.45	15.94	15.41	21.12	16.49	14.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.33	3.47	3.54	6.42	3.58	3.83	1.84	0.31	0.25	0.23	0.43	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.61	0.61	0.59	0.59	0.59	0.60	0.36	0.28	0.17	0.44	0.20
d, Delay for Lane Group [s/veh]	38.58	19.67	19.74	39.16	21.34	21.60	28.30	16.25	15.67	21.35	16.92	15.04
Lane Group LOS	D	B	B	D	C	C	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.16	5.86	5.77	0.92	5.40	5.11	3.04	2.74	1.77	0.72	3.46	1.19
50th-Percentile Queue Length [ft/ln]	53.96	146.43	144.15	22.90	135.03	127.71	75.89	68.61	44.14	17.97	86.42	29.79
95th-Percentile Queue Length [veh/ln]	3.88	9.83	9.70	1.65	9.21	8.82	5.46	4.94	3.18	1.29	6.22	2.14
95th-Percentile Queue Length [ft/ln]	97.12	245.65	242.61	41.22	230.32	220.38	136.60	123.49	79.45	32.35	155.56	53.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.58	19.70	19.74	39.16	21.44	21.60	28.30	16.25	15.67	21.35	16.92	15.04
Movement LOS	D	B	B	D	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.84			22.49			19.83			16.98		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.82											
Intersection LOS	C											
Intersection V/C	0.580											

Emissions

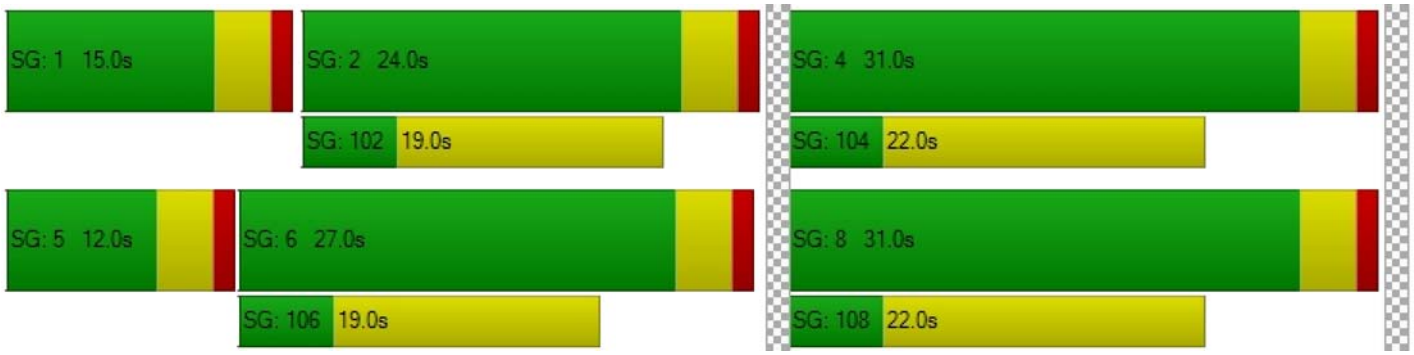
Vehicle Miles Traveled [mph]	9.19	36.41	35.76	12.42	104.51	97.96	12.27	16.35	10.86	14.20	77.48	29.65
Stops [stops/h]	111.00	301.22	296.55	47.11	277.78	262.72	156.11	141.13	90.80	36.97	177.78	61.28
Fuel consumption [US gal/h]	2.35	6.15	6.06	1.30	8.26	7.79	2.75	2.53	1.64	1.07	5.36	1.96
CO [g/h]	164.53	430.01	423.25	90.73	577.64	544.43	192.03	176.93	114.55	74.58	374.74	136.68
NOx [g/h]	32.01	83.67	82.35	17.65	112.39	105.93	37.36	34.42	22.29	14.51	72.91	26.59
VOC [g/h]	38.13	99.66	98.09	21.03	133.87	126.18	44.51	41.01	26.55	17.28	86.85	31.68

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.872	3.094	2.460	2.359
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	657	571	771	771
d_b, Bicycle Delay [s]	15.78	17.86	13.21	13.21
l_b,int, Bicycle LOS Score for Intersection	2.429	2.259	2.579	2.363
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	8	19	15	242	337	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	4	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	21	17	273	379	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	5	78	108	1
Total Analysis Volume [veh/h]	11	24	19	310	431	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.04	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.54	11.26	8.19	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.22	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.52	5.52	0.80	0.80	0.00	0.00
d_A, Approach Delay [s/veh]	12.60		0.47		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.75					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.160

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	24	1	2	0	0	6	5	36	13	0	104	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	3	1	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	1	2	0	0	7	6	43	15	0	116	0
Peak Hour Factor	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	0	1	0	0	2	2	13	5	0	35	0
Total Analysis Volume [veh/h]	33	1	2	0	0	9	7	52	18	0	141	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	795	946	896	883
Degree of Utilization, x	0.05	0.01	0.09	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.14	0.03	0.28	0.57
95th-Percentile Queue Length [ft]	3.55	0.72	7.03	14.17
Approach Delay [s/veh]	7.74	6.84	7.40	7.85
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.67			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	420.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	814	374	351	610	0	388	2	351	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	6	78	38	0	52	0	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	940	421	468	715	0	483	2	392	0	0	0
Peak Hour Factor	1.0000	0.9220	0.9220	0.9220	0.9220	1.0000	0.9220	0.9220	0.9220	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	255	114	127	194	0	131	1	106	0	0	0
Total Analysis Volume [veh/h]	0	1020	457	508	775	0	524	2	425	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	12	0	30	46	0	0	16	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	26.0	49.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	20.8	20.8	20.8	21.3	46.2	15.8	15.8	15.8	
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.66	0.23	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.23	0.23	0.28	0.21	0.18	0.18	0.20	
s, saturation flow rate [veh/h]	3618	1633	1615	1810	3618	1810	1738	1615	
c, Capacity [veh/h]	1074	485	479	552	2384	410	394	366	
d1, Uniform Delay [s]	21.74	22.36	22.43	23.51	5.18	25.40	25.60	26.00	
k, delay calibration	0.50	0.50	0.50	0.33	0.50	0.22	0.24	0.28	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.60	10.79	11.34	17.03	0.36	6.43	8.41	13.86	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.69	0.76	0.77	0.92	0.33	0.78	0.81	0.86	
d, Delay for Lane Group [s/veh]	25.34	33.15	33.77	40.54	5.54	31.82	34.01	39.86	
Lane Group LOS	C	C	C	D	A	C	C	D	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.43	6.49	6.56	10.12	1.96	5.26	5.47	5.99	
50th-Percentile Queue Length [ft/ln]	135.76	162.16	163.97	252.96	49.04	131.52	136.68	149.86	
95th-Percentile Queue Length [veh/ln]	9.25	10.66	10.76	15.34	3.53	9.02	9.30	10.01	
95th-Percentile Queue Length [ft/ln]	231.30	266.58	268.98	383.38	88.26	225.56	232.55	250.25	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.61	33.65	40.54	5.54	0.00	32.69	34.01	38.37	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	C	D			
d_A, Approach Delay [s/veh]	29.40			19.40			35.22			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	27.43											
Intersection LOS	C											
Intersection V/C	0.795											

Emissions

Vehicle Miles Traveled [mph]	95.41	47.71	47.71	22.92	34.96	27.38	27.28	27.08
Stops [stops/h]	558.55	333.58	337.32	520.38	201.74	270.55	281.17	308.29
Fuel consumption [US gal/h]	11.65	6.82	6.89	8.01	3.43	5.70	5.94	6.55
CO [g/h]	814.04	476.61	481.80	559.85	239.64	398.56	414.90	458.15
NOx [g/h]	158.38	92.73	93.74	108.93	46.63	77.55	80.72	89.14
VOC [g/h]	188.66	110.46	111.66	129.75	55.54	92.37	96.16	106.18

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.341	2.175
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1286	486	0
d_b, Bicycle Delay [s]	18.58	4.46	20.06	35.00
l_b,int, Bicycle LOS Score for Intersection	2.372	2.618	3.129	4.132
Bicycle LOS	B	B	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	37.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.945

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	468	746	0	0	679	460	0	0	0	237	1	206
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	84	0	0	114	77	0	0	0	2	0	53
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	523	912	0	0	868	588	0	0	0	265	1	282
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	148	258	0	0	245	166	0	0	0	75	0	80
Total Analysis Volume [veh/h]	592	1032	0	0	982	665	0	0	0	300	1	319
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30	71	0	0	37	0	0	0	0	0	11	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	33.0	73.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	90	90	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	29.1	69.2	36.1	36.1		12.8	12.8	12.8
g / C, Green / Cycle	0.32	0.77	0.40	0.40		0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.33	0.29	0.19	0.41		0.12	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1688	1615
c, Capacity [veh/h]	584	2781	2077	648		258	240	230
d1, Uniform Delay [s]	30.47	3.37	19.91	26.94		37.64	37.66	37.68
k, delay calibration	0.46	0.50	0.50	0.50		0.28	0.29	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	38.93	0.38	0.77	42.14		17.60	19.19	20.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.01	0.37	0.47	1.03		0.85	0.85	0.85
d, Delay for Lane Group [s/veh]	69.40	3.75	20.68	69.08		55.24	56.86	57.94
Lane Group LOS	F	A	C	F		E	E	E
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	18.42	2.24	5.03	20.68		5.76	5.50	5.35
50th-Percentile Queue Length [ft/ln]	460.59	55.88	125.85	516.96		144.02	137.62	133.68
95th-Percentile Queue Length [veh/ln]	25.69	4.02	8.71	28.66		9.70	9.35	9.14
95th-Percentile Queue Length [ft/ln]	642.14	100.58	217.84	716.51		242.43	233.82	228.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.40	3.75	0.00	0.00	20.68	69.08	0.00	0.00	0.00	55.72	56.86	57.55
Movement LOS	F	A			C	F				E	E	E
d_A, Approach Delay [s/veh]	27.68			40.22			0.00			56.63		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	37.60											
Intersection LOS	D											
Intersection V/C	0.945											

Emissions

Vehicle Miles Traveled [mph]	26.70	46.55	36.41	24.66		18.24	17.10	16.41
Stops [stops/h]	736.95	178.81	604.09	827.13		230.44	220.20	213.89
Fuel consumption [US gal/h]	13.53	3.69	8.97	14.93		5.37	5.15	5.01
CO [g/h]	945.79	258.08	626.96	1043.81		375.62	359.73	349.94
NOx [g/h]	184.02	50.21	121.98	203.09		73.08	69.99	68.09
VOC [g/h]	219.20	59.81	145.30	241.91		87.05	83.37	81.10

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.330	2.210
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1533	800	0	289
d_b, Bicycle Delay [s]	2.45	16.20	45.00	32.94
l_b,int, Bicycle LOS Score for Intersection	2.899	2.465	4.132	2.583
Bicycle LOS	C	B	D	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	23.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	71	790	102	40	760	20	41	79	183	216	101	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	116	0	0	173	7	3	2	0	2	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	993	113	44	1017	29	49	90	203	242	115	69
Peak Hour Factor	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	294	33	13	301	9	14	27	60	72	34	20
Total Analysis Volume [veh/h]	118	1175	134	52	1204	34	58	107	240	286	136	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	8	36	0	5	33	0	0	27	0	0	27	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	19.0	36.0	0.0	12.0	29.0	0.0	0.0	32.0	0.0	0.0	32.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.8	36.5	36.5	3.5	33.2	33.2	28.0	28.0	28.0	28.0	28.0	28.0
g / C, Green / Cycle	0.08	0.46	0.46	0.04	0.42	0.42	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.07	0.35	0.35	0.03	0.23	0.23	0.05	0.06	0.15	0.27	0.07	0.05
s, saturation flow rate [veh/h]	1810	1900	1833	1810	3618	1873	1182	1900	1615	1050	1900	1615
c, Capacity [veh/h]	156	865	835	81	1497	775	415	665	565	391	665	565
d1, Uniform Delay [s]	35.73	18.23	18.31	37.59	17.75	17.75	22.12	17.91	19.85	28.01	18.20	17.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.29	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.26	6.46	6.88	8.29	1.43	2.74	0.15	0.11	0.51	6.81	0.15	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.77	0.77	0.64	0.54	0.54	0.14	0.16	0.42	0.73	0.20	0.15
d, Delay for Lane Group [s/veh]	42.99	24.69	25.19	45.89	19.18	20.49	22.27	18.02	20.36	34.82	18.35	17.92
Lane Group LOS	D	C	C	D	B	C	C	B	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.52	10.93	10.76	1.15	5.38	5.86	0.81	1.31	3.27	5.84	1.72	1.02
50th-Percentile Queue Length [ft/ln]	62.93	273.37	268.90	28.63	134.60	146.51	20.27	32.64	81.86	145.99	43.03	25.42
95th-Percentile Queue Length [veh/ln]	4.53	16.36	16.13	2.06	9.19	9.83	1.46	2.35	5.89	9.80	3.10	1.83
95th-Percentile Queue Length [ft/ln]	113.27	408.95	403.36	51.53	229.73	245.77	36.48	58.76	147.35	245.06	77.45	45.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.99	24.91	25.19	45.89	19.60	20.49	22.27	18.02	20.36	34.82	18.35	17.92
Movement LOS	D	C	C	D	B	C	C	B	C	C	B	B
d_A, Approach Delay [s/veh]	26.43			20.68			20.01			27.63		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.84											
Intersection LOS	C											
Intersection V/C	0.768											

Emissions

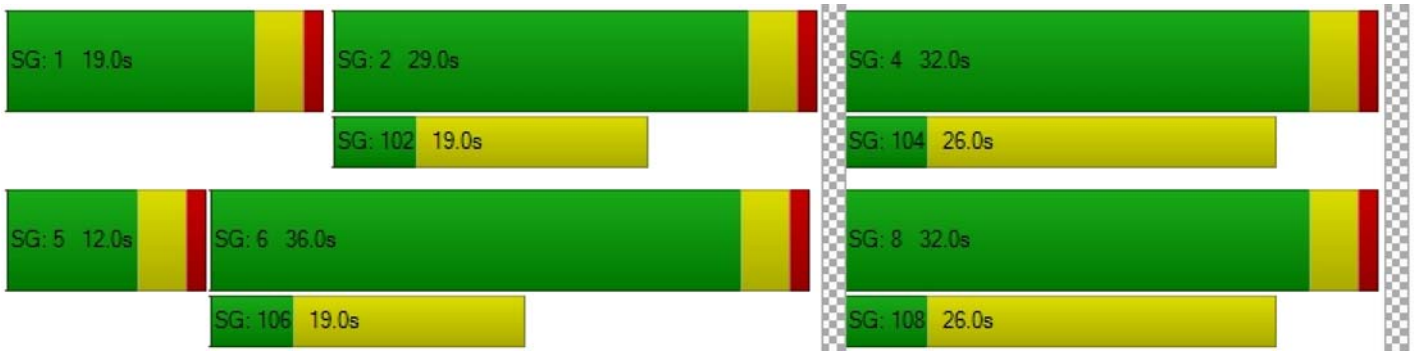
Vehicle Miles Traveled [mph]	5.04	28.33	27.54	25.84	405.20	209.88	3.46	6.39	14.33	16.37	7.78	4.69
Stops [stops/h]	113.27	492.07	484.01	51.53	484.55	263.72	36.48	58.76	147.35	262.78	77.45	45.76
Fuel consumption [US gal/h]	1.87	7.22	7.12	1.92	22.46	11.87	0.67	1.08	2.65	4.15	1.26	0.75
CO [g/h]	130.39	504.67	497.42	134.01	1569.79	829.73	46.78	75.35	185.15	290.23	87.82	52.08
NOx [g/h]	25.37	98.19	96.78	26.07	305.42	161.44	9.10	14.66	36.02	56.47	17.09	10.13
VOC [g/h]	30.22	116.96	115.28	31.06	363.81	192.30	10.84	17.46	42.91	67.26	20.35	12.07

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.368	3.095	2.324	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	625	700	700
d_b, Bicycle Delay [s]	14.40	18.91	16.90	16.90
l_b,int, Bicycle LOS Score for Intersection	2.737	2.269	2.228	2.391
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.679

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	4	2	2	38	3	79	35	77	2	5	275	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	4	0	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	2	2	42	3	88	39	89	2	6	308	52
Peak Hour Factor	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	15	1	31	14	31	1	2	108	18
Total Analysis Volume [veh/h]	6	3	3	59	4	123	55	125	3	8	432	73
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	603	677	628	739	756
Degree of Utilization, x	0.02	0.27	0.29	0.00	0.68

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.06	1.12	1.18	0.01	5.38
95th-Percentile Queue Length [ft]	1.52	27.91	29.50	0.31	134.52
Approach Delay [s/veh]	9.09	10.32	10.66		17.20
Approach LOS	A	B	B		C
Intersection Delay [s/veh]	14.32				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	262.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.906

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	220	660	490	88	26	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	1	3	3	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	244	736	545	101	32	124
Peak Hour Factor	0.8580	0.8580	0.8580	0.8580	0.8580	0.8580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	71	214	159	29	9	36
Total Analysis Volume [veh/h]	284	858	635	118	37	145
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.33	0.01	0.01	0.00	0.91	0.30
d_M, Delay for Movement [s/veh]	11.17	0.00	0.00	0.00	262.53	15.65
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	1.44	0.00	0.00	0.00	3.49	1.25
95th-Percentile Queue Length [ft/ln]	35.89	0.00	0.00	0.00	87.29	31.33
d_A, Approach Delay [s/veh]	2.78		0.00		65.84	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	7.30					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	46.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.181

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	74	656	432	24	11	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	1	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	728	481	28	15	28
Peak Hour Factor	0.8370	0.8370	0.8370	0.8370	0.8370	0.8370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	217	144	8	4	8
Total Analysis Volume [veh/h]	98	870	575	33	18	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.01	0.00	0.18	0.06
d_M, Delay for Movement [s/veh]	9.08	0.00	0.00	0.00	46.68	17.39
Movement LOS	A	A	A	A	E	C
95th-Percentile Queue Length [veh/ln]	0.33	0.00	0.00	0.00	0.93	0.93
95th-Percentile Queue Length [ft/ln]	8.31	0.00	0.00	0.00	23.16	23.16
d_A, Approach Delay [s/veh]	0.92		0.00		27.73	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.42					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	43.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.840

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	159	523	202	64	447	35	51	391	163	150	702	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	115	3	29	175	29	19	0	2	3	0	19
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	177	696	227	100	671	68	76	434	183	170	779	109
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	208	68	30	200	20	23	129	55	51	232	33
Total Analysis Volume [veh/h]	211	831	271	119	801	81	91	518	218	203	930	130
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	31	49	0	8	26	0	5	22	0	5	22	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21.0	37.0	0.0	15.0	31.0	0.0	13.0	26.0	0.0	22.0	35.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13.6	32.8	32.8	8.2	27.5	27.5	6.5	29.7	29.7	13.2	36.5	36.5
g / C, Green / Cycle	0.14	0.33	0.33	0.08	0.27	0.27	0.06	0.30	0.30	0.13	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.12	0.30	0.30	0.07	0.24	0.24	0.05	0.14	0.13	0.11	0.28	0.29
s, saturation flow rate [veh/h]	1810	1900	1743	1810	1900	1839	1810	3618	1615	1810	1900	1820
c, Capacity [veh/h]	246	623	572	149	522	505	118	1074	479	240	692	663
d1, Uniform Delay [s]	42.27	32.31	32.45	45.04	34.42	34.42	46.01	28.85	28.58	42.37	28.24	28.28
k, delay calibration	0.20	0.34	0.35	0.11	0.29	0.29	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.29	15.58	18.07	9.59	10.37	10.67	10.19	1.55	3.09	7.98	8.52	9.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.92	0.93	0.80	0.86	0.86	0.77	0.48	0.45	0.85	0.78	0.78
d, Delay for Lane Group [s/veh]	56.55	47.89	50.52	54.63	44.79	45.09	56.20	30.41	31.67	50.35	36.76	37.28
Lane Group LOS	E	D	D	D	D	D	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.91	15.24	14.54	3.25	11.49	11.17	2.48	5.05	4.43	5.28	12.45	12.06
50th-Percentile Queue Length [ft/ln]	147.84	380.91	363.50	81.23	287.27	279.17	62.02	126.35	110.81	132.01	311.15	301.57
95th-Percentile Queue Length [veh/ln]	9.90	21.64	20.79	5.85	17.05	16.65	4.47	8.74	7.89	9.05	18.23	17.76
95th-Percentile Queue Length [ft/ln]	247.55	540.95	519.84	146.21	426.25	416.18	111.64	218.52	197.13	226.22	455.79	443.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.55	48.71	50.52	54.63	44.92	45.09	56.20	30.41	31.67	50.35	36.98	37.28
Movement LOS	E	D	D	D	D	D	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	50.34			46.09			33.58			39.16		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	43.02											
Intersection LOS	D											
Intersection V/C	0.840											

Emissions

Vehicle Miles Traveled [mph]	104.83	284.19	263.33	8.05	30.33	29.37	10.73	61.07	25.70	19.71	52.47	50.45
Stops [stops/h]	212.89	548.51	523.44	116.96	413.67	402.00	89.31	363.88	159.57	190.09	448.05	434.26
Fuel consumption [US gal/h]	8.27	21.14	20.02	2.51	8.35	8.12	2.52	9.82	4.27	4.65	10.32	10.01
CO [g/h]	578.39	1477.79	1399.63	175.41	583.76	567.81	176.07	686.61	298.47	325.25	721.63	700.01
NOx [g/h]	112.53	287.53	272.32	34.13	113.58	110.48	34.26	133.59	58.07	63.28	140.40	136.20
VOC [g/h]	134.05	342.49	324.38	40.65	135.29	131.60	40.81	159.13	69.17	75.38	167.24	162.24

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.966	2.774	2.959	2.871
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	540	440	620
d_b, Bicycle Delay [s]	22.45	26.65	30.42	23.81
l_b,int, Bicycle LOS Score for Intersection	2.643	2.385	2.242	2.602
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 12: Project Driveway/W American Ave

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Project Driveway		West American Avenue		West American Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway		West American Avenue		West American Avenue	
Base Volume Input [veh/h]	0	0	0	85	185	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	17	6	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	17	6	94	205	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	4	2	24	51	0
Total Analysis Volume [veh/h]	4	17	6	94	205	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.40	9.40	7.62	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.01	2.01	0.25	0.25	0.00	0.00
d_A, Approach Delay [s/veh]	9.59		0.46		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	70	837	12	95	815	16	4	31	80	25	32	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	6	13	55	0	0	0	0	3	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	996	19	118	960	18	4	34	89	31	36	77
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	265	5	31	256	5	1	9	24	8	10	21
Total Analysis Volume [veh/h]	83	1061	20	126	1022	19	4	36	95	33	38	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	29	0	5	29	0	0	34	0	0	34	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	41.0	0.0	9.0	41.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	62.3	53.6	53.6	62.3	54.1	54.1	9.7	9.7
g / C, Green / Cycle	0.78	0.67	0.67	0.78	0.68	0.68	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.14	0.32	0.32	0.21	0.31	0.01	0.09	0.10
s, saturation flow rate [veh/h]	609	1710	1699	601	3256	1454	1578	1531
c, Capacity [veh/h]	525	1144	1136	520	2197	981	239	242
d1, Uniform Delay [s]	3.31	6.42	6.42	3.62	6.16	4.28	33.80	34.17
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	1.41	1.42	1.11	0.71	0.04	2.08	2.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.16	0.47	0.47	0.24	0.47	0.02	0.56	0.63
d, Delay for Lane Group [s/veh]	3.45	7.83	7.84	4.73	6.87	4.32	35.88	36.88
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.16	3.63	3.61	0.41	3.27	0.09	2.70	3.04
50th-Percentile Queue Length [ft/ln]	3.98	90.66	90.17	10.18	81.68	2.22	67.57	76.11
95th-Percentile Queue Length [veh/ln]	0.29	6.53	6.49	0.73	5.88	0.16	4.86	5.48
95th-Percentile Queue Length [ft/ln]	7.16	163.18	162.31	18.33	147.02	3.99	121.62	136.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.45	7.84	7.84	4.73	6.87	4.32	35.88	35.88	35.88	36.88	36.88	36.88
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.53			6.60			35.88			36.88		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.29											
Intersection LOS	B											
Intersection V/C	0.518											

Emissions

Vehicle Miles Traveled [mph]	21.03	137.39	136.53	16.28	132.04	2.45	3.20	15.15
Stops [stops/h]	7.16	163.18	162.31	18.33	294.04	3.99	121.62	136.99
Fuel consumption [US gal/h]	0.88	7.39	7.35	0.88	8.67	0.14	1.33	2.36
CO [g/h]	61.65	516.49	513.44	61.48	606.31	9.81	92.90	164.62
NOx [g/h]	12.00	100.49	99.90	11.96	117.97	1.91	18.08	32.03
VOC [g/h]	14.29	119.70	118.99	14.25	140.52	2.27	21.53	38.15

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.893	1.860	1.971
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	925	650	650
d_b, Bicycle Delay [s]	11.56	11.56	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.520	2.522	1.782	1.812
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	120	692	91	82	701	175	145	394	171	63	276	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	63	0	5	50	3	5	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	133	831	101	96	828	197	166	437	190	70	306	85
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	216	26	25	215	51	43	113	49	18	79	22
Total Analysis Volume [veh/h]	138	863	105	100	860	205	172	454	197	73	318	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	10	27	0	8	25	0	0	23	0	0	23	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	14.0	27.0	0.0	15.0	28.0	0.0	0.0	28.0	0.0	0.0	28.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.8	28.9	28.9	5.1	27.2	27.2	24.0	24.0	24.0	24.0	24.0	24.0
g / C, Green / Cycle	0.10	0.41	0.41	0.07	0.39	0.39	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.08	0.26	0.26	0.06	0.29	0.29	0.17	0.24	0.12	0.09	0.17	0.05
s, saturation flow rate [veh/h]	1810	1900	1829	1810	1900	1775	995	1900	1615	793	1900	1615
c, Capacity [veh/h]	177	782	753	134	737	688	284	651	554	189	651	554
d1, Uniform Delay [s]	30.83	16.35	16.36	31.77	18.46	18.48	28.30	19.86	17.21	30.67	18.15	15.99
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.22	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.20	3.83	3.99	8.04	6.78	7.30	2.08	2.75	0.39	1.30	0.57	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.63	0.63	0.75	0.75	0.75	0.61	0.70	0.36	0.39	0.49	0.16
d, Delay for Lane Group [s/veh]	38.04	20.19	20.34	39.82	25.25	25.78	30.38	22.61	17.60	31.97	18.72	16.12
Lane Group LOS	D	C	C	D	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.48	6.21	6.02	1.85	8.01	7.61	2.82	6.26	2.23	1.21	3.79	0.92
50th-Percentile Queue Length [ft/ln]	61.95	155.31	150.41	46.35	200.24	190.13	70.59	156.59	55.71	30.31	94.87	23.00
95th-Percentile Queue Length [veh/ln]	4.46	10.30	10.04	3.34	12.65	12.13	5.08	10.37	4.01	2.18	6.83	1.66
95th-Percentile Queue Length [ft/ln]	111.50	257.50	250.97	83.42	316.28	303.20	127.07	259.20	100.29	54.56	170.77	41.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.04	20.25	20.34	39.82	25.44	25.78	30.38	22.61	17.60	31.97	18.72	16.12
Movement LOS	D	C	C	D	C	C	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	22.48			26.73			23.03			20.26		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.70											
Intersection LOS	C											
Intersection V/C	0.731											

Emissions

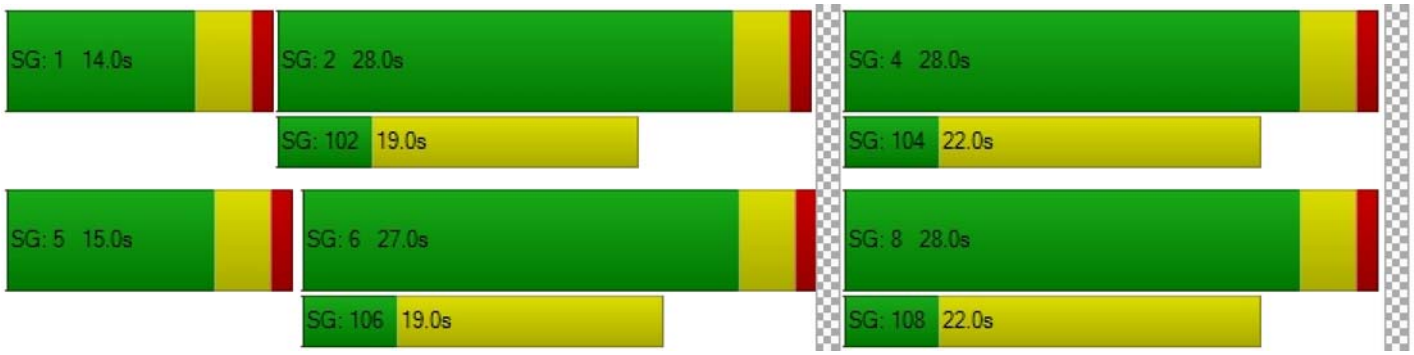
Vehicle Miles Traveled [mph]	10.65	38.06	36.66	25.34	139.34	130.53	10.99	29.00	12.59	18.19	79.23	21.92
Stops [stops/h]	127.43	319.50	309.41	95.34	411.93	391.12	145.22	322.13	114.61	62.35	195.16	47.32
Fuel consumption [US gal/h]	2.70	6.53	6.32	2.65	11.86	11.22	2.57	5.62	2.05	1.64	5.70	1.48
CO [g/h]	188.84	456.28	441.68	185.55	829.22	784.31	179.94	392.61	143.11	114.43	398.37	103.47
NOx [g/h]	36.74	88.78	85.93	36.10	161.34	152.60	35.01	76.39	27.84	22.26	77.51	20.13
VOC [g/h]	43.76	105.75	102.36	43.00	192.18	181.77	41.70	90.99	33.17	26.52	92.33	23.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.974	3.128	2.542	2.444
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	657	686	686	686
d_b, Bicycle Delay [s]	15.78	15.11	15.11	15.11
l_b,int, Bicycle LOS Score for Intersection	2.472	2.521	2.918	2.350
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	1	19	22	509	376	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	5	5	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	21	24	570	422	4
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	7	154	114	1
Total Analysis Volume [veh/h]	2	23	26	618	457	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.04	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	21.73	11.27	8.27	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.69	3.69	1.10	1.10	0.00	0.00
d_A, Approach Delay [s/veh]	12.11		0.33		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.159

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	11	5	5	1	2	3	6	86	17	5	73	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	2	1	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	6	6	1	2	3	7	97	20	6	84	0
Peak Hour Factor	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	2	2	0	1	1	2	28	6	2	24	0
Total Analysis Volume [veh/h]	15	7	7	1	2	3	8	112	23	7	97	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	820	859	901	872
Degree of Utilization, x	0.04	0.01	0.16	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.11	0.02	0.56	0.40
95th-Percentile Queue Length [ft]	2.75	0.53	14.07	10.12
Approach Delay [s/veh]	7.55	7.22	7.75	7.69
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.70			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	21.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	420.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	641	458	377	910	0	194	3	237	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	73	1	119	63	0	145	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	785	509	537	1073	0	360	3	268	0	0	0
Peak Hour Factor	1.0000	0.9530	0.9530	0.9530	0.9530	1.0000	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	206	134	141	281	0	94	1	70	0	0	0
Total Analysis Volume [veh/h]	0	824	534	563	1126	0	378	3	281	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	12	0	26	42	0	0	10	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	29.0	52.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	22.9	22.9	22.9	23.7	50.6	11.4	11.4	11.4	
g / C, Green / Cycle	0.33	0.33	0.33	0.34	0.72	0.16	0.16	0.16	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.21	0.31	0.31	0.13	0.13	0.13	
s, saturation flow rate [veh/h]	3618	1615	1615	1810	3618	1810	1742	1615	
c, Capacity [veh/h]	1182	528	528	612	2611	296	285	265	
d1, Uniform Delay [s]	19.53	20.09	20.09	22.26	3.93	28.04	28.06	28.10	
k, delay calibration	0.50	0.50	0.50	0.30	0.50	0.15	0.15	0.16	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.04	5.94	5.94	14.40	0.52	6.11	6.54	7.45	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.57	0.64	0.64	0.92	0.43	0.78	0.78	0.79	
d, Delay for Lane Group [s/veh]	21.57	26.03	26.03	36.66	4.45	34.16	34.60	35.55	
Lane Group LOS	C	C	C	D	A	C	C	D	
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.50	5.16	5.16	10.61	2.24	3.92	3.83	3.65	
50th-Percentile Queue Length [ft/ln]	112.52	128.89	128.89	265.16	56.00	98.01	95.66	91.13	
95th-Percentile Queue Length [veh/ln]	7.98	8.88	8.88	15.95	4.03	7.06	6.89	6.56	
95th-Percentile Queue Length [ft/ln]	199.50	221.99	221.99	398.68	100.80	176.42	172.18	164.03	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.57	26.03	36.66	4.45	0.00	34.34	34.60	35.34	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	C	D			
d_A, Approach Delay [s/veh]		23.80			15.19			34.75			0.00	
Approach LOS		C			B			C			A	
d_I, Intersection Delay [s/veh]	21.83											
Intersection LOS	C											
Intersection V/C	0.734											

Emissions

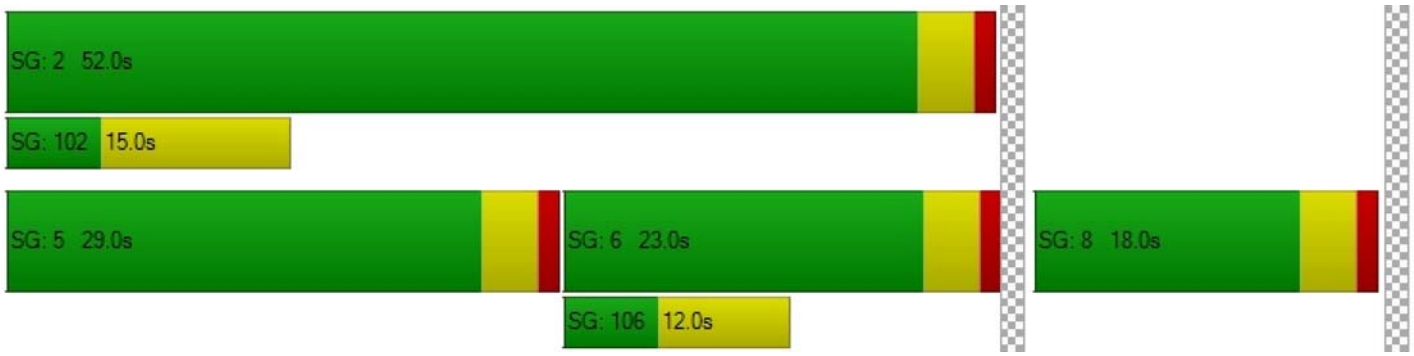
Vehicle Miles Traveled [mph]	87.73	43.86	43.86	25.40	50.79	19.81	19.17	17.92	
Stops [stops/h]	462.93	265.15	265.15	545.47	230.40	201.63	196.78	187.46	
Fuel consumption [US gal/h]	9.81	5.46	5.46	8.26	4.38	4.29	4.19	3.99	
CO [g/h]	685.43	381.96	381.96	577.31	306.46	300.05	292.86	279.05	
NOx [g/h]	133.36	74.32	74.32	112.32	59.63	58.38	56.98	54.29	
VOC [g/h]	158.86	88.52	88.52	133.80	71.02	69.54	67.87	64.67	

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.216	2.240
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1371	400	0
d_b, Bicycle Delay [s]	18.58	3.46	22.40	35.00
l_b,int, Bicycle LOS Score for Intersection	2.307	2.953	2.652	4.132
Bicycle LOS	B	C	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	40.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	325	587	0	0	815	416	0	0	0	344	3	346
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	215	0	0	177	116	0	0	0	5	0	147
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	364	867	0	0	1082	578	0	0	0	387	3	531
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	245	0	0	306	163	0	0	0	109	1	150
Total Analysis Volume [veh/h]	412	981	0	0	1224	654	0	0	0	438	3	601
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	18	55	0	0	33	0	0	0	0	0	17	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	34.0	87.0	0.0	0.0	53.0	0.0	0.0	0.0	0.0	0.0	33.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	29.1	84.0	51.0	51.0		28.0	28.0	28.0
g / C, Green / Cycle	0.24	0.70	0.42	0.42		0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.23	0.27	0.24	0.40		0.19	0.21	0.22
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1664	1615
c, Capacity [veh/h]	439	2532	2195	685		422	388	377
d1, Uniform Delay [s]	44.57	7.41	26.06	33.44		43.65	44.58	44.93
k, delay calibration	0.37	0.50	0.50	0.50		0.30	0.35	0.37
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	24.45	0.45	1.03	24.92		10.45	19.52	24.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.39	0.56	0.95		0.82	0.89	0.92
d, Delay for Lane Group [s/veh]	69.02	7.86	27.09	58.36		54.10	64.10	69.43
Lane Group LOS	E	A	C	E		D	E	E
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	14.91	4.94	8.92	22.65		10.78	11.86	12.40
50th-Percentile Queue Length [ft/ln]	372.84	123.45	222.90	566.28		269.53	296.59	310.03
95th-Percentile Queue Length [veh/ln]	21.25	8.58	13.81	30.46		16.17	17.51	18.18
95th-Percentile Queue Length [ft/ln]	531.18	214.55	345.33	761.41		404.15	437.81	454.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.02	7.86	0.00	0.00	27.09	58.36	0.00	0.00	0.00	56.17	64.10	67.18
Movement LOS	E	A			C	E				E	E	E
d_A, Approach Delay [s/veh]	25.95			37.98			0.00			62.54		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	40.03											
Intersection LOS	D											
Intersection V/C	0.908											

Emissions

Vehicle Miles Traveled [mph]	18.58	44.25	45.39	24.25		29.00	29.00	29.00
Stops [stops/h]	447.41	296.27	802.45	679.53		323.43	355.91	372.03
Fuel consumption [US gal/h]	9.02	5.03	13.05	12.52		8.04	9.06	9.60
CO [g/h]	630.72	351.39	912.09	875.07		561.94	633.64	671.05
NOx [g/h]	122.72	68.37	177.46	170.26		109.33	123.28	130.56
VOC [g/h]	146.18	81.44	211.39	202.81		130.24	146.85	155.52

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.251	2.407
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1383	817	0	483
d_b, Bicycle Delay [s]	5.70	21.00	60.00	34.50
l_b,int, Bicycle LOS Score for Intersection	2.709	2.593	4.132	3.279
Bicycle LOS	B	B	D	C

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	169	748	106	39	732	43	53	157	224	147	133	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	337	2	0	269	8	6	4	0	1	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	211	1167	120	43	1082	56	65	178	249	164	152	72
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	319	33	12	296	15	18	49	68	45	42	20
Total Analysis Volume [veh/h]	231	1275	131	47	1183	61	71	195	272	179	166	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	17	37	0	5	25	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	22.0	38.0	0.0	12.0	28.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12.2	39.5	39.5	3.3	30.6	30.6	25.2	25.2	25.2	25.2	25.2	25.2
g / C, Green / Cycle	0.15	0.49	0.49	0.04	0.38	0.38	0.31	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.37	0.38	0.03	0.23	0.23	0.06	0.10	0.17	0.19	0.09	0.05
s, saturation flow rate [veh/h]	1810	1900	1839	1810	3618	1853	1153	1900	1615	941	1900	1615
c, Capacity [veh/h]	277	939	908	77	1387	710	347	596	507	288	596	507
d1, Uniform Delay [s]	32.90	16.34	16.49	37.66	19.69	19.69	25.72	21.00	22.66	30.80	20.65	19.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.14	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.51	5.64	6.16	7.70	1.87	3.63	0.29	0.32	0.89	2.88	0.25	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.76	0.77	0.61	0.59	0.59	0.20	0.33	0.54	0.62	0.28	0.16
d, Delay for Lane Group [s/veh]	39.41	21.98	22.66	45.36	21.56	23.32	26.00	21.31	23.54	33.67	20.90	19.95
Lane Group LOS	D	C	C	D	C	C	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.72	10.93	10.94	1.03	5.88	6.37	1.10	2.69	4.09	3.47	2.29	1.05
50th-Percentile Queue Length [ft/ln]	118.12	273.33	273.45	25.77	147.09	159.37	27.42	67.15	102.21	86.66	57.18	26.13
95th-Percentile Queue Length [veh/ln]	8.29	16.36	16.36	1.86	9.86	10.52	1.97	4.83	7.36	6.24	4.12	1.88
95th-Percentile Queue Length [ft/ln]	207.24	408.90	409.05	46.38	246.54	262.89	49.35	120.86	183.99	155.98	102.92	47.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.41	22.28	22.66	45.36	22.10	23.32	26.00	21.31	23.54	33.67	20.90	19.95
Movement LOS	D	C	C	D	C	C	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	24.73			23.00			23.06			26.11		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.08											
Intersection LOS	C											
Intersection V/C	0.700											

Emissions

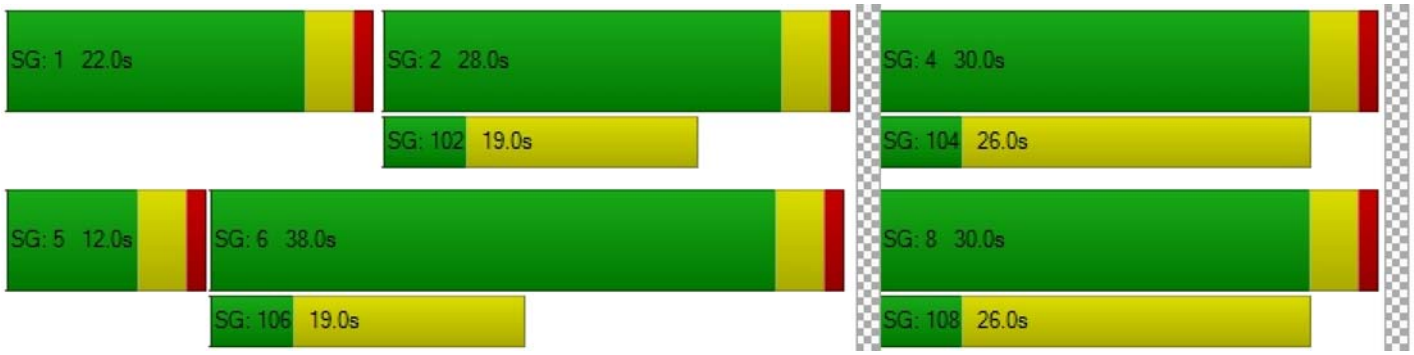
Vehicle Miles Traveled [mph]	9.86	30.27	29.75	23.35	408.69	209.37	4.24	11.65	16.24	10.25	9.50	4.52
Stops [stops/h]	212.61	492.00	492.22	46.38	529.54	286.86	49.35	120.86	183.99	155.98	102.92	47.04
Fuel consumption [US gal/h]	3.43	7.14	7.16	1.73	23.45	12.32	0.91	2.20	3.31	2.51	1.67	0.77
CO [g/h]	239.97	498.90	500.27	120.64	1639.22	860.99	63.50	153.69	231.10	175.45	116.43	53.60
NOx [g/h]	46.69	97.07	97.33	23.47	318.93	167.52	12.36	29.90	44.96	34.14	22.65	10.43
VOC [g/h]	55.61	115.63	115.94	27.96	379.90	199.54	14.72	35.62	53.56	40.66	26.98	12.42

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.235	3.138	2.410	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	850	600	650	650
d_b, Bicycle Delay [s]	13.23	19.60	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.910	2.270	2.447	2.259
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	1	4	3	68	2	53	87	198	1	0	152	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	4	0	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	4	3	75	2	59	97	224	1	0	175	38
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	20	1	16	26	61	0	0	47	10
Total Analysis Volume [veh/h]	1	4	3	81	2	64	105	242	1	0	189	41
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	662	690	680	812	752
Degree of Utilization, x	0.01	0.21	0.51	0.00	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.04	0.80	2.92	0.00	1.30
95th-Percentile Queue Length [ft]	0.92	20.08	73.02	0.09	32.40
Approach Delay [s/veh]	8.50	9.63	13.36		9.88
Approach LOS	A	A	B		A
Intersection Delay [s/veh]	11.47				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	113.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.810

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	113	594	521	109	73	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	2	3	5	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	126	661	581	126	85	210
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	171	150	33	22	54
Total Analysis Volume [veh/h]	130	684	601	130	88	217
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.01	0.01	0.00	0.81	0.43
d_M, Delay for Movement [s/veh]	9.78	0.00	0.00	0.00	113.27	17.43
Movement LOS	A	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.52	0.00	0.00	0.00	4.60	2.14
95th-Percentile Queue Length [ft/ln]	12.89	0.00	0.00	0.00	114.91	53.52
d_A, Approach Delay [s/veh]	1.56		0.00		45.08	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	8.12					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	32.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.164

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	43	559	553	36	22	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	3	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	621	614	43	26	59
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	157	156	11	7	15
Total Analysis Volume [veh/h]	49	630	623	44	26	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.16	0.12
d_M, Delay for Movement [s/veh]	9.08	0.00	0.00	0.00	32.49	17.10
Movement LOS	A	A	A	A	D	C
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	1.16	1.16
95th-Percentile Queue Length [ft/ln]	4.16	0.00	0.00	0.00	28.90	28.90
d_A, Approach Delay [s/veh]	0.65		0.00		21.76	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.62					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	53.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.929

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	167	508	175	122	499	62	95	897	186	156	640	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	337	5	44	269	44	56	0	3	5	0	56
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	901	199	179	823	113	161	996	209	178	710	155
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	232	51	46	211	29	41	256	54	46	182	40
Total Analysis Volume [veh/h]	191	926	205	184	846	116	165	1024	215	183	730	159
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	15	32	0	11	28	0	15	30	0	11	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21.0	39.0	0.0	18.0	36.0	0.0	19.0	35.0	0.0	18.0	34.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13.5	35.5	35.5	13.0	35.0	35.0	11.9	32.5	32.5	13.0	33.5	33.5
g / C, Green / Cycle	0.12	0.32	0.32	0.12	0.32	0.32	0.11	0.30	0.30	0.12	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.11	0.31	0.31	0.10	0.26	0.26	0.09	0.28	0.13	0.10	0.24	0.24
s, saturation flow rate [veh/h]	1810	1900	1783	1810	1900	1821	1810	3618	1615	1810	1900	1784
c, Capacity [veh/h]	224	613	575	214	602	577	198	1070	478	213	579	543
d1, Uniform Delay [s]	47.21	36.37	36.49	47.59	34.59	34.60	48.03	38.06	31.47	47.60	35.06	35.07
k, delay calibration	0.20	0.41	0.42	0.26	0.31	0.32	0.16	0.50	0.50	0.24	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.81	22.55	25.05	20.48	7.59	7.96	12.96	18.99	3.05	19.03	10.66	11.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.95	0.96	0.86	0.81	0.82	0.84	0.96	0.45	0.86	0.79	0.79
d, Delay for Lane Group [s/veh]	62.01	58.91	61.55	68.08	42.18	42.56	60.98	57.04	34.52	66.64	45.72	46.38
Lane Group LOS	E	E	E	E	D	D	E	E	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.93	18.37	17.79	6.10	13.01	12.54	5.01	15.64	4.86	5.94	12.53	11.87
50th-Percentile Queue Length [ft/ln]	148.26	459.22	444.82	152.51	325.17	313.61	125.23	391.07	121.44	148.43	313.15	296.67
95th-Percentile Queue Length [veh/ln]	9.92	25.40	24.71	10.15	18.92	18.35	8.68	22.13	8.47	9.93	18.33	17.52
95th-Percentile Queue Length [ft/ln]	248.10	634.94	617.76	253.78	473.03	458.82	216.99	553.22	211.80	248.34	458.25	437.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.01	59.89	61.55	68.08	42.34	42.56	60.98	57.04	34.52	66.64	45.97	46.38
Movement LOS	E	E	E	E	D	D	E	E	C	E	D	D
d_A, Approach Delay [s/veh]	60.46			46.49			54.06			49.56		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	53.04											
Intersection LOS	D											
Intersection V/C	0.929											

Emissions

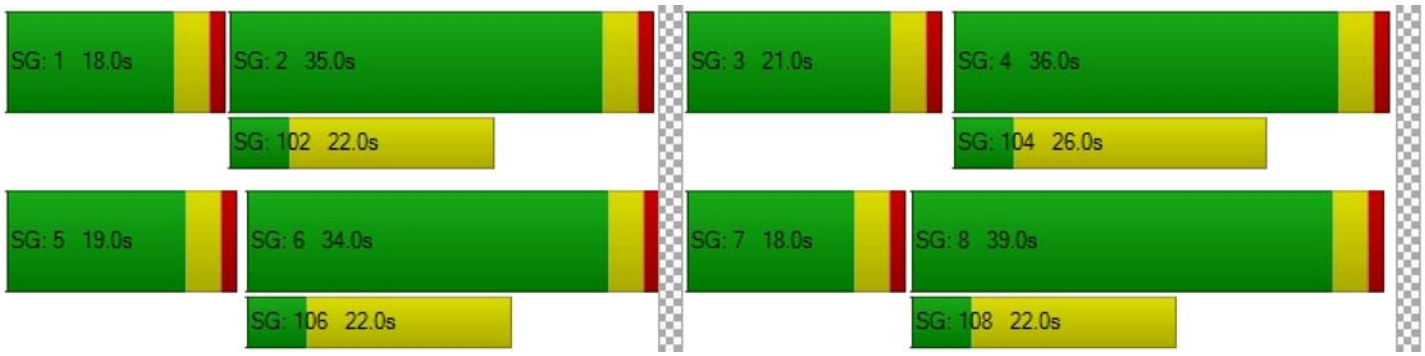
Vehicle Miles Traveled [mph]	94.90	288.79	273.13	12.45	33.23	31.89	19.45	120.72	25.35	17.77	44.51	41.81
Stops [stops/h]	194.08	601.16	582.31	199.65	425.67	410.54	163.94	1023.88	158.97	194.31	409.94	388.37
Fuel consumption [US gal/h]	7.72	23.22	22.39	4.52	8.68	8.38	4.75	28.75	4.36	5.03	9.89	9.38
CO [g/h]	539.34	1622.95	1564.97	316.30	606.81	585.98	332.20	2009.89	304.47	351.36	691.02	655.45
NOx [g/h]	104.94	315.77	304.49	61.54	118.06	114.01	64.63	391.05	59.24	68.36	134.45	127.53
VOC [g/h]	125.00	376.14	362.70	73.30	140.63	135.81	76.99	465.81	70.56	81.43	160.15	151.91

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.978	2.856	3.059	2.957
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	636	582	564	545
d_b, Bicycle Delay [s]	25.57	27.65	28.37	29.09
l_b,int, Bicycle LOS Score for Intersection	2.650	2.505	2.718	2.444
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Project Driveway/W American Ave

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Project Driveway		West American Avenue		West American Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway		West American Avenue		West American Avenue	
Base Volume Input [veh/h]	0	0	0	138	120	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	10	19	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	10	19	153	133	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	5	38	33	1
Total Analysis Volume [veh/h]	3	10	19	153	133	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.50	8.98	7.49	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.17	1.17	0.80	0.80	0.00	0.00
d_A, Approach Delay [s/veh]	9.33		0.83		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.82					
Intersection LOS	B					