

Volumes

Name	Saliman Rd			Saliman Rd			William St			William St		
Base Volume Input [veh/h]	131	128	368	117	102	14	29	873	157	456	698	48
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	-11	0	-26	0	0	0	0	0	-19	-44	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	103	0	0	7	0	0	72	0	0	25
Total Hourly Volume [veh/h]	120	128	239	117	102	7	29	873	66	412	698	23
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
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]	32	34	64	31	27	2	8	235	18	111	188	6
Total Analysis Volume [veh/h]	129	138	257	126	110	8	31	939	71	443	751	25
Presence of On-Street Parking	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	8			6			5			0		
v_di, Inbound Pedestrian Volume crossing m	0			5			6			8		
v_co, Outbound Pedestrian Volume crossing	1			0			1			1		
v_ci, Inbound Pedestrian Volume crossing mi	1			1			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	4			1			3			3		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	40	40	0	30	40	0	20	35	0	26	35	0
Amber [s]	3.0	3.4	0.0	3.5	3.4	0.0	3.6	4.5	0.0	3.5	4.4	0.0
All red [s]	2.5	3.0	0.0	1.5	3.0	0.0	4.1	1.0	0.0	4.1	1.0	0.0
Split [s]	26	44	0	15	33	0	15	38	0	23	46	0
Vehicle Extension [s]	1.9	2.0	0.0	3.0	2.0	0.0	1.7	2.7	0.0	1.7	2.7	0.0
Walk [s]	0	9	0	0	14	0	0	9	0	0	8	0
Pedestrian Clearance [s]	0	28	0	0	12	0	0	21	0	0	20	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]	3.5	4.4	0.0	3.0	4.4	0.0	5.7	3.5	0.0	5.6	3.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.40	6.40	6.40	6.40	6.40	6.40	7.70	5.50	5.50	7.60	5.40	5.40
I1_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
I2, Clearance Lost Time [s]	0.00	4.40	4.40	0.00	4.40	4.40	5.70	3.50	3.50	5.60	3.40	3.40
g_i, Effective Green Time [s]	37	23	23	37	23	23	3	47	47	17	61	61
g / C, Green / Cycle	0.31	0.19	0.19	0.31	0.19	0.19	0.03	0.39	0.39	0.14	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.09	0.07	0.17	0.10	0.03	0.03	0.02	0.26	0.04	0.13	0.21	0.21
s, saturation flow rate [veh/h]	1451	1885	1556	1246	1885	1832	1795	3589	1578	3486	1885	1862
c, Capacity [veh/h]	502	365	302	411	357	346	49	1388	610	506	951	939
d1, Uniform Delay [s]	31.22	42.13	46.51	31.37	40.78	40.81	57.85	30.60	23.64	50.31	18.59	18.60
k, delay calibration	0.04	0.04	0.04	0.11	0.04	0.04	0.04	0.50	0.50	0.04	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]	0.10	0.24	2.65	0.42	0.08	0.08	4.98	2.66	0.39	1.95	1.31	1.33
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	0.26	0.38	0.85	0.31	0.17	0.17	0.63	0.68	0.12	0.88	0.41	0.41
d, Delay for Lane Group [s/veh]	31.32	42.37	49.16	31.79	40.86	40.89	62.83	33.27	24.03	52.25	19.90	19.93
Lane Group LOS	C	D	D	C	D	D	E	C	C	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.93	3.70	7.78	2.83	1.50	1.49	0.99	11.38	1.34	6.53	6.82	6.76
50th-Percentile Queue Length [ft/ln]	73.19	92.55	194.56	70.69	37.55	37.19	24.65	284.46	33.38	163.22	170.50	168.89
95th-Percentile Queue Length [veh/ln]	5.27	6.66	12.36	5.09	2.70	2.68	1.77	16.91	2.40	10.72	11.10	11.02
95th-Percentile Queue Length [ft/ln]	131.74	166.59	308.94	127.24	67.59	66.94	44.37	422.77	60.08	267.98	277.57	275.45

Movement, Approach, & Intersection Results

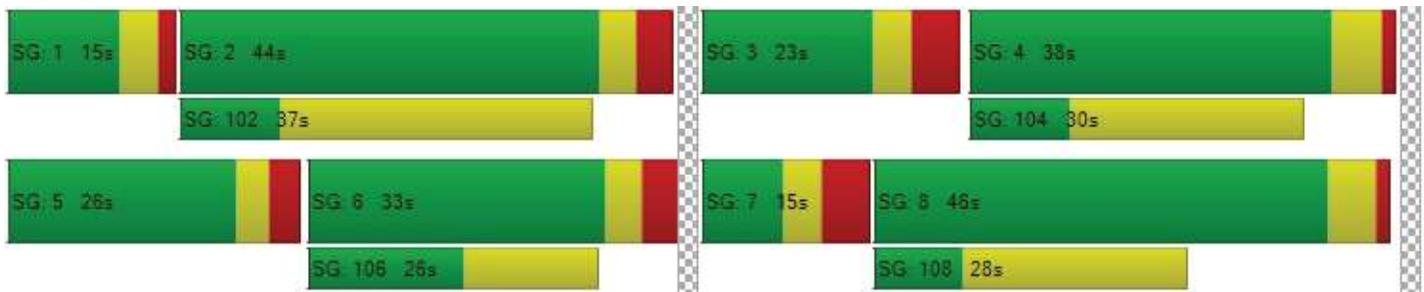
d_M, Delay for Movement [s/veh]	31.32	42.37	49.16	31.79	40.88	40.89	62.83	33.27	24.03	52.25	19.92	19.93
Movement LOS	C	D	D	C	D	D	E	C	C	D	B	B
d_A, Approach Delay [s/veh]	42.98			36.19			33.52			31.67		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.63											
Intersection LOS	C											
Intersection V/C	0.609											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	18.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	3883.06	7559.34	1061.45	804.92
d_p, Pedestrian Delay [s]	47.74	48.64	43.39	47.74
I_p,int, Pedestrian LOS Score for Intersectio	2.588	2.399	3.037	3.117
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	626	443	541	676
d_b, Bicycle Delay [s]	28.38	36.40	31.99	26.34
I_b,int, Bicycle LOS Score for Intersection	2.594	1.767	2.478	2.586
Bicycle LOS	B	A	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 2: Saliman Road / Robinson Street

Control Type:	All-way stop	Delay (sec / veh):	16.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.577

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	21	397	83	200	471	58	62	21	21	68	22	151
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	-22	-63	0	0	0	-6	0	-13	-4	-37
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]	21	397	61	137	471	58	62	15	21	55	18	114
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	6	112	17	38	132	16	17	4	6	15	5	32
Total Analysis Volume [veh/h]	24	446	69	154	529	65	70	17	24	62	20	128
Pedestrian Volume [ped/h]	4			2			4			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	465	496	508	480	515	526	439	488	441	504
Degree of Utilization, x	0.05	0.52	0.51	0.32	0.58	0.56	0.16	0.08	0.14	0.29

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.16	2.95	2.82	1.37	3.62	3.47	0.56	0.27	0.49	1.21
95th-Percentile Queue Length [ft]	4.07	73.71	70.50	34.23	90.38	86.76	14.05	6.84	12.14	30.32
Approach Delay [s/veh]	16.89			17.46			11.82		12.60	
Approach LOS	C			C			B		B	
Intersection Delay [s/veh]	16.24									
Intersection LOS	C									

**Intersection Level Of Service Report
Intersection 3: Saliman Road / 5th Street**

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.261

Intersection Setup

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	12.00	11.00	11.00	11.00	11.00	10.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	175.00	100.00	100.00	160.00	100.00	100.00	130.00	100.00	130.00	150.00	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			35.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Base Volume Input [veh/h]	86	303	169	89	287	105	132	364	80	124	235	56
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	-16	-16	0	-9	-4	-6	-7	0	-9	-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	80	0	0	53	0	0	42	0	0	29
Total Hourly Volume [veh/h]	86	287	73	89	278	48	126	357	38	115	231	27
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]	24	80	20	25	77	13	35	99	11	32	64	8
Total Analysis Volume [veh/h]	96	319	81	99	309	53	140	397	42	128	257	30
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	1			0			1			0		
v_di, Inbound Pedestrian Volume crossing m	1			0			1			0		
v_co, Outbound Pedestrian Volume crossing	1			0			2			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			2			0			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			1			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss							
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	20	30	0	20	30	0	0	30	0	0	30	0
Amber [s]	3.2	4.1	0.0	3.2	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	2.4	2.4	0.0	2.3	2.4	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	1.8	0.0	2.0	1.8	0.0	0.0	2.0	0.0	0.0	1.8	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	23	0	0	12	0	0	17	0	0	23	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]	3.6	4.5	0.0	3.5	4.5	0.0	0.0	3.9	0.0	0.0	3.9	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	
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
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

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	C	L	C	R
C, Cycle Length [s]	50	50	50	50	50	50	50	50	50	50	50	50
L, Total Lost Time per Cycle [s]	6.05	6.50	6.50	6.00	6.50	6.50	5.90	5.90	5.90	5.90	5.90	5.90
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	4.50	4.50	0.00	4.50	4.50	3.90	3.90	3.90	3.90	3.90	3.90
g_i, Effective Green Time [s]	22	12	12	23	12	12	16	16	16	16	16	16
g / C, Green / Cycle	0.45	0.24	0.24	0.45	0.24	0.24	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.07	0.11	0.11	0.07	0.10	0.10	0.13	0.12	0.12	0.13	0.14	0.02
s, saturation flow rate [veh/h]	1445	1885	1755	1440	1885	1788	1101	1885	1817	957	1885	1581
c, Capacity [veh/h]	594	450	419	586	461	437	334	607	585	324	607	509
d1, Uniform Delay [s]	12.55	16.27	16.30	13.01	15.83	15.86	19.62	13.03	13.05	19.04	13.31	11.71
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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]	0.05	0.27	0.30	0.05	0.21	0.23	0.31	0.14	0.14	0.29	0.17	0.02
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	0.16	0.46	0.46	0.17	0.40	0.41	0.42	0.37	0.37	0.40	0.42	0.06
d, Delay for Lane Group [s/veh]	12.60	16.53	16.60	13.06	16.04	16.08	19.93	13.17	13.19	19.33	13.48	11.73
Lane Group LOS	B	B	B	B	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.47	1.76	1.67	0.48	1.54	1.49	1.41	1.68	1.63	1.20	1.84	0.19
50th-Percentile Queue Length [ft/ln]	11.80	43.92	41.76	12.12	38.50	37.19	35.30	41.88	40.79	30.04	46.05	4.72
95th-Percentile Queue Length [veh/ln]	0.85	3.16	3.01	0.87	2.77	2.68	2.54	3.02	2.94	2.16	3.32	0.34
95th-Percentile Queue Length [ft/ln]	21.23	79.06	75.16	21.81	69.30	66.94	63.54	75.38	73.41	54.07	82.89	8.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.60	16.56	16.60	13.06	16.05	16.08	19.93	13.18	13.19	19.33	13.48	11.73
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.80			15.42			14.81			15.16		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.28											
Intersection LOS	B											
Intersection V/C	0.261											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²/ped]	8519.13			0.00			8330.98			17498.27		
d_p, Pedestrian Delay [s]	15.27			15.27			15.27			15.27		
I_p,int, Pedestrian LOS Score for Intersectio	2.812			2.776			2.524			2.700		
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]	1197			1197			1197			1197		
d_b, Bicycle Delay [s]	4.04			4.04			4.04			4.04		
I_b,int, Bicycle LOS Score for Intersection	2.035			1.984			2.072			2.292		
Bicycle LOS	B			A			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 4: Robinson Street / Matterhorn Lane

Control Type:	Roundabout	Delay (sec / veh):	3.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
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			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
Base Volume Input [veh/h]	74	36	9	0	30	62	78	22	91	6	14	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 [%]	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00	1.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
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]	-45	0	0	0	0	0	0	0	-56	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]	29	36	9	0	30	62	78	22	35	6	14	0
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]	8	10	3	0	8	17	22	6	10	2	4	0
Total Analysis Volume [veh/h]	32	40	10	0	33	69	87	24	39	7	16	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	112			56			40			161		
Exiting Flow Rate [veh/h]	80			128			118			35		
Demand Flow Rate [veh/h]	29	36	9	0	30	62	78	22	35	6	14	0
Adjusted Demand Flow Rate [veh/h]	32	40	10	0	33	69	87	24	39	7	16	0

Lanes

Override Calculated Critical Headway	No			No			No			No		
User-Defined Critical Headway [s]	4.00			4.00			4.00			4.00		
Override Calculated Follow-Up Time	No			No			No			No		
User-Defined Follow-Up Time [s]	3.00			3.00			3.00			3.00		
A (intercept)	1380.00			1380.00			1380.00			1380.00		
B (coefficient)	0.00102			0.00102			0.00102			0.00102		
HV Adjustment Factor	0.99			0.99			0.99			0.98		
Entry Flow Rate [veh/h]	83			104			152			24		
Capacity of Entry and Bypass Lanes [veh/h]	1231			1304			1325			1172		
Pedestrian Impedance	1.00			1.00			1.00			1.00		
Capacity per Entry Lane [veh/h]	1217			1291			1309			1149		
X, volume / capacity	0.07			0.08			0.11			0.02		

Movement, Approach, & Intersection Results

Lane LOS	A			A			A			A		
95th-Percentile Queue Length [veh]	0.22			0.26			0.39			0.06		
95th-Percentile Queue Length [ft]	5.41			6.42			9.68			1.53		
Approach Delay [s/veh]	3.51			3.42			3.68			3.30		
Approach LOS	A			A			A			A		
Intersection Delay [s/veh]	3.54											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Lane

Control Type:	Signalized	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.325

Intersection Setup

Name	Matterhorn Ln			5th St			5th St					
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	0	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	150.00
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			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Matterhorn Ln			5th St			5th St		
Base Volume Input [veh/h]	22	0	15	23	0	38	57	508	37	26	353	37
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 [%]	2.00	2.00	2.00	1.00	2.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00
Growth 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
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	-8	0	-13	-23	0	0	0	0	-13
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	8	0	0	13	0	0	19	0	0	12
Total Hourly Volume [veh/h]	22	0	7	15	0	12	34	508	18	26	353	12
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]	6	0	2	4	0	3	9	141	5	7	98	3
Total Analysis Volume [veh/h]	24	0	8	17	0	13	38	564	20	29	392	13
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]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	20	30	0	20	30	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	17	0	0	10	0	0	10	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	28	28	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	1	1	1	1	17	11	11	17	10	10
g / C, Green / Cycle	0.04	0.04	0.04	0.04	0.60	0.39	0.39	0.60	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.01	0.01	0.03	0.30	0.01	0.03	0.21	0.01
s, saturation flow rate [veh/h]	1401	1589	1418	1589	1195	1885	1589	1059	1885	1602
c, Capacity [veh/h]	258	64	258	64	948	728	614	808	709	603
d1, Uniform Delay [s]	13.98	12.94	13.98	12.98	2.63	7.52	5.34	3.22	6.87	5.48
k, delay calibration	0.11	0.11	0.11	0.11	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
d2, Incremental Delay [s]	0.15	0.86	0.11	1.53	0.02	1.81	0.02	0.02	0.68	0.01
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.09	0.12	0.07	0.20	0.04	0.77	0.03	0.04	0.55	0.02
d, Delay for Lane Group [s/veh]	14.14	13.80	14.09	14.51	2.65	9.33	5.36	3.24	7.54	5.50
Lane Group LOS	B	B	B	B	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.13	0.05	0.10	0.09	0.00	1.51	0.03	0.00	0.87	0.02
50th-Percentile Queue Length [ft/ln]	3.24	1.30	2.38	2.25	0.11	37.76	0.81	0.10	21.86	0.55
95th-Percentile Queue Length [veh/ln]	0.23	0.09	0.17	0.16	0.01	2.72	0.06	0.01	1.57	0.04
95th-Percentile Queue Length [ft/ln]	5.84	2.33	4.28	4.04	0.20	67.97	1.46	0.18	39.35	0.99

Movement, Approach, & Intersection Results

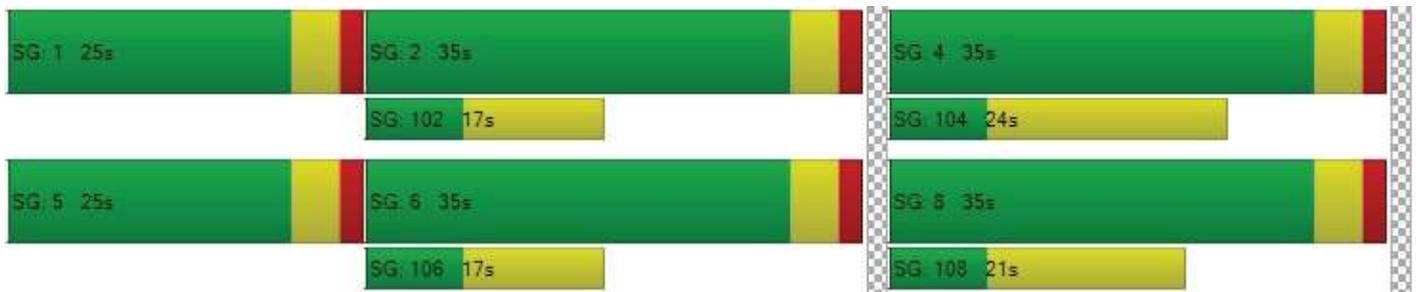
d_M, Delay for Movement [s/veh]	14.14	13.80	13.80	14.09	14.51	14.51	2.65	9.33	5.36	3.24	7.54	5.50
Movement LOS	B	B	B	B	B	B	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	14.05			14.27			8.79			7.19		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.47											
Intersection LOS	A											
Intersection V/C	0.325											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	5.11			5.11			5.11			5.11		
I_p,int, Pedestrian LOS Score for Intersectio	1.928			1.934			2.565			2.434		
Crosswalk LOS	A			A			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	2153			2153			2153			2153		
d_b, Bicycle Delay [s]	0.08			0.08			0.08			0.08		
I_b,int, Bicycle LOS Score for Intersection	1.626			1.631			2.617			2.296		
Bicycle LOS	A			A			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 2: Saliman Road / Robinson Street

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.357

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	21	397	83	200	471	58	62	21	21	68	22	151
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	-22	-63	0	0	0	-6	0	-13	-4	-37
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	32	0	0	30	0	0	11	0	0	34
Total Hourly Volume [veh/h]	21	397	29	137	471	28	62	15	10	55	18	80
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	6	112	8	38	132	8	17	4	3	15	5	22
Total Analysis Volume [veh/h]	24	446	33	154	529	31	70	17	11	62	20	90
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	2			1			2			1		
v_di, Inbound Pedestrian Volume crossing m	2			1			2			1		
v_co, Outbound Pedestrian Volume crossing	0			2			2			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			2			2			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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	1.5	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Split [s]	30	37	0	34	41	0	15	34	0	15	34	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	22	0	0	22	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]	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	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No										
Pedestrian Recall	No	No										
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
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

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	L	C
C, Cycle Length [s]	40	40	40	40	40	40	40	40	40	40
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
I1_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
I2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	1	8	8	5	12	12	3	4	3	4
g / C, Green / Cycle	0.03	0.21	0.21	0.13	0.31	0.31	0.07	0.11	0.06	0.10
(v / s)_i Volume / Saturation Flow Rate	0.01	0.14	0.14	0.10	0.17	0.17	0.04	0.02	0.04	0.07
s, saturation flow rate [veh/h]	1616	1696	1656	1616	1696	1662	1616	1579	1616	1475
c, Capacity [veh/h]	48	358	349	203	520	510	111	167	102	148
d1, Uniform Delay [s]	19.32	14.69	14.70	17.08	11.66	11.67	18.34	16.46	18.46	17.68
k, delay calibration	0.11	0.11	0.11	0.11	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
d2, Incremental Delay [s]	7.67	2.24	2.33	5.67	0.88	0.91	5.86	0.47	5.73	7.13
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.50	0.68	0.68	0.76	0.54	0.54	0.63	0.17	0.61	0.74
d, Delay for Lane Group [s/veh]	26.99	16.93	17.03	22.75	12.55	12.57	24.20	16.93	24.19	24.82
Lane Group LOS	C	B	B	C	B	B	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.31	2.09	2.06	1.61	2.01	1.98	0.78	0.24	0.70	1.23
50th-Percentile Queue Length [ft/ln]	7.84	52.24	51.51	40.25	50.29	49.48	19.52	6.10	17.39	30.70
95th-Percentile Queue Length [veh/ln]	0.56	3.76	3.71	2.90	3.62	3.56	1.41	0.44	1.25	2.21
95th-Percentile Queue Length [ft/ln]	14.11	94.03	92.72	72.44	90.53	89.07	35.14	10.98	31.30	55.25

Movement, Approach, & Intersection Results

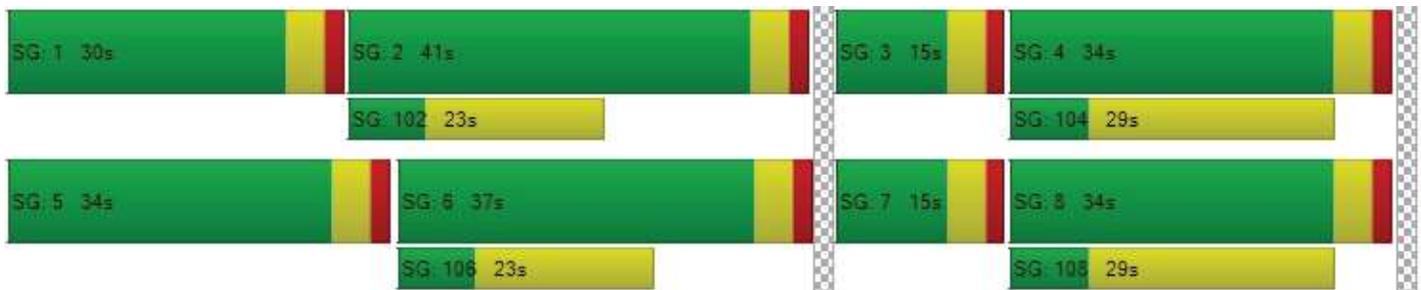
d_M, Delay for Movement [s/veh]	26.99	16.98	17.03	22.75	12.56	12.57	24.20	16.93	16.93	24.19	24.82	24.82
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	17.46			14.76			22.12			24.59		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.29											
Intersection LOS	B											
Intersection V/C	0.357											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	5974.72			11448.93			5587.72			0.00		
d_p, Pedestrian Delay [s]	10.63			10.63			10.63			10.63		
I_p,int, Pedestrian LOS Score for Intersectio	2.409			2.430			1.943			2.012		
Crosswalk LOS	B			B			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1590			1788			1441			1441		
d_b, Bicycle Delay [s]	0.85			0.23			1.58			1.58		
I_b,int, Bicycle LOS Score for Intersection	2.001			2.173			1.739			1.900		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Lane

Control Type:	Two-way stop	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

Intersection Setup

Name	Matterhorn Ln		5th St		5th St	
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	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	150.00
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		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Matterhorn Ln		5th St		5th St	
Base Volume Input [veh/h]	23	38	57	508	353	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	-8	-13	-23	0	0	-13
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]	15	25	34	508	353	24
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	4	7	9	141	98	7
Total Analysis Volume [veh/h]	17	28	38	564	392	27
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
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	0.07	0.04	0.03	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	20.42	10.71	8.25	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.13	0.10	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.42	3.32	2.57	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.38		0.52		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.90					
Intersection LOS	C					

Appendix D

2025 Plus Project LOS Calculations



Intersection Level Of Service Report
Intersection 1: William Street / Saliman Road

Control Type:	Signalized	Delay (sec / veh):	35.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.522

Intersection Setup

Name	Saliman Rd			Saliman Road			William Street			William Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	275.00	100.00	100.00	160.00	100.00	100.00	215.00	100.00	225.00	325.00	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]	15.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Road			William Street			William Street		
Base Volume Input [veh/h]	256	86	414	40	172	21	15	360	207	361	833	30
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	11	0	26	0	0	0	0	0	4	9	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	132	0	0	11	0	0	110	0	0	16
Total Hourly Volume [veh/h]	267	86	308	40	172	10	15	360	101	370	833	14
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
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]	77	25	89	11	49	3	4	103	29	106	239	4
Total Analysis Volume [veh/h]	307	99	354	46	198	11	17	414	116	425	957	16
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	4			11			8			45		
v_di, Inbound Pedestrian Volume crossing m	45			8			11			4		
v_co, Outbound Pedestrian Volume crossing	5			2			11			0		
v_ci, Inbound Pedestrian Volume crossing mi	11			0			5			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			4			3			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	37	0	5	5	0	5	30	0	5	10	0
Maximum Green [s]	40	40	0	40	42	0	20	35	0	26	35	0
Amber [s]	3.0	3.4	0.0	3.0	3.4	0.0	3.6	4.5	0.0	3.5	4.4	0.0
All red [s]	2.5	3.0	0.0	2.5	3.0	0.0	4.1	1.0	0.0	4.1	1.0	0.0
Split [s]	26	52	0	23	49	0	15	41	0	34	60	0
Vehicle Extension [s]	1.9	2.0	0.0	1.9	2.0	0.0	1.7	2.7	0.0	1.7	2.7	0.0
Walk [s]	0	9	0	0	14	0	0	9	0	0	8	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	21	0	0	20	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]	3.5	4.4	0.0	3.5	4.4	0.0	5.7	3.5	0.0	5.6	3.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	117	117	117	117	117	117	117	117	117	117	117	117
L, Total Lost Time per Cycle [s]	6.40	6.40	6.40	6.40	6.40	6.40	7.70	5.50	5.50	7.60	5.40	5.40
I1_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
I2, Clearance Lost Time [s]	0.00	4.40	4.40	0.00	4.40	4.40	5.70	3.50	3.50	5.60	3.40	3.40
g_i, Effective Green Time [s]	46	37	37	46	24	24	2	35	35	17	49	49
g / C, Green / Cycle	0.40	0.31	0.31	0.40	0.20	0.20	0.02	0.30	0.30	0.14	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.21	0.05	0.23	0.04	0.06	0.06	0.01	0.12	0.08	0.12	0.26	0.26
s, saturation flow rate [veh/h]	1444	1870	1515	1073	1870	1826	1781	3560	1542	3459	1870	1858
c, Capacity [veh/h]	606	589	477	480	377	368	33	1060	459	489	786	781
d1, Uniform Delay [s]	26.17	29.16	35.52	22.16	39.70	39.74	57.18	32.82	31.29	49.43	26.72	26.74
k, delay calibration	0.10	0.04	0.15	0.04	0.04	0.04	0.04	0.50	0.50	0.04	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]	0.60	0.05	3.16	0.03	0.15	0.15	4.54	1.08	1.32	1.91	3.66	3.70
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	0.51	0.17	0.74	0.10	0.28	0.28	0.52	0.39	0.25	0.87	0.62	0.62
d, Delay for Lane Group [s/veh]	26.76	29.21	38.69	22.20	39.85	39.89	61.72	33.91	32.61	51.34	30.39	30.44
Lane Group LOS	C	C	D	C	D	D	E	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.60	2.11	9.60	0.81	2.62	2.60	0.53	4.75	2.62	6.11	11.07	11.04
50th-Percentile Queue Length [ft/ln]	165.08	52.86	239.90	20.27	65.39	64.91	13.36	118.64	65.46	152.83	276.87	275.90
95th-Percentile Queue Length [veh/ln]	10.82	3.81	14.68	1.46	4.71	4.67	0.96	8.32	4.71	10.17	16.53	16.48
95th-Percentile Queue Length [ft/ln]	270.44	95.15	366.90	36.49	117.70	116.84	24.04	207.95	117.82	254.21	413.31	412.10

Movement, Approach, & Intersection Results

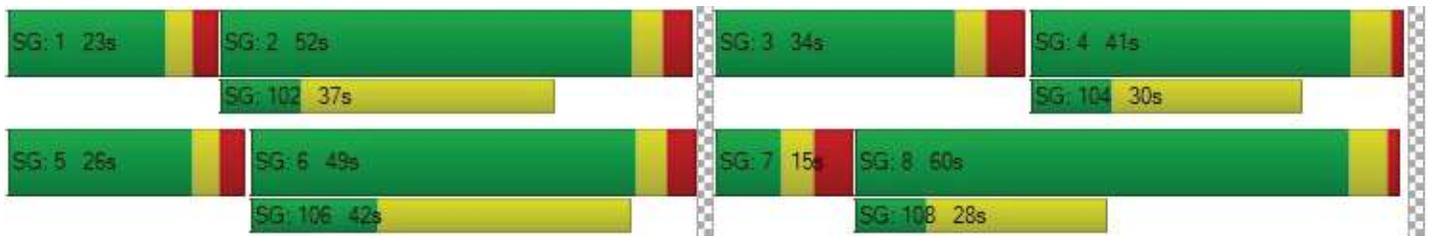
d_M, Delay for Movement [s/veh]	26.76	29.21	38.69	22.20	39.87	39.89	61.72	33.91	32.61	51.34	30.41	30.44
Movement LOS	C	C	D	C	D	D	E	C	C	D	C	C
d_A, Approach Delay [s/veh]	32.63			36.68			34.50			36.77		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	35.28											
Intersection LOS	D											
Intersection V/C	0.522											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	18.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	469.00	3907.88	610.18	121.05
d_p, Pedestrian Delay [s]	46.47	47.36	42.13	46.47
I_p,int, Pedestrian LOS Score for Intersectio	2.669	2.395	3.133	3.020
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	776	725	604	929
d_b, Bicycle Delay [s]	22.00	23.92	28.65	16.85
I_b,int, Bicycle LOS Score for Intersection	3.031	1.779	2.102	2.726
Bicycle LOS	C	A	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 2: Saliman Road / Robinson Street

Control Type:	All-way stop	Delay (sec / veh):	18.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	37	405	94	52	225	89	99	20	33	104	18	102
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 [%]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	4	13	0	0	0	1	0	14	4	37
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]	37	405	98	65	225	89	99	21	33	118	22	139
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
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]	12	130	31	21	72	29	32	7	11	38	7	45
Total Analysis Volume [veh/h]	47	519	126	83	288	114	127	27	42	151	28	178
Pedestrian Volume [ped/h]	106			98			17			200		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	445	474	491	422	447	470	441	488	441	502
Degree of Utilization, x	0.11	0.68	0.66	0.20	0.45	0.43	0.29	0.14	0.34	0.41

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.35	5.06	4.71	0.72	2.28	2.11	1.18	0.49	1.50	1.98
95th-Percentile Queue Length [ft]	8.80	126.56	117.71	18.08	57.02	52.75	29.51	12.23	37.54	49.57
Approach Delay [s/veh]	23.23			16.01			13.15		14.90	
Approach LOS	C			C			B		B	
Intersection Delay [s/veh]	18.34									
Intersection LOS	C									

**Intersection Level Of Service Report
Intersection 3: Saliman Road / 5th Street**

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.320

Intersection Setup

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	12.00	11.00	11.00	11.00	11.00	10.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	175.00	100.00	100.00	160.00	100.00	100.00	130.00	100.00	130.00	150.00	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			35.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Base Volume Input [veh/h]	75	249	53	99	209	100	74	155	82	171	319	127
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	3	0	10	4	1	1	0	9	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	29	0	0	54	0	0	43	0	0	66
Total Hourly Volume [veh/h]	75	252	27	99	219	50	75	156	39	180	323	61
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
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]	23	77	8	30	67	15	23	48	12	55	98	19
Total Analysis Volume [veh/h]	91	307	33	121	267	61	91	190	48	220	394	74
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			4			3			0		
v_di, Inbound Pedestrian Volume crossing m	3			0			0			4		
v_co, Outbound Pedestrian Volume crossing	7			1			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			1			7		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	4			1			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss							
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	20	30	0	20	30	0	0	30	0	0	30	0
Amber [s]	3.2	4.1	0.0	3.2	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	2.4	2.4	0.0	2.3	2.4	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	1.8	0.0	2.0	1.8	0.0	0.0	2.0	0.0	0.0	1.8	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	23	0	0	12	0	0	17	0	0	23	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]	3.6	4.5	0.0	3.5	4.5	0.0	0.0	3.9	0.0	0.0	3.9	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	
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
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

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	C	L	C	R
C, Cycle Length [s]	53	53	53	53	53	53	53	53	53	53	53	53
L, Total Lost Time per Cycle [s]	6.05	6.50	6.50	6.00	6.50	6.50	5.90	5.90	5.90	5.90	5.90	5.90
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	4.50	4.50	0.00	4.50	4.50	3.90	3.90	3.90	3.90	3.90	3.90
g_i, Effective Green Time [s]	23	13	13	23	13	13	19	19	19	19	19	19
g / C, Green / Cycle	0.43	0.24	0.24	0.44	0.24	0.24	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.09	0.08	0.09	0.09	0.10	0.06	0.07	0.19	0.21	0.05
s, saturation flow rate [veh/h]	1435	1870	1797	1444	1870	1733	924	1870	1741	1140	1870	1563
c, Capacity [veh/h]	575	441	424	580	456	423	260	653	609	435	653	546
d1, Uniform Delay [s]	13.40	17.16	17.19	13.87	16.76	16.81	22.15	12.08	12.11	17.97	14.31	11.85
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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]	0.05	0.21	0.22	0.07	0.18	0.21	0.30	0.05	0.06	0.34	0.33	0.04
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	0.16	0.39	0.40	0.21	0.37	0.38	0.35	0.19	0.19	0.51	0.60	0.14
d, Delay for Lane Group [s/veh]	13.44	17.37	17.41	13.94	16.95	17.02	22.45	12.13	12.17	18.31	14.65	11.89
Lane Group LOS	B	B	B	B	B	B	C	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.51	1.59	1.55	0.69	1.52	1.46	1.02	0.89	0.85	2.11	3.21	0.50
50th-Percentile Queue Length [ft/ln]	12.87	39.64	38.81	17.35	38.07	36.50	25.61	22.15	21.35	52.72	80.17	12.39
95th-Percentile Queue Length [veh/ln]	0.93	2.85	2.79	1.25	2.74	2.63	1.84	1.60	1.54	3.80	5.77	0.89
95th-Percentile Queue Length [ft/ln]	23.17	71.36	69.86	31.22	68.53	65.70	46.11	39.88	38.43	94.89	144.31	22.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.44	17.39	17.41	13.94	16.97	17.02	22.45	12.14	12.17	18.31	14.65	11.89
Movement LOS	B	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.56			16.16			15.00			15.52		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.82											
Intersection LOS	B											
Intersection V/C	0.320											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0		11.0		11.0		11.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	4853.45		4099.92		7707.28		2377.64	
d_p, Pedestrian Delay [s]	16.86		16.86		16.86		16.86	
I_p,int, Pedestrian LOS Score for Intersectio	2.861		2.714		2.500		2.789	
Crosswalk LOS	C		B		B		C	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	1122		1122		1122		1122	
d_b, Bicycle Delay [s]	5.16		5.15		5.15		5.15	
I_b,int, Bicycle LOS Score for Intersection	1.939		1.975		1.867		2.804	
Bicycle LOS	A		A		A		C	

Sequence

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



Intersection Level Of Service Report
Intersection 4: Robinson St / Matterhorn Ln

Control Type:	Roundabout	Delay (sec / veh):	3.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
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			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
Base Volume Input [veh/h]	78	0	0	0	0	0	0	0	50	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	1	0	17	44	14	4	0	4	11	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]	78	6	1	0	17	44	14	4	50	4	11	0
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	24	2	0	0	5	14	4	1	16	1	3	0
Total Analysis Volume [veh/h]	98	8	1	0	21	55	18	5	63	5	14	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	23			119			27			126		
Exiting Flow Rate [veh/h]	91			27			170			6		
Demand Flow Rate [veh/h]	78	6	1	0	17	44	14	4	50	4	11	0
Adjusted Demand Flow Rate [veh/h]	98	8	1	0	21	55	18	5	63	5	14	0

Lanes

Override Calculated Critical Headway	No			No			No			No		
User-Defined Critical Headway [s]	4.00			4.00			4.00			4.00		
Override Calculated Follow-Up Time	No			No			No			No		
User-Defined Follow-Up Time [s]	3.00			3.00			3.00			3.00		
A (intercept)	1380.00			1380.00			1380.00			1380.00		
B (coefficient)	0.00102			0.00102			0.00102			0.00102		
HV Adjustment Factor	0.98			0.98			0.98			0.98		
Entry Flow Rate [veh/h]	110			78			88			20		
Capacity of Entry and Bypass Lanes [veh/h]	1348			1222			1344			1213		
Pedestrian Impedance	1.00			1.00			1.00			1.00		
Capacity per Entry Lane [veh/h]	1321			1198			1317			1190		
X, volume / capacity	0.08			0.06			0.07			0.02		

Movement, Approach, & Intersection Results

Lane LOS	A			A			A			A		
95th-Percentile Queue Length [veh]	0.26			0.20			0.21			0.05		
95th-Percentile Queue Length [ft]	6.60			5.07			5.23			1.22		
Approach Delay [s/veh]	3.37			3.53			3.25			3.16		
Approach LOS	A			A			A			A		
Intersection Delay [s/veh]	3.36											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Ln

Control Type:	Two-way stop	Delay (sec / veh):	23.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.149

Intersection Setup

Name	Matterhorn Ln		5th Street		5th Street	
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	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	150.00
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		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Matterhorn Ln		5th Street		5th Street	
Base Volume Input [veh/h]	21	30	11	299	560	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	13	4	0	0	3
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]	29	43	15	299	560	10
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	13	5	91	171	3
Total Analysis Volume [veh/h]	35	52	18	365	683	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
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	0.12	0.02	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	22.96	14.06	9.08	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.51	0.39	0.06	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	12.84	9.74	1.53	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.64		0.43		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.46					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: William Street / Saliman Road

Control Type:	Signalized	Delay (sec / veh):	39.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.599

Intersection Setup

Name	Saliman Rd			Saliman Road			William Street			William Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	275.00	100.00	100.00	160.00	100.00	100.00	215.00	100.00	225.00	325.00	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]	15.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Road			William Street			William Street		
Base Volume Input [veh/h]	190	118	335	101	70	22	45	704	116	335	626	56
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	12	0	0	0	0	0	10	22	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	104	0	0	11	0	0	66	0	0	29
Total Hourly Volume [veh/h]	196	118	243	101	70	11	45	704	60	357	626	27
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
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]	59	36	73	30	21	3	14	212	18	108	189	8
Total Analysis Volume [veh/h]	236	142	293	122	84	13	54	848	72	430	754	33
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	39			2			20			1		
v_di, Inbound Pedestrian Volume crossing m	1			20			2			39		
v_co, Outbound Pedestrian Volume crossing	31			3			3			0		
v_ci, Inbound Pedestrian Volume crossing mi	3			0			31			3		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			3			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	37	0	5	5	0	5	30	0	5	10	0
Maximum Green [s]	40	40	0	40	42	0	20	35	0	26	35	0
Amber [s]	3.0	3.4	0.0	3.0	3.4	0.0	3.6	4.5	0.0	3.5	4.4	0.0
All red [s]	2.5	3.0	0.0	2.5	3.0	0.0	4.1	1.0	0.0	4.1	1.0	0.0
Split [s]	26	52	0	23	49	0	15	41	0	34	60	0
Vehicle Extension [s]	1.9	2.0	0.0	3.0	2.0	0.0	1.7	2.7	0.0	1.7	2.7	0.0
Walk [s]	0	9	0	0	14	0	0	9	0	0	8	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	21	0	0	20	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]	3.5	4.4	0.0	3.5	4.4	0.0	5.7	3.5	0.0	5.6	3.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	122	122	122	122	122	122	122	122	122	122	122	122
L, Total Lost Time per Cycle [s]	6.40	6.40	6.40	6.40	6.40	6.40	7.70	5.50	5.50	7.60	5.40	5.40
I1_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
I2, Clearance Lost Time [s]	0.00	4.40	4.40	0.00	4.40	4.40	5.70	3.50	3.50	5.60	3.40	3.40
g_i, Effective Green Time [s]	50	37	37	50	31	31	5	35	35	17	47	47
g / C, Green / Cycle	0.41	0.30	0.30	0.41	0.26	0.26	0.04	0.29	0.29	0.14	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.16	0.08	0.19	0.11	0.03	0.03	0.03	0.24	0.05	0.12	0.21	0.21
s, saturation flow rate [veh/h]	1472	1885	1520	1145	1885	1777	1795	3589	1526	3486	1885	1857
c, Capacity [veh/h]	667	573	462	504	484	456	71	1031	438	494	733	722
d1, Uniform Delay [s]	24.36	31.92	36.12	22.90	34.55	34.58	57.90	40.51	32.39	51.20	28.78	28.79
k, delay calibration	0.04	0.04	0.07	0.11	0.04	0.04	0.04	0.50	0.50	0.04	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]	0.12	0.08	0.90	0.25	0.03	0.04	5.91	7.40	0.80	1.91	2.84	2.89
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	0.35	0.25	0.63	0.24	0.10	0.11	0.76	0.82	0.16	0.87	0.54	0.54
d, Delay for Lane Group [s/veh]	24.48	32.00	37.02	23.14	34.58	34.62	63.80	47.90	33.20	53.10	31.63	31.68
Lane Group LOS	C	C	D	C	C	C	E	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.83	3.28	7.75	2.29	1.13	1.11	1.74	12.57	1.66	6.43	9.25	9.14
50th-Percentile Queue Length [ft/ln]	120.76	82.09	193.79	57.30	28.31	27.82	43.46	314.15	41.51	160.73	231.36	228.47
95th-Percentile Queue Length [veh/ln]	8.43	5.91	12.32	4.13	2.04	2.00	3.13	18.38	2.99	10.59	14.24	14.10
95th-Percentile Queue Length [ft/ln]	210.87	147.77	307.94	103.14	50.96	50.07	78.23	459.48	74.72	264.69	356.09	352.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.48	32.00	37.02	23.14	34.60	34.62	63.80	47.90	33.20	53.10	31.65	31.68
Movement LOS	C	C	D	C	C	C	E	D	C	D	C	C
d_A, Approach Delay [s/veh]	31.54			28.22			47.70			39.23		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	39.45											
Intersection LOS	D											
Intersection V/C	0.599											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	18.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	223.45	2459.71	507.51	148.00
d_p, Pedestrian Delay [s]	48.51	49.41	44.15	48.51
I_p,int, Pedestrian LOS Score for Intersectio	2.600	2.409	3.093	3.129
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	750	700	584	898
d_b, Bicycle Delay [s]	23.77	25.71	30.51	18.47
I_b,int, Bicycle LOS Score for Intersection	2.838	1.749	2.418	2.588
Bicycle LOS	C	A	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 2: Saliman Road / Robinson Street

Control Type:	All-way stop	Delay (sec / veh):	18.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.685

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	27	274	50	88	382	77	45	20	37	68	25	74
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 [%]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	11	32	0	0	0	3	0	7	2	18
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	274	61	120	382	77	45	23	37	75	27	92
Peak Hour Factor	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900
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]	10	99	22	43	138	28	16	8	13	27	10	33
Total Analysis Volume [veh/h]	39	397	88	174	554	112	65	33	54	109	39	133
Pedestrian Volume [ped/h]	6			154			50			79		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	431	457	472	456	486	502	430	476	431	486
Degree of Utilization, x	0.09	0.53	0.51	0.38	0.68	0.66	0.15	0.18	0.25	0.35

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.30	3.04	2.88	1.76	5.14	4.81	0.53	0.66	0.99	1.58
95th-Percentile Queue Length [ft]	7.43	76.09	72.01	44.08	128.49	120.37	13.20	16.53	24.76	39.54
Approach Delay [s/veh]	18.11			22.05			12.20		14.02	
Approach LOS	C			C			B		B	
Intersection Delay [s/veh]	18.81									
Intersection LOS	C									

**Intersection Level Of Service Report
Intersection 3: Saliman Road / 5th Street**

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.227

Intersection Setup

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	12.00	11.00	11.00	11.00	11.00	10.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	175.00	100.00	100.00	160.00	100.00	100.00	130.00	100.00	130.00	150.00	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			35.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Base Volume Input [veh/h]	63	214	74	103	260	114	80	206	67	103	185	49
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 [%]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	8	8	0	5	2	3	3	0	5	2	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	43	0	0	60	0	0	35	0	0	25
Total Hourly Volume [veh/h]	63	222	39	103	265	56	83	209	32	108	187	24
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	18	62	11	29	74	16	23	59	9	30	53	7
Total Analysis Volume [veh/h]	71	249	44	116	298	63	93	235	36	121	210	27
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	7			1			3			11		
v_di, Inbound Pedestrian Volume crossing m	3			11			7			1		
v_co, Outbound Pedestrian Volume crossing	2			1			33			12		
v_ci, Inbound Pedestrian Volume crossing mi	12			33			1			2		
v_ab, Corner Pedestrian Volume [ped/h]	1			4			0			1		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss							
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	20	30	0	20	30	0	0	30	0	0	30	0
Amber [s]	3.2	4.1	0.0	3.2	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	2.4	2.4	0.0	2.3	2.4	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	1.8	0.0	2.0	1.8	0.0	0.0	2.0	0.0	0.0	1.8	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	23	0	0	12	0	0	17	0	0	23	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]	3.6	4.5	0.0	3.5	4.5	0.0	0.0	3.9	0.0	0.0	3.9	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	
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
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

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	C	L	C	R
C, Cycle Length [s]	47	47	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	6.05	6.50	6.50	6.00	6.50	6.50	5.90	5.90	5.90	5.90	5.90	5.90
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	4.50	4.50	0.00	4.50	4.50	3.90	3.90	3.90	3.90	3.90	3.90
g_i, Effective Green Time [s]	22	12	12	22	13	13	13	13	13	13	13	13
g / C, Green / Cycle	0.48	0.26	0.26	0.48	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.05	0.08	0.08	0.08	0.10	0.10	0.08	0.07	0.08	0.11	0.11	0.02
s, saturation flow rate [veh/h]	1413	1855	1750	1458	1855	1699	1126	1855	1765	1093	1855	1556
c, Capacity [veh/h]	619	475	449	656	492	451	313	518	493	345	518	435
d1, Uniform Delay [s]	10.78	14.11	14.15	10.52	14.06	14.13	18.83	13.16	13.18	17.96	13.74	12.40
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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]	0.03	0.14	0.15	0.05	0.18	0.20	0.19	0.10	0.11	0.23	0.19	0.02
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	0.11	0.31	0.32	0.18	0.37	0.39	0.30	0.27	0.27	0.35	0.41	0.06
d, Delay for Lane Group [s/veh]	10.81	14.25	14.30	10.57	14.24	14.34	19.02	13.26	13.29	18.19	13.93	12.42
Lane Group LOS	B	B	B	B	B	B	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.28	1.09	1.06	0.47	1.35	1.30	0.86	0.98	0.96	1.03	1.47	0.17
50th-Percentile Queue Length [ft/ln]	7.07	27.22	26.45	11.78	33.87	32.59	21.51	24.59	23.96	25.84	36.65	4.24
95th-Percentile Queue Length [veh/ln]	0.51	1.96	1.90	0.85	2.44	2.35	1.55	1.77	1.73	1.86	2.64	0.31
95th-Percentile Queue Length [ft/ln]	12.73	49.00	47.61	21.21	60.97	58.65	38.72	44.27	43.13	46.52	65.98	7.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.81	14.27	14.30	10.57	14.28	14.34	19.02	13.27	13.29	18.19	13.93	12.42
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.60			13.38			14.74			15.25		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.18											
Intersection LOS	B											
Intersection V/C	0.227											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	1842.68	1614.99	527.38	1359.65
d_p, Pedestrian Delay [s]	13.84	13.84	13.84	13.84
I_p,int, Pedestrian LOS Score for Intersectio	2.700	2.692	2.415	2.633
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1274	1274	1274	1274
d_b, Bicycle Delay [s]	3.11	3.11	3.11	3.11
I_b,int, Bicycle LOS Score for Intersection	1.895	2.003	1.889	2.192
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Robinson St / Matterhorn Ln

Control Type:	Roundabout	Delay (sec / veh):	3.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
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			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
Base Volume Input [veh/h]	56	0	0	0	0	0	0	0	70	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	14	4	0	9	22	37	9	0	2	5	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]	56	14	4	0	9	22	37	9	70	2	5	0
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	18	4	1	0	3	7	12	3	22	1	2	0
Total Analysis Volume [veh/h]	70	18	5	0	11	28	46	11	88	3	6	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	58			81			14			137		
Exiting Flow Rate [veh/h]	104			65			106			16		
Demand Flow Rate [veh/h]	56	14	4	0	9	22	37	9	70	2	5	0
Adjusted Demand Flow Rate [veh/h]	70	18	5	0	11	28	46	11	88	3	6	0

Lanes

Override Calculated Critical Headway	No			No			No			No		
User-Defined Critical Headway [s]	4.00			4.00			4.00			4.00		
Override Calculated Follow-Up Time	No			No			No			No		
User-Defined Follow-Up Time [s]	3.00			3.00			3.00			3.00		
A (intercept)	1380.00			1380.00			1380.00			1380.00		
B (coefficient)	0.00102			0.00102			0.00102			0.00102		
HV Adjustment Factor	0.98			0.98			0.98			0.98		
Entry Flow Rate [veh/h]	95			40			148			10		
Capacity of Entry and Bypass Lanes [veh/h]	1301			1272			1361			1201		
Pedestrian Impedance	1.00			1.00			1.00			1.00		
Capacity per Entry Lane [veh/h]	1276			1247			1334			1177		
X, volume / capacity	0.07			0.03			0.11			0.01		

Movement, Approach, & Intersection Results

Lane LOS	A			A			A			A		
95th-Percentile Queue Length [veh]	0.24			0.10			0.37			0.02		
95th-Percentile Queue Length [ft]	5.89			2.42			9.13			0.58		
Approach Delay [s/veh]	3.41			3.14			3.57			3.12		
Approach LOS	A			A			A			A		
Intersection Delay [s/veh]	3.45											
Intersection LOS	A											

**Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Ln**

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.051

Intersection Setup

Name	Matterhorn Ln		5th Street		5th Street	
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	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	150.00
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		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Matterhorn Ln		5th Street		5th Street	
Base Volume Input [veh/h]	11	15	25	340	318	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	3.00	3.00	3.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	7	11	0	0	7
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]	15	22	36	340	318	25
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	6	10	96	89	7
Total Analysis Volume [veh/h]	17	25	40	382	357	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
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	0.05	0.04	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	16.43	10.46	8.19	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.16	0.11	0.11	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.03	2.84	2.66	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.87		0.78		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.02					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: William Street / Saliman Road

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

Intersection Setup

Name	Saliman Rd			Saliman Road			William Street			William Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	275.00	100.00	100.00	160.00	100.00	100.00	215.00	100.00	225.00	325.00	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]	15.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Road			William Street			William Street		
Base Volume Input [veh/h]	110	117	317	107	94	13	26	802	133	390	641	44
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	0	17	0	0	0	0	0	13	30	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	100	0	0	7	0	0	76	0	0	23
Total Hourly Volume [veh/h]	118	117	234	107	94	6	26	802	70	420	641	21
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
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]	32	31	63	29	25	2	7	216	19	113	172	6
Total Analysis Volume [veh/h]	127	126	252	115	101	6	28	862	75	452	689	23
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	8			6			5			0		
v_di, Inbound Pedestrian Volume crossing m	0			5			6			8		
v_co, Outbound Pedestrian Volume crossing	1			0			1			1		
v_ci, Inbound Pedestrian Volume crossing mi	1			1			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	4			1			3			3		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	40	40	0	40	40	0	20	35	0	26	35	0
Amber [s]	3.0	3.4	0.0	3.0	3.4	0.0	3.6	4.5	0.0	3.5	4.4	0.0
All red [s]	2.5	3.0	0.0	2.5	3.0	0.0	4.1	1.0	0.0	4.1	1.0	0.0
Split [s]	26	35	0	20	29	0	16	40	0	25	49	0
Vehicle Extension [s]	1.9	2.0	0.0	1.9	2.0	0.0	1.7	2.7	0.0	1.7	2.7	0.0
Walk [s]	0	9	0	0	14	0	0	9	0	0	8	0
Pedestrian Clearance [s]	0	19	0	0	8	0	0	21	0	0	20	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]	3.5	4.4	0.0	3.5	4.4	0.0	5.7	3.5	0.0	5.6	3.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.40	6.40	6.40	6.40	6.40	6.40	7.70	5.50	5.50	7.60	5.40	5.40
I1_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
I2, Clearance Lost Time [s]	0.00	4.40	4.40	0.00	4.40	4.40	5.70	3.50	3.50	5.60	3.40	3.40
g_i, Effective Green Time [s]	35	22	22	35	21	21	3	48	48	18	62	62
g / C, Green / Cycle	0.29	0.18	0.18	0.29	0.18	0.18	0.03	0.40	0.40	0.15	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.09	0.07	0.16	0.09	0.03	0.03	0.02	0.24	0.05	0.13	0.19	0.19
s, saturation flow rate [veh/h]	1467	1885	1555	1264	1885	1840	1795	3589	1578	3486	1885	1862
c, Capacity [veh/h]	492	344	284	404	334	326	46	1423	626	515	977	965
d1, Uniform Delay [s]	32.29	43.01	47.62	32.24	41.89	41.91	57.94	28.80	22.96	50.15	17.20	17.21
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.04	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]	0.10	0.24	3.73	0.14	0.08	0.09	4.74	1.92	0.39	1.95	1.06	1.08
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	0.26	0.37	0.89	0.28	0.16	0.16	0.61	0.61	0.12	0.88	0.37	0.37
d, Delay for Lane Group [s/veh]	32.39	43.25	51.35	32.38	41.97	42.00	62.69	30.73	23.35	52.10	18.26	18.28
Lane Group LOS	C	D	D	C	D	D	E	C	C	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.94	3.41	7.79	2.59	1.38	1.37	0.89	9.89	1.39	6.66	5.90	5.84
50th-Percentile Queue Length [ft/ln]	73.39	85.20	194.75	64.68	34.48	34.23	22.26	247.18	34.67	166.46	147.46	146.00
95th-Percentile Queue Length [veh/ln]	5.28	6.13	12.37	4.66	2.48	2.46	1.60	15.04	2.50	10.89	9.88	9.80
95th-Percentile Queue Length [ft/ln]	132.10	153.35	309.18	116.43	62.07	61.62	40.06	376.09	62.40	272.26	247.04	245.08

Movement, Approach, & Intersection Results

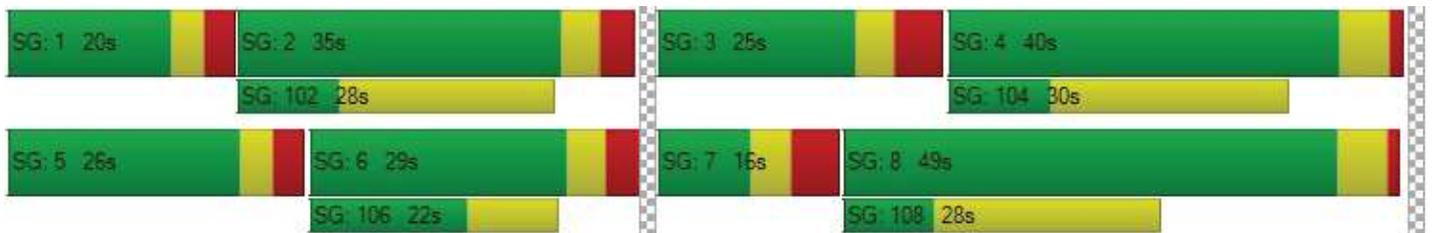
d_M, Delay for Movement [s/veh]	32.39	43.25	51.35	32.38	41.98	42.00	62.69	30.73	23.35	52.10	18.27	18.28
Movement LOS	C	D	D	C	D	D	E	C	C	D	B	B
d_A, Approach Delay [s/veh]	44.56			37.01			31.08			31.41		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.06											
Intersection LOS	C											
Intersection V/C	0.583											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	18.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	3863.78	7578.61	1064.23	813.17
d_p, Pedestrian Delay [s]	47.74	48.64	43.39	47.74
I_p,int, Pedestrian LOS Score for Intersectio	2.582	2.393	3.010	3.076
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	476	376	575	726
d_b, Bicycle Delay [s]	34.91	39.59	30.54	24.39
I_b,int, Bicycle LOS Score for Intersection	2.558	1.749	2.418	2.539
Bicycle LOS	B	A	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 2: Saliman Road / Robinson Street

Control Type:	All-way stop	Delay (sec / veh):	15.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	19	369	59	135	439	54	57	15	19	50	16	102
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	15	43	0	0	0	4	0	10	3	25
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]	19	369	74	178	439	54	57	19	19	60	19	127
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	5	104	21	50	123	15	16	5	5	17	5	36
Total Analysis Volume [veh/h]	21	415	83	200	493	61	64	21	21	67	21	143
Pedestrian Volume [ped/h]	4			2			4			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	461	493	508	479	513	525	440	485	443	508
Degree of Utilization, x	0.05	0.51	0.49	0.42	0.54	0.53	0.15	0.09	0.15	0.32

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.14	2.81	2.66	2.03	3.17	3.05	0.51	0.28	0.53	1.39
95th-Percentile Queue Length [ft]	3.57	70.25	66.55	50.73	79.35	76.29	12.65	7.08	13.22	34.73
Approach Delay [s/veh]	16.58			16.81			11.71		12.90	
Approach LOS	C			C			B		B	
Intersection Delay [s/veh]	15.84									
Intersection LOS	C									

**Intersection Level Of Service Report
Intersection 3: Saliman Road / 5th Street**

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.250

Intersection Setup

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	12.00	11.00	11.00	11.00	11.00	10.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	175.00	100.00	100.00	160.00	100.00	100.00	130.00	100.00	130.00	150.00	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			35.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Base Volume Input [veh/h]	79	268	146	83	256	94	118	331	74	106	214	51
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	10	0	7	3	4	4	0	6	2	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	81	0	0	50	0	0	38	0	0	27
Total Hourly Volume [veh/h]	79	279	75	83	263	47	122	335	36	112	216	24
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]	22	78	21	23	73	13	34	93	10	31	60	7
Total Analysis Volume [veh/h]	88	310	83	92	292	52	136	372	40	124	240	27
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	1			0			1			0		
v_di, Inbound Pedestrian Volume crossing m	1			0			1			0		
v_co, Outbound Pedestrian Volume crossing	1			0			2			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			2			0			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			1			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss							
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	20	30	0	20	30	0	0	30	0	0	30	0
Amber [s]	3.2	4.1	0.0	3.2	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	2.4	2.4	0.0	2.3	2.4	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	1.8	0.0	2.0	1.8	0.0	0.0	2.0	0.0	0.0	1.8	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	23	0	0	12	0	0	17	0	0	23	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]	3.6	4.5	0.0	3.5	4.5	0.0	0.0	3.9	0.0	0.0	3.9	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	
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
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

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	C	L	C	R
C, Cycle Length [s]	48	48	48	48	48	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	6.05	6.50	6.50	6.00	6.50	6.50	5.90	5.90	5.90	5.90	5.90	5.90
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	4.50	4.50	0.00	4.50	4.50	3.90	3.90	3.90	3.90	3.90	3.90
g_i, Effective Green Time [s]	21	11	11	21	11	11	15	15	15	15	15	15
g / C, Green / Cycle	0.44	0.23	0.23	0.45	0.24	0.24	0.31	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.06	0.11	0.11	0.06	0.09	0.09	0.12	0.11	0.11	0.13	0.13	0.02
s, saturation flow rate [veh/h]	1468	1885	1750	1456	1885	1785	1121	1885	1816	981	1885	1581
c, Capacity [veh/h]	602	438	407	590	445	421	341	591	569	331	591	496
d1, Uniform Delay [s]	11.90	15.70	15.73	12.42	15.31	15.34	18.69	12.61	12.62	18.19	12.84	11.40
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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]	0.04	0.28	0.31	0.05	0.21	0.23	0.28	0.13	0.14	0.26	0.17	0.02
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	0.15	0.46	0.47	0.16	0.39	0.40	0.40	0.35	0.36	0.38	0.41	0.05
d, Delay for Lane Group [s/veh]	11.94	15.98	16.05	12.46	15.52	15.56	18.98	12.74	12.76	18.45	13.01	11.42
Lane Group LOS	B	B	B	B	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.40	1.63	1.55	0.42	1.38	1.33	1.28	1.48	1.44	1.09	1.61	0.16
50th-Percentile Queue Length [ft/ln]	9.98	40.70	38.66	10.40	34.45	33.30	32.06	36.98	36.04	27.14	40.22	4.01
95th-Percentile Queue Length [veh/ln]	0.72	2.93	2.78	0.75	2.48	2.40	2.31	2.66	2.59	1.95	2.90	0.29
95th-Percentile Queue Length [ft/ln]	17.97	73.25	69.59	18.72	62.01	59.94	57.71	66.56	64.86	48.86	72.40	7.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.94	16.00	16.05	12.46	15.54	15.56	18.98	12.75	12.76	18.45	13.01	11.42
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.27			14.89			14.30			14.63		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.76											
Intersection LOS	B											
Intersection V/C	0.250											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0		11.0		11.0		11.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	9049.21		0.00		8867.10		18534.80	
d_p, Pedestrian Delay [s]	14.11		14.11		14.11		14.11	
I_p,int, Pedestrian LOS Score for Intersectio	2.795		2.752		2.490		2.671	
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]	1258		1258		1258		1258	
d_b, Bicycle Delay [s]	3.28		3.28		3.28		3.28	
I_b,int, Bicycle LOS Score for Intersection	2.023		1.961		2.043		2.249	
Bicycle LOS	B		A		B		B	

Sequence

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



Intersection Level Of Service Report
Intersection 4: Robinson St / Matterhorn Ln

Control Type:	Roundabout	Delay (sec / veh):	3.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
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			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
Base Volume Input [veh/h]	74	0	0	0	0	0	0	0	91	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 [%]	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00	1.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	18	5	0	11	30	49	13	0	2	8	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]	74	18	5	0	11	30	49	13	91	2	8	0
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]	21	5	1	0	3	8	14	4	25	1	2	0
Total Analysis Volume [veh/h]	82	20	6	0	12	33	54	14	101	2	9	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	69			94			14			158		
Exiting Flow Rate [veh/h]	116			75			125			20		
Demand Flow Rate [veh/h]	74	18	5	0	11	30	49	13	91	2	8	0
Adjusted Demand Flow Rate [veh/h]	82	20	6	0	12	33	54	14	101	2	9	0

Lanes

Override Calculated Critical Headway	No			No			No			No		
User-Defined Critical Headway [s]	4.00			4.00			4.00			4.00		
Override Calculated Follow-Up Time	No			No			No			No		
User-Defined Follow-Up Time [s]	3.00			3.00			3.00			3.00		
A (intercept)	1380.00			1380.00			1380.00			1380.00		
B (coefficient)	0.00102			0.00102			0.00102			0.00102		
HV Adjustment Factor	0.99			0.99			0.99			0.98		
Entry Flow Rate [veh/h]	110			46			171			12		
Capacity of Entry and Bypass Lanes [veh/h]	1287			1254			1361			1176		
Pedestrian Impedance	1.00			1.00			1.00			1.00		
Capacity per Entry Lane [veh/h]	1274			1242			1346			1153		
X, volume / capacity	0.08			0.04			0.13			0.01		

Movement, Approach, & Intersection Results

Lane LOS	A			A			A			A		
95th-Percentile Queue Length [veh]	0.28			0.11			0.43			0.03		
95th-Percentile Queue Length [ft]	6.94			2.82			10.74			0.72		
Approach Delay [s/veh]	3.51			3.19			3.69			3.20		
Approach LOS	A			A			A			A		
Intersection Delay [s/veh]	3.55											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Ln

Control Type:	Two-way stop	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.087

Intersection Setup

Name	Matterhorn Ln		5th Street		5th Street	
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	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	150.00
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		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Matterhorn Ln		5th Street		5th Street	
Base Volume Input [veh/h]	14	20	34	503	347	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	8	14	0	0	9
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]	19	28	48	503	347	33
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	5	8	13	140	96	9
Total Analysis Volume [veh/h]	21	31	53	559	386	37
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
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	0.09	0.05	0.05	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	21.39	10.69	8.31	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.28	0.15	0.15	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	7.10	3.67	3.65	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.01		0.72		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.12					
Intersection LOS	C					

Appendix E
Future Year Plus Project
LOS Calculations



Intersection Level Of Service Report
Intersection 1: William Street / Saliman Road

Control Type:	Signalized	Delay (sec / veh):	39.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.595

Intersection Setup

Name	Saliman Rd			Saliman Rd			William St			William St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right									
Lane Width [ft]	11.00	10.00	10.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	275.00	100.00	100.00	160.00	100.00	100.00	215.00	100.00	225.00	325.00	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]	15.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			William St			William St		
Base Volume Input [veh/h]	274	94	439	44	187	23	17	392	224	390	907	33
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	36	0	86	0	0	0	0	0	36	83	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	158	0	0	12	0	0	135	0	0	17
Total Hourly Volume [veh/h]	310	94	367	44	187	11	17	392	125	473	907	16
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
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]	89	27	105	13	54	3	5	113	36	136	261	5
Total Analysis Volume [veh/h]	356	108	422	51	215	13	20	451	144	544	1043	18
Presence of On-Street Parking	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	4			11			8			45		
v_di, Inbound Pedestrian Volume crossing m	45			8			11			4		
v_co, Outbound Pedestrian Volume crossing	5			2			11			0		
v_ci, Inbound Pedestrian Volume crossing mi	11			0			5			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			4			3			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	37	0	5	5	0	5	30	0	5	10	0
Maximum Green [s]	40	40	0	30	42	0	20	35	0	26	35	0
Amber [s]	3.0	3.4	0.0	3.5	3.4	0.0	3.6	4.5	0.0	3.5	4.4	0.0
All red [s]	2.5	3.0	0.0	1.5	3.0	0.0	4.1	1.0	0.0	4.1	1.0	0.0
Split [s]	26	60	0	15	49	0	15	41	0	34	60	0
Vehicle Extension [s]	1.9	2.0	0.0	3.0	2.0	0.0	1.7	2.7	0.0	1.7	2.7	0.0
Walk [s]	0	9	0	0	14	0	0	9	0	0	8	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	21	0	0	20	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]	3.5	4.4	0.0	3.0	4.4	0.0	5.7	3.5	0.0	5.6	3.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	122	122	122	122	122	122	122	122	122	122	122	122
L, Total Lost Time per Cycle [s]	6.40	6.40	6.40	6.40	6.40	6.40	7.70	5.50	5.50	7.60	5.40	5.40
I1_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
I2, Clearance Lost Time [s]	0.00	4.40	4.40	0.00	4.40	4.40	5.70	3.50	3.50	5.60	3.40	3.40
g_i, Effective Green Time [s]	46	37	37	46	19	19	2	35	35	21	54	54
g / C, Green / Cycle	0.38	0.30	0.30	0.38	0.16	0.16	0.02	0.29	0.29	0.17	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.24	0.06	0.28	0.05	0.06	0.06	0.01	0.13	0.09	0.16	0.28	0.29
s, saturation flow rate [veh/h]	1492	1870	1513	1014	1870	1820	1781	3560	1541	3459	1870	1858
c, Capacity [veh/h]	590	568	459	436	295	287	37	1021	442	604	824	819
d1, Uniform Delay [s]	29.70	31.41	40.30	24.36	46.11	46.16	59.21	35.55	34.14	49.33	26.66	26.69
k, delay calibration	0.18	0.04	0.29	0.11	0.04	0.04	0.04	0.50	0.50	0.04	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]	1.69	0.06	17.24	0.12	0.31	0.33	4.60	1.39	1.96	2.06	3.87	3.93
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	0.60	0.19	0.92	0.12	0.39	0.39	0.55	0.44	0.33	0.90	0.64	0.65
d, Delay for Lane Group [s/veh]	31.39	31.47	57.53	24.47	46.42	46.49	63.81	36.94	36.10	51.39	30.53	30.62
Lane Group LOS	C	C	E	C	D	D	E	D	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	8.66	2.46	14.48	0.98	3.18	3.15	0.65	5.57	3.54	8.12	12.46	12.45
50th-Percentile Queue Length [ft/ln]	216.40	61.48	361.97	24.49	79.51	78.85	16.26	139.24	88.38	203.05	311.62	311.16
95th-Percentile Queue Length [veh/ln]	13.48	4.43	20.72	1.76	5.72	5.68	1.17	9.44	6.36	12.80	18.25	18.23
95th-Percentile Queue Length [ft/ln]	337.03	110.66	517.98	44.08	143.12	141.92	29.27	236.00	159.08	319.90	456.37	455.81

Movement, Approach, & Intersection Results

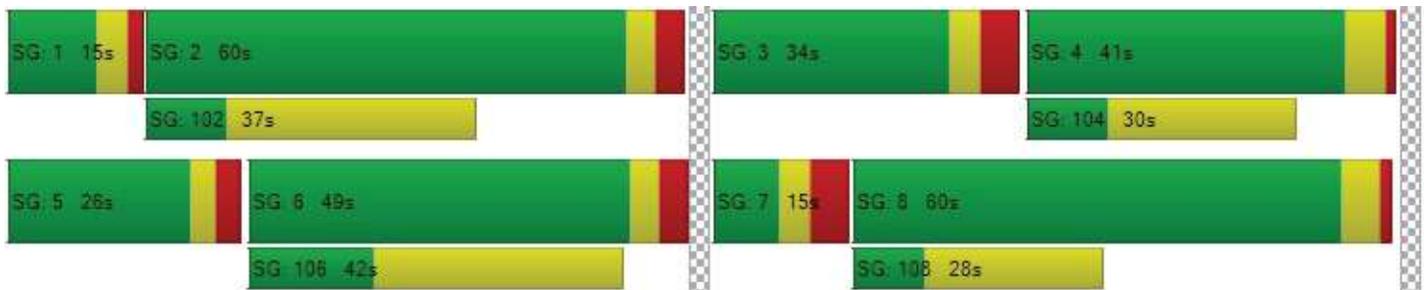
d_M, Delay for Movement [s/veh]	31.39	31.47	57.53	24.47	46.45	46.49	63.81	36.94	36.10	51.39	30.57	30.62
Movement LOS	C	C	E	C	D	D	E	D	D	D	C	C
d_A, Approach Delay [s/veh]	43.85			42.44			37.62			37.63		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	39.65											
Intersection LOS	D											
Intersection V/C	0.595											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	18.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	432.56	3753.41	588.07	103.75
d_p, Pedestrian Delay [s]	48.66	49.55	44.29	48.66
I_p,int, Pedestrian LOS Score for Intersectio	2.741	2.405	3.214	3.099
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	879	699	582	896
d_b, Bicycle Delay [s]	19.14	25.86	30.68	18.61
I_b,int, Bicycle LOS Score for Intersection	3.282	1.800	2.178	2.898
Bicycle LOS	C	A	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: Saliman Road / Robinson Street

Control Type:	All-way stop	Delay (sec / veh):	35.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.926

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	41	433	101	54	242	97	108	22	36	110	19	103
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 [%]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	42	119	0	0	0	12	0	43	12	122
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]	41	433	143	173	242	97	108	34	36	153	31	225
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
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]	13	139	46	55	78	31	35	11	12	49	10	72
Total Analysis Volume [veh/h]	53	555	183	222	310	124	138	44	46	196	40	288
Pedestrian Volume [ped/h]	106			98			17			200		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	379	399	414	354	373	389	362	391	373	417
Degree of Utilization, x	0.14	0.93	0.89	0.63	0.58	0.56	0.38	0.23	0.53	0.79

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.48	10.06	9.29	4.04	3.54	3.29	1.74	0.88	2.93	6.86
95th-Percentile Queue Length [ft]	12.06	251.45	232.35	101.10	88.46	82.17	43.50	21.90	73.27	171.45
Approach Delay [s/veh]	52.03			25.52			17.06		31.36	
Approach LOS	F			D			C		D	
Intersection Delay [s/veh]	35.57									
Intersection LOS	E									

**Intersection Level Of Service Report
Intersection 3: Saliman Road / 5th Street**

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.365

Intersection Setup

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	12.00	11.00	11.00	11.00	11.00	10.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	175.00	100.00	100.00	160.00	100.00	100.00	130.00	100.00	130.00	150.00	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			35.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Base Volume Input [veh/h]	81	270	56	107	223	107	79	168	89	182	346	138
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	29	0	31	12	12	12	0	30	12	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	44	0	0	62	0	0	46	0	0	72
Total Hourly Volume [veh/h]	81	300	41	107	254	57	91	180	43	212	358	66
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
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]	25	91	13	33	77	17	28	55	13	65	109	20
Total Analysis Volume [veh/h]	99	366	50	130	310	70	111	220	52	259	437	80
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			4			3			0		
v_di, Inbound Pedestrian Volume crossing m	3			0			0			4		
v_co, Outbound Pedestrian Volume crossing	7			1			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			1			7		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	4			1			0			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss							
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	20	30	0	20	30	0	0	30	0	0	30	0
Amber [s]	3.2	4.1	0.0	3.2	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	2.4	2.4	0.0	2.3	2.4	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	1.8	0.0	2.0	1.8	0.0	0.0	2.0	0.0	0.0	1.8	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	23	0	0	12	0	0	17	0	0	23	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]	3.6	4.5	0.0	3.5	4.5	0.0	0.0	3.9	0.0	0.0	3.9	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	
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
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

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	C	L	C	R
C, Cycle Length [s]	61	61	61	61	61	61	61	61	61	61	61	61
L, Total Lost Time per Cycle [s]	6.05	6.50	6.50	6.00	6.50	6.50	5.90	5.90	5.90	5.90	5.90	5.90
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	4.50	4.50	0.00	4.50	4.50	3.90	3.90	3.90	3.90	3.90	3.90
g_i, Effective Green Time [s]	26	15	15	26	16	16	23	23	23	23	23	23
g / C, Green / Cycle	0.43	0.25	0.25	0.43	0.26	0.26	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.07	0.11	0.11	0.09	0.10	0.11	0.13	0.07	0.08	0.23	0.23	0.05
s, saturation flow rate [veh/h]	1373	1870	1781	1375	1870	1734	883	1870	1748	1105	1870	1564
c, Capacity [veh/h]	533	467	445	531	485	450	256	710	664	445	710	594
d1, Uniform Delay [s]	16.03	19.41	19.45	16.99	18.73	18.79	24.88	12.71	12.74	19.81	15.36	12.39
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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]	0.06	0.26	0.27	0.09	0.20	0.22	0.43	0.05	0.05	0.45	0.32	0.04
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	0.19	0.45	0.46	0.24	0.40	0.41	0.43	0.20	0.20	0.58	0.62	0.13
d, Delay for Lane Group [s/veh]	16.09	19.66	19.72	17.07	18.93	19.01	25.31	12.76	12.80	20.26	15.68	12.43
Lane Group LOS	B	B	B	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.70	2.33	2.26	0.93	2.09	2.00	1.48	1.15	1.11	2.97	4.16	0.61
50th-Percentile Queue Length [ft/ln]	17.43	58.32	56.59	23.24	52.32	49.96	37.02	28.87	27.74	74.14	103.93	15.27
95th-Percentile Queue Length [veh/ln]	1.26	4.20	4.07	1.67	3.77	3.60	2.67	2.08	2.00	5.34	7.48	1.10
95th-Percentile Queue Length [ft/ln]	31.38	104.98	101.87	41.83	94.18	89.93	66.63	51.97	49.93	133.46	187.07	27.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.09	19.69	19.72	17.07	18.96	19.01	25.31	12.78	12.80	20.26	15.68	12.43
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.00			18.49			16.41			16.88		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.67											
Intersection LOS	B											
Intersection V/C	0.365											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0		11.0		11.0		11.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	3906.97		3445.15		6465.17		2002.27	
d_p, Pedestrian Delay [s]	20.58		20.58		20.58		20.58	
I_p,int, Pedestrian LOS Score for Intersectio	2.988		2.798		2.554		2.862	
Crosswalk LOS	C		C		B		C	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	981		981		981		981	
d_b, Bicycle Delay [s]	7.96		7.95		7.95		7.96	
I_b,int, Bicycle LOS Score for Intersection	2.021		2.032		1.914		2.959	
Bicycle LOS	B		B		A		C	

Sequence

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



Intersection Level Of Service Report
Intersection 4: Robinson Street / Matterhorn Lane

Control Type:	Roundabout	Delay (sec / veh):	5.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
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			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
Base Volume Input [veh/h]	78	0	0	0	0	0	0	0	50	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	82	1	0	81	185	188	4	0	4	11	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]	78	82	1	0	81	185	188	4	50	4	11	0
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	24	26	0	0	25	58	59	1	16	1	3	0
Total Analysis Volume [veh/h]	98	103	1	0	101	231	235	5	63	5	14	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	245			119			108			445		
Exiting Flow Rate [veh/h]	172			345			350			6		
Demand Flow Rate [veh/h]	78	82	1	0	81	185	188	4	50	4	11	0
Adjusted Demand Flow Rate [veh/h]	98	103	1	0	101	231	235	5	63	5	14	0

Lanes

Override Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Override Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	207	339	310	20
Capacity of Entry and Bypass Lanes [veh/h]	1076	1222	1236	877
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1054	1198	1212	860
X, volume / capacity	0.19	0.28	0.25	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.71	1.14	0.99	0.07
95th-Percentile Queue Length [ft]	17.66	28.46	24.79	1.69
Approach Delay [s/veh]	5.18	5.54	5.21	4.39
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.31			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Lane

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

Intersection Setup

Name	South Lompa Access			Matterhorn Ln			5th St			5th St		
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	0	1	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00
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			40.00			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 Lompa Access			Matterhorn Ln			5th St			5th St		
Base Volume Input [veh/h]	32	0	24	21	0	30	11	312	11	8	577	7
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	24	0	49	49	0	0	0	0	23
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	12	0	0	41	0	0	6	0	0	16
Total Hourly Volume [veh/h]	32	0	12	45	0	38	60	312	5	8	577	14
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
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]	10	0	4	14	0	12	18	95	2	2	176	4
Total Analysis Volume [veh/h]	39	0	15	55	0	46	73	380	6	10	704	17
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]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	20	30	0	20	30	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.5	2.5	0.0	2.5	2.5	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	17	0	0	10	0	0	10	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	
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
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

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	L	C	R
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	5	5	5	5	28	22	22	28	19	19
g / C, Green / Cycle	0.10	0.10	0.10	0.10	0.63	0.48	0.48	0.63	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.03	0.01	0.08	0.03	0.07	0.20	0.00	0.01	0.38	0.01
s, saturation flow rate [veh/h]	1360	1589	656	1589	993	1870	1589	1125	1870	1589
c, Capacity [veh/h]	162	164	229	164	615	900	765	822	799	680
d1, Uniform Delay [s]	22.40	18.18	21.11	18.54	6.11	7.56	6.05	3.47	11.77	7.42
k, delay calibration	0.11	0.11	0.11	0.11	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
d2, Incremental Delay [s]	0.76	0.24	0.54	0.92	0.09	0.32	0.00	0.01	3.38	0.01
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.24	0.09	0.24	0.28	0.12	0.42	0.01	0.01	0.88	0.03
d, Delay for Lane Group [s/veh]	23.16	18.41	21.64	19.46	6.19	7.88	6.05	3.47	15.15	7.44
Lane Group LOS	C	B	C	B	A	A	A	A	B	A
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.43	0.14	0.56	0.44	0.11	1.57	0.02	0.01	5.04	0.07
50th-Percentile Queue Length [ft/ln]	10.66	3.49	13.99	11.10	2.84	39.30	0.49	0.36	125.98	1.70
95th-Percentile Queue Length [veh/ln]	0.77	0.25	1.01	0.80	0.20	2.83	0.04	0.03	8.72	0.12
95th-Percentile Queue Length [ft/ln]	19.19	6.27	25.18	19.99	5.11	70.75	0.89	0.65	218.02	3.06

Movement, Approach, & Intersection Results

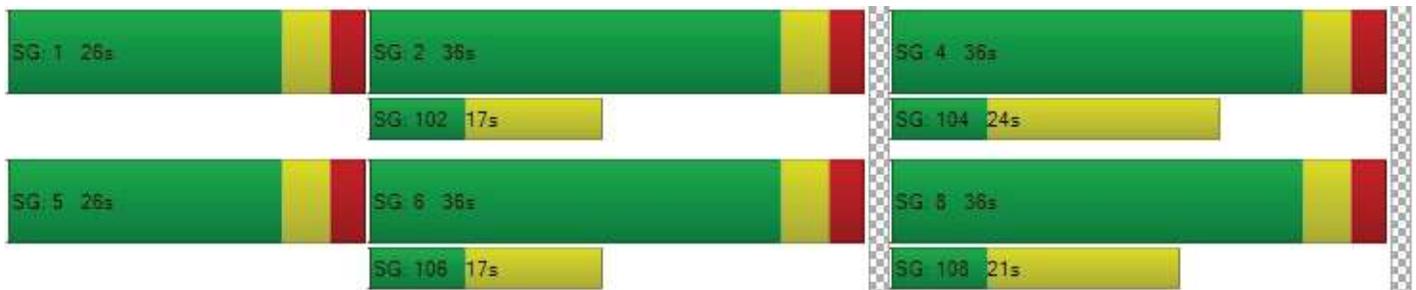
d_M, Delay for Movement [s/veh]	23.16	18.41	18.41	21.64	21.64	19.46	6.19	7.88	6.05	3.47	15.15	7.44
Movement LOS	C	B	B	C	C	B	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	21.84			20.65			7.59			14.81		
Approach LOS	C			C			A			B		
d_I, Intersection Delay [s/veh]	13.07											
Intersection LOS	B											
Intersection V/C	0.482											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	12.77			12.77			12.77			12.77		
I_p,int, Pedestrian LOS Score for Intersectio	1.948			2.074			2.660			2.584		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1338			1338			1338			1338		
d_b, Bicycle Delay [s]	2.45			2.45			2.45			2.45		
I_b,int, Bicycle LOS Score for Intersection	1.669			1.794			2.327			2.792		
Bicycle LOS	A			A			B			C		

Sequence

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



Intersection Level Of Service Report
Intersection 2: Saliman Road / Robinson Street

Control Type:	Signalized	Delay (sec / veh):	36.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	41	433	101	54	242	97	108	22	36	110	19	103
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 [%]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	42	119	0	0	0	12	0	43	12	122
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	74	0	0	50	0	0	19	0	0	68
Total Hourly Volume [veh/h]	41	433	69	173	242	47	108	34	17	153	31	157
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
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]	13	139	22	55	78	15	35	11	5	49	10	50
Total Analysis Volume [veh/h]	53	555	88	222	310	60	138	44	22	196	40	201
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	53			49			53			49		
v_di, Inbound Pedestrian Volume crossing m	53			49			53			49		
v_co, Outbound Pedestrian Volume crossing	100			8			9			100		
v_ci, Inbound Pedestrian Volume crossing mi	100			9			8			100		
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	1.5	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Split [s]	15	40	0	24	49	0	17	34	0	22	39	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	22	0	0	22	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]	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	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No										
Pedestrian Recall	No	No										
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
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

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	L	C
C, Cycle Length [s]	92	92	92	92	92	92	92	92	92	92
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
I1_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
I2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	23	23	14	33	33	9	23	12	26
g / C, Green / Cycle	0.04	0.25	0.25	0.15	0.36	0.36	0.10	0.25	0.13	0.28
(v / s)_i Volume / Saturation Flow Rate	0.03	0.18	0.22	0.13	0.10	0.10	0.08	0.04	0.11	0.17
s, saturation flow rate [veh/h]	1752	1840	1449	1752	1840	1723	1752	1648	1752	1459
c, Capacity [veh/h]	71	459	362	264	662	619	174	409	237	414
d1, Uniform Delay [s]	43.78	31.63	33.17	38.10	21.09	21.13	40.59	27.18	38.84	28.36
k, delay calibration	0.11	0.11	0.19	0.11	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
d2, Incremental Delay [s]	14.29	2.10	10.73	7.10	0.24	0.26	7.79	0.18	7.20	1.30
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.75	0.72	0.87	0.84	0.29	0.29	0.79	0.16	0.83	0.58
d, Delay for Lane Group [s/veh]	58.07	33.73	43.91	45.21	21.33	21.39	48.38	27.36	46.04	29.66
Lane Group LOS	E	C	D	D	C	C	D	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.50	7.06	7.89	5.48	3.04	2.90	3.50	1.19	4.87	4.80
50th-Percentile Queue Length [ft/ln]	37.56	176.53	197.36	137.09	75.92	72.55	87.43	29.79	121.72	120.06
95th-Percentile Queue Length [veh/ln]	2.70	11.42	12.50	9.32	5.47	5.22	6.29	2.14	8.49	8.40
95th-Percentile Queue Length [ft/ln]	67.61	285.48	312.56	233.10	136.66	130.59	157.37	53.62	212.19	209.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.07	37.88	43.91	45.21	21.35	21.39	48.38	27.36	27.36	46.04	29.66	29.66
Movement LOS	E	D	D	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	40.18			30.30			41.58			37.01		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	36.58											
Intersection LOS	D											
Intersection V/C	0.587											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	95.33	80.29	527.41	41.26
d_p, Pedestrian Delay [s]	35.69	35.69	35.69	35.69
I_p,int, Pedestrian LOS Score for Intersectio	2.534	2.528	2.037	2.189
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	956	630	739
d_b, Bicycle Delay [s]	17.69	12.55	21.60	18.31
I_b,int, Bicycle LOS Score for Intersection	2.195	2.089	1.928	2.393
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Lane

Control Type:	Two-way stop	Delay (sec / veh):	33.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.306

Intersection Setup

Name	Matterhorn Ln		5th St		5th St	
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	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	150.00	100.00	100.00	150.00
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		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Matterhorn Ln		5th St		5th St	
Base Volume Input [veh/h]	21	30	11	312	577	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	49	49	0	0	23
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]	45	79	60	312	577	30
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	24	18	95	176	9
Total Analysis Volume [veh/h]	55	96	73	380	704	37
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
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	0.31	0.22	0.08	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	33.66	15.54	9.54	0.00	0.00	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.23	0.83	0.28	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	30.69	20.71	6.89	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.14		1.54		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	3.00					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 1: William Street / Saliman Road

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

Intersection Setup

Name	Saliman Rd			Saliman Rd			William St			William St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right									
Lane Width [ft]	11.00	10.00	10.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	275.00	100.00	100.00	160.00	100.00	100.00	215.00	100.00	225.00	325.00	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]	15.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			William St			William St		
Base Volume Input [veh/h]	204	129	359	110	76	24	50	766	122	356	682	61
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	0	49	0	0	0	0	0	23	53	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	122	0	0	12	0	0	75	0	0	32
Total Hourly Volume [veh/h]	225	129	286	110	76	12	50	766	70	409	682	29
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
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]	68	39	86	33	23	4	15	231	21	123	205	9
Total Analysis Volume [veh/h]	271	155	345	133	92	14	60	923	84	493	822	35
Presence of On-Street Parking	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	39			2			20			1		
v_di, Inbound Pedestrian Volume crossing m	1			20			2			39		
v_co, Outbound Pedestrian Volume crossing	31			3			3			0		
v_ci, Inbound Pedestrian Volume crossing mi	3			0			31			3		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			3			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	37	0	5	5	0	5	30	0	5	10	0
Maximum Green [s]	40	40	0	30	42	0	20	35	0	26	35	0
Amber [s]	3.0	3.4	0.0	3.5	3.4	0.0	3.6	4.5	0.0	3.5	4.4	0.0
All red [s]	2.5	3.0	0.0	1.5	3.0	0.0	4.1	1.0	0.0	4.1	1.0	0.0
Split [s]	26	60	0	15	49	0	15	40	0	35	60	0
Vehicle Extension [s]	1.9	2.0	0.0	3.0	2.0	0.0	1.7	2.7	0.0	1.7	2.7	0.0
Walk [s]	0	9	0	0	14	0	0	9	0	0	8	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	21	0	0	20	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]	3.5	4.4	0.0	3.0	4.4	0.0	5.7	3.5	0.0	5.6	3.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	124	124	124	124	124	124	124	124	124	124	124	124
L, Total Lost Time per Cycle [s]	6.40	6.40	6.40	6.40	6.40	6.40	7.70	5.50	5.50	7.60	5.40	5.40
I1_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
I2, Clearance Lost Time [s]	0.00	4.40	4.40	0.00	4.40	4.40	5.70	3.50	3.50	5.60	3.40	3.40
g_i, Effective Green Time [s]	50	37	37	50	29	29	5	35	35	20	49	49
g / C, Green / Cycle	0.40	0.30	0.30	0.40	0.23	0.23	0.04	0.28	0.28	0.16	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.08	0.23	0.12	0.03	0.03	0.03	0.26	0.06	0.14	0.23	0.23
s, saturation flow rate [veh/h]	1488	1885	1519	1104	1885	1777	1795	3589	1525	3486	1885	1858
c, Capacity [veh/h]	658	560	452	476	441	415	79	1008	428	554	746	735
d1, Uniform Delay [s]	26.14	33.53	39.22	24.21	37.67	37.71	58.93	43.40	34.02	51.34	29.49	29.52
k, delay calibration	0.05	0.04	0.17	0.11	0.04	0.04	0.04	0.50	0.50	0.04	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]	0.19	0.10	4.15	0.32	0.05	0.05	5.48	14.15	1.02	2.00	3.25	3.31
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	0.41	0.28	0.76	0.28	0.12	0.13	0.76	0.92	0.20	0.89	0.58	0.58
d, Delay for Lane Group [s/veh]	26.33	33.63	43.36	24.53	37.71	37.76	64.41	57.55	35.04	53.34	32.74	32.83
Lane Group LOS	C	C	D	C	D	D	E	E	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.91	3.74	10.23	2.62	1.32	1.29	1.97	15.34	2.03	7.55	10.48	10.37
50th-Percentile Queue Length [ft/ln]	147.79	93.59	255.65	65.54	32.95	32.34	49.14	383.62	50.71	188.69	261.90	259.17
95th-Percentile Queue Length [veh/ln]	9.90	6.74	15.47	4.72	2.37	2.33	3.54	21.77	3.65	12.05	15.78	15.65
95th-Percentile Queue Length [ft/ln]	247.48	168.46	386.77	117.98	59.31	58.21	88.44	544.22	91.28	301.33	394.60	391.18

Movement, Approach, & Intersection Results

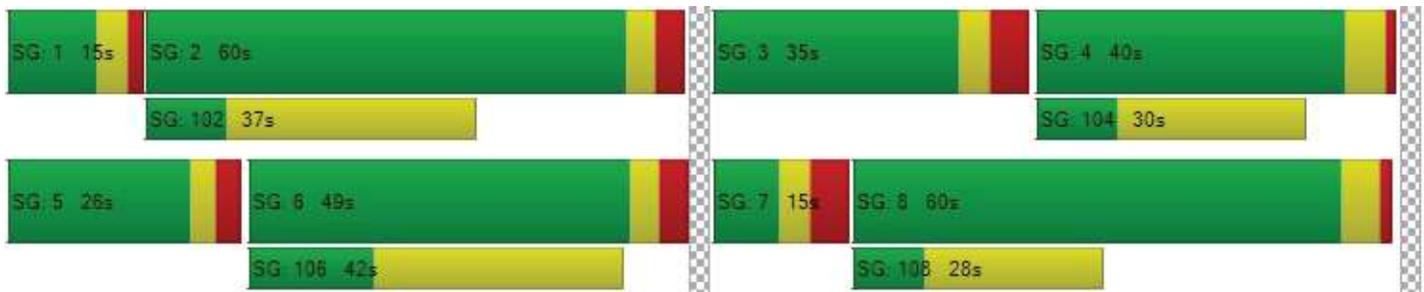
d_M, Delay for Movement [s/veh]	26.33	33.63	43.36	24.53	37.73	37.76	64.41	57.55	35.04	53.34	32.78	32.83
Movement LOS	C	C	D	C	D	D	E	E	D	D	C	C
d_A, Approach Delay [s/veh]	35.42			30.38			56.16			40.29		
Approach LOS	D			C			E			D		
d_I, Intersection Delay [s/veh]	43.45											
Intersection LOS	D											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	18.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	214.51	2395.04	493.87	132.74
d_p, Pedestrian Delay [s]	49.90	50.80	45.53	49.90
I_p,int, Pedestrian LOS Score for Intersectio	2.647	2.418	3.156	3.201
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	861	685	554	877
d_b, Bicycle Delay [s]	20.18	26.96	32.52	19.60
I_b,int, Bicycle LOS Score for Intersection	3.033	1.767	2.502	2.700
Bicycle LOS	C	A	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 2: Saliman Road / Robinson Street

Control Type:	All-way stop	Delay (sec / veh):	27.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.825

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	30	295	52	89	410	84	50	21	41	73	27	77
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 [%]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	28	76	0	0	0	7	0	24	7	70
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]	30	295	80	165	410	84	50	28	41	97	34	147
Peak Hour Factor	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900
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	107	29	60	149	30	18	10	15	35	12	53
Total Analysis Volume [veh/h]	43	428	116	239	594	122	72	41	59	141	49	213
Pedestrian Volume [ped/h]	10			179			50			79		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	381	401	415	409	434	447	384	419	385	429
Degree of Utilization, x	0.11	0.68	0.66	0.58	0.82	0.80	0.19	0.24	0.37	0.61

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.38	4.85	4.55	3.59	7.77	7.31	0.68	0.92	1.64	3.95
95th-Percentile Queue Length [ft]	9.47	121.33	113.84	89.84	194.34	182.65	17.01	23.00	41.07	98.63
Approach Delay [s/veh]	26.47			34.19			14.08		21.22	
Approach LOS	D			D			B		C	
Intersection Delay [s/veh]	27.95									
Intersection LOS	D									

**Intersection Level Of Service Report
Intersection 3: Saliman Road / 5th Street**

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.263

Intersection Setup

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	12.00	11.00	11.00	11.00	11.00	10.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	175.00	100.00	100.00	160.00	100.00	100.00	130.00	100.00	130.00	150.00	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			35.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Base Volume Input [veh/h]	68	229	77	112	281	122	85	223	73	110	200	53
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 [%]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	18	0	17	7	8	7	0	18	7	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	49	0	0	67	0	0	38	0	0	28
Total Hourly Volume [veh/h]	68	249	46	112	298	62	93	230	35	128	207	25
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	19	70	13	31	84	17	26	65	10	36	58	7
Total Analysis Volume [veh/h]	76	280	52	126	335	70	104	258	39	144	233	28
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	7			1			3			11		
v_di, Inbound Pedestrian Volume crossing m	3			11			7			1		
v_co, Outbound Pedestrian Volume crossing	2			1			33			12		
v_ci, Inbound Pedestrian Volume crossing mi	12			33			1			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			4			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss							
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	20	30	0	20	30	0	0	30	0	0	30	0
Amber [s]	3.2	4.1	0.0	3.2	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	2.4	2.4	0.0	2.3	2.4	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	1.8	0.0	2.0	1.8	0.0	0.0	2.0	0.0	0.0	1.8	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	23	0	0	12	0	0	17	0	0	23	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]	3.6	4.5	0.0	3.5	4.5	0.0	0.0	3.9	0.0	0.0	3.9	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	
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
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

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	C	L	C	R
C, Cycle Length [s]	51	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	6.05	6.50	6.50	6.00	6.50	6.50	5.90	5.90	5.90	5.90	5.90	5.90
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	4.50	4.50	0.00	4.50	4.50	3.90	3.90	3.90	3.90	3.90	3.90
g_i, Effective Green Time [s]	24	14	14	24	14	14	15	15	15	15	15	15
g / C, Green / Cycle	0.47	0.27	0.27	0.48	0.27	0.27	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.09	0.09	0.11	0.12	0.09	0.08	0.08	0.13	0.13	0.02
s, saturation flow rate [veh/h]	1375	1855	1738	1418	1855	1684	1102	1855	1766	1067	1855	1538
c, Capacity [veh/h]	592	497	465	629	507	460	314	555	528	349	555	460
d1, Uniform Delay [s]	12.09	15.01	15.06	11.79	15.13	15.23	19.99	13.61	13.64	19.11	14.30	12.73
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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]	0.04	0.15	0.17	0.06	0.20	0.24	0.23	0.10	0.10	0.29	0.19	0.02
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	0.13	0.34	0.35	0.20	0.41	0.43	0.33	0.27	0.28	0.41	0.42	0.06
d, Delay for Lane Group [s/veh]	12.12	15.16	15.22	11.85	15.33	15.46	20.22	13.71	13.74	19.40	14.49	12.75
Lane Group LOS	B	B	B	B	B	B	C	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.35	1.37	1.33	0.59	1.71	1.64	1.06	1.17	1.14	1.37	1.79	0.19
50th-Percentile Queue Length [ft/ln]	8.75	34.30	33.20	14.86	42.63	40.96	26.50	29.27	28.47	34.31	44.63	4.76
95th-Percentile Queue Length [veh/ln]	0.63	2.47	2.39	1.07	3.07	2.95	1.91	2.11	2.05	2.47	3.21	0.34
95th-Percentile Queue Length [ft/ln]	15.75	61.75	59.77	26.74	76.73	73.72	47.70	52.69	51.24	61.75	80.34	8.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.12	15.19	15.22	11.85	15.38	15.46	20.22	13.72	13.74	19.40	14.49	12.75
Movement LOS	B	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	14.62			14.55			15.41			16.12		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.13											
Intersection LOS	B											
Intersection V/C	0.263											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	1651.00			1469.70			477.01			1230.78		
d_p, Pedestrian Delay [s]	15.71			15.71			15.71			15.71		
I_p,int, Pedestrian LOS Score for Intersectio	2.773			2.747			2.451			2.681		
Crosswalk LOS	C			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1175			1175			1175			1175		
d_b, Bicycle Delay [s]	4.34			4.35			4.34			4.34		
I_b,int, Bicycle LOS Score for Intersection	1.937			2.053			1.922			2.274		
Bicycle LOS	A			B			A			B		

Sequence

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



Intersection Level Of Service Report
Intersection 4: Robinson Street / Matterhorn Lane

Control Type:	Roundabout	Delay (sec / veh):	4.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
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			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
Base Volume Input [veh/h]	56	0	0	0	0	0	0	0	70	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	49	8	0	49	108	110	18	0	6	11	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]	56	49	8	0	49	108	110	18	70	6	11	0
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	18	15	3	0	15	34	34	6	22	2	3	0
Total Analysis Volume [veh/h]	70	61	10	0	61	135	138	23	88	8	14	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	164			94			70			274		
Exiting Flow Rate [veh/h]	160			203			223			34		
Demand Flow Rate [veh/h]	56	49	8	0	49	108	110	18	70	6	11	0
Adjusted Demand Flow Rate [veh/h]	70	61	10	0	61	135	138	23	88	8	14	0

Lanes

Override Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Override Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	144	200	254	23
Capacity of Entry and Bypass Lanes [veh/h]	1168	1255	1285	1044
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1145	1230	1260	1023
X, volume / capacity	0.12	0.16	0.20	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.42	0.57	0.74	0.07
95th-Percentile Queue Length [ft]	10.51	14.16	18.38	1.65
Approach Delay [s/veh]	4.20	4.28	4.55	3.71
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.35			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Lane

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.241

Intersection Setup

Name	Matterhorn Ln			5th St			5th St					
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	0	1	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	100.00	150.00	100.00	150.00
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			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Matterhorn Ln			5th St			5th St		
Base Volume Input [veh/h]	17	0	11	11	0	15	25	337	28	20	327	18
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 [%]	2.00	2.00	2.00	3.00	2.00	3.00	3.00	3.00	2.00	2.00	3.00	3.00
Growth 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
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	14	0	30	29	0	0	0	0	15
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	6	0	0	23	0	0	15	0	0	17
Total Hourly Volume [veh/h]	17	0	5	25	0	22	54	337	13	20	327	16
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	5	0	1	7	0	6	15	95	4	6	92	4
Total Analysis Volume [veh/h]	19	0	6	28	0	25	61	379	15	22	367	18
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]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	20	30	0	20	30	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.5	2.5	0.0	2.5	2.5	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	17	0	0	10	0	0	10	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	30	30	30	30	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	2	2	2	2	16	9	9	16	8	8
g / C, Green / Cycle	0.06	0.06	0.06	0.06	0.54	0.31	0.31	0.54	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.02	0.02	0.05	0.20	0.01	0.02	0.20	0.01
s, saturation flow rate [veh/h]	1386	1589	1398	1589	1281	1855	1589	1229	1855	1577
c, Capacity [veh/h]	242	98	243	98	874	574	492	850	501	426
d1, Uniform Delay [s]	14.99	13.26	14.99	13.42	3.80	8.99	7.22	3.69	9.96	8.08
k, delay calibration	0.11	0.11	0.11	0.11	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
d2, Incremental Delay [s]	0.14	0.26	0.21	1.37	0.03	1.31	0.02	0.01	2.09	0.04
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.08	0.06	0.12	0.26	0.07	0.66	0.03	0.03	0.73	0.04
d, Delay for Lane Group [s/veh]	15.13	13.52	15.20	14.79	3.83	10.30	7.25	3.70	12.05	8.12
Lane Group LOS	B	B	B	B	A	B	A	A	B	A
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.11	0.04	0.17	0.17	0.04	1.35	0.04	0.01	1.54	0.05
50th-Percentile Queue Length [ft/ln]	2.83	0.92	4.37	4.18	0.99	33.83	0.99	0.35	38.46	1.36
95th-Percentile Queue Length [veh/ln]	0.20	0.07	0.31	0.30	0.07	2.44	0.07	0.03	2.77	0.10
95th-Percentile Queue Length [ft/ln]	5.10	1.65	7.87	7.53	1.78	60.89	1.79	0.63	69.23	2.45

Movement, Approach, & Intersection Results

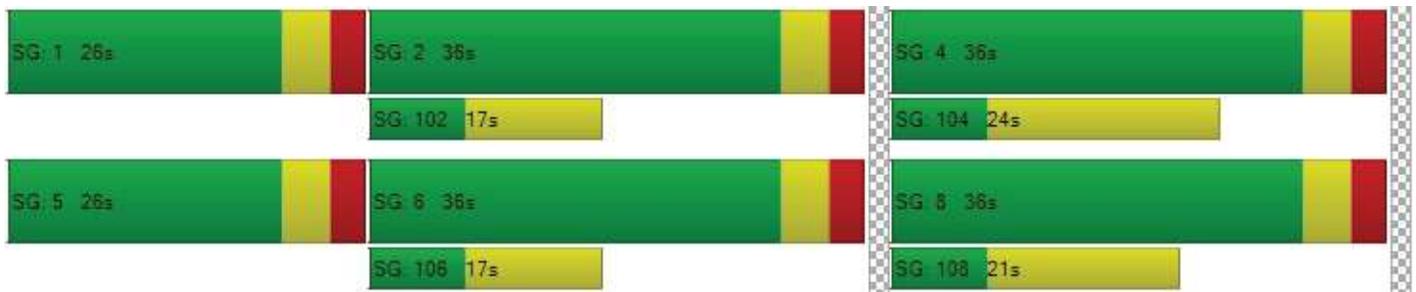
d_M, Delay for Movement [s/veh]	15.13	13.52	13.52	15.20	14.79	14.79	3.83	10.30	7.25	3.70	12.05	8.12
Movement LOS	B	B	B	B	B	B	A	B	A	A	B	A
d_A, Approach Delay [s/veh]	14.74			15.00			9.33			11.42		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	10.70											
Intersection LOS	B											
Intersection V/C	0.241											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	5.95			5.95			5.95			5.95		
I_p,int, Pedestrian LOS Score for Intersectio	1.916			1.977			2.512			2.398		
Crosswalk LOS	A			A			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	2010			2010			2010			2010		
d_b, Bicycle Delay [s]	0.00			0.00			0.00			0.00		
I_b,int, Bicycle LOS Score for Intersection	1.611			1.685			2.335			2.259		
Bicycle LOS	A			A			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 2: Saliman Road / Robinson Street

Control Type:	Signalized	Delay (sec / veh):	30.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.457

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	30	295	52	89	410	84	50	21	41	73	27	77
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 [%]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	28	76	0	0	0	7	0	24	7	70
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	42	0	0	44	0	0	21	0	0	44
Total Hourly Volume [veh/h]	30	295	38	165	410	40	50	28	20	97	34	103
Peak Hour Factor	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900
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	107	14	60	149	14	18	10	7	35	12	37
Total Analysis Volume [veh/h]	43	428	55	239	594	58	72	41	29	141	49	149
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	5			90			5			89		
v_di, Inbound Pedestrian Volume crossing m	5			89			5			90		
v_co, Outbound Pedestrian Volume crossing	39			25			25			40		
v_ci, Inbound Pedestrian Volume crossing mi	40			25			25			39		
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	1.5	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Split [s]	24	33	0	32	41	0	13	34	0	21	42	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	22	0	0	22	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]	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	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No										
Pedestrian Recall	No	No										
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
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

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	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
I1_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
I2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	19	19	14	30	30	5	23	9	27
g / C, Green / Cycle	0.04	0.23	0.23	0.16	0.35	0.35	0.05	0.27	0.10	0.32
(v / s)_i Volume / Saturation Flow Rate	0.02	0.13	0.14	0.14	0.18	0.18	0.04	0.04	0.08	0.14
s, saturation flow rate [veh/h]	1767	1855	1691	1767	1855	1770	1767	1720	1767	1414
c, Capacity [veh/h]	67	427	389	285	656	626	95	466	180	451
d1, Uniform Delay [s]	40.26	28.99	29.27	34.51	21.59	21.66	39.59	23.51	37.19	22.89
k, delay calibration	0.11	0.11	0.11	0.11	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
d2, Incremental Delay [s]	9.81	1.22	1.56	6.49	0.60	0.65	11.40	0.15	7.24	0.67
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.64	0.57	0.61	0.84	0.50	0.51	0.76	0.15	0.78	0.44
d, Delay for Lane Group [s/veh]	50.07	30.21	30.83	41.00	22.19	22.31	51.00	23.66	44.43	23.56
Lane Group LOS	D	C	C	D	C	C	D	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.08	4.64	4.57	5.36	5.35	5.21	1.81	1.11	3.26	3.27
50th-Percentile Queue Length [ft/ln]	27.08	116.10	114.23	134.01	133.84	130.35	45.19	27.74	81.59	81.64
95th-Percentile Queue Length [veh/ln]	1.95	8.18	8.07	9.16	9.15	8.96	3.25	2.00	5.87	5.88
95th-Percentile Queue Length [ft/ln]	48.75	204.46	201.87	228.94	228.71	223.97	81.35	49.93	146.85	146.94

Movement, Approach, & Intersection Results

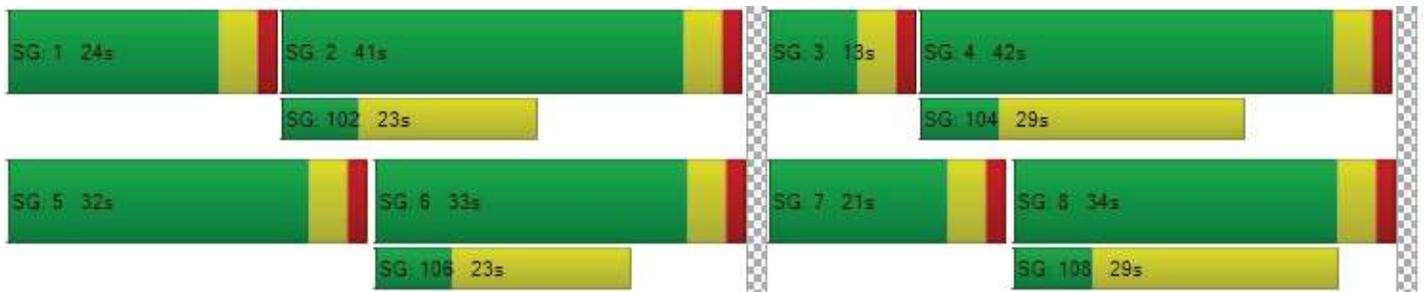
d_M, Delay for Movement [s/veh]	50.07	30.48	30.83	41.00	22.24	22.31	51.00	23.66	23.66	44.43	23.56	23.56
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	32.11			27.28			37.52			32.24		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	30.27											
Intersection LOS	C											
Intersection V/C	0.457											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	1104.49	52.23	196.40	124.42
d_p, Pedestrian Delay [s]	32.08	32.08	32.08	32.08
I_p,int, Pedestrian LOS Score for Intersectio	2.488	2.518	2.024	2.123
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	661	850	685	873
d_b, Bicycle Delay [s]	18.99	14.01	18.33	13.44
I_b,int, Bicycle LOS Score for Intersection	2.028	2.331	1.829	2.192
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Lane

Control Type:	Two-way stop	Delay (sec / veh):	18.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.092

Intersection Setup

Name	Matterhorn Ln		5th St		5th St	
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	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	150.00
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		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Matterhorn Ln		5th St		5th St	
Base Volume Input [veh/h]	11	15	25	337	327	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	3.00	3.00	3.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	30	29	0	0	15
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]	25	45	54	337	327	33
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	13	15	95	92	9
Total Analysis Volume [veh/h]	28	51	61	379	367	37
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
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	0.09	0.08	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	18.02	10.76	8.31	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.30	0.24	0.17	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	7.53	6.10	4.20	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.33		1.15		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.69					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: William Street / Saliman Road

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

Intersection Setup

Name	Saliman Rd			Saliman Rd			William St			William St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right									
Lane Width [ft]	11.00	10.00	10.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	275.00	100.00	100.00	160.00	100.00	100.00	215.00	100.00	225.00	325.00	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]	15.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			William St			William St		
Base Volume Input [veh/h]	117	128	338	117	102	14	29	873	139	413	698	48
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	30	0	0	0	0	0	18	43	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	110	0	0	7	0	0	82	0	0	25
Total Hourly Volume [veh/h]	131	128	258	117	102	7	29	873	75	456	698	23
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
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	34	69	31	27	2	8	235	20	123	188	6
Total Analysis Volume [veh/h]	141	138	277	126	110	8	31	939	81	490	751	25
Presence of On-Street Parking	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	8			6			5			0		
v_di, Inbound Pedestrian Volume crossing m	0			5			6			8		
v_co, Outbound Pedestrian Volume crossing	1			0			1			1		
v_ci, Inbound Pedestrian Volume crossing mi	1			1			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	4			1			3			3		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	40	40	0	30	40	0	20	35	0	26	35	0
Amber [s]	3.0	3.4	0.0	3.5	3.4	0.0	3.6	4.5	0.0	3.5	4.4	0.0
All red [s]	2.5	3.0	0.0	1.5	3.0	0.0	4.1	1.0	0.0	4.1	1.0	0.0
Split [s]	26	44	0	15	33	0	15	38	0	23	46	0
Vehicle Extension [s]	1.9	2.0	0.0	3.0	2.0	0.0	1.7	2.7	0.0	1.7	2.7	0.0
Walk [s]	0	9	0	0	14	0	0	9	0	0	8	0
Pedestrian Clearance [s]	0	28	0	0	12	0	0	21	0	0	20	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]	3.5	4.4	0.0	3.0	4.4	0.0	5.7	3.5	0.0	5.6	3.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.40	6.40	6.40	6.40	6.40	6.40	7.70	5.50	5.50	7.60	5.40	5.40
I1_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
I2, Clearance Lost Time [s]	0.00	4.40	4.40	0.00	4.40	4.40	5.70	3.50	3.50	5.60	3.40	3.40
g_i, Effective Green Time [s]	38	25	25	38	23	23	3	44	44	19	59	59
g / C, Green / Cycle	0.32	0.20	0.20	0.32	0.19	0.19	0.03	0.36	0.36	0.16	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.10	0.07	0.18	0.10	0.03	0.03	0.02	0.26	0.05	0.14	0.21	0.21
s, saturation flow rate [veh/h]	1454	1885	1558	1224	1885	1832	1795	3589	1577	3486	1885	1862
c, Capacity [veh/h]	518	386	319	418	367	356	49	1303	573	552	932	920
d1, Uniform Delay [s]	30.53	41.00	45.94	30.46	40.25	40.27	57.86	33.00	25.66	49.51	19.36	19.37
k, delay calibration	0.04	0.04	0.04	0.11	0.04	0.04	0.04	0.50	0.50	0.04	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]	0.10	0.21	2.85	0.40	0.08	0.08	5.01	3.46	0.52	1.98	1.38	1.40
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	0.27	0.36	0.87	0.30	0.16	0.16	0.64	0.72	0.14	0.89	0.42	0.42
d, Delay for Lane Group [s/veh]	30.64	41.21	48.79	30.86	40.33	40.35	62.86	36.46	26.18	51.49	20.75	20.78
Lane Group LOS	C	D	D	C	D	D	E	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.17	3.65	8.40	2.78	1.49	1.48	0.99	11.99	1.61	7.21	7.00	6.93
50th-Percentile Queue Length [ft/ln]	79.27	91.14	210.06	69.51	37.28	36.91	24.66	299.77	40.17	180.15	174.94	173.35
95th-Percentile Queue Length [veh/ln]	5.71	6.56	13.16	5.00	2.68	2.66	1.78	17.67	2.89	11.61	11.34	11.25
95th-Percentile Queue Length [ft/ln]	142.69	164.05	328.90	125.12	67.10	66.45	44.38	441.75	72.31	290.21	283.39	281.31

Movement, Approach, & Intersection Results

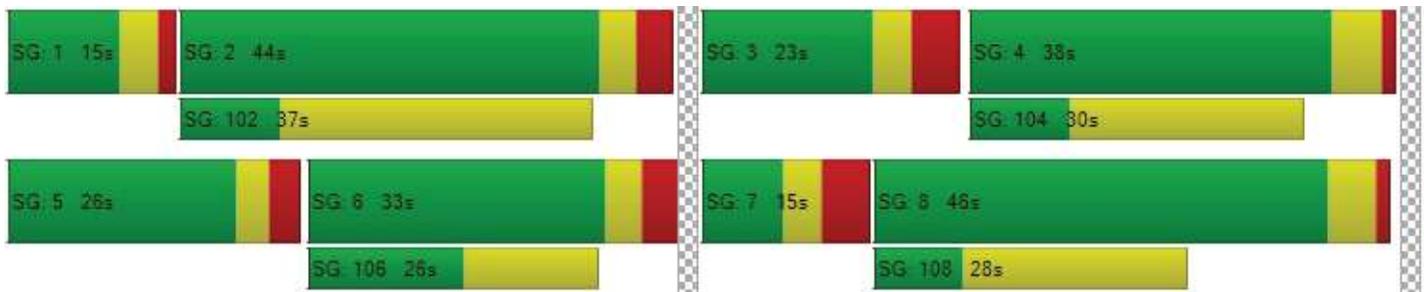
d_M, Delay for Movement [s/veh]	30.64	41.21	48.79	30.86	40.34	40.35	62.86	36.46	26.18	51.49	20.76	20.78
Movement LOS	C	D	D	C	D	D	E	D	C	D	C	C
d_A, Approach Delay [s/veh]	42.31			35.45			36.45			32.66		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	35.87											
Intersection LOS	D											
Intersection V/C	0.635											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	18.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	3834.88	7559.34	1059.20	784.36
d_p, Pedestrian Delay [s]	47.74	48.64	43.39	47.74
I_p,int, Pedestrian LOS Score for Intersectio	2.608	2.399	3.062	3.135
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	626	443	541	676
d_b, Bicycle Delay [s]	28.38	36.40	31.99	26.34
I_b,int, Bicycle LOS Score for Intersection	2.659	1.767	2.494	2.625
Bicycle LOS	B	A	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 2: Saliman Road / Robinson Street

Control Type:	All-way stop	Delay (sec / veh):	18.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	21	397	61	139	471	58	62	15	21	52	17	107
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	22	61	0	0	0	6	0	16	5	44
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]	21	397	83	200	471	58	62	21	21	68	22	151
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	6	112	23	56	132	16	17	6	6	19	6	42
Total Analysis Volume [veh/h]	24	446	93	225	529	65	70	24	24	76	25	170
Pedestrian Volume [ped/h]	4			2			4			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	439	466	481	457	487	498	421	461	425	483
Degree of Utilization, x	0.05	0.58	0.56	0.49	0.61	0.60	0.17	0.10	0.18	0.40

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.17	3.59	3.39	2.67	4.01	3.85	0.59	0.35	0.64	1.93
95th-Percentile Queue Length [ft]	4.33	89.67	84.72	66.74	100.25	96.35	14.79	8.66	16.11	48.27
Approach Delay [s/veh]	19.52			19.84			12.34		14.54	
Approach LOS	C			C			B		B	
Intersection Delay [s/veh]	18.43									
Intersection LOS	C									

**Intersection Level Of Service Report
Intersection 3: Saliman Road / 5th Street**

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.277

Intersection Setup

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	10.00	10.00	12.00	11.00	11.00	11.00	11.00	10.00	11.00	11.00	10.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	175.00	100.00	100.00	160.00	100.00	100.00	130.00	100.00	130.00	150.00	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			35.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			5th St			5th St		
Base Volume Input [veh/h]	86	287	154	89	276	100	126	358	80	112	231	56
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	15	0	11	5	6	6	0	12	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	88	0	0	55	0	0	42	0	0	29
Total Hourly Volume [veh/h]	86	303	81	89	287	50	132	364	38	124	235	27
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]	24	84	23	25	80	14	37	101	11	34	65	8
Total Analysis Volume [veh/h]	96	337	90	99	319	56	147	404	42	138	261	30
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	1			0			1			0		
v_di, Inbound Pedestrian Volume crossing m	1			0			1			0		
v_co, Outbound Pedestrian Volume crossing	1			0			2			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			2			0			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			1			2		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss							
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	20	30	0	20	30	0	0	30	0	0	30	0
Amber [s]	3.2	4.1	0.0	3.2	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	2.4	2.4	0.0	2.3	2.4	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.0	1.8	0.0	2.0	1.8	0.0	0.0	2.0	0.0	0.0	1.8	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	23	0	0	12	0	0	17	0	0	23	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]	3.6	4.5	0.0	3.5	4.5	0.0	0.0	3.9	0.0	0.0	3.9	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	
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
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

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	C	L	C	R
C, Cycle Length [s]	51	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	6.05	6.50	6.50	6.00	6.50	6.50	5.90	5.90	5.90	5.90	5.90	5.90
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	4.50	4.50	0.00	4.50	4.50	3.90	3.90	3.90	3.90	3.90	3.90
g_i, Effective Green Time [s]	23	12	12	23	13	13	17	17	17	17	17	17
g / C, Green / Cycle	0.45	0.24	0.24	0.45	0.25	0.25	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.12	0.07	0.10	0.10	0.13	0.12	0.12	0.15	0.14	0.02
s, saturation flow rate [veh/h]	1431	1885	1750	1425	1885	1786	1097	1885	1818	951	1885	1581
c, Capacity [veh/h]	588	454	421	576	468	444	335	616	594	324	616	516
d1, Uniform Delay [s]	12.84	16.69	16.73	13.51	16.08	16.10	20.00	13.17	13.19	19.50	13.46	11.81
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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]	0.05	0.30	0.33	0.05	0.21	0.23	0.34	0.14	0.14	0.33	0.17	0.02
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	0.16	0.48	0.49	0.17	0.41	0.41	0.44	0.37	0.37	0.43	0.42	0.06
d, Delay for Lane Group [s/veh]	12.89	16.99	17.06	13.56	16.29	16.33	20.34	13.31	13.33	19.83	13.63	11.83
Lane Group LOS	B	B	B	B	B	B	C	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.49	1.95	1.85	0.50	1.64	1.58	1.53	1.74	1.69	1.34	1.91	0.19
50th-Percentile Queue Length [ft/ln]	12.24	48.73	46.13	12.58	41.06	39.60	38.14	43.46	42.32	33.53	47.85	4.82
95th-Percentile Queue Length [veh/ln]	0.88	3.51	3.32	0.91	2.96	2.85	2.75	3.13	3.05	2.41	3.45	0.35
95th-Percentile Queue Length [ft/ln]	22.03	87.71	83.04	22.64	73.91	71.29	68.65	78.23	76.18	60.36	86.13	8.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.89	17.02	17.06	13.56	16.31	16.33	20.34	13.32	13.33	19.83	13.63	11.83
Movement LOS	B	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.27			15.73			15.06			15.50		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.62											
Intersection LOS	B											
Intersection V/C	0.277											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	8248.55			0.00			8104.96			16969.63		
d_p, Pedestrian Delay [s]	15.79			15.79			15.79			15.79		
I_p,int, Pedestrian LOS Score for Intersectio	2.851			2.799			2.532			2.711		
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]	1172			1172			1172			1172		
d_b, Bicycle Delay [s]	4.39			4.39			4.40			4.40		
I_b,int, Bicycle LOS Score for Intersection	2.064			1.996			2.083			2.315		
Bicycle LOS	B			A			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 4: Robinson Street / Matterhorn Lane

Control Type:	Roundabout	Delay (sec / veh):	3.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
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			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Matterhorn Ln			Matterhorn Ln			Robinson St			Robinson St		
Base Volume Input [veh/h]	84	0	0	0	0	0	0	0	91	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 [%]	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00	1.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	9	0	30	62	78	22	0	6	14	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]	84	36	9	0	30	62	78	22	91	6	14	0
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]	23	10	3	0	8	17	22	6	25	2	4	0
Total Analysis Volume [veh/h]	93	40	10	0	33	69	87	24	101	7	16	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	112			117			40			222		
Exiting Flow Rate [veh/h]	142			128			180			35		
Demand Flow Rate [veh/h]	84	36	9	0	30	62	78	22	91	6	14	0
Adjusted Demand Flow Rate [veh/h]	93	40	10	0	33	69	87	24	101	7	16	0

Lanes

Override Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Override Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.99	0.99	0.99	0.98
Entry Flow Rate [veh/h]	145	104	215	24
Capacity of Entry and Bypass Lanes [veh/h]	1231	1225	1325	1101
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1218	1213	1310	1079
X, volume / capacity	0.12	0.08	0.16	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.40	0.28	0.58	0.07
95th-Percentile Queue Length [ft]	9.95	6.88	14.43	1.63
Approach Delay [s/veh]	3.94	3.66	4.09	3.52
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	3.93			
Intersection LOS	A			

**Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Lane**

Control Type:	Signalized	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.326

Intersection Setup

Name	Northbound			Matterhorn Ln			5th St			5th St		
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	0	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	150.00
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			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Matterhorn Ln			5th St			5th St		
Base Volume Input [veh/h]	22	0	15	14	0	20	34	508	37	26	353	24
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 [%]	2.00	2.00	2.00	1.00	2.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00
Growth 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
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	9	0	18	23	0	0	0	0	13
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	8	0	0	20	0	0	19	0	0	19
Total Hourly Volume [veh/h]	22	0	7	23	0	18	57	508	18	26	353	18
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]	6	0	2	6	0	5	16	141	5	7	98	5
Total Analysis Volume [veh/h]	24	0	8	26	0	20	63	564	20	29	392	20
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]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	20	30	0	20	30	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	17	0	0	10	0	0	10	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
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
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

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	29	29	29	29	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	2	2	2	2	17	11	11	17	10	10
g / C, Green / Cycle	0.05	0.05	0.05	0.05	0.60	0.38	0.38	0.60	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.02	0.01	0.05	0.30	0.01	0.03	0.21	0.01
s, saturation flow rate [veh/h]	1392	1589	1418	1589	1220	1885	1589	1056	1885	1602
c, Capacity [veh/h]	252	87	252	87	941	727	613	790	664	565
d1, Uniform Delay [s]	14.35	12.89	14.35	12.98	2.84	7.73	5.49	3.37	7.60	6.10
k, delay calibration	0.11	0.11	0.11	0.11	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
d2, Incremental Delay [s]	0.16	0.45	0.18	1.33	0.03	1.82	0.02	0.02	0.84	0.03
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.10	0.09	0.10	0.23	0.07	0.78	0.03	0.04	0.59	0.04
d, Delay for Lane Group [s/veh]	14.51	13.34	14.53	14.31	2.87	9.55	5.51	3.39	8.44	6.12
Lane Group LOS	B	B	B	B	A	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.13	0.05	0.15	0.13	0.01	1.62	0.04	0.00	1.05	0.04
50th-Percentile Queue Length [ft/ln]	3.37	1.20	3.81	3.26	0.19	40.39	0.88	0.10	26.33	1.02
95th-Percentile Queue Length [veh/ln]	0.24	0.09	0.27	0.23	0.01	2.91	0.06	0.01	1.90	0.07
95th-Percentile Queue Length [ft/ln]	6.07	2.17	6.86	5.87	0.35	72.70	1.58	0.19	47.39	1.83

Movement, Approach, & Intersection Results

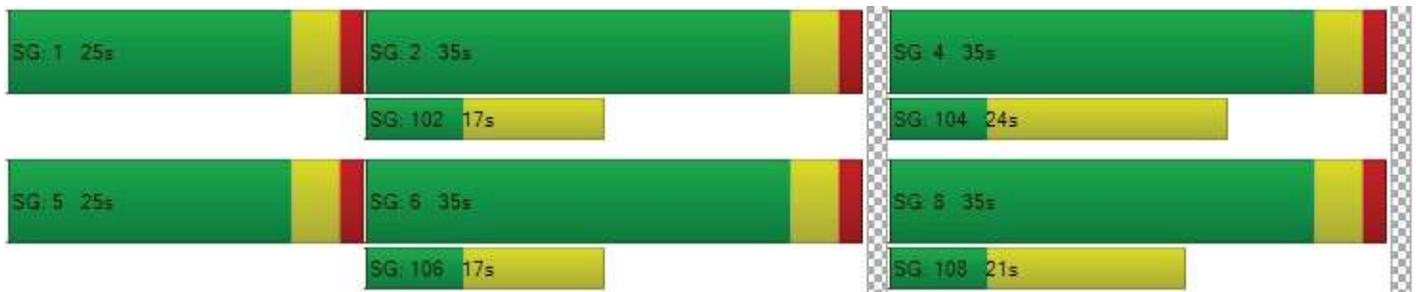
d_M, Delay for Movement [s/veh]	14.51	13.34	13.34	14.53	14.31	14.31	2.87	9.55	5.51	3.39	8.44	6.12
Movement LOS	B	B	B	B	B	B	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	14.22			14.43			8.77			8.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.85											
Intersection LOS	A											
Intersection V/C	0.326											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	5.42	5.42	5.42	5.42
I_p,int, Pedestrian LOS Score for Intersectio	1.930	1.977	2.578	2.467
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2098	2098	2098	2098
d_b, Bicycle Delay [s]	0.03	0.03	0.03	0.03
I_b,int, Bicycle LOS Score for Intersection	1.626	1.669	2.659	2.319
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Saliman Road / Robinson Street

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

Intersection Setup

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	11.00	11.00	11.00	11.00	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	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	150.00	100.00	100.00	60.00	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]	15.00			15.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Saliman Rd			Saliman Rd			Robinson St			Robinson St		
Base Volume Input [veh/h]	21	397	61	139	471	58	62	15	21	52	17	107
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 [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	22	61	0	0	0	6	0	16	5	44
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	43	0	0	30	0	0	11	0	0	45
Total Hourly Volume [veh/h]	21	397	40	200	471	28	62	21	10	68	22	106
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
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]	6	112	11	56	132	8	17	6	3	19	6	30
Total Analysis Volume [veh/h]	24	446	45	225	529	31	70	24	11	76	25	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	2			1			2			1		
v_di, Inbound Pedestrian Volume crossing m	2			1			2			1		
v_co, Outbound Pedestrian Volume crossing	0			2			2			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			2			2			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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	1.5	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Split [s]	30	37	0	34	41	0	15	34	0	15	34	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	22	0	0	22	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]	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	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No										
Pedestrian Recall	No	No										
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
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

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	L	C
C, Cycle Length [s]	44	44	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
I1_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
I2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	1	9	9	7	15	15	3	5	3	5
g / C, Green / Cycle	0.03	0.19	0.19	0.17	0.33	0.33	0.07	0.12	0.07	0.12
(v / s)_i Volume / Saturation Flow Rate	0.01	0.13	0.13	0.13	0.15	0.15	0.04	0.02	0.04	0.09
s, saturation flow rate [veh/h]	1795	1885	1825	1795	1885	1847	1795	1780	1795	1638
c, Capacity [veh/h]	53	368	356	300	627	615	118	212	124	201
d1, Uniform Delay [s]	21.24	16.59	16.61	17.65	11.65	11.65	20.20	17.60	20.12	18.77
k, delay calibration	0.11	0.11	0.11	0.11	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
d2, Incremental Delay [s]	6.07	2.17	2.29	3.79	0.51	0.52	4.68	0.36	4.82	4.74
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.46	0.68	0.68	0.75	0.45	0.45	0.59	0.17	0.61	0.72
d, Delay for Lane Group [s/veh]	27.31	18.76	18.90	21.44	12.15	12.17	24.88	17.96	24.94	23.51
Lane Group LOS	C	B	B	C	B	B	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.33	2.43	2.38	2.39	2.09	2.05	0.83	0.33	0.90	1.62
50th-Percentile Queue Length [ft/ln]	8.14	60.73	59.53	59.72	52.23	51.32	20.78	8.25	22.52	40.57
95th-Percentile Queue Length [veh/ln]	0.59	4.37	4.29	4.30	3.76	3.70	1.50	0.59	1.62	2.92
95th-Percentile Queue Length [ft/ln]	14.66	109.31	107.16	107.49	94.02	92.38	37.40	14.85	40.54	73.03

Movement, Approach, & Intersection Results

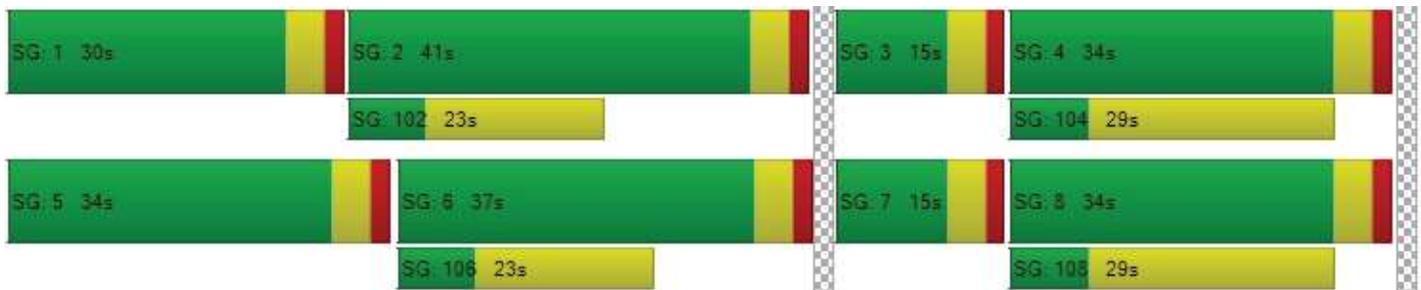
d_M, Delay for Movement [s/veh]	27.31	18.82	18.90	21.44	12.16	12.17	24.88	17.96	17.96	24.94	23.51	23.51
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	19.22			14.82			22.58			24.01		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.96											
Intersection LOS	B											
Intersection V/C	0.385											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	5421.38	10158.18	5061.12	0.00
d_p, Pedestrian Delay [s]	12.54	12.54	12.54	12.54
I_p,int, Pedestrian LOS Score for Intersectio	2.435	2.447	1.951	2.061
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1443	1624	1308	1308
d_b, Bicycle Delay [s]	1.72	0.78	2.65	2.65
I_b,int, Bicycle LOS Score for Intersection	2.020	2.232	1.751	1.997
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: 5th Street / Matterhorn Lane

Control Type:	Two-way stop	Delay (sec / veh):	22.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.114

Intersection Setup

Name	Matterhorn Ln		5th St		5th St	
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	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	150.00
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		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Matterhorn Ln		5th St		5th St	
Base Volume Input [veh/h]	14	20	34	508	353	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	18	23	0	0	13
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]	23	38	57	508	353	37
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	6	11	16	141	98	10
Total Analysis Volume [veh/h]	26	42	63	564	392	41
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
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	0.11	0.06	0.06	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	22.78	10.84	8.37	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.38	0.20	0.18	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.49	5.09	4.41	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.40		0.84		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.40					
Intersection LOS	C					

Carson City Property Inquiry

Property Information

Parcel ID	010-041-40	Parcel Acreage	58,5200
Tax Year	2023	Assessed Value	843,125
Land Use Group	VAC	Tax Rate	0,0000
Land Use	120 - Vacant - Single Family Residential	Total Tax	\$0,00
Zoning	A	Fiscal Year (2023 - 2024)	
Tax District	024	Total Unpaid All Years	\$0,00
Site Address	2230 E FIFTH ST		
Neighborhood	Book 10, Lompa Ranch East		

Pay Taxes

No Sketches or Photos

Assessments

Taxable Value	Land	Building	Per. Property	Totals
Residential	2,408,929	0	0	2,408,929
Com / Ind.	0	0	0	0
Agricultural	0	0	0	0
Exempt	0	0	0	0
Pers. Exempt				0
Total	2,408,929	0	0	2,408,929

Assessed Value	Land	Building	Per. Property	Totals
Residential	843,125	0	0	843,125
Com / Ind.	0	0	0	0
Agricultural	0	0	0	0
Exempt	0	0	0	0
Pers. Exempt				0
Total	843,125	0	0	843,125

	New Land	New Const.	New P.P.
Residential	0	0	0
Com / Ind.	0	0	0
Agricultural	0	0	0
Exempt	0	0	0
Totals	0	0	0

Assessor Descriptions

Year	Assessor Descriptions	Subdivision	Section	Township	Range	Block & Lot
Current Year 2023						
2023	B1, R/S 3007, DOC # 516791		16	15N	20E	

No Personal Exemptions

No Billing Information

☰ Payment History

	Fiscal Year	Total Due	Total Paid	Amount Unpaid
+	(2022 - 2023)	\$31,494.68	\$31,494.68	\$0.00
+	(2021 - 2022)	\$30,877.19	\$30,877.19	\$0.00

☰ Related Names

CURRENT OWNER FOR 2023 (2023 - 2024)		CURRENT Mail To FOR 2023 (2023 - 2024)	
Name	RD LOMPA LLC	Name	RD LOMPA LLC
Mailing Address		Mailing Address	ATTN: STEVE THOMSEN 985 DAMONTE RANCH PKWY, SUITE 140 RENO, NV, 89521
Status	Current	Status	Current
Account		Account	

No Structure Information

☰ Sales History

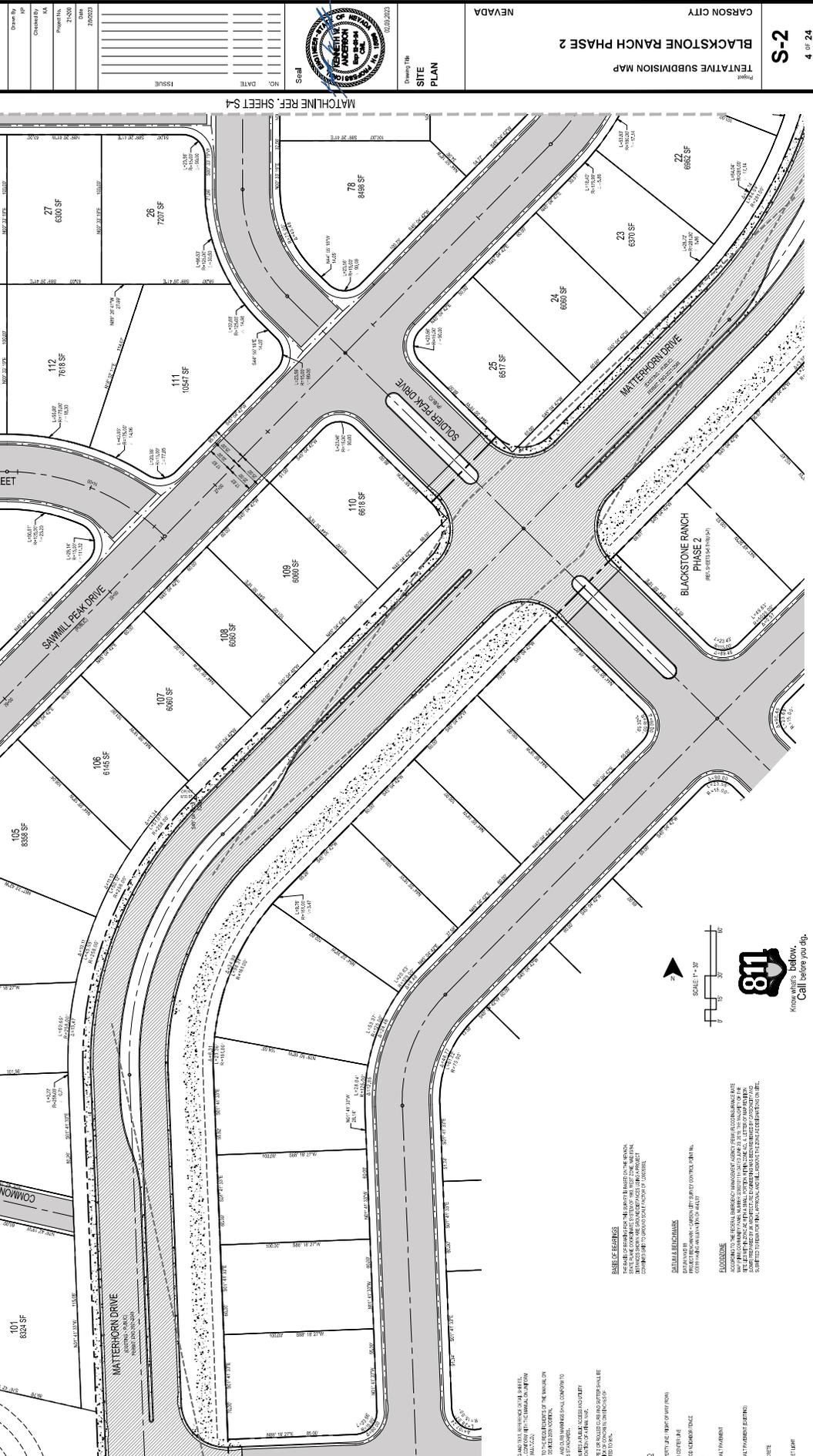
DISCLAIMER: SOME DOCUMENTS MAY NOT BE SHOWN

Year	Document #	Document Type	Sale Date	Sold By	Sold To	Price
2023	536845	EASEMENT DEED	11/21/2022			\$0
2022	528362	EASEMENT DEED	12/27/2021			\$0
2021	519867	GRANT BARGAIN SALE DEED	4/30/2021	MYERS FAMILY EXEMPT TR 3/16/17 JOSHUA MYERS	RD LOMPA LLC	\$7,752,000
2021	516791	BOUNDARY LINE ADJUSTMENT	2/19/2021			\$0
2021	516792	RECORD OF SURVEY	2/19/2021			\$0

☰ Parcel Genealogy

Relationship	Parcel Number	Action	Year	Change Effective Year	Completed
Parent Parcel	01004171	A	2021	2021	Yes

No Taxing Entity Information



0104-041-35
D & S L V LLC
 (TRUST PARTNER)

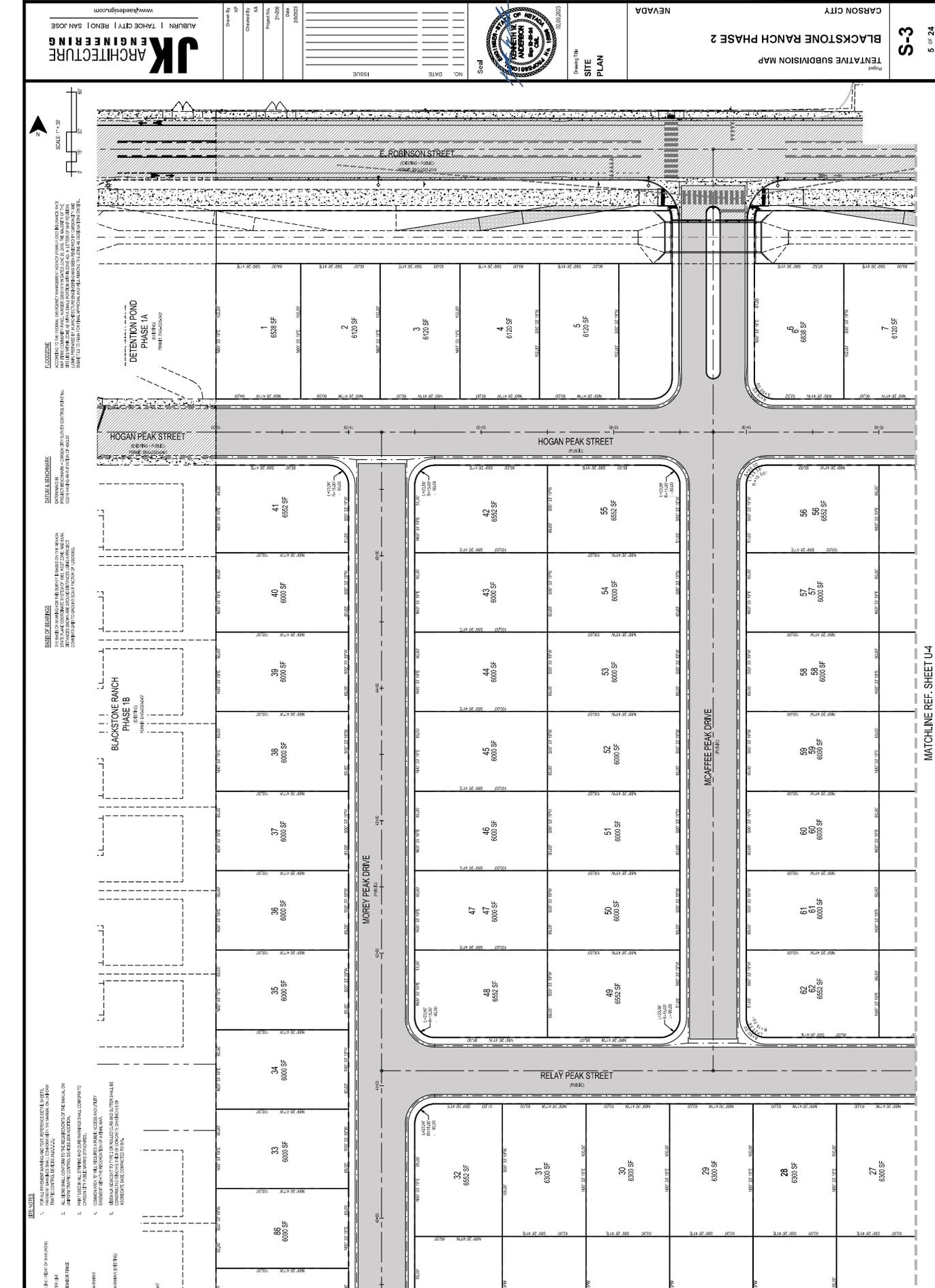
LEGEND
 PROPERTY LINE (THIN) / THICK
 EASEMENT (DASHED)
 CONCRETE (HATCHED)
 ASPHALT DRIVEWAY (HATCHED)
 ASPHALT DRIVEWAY (DOTTED)
 CONCRETE (HATCHED)
 STREET LIGHT

SCALE 1" = 30'
 NORTH ARROW

811
 Know what's below.
 Call before you dig.

BASELINE RESIGNES
 The scale of this drawing is 1" = 30'. It is based on the information provided by the owner and is not a guarantee of accuracy. The owner is responsible for the accuracy of the information provided. The designer is not responsible for the accuracy of the information provided. The designer is not responsible for the accuracy of the information provided.

DATE AND REVISIONS
 DATE: 10/20/2023
 REVISION: 1.0

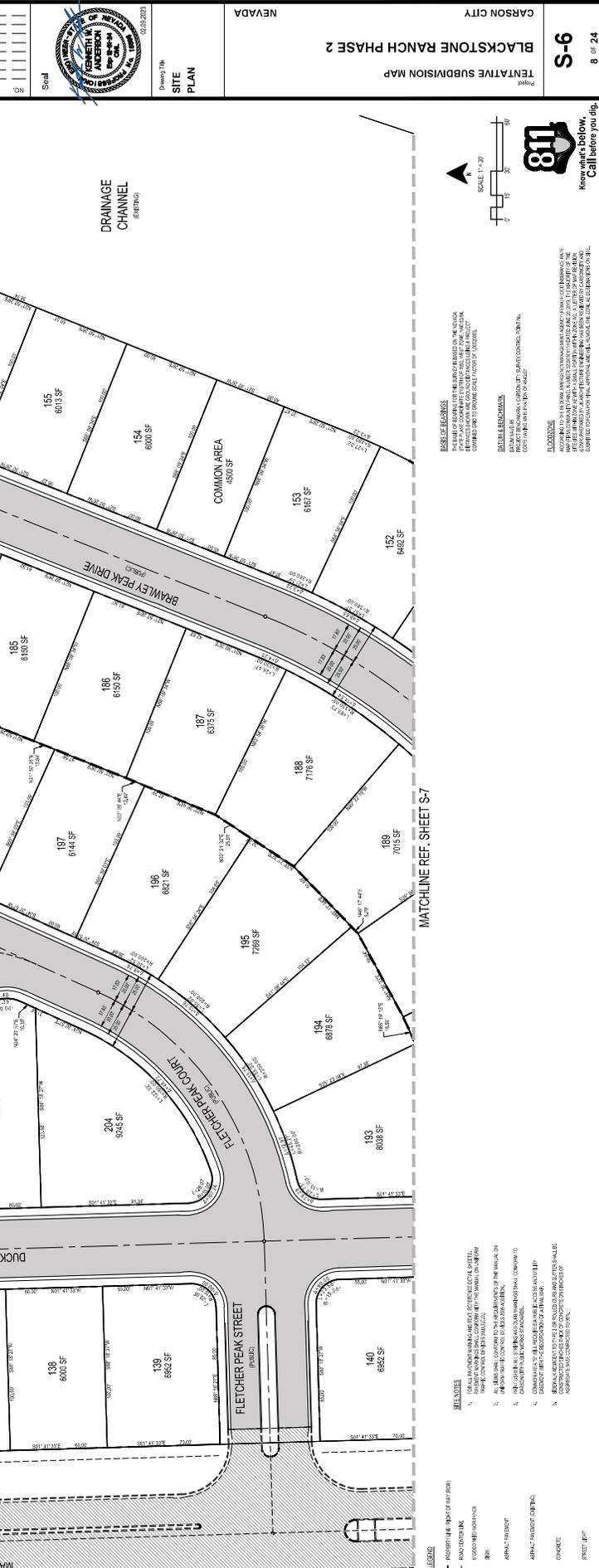


Drawn By	SP
Checked By	MA
Project No.	20002
Date	200203
No.	DATE
ISSUE	

Seal
 STATE OF NEVADA
 PROFESSIONAL ENGINEER
 JAMES R. JOHNSON
 LICENSE NO. 10000
 EXPIRES 03/31/2023

Drawing Title
SITE PLAN
 NEVADA
 CARSON CITY
BLACKSTONE RANCH PHASE 2
 TENTATIVE SUBDIVISION MAP

Project
S-6
 8 OF 24



LEGEND
 PROPERTY LINE (PER PERMITS)
 PLANNED LINE
 6" CONC. SIDEWALK
 BR
 ASPHALT DRIVEWAY
 ASPHALT DRIVEWAY (SHARED)
 CONCRETE
 STREET LIGHT

REMARKS
 1. THIS DOCUMENT IS THE PROPERTY OF JK ARCHITECTURE AND SHALL REMAIN THE PROPERTY OF JK ARCHITECTURE.
 2. THIS DOCUMENT IS NOT TO BE USED FOR ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE.
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 4. THIS DOCUMENT IS NOT TO BE USED FOR ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE.
 5. THIS DOCUMENT IS NOT TO BE USED FOR ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE.

SCALE
 SCALE 1" = 30'
 0 15 30

811
 Know what's below.
 Call before you dig.



FLOODING
 ACCORDING TO THE FEDERAL, STATE, AND LOCAL REGULATIONS, FLOODING SHALL BE INDICATED AS SHOWN ON THIS PLAN. THE DESIGNER HAS CONDUCTED A VISUAL FLOODING ANALYSIS AND HAS DETERMINED THAT THERE IS NO FLOODING HAZARD TO THIS PROJECT. THE DESIGNER HAS CONDUCTED A VISUAL FLOODING ANALYSIS AND HAS DETERMINED THAT THERE IS NO FLOODING HAZARD TO THIS PROJECT.

DATELINE BENCHMARK
 DATELINE BENCHMARK SHALL BE SHOWN AS SHOWN ON THIS PLAN. THE DESIGNER HAS CONDUCTED A VISUAL FLOODING ANALYSIS AND HAS DETERMINED THAT THERE IS NO FLOODING HAZARD TO THIS PROJECT.

BASE OF ELEVATIONS
 ELEVATIONS SHALL BE BASED ON THE DATUM SHOWN ON THIS PLAN. THE DESIGNER HAS CONDUCTED A VISUAL FLOODING ANALYSIS AND HAS DETERMINED THAT THERE IS NO FLOODING HAZARD TO THIS PROJECT.

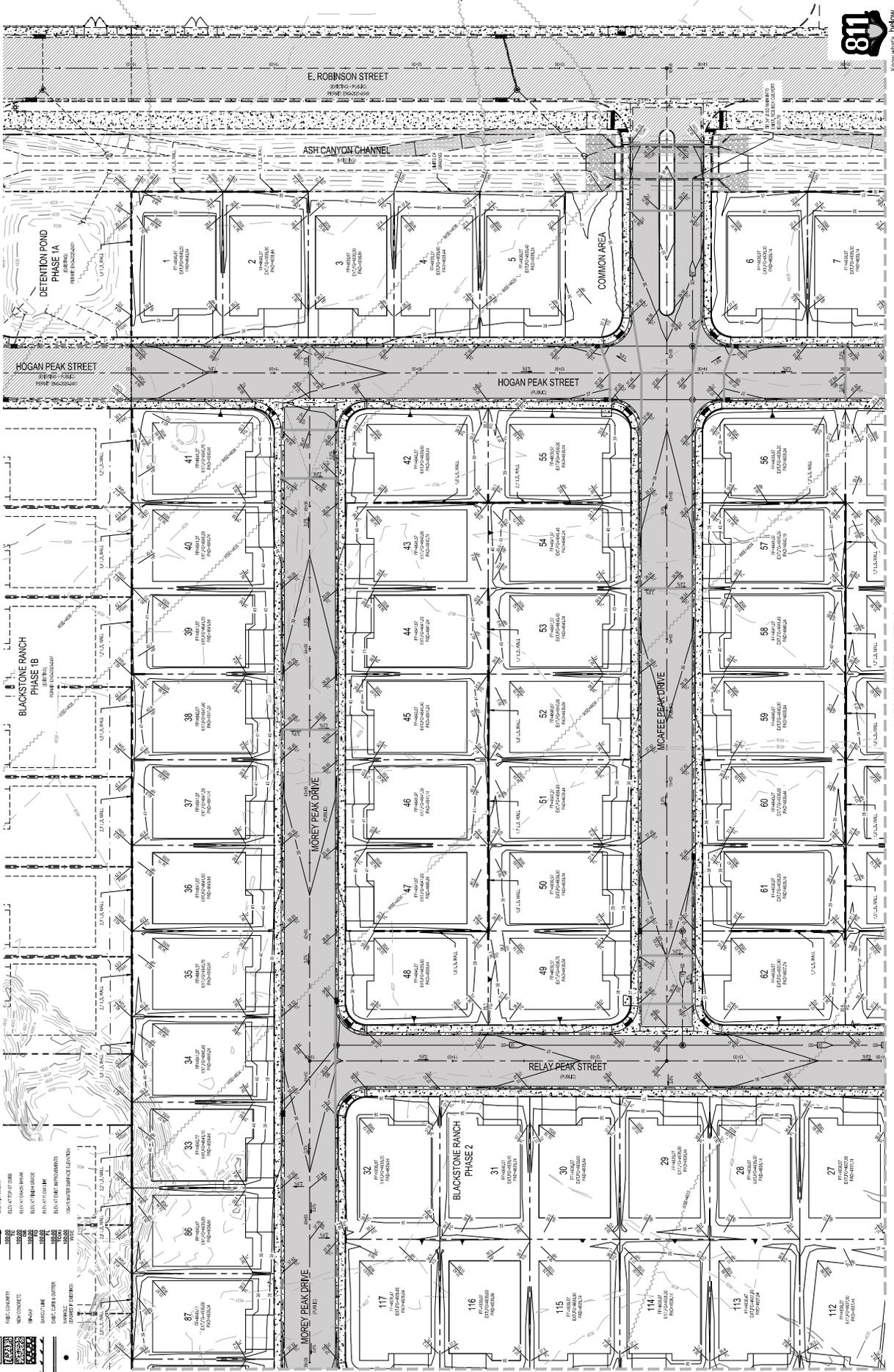
PHASE OVERALL EARTHWORK
 EARTHWORK VOLUMES ARE PROVIDED ONLY AS A GUIDE TO CONSTRUCTION. THE DESIGNER HAS CONDUCTED A VISUAL FLOODING ANALYSIS AND HAS DETERMINED THAT THERE IS NO FLOODING HAZARD TO THIS PROJECT.

REF. SHEET G-4 FOR GRADING NOTES

CONSTRUCTION
 EXISTING
 PROPOSED
 PROPOSED WITH FINISH

FINISH ELEVATIONS
 FINISH GRADE
 FINISH PAVEMENT
 FINISH CURB
 FINISH SIDEWALK
 FINISH DRIVEWAY

FINISH ELEVATIONS
 FINISH GRADE
 FINISH PAVEMENT
 FINISH CURB
 FINISH SIDEWALK
 FINISH DRIVEWAY





ELEVATIONS
 ACCORDING TO THE ELEVATION, UNLESS OTHERWISE SPECIFIED, ALL ELEVATIONS ARE MEASUREMENTS TO THE FINISH GRADE OF THE SURFACE. UNLESS OTHERWISE SPECIFIED, ALL ELEVATIONS ARE MEASUREMENTS TO THE FINISH GRADE OF THE SURFACE. UNLESS OTHERWISE SPECIFIED, ALL ELEVATIONS ARE MEASUREMENTS TO THE FINISH GRADE OF THE SURFACE.

DATELINE BENCHMARK
 DATELINE BENCHMARK SHALL BE USED TO CONTROL THE ELEVATION OF ALL FINISH GRADES AND CONSTRUCTION OF ALL UTILITIES.

BASE OF BENCHMARK
 THE BASE OF BENCHMARK SHALL BE THE SURFACE BENCHMARK TO THE SURFACE. UNLESS OTHERWISE SPECIFIED, ALL ELEVATIONS ARE MEASUREMENTS TO THE FINISH GRADE OF THE SURFACE. UNLESS OTHERWISE SPECIFIED, ALL ELEVATIONS ARE MEASUREMENTS TO THE FINISH GRADE OF THE SURFACE.

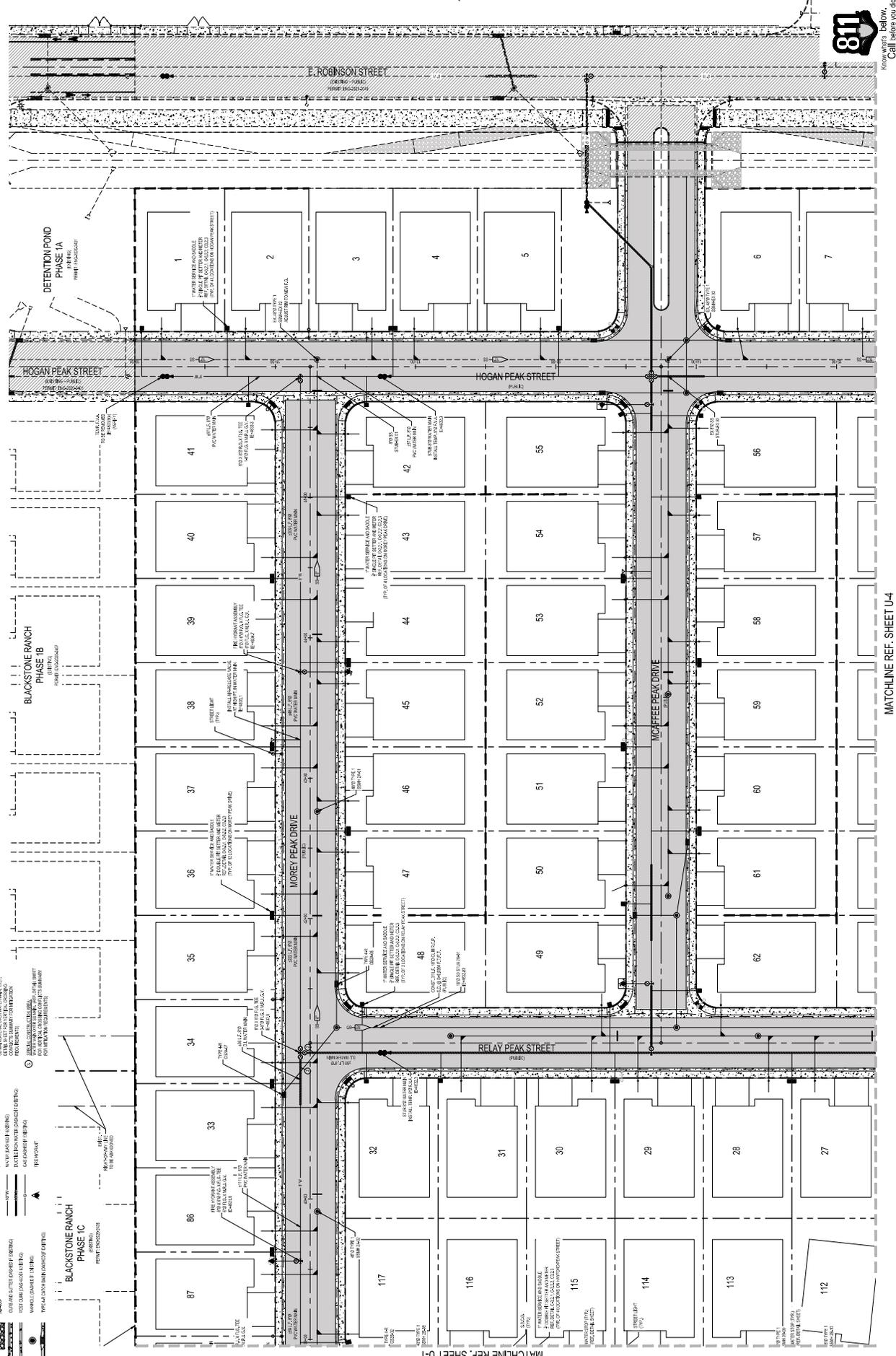
BLACKSTONE RANCH PHASE 1A
 PHASE 1A
 FINISH TREATMENT

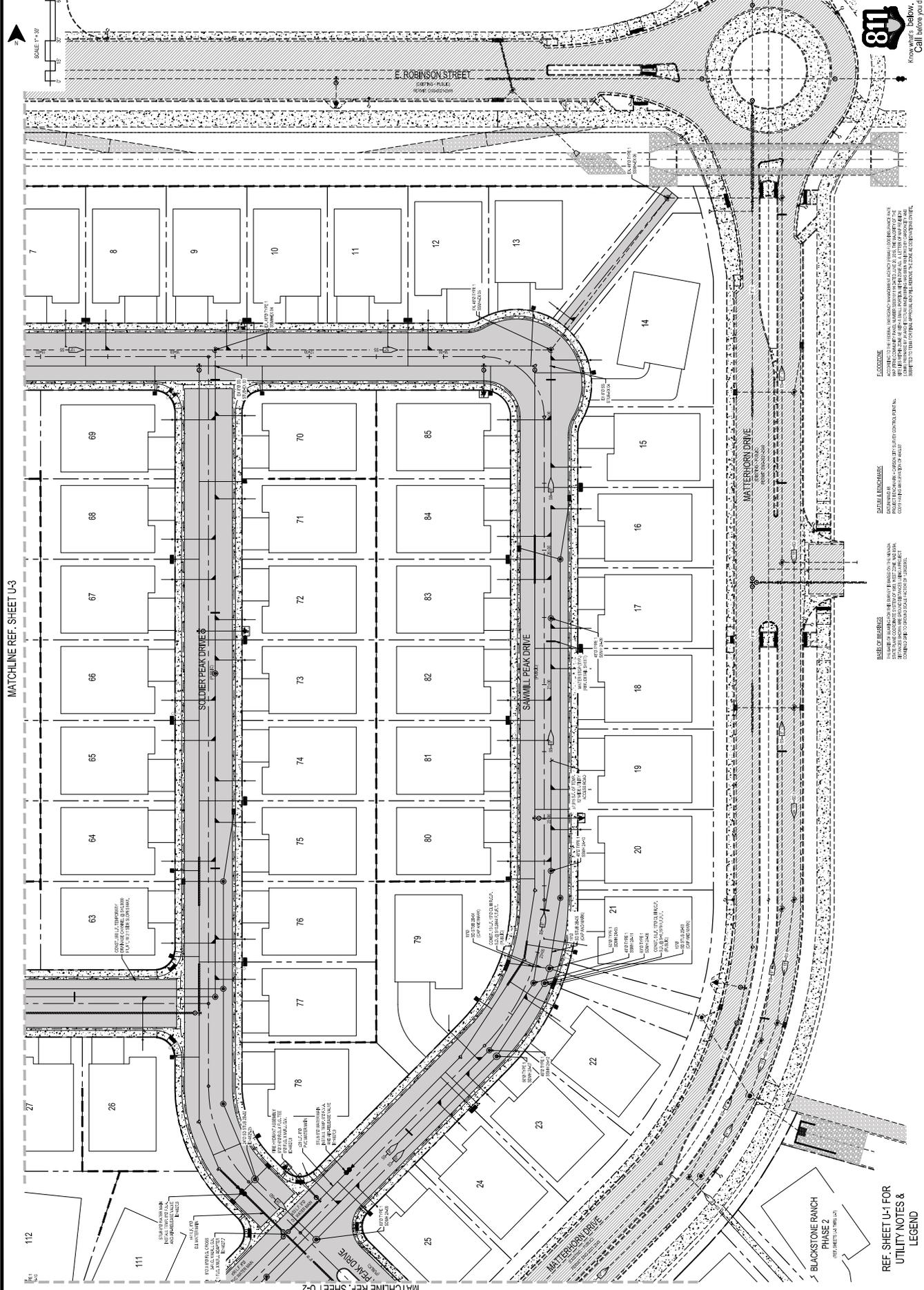
BLACKSTONE RANCH PHASE 1B
 PHASE 1B
 FINISH TREATMENT

BLACKSTONE RANCH PHASE 1C
 PHASE 1C
 FINISH TREATMENT

BLACKSTONE RANCH PHASE 2
 PHASE 2
 FINISH TREATMENT

BLACKSTONE RANCH PHASE 3
 PHASE 3
 FINISH TREATMENT





MATCHLINE REF. SHEET U-3

112

111

MATCHLINE REF. SHEET U-2

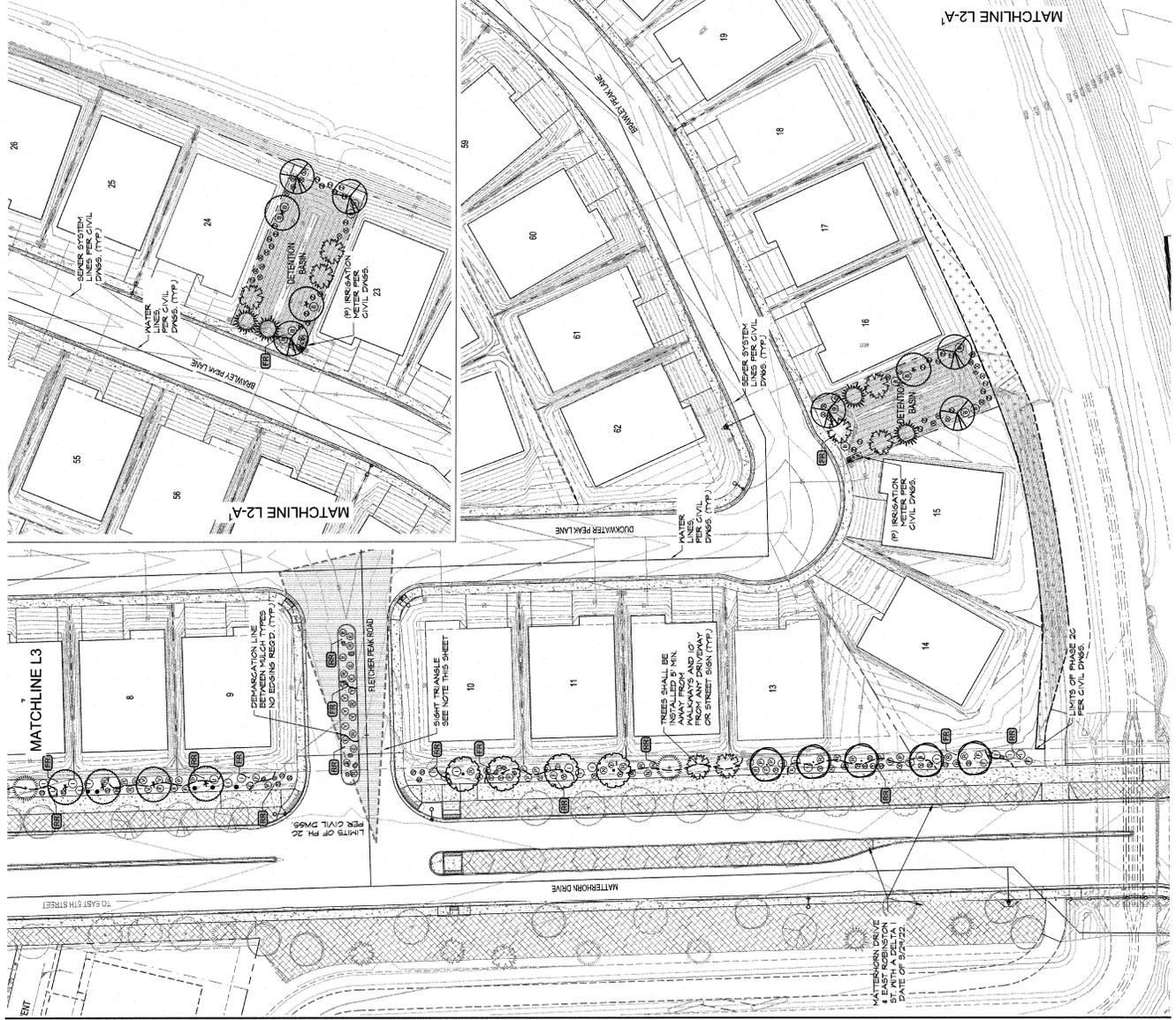
FLOODZONE
 ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) 100-YEAR FLOOD ZONE MAP, THE FLOOD ZONE IS SHOWN AS A Hatched AREA. THE FLOOD ZONE IS SHOWN AS A Hatched AREA. THE FLOOD ZONE IS SHOWN AS A Hatched AREA.

DATA & BENCHMARK
 ALL DATA AND BENCHMARKS ARE TO BE OBTAINED BY THE ENGINEER. THE ENGINEER SHALL BE RESPONSIBLE FOR OBTAINING ALL DATA AND BENCHMARKS. THE ENGINEER SHALL BE RESPONSIBLE FOR OBTAINING ALL DATA AND BENCHMARKS.

BASES OF BEARINGS
 THE BASIS OF BEARINGS FOR ALL LINES IS TO BE OBTAINED BY THE ENGINEER. THE ENGINEER SHALL BE RESPONSIBLE FOR OBTAINING ALL BASIS OF BEARINGS. THE ENGINEER SHALL BE RESPONSIBLE FOR OBTAINING ALL BASIS OF BEARINGS.

REF. SHEET U-1 FOR UTILITY NOTES & LEGEND

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PLANT LIST

TREE AND SHRUB SIZES ARE LISTED AT CARSON CITY CODE MINIMUM. ANY PLANT MATERIALS INSTALLED AT CONTRACTOR'S EXPENSE SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

SYM.	QNT.	BOTANICAL NAME/COMMON NAME	MIN. SIZE
	15	PLATANUS X AGGERIFOLIA BLOODGOOD/LONDON PLANE TREE	2' CAL.
	11	QUERCUS COCCINEA/SCARLET OAK	2' CAL.
	6	TILIA AMERICANA 'MAGNETRY'/AMERICAN SENNARY LINEN*	2' CAL.
	4	ZELKOVA SERRATA/SAMELEAF ZELKOVA*	2' CAL.
	15	EVERGREEN TREES	6' HT.
	4	CAUCOPUS DECURENS/INCENSE CEDAR	6' HT.
	1	CEPALIS ATLANTICA/ATLAS CEDAR	6' HT.
	1	PICEA PINSONG/COLORADO BLUE SPRUCE	6' HT.
	8	SHRUBS	5 GAL.
	15	ERBERIS X GLADONENSIS WILLIAM PENNY/WILLIAM PENN BARBERSKY*	5 GAL.
	1	FORSYTHIA X COINTAGE GOLD TIDE FORSYTHIA*	5 GAL.
	1	ILEX GLABRA/INHERENT HOLLY*	5 GAL.
	1	PHYSCOCARPUS OLIIFOLIUS DONNA MAY/LITTLE DEVIL NINEBARK*	5 GAL.
	1	FRAXINUS BENTHAMII/WHITE BOTTLED SAND CHERRY*	5 GAL.
	1	TRIAL OCCIDENTALIS/SCARLET GARDEN GLOBE THROAT*	5 GAL.
	4	PERENNIALS, GROUND COVER & ORNAMENTAL GRASSES	1 GAL.
	4	GALANUSCOTIS X ACUTIFLORA KARL FORSTER/UTAHER REED GRASS	1 GAL.
	1	YACONTHA X GIBBERNA/BLACK BELL GARDEN ORCHID*	1 GAL.
	1	PANICUM VIRGATUM/CHRYSE SKY/GOLDEN SKY SWITCH GRASS	1 GAL.
	1	PEROVSKIA ORIENTALE 'KARLEY ROSE'/KARLEY ROSE SWITCH GRASS	1 GAL.
	1	PEROVSKIA ANTHILOIDIFOLIA 'LAGSY BLUE'/LAGSY BLUE RUSSIAN SAGE (DWARF)*	1 GAL.
	1	PEROVSKIA ANTHILOIDIFOLIA 'LAGSY BLUE'/LAGSY BLUE RUSSIAN SAGE (DWARF)*	1 GAL.

*DENOTES POLLINATOR FRIENDLY PLANT MATERIALS • 248 (626)

NOTE:
 STREET TREE SPECIFICATION REQUESTS SHALL BE DIRECTED TO THE CARSON CITY PLANNING DEPARTMENT FOR CONSIDERATION. STREET TREE SPECIFICATION SHALL BE LISTED FOR CARSON CITY TREE LIST FOR COMMERCIAL PROJECTS.

MULCH LEGEND

- SEE LANDSCAPE SPECIFICATION #3 SHEET L1
- RIVER ROCK
- TEXTURED ROCKS
- BLACKSTONE - EXISTING BLACKSTONE RANCH LANDSCAPE
- 25'-11" LANDSCAPE BORDERS - TO BE RANDOMLY PLACED THROUGHOUT THE LANDSCAPE AS INDICATED PER PLAN. SIZE TO VARY, 24" DIA. MIN. OPTIONAL BY OWNER.

VISION (SIGHT) TRIANGLES

- STREET VISION TRIANGLE IS DEFINED BY THE MOST RECENT AND TRANSPORTATION DEPARTMENT'S HIGHWAYS AND STREETS POLICY AND DESIGN MANUAL.
- NO FENCE, WALL, SCREEN, SIGN OR FOLIAGE SHALL BE ERRECTED, MAINTAINED OR REPLACED WITHIN THE VISION TRIANGLE OR INTERFERE WITH A CLEAR LINE OF SIGHT FOR THE DRIVERS OR APPROACHING VEHICLES WITHIN THE VISION TRIANGLE BETWEEN AVERAGE GRADE OF THE CARB. THIS SHALL NOT BE INTERPRETED TO PROHIBIT TRAFFIC SIGN POSTS, UTILITY POLES OR TREE TRUNKS WITHIN THE VISION TRIANGLE AREA.

