

APPENDIX E

INTERSECTION CAPACITY LEVEL OF SERVICE WORKSHEETS FOR HCM METHODOLOGY


APPENDIX E-1

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.506

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	185	311	703	212	116	159
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	185	311	703	212	116	159
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	85	192	58	32	43
Total Analysis Volume [veh/h]	202	340	767	231	127	174
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume cr	0		0		0	
v_di, Inbound Pedestrian Volume cros	0		0		0	
v_co, Outbound Pedestrian Volume cr	0		0		0	
v_ci, Inbound Pedestrian Volume cros	0		0		0	
v_ab, Corner Pedestrian Volume [ped/	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	39	61	22	0	29	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	70	53	53	12	12
g / C, Green / Cycle	0.14	0.78	0.59	0.59	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.22	0.15	0.07	0.11
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	244	2760	2114	944	242	216
d1, Uniform Delay [s]	37.81	2.51	9.47	8.70	36.20	37.75
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.00	0.09	0.48	0.62	1.76	6.90
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.12	0.36	0.24	0.52	0.81
d, Delay for Lane Group [s/veh]	44.81	2.61	9.96	9.31	37.96	44.65
Lane Group LOS	D	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.74	0.55	3.69	2.13	2.68	4.07
50th-Percentile Queue Length [ft/ln]	118.38	13.71	92.32	53.13	66.99	101.85
95th-Percentile Queue Length [veh/ln]	8.30	0.99	6.65	3.83	4.82	7.33
95th-Percentile Queue Length [ft/ln]	207.60	24.67	166.17	95.63	120.58	183.33

Movement, Approach, & Intersection Results

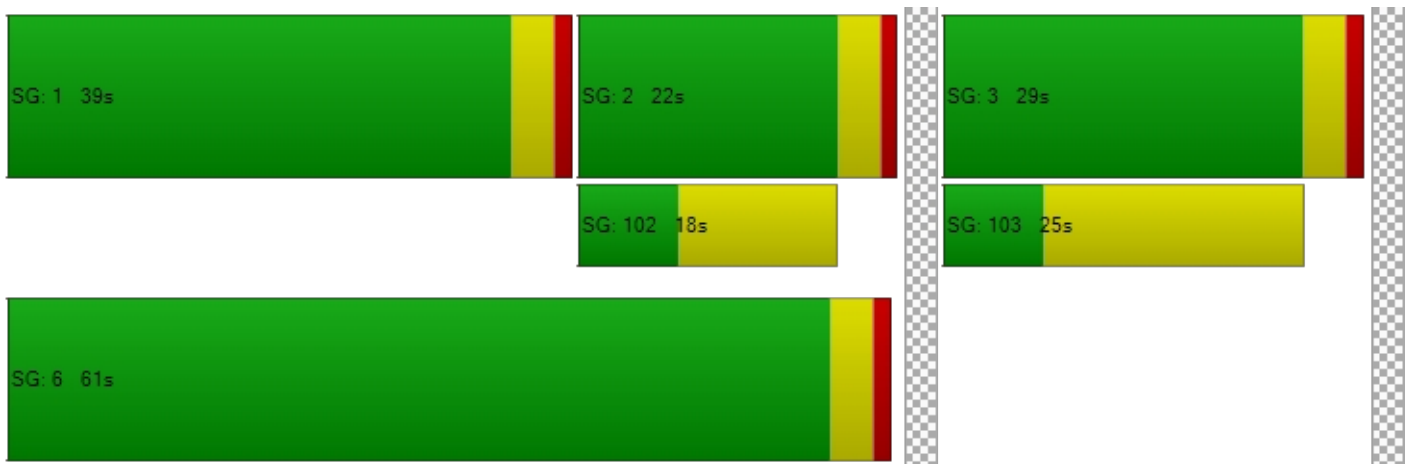
d_M, Delay for Movement [s/veh]	44.81	2.61	9.96	9.31	37.96	44.65
Movement LOS	D	A	A	A	D	D
d_A, Approach Delay [s/veh]	18.34		9.81		41.83	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	17.55					
Intersection LOS	B					
Intersection V/C	0.506					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
I_p,int, Pedestrian LOS Score for Inter	2.589	0.000	2.178
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycl	2000	2000	2000
c_b, Capacity of the bicycle lane [bicyc	1267	400	556
d_b, Bicycle Delay [s]	6.05	28.80	23.47
I_b,int, Bicycle LOS Score for Intersect	2.007	2.383	1.560
Bicycle LOS	B	B	A

Sequence


























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



HCM 6th Signalized Intersection Summary

2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	 
Traffic Volume (veh/h)	280	1055	255	0	0	0	280	273	253	54	286	592
Future Volume (veh/h)	280	1055	255	0	0	0	280	273	253	54	286	592
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	301	1134	0				298	299	272	58	308	637
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	632	1261					467	490	415	460	918	1710
Arrive On Green	0.35	0.35	0.00				0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	301	1134	0				298	299	272	58	308	637
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	15.7	36.3	0.0				17.8	16.9	18.3	3.0	8.4	13.7
Cycle Q Clear(g_c), s	15.7	36.3	0.0				17.8	16.9	18.3	3.0	8.4	13.7
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	632	1261					467	490	415	460	918	1710
V/C Ratio(X)	0.48	0.90					0.64	0.61	0.66	0.13	0.34	0.37
Avail Cap(c_a), veh/h	668	1333					467	490	415	460	918	1710
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	36.7	0.0				39.3	38.9	39.5	34.1	36.1	11.6
Incr Delay (d2), s/veh	0.6	8.3	0.0				6.6	5.6	7.8	0.6	1.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	16.6	0.0				8.5	8.3	7.9	1.4	3.7	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	45.0	0.0				45.8	44.5	47.3	34.7	37.1	12.3
LnGrp LOS	C	D					D	D	D	C	D	B
Approach Vol, veh/h		1435	A					869			1003	
Approach Delay, s/veh		42.0						45.8			21.2	
Approach LOS		D						D			C	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		36.4		47.6				36.0				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		29.0		45.0				31.0				
Max Q Clear Time (g_c+I1), s		20.3		38.3				15.7				
Green Ext Time (p_c), s		2.5		4.3				4.3				

Intersection Summary

HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D






















Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	1055	255	0	0	0	280	273	253	54	286	592
Future Volume (vph)	280	1055	255	0	0	0	280	273	253	54	286	592
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.995		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1761	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.995		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1761	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			274						272			377
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	301	1134	274	0	0	0	301	294	272	58	308	637
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	301	1134	274	0	0	0	271	324	272	58	308	637
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	50.0	50.0	50.0				34.0	34.0	34.0	36.0	36.0	50.0
Total Split (%)	41.7%	41.7%	41.7%				28.3%	28.3%	28.3%	30.0%	30.0%	41.7%
Maximum Green (s)	45.0	45.0	45.0				29.0	29.0	29.0	31.0	31.0	45.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	44.9	44.9	44.9				29.1	29.1	29.1	31.0	31.0	80.9
Actuated g/C Ratio	0.37	0.37	0.37				0.24	0.24	0.24	0.26	0.26	0.67
v/c Ratio	0.45	0.86	0.36				0.67	0.76	0.46	0.13	0.34	0.32
Control Delay	31.1	42.3	4.3				50.2	55.1	7.1	35.1	37.4	3.4
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.1	42.3	4.3				50.2	55.1	7.1	35.1	37.4	3.4
LOS	C	D	A				D	E	A	D	D	A
Approach Delay		34.2						38.5			15.7	
Approach LOS		C						D			B	
Queue Length 50th (ft)	174	421	0				201	247	0	35	102	37
Queue Length 95th (ft)	256	514	55				302	#380	68	70	144	60
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	663	1327	764				407	426	589	457	914	2003
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.85	0.36				0.67	0.76	0.46	0.13	0.34	0.32

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 30.1 Intersection LOS: C

Intersection Capacity Utilization 65.2% ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
AM Peak Hour

Queue shown is maximum after two cycles.




Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report
Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.347

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	541	6	122	333	0	227
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	541	6	122	333	0	227
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	1.0000	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	2	33	89	0	61
Total Analysis Volume [veh/h]	581	6	131	358	0	244
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.13	0.00	0.00	0.35
d_M, Delay for Movement [s/veh]	0.00	0.00	9.22	0.00	0.00	12.82
Movement LOS	A	A	A	A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.46	0.00	0.00	1.55
95th-Percentile Queue Length [ft/ln]	0.00	0.00	11.47	0.00	0.00	38.83
d_A, Approach Delay [s/veh]	0.00		2.47		12.82	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.28					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

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):	0.214

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	134	409	1	3	279	36	150	1	69	2	0	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	134	409	1	3	279	36	150	1	69	2	0	3
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
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]	36	110	0	1	75	10	40	0	19	1	0	1
Total Analysis Volume [veh/h]	145	441	1	3	301	39	162	1	74	2	0	3
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 cr	0			0			0			0		
v_di, Inbound Pedestrian Volume cros	0			0			0			0		
v_co, Outbound Pedestrian Volume cr	0			0			0			0		
v_ci, Inbound Pedestrian Volume cros	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permissi	Permissi	Protecte	Permissi	Permissi	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	19	38	0	10	29	0	0	32	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	66	66	0	61	61	7	7	7	1
g / C, Green / Cycle	0.07	0.73	0.73	0.01	0.67	0.67	0.07	0.07	0.07	0.01
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.00	0.08	0.02	0.05	0.05	0.05	0.00
s, saturation flow rate [veh/h]	3459	1870	1868	1781	3560	1589	1781	1782	1589	1661
c, Capacity [veh/h]	228	1370	1369	11	2396	1070	132	132	118	15
d1, Uniform Delay [s]	41.06	3.65	3.65	44.61	5.26	4.94	40.49	40.49	40.52	44.40
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	2.92	0.25	0.25	12.87	0.11	0.06	4.58	4.57	5.34	11.94
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	0.16	0.16	0.27	0.13	0.04	0.62	0.62	0.63	0.33
d, Delay for Lane Group [s/veh]	43.98	3.90	3.90	57.49	5.37	5.00	45.06	45.06	45.86	56.34
Lane Group LOS	D	A	A	E	A	A	D	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1.64	1.04	1.04	0.11	0.90	0.23	1.90	1.90	1.75	0.16
50th-Percentile Queue Length [ft/ln]	41.10	25.96	25.95	2.63	22.51	5.73	47.53	47.55	43.76	4.02
95th-Percentile Queue Length [veh/ln]	2.96	1.87	1.87	0.19	1.62	0.41	3.42	3.42	3.15	0.29
95th-Percentile Queue Length [ft/ln]	73.99	46.73	46.71	4.74	40.52	10.31	85.55	85.58	78.77	7.23

Movement, Approach, & Intersection Results

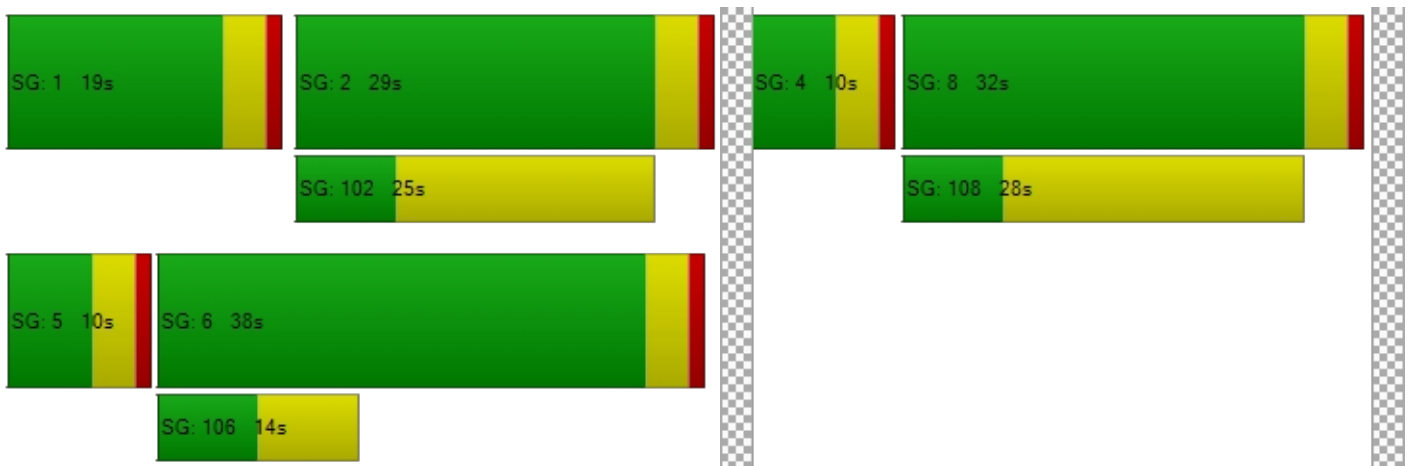
d_M, Delay for Movement [s/veh]	43.98	3.90	3.90	57.49	5.37	5.00	45.06	45.06	45.86	56.34	56.34	56.34
Movement LOS	D	A	A	E	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	13.80			5.79			45.31			56.34		
Approach LOS	B			A			D			E		
d_I, Intersection Delay [s/veh]	18.01											
Intersection LOS	B											
Intersection V/C	0.214											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			0.0			11.0			11.0		
M_corner, Corner Circulation Area [ft²]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			0.00			34.67			34.67		
I_p,int, Pedestrian LOS Score for Inter	2.609			0.000			2.381			1.719		
Crosswalk LOS	B			F			B			A		
s_b, Saturation Flow Rate of the bicycl	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicyc	756			556			622			133		
d_b, Bicycle Delay [s]	17.42			23.47			21.36			39.20		
I_b,int, Bicycle LOS Score for Intersect	2.044			1.843			1.951			1.568		
Bicycle LOS	B			A			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	34	634	51	10	491	18	0	0	9	0	0	11
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	634	51	10	491	18	0	0	9	0	0	11
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
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]	9	166	13	3	128	5	0	0	2	0	0	3
Total Analysis Volume [veh/h]	36	663	53	10	514	19	0	0	9	0	0	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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




















Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	8.62	0.00	0.00	9.14	0.00	0.00	22.68	29.70	9.98	25.53	29.17	10.75
Movement LOS	A	A	A	A	A	A	C	D	A	D	D	B
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.03	0.00	0.00	0.04	0.04	0.04	0.06	0.06	0.06
95th-Percentile Queue Length [ft/ln]	2.71	0.00	0.00	0.86	0.00	0.00	0.93	0.93	0.93	1.44	1.44	1.44
d_A, Approach Delay [s/veh]	0.41			0.17			9.98			10.75		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.47											
Intersection LOS	B											

HCM 6th Signalized Intersection Summary

7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1	32	54	17	419	22	271	206	0	480	14
Future Volume (veh/h)	15	1	32	54	17	419	22	271	206	0	480	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	16	1	33	56	18	436	23	282	215	0	500	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	160	33	274	405	121	484	367	2075	925	0	1135	34
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.21	0.58	0.58	0.00	0.32	0.32
Sat Flow, veh/h	352	110	896	1098	397	1585	1781	3554	1585	0	3616	106
Grp Volume(v), veh/h	50	0	0	74	0	436	23	282	215	0	252	263
Grp Sat Flow(s),veh/h/ln	1358	0	0	1494	0	1585	1781	1777	1585	0	1777	1851
Q Serve(g_s), s	0.0	0.0	0.0	0.9	0.0	23.7	0.9	3.2	5.9	0.0	10.1	10.1
Cycle Q Clear(g_c), s	1.9	0.0	0.0	2.8	0.0	23.7	0.9	3.2	5.9	0.0	10.1	10.1
Prop In Lane	0.32		0.66	0.76		1.00	1.00		1.00	0.00		0.06
Lane Grp Cap(c), veh/h	467	0	0	526	0	484	367	2075	925	0	573	597
V/C Ratio(X)	0.11	0.00	0.00	0.14	0.00	0.90	0.06	0.14	0.23	0.00	0.44	0.44
Avail Cap(c_a), veh/h	634	0	0	715	0	687	367	2075	925	0	573	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	0.0	0.0	22.7	0.0	30.0	28.7	8.5	9.0	0.0	24.1	24.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	11.5	0.1	0.1	0.6	0.0	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	1.1	0.0	10.3	0.4	1.2	2.0	0.0	4.4	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	0.0	0.0	22.8	0.0	41.5	28.8	8.6	9.6	0.0	26.5	26.5
LnGrp LOS	C	A	A	C	A	D	C	A	A	A	C	C
Approach Vol, veh/h		50			510			520			515	
Approach Delay, s/veh		22.5			38.8			9.9			26.5	
Approach LOS		C			D			A			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		57.5		32.5	23.5	34.0		32.5				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		41.0		39.0	8.0	* 29		39.0				
Max Q Clear Time (g_c+I1), s		7.9		3.9	2.9	12.1		25.7				
Green Ext Time (p_c), s		2.6		0.3	0.0	2.7		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				24.9								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↗	↗	↗	↗	↕	↕
Traffic Volume (vph)	15	1	32	54	17	419	22	271	206	0	480	14
Future Volume (vph)	15	1	32	54	17	419	22	271	206	0	480	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.911				0.850			0.850		0.996	
Flt Protected		0.984			0.964		0.950					
Satd. Flow (prot)	0	1670	0	0	1796	1583	1770	3539	1583	0	3525	0
Flt Permitted		0.890			0.760		0.950					
Satd. Flow (perm)	0	1510	0	0	1416	1583	1770	3539	1583	0	3525	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33				436			215			3
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	1	33	56	18	436	23	282	215	0	500	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	74	436	23	282	215	0	515	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	44.0	44.0		44.0	44.0	44.0	12.0	46.0	46.0		34.0	
Total Split (%)	48.9%	48.9%		48.9%	48.9%	48.9%	13.3%	51.1%	51.1%		37.8%	
Maximum Green (s)	39.0	39.0		39.0	39.0	39.0	8.0	41.0	41.0		29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		11.7			11.7	11.7	6.9	68.3	68.3		63.5	
Actuated g/C Ratio		0.13			0.13	0.13	0.08	0.76	0.76		0.71	
v/c Ratio		0.22			0.40	0.75	0.17	0.10	0.17		0.21	
Control Delay		18.0			40.4	12.0	38.3	2.7	0.5		6.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		18.0			40.4	12.0	38.3	2.7	0.5		6.6	
LOS		B			D	B	D	A	A		A	
Approach Delay		18.0			16.1			3.4			6.6	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		9			40	0	13	12	0		32	
Queue Length 95th (ft)		36			72	77	37	31	7		112	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		673			613	933	157	2686	1253		2488	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.07			0.12	0.47	0.15	0.10	0.17		0.21	

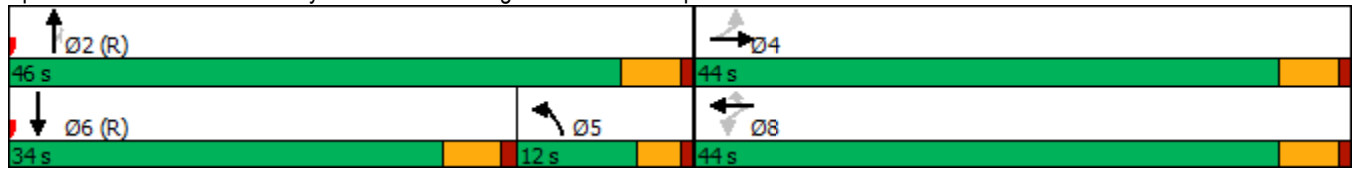
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	8.9
Intersection LOS:	A
Intersection Capacity Utilization:	50.9%
ICU Level of Service:	A
Analysis Period (min):	15

Lanes, Volumes, Timings
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
 AM Peak Hour

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Existing
 AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶↶	↷		↶↶	↶	
Traffic Volume (veh/h)	141	279	0	408	184	0
Future Volume (veh/h)	141	279	0	408	184	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	148	0	0	429	194	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	232		0	2920	1537	0
Arrive On Green	0.07	0.00	0.00	0.82	0.82	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	148	0	0	429	194	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	3.8	0.0	0.0	2.2	1.9	0.0
Cycle Q Clear(g_c), s	3.8	0.0	0.0	2.2	1.9	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	232		0	2920	1537	0
V/C Ratio(X)	0.64		0.00	0.15	0.13	0.00
Avail Cap(c_a), veh/h	1075		0	2920	1537	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.9	0.0	0.0	1.6	1.6	0.0
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	0.4	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.8	0.0	0.0	1.7	1.8	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	148	A		429	194	
Approach Delay, s/veh	43.8			1.7	1.8	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		79.0		11.0		79.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		52.0		28.0		52.0
Max Q Clear Time (g_c+I1), s		4.2		5.8		3.9
Green Ext Time (p_c), s		3.1		0.4		1.1
Intersection Summary						
HCM 6th Ctrl Delay			9.8			
HCM 6th LOS			A			
Notes						
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.						

Lanes, Volumes, Timings
10: Doheny Park Rd & PCH Side Path

Existing
AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔	↗		↕↕	↕	
Traffic Volume (vph)	141	279	0	408	184	0
Future Volume (vph)	141	279	0	408	184	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		294				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	294	0	429	194	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	148	294	0	429	194	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Existing
 AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	33.0			57.0	57.0	
Total Split (%)	36.7%			63.3%	63.3%	
Maximum Green (s)	28.0			52.0	52.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	9.2	90.0		70.8	70.8	
Actuated g/C Ratio	0.10	1.00		0.79	0.79	
v/c Ratio	0.42	0.19		0.15	0.13	
Control Delay	41.1	0.3		2.6	2.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	41.1	0.3		2.6	2.4	
LOS	D	A		A	A	
Approach Delay	13.9			2.6	2.4	
Approach LOS	B			A	A	
Queue Length 50th (ft)	41	0		23	29	
Queue Length 95th (ft)	69	0		40	14	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1068	1583		2782	1464	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.14	0.19		0.15	0.13	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	16 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.42
Intersection Signal Delay:	7.3
Intersection LOS:	A
Intersection Capacity Utilization:	24.6%
ICU Level of Service:	A
Analysis Period (min):	15

Lanes, Volumes, Timings
10: Doheny Park Rd & PCH Side Path

Existing
AM Peak Hour

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↰		↱		↰↱	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	13	196	106	32	26	2
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	196	106	32	26	2
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	52	28	8	7	1
Total Analysis Volume [veh/h]	14	207	112	34	27	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	7.53	0.00	0.00	0.00	10.99	8.92
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.13	0.01
95th-Percentile Queue Length [ft/ln]	0.74	0.74	0.00	0.00	3.36	0.16
d_A, Approach Delay [s/veh]	0.48		0.00		10.84	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.06					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	7.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.162

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	20	3	7	7	3	54	19	79	2	7	103	9
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	3	7	7	3	54	19	79	2	7	103	9
Peak Hour Factor	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620
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	1	2	2	1	16	6	23	1	2	30	3
Total Analysis Volume [veh/h]	23	3	8	8	3	63	22	92	2	8	119	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	786	887	829	844
Degree of Utilization, x	0.04	0.08	0.14	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.14	0.27	0.49	0.58
95th-Percentile Queue Length [ft]	3.39	6.80	12.15	14.45
Approach Delay [s/veh]	7.79	7.42	8.05	8.09
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.91			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	3	4	1	9	24	2
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	4	1	9	24	2
Peak Hour Factor	0.7710	0.7710	0.7710	0.7710	0.7710	0.7710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	3	8	1
Total Analysis Volume [veh/h]	4	5	1	12	31	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	8.75	8.47
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.19	0.19	0.00	0.00	2.63	2.63
d_A, Approach Delay [s/veh]	3.22		0.00		8.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.81					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	84	180	87	13	19	44
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	180	87	13	19	44
Peak Hour Factor	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	53	26	4	6	13
Total Analysis Volume [veh/h]	99	213	103	15	22	52
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.05	0.06
d_M, Delay for Movement [s/veh]	7.63	0.00	0.00	0.00	13.04	9.37
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.22	0.00	0.00	0.00	0.34	0.34
95th-Percentile Queue Length [ft/ln]	5.41	0.00	0.00	0.00	8.39	8.39
d_A, Approach Delay [s/veh]	2.42		0.00		10.46	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.03					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	20	581	357	16	6	17
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	581	357	16	6	17
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	156	96	4	2	5
Total Analysis Volume [veh/h]	21	622	382	17	6	18
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	8.17	0.00	0.00	0.00	12.01	9.63
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	1.39	0.00	0.00	0.00	2.61	2.61
d_A, Approach Delay [s/veh]	0.27		0.00		10.22	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.39					
Intersection LOS	B					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Existing
 AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	487	173	0	204	777
Future Volume (veh/h)	0	487	173	0	204	777
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	529	188	0	222	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	2014	1060	0	1114	
Arrive On Green	0.00	0.57	0.57	0.00	0.32	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	529	188	0	222	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	6.8	4.4	0.0	4.2	0.0
Cycle Q Clear(g_c), s	0.0	6.8	4.4	0.0	4.2	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2014	1060	0	1114	
V/C Ratio(X)	0.00	0.26	0.18	0.00	0.20	
Avail Cap(c_a), veh/h	0	2014	1060	0	1114	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	9.9	9.4	0.0	22.1	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.4	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	1.7	0.0	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	10.2	9.8	0.0	22.5	0.0
LnGrp LOS	A	B	A	A	C	
Approach Vol, veh/h		529	188		222	A
Approach Delay, s/veh		10.2	9.8		22.5	
Approach LOS		B	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				56.0	34.0	56.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				51.0	29.0	51.0
Max Q Clear Time (g_c+I1), s				8.8	6.2	6.4
Green Ext Time (p_c), s				3.7	0.7	1.0
Intersection Summary						
HCM 6th Ctrl Delay			13.0			
HCM 6th LOS			B			
Notes						
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.						

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing
AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	487	173	0	204	777
Future Volume (vph)	0	487	173	0	204	777
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr _t						0.850
Fl _t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl _t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						845
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	529	188	0	222	845
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	529	188	0	222	845
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing
AM Peak Hour

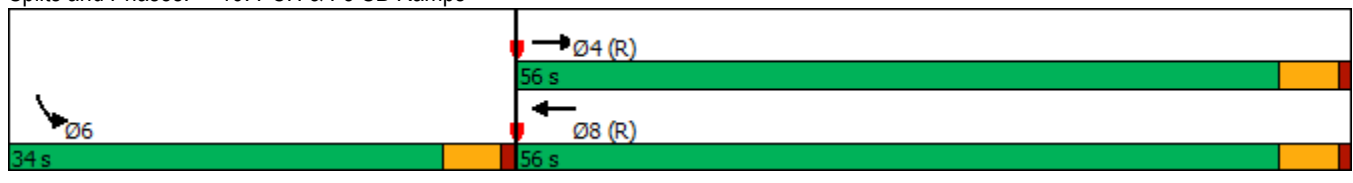


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		56.0	56.0		34.0	
Total Split (%)		62.2%	62.2%		37.8%	
Maximum Green (s)		51.0	51.0		29.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		51.0	51.0		29.0	90.0
Actuated g/C Ratio		0.57	0.57		0.32	1.00
v/c Ratio		0.26	0.18		0.20	0.53
Control Delay		10.4	4.0		22.7	1.3
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		10.4	4.0		22.7	1.3
LOS		B	A		C	A
Approach Delay		10.4	4.0		5.8	
Approach LOS		B	A		A	
Queue Length 50th (ft)		75	14		46	0
Queue Length 95th (ft)		103	23		74	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		2005	1055		1106	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.26	0.18		0.20	0.53

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 15 (17%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 6.9
 Intersection Capacity Utilization 27.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↗	
Traffic Volume (veh/h)	22	273	355	0	648	7	1	12	87	8	0	93
Future Volume (veh/h)	22	273	355	0	648	7	1	12	87	8	0	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	290	0	0	689	7	1	13	93	9	0	99
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	455	2014		0	2953	30	60	578	511	488	0	511
Arrive On Green	0.57	0.57	0.00	0.00	0.57	0.57	0.32	0.32	0.32	0.32	0.00	0.32
Sat Flow, veh/h	749	3554	1585	0	5380	53	53	1794	1585	1288	0	1585
Grp Volume(v), veh/h	23	290	0	0	450	246	14	0	93	9	0	99
Grp Sat Flow(s),veh/h/ln	749	1777	1585	0	1702	1861	1847	0	1585	1288	0	1585
Q Serve(g_s), s	1.4	3.5	0.0	0.0	5.9	5.9	0.0	0.0	3.8	0.4	0.0	4.1
Cycle Q Clear(g_c), s	7.4	3.5	0.0	0.0	5.9	5.9	0.5	0.0	3.8	0.9	0.0	4.1
Prop In Lane	1.00		1.00	0.00		0.03	0.07		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	455	2014		0	1929	1054	638	0	511	488	0	511
V/C Ratio(X)	0.05	0.14		0.00	0.23	0.23	0.02	0.00	0.18	0.02	0.00	0.19
Avail Cap(c_a), veh/h	455	2014		0	1929	1054	638	0	511	488	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.6	9.2	0.0	0.0	9.7	9.7	20.8	0.0	22.0	21.1	0.0	22.0
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	0.3	0.5	0.1	0.0	0.8	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.2	0.0	0.0	2.0	2.3	0.2	0.0	1.5	0.1	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.8	9.4	0.0	0.0	10.0	10.3	20.9	0.0	22.7	21.2	0.0	22.9
LnGrp LOS	B	A		A	B	B	C	A	C	C	A	C
Approach Vol, veh/h		313	A		696			107			108	
Approach Delay, s/veh		9.5			10.1			22.5			22.8	
Approach LOS		A			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		56.0		34.0		56.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		29.0		51.0		29.0		51.0				
Max Q Clear Time (g_c+1), s		5.8		9.4		6.1		7.9				
Green Ext Time (p_c), s		0.3		2.1		0.5		4.7				

Intersection Summary

HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	273	355	0	648	7	1	12	87	8	0	93
Future Volume (vph)	22	273	355	0	648	7	1	12	87	8	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998				0.850		0.850	
Flt Protected	0.950							0.996		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5075	0	0	1855	1583	1770	1583	0
Flt Permitted	0.365							0.991		0.748		
Satd. Flow (perm)	680	3539	1583	0	5075	0	0	1846	1583	1393	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			378		3				93		223	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	23	290	378	0	689	7	1	13	93	9	0	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	290	378	0	696	0	0	14	93	9	99	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	56.0	56.0			56.0		34.0	34.0	34.0	34.0	34.0	34.0
Total Split (%)	62.2%	62.2%			62.2%		37.8%	37.8%	37.8%	37.8%	37.8%	37.8%
Maximum Green (s)	51.0	51.0			51.0		29.0	29.0	29.0	29.0	29.0	29.0
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	Max
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	51.0	51.0	90.0		51.0		29.0	29.0	29.0	29.0	29.0	29.0
Actuated g/C Ratio	0.57	0.57	1.00		0.57		0.32	0.32	0.32	0.32	0.32	0.32
v/c Ratio	0.06	0.14	0.24		0.24		0.02	0.16	0.02	0.02	0.15	0.15
Control Delay	6.6	6.6	0.6		10.0		21.1	5.7	21.1	0.5	0.5	0.5
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	6.6	0.6		10.0		21.1	5.7	21.1	0.5	0.5	0.5
LOS	A	A	A		B		C	A	C	A	A	A
Approach Delay		3.3			10.0		7.7				2.2	2.2
Approach LOS		A			B		A				A	A
Queue Length 50th (ft)	4	26	1		67		5	0	3	0	0	0
Queue Length 95th (ft)	12	39	7		88		19	33	14	0	0	0
Internal Link Dist (ft)		121			561		495				178	178
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	385	2005	1583		2877		594	573	448	661	661	661
Starvation Cap Reductn	0	0	0		0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0		0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0		0		0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.14	0.24		0.24		0.02	0.16	0.02	0.15	0.15	0.15

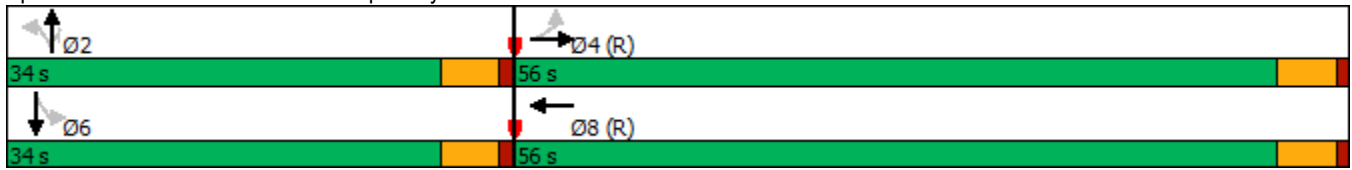
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.24
Intersection Signal Delay:	6.4
Intersection LOS:	A
Intersection Capacity Utilization:	33.3%
ICU Level of Service:	A
Analysis Period (min):	15

Lanes, Volumes, Timings
20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
AM Peak Hour

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Existing
 AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↶	↷	↶↶	↷	↶↶	↶↶
Traffic Volume (veh/h)	665	343	455	27	360	507
Future Volume (veh/h)	665	343	455	27	360	507
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	715	0	489	0	387	545
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	846		1632		485	2289
Arrive On Green	0.24	0.00	0.46	0.00	0.14	0.64
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	715	0	489	0	387	545
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	17.7	0.0	7.8	0.0	9.8	5.8
Cycle Q Clear(g_c), s	17.7	0.0	7.8	0.0	9.8	5.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	846		1632		485	2289
V/C Ratio(X)	0.84		0.30		0.80	0.24
Avail Cap(c_a), veh/h	1229		1632		768	2289
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	0.0	15.3	0.0	37.5	6.7
Incr Delay (d2), s/veh	3.8	0.0	0.5	0.0	3.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	2.9	0.0	4.1	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.1	0.0	15.7	0.0	40.6	7.0
LnGrp LOS	D		B		D	A
Approach Vol, veh/h	715	A	489	A		932
Approach Delay, s/veh	36.1		15.7			20.9
Approach LOS	D		B			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	16.6	46.3			63.0	27.0
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	20.0	24.0			48.0	32.0
Max Q Clear Time (g_c+I1), s	11.8	9.8			7.8	19.7
Green Ext Time (p_c), s	0.9	2.5			3.6	2.3

Intersection Summary

















HCM 6th Ctrl Delay		24.8	
HCM 6th LOS		C	

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing
 AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	665	343	455	27	360	507
Future Volume (vph)	665	343	455	27	360	507
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		369		29		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	715	369	489	29	387	545
Shared Lane Traffic (%)						
Lane Group Flow (vph)	715	369	489	29	387	545
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing
 AM Peak Hour

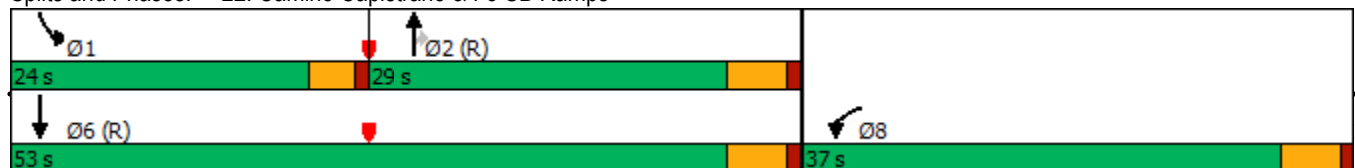


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	37.0		29.0	29.0	24.0	53.0
Total Split (%)	41.1%		32.2%	32.2%	26.7%	58.9%
Maximum Green (s)	32.0		24.0	24.0	20.0	48.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effect Green (s)	24.5	90.0	36.2	36.2	15.3	55.5
Actuated g/C Ratio	0.27	1.00	0.40	0.40	0.17	0.62
v/c Ratio	0.77	0.23	0.34	0.04	0.66	0.25
Control Delay	35.6	0.3	21.2	8.6	40.4	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	0.3	21.2	8.6	40.4	8.8
LOS	D	A	C	A	D	A
Approach Delay	23.6		20.5			21.9
Approach LOS	C		C			C
Queue Length 50th (ft)	191	0	100	0	107	67
Queue Length 95th (ft)	232	0	166	20	145	110
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1220	1583	1423	654	762	2182
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.23	0.34	0.04	0.51	0.25

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 24 (27%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 22.3
 Intersection LOS: C
 Intersection Capacity Utilization 53.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Two-way stop	Delay (sec / veh):	33.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	81	4	0	0	0	1649	16	33	888	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	81	4	0	0	0	1649	16	33	888	3
Peak Hour Factor	1.0000	1.0000	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	22	1	0	0	0	446	4	9	240	1
Total Analysis Volume [veh/h]	0	0	88	4	0	0	0	1783	17	36	960	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results



V/C, Movement V/C Ratio	0.00	0.00	0.31	0.03	0.00	0.00	0.00	0.02	0.00	0.11	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	23.16	33.45	48.48	12.65	10.07	0.00	0.00	16.89	0.00	0.00
Movement LOS			C	D	E	B	B	A	A	C	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.27	0.09	0.09	0.09	0.00	0.00	0.00	0.35	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	31.83	2.36	2.36	2.36	0.00	0.00	0.00	8.83	0.00	0.00
d_A, Approach Delay [s/veh]	23.16		33.45				0.00		0.61			
Approach LOS	C		D				A		A			
d_I, Intersection Delay [s/veh]	0.96											
Intersection LOS	D											

Intersection Level Of Service Report

Intersection 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	141	335	1362	173	207	293
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	335	1362	173	207	293
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	92	373	47	57	80
Total Analysis Volume [veh/h]	155	367	1493	190	227	321
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume cr	0		0		0	
v_di, Inbound Pedestrian Volume cros	0		0		0	
v_co, Outbound Pedestrian Volume cr	0		0		0	
v_ci, Inbound Pedestrian Volume cros	0		0		0	
v_ab, Corner Pedestrian Volume [ped/	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	13	56	43	0	34	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	61	48	48	21	21
g / C, Green / Cycle	0.10	0.68	0.54	0.54	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.09	0.10	0.42	0.12	0.13	0.20
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	180	2424	1906	851	410	366
d1, Uniform Delay [s]	39.87	5.12	16.73	11.04	30.56	33.41
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.49	0.13	3.30	0.61	1.17	9.61
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.15	0.78	0.22	0.55	0.88
d, Delay for Lane Group [s/veh]	51.36	5.25	20.03	11.64	31.73	43.02
Lane Group LOS	D	A	C	B	C	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.90	1.09	12.08	2.02	4.39	7.56
50th-Percentile Queue Length [ft/ln]	97.57	27.18	302.02	50.62	109.76	188.99
95th-Percentile Queue Length [veh/ln]	7.02	1.96	17.78	3.64	7.83	12.07
95th-Percentile Queue Length [ft/ln]	175.62	48.92	444.53	91.11	195.67	301.72

Movement, Approach, & Intersection Results

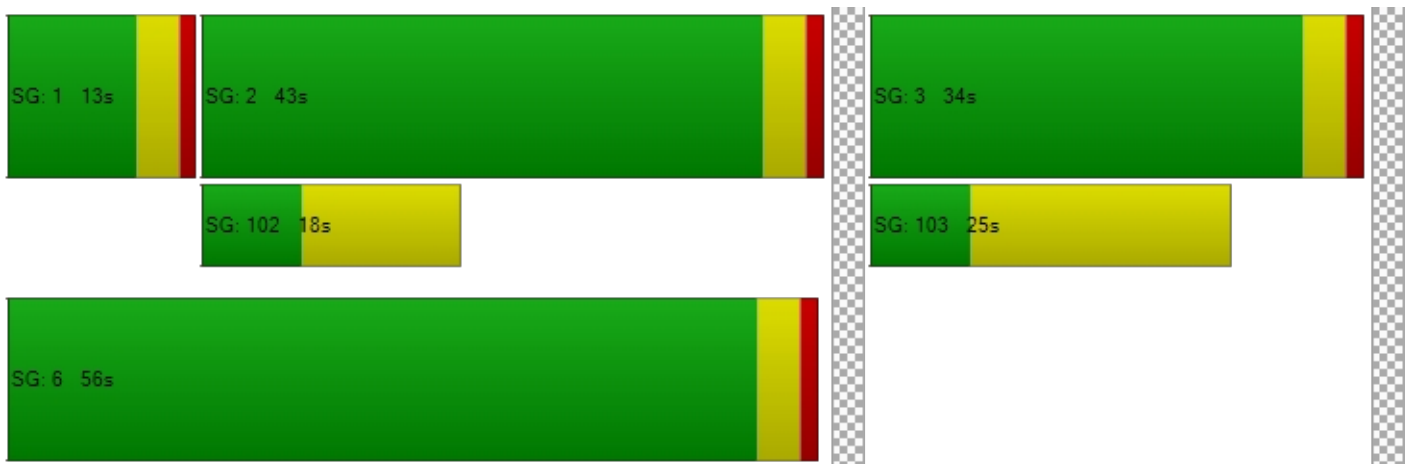
d_M, Delay for Movement [s/veh]	51.36	5.25	20.03	11.64	31.73	43.02
Movement LOS	D	A	C	B	C	D
d_A, Approach Delay [s/veh]	18.94		19.08		38.34	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	22.89					
Intersection LOS	C					
Intersection V/C	0.817					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
I_p,int, Pedestrian LOS Score for Inter	2.755	0.000	2.230
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycl	2000	2000	2000
c_b, Capacity of the bicycle lane [bicyc	1156	867	667
d_b, Bicycle Delay [s]	8.02	14.45	20.00
I_b,int, Bicycle LOS Score for Intersect	1.990	2.948	1.560
Bicycle LOS	A	C	A

Sequence


























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



HCM 6th Signalized Intersection Summary

2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	 
Traffic Volume (veh/h)	184	805	381	0	0	0	477	259	357	153	623	847
Future Volume (veh/h)	184	805	381	0	0	0	477	259	357	153	623	847
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	194	847	0				388	433	376	161	656	892
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	471	940					530	556	471	526	1049	1562
Arrive On Green	0.26	0.26	0.00				0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	194	847	0				388	433	376	161	656	892
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	9.4	24.2	0.0				20.5	22.2	22.9	7.4	16.8	21.7
Cycle Q Clear(g_c), s	9.4	24.2	0.0				20.5	22.2	22.9	7.4	16.8	21.7
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	471	940					530	556	471	526	1049	1562
V/C Ratio(X)	0.41	0.90					0.73	0.78	0.80	0.31	0.63	0.57
Avail Cap(c_a), veh/h	492	981					530	556	471	526	1049	1562
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	37.3	0.0				33.1	33.7	34.0	28.7	32.0	15.0
Incr Delay (d2), s/veh	0.6	11.0	0.0				8.7	10.3	13.2	1.5	2.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	11.5	0.0				9.8	11.3	10.2	3.3	7.3	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	48.3	0.0				41.8	44.0	47.1	30.2	34.8	16.5
LnGrp LOS	C	D					D	D	D	C	C	B
Approach Vol, veh/h		1041	A					1197			1709	
Approach Delay, s/veh		45.3						44.3			24.8	
Approach LOS		D						D			C	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		36.2		32.8				36.0				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		30.0		29.0				31.0				
Max Q Clear Time (g_c+I1), s		24.9		26.2				23.7				
Green Ext Time (p_c), s		2.4		1.6				4.7				
Intersection Summary												
HCM 6th Ctrl Delay			36.1									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	805	381	0	0	0	477	259	357	153	623	847
Future Volume (vph)	184	805	381	0	0	0	477	259	357	153	623	847
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.985		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1743	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.985		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1743	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			401						288			187
Link Speed (mph)		40			40			40				40
Link Distance (ft)		1049			847			684				549
Travel Time (s)		17.9			14.4			11.7				9.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	847	401	0	0	0	502	273	376	161	656	892
Shared Lane Traffic (%)							24%					
Lane Group Flow (vph)	194	847	401	0	0	0	382	393	376	161	656	892
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94				94
Detector 2 Size(ft)		6						6				6
Detector 2 Type		Cl+Ex						Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				0.0
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
 PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	34.0	34.0	34.0				35.0	35.0	35.0	36.0	36.0	34.0
Total Split (%)	32.4%	32.4%	32.4%				33.3%	33.3%	33.3%	34.3%	34.3%	32.4%
Maximum Green (s)	29.0	29.0	29.0				30.0	30.0	30.0	31.0	31.0	29.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	29.0	29.0	29.0				30.0	30.0	30.0	31.0	31.0	65.0
Actuated g/C Ratio	0.28	0.28	0.28				0.29	0.29	0.29	0.30	0.30	0.62
v/c Ratio	0.40	0.87	0.55				0.80	0.79	0.57	0.31	0.63	0.50
Control Delay	33.9	47.0	6.3				48.5	47.6	11.8	30.7	35.2	9.4
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	47.0	6.3				48.5	47.6	11.8	30.7	35.2	9.4
LOS	C	D	A				D	D	B	C	D	A
Approach Delay		33.9						36.2			21.3	
Approach LOS		C						D			C	
Queue Length 50th (ft)	106	284	0				249	255	45	84	200	132
Queue Length 95th (ft)	172	#387	74				#403	#409	137	141	262	182
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	488	977	727				480	498	658	522	1044	1796
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.87	0.55				0.80	0.79	0.57	0.31	0.63	0.50

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 29.5
 Intersection LOS: C
 Intersection Capacity Utilization 74.1%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
PM Peak Hour

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report

Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	14.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.294

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	934	25	201	595	0	153
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	934	25	201	595	0	153
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	1.0000	0.9840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	237	6	51	151	0	39
Total Analysis Volume [veh/h]	949	25	204	605	0	155
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.29	0.01	0.00	0.29
d_M, Delay for Movement [s/veh]	0.00	0.00	12.19	0.00	0.00	14.67
Movement LOS	A	A	B	A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.20	0.00	0.00	1.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	30.04	0.00	0.00	30.50
d_A, Approach Delay [s/veh]	0.00		3.07		14.67	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.46					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.486

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	308	552	3	13	466	127	389	1	257	3	0	5
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	308	552	3	13	466	127	389	1	257	3	0	5
Peak Hour Factor	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650
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]	80	143	1	3	121	33	101	0	67	1	0	1
Total Analysis Volume [veh/h]	319	572	3	13	483	132	403	1	266	3	0	5
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 cr	0			0			0			0		
v_di, Inbound Pedestrian Volume cros	0			0			0			0		
v_co, Outbound Pedestrian Volume cr	0			0			0			0		
v_ci, Inbound Pedestrian Volume cros	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permissi	Permissi	Protecte	Permissi	Permissi	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	34	0	10	29	0	0	36	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	53	53	2	44	44	18	18	18	1
g / C, Green / Cycle	0.11	0.59	0.59	0.02	0.49	0.49	0.20	0.20	0.20	0.01
(v / s)_i Volume / Saturation Flow Rate	0.09	0.15	0.15	0.01	0.14	0.08	0.11	0.11	0.17	0.00
s, saturation flow rate [veh/h]	3459	1870	1867	1781	3560	1589	1781	1781	1589	1656
c, Capacity [veh/h]	396	1097	1095	35	1753	782	360	360	322	22
d1, Uniform Delay [s]	38.95	9.10	9.10	43.63	13.45	12.68	32.36	32.36	34.45	44.10
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.89	0.58	0.58	6.22	0.39	0.47	1.37	1.37	5.41	9.45
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	0.81	0.26	0.26	0.37	0.28	0.17	0.56	0.56	0.83	0.36
d, Delay for Lane Group [s/veh]	42.84	9.68	9.68	49.85	13.84	13.14	33.72	33.72	39.86	53.54
Lane Group LOS	D	A	A	D	B	B	C	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	3.60	2.70	2.69	0.34	2.83	1.51	4.03	4.03	5.94	0.23
50th-Percentile Queue Length [ft/ln]	90.08	67.46	67.34	8.62	70.71	37.74	100.75	100.77	148.56	5.85
95th-Percentile Queue Length [veh/ln]	6.49	4.86	4.85	0.62	5.09	2.72	7.25	7.26	9.94	0.42
95th-Percentile Queue Length [ft/ln]	162.14	121.42	121.22	15.52	127.28	67.94	181.35	181.39	248.51	10.53

Movement, Approach, & Intersection Results

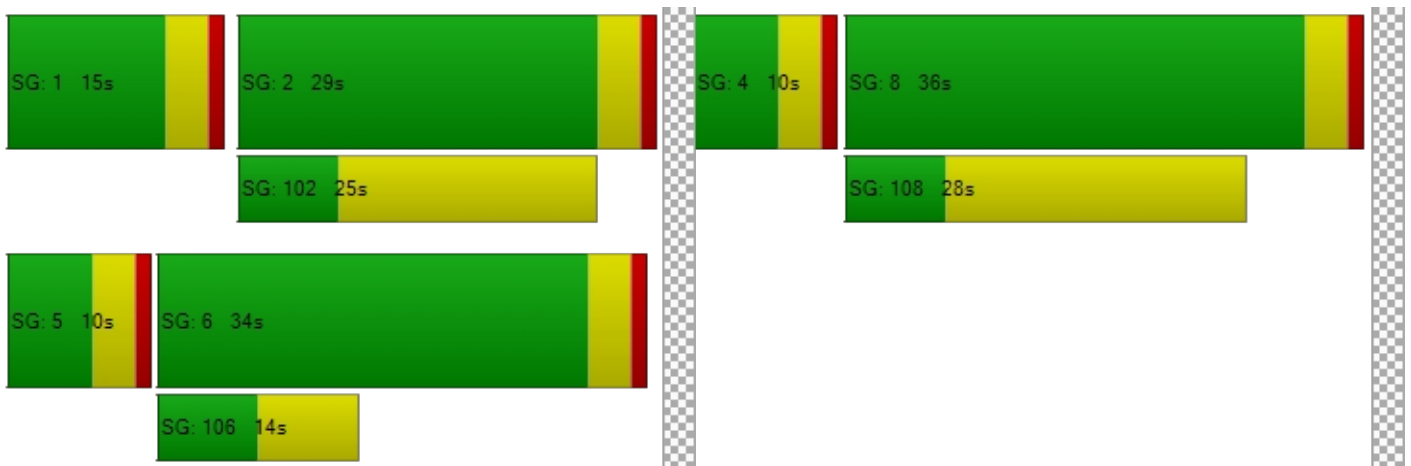
d_M, Delay for Movement [s/veh]	42.84	9.68	9.68	49.85	13.84	13.14	33.72	33.72	39.86	53.54	53.54	53.54
Movement LOS	D	A	A	D	B	B	C	C	D	D	D	D
d_A, Approach Delay [s/veh]	21.51			14.44			36.16			53.54		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	24.07											
Intersection LOS	C											
Intersection V/C	0.486											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			0.0			11.0			11.0		
M_corner, Corner Circulation Area [ft²]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			0.00			34.67			34.67		
I_p,int, Pedestrian LOS Score for Inter	2.720			0.000			2.518			1.727		
Crosswalk LOS	B			F			B			A		
s_b, Saturation Flow Rate of the bicycl	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicyc	667			556			711			133		
d_b, Bicycle Delay [s]	20.00			23.47			18.69			39.20		
I_b,int, Bicycle LOS Score for Intersect	2.297			2.078			2.665			1.573		
Bicycle LOS	B			B			B			A		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	30	909	45	13	864	21	0	0	15	0	0	16
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	909	45	13	864	21	0	0	15	0	0	16
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
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	231	11	3	220	5	0	0	4	0	0	4
Total Analysis Volume [veh/h]	30	924	46	13	878	21	0	0	15	0	0	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings




















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	9.99	0.00	0.00	10.19	0.00	0.00	46.51	64.72	11.64	48.99	63.69	12.03
Movement LOS	A	A	A	B	A	A	E	F	B	E	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.06	0.00	0.00	0.08	0.08	0.08	0.09	0.09	0.09
95th-Percentile Queue Length [ft/ln]	3.12	0.00	0.00	1.41	0.00	0.00	2.07	2.07	2.07	2.34	2.34	2.34
d_A, Approach Delay [s/veh]	0.30			0.15			11.64			12.03		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.41											
Intersection LOS	B											




















HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1	30	83	10	579	18	403	210	0	867	7
Future Volume (veh/h)	15	1	30	83	10	579	18	403	210	0	867	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	15	1	31	85	10	591	18	411	214	0	885	7
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	190	36	335	582	64	630	182	1745	778	0	1204	10
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.10	0.49	0.49	0.00	0.33	0.33
Sat Flow, veh/h	344	91	842	1271	162	1585	1781	3554	1585	0	3707	29
Grp Volume(v), veh/h	47	0	0	95	0	591	18	411	214	0	435	457
Grp Sat Flow(s),veh/h/ln	1276	0	0	1433	0	1585	1781	1777	1585	0	1777	1865
Q Serve(g_s), s	0.0	0.0	0.0	1.9	0.0	32.2	0.8	6.0	7.1	0.0	19.5	19.5
Cycle Q Clear(g_c), s	1.6	0.0	0.0	3.4	0.0	32.2	0.8	6.0	7.1	0.0	19.5	19.5
Prop In Lane	0.32		0.66	0.89		1.00	1.00		1.00	0.00		0.02
Lane Grp Cap(c), veh/h	560	0	0	646	0	630	182	1745	778	0	592	622
V/C Ratio(X)	0.08	0.00	0.00	0.15	0.00	0.94	0.10	0.24	0.27	0.00	0.73	0.73
Avail Cap(c_a), veh/h	618	0	0	712	0	704	182	1745	778	0	592	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	0.0	17.3	0.0	26.0	36.6	13.2	13.5	0.0	26.5	26.5
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	19.1	0.2	0.3	0.9	0.0	7.9	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	1.2	0.0	14.8	0.4	2.3	2.6	0.0	9.1	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	0.0	0.0	17.4	0.0	45.1	36.9	13.5	14.3	0.0	34.4	34.0
LnGrp LOS	B	A	A	B	A	D	D	B	B	A	C	C
Approach Vol, veh/h		47			686			643			892	
Approach Delay, s/veh		16.9			41.3			14.4			34.2	
Approach LOS		B			D			B			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		49.2		40.8	14.2	35.0		40.8				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		40.0		40.0	6.0	* 30		40.0				
Max Q Clear Time (g_c+I1), s		9.1		3.6	2.8	21.5		34.2				
Green Ext Time (p_c), s		3.6		0.3	0.0	3.5		1.6				
Intersection Summary												
HCM 6th Ctrl Delay				30.4								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1	30	83	10	579	18	403	210	0	867	7
Future Volume (vph)	15	1	30	83	10	579	18	403	210	0	867	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.911				0.850			0.850		0.999	
Flt Protected		0.984			0.957		0.950					
Satd. Flow (prot)	0	1670	0	0	1783	1583	1770	3539	1583	0	3536	0
Flt Permitted		0.919			0.731		0.950					
Satd. Flow (perm)	0	1560	0	0	1362	1583	1770	3539	1583	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31				329			214		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		541			715			167			478	
Travel Time (s)		12.3			16.3			3.3			9.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	15	1	31	85	10	591	18	411	214	0	885	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	95	591	18	411	214	0	892	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1		2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (ft)	20	100		20	100	20	20	100	20		100	
Trailing Detector (ft)	0	0		0	0	0	0	0	0		0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0		0	
Detector 1 Size(ft)	20	6		20	6	20	20	6	20		6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm		NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	45.0	45.0		45.0	45.0	45.0	10.0	45.0	45.0		35.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	11.1%	50.0%	50.0%		38.9%	
Maximum Green (s)	40.0	40.0		40.0	40.0	40.0	6.0	40.0	40.0		30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		25.7			25.7	25.7	6.0	54.3	54.3		50.3	
Actuated g/C Ratio		0.29			0.29	0.29	0.07	0.60	0.60		0.56	
v/c Ratio		0.10			0.24	0.86	0.15	0.19	0.21		0.45	
Control Delay		9.2			22.6	25.0	37.2	6.9	0.7		16.4	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		9.2			22.6	25.0	37.2	6.9	0.7		16.4	
LOS		A			C	C	D	A	A		B	
Approach Delay		9.2			24.7			5.7			16.4	
Approach LOS		A			C			A			B	
Queue Length 50th (ft)		7			41	146	10	34	0		132	
Queue Length 95th (ft)		24			62	228	32	70	5		307	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		710			605	886	118	2134	1039		1976	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.07			0.16	0.67	0.15	0.19	0.21		0.45	

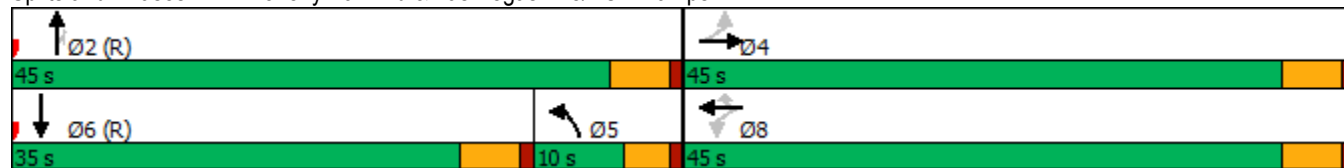
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	68 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	15.7
Intersection LOS:	B
Intersection Capacity Utilization:	64.5%
ICU Level of Service:	C
Analysis Period (min):	15

Lanes, Volumes, Timings
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
 PM Peak Hour

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Existing
 PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↗		↖↗	↖	
Traffic Volume (veh/h)	232	302	0	471	275	0
Future Volume (veh/h)	232	302	0	471	275	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	237	0	0	481	281	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	335		0	2815	1481	0
Arrive On Green	0.10	0.00	0.00	0.79	0.79	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	237	0	0	481	281	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	6.0	0.0	0.0	2.9	3.3	0.0
Cycle Q Clear(g_c), s	6.0	0.0	0.0	2.9	3.3	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	335		0	2815	1481	0
V/C Ratio(X)	0.71		0.00	0.17	0.19	0.00
Avail Cap(c_a), veh/h	1075		0	2815	1481	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.4	0.0	0.0	2.3	2.3	0.0
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	0.6	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.2	0.0	0.0	2.4	2.6	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	237	A		481	281	
Approach Delay, s/veh	42.2			2.4	2.6	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		76.3		13.7		76.3
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		52.0		28.0		52.0
Max Q Clear Time (g_c+I1), s		4.9		8.0		5.3
Green Ext Time (p_c), s		3.5		0.8		1.7
Intersection Summary						
HCM 6th Ctrl Delay			11.9			
HCM 6th LOS			B			

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
10: Doheny Park Rd & PCH Side Path

Existing
PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔	↗		↑↑	↑	
Traffic Volume (vph)	232	302	0	471	275	0
Future Volume (vph)	232	302	0	471	275	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Flt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		308				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	237	308	0	481	281	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	237	308	0	481	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Existing
 PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	33.0			57.0	57.0	
Total Split (%)	36.7%			63.3%	63.3%	
Maximum Green (s)	28.0			52.0	52.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	11.6	90.0		68.4	68.4	
Actuated g/C Ratio	0.13	1.00		0.76	0.76	
v/c Ratio	0.54	0.19		0.18	0.20	
Control Delay	40.9	0.3		3.4	1.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	40.9	0.3		3.4	1.2	
LOS	D	A		A	A	
Approach Delay	18.0			3.4	1.2	
Approach LOS	B			A	A	
Queue Length 50th (ft)	65	0		31	4	
Queue Length 95th (ft)	98	0		53	8	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1068	1583		2691	1416	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.22	0.19		0.18	0.20	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	9.0
Intersection Capacity Utilization:	29.4%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Lanes, Volumes, Timings
10: Doheny Park Rd & PCH Side Path

Existing
PM Peak Hour

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	10	120	176	50	28	8
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	120	176	50	28	8
Peak Hour Factor	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	37	54	15	9	2
Total Analysis Volume [veh/h]	12	147	215	61	34	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.06	0.01
d_M, Delay for Movement [s/veh]	7.82	0.00	0.00	0.00	11.51	9.60
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.18	0.04
95th-Percentile Queue Length [ft/ln]	0.71	0.71	0.00	0.00	4.60	0.96
d_A, Approach Delay [s/veh]	0.59		0.00		11.08	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.21					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.204

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	17	4	12	7	3	52	41	122	4	5	100	5
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	4	12	7	3	52	41	122	4	5	100	5
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	3	2	1	13	11	31	1	1	26	1
Total Analysis Volume [veh/h]	17	4	12	7	3	53	42	125	4	5	102	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	796	873	837	834
Degree of Utilization, x	0.04	0.07	0.20	0.13

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.13	0.23	0.76	0.46
95th-Percentile Queue Length [ft]	3.24	5.82	19.10	11.56
Approach Delay [s/veh]	7.72	7.45	8.41	7.98
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.06			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↰		↱		↔	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	1	2	4	7	31	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	2	4	7	31	5
Peak Hour Factor	0.8540	0.8540	0.8540	0.8540	0.8540	0.8540
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	2	9	1
Total Analysis Volume [veh/h]	1	2	5	8	36	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	7.24	0.00	0.00	0.00	8.73	8.51
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	0.00	3.24	3.24
d_A, Approach Delay [s/veh]	2.41		0.00		8.70	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.43					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	67	103	161	11	17	104
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	103	161	11	17	104
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	27	43	3	5	28
Total Analysis Volume [veh/h]	71	109	171	12	18	111
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.03	0.13
d_M, Delay for Movement [s/veh]	7.73	0.00	0.00	0.00	12.36	10.01
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.00	0.57	0.57
95th-Percentile Queue Length [ft/ln]	4.03	0.00	0.00	0.00	14.26	14.26
d_A, Approach Delay [s/veh]	3.05		0.00		10.34	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.83					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.053

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	32	912	737	35	18	63
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	912	737	35	18	63
Peak Hour Factor	0.9850	0.9850	0.9850	0.9850	0.9850	0.9850
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	231	187	9	5	16
Total Analysis Volume [veh/h]	32	926	748	36	18	64
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	0.05	0.11
d_M, Delay for Movement [s/veh]	9.51	0.00	0.00	0.00	16.88	12.23
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.56	0.56
95th-Percentile Queue Length [ft/ln]	3.00	0.00	0.00	0.00	13.96	13.96
d_A, Approach Delay [s/veh]	0.32		0.00		13.25	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	C					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Existing
 PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	533	142	0	307	812
Future Volume (veh/h)	0	533	142	0	307	812
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	561	149	0	323	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	1895	998	0	1229	
Arrive On Green	0.00	0.53	0.53	0.00	0.36	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	561	149	0	323	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	7.9	3.6	0.0	6.0	0.0
Cycle Q Clear(g_c), s	0.0	7.9	3.6	0.0	6.0	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1895	998	0	1229	
V/C Ratio(X)	0.00	0.30	0.15	0.00	0.26	
Avail Cap(c_a), veh/h	0	1895	998	0	1229	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	11.6	10.6	0.0	20.6	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.3	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	1.4	0.0	2.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	12.0	11.0	0.0	21.1	0.0
LnGrp LOS	A	B	B	A	C	
Approach Vol, veh/h		561	149		323	A
Approach Delay, s/veh		12.0	11.0		21.1	
Approach LOS		B	B		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				53.0	37.0	53.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				48.0	32.0	48.0
Max Q Clear Time (g_c+I1), s				9.9	8.0	5.6
Green Ext Time (p_c), s				3.9	1.1	0.8

Intersection Summary

HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing
PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	533	142	0	307	812
Future Volume (vph)	0	533	142	0	307	812
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr t						0.850
Fl t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						855
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	561	149	0	323	855
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	561	149	0	323	855
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing
PM Peak Hour

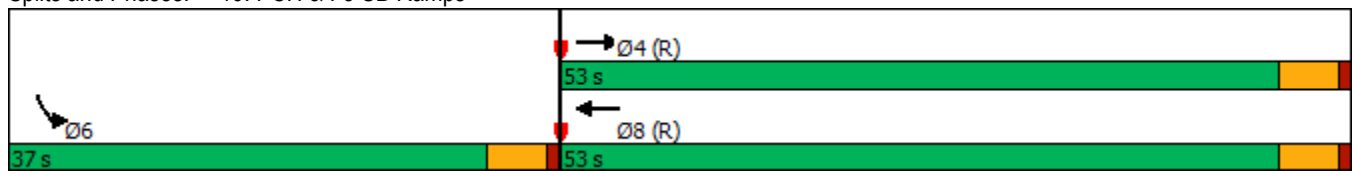


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		53.0	53.0		37.0	
Total Split (%)		58.9%	58.9%		41.1%	
Maximum Green (s)		48.0	48.0		32.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		48.0	48.0		32.0	90.0
Actuated g/C Ratio		0.53	0.53		0.36	1.00
v/c Ratio		0.30	0.15		0.26	0.54
Control Delay		12.2	5.8		21.4	1.3
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		12.2	5.8		21.4	1.3
LOS		B	A		C	A
Approach Delay		12.2	5.8		6.8	
Approach LOS		B	A		A	
Queue Length 50th (ft)		87	16		66	0
Queue Length 95th (ft)		120	26		98	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		1887	993		1220	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.30	0.15		0.26	0.54

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 8.3
 Intersection Capacity Utilization 31.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↗	
Traffic Volume (veh/h)	47	464	389	0	364	10	7	32	116	6	0	48
Future Volume (veh/h)	47	464	389	0	364	10	7	32	116	6	0	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	483	0	0	379	10	7	33	121	6	0	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	561	1856		0	2672	70	129	573	581	515	0	581
Arrive On Green	0.52	0.52	0.00	0.00	0.52	0.52	0.37	0.37	0.37	0.37	0.00	0.37
Sat Flow, veh/h	995	3554	1585	0	5284	134	223	1563	1585	1233	0	1585
Grp Volume(v), veh/h	49	483	0	0	252	137	40	0	121	6	0	50
Grp Sat Flow(s),veh/h/ln	995	1777	1585	0	1702	1846	1786	0	1585	1233	0	1585
Q Serve(g_s), s	2.4	6.8	0.0	0.0	3.4	3.5	0.0	0.0	4.7	0.3	0.0	1.9
Cycle Q Clear(g_c), s	5.9	6.8	0.0	0.0	3.4	3.5	1.2	0.0	4.7	1.5	0.0	1.9
Prop In Lane	1.00		1.00	0.00		0.07	0.17		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	561	1856		0	1778	964	702	0	581	515	0	581
V/C Ratio(X)	0.09	0.26		0.00	0.14	0.14	0.06	0.00	0.21	0.01	0.00	0.09
Avail Cap(c_a), veh/h	561	1856		0	1778	964	702	0	581	515	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.6	11.9	0.0	0.0	11.1	11.1	18.4	0.0	19.5	18.9	0.0	18.6
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.0	0.2	0.3	0.2	0.0	0.8	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.5	0.0	0.0	1.2	1.4	0.6	0.0	1.8	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	12.2	0.0	0.0	11.3	11.4	18.6	0.0	20.4	19.0	0.0	18.9
LnGrp LOS	B	B		A	B	B	B	A	C	B	A	B
Approach Vol, veh/h		532	A		389			161				56
Approach Delay, s/veh		12.3			11.3			19.9				18.9
Approach LOS		B			B			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.0		52.0		38.0		52.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		33.0		47.0		33.0		47.0				
Max Q Clear Time (g_c+I1), s		6.7		8.8		3.9		5.5				
Green Ext Time (p_c), s		0.6		3.5		0.3		2.4				

Intersection Summary

HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
 PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↘	
Traffic Volume (vph)	47	464	389	0	364	10	7	32	116	6	0	48
Future Volume (vph)	47	464	389	0	364	10	7	32	116	6	0	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996				0.850		0.850	
Flt Protected	0.950							0.991		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5065	0	0	1846	1583	1770	1583	0
Flt Permitted	0.513							0.971		0.731		
Satd. Flow (perm)	956	3539	1583	0	5065	0	0	1809	1583	1362	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			405		6				121		428	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	49	483	405	0	379	10	7	33	121	6	0	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	483	405	0	389	0	0	40	121	6	50	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
 PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	52.0	52.0			52.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)	57.8%	57.8%			57.8%		42.2%	42.2%	42.2%	42.2%	42.2%	
Maximum Green (s)	47.0	47.0			47.0		33.0	33.0	33.0	33.0	33.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	47.0	47.0	90.0		47.0		33.0	33.0	33.0	33.0	33.0	
Actuated g/C Ratio	0.52	0.52	1.00		0.52		0.37	0.37	0.37	0.37	0.37	
v/c Ratio	0.10	0.26	0.26		0.15		0.06	0.18	0.01	0.01	0.06	
Control Delay	7.6	8.3	0.4		11.1		18.9	4.6	18.3	0.1	0.1	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	7.6	8.3	0.4		11.1		18.9	4.6	18.3	0.1	0.1	
LOS	A	A	A		B		B	A	B	A	A	
Approach Delay		4.8			11.1		8.1				2.1	
Approach LOS		A			B		A				A	
Queue Length 50th (ft)	8	43	0		39		14	0	2	0	0	
Queue Length 95th (ft)	19	57	0		55		36	34	10	0	0	
Internal Link Dist (ft)		121			561		495				178	
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	499	1848	1583		2647		663	657	499	851		
Starvation Cap Reductn	0	0	0		0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0		0		0	0	0	0	0	
Storage Cap Reductn	0	0	0		0		0	0	0	0	0	
Reduced v/c Ratio	0.10	0.26	0.26		0.15		0.06	0.18	0.01	0.06	0.06	

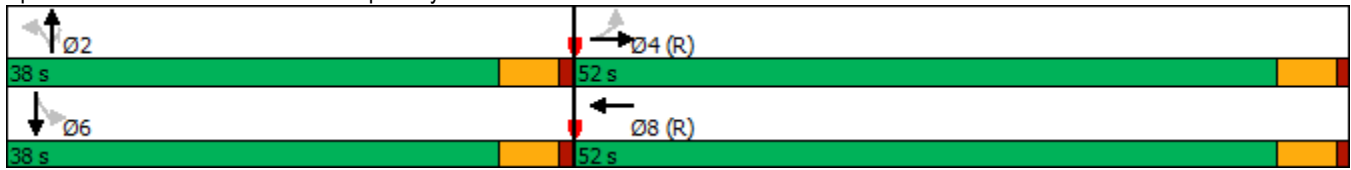
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.26
Intersection Signal Delay:	6.7
Intersection Capacity Utilization:	37.5%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Lanes, Volumes, Timings
20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

















Existing
PM Peak Hour

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Existing
 PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	910	390	559	35	490	616
Future Volume (veh/h)	910	390	559	35	490	616
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	958	0	588	0	516	648
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1088		1254		611	2040
Arrive On Green	0.31	0.00	0.35	0.00	0.18	0.57
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	958	0	588	0	516	648
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	23.7	0.0	11.5	0.0	13.0	8.5
Cycle Q Clear(g_c), s	23.7	0.0	11.5	0.0	13.0	8.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1088		1254		611	2040
V/C Ratio(X)	0.88		0.47		0.84	0.32
Avail Cap(c_a), veh/h	1305		1254		768	2040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	0.0	22.6	0.0	35.9	10.0
Incr Delay (d2), s/veh	6.4	0.0	1.3	0.0	7.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	0.0	4.7	0.0	5.8	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.6	0.0	23.8	0.0	42.9	10.4
LnGrp LOS	D		C		D	B
Approach Vol, veh/h	958	A	588	A		1164
Approach Delay, s/veh	35.6		23.8			24.8
Approach LOS	D		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	19.9	36.8			56.7	33.3
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	20.0	22.0			46.0	34.0
Max Q Clear Time (g_c+I1), s	15.0	13.5			10.5	25.7
Green Ext Time (p_c), s	0.9	2.3			4.4	2.7

Intersection Summary













HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing
 PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	910	390	559	35	490	616
Future Volume (vph)	910	390	559	35	490	616
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		366		37		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	958	411	588	37	516	648
Shared Lane Traffic (%)						
Lane Group Flow (vph)	958	411	588	37	516	648
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing
 PM Peak Hour

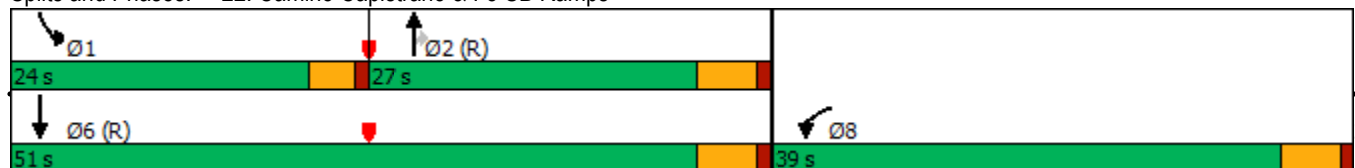


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	39.0		27.0	27.0	24.0	51.0
Total Split (%)	43.3%		30.0%	30.0%	26.7%	56.7%
Maximum Green (s)	34.0		22.0	22.0	20.0	46.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effect Green (s)	30.3	90.0	27.8	27.8	17.9	49.7
Actuated g/C Ratio	0.34	1.00	0.31	0.31	0.20	0.55
v/c Ratio	0.83	0.26	0.54	0.07	0.76	0.33
Control Delay	34.2	0.4	29.4	9.5	41.5	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	0.4	29.4	9.5	41.5	12.2
LOS	C	A	C	A	D	B
Approach Delay	24.1		28.3			25.2
Approach LOS	C		C			C
Queue Length 50th (ft)	252	0	148	0	142	101
Queue Length 95th (ft)	310	0	217	24	193	148
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1296	1583	1095	515	764	1955
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.26	0.54	0.07	0.68	0.33

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 24 (27%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 25.3
 Intersection LOS: C
 Intersection Capacity Utilization 67.1%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Two-way stop	Delay (sec / veh):	37.9
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	35	4	0	0	0	1259	20	9	1429	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	35	4	0	0	0	1259	20	9	1429	3
Peak Hour Factor	1.0000	1.0000	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	1	0	0	0	326	5	2	370	1
Total Analysis Volume [veh/h]	0	0	36	4	0	0	0	1305	21	9	1481	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0



Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.09	0.04	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	14.62	37.93	34.11	16.21	13.01	0.00	0.00	12.09	0.00	0.00
Movement LOS			B	E	D	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.29	0.11	0.11	0.11	0.00	0.00	0.00	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	7.17	2.72	2.72	2.72	0.00	0.00	0.00	1.33	0.00	0.00
d_A, Approach Delay [s/veh]	14.62		37.93				0.00		0.07			
Approach LOS	B		E				A		A			
d_I, Intersection Delay [s/veh]	0.28											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	123	346	935	137	121	175
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	346	935	137	121	175
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	89	240	35	31	45
Total Analysis Volume [veh/h]	126	356	961	141	124	180
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume cr	0		0		0	
v_di, Inbound Pedestrian Volume cros	0		0		0	
v_co, Outbound Pedestrian Volume cr	0		0		0	
v_ci, Inbound Pedestrian Volume cros	0		0		0	
v_ab, Corner Pedestrian Volume [ped/	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	21	43	22	0	47	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	69	57	57	13	13
g / C, Green / Cycle	0.09	0.77	0.64	0.64	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.07	0.10	0.27	0.09	0.07	0.11
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	160	2742	2264	1011	251	224
d1, Uniform Delay [s]	40.13	2.64	8.18	6.55	35.72	37.47
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.23	0.10	0.59	0.29	1.50	6.62
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.13	0.42	0.14	0.49	0.80
d, Delay for Lane Group [s/veh]	48.36	2.74	8.76	6.84	37.22	44.09
Lane Group LOS	D	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.06	0.60	4.27	1.04	2.58	4.19
50th-Percentile Queue Length [ft/ln]	76.56	15.05	106.72	26.03	64.61	104.70
95th-Percentile Queue Length [veh/ln]	5.51	1.08	7.66	1.87	4.65	7.54
95th-Percentile Queue Length [ft/ln]	137.80	27.09	191.43	46.86	116.30	188.46

Movement, Approach, & Intersection Results

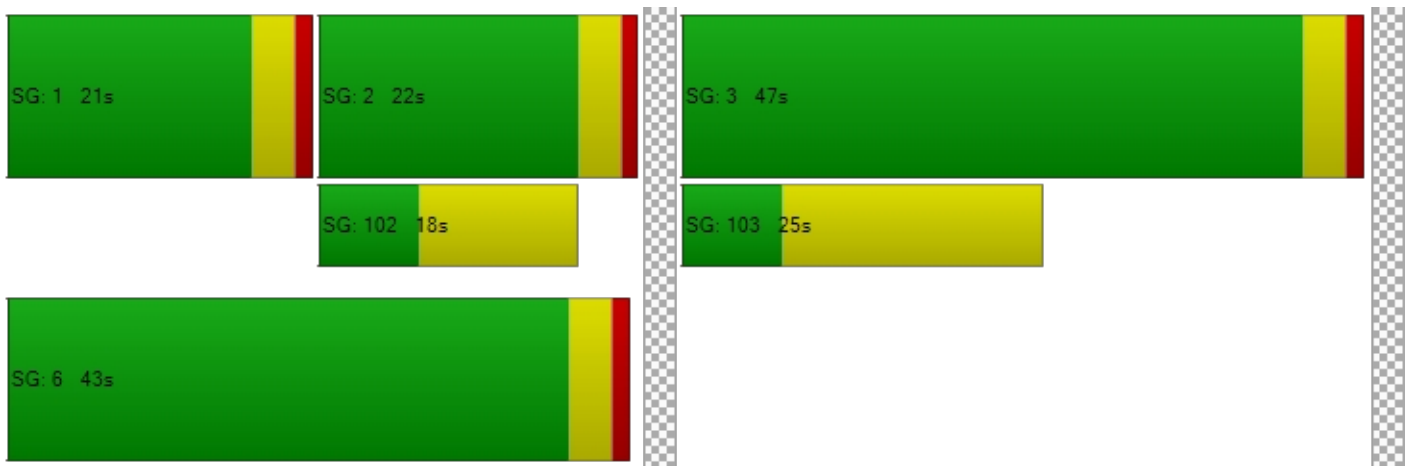
d_M, Delay for Movement [s/veh]	48.36	2.74	8.76	6.84	37.22	44.09
Movement LOS	D	A	A	A	D	D
d_A, Approach Delay [s/veh]	14.66		8.52		41.29	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	15.36					
Intersection LOS	B					
Intersection V/C	0.524					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
I_p,int, Pedestrian LOS Score for Inter	2.616	0.000	2.125
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycl	2000	2000	2000
c_b, Capacity of the bicycle lane [bicyc	867	400	956
d_b, Bicycle Delay [s]	14.45	28.80	12.27
I_b,int, Bicycle LOS Score for Intersect	1.957	2.469	1.560
Bicycle LOS	A	B	A

Sequence

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



HCM 6th Signalized Intersection Summary

2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
Sat Midday Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗				↘	↗	↗	↘	↑↑	↗↘
Traffic Volume (veh/h)	187	653	411	0	0	0	383	262	287	69	590	559
Future Volume (veh/h)	187	653	411	0	0	0	383	262	287	69	590	559
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	193	673	0				332	357	296	71	608	576
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	393	785					525	552	467	581	1160	1527
Arrive On Green	0.22	0.22	0.00				0.29	0.29	0.29	0.33	0.33	0.33
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	193	673	0				332	357	296	71	608	576
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	9.0	17.3	0.0				15.3	15.8	15.4	2.7	13.2	11.2
Cycle Q Clear(g_c), s	9.0	17.3	0.0				15.3	15.8	15.4	2.7	13.2	11.2
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	393	785					525	552	467	581	1160	1527
V/C Ratio(X)	0.49	0.86					0.63	0.65	0.63	0.12	0.52	0.38
Avail Cap(c_a), veh/h	431	860					525	552	467	581	1160	1527
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	35.6	0.0				29.0	29.2	29.0	22.5	26.0	12.3
Incr Delay (d2), s/veh	0.9	8.1	0.0				5.7	5.8	6.4	0.4	1.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	8.0	0.0				7.0	7.6	6.4	1.1	5.6	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	43.6	0.0				34.7	35.0	35.4	22.9	27.7	13.0
LnGrp LOS	C	D					C	C	D	C	C	B
Approach Vol, veh/h		866	A				985			1255		
Approach Delay, s/veh		41.3					35.0			20.7		
Approach LOS		D					D			C		
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		33.0		26.0			36.0					
Change Period (Y+Rc), s		5.0		5.0			5.0					
Max Green Setting (Gmax), s		26.0		23.0			31.0					
Max Q Clear Time (g_c+I1), s		17.8		19.3			15.2					
Green Ext Time (p_c), s		2.8		1.7			6.0					

Intersection Summary

HCM 6th Ctrl Delay	31.0
HCM 6th LOS	C






















Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
 Sat Midday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	653	411	0	0	0	383	262	287	69	590	559
Future Volume (vph)	187	653	411	0	0	0	383	262	287	69	590	559
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.990		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1752	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.990		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1752	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			424						296			288
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	193	673	424	0	0	0	395	270	296	71	608	576
Shared Lane Traffic (%)							17%					
Lane Group Flow (vph)	193	673	424	0	0	0	328	337	296	71	608	576
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
 Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	28.0	28.0	28.0				31.0	31.0	31.0	36.0	36.0	28.0
Total Split (%)	29.5%	29.5%	29.5%				32.6%	32.6%	32.6%	37.9%	37.9%	29.5%
Maximum Green (s)	23.0	23.0	23.0				26.0	26.0	26.0	31.0	31.0	23.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	22.8	22.8	22.8				26.2	26.2	26.2	31.0	31.0	58.8
Actuated g/C Ratio	0.24	0.24	0.24				0.28	0.28	0.28	0.33	0.33	0.62
v/c Ratio	0.45	0.79	0.60				0.71	0.70	0.46	0.12	0.53	0.31
Control Delay	34.8	41.8	7.2				40.8	39.9	5.9	23.3	28.0	4.4
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	41.8	7.2				40.8	39.9	5.9	23.3	28.0	4.4
LOS	C	D	A				D	D	A	C	C	A
Approach Delay		29.4						29.7			16.9	
Approach LOS		C						C			B	
Queue Length 50th (ft)	99	200	0				187	192	0	30	155	38
Queue Length 95th (ft)	166	266	77				291	296	61	61	209	63
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	428	856	704				463	482	650	577	1154	1840
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.79	0.60				0.71	0.70	0.46	0.12	0.53	0.31

Intersection Summary

Area Type:	Other
Cycle Length:	95
Actuated Cycle Length:	95
Offset:	0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	25.0
Intersection LOS:	C
Intersection Capacity Utilization:	64.6%
ICU Level of Service:	C
Analysis Period (min):	15

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing
Sat Midday Peak Hour




Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report
Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	14.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.262

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	957	17	121	669	0	129
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	957	17	121	669	0	129
Peak Hour Factor	0.9620	0.9620	0.9620	0.9620	1.0000	0.9620
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	249	4	31	174	0	34
Total Analysis Volume [veh/h]	995	18	126	695	0	134
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.19	0.01	0.00	0.26
d_M, Delay for Movement [s/veh]	0.00	0.00	11.49	0.00	0.00	14.53
Movement LOS	A	A	B	A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.68	0.00	0.00	1.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	16.89	0.00	0.00	26.07
d_A, Approach Delay [s/veh]	0.00		1.76		14.53	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	398	482	4	37	521	126	436	0	251	1	2	2
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	398	482	4	37	521	126	436	0	251	1	2	2
Peak Hour Factor	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540
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]	104	126	1	10	137	33	114	0	66	0	1	1
Total Analysis Volume [veh/h]	417	505	4	39	546	132	457	0	263	1	2	2
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 cr	0			0			0			0		
v_di, Inbound Pedestrian Volume cros	0			0			0			0		
v_co, Outbound Pedestrian Volume cr	0			0			0			0		
v_ci, Inbound Pedestrian Volume cros	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-6)

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permissi	Permissi	Protecte	Permissi	Permissi	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	22	41	0	10	29	0	0	34	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	55	55	4	46	46	19	19	19	1
g / C, Green / Cycle	0.15	0.58	0.58	0.04	0.48	0.48	0.20	0.20	0.20	0.01
(v / s)_i Volume / Saturation Flow Rate	0.12	0.14	0.14	0.02	0.15	0.08	0.13	0.13	0.17	0.00
s, saturation flow rate [veh/h]	3459	1870	1865	1781	3560	1589	1781	1781	1589	1731
c, Capacity [veh/h]	504	1088	1085	75	1701	759	355	355	317	16
d1, Uniform Delay [s]	39.49	9.64	9.64	44.66	15.32	14.15	34.99	34.99	36.55	46.86
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.55	0.51	0.51	5.58	0.50	0.50	1.96	1.96	5.59	11.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.83	0.23	0.23	0.52	0.32	0.17	0.64	0.64	0.83	0.32
d, Delay for Lane Group [s/veh]	43.04	10.15	10.15	50.24	15.82	14.65	36.95	36.95	42.14	58.00
Lane Group LOS	D	B	B	D	B	B	D	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	4.92	2.55	2.54	1.01	3.62	1.67	4.98	4.98	6.25	0.17
50th-Percentile Queue Length [ft/ln]	122.93	63.78	63.61	25.25	90.59	41.75	124.56	124.56	156.26	4.14
95th-Percentile Queue Length [veh/ln]	8.55	4.59	4.58	1.82	6.52	3.01	8.64	8.64	10.35	0.30
95th-Percentile Queue Length [ft/ln]	213.85	114.80	114.50	45.46	163.07	75.16	216.08	216.08	258.76	7.45

Movement, Approach, & Intersection Results

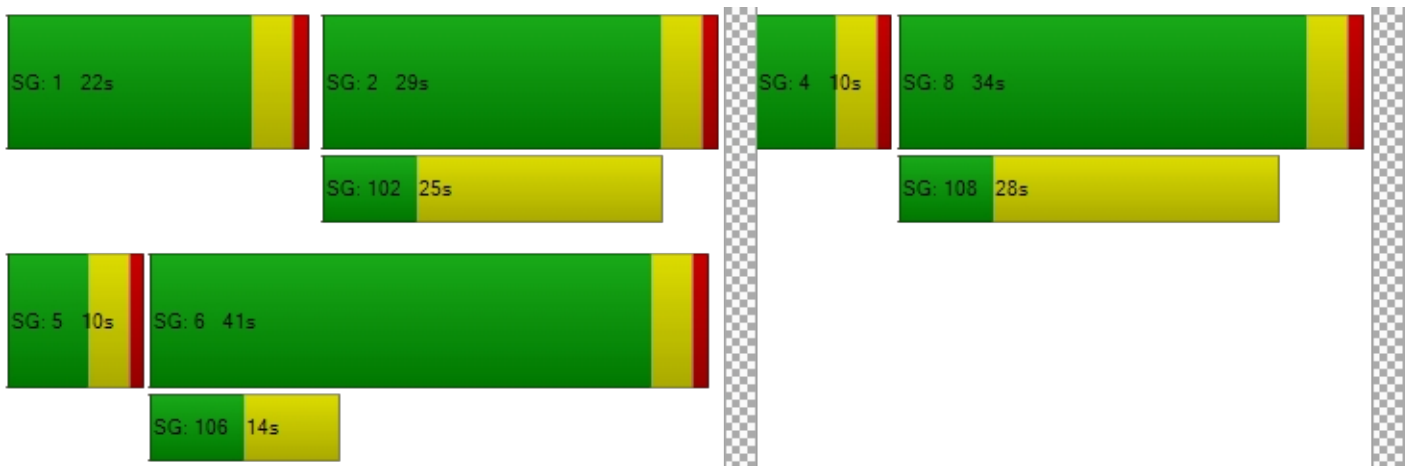
d_M, Delay for Movement [s/veh]	43.04	10.15	10.15	50.24	15.82	14.65	36.95	36.95	42.14	58.00	58.00	58.00
Movement LOS	D	B	B	D	B	B	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	24.96			17.48			38.84			58.00		
Approach LOS	C			B			D			E		
d_I, Intersection Delay [s/veh]	26.99											
Intersection LOS	C											
Intersection V/C	0.532											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			0.0			11.0			11.0		
M_corner, Corner Circulation Area [ft²]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	37.14			0.00			37.14			37.14		
I_p,int, Pedestrian LOS Score for Inter	2.737			0.000			2.550			1.741		
Crosswalk LOS	B			F			B			A		
s_b, Saturation Flow Rate of the bicycl	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicyc	779			526			632			126		
d_b, Bicycle Delay [s]	17.71			25.79			22.24			41.69		
I_b,int, Bicycle LOS Score for Intersect	2.324			2.151			2.748			1.568		
Bicycle LOS	B			B			B			A		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	20	987	17	10	907	14	0	0	6	0	0	15
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	987	17	10	907	14	0	0	6	0	0	15
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
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	258	4	3	237	4	0	0	2	0	0	4
Total Analysis Volume [veh/h]	21	1032	18	10	949	15	0	0	6	0	0	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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




















Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	10.23	0.00	0.00	10.55	0.00	0.00	53.57	75.37	11.87	56.37	75.38	12.48
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	B
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.05	0.00	0.00	0.03	0.03	0.03	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	2.28	0.00	0.00	1.16	0.00	0.00	0.86	0.86	0.86	2.49	2.49	2.49
d_A, Approach Delay [s/veh]	0.20			0.11			11.87			12.48		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.29											
Intersection LOS	B											

HCM 6th Signalized Intersection Summary

7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
Sat Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	0	17	36	11	550	12	457	191	0	915	15
Future Volume (veh/h)	12	0	17	36	11	550	12	457	191	0	915	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	12	0	17	37	11	561	12	466	195	0	934	15
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	223	22	266	495	139	598	179	1818	811	0	1273	20
Arrive On Green	0.38	0.00	0.38	0.38	0.38	0.38	0.10	0.51	0.51	0.00	0.36	0.36
Sat Flow, veh/h	440	58	706	1125	367	1585	1781	3554	1585	0	3673	57
Grp Volume(v), veh/h	29	0	0	48	0	561	12	466	195	0	464	485
Grp Sat Flow(s),veh/h/ln	1204	0	0	1492	0	1585	1781	1777	1585	0	1777	1860
Q Serve(g_s), s	0.0	0.0	0.0	0.7	0.0	30.7	0.5	6.6	6.2	0.0	20.5	20.5
Cycle Q Clear(g_c), s	1.0	0.0	0.0	1.6	0.0	30.7	0.5	6.6	6.2	0.0	20.5	20.5
Prop In Lane	0.41		0.59	0.77		1.00	1.00		1.00	0.00		0.03
Lane Grp Cap(c), veh/h	511	0	0	634	0	598	179	1818	811	0	632	661
V/C Ratio(X)	0.06	0.00	0.00	0.08	0.00	0.94	0.07	0.26	0.24	0.00	0.73	0.73
Avail Cap(c_a), veh/h	563	0	0	701	0	669	179	1818	811	0	632	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	0.0	17.9	0.0	27.0	36.7	12.4	12.2	0.0	25.3	25.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	19.8	0.2	0.3	0.7	0.0	7.4	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.6	0.0	14.3	0.2	2.5	2.2	0.0	9.5	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	0.0	18.0	0.0	46.8	36.8	12.7	12.9	0.0	32.7	32.4
LnGrp LOS	B	A	A	B	A	D	D	B	B	A	C	C
Approach Vol, veh/h		29			609			673			949	
Approach Delay, s/veh		17.8			44.6			13.2			32.5	
Approach LOS		B			D			B			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		51.0		39.0	14.0	37.0		39.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		42.0		38.0	6.0	* 32		38.0				
Max Q Clear Time (g_c+11), s		8.6		3.0	2.5	22.5		32.7				
Green Ext Time (p_c), s		4.0		0.1	0.0	4.0		1.3				

Intersection Summary




















HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C

Notes

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

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
Sat Midday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	17	36	11	550	12	457	191	0	915	15
Future Volume (vph)	12	0	17	36	11	550	12	457	191	0	915	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.921				0.850			0.850		0.998	
Flt Protected		0.980			0.963		0.950					
Satd. Flow (prot)	0	1681	0	0	1794	1583	1770	3539	1583	0	3532	0
Flt Permitted		0.917			0.814		0.950					
Satd. Flow (perm)	0	1573	0	0	1516	1583	1770	3539	1583	0	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		85				298			195			2
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	12	0	17	37	11	561	12	466	195	0	934	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	48	561	12	466	195	0	949	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8			5	2			6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2			6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0			6.0
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0			19.0
Total Split (s)	43.0	43.0		43.0	43.0	43.0	10.0	47.0	47.0			37.0
Total Split (%)	47.8%	47.8%		47.8%	47.8%	47.8%	11.1%	52.2%	52.2%			41.1%
Maximum Green (s)	38.0	38.0		38.0	38.0	38.0	6.0	42.0	42.0			32.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0			4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0			1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0			0.0
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0			5.0
Lead/Lag							Lag					Lead
Lead-Lag Optimize?							Yes					Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max			C-Max
Walk Time (s)				7.0	7.0	7.0						7.0
Flash Dont Walk (s)				14.0	14.0	14.0						7.0
Pedestrian Calls (#/hr)				5	5	5						5
Act Effct Green (s)		24.8			24.8	24.8	6.0	55.2	55.2			53.2
Actuated g/C Ratio		0.28			0.28	0.28	0.07	0.61	0.61			0.59
v/c Ratio		0.06			0.12	0.86	0.10	0.21	0.19			0.45
Control Delay		0.2			20.6	26.9	36.8	6.7	0.7			14.2
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0			0.0
Total Delay		0.2			20.6	26.9	36.8	6.7	0.7			14.2
LOS		A			C	C	D	A	A			B
Approach Delay		0.2			26.4			5.5				14.2
Approach LOS		A			C			A				B
Queue Length 50th (ft)		0			20	148	7	38	0			137
Queue Length 95th (ft)		0			37	230	25	77	7			321
Internal Link Dist (ft)		461			635			87				398
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		713			640	840	118	2171	1047			2090
Starvation Cap Reductn		0			0	0	0	0	0			0
Spillback Cap Reductn		0			0	0	0	0	0			0
Storage Cap Reductn		0			0	0	0	0	0			0
Reduced v/c Ratio		0.04			0.07	0.67	0.10	0.21	0.19			0.45

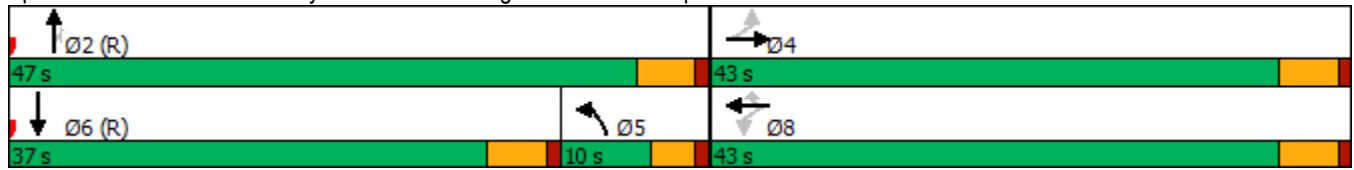
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	64 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	14.7
Intersection Capacity Utilization	64.2%
Analysis Period (min)	15
Intersection LOS:	B
ICU Level of Service	C

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing
Sat Midday Peak Hour

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Existing
 Sat Midday Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↗		↖↗	↖	
Traffic Volume (veh/h)	252	328	0	458	232	0
Future Volume (veh/h)	252	328	0	458	232	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	257	0	0	467	237	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	358		0	2791	1469	0
Arrive On Green	0.10	0.00	0.00	0.79	0.79	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	257	0	0	467	237	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	6.5	0.0	0.0	2.9	2.8	0.0
Cycle Q Clear(g_c), s	6.5	0.0	0.0	2.9	2.8	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	358		0	2791	1469	0
V/C Ratio(X)	0.72		0.00	0.17	0.16	0.00
Avail Cap(c_a), veh/h	1190		0	2791	1469	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.1	0.0	0.0	2.4	2.4	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	0.7	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.8	0.0	0.0	2.5	2.6	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	257	A		467	237	
Approach Delay, s/veh	41.8			2.5	2.6	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		75.7		14.3		75.7
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		49.0		31.0		49.0
Max Q Clear Time (g_c+I1), s		4.9		8.5		4.8
Green Ext Time (p_c), s		3.3		0.9		1.4

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Existing
 Sat Midday Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	252	328	0	458	232	0
Future Volume (vph)	252	328	0	458	232	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		335				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	257	335	0	467	237	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	257	335	0	467	237	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Existing
 Sat Midday Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	36.0			54.0	54.0	
Total Split (%)	40.0%			60.0%	60.0%	
Maximum Green (s)	31.0			49.0	49.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	12.1	90.0		67.9	67.9	
Actuated g/C Ratio	0.13	1.00		0.75	0.75	
v/c Ratio	0.56	0.21		0.17	0.17	
Control Delay	40.8	0.3		3.5	1.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	40.8	0.3		3.5	1.2	
LOS	D	A		A	A	
Approach Delay	17.9			3.5	1.2	
Approach LOS	B			A	A	
Queue Length 50th (ft)	71	0		31	5	
Queue Length 95th (ft)	105	0		53	9	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1182	1583		2669	1405	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.22	0.21		0.17	0.17	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	9.7
Intersection LOS:	A
Intersection Capacity Utilization:	28.2%
ICU Level of Service:	A
Analysis Period (min):	15

Lanes, Volumes, Timings
10: Doheny Park Rd & PCH Side Path

Existing
Sat Midday Peak Hour

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↶↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	13	92	101	43	19	10
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	92	101	43	19	10
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	25	28	12	5	3
Total Analysis Volume [veh/h]	14	102	112	48	21	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	7.56	0.00	0.00	0.00	10.18	8.99
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.09	0.04
95th-Percentile Queue Length [ft/ln]	0.75	0.75	0.00	0.00	2.27	0.91
d_A, Approach Delay [s/veh]	0.91		0.00		9.77	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.36					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.175

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	15	2	11	5	2	45	27	84	1	4	111	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	2	11	5	2	45	27	84	1	4	111	3
Peak Hour Factor	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060
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	1	3	2	1	14	8	26	0	1	34	1
Total Analysis Volume [veh/h]	19	2	14	6	2	56	33	104	1	5	138	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	797	875	826	838
Degree of Utilization, x	0.04	0.07	0.17	0.18

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.14	0.24	0.60	0.63
95th-Percentile Queue Length [ft]	3.44	5.90	14.93	15.83
Approach Delay [s/veh]	7.72	7.44	8.23	8.21
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.04			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	0	3	1	7	29	2
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	1	7	29	2
Peak Hour Factor	0.6670	0.6670	0.6670	0.6670	0.6670	0.6670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	3	11	1
Total Analysis Volume [veh/h]	0	4	1	10	43	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	7.24	0.00	0.00	0.00	8.73	8.51
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	3.56	3.56
d_A, Approach Delay [s/veh]	0.00		0.00		8.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.57					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	100	100	113	3	1	91
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	100	113	3	1	91
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	27	30	1	0	25
Total Analysis Volume [veh/h]	108	108	122	3	1	98
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.00	0.11
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	0.00	12.31	9.35
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.24	0.00	0.00	0.00	0.36	0.36
95th-Percentile Queue Length [ft/ln]	5.98	0.00	0.00	0.00	9.01	9.01
d_A, Approach Delay [s/veh]	3.83		0.00		9.38	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.99					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	19.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.095

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	39	930	820	42	26	64
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	930	820	42	26	64
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	246	217	11	7	17
Total Analysis Volume [veh/h]	41	984	868	44	28	68
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.01	0.00	0.09	0.12
d_M, Delay for Movement [s/veh]	10.13	0.00	0.00	0.00	19.46	13.80
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	0.82	0.82
95th-Percentile Queue Length [ft/ln]	4.37	0.00	0.00	0.00	20.53	20.53
d_A, Approach Delay [s/veh]	0.41		0.00		15.45	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	C					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Existing
 Sat Midday Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	498	113	0	181	574
Future Volume (veh/h)	0	498	113	0	181	574
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	519	118	0	189	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	2093	1101	0	1037	
Arrive On Green	0.00	0.59	0.59	0.00	0.30	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	519	118	0	189	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	6.3	2.5	0.0	3.6	0.0
Cycle Q Clear(g_c), s	0.0	6.3	2.5	0.0	3.6	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2093	1101	0	1037	
V/C Ratio(X)	0.00	0.25	0.11	0.00	0.18	
Avail Cap(c_a), veh/h	0	2093	1101	0	1037	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	8.1	0.0	23.3	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.2	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.9	0.0	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.2	8.3	0.0	23.7	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		519	118		189	A
Approach Delay, s/veh		9.2	8.3		23.7	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				58.0	32.0	58.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				53.0	27.0	53.0
Max Q Clear Time (g_c+I1), s				8.3	5.6	4.5
Green Ext Time (p_c), s				3.6	0.6	0.6

Intersection Summary

HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing
Sat Midday Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	498	113	0	181	574
Future Volume (vph)	0	498	113	0	181	574
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Flt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						598
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	519	118	0	189	598
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	519	118	0	189	598
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing
Sat Midday Peak Hour

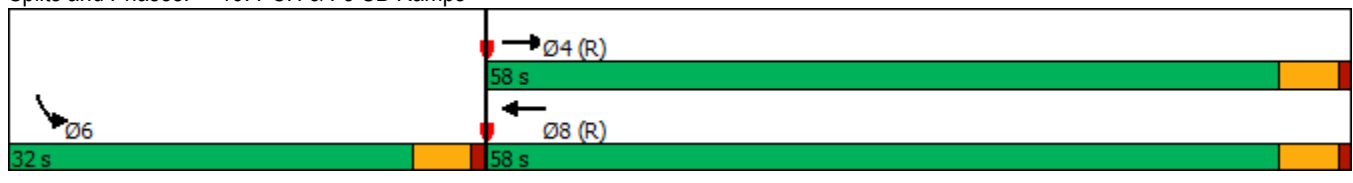


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		58.0	58.0		32.0	
Total Split (%)		64.4%	64.4%		35.6%	
Maximum Green (s)		53.0	53.0		27.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		53.0	53.0		27.0	90.0
Actuated g/C Ratio		0.59	0.59		0.30	1.00
v/c Ratio		0.25	0.11		0.18	0.38
Control Delay		9.3	2.7		23.9	0.7
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		9.3	2.7		23.9	0.7
LOS		A	A		C	A
Approach Delay		9.3	2.7		6.3	
Approach LOS		A	A		A	
Queue Length 50th (ft)		68	7		40	0
Queue Length 95th (ft)		95	12		67	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		2084	1097		1029	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.25	0.11		0.18	0.38

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 9 (10%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.38
 Intersection Signal Delay: 7.1
 Intersection Capacity Utilization 27.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
 Sat Midday Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖↗↘			↖	↗	↘	↖	↗
Traffic Volume (veh/h)	41	321	423	0	389	5	6	21	97	6	0	55
Future Volume (veh/h)	41	321	423	0	389	5	6	21	97	6	0	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	349	0	0	423	5	7	23	105	7	0	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	506	1737		0	2543	30	180	566	634	573	0	634
Arrive On Green	0.49	0.49	0.00	0.00	0.49	0.49	0.40	0.40	0.40	0.40	0.00	0.40
Sat Flow, veh/h	960	3554	1585	0	5370	61	327	1414	1585	1262	0	1585
Grp Volume(v), veh/h	45	349	0	0	277	151	30	0	105	7	0	60
Grp Sat Flow(s),veh/h/ln	960	1777	1585	0	1702	1859	1742	0	1585	1262	0	1585
Q Serve(g_s), s	2.5	5.0	0.0	0.0	4.1	4.1	0.0	0.0	3.8	0.3	0.0	2.1
Cycle Q Clear(g_c), s	6.5	5.0	0.0	0.0	4.1	4.1	0.9	0.0	3.8	1.2	0.0	2.1
Prop In Lane	1.00		1.00	0.00		0.03	0.23		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	506	1737		0	1664	909	746	0	634	573	0	634
V/C Ratio(X)	0.09	0.20		0.00	0.17	0.17	0.04	0.00	0.17	0.01	0.00	0.09
Avail Cap(c_a), veh/h	506	1737		0	1664	909	746	0	634	573	0	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	13.0	0.0	0.0	12.8	12.8	16.5	0.0	17.3	16.8	0.0	16.8
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.0	0.2	0.4	0.1	0.0	0.6	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.9	0.0	0.0	1.5	1.7	0.4	0.0	1.5	0.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.0	13.3	0.0	0.0	13.0	13.2	16.6	0.0	17.9	16.9	0.0	17.1
LnGrp LOS	B	B		A	B	B	B	A	B	B	A	B
Approach Vol, veh/h		394	A		428			135				67
Approach Delay, s/veh		13.5			13.1			17.6				17.1
Approach LOS		B			B			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		49.0		41.0		49.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		36.0		44.0		36.0		44.0				
Max Q Clear Time (g_c+I1), s		5.8		8.5		4.1		6.1				
Green Ext Time (p_c), s		0.5		2.5		0.3		2.7				

Intersection Summary

HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
 Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↘	
Traffic Volume (vph)	41	321	423	0	389	5	6	21	97	6	0	55
Future Volume (vph)	41	321	423	0	389	5	6	21	97	6	0	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998				0.850		0.850	
Flt Protected	0.950							0.988		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5075	0	0	1840	1583	1770	1583	0
Flt Permitted	0.493							0.962		0.738		
Satd. Flow (perm)	918	3539	1583	0	5075	0	0	1792	1583	1375	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			460		3				105		356	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	349	460	0	423	5	7	23	105	7	0	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	349	460	0	428	0	0	30	105	7	60	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
 Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	49.0	49.0			49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	54.4%	54.4%			54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	44.0	44.0			44.0		36.0	36.0	36.0	36.0	36.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	44.0	44.0	90.0		44.0		36.0	36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.49	0.49	1.00		0.49		0.40	0.40	0.40	0.40	0.40	
v/c Ratio	0.10	0.20	0.29		0.17		0.04	0.15	0.01	0.01	0.07	
Control Delay	10.2	10.2	0.8		13.0		16.8	4.2	16.5	0.2	0.2	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	10.2	10.2	0.8		13.0		16.8	4.2	16.5	0.2	0.2	
LOS	B	B	A		B		B	A	B	A	A	
Approach Delay		5.2			13.0		7.0				1.9	
Approach LOS		A			B		A				A	
Queue Length 50th (ft)	10	43	1		47		10	0	2	0	0	
Queue Length 95th (ft)	25	61	12		66		27	30	11	0	0	
Internal Link Dist (ft)		121			561		495				178	
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	448	1730	1583		2482		716	696	550	846		
Starvation Cap Reductn	0	0	0		0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0		0		0	0	0	0	0	
Storage Cap Reductn	0	0	0		0		0	0	0	0	0	
Reduced v/c Ratio	0.10	0.20	0.29		0.17		0.04	0.15	0.01	0.07		

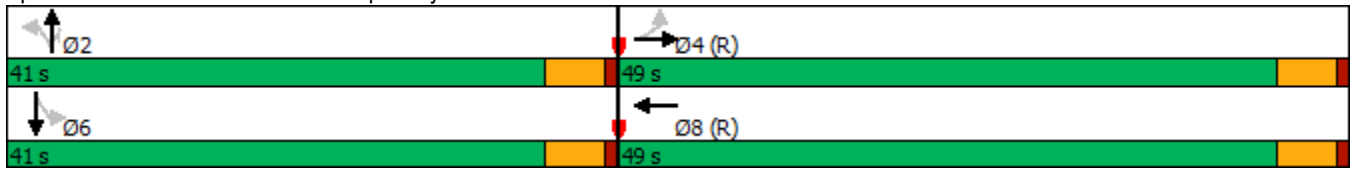
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.29
Intersection Signal Delay:	7.4
Intersection LOS:	A
Intersection Capacity Utilization:	32.4%
ICU Level of Service:	A
Analysis Period (min):	15

Lanes, Volumes, Timings
20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing
Sat Midday Peak Hour

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Existing
 Sat Midday Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↕↕	↔	↔↔	↕↕
Traffic Volume (veh/h)	846	363	520	33	456	573
Future Volume (veh/h)	846	363	520	33	456	573
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	891	0	547	0	480	603
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1021		948		937	2109
Arrive On Green	0.30	0.00	0.27	0.00	0.27	0.59
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	891	0	547	0	480	603
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	22.0	0.0	12.0	0.0	10.6	7.5
Cycle Q Clear(g_c), s	22.0	0.0	12.0	0.0	10.6	7.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1021		948		937	2109
V/C Ratio(X)	0.87		0.58		0.51	0.29
Avail Cap(c_a), veh/h	1267		948		937	2109
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	28.6	0.0	27.8	9.0
Incr Delay (d2), s/veh	5.9	0.0	2.6	0.0	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	5.1	0.0	4.1	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.0	0.0	31.2	0.0	28.2	9.3
LnGrp LOS	D		C		C	A
Approach Vol, veh/h	891	A	547	A		1083
Approach Delay, s/veh	36.0		31.2			17.7
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	29.4	29.0			58.4	31.6
Change Period (Y+Rc), s	5.0	* 5			5.0	5.0
Max Green Setting (Gmax), s	19.0	* 24			47.0	33.0
Max Q Clear Time (g_c+I1), s	12.6	14.0			9.5	24.0
Green Ext Time (p_c), s	1.0	2.3			4.1	2.6

Intersection Summary













HCM 6th Ctrl Delay			27.1			
HCM 6th LOS			C			

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing
 Sat Midday Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	846	363	520	33	456	573
Future Volume (vph)	846	363	520	33	456	573
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		366		35		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	891	382	547	35	480	603
Shared Lane Traffic (%)						
Lane Group Flow (vph)	891	382	547	35	480	603
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing
 Sat Midday Peak Hour

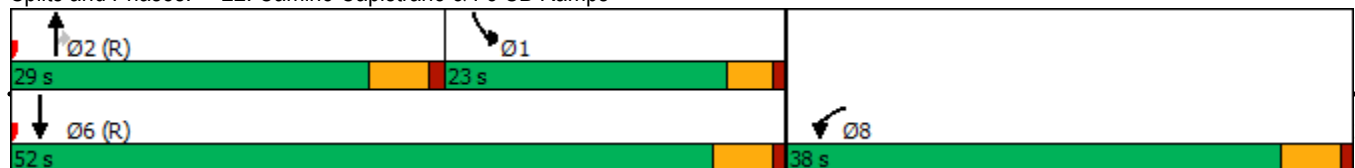


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	38.0		29.0	29.0	23.0	52.0
Total Split (%)	42.2%		32.2%	32.2%	25.6%	57.8%
Maximum Green (s)	33.0		24.0	24.0	19.0	47.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effect Green (s)	28.8	90.0	28.2	28.2	19.0	51.2
Actuated g/C Ratio	0.32	1.00	0.31	0.31	0.21	0.57
v/c Ratio	0.81	0.24	0.49	0.07	0.66	0.30
Control Delay	34.4	0.4	27.8	9.2	37.7	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	0.4	27.8	9.2	37.7	11.2
LOS	C	A	C	A	D	B
Approach Delay	24.2		26.7			22.9
Approach LOS	C		C			C
Queue Length 50th (ft)	235	0	133	0	129	88
Queue Length 95th (ft)	288	0	195	22	181	133
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1258	1583	1110	520	724	2015
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.24	0.49	0.07	0.66	0.30

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 24.2
 Intersection LOS: C
 Intersection Capacity Utilization 63.2%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Two-way stop	Delay (sec / veh):	33.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	33	4	0	0	0	1171	19	8	1329	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	33	4	0	0	0	1171	19	8	1329	3
Peak Hour Factor	1.0000	1.0000	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	1	0	0	0	303	5	2	344	1
Total Analysis Volume [veh/h]	0	0	34	4	0	0	0	1213	20	8	1377	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.08	0.03	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	13.87	33.13	30.49	15.14	12.31	0.00	0.00	11.51	0.00	0.00
Movement LOS			B	D	D	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.25	0.09	0.09	0.09	0.00	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	6.25	2.33	2.33	2.33	0.00	0.00	0.00	1.08	0.00	0.00
d_A, Approach Delay [s/veh]	13.87			33.13			0.00			0.07		
Approach LOS	B			D			A			A		
d_I, Intersection Delay [s/veh]	0.26											
Intersection LOS	D											



APPENDIX E-II

EXISTING PLUS PROJECT TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	183	331	751	212	116	156
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	331	751	212	116	156
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	90	205	58	32	43
Total Analysis Volume [veh/h]	200	361	820	231	127	170
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume cr	0		0		0	
v_di, Inbound Pedestrian Volume cros	0		0		0	
v_co, Outbound Pedestrian Volume cr	0		0		0	
v_ci, Inbound Pedestrian Volume cros	0		0		0	
v_ab, Corner Pedestrian Volume [ped/	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	39	61	22	0	29	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	70	54	54	12	12
g / C, Green / Cycle	0.14	0.78	0.60	0.60	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.23	0.15	0.07	0.11
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	242	2769	2127	950	238	212
d1, Uniform Delay [s]	37.87	2.48	9.48	8.54	36.41	37.86
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.00	0.10	0.53	0.61	1.86	6.88
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.13	0.39	0.24	0.53	0.80
d, Delay for Lane Group [s/veh]	44.87	2.57	10.01	9.15	38.27	44.74
Lane Group LOS	D	A	B	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.69	0.57	3.98	2.10	2.69	3.98
50th-Percentile Queue Length [ft/ln]	117.27	14.33	99.42	52.47	67.32	99.57
95th-Percentile Queue Length [veh/ln]	8.24	1.03	7.16	3.78	4.85	7.17
95th-Percentile Queue Length [ft/ln]	206.07	25.80	178.95	94.45	121.18	179.22

Movement, Approach, & Intersection Results

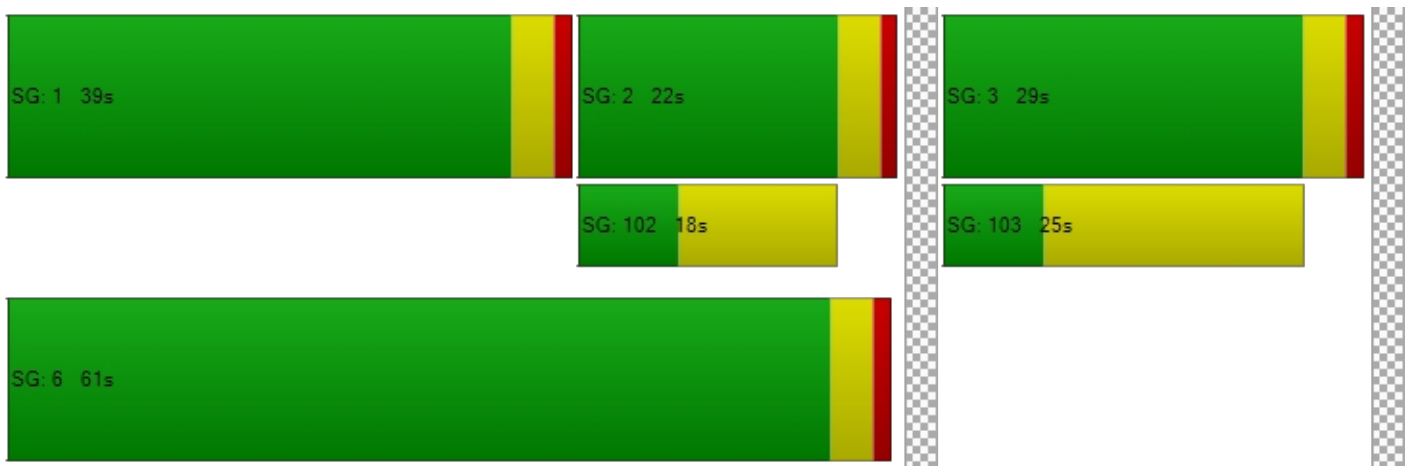
d_M, Delay for Movement [s/veh]	44.87	2.57	10.01	9.15	38.27	44.74
Movement LOS	D	A	B	A	D	D
d_A, Approach Delay [s/veh]	17.65		9.82		41.97	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	17.13					
Intersection LOS	B					
Intersection V/C	0.519					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
I_p,int, Pedestrian LOS Score for Inter	2.602	0.000	2.176
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycl	2000	2000	2000
c_b, Capacity of the bicycle lane [bicyc	1267	400	556
d_b, Bicycle Delay [s]	6.05	28.80	23.47
I_b,int, Bicycle LOS Score for Intersect	2.022	2.427	1.560
Bicycle LOS	B	B	A


























Sequence

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



HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing+Project
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	 
Traffic Volume (veh/h)	280	1055	256	0	0	0	297	290	313	54	332	592
Future Volume (veh/h)	280	1055	256	0	0	0	297	290	313	54	332	592
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	301	1134	0				316	317	337	58	357	637
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	625	1248					473	497	421	460	918	1700
Arrive On Green	0.35	0.35	0.00				0.27	0.27	0.27	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	301	1134	0				316	317	337	58	357	637
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	15.8	36.5	0.0				19.0	18.0	23.8	3.0	9.9	13.9
Cycle Q Clear(g_c), s	15.8	36.5	0.0				19.0	18.0	23.8	3.0	9.9	13.9
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	625	1248					473	497	421	460	918	1700
V/C Ratio(X)	0.48	0.91					0.67	0.64	0.80	0.13	0.39	0.37
Avail Cap(c_a), veh/h	653	1303					473	497	421	460	918	1700
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	37.1	0.0				39.3	39.0	41.1	34.1	36.7	11.9
Incr Delay (d2), s/veh	0.6	9.3	0.0				7.3	6.2	14.8	0.6	1.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	16.8	0.0				9.1	8.9	10.8	1.4	4.4	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	46.4	0.0				46.6	45.1	55.9	34.7	37.9	12.5
LnGrp LOS	C	D					D	D	E	C	D	B
Approach Vol, veh/h		1435	A					970			1052	
Approach Delay, s/veh		43.2						49.4			22.3	
Approach LOS		D						D			C	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		36.9		47.1				36.0				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		30.0		44.0				31.0				
Max Q Clear Time (g_c+I1), s		25.8		38.5				15.9				
Green Ext Time (p_c), s		1.7		3.6				4.6				

Intersection Summary






















HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing+Project
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	1055	256	0	0	0	297	290	313	54	332	592
Future Volume (vph)	280	1055	256	0	0	0	297	290	313	54	332	592
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.995		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1761	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.995		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1761	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			275						337			361
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	301	1134	275	0	0	0	319	312	337	58	357	637
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	301	1134	275	0	0	0	287	344	337	58	357	637
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing+Project
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	49.0	49.0	49.0				35.0	35.0	35.0	36.0	36.0	49.0
Total Split (%)	40.8%	40.8%	40.8%				29.2%	29.2%	29.2%	30.0%	30.0%	40.8%
Maximum Green (s)	44.0	44.0	44.0				30.0	30.0	30.0	31.0	31.0	44.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	44.0	44.0	44.0				30.0	30.0	30.0	31.0	31.0	80.0
Actuated g/C Ratio	0.37	0.37	0.37				0.25	0.25	0.25	0.26	0.26	0.67
v/c Ratio	0.46	0.87	0.36				0.68	0.78	0.52	0.13	0.39	0.32
Control Delay	31.9	44.3	4.5				50.2	55.7	7.0	35.1	38.2	3.8
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	44.3	4.5				50.2	55.7	7.0	35.1	38.2	3.8
LOS	C	D	A				D	E	A	D	D	A
Approach Delay		35.7						37.1			17.2	
Approach LOS		D						D			B	
Queue Length 50th (ft)	176	427	0				212	263	0	35	120	40
Queue Length 95th (ft)	260	521	56				317	#407	74	70	166	65
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	649	1297	754				420	440	648	457	914	1978
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.87	0.36				0.68	0.78	0.52	0.13	0.39	0.32

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 30.8
 Intersection LOS: C
 Intersection Capacity Utilization 70.2%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp




Intersection Level Of Service Report

Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	586	6	115	379	0	274
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	586	6	115	379	0	274
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	1.0000	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	157	2	31	102	0	74
Total Analysis Volume [veh/h]	629	6	124	407	0	294
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.13	0.00	0.00	0.43
d_M, Delay for Movement [s/veh]	0.00	0.00	9.39	0.00	0.00	14.31
Movement LOS	A	A	A	A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.45	0.00	0.00	2.20
95th-Percentile Queue Length [ft/ln]	0.00	0.00	11.29	0.00	0.00	54.88
d_A, Approach Delay [s/veh]	0.00		2.19		14.31	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.68					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.231

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	134	461	0	2	326	36	150	1	69	2	0	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	134	461	0	2	326	36	150	1	69	2	0	3
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
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]	36	124	0	1	88	10	40	0	19	1	0	1
Total Analysis Volume [veh/h]	145	497	0	2	352	39	162	1	74	2	0	3
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 cr	0			0			0			0		
v_di, Inbound Pedestrian Volume cros	0			0			0			0		
v_co, Outbound Pedestrian Volume cr	0			0			0			0		
v_ci, Inbound Pedestrian Volume cros	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permissi	Permissi	Protecte	Permissi	Permissi	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	19	38	0	10	29	0	0	32	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	66	66	0	61	61	7	7	7	1
g / C, Green / Cycle	0.07	0.74	0.74	0.00	0.67	0.67	0.07	0.07	0.07	0.01
(v / s)_i Volume / Saturation Flow Rate	0.04	0.13	0.13	0.00	0.10	0.02	0.05	0.05	0.05	0.00
s, saturation flow rate [veh/h]	3459	1870	1870	1781	3560	1589	1781	1782	1589	1661
c, Capacity [veh/h]	228	1373	1373	8	2396	1070	132	132	118	15
d1, Uniform Delay [s]	41.06	3.67	3.67	44.73	5.35	4.94	40.49	40.49	40.52	44.40
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	2.92	0.29	0.29	14.87	0.13	0.06	4.58	4.57	5.34	11.94
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	0.18	0.18	0.25	0.15	0.04	0.62	0.62	0.63	0.33
d, Delay for Lane Group [s/veh]	43.98	3.96	3.96	59.60	5.48	5.00	45.06	45.06	45.86	56.34
Lane Group LOS	D	A	A	E	A	A	D	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1.64	1.18	1.18	0.08	1.07	0.23	1.90	1.90	1.75	0.16
50th-Percentile Queue Length [ft/ln]	41.10	29.41	29.41	1.94	26.75	5.73	47.53	47.55	43.76	4.02
95th-Percentile Queue Length [veh/ln]	2.96	2.12	2.12	0.14	1.93	0.41	3.42	3.42	3.15	0.29
95th-Percentile Queue Length [ft/ln]	73.99	52.93	52.93	3.50	48.15	10.31	85.55	85.58	78.77	7.23

Movement, Approach, & Intersection Results

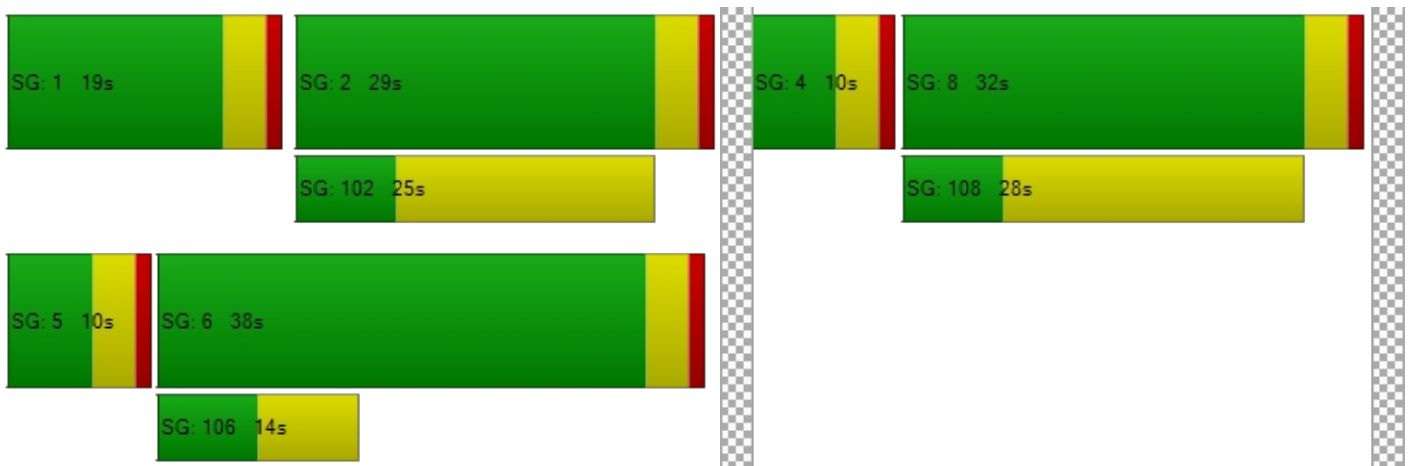
d_M, Delay for Movement [s/veh]	43.98	3.96	3.96	59.60	5.48	5.00	45.06	45.06	45.86	56.34	56.34	56.34
Movement LOS	D	A	A	E	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	13.00			5.71			45.31			56.34		
Approach LOS	B			A			D			E		
d_I, Intersection Delay [s/veh]	16.92											
Intersection LOS	B											
Intersection V/C	0.231											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			0.0			11.0			11.0		
M_corner, Corner Circulation Area [ft²]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			0.00			34.67			34.67		
I_p,int, Pedestrian LOS Score for Inter	2.626			0.000			2.381			1.718		
Crosswalk LOS	B			F			B			A		
s_b, Saturation Flow Rate of the bicycl	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicyc	756			556			622			133		
d_b, Bicycle Delay [s]	17.42			23.47			21.36			39.20		
I_b,int, Bicycle LOS Score for Intersect	2.089			1.884			1.951			1.568		
Bicycle LOS	B			A			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.039

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	70	698	41	11	547	35	0	0	15	0	0	23
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	698	41	11	547	35	0	0	15	0	0	23
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
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	183	11	3	143	9	0	0	4	0	0	6
Total Analysis Volume [veh/h]	73	730	43	12	572	37	0	0	16	0	0	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings




















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	9.03	0.00	0.00	9.36	0.00	0.00	30.30	39.36	10.33	33.70	39.33	11.12
Movement LOS	A	A	A	A	A	A	D	E	B	D	E	B
95th-Percentile Queue Length [veh/ln]	0.24	0.00	0.00	0.04	0.00	0.00	0.07	0.07	0.07	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	6.12	0.00	0.00	1.09	0.00	0.00	1.78	1.78	1.78	3.06	3.06	3.06
d_A, Approach Delay [s/veh]	0.78			0.18			10.33			11.12		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.80											
Intersection LOS	B											






















HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1	42	54	44	461	39	306	206	0	523	34
Future Volume (veh/h)	27	1	42	54	44	461	39	306	206	0	523	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	28	1	44	56	46	480	41	319	215	0	545	34
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	192	29	251	333	257	528	317	1976	881	0	1095	68
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.18	0.56	0.56	0.00	0.32	0.32
Sat Flow, veh/h	410	87	754	814	772	1585	1781	3554	1585	0	3491	212
Grp Volume(v), veh/h	73	0	0	102	0	480	41	319	215	0	285	294
Grp Sat Flow(s),veh/h/ln	1251	0	0	1586	0	1585	1781	1777	1585	0	1777	1832
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	26.1	1.7	3.9	6.3	0.0	11.6	11.7
Cycle Q Clear(g_c), s	3.5	0.0	0.0	3.5	0.0	26.1	1.7	3.9	6.3	0.0	11.6	11.7
Prop In Lane	0.38		0.60	0.55		1.00	1.00		1.00	0.00		0.12
Lane Grp Cap(c), veh/h	472	0	0	590	0	528	317	1976	881	0	573	590
V/C Ratio(X)	0.15	0.00	0.00	0.17	0.00	0.91	0.13	0.16	0.24	0.00	0.50	0.50
Avail Cap(c_a), veh/h	593	0	0	746	0	687	317	1976	881	0	573	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	0.0	21.2	0.0	28.7	31.1	9.7	10.3	0.0	24.6	24.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	13.6	0.2	0.2	0.7	0.0	3.1	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	1.5	0.0	11.5	0.7	1.4	2.1	0.0	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	0.0	0.0	21.3	0.0	42.3	31.3	9.9	10.9	0.0	27.7	27.6
LnGrp LOS	C	A	A	C	A	D	C	A	B	A	C	C
Approach Vol, veh/h		73			582			575			579	
Approach Delay, s/veh		21.1			38.6			11.8			27.7	
Approach LOS		C			D			B			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		55.0		35.0	21.0	34.0		35.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		41.0		39.0	8.0	* 29		39.0				
Max Q Clear Time (g_c+I1), s		8.3		5.5	3.7	13.7		28.1				
Green Ext Time (p_c), s		2.9		0.5	0.0	3.0		1.9				
Intersection Summary												
HCM 6th Ctrl Delay				25.9								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1	42	54	44	461	39	306	206	0	523	34
Future Volume (vph)	27	1	42	54	44	461	39	306	206	0	523	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.919				0.850			0.850		0.991	
Flt Protected		0.981			0.973		0.950					
Satd. Flow (prot)	0	1679	0	0	1812	1583	1770	3539	1583	0	3507	0
Flt Permitted		0.855			0.825		0.950					
Satd. Flow (perm)	0	1464	0	0	1537	1583	1770	3539	1583	0	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44				443			215			7
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	1.00
Adj. Flow (vph)	28	1	44	56	46	480	41	319	215	0	545	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	73	0	0	102	480	41	319	215	0	579	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	44.0	44.0		44.0	44.0	44.0	12.0	46.0	46.0		34.0	
Total Split (%)	48.9%	48.9%		48.9%	48.9%	48.9%	13.3%	51.1%	51.1%		37.8%	
Maximum Green (s)	39.0	39.0		39.0	39.0	39.0	8.0	41.0	41.0		29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		14.0			14.0	14.0	7.3	66.0	66.0		58.8	
Actuated g/C Ratio		0.16			0.16	0.16	0.08	0.73	0.73		0.65	
v/c Ratio		0.28			0.43	0.77	0.29	0.12	0.18		0.25	
Control Delay		17.1			37.7	13.8	44.1	3.2	0.5		8.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		17.1			37.7	13.8	44.1	3.2	0.5		8.9	
LOS		B			D	B	D	A	A		A	
Approach Delay		17.1			18.0			5.1			8.9	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		15			55	19	23	14	0		70	
Queue Length 95th (ft)		45			87	102	56	37	5		141	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		659			666	937	157	2594	1217		2293	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.11			0.15	0.51	0.26	0.12	0.18		0.25	

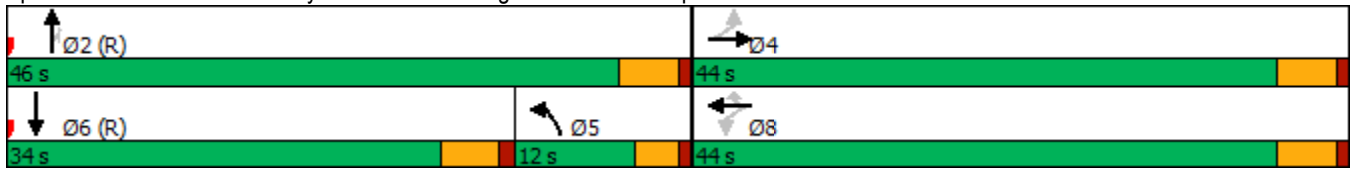
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	84 (93%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	10.9
Intersection Capacity Utilization	54.5%
Analysis Period (min)	15
Intersection LOS:	B
ICU Level of Service	A

Lanes, Volumes, Timings
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
 AM Peak Hour

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Existing+Project
 AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔	↔		↑↑	↑	
Traffic Volume (veh/h)	178	279	0	422	195	0
Future Volume (veh/h)	178	279	0	422	195	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	187	0	0	444	205	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	279		0	2872	1512	0
Arrive On Green	0.08	0.00	0.00	0.81	0.81	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	187	0	0	444	205	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	4.7	0.0	0.0	2.5	2.1	0.0
Cycle Q Clear(g_c), s	4.7	0.0	0.0	2.5	2.1	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	279		0	2872	1512	0
V/C Ratio(X)	0.67		0.00	0.15	0.14	0.00
Avail Cap(c_a), veh/h	1152		0	2872	1512	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.2	0.0	0.0	1.9	1.9	0.0
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	0.5	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.0	0.0	0.0	2.0	2.0	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	187	A		444	205	
Approach Delay, s/veh	43.0			2.0	2.0	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		77.7		12.3		77.7
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		50.0		30.0		50.0
Max Q Clear Time (g_c+I1), s		4.5		6.7		4.1
Green Ext Time (p_c), s		3.2		0.6		1.2

Intersection Summary

HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Existing+Project
 AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔	↗		↕↕	↕	
Traffic Volume (vph)	178	279	0	422	195	0
Future Volume (vph)	178	279	0	422	195	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		294				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	187	294	0	444	205	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	187	294	0	444	205	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
10: Doheny Park Rd & PCH Side Path

Existing+Project
AM Peak Hour

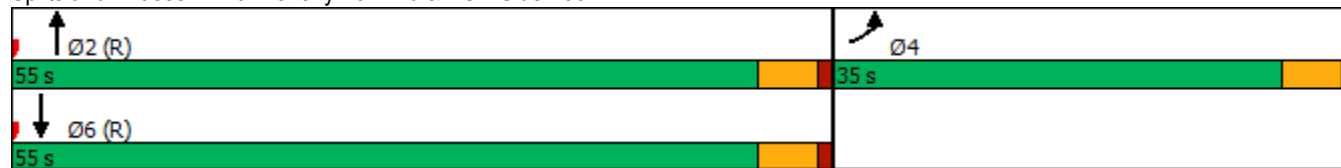


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	35.0			55.0	55.0	
Total Split (%)	38.9%			61.1%	61.1%	
Maximum Green (s)	30.0			50.0	50.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	10.3	90.0		69.7	69.7	
Actuated g/C Ratio	0.11	1.00		0.77	0.77	
v/c Ratio	0.48	0.19		0.16	0.14	
Control Delay	41.0	0.3		2.9	1.7	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	41.0	0.3		2.9	1.7	
LOS	D	A		A	A	
Approach Delay	16.1			2.9	1.7	
Approach LOS	B			A	A	
Queue Length 50th (ft)	52	0		26	16	
Queue Length 95th (ft)	81	0		45	26	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1144	1583		2741	1443	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.16	0.19		0.16	0.14	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.48
Intersection Signal Delay:	8.3
Intersection Capacity Utilization:	25.1%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.090

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↶↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	5	166	90	61	58	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	166	90	61	58	5
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	44	24	16	15	1
Total Analysis Volume [veh/h]	5	175	95	64	61	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.09	0.01
d_M, Delay for Movement [s/veh]	7.54	0.00	0.00	0.00	10.83	8.92
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.30	0.02
95th-Percentile Queue Length [ft/ln]	0.26	0.26	0.00	0.00	7.39	0.41
d_A, Approach Delay [s/veh]	0.21		0.00		10.69	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.84					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	7.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.134

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	55	5	5	10	3	87	14	59	3	7	79	8
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	5	5	10	3	87	14	59	3	7	79	8
Peak Hour Factor	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620	0.8620
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]	16	1	1	3	1	25	4	17	1	2	23	2
Total Analysis Volume [veh/h]	64	6	6	12	3	101	16	68	3	8	92	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	777	904	799	813
Degree of Utilization, x	0.10	0.13	0.11	0.13

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	0.44	0.36	0.46
95th-Percentile Queue Length [ft]	8.11	10.99	9.12	11.55
Approach Delay [s/veh]	8.14	7.57	8.05	8.11
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.94			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↰		↳		↔	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	3	4	1	9	15	2
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	4	1	9	15	2
Peak Hour Factor	0.7710	0.7710	0.7710	0.7710	0.7710	0.7710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	3	5	1
Total Analysis Volume [veh/h]	4	5	1	12	19	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	8.70	8.43
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.19	0.19	0.00	0.00	1.68	1.68
d_A, Approach Delay [s/veh]	3.22		0.00		8.66	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.99					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	78	179	88	5	5	53
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	179	88	5	5	53
Peak Hour Factor	0.8470	0.8470	0.8470	0.8470	0.8470	0.8470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	53	26	1	1	16
Total Analysis Volume [veh/h]	92	211	104	6	6	63
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.01	0.07
d_M, Delay for Movement [s/veh]	7.59	0.00	0.00	0.00	12.61	9.15
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.20	0.00	0.00	0.00	0.26	0.26
95th-Percentile Queue Length [ft/ln]	4.97	0.00	0.00	0.00	6.38	6.38
d_A, Approach Delay [s/veh]	2.31		0.00		9.45	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.80					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	17	654	419	5	5	12
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	654	419	5	5	12
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	175	112	1	1	3
Total Analysis Volume [veh/h]	18	700	449	5	5	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	8.32	0.00	0.00	0.00	12.49	9.79
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	1.24	0.00	0.00	0.00	2.07	2.07
d_A, Approach Delay [s/veh]	0.21		0.00		10.54	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.29					
Intersection LOS	B					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Existing+Project
 AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	487	174	0	204	810
Future Volume (veh/h)	0	487	174	0	204	810
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	529	189	0	222	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	2014	1060	0	1114	
Arrive On Green	0.00	0.57	0.57	0.00	0.32	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	529	189	0	222	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	6.8	4.4	0.0	4.2	0.0
Cycle Q Clear(g_c), s	0.0	6.8	4.4	0.0	4.2	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2014	1060	0	1114	
V/C Ratio(X)	0.00	0.26	0.18	0.00	0.20	
Avail Cap(c_a), veh/h	0	2014	1060	0	1114	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	9.9	9.4	0.0	22.1	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.4	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	1.7	0.0	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	10.2	9.8	0.0	22.5	0.0
LnGrp LOS	A	B	A	A	C	
Approach Vol, veh/h		529	189		222	A
Approach Delay, s/veh		10.2	9.8		22.5	
Approach LOS		B	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				56.0	34.0	56.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				51.0	29.0	51.0
Max Q Clear Time (g_c+I1), s				8.8	6.2	6.4
Green Ext Time (p_c), s				3.7	0.7	1.1
Intersection Summary						
HCM 6th Ctrl Delay			13.0			
HCM 6th LOS			B			

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing+Project
AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	487	174	0	204	810
Future Volume (vph)	0	487	174	0	204	810
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr _t						0.850
Fl _t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl _t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						850
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	529	189	0	222	880
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	529	189	0	222	880
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing+Project
AM Peak Hour

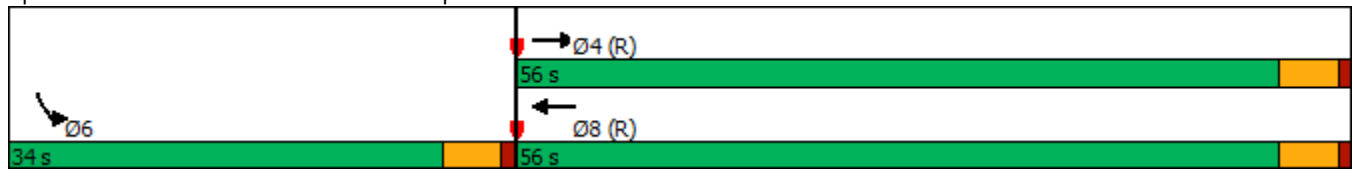


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		56.0	56.0		34.0	
Total Split (%)		62.2%	62.2%		37.8%	
Maximum Green (s)		51.0	51.0		29.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		51.0	51.0		29.0	90.0
Actuated g/C Ratio		0.57	0.57		0.32	1.00
v/c Ratio		0.26	0.18		0.20	0.56
Control Delay		10.4	4.2		22.7	1.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		10.4	4.2		22.7	1.4
LOS		B	A		C	A
Approach Delay		10.4	4.2		5.7	
Approach LOS		B	A		A	
Queue Length 50th (ft)		75	16		46	0
Queue Length 95th (ft)		103	25		74	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		2005	1055		1106	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.26	0.18		0.20	0.56

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 15 (17%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 6.9
 Intersection Capacity Utilization 27.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing+Project
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↗	
Traffic Volume (veh/h)	22	273	355	0	649	7	1	12	87	8	0	93
Future Volume (veh/h)	22	273	355	0	649	7	1	12	87	8	0	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	290	0	0	690	7	1	13	93	9	0	99
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	454	2014		0	2954	30	60	578	511	488	0	511
Arrive On Green	0.57	0.57	0.00	0.00	0.57	0.57	0.32	0.32	0.32	0.32	0.00	0.32
Sat Flow, veh/h	748	3554	1585	0	5380	53	53	1794	1585	1288	0	1585
Grp Volume(v), veh/h	23	290	0	0	450	247	14	0	93	9	0	99
Grp Sat Flow(s),veh/h/ln	748	1777	1585	0	1702	1861	1847	0	1585	1288	0	1585
Q Serve(g_s), s	1.4	3.5	0.0	0.0	5.9	6.0	0.0	0.0	3.8	0.4	0.0	4.1
Cycle Q Clear(g_c), s	7.4	3.5	0.0	0.0	5.9	6.0	0.5	0.0	3.8	0.9	0.0	4.1
Prop In Lane	1.00		1.00	0.00		0.03	0.07		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	454	2014		0	1929	1054	638	0	511	488	0	511
V/C Ratio(X)	0.05	0.14		0.00	0.23	0.23	0.02	0.00	0.18	0.02	0.00	0.19
Avail Cap(c_a), veh/h	454	2014		0	1929	1054	638	0	511	488	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.6	9.2	0.0	0.0	9.7	9.7	20.8	0.0	22.0	21.1	0.0	22.0
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	0.3	0.5	0.1	0.0	0.8	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.2	0.0	0.0	2.0	2.3	0.2	0.0	1.5	0.1	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.8	9.4	0.0	0.0	10.0	10.3	20.9	0.0	22.7	21.2	0.0	22.9
LnGrp LOS	B	A		A	B	B	C	A	C	C	A	C
Approach Vol, veh/h		313	A		697			107			108	
Approach Delay, s/veh		9.5			10.1			22.5			22.8	
Approach LOS		A			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		56.0		34.0		56.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		29.0		51.0		29.0		51.0				
Max Q Clear Time (g_c+1), s		5.8		9.4		6.1		8.0				
Green Ext Time (p_c), s		0.3		2.1		0.5		4.7				

Intersection Summary

HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing+Project
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↗	
Traffic Volume (vph)	22	273	355	0	649	7	1	12	87	8	0	93
Future Volume (vph)	22	273	355	0	649	7	1	12	87	8	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998				0.850		0.850	
Flt Protected	0.950							0.996		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5075	0	0	1855	1583	1770	1583	0
Flt Permitted	0.365							0.991		0.748		
Satd. Flow (perm)	680	3539	1583	0	5075	0	0	1846	1583	1393	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			378		3				93		222	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	23	290	378	0	690	7	1	13	93	9	0	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	290	378	0	697	0	0	14	93	9	99	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing+Project
 AM Peak Hour

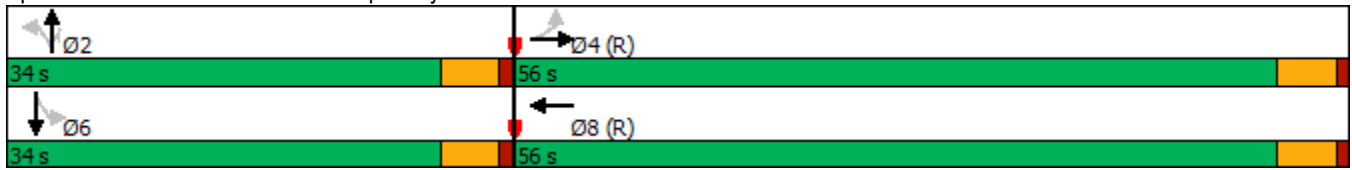


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	56.0	56.0			56.0		34.0	34.0	34.0	34.0	34.0	
Total Split (%)	62.2%	62.2%			62.2%		37.8%	37.8%	37.8%	37.8%	37.8%	
Maximum Green (s)	51.0	51.0			51.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	51.0	51.0	90.0		51.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.57	0.57	1.00		0.57		0.32	0.32	0.32	0.32	0.32	
v/c Ratio	0.06	0.14	0.24		0.24		0.02	0.16	0.02	0.02	0.15	
Control Delay	6.8	6.7	0.5		10.0		21.1	5.7	21.1	0.5		
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0		
Total Delay	6.8	6.7	0.5		10.0		21.1	5.7	21.1	0.5		
LOS	A	A	A		B		C	A	C	A		
Approach Delay		3.3			10.0		7.7				2.2	
Approach LOS		A			B		A				A	
Queue Length 50th (ft)	4	26	1		67		5	0	3	0		
Queue Length 95th (ft)	12	40	5		88		19	33	14	0		
Internal Link Dist (ft)		121			561		495				178	
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	385	2005	1583		2877		594	573	448	660		
Starvation Cap Reductn	0	0	0		0		0	0	0	0		
Spillback Cap Reductn	0	0	0		0		0	0	0	0		
Storage Cap Reductn	0	0	0		0		0	0	0	0		
Reduced v/c Ratio	0.06	0.14	0.24		0.24		0.02	0.16	0.02	0.15		

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.24
Intersection Signal Delay:	6.4
Intersection LOS:	A
Intersection Capacity Utilization:	33.3%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Existing+Project
 AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↕↕	↔	↔↔	↕↕
Traffic Volume (veh/h)	689	343	475	27	360	527
Future Volume (veh/h)	689	343	475	27	360	527
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	741	0	511	0	387	567
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	872		1607		483	2262
Arrive On Green	0.25	0.00	0.45	0.00	0.14	0.64
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	741	0	511	0	387	567
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	18.4	0.0	8.3	0.0	9.8	6.2
Cycle Q Clear(g_c), s	18.4	0.0	8.3	0.0	9.8	6.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	872		1607		483	2262
V/C Ratio(X)	0.85		0.32		0.80	0.25
Avail Cap(c_a), veh/h	1229		1607		730	2262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	0.0	15.8	0.0	37.5	7.1
Incr Delay (d2), s/veh	4.1	0.0	0.5	0.0	3.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	3.1	0.0	4.2	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.2	0.0	16.3	0.0	41.3	7.3
LnGrp LOS	D		B		D	A
Approach Vol, veh/h	741	A	511	A		954
Approach Delay, s/veh	36.2		16.3			21.1
Approach LOS	D		B			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	16.6	45.7			62.3	27.7
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	19.0	25.0			48.0	32.0
Max Q Clear Time (g_c+I1), s	11.8	10.3			8.2	20.4
Green Ext Time (p_c), s	0.8	2.6			3.8	2.4

Intersection Summary

















HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing+Project
 AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	689	343	475	27	360	527
Future Volume (vph)	689	343	475	27	360	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		369		29		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	741	369	511	29	387	567
Shared Lane Traffic (%)						
Lane Group Flow (vph)	741	369	511	29	387	567
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing+Project
 AM Peak Hour

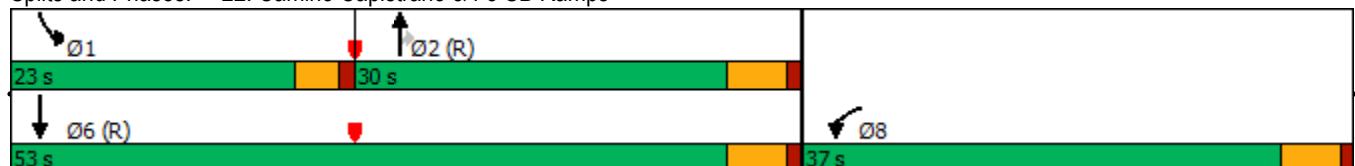


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	37.0		30.0	30.0	23.0	53.0
Total Split (%)	41.1%		33.3%	33.3%	25.6%	58.9%
Maximum Green (s)	32.0		25.0	25.0	19.0	48.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effect Green (s)	25.2	90.0	35.5	35.5	15.3	54.8
Actuated g/C Ratio	0.28	1.00	0.39	0.39	0.17	0.61
v/c Ratio	0.77	0.23	0.37	0.05	0.66	0.26
Control Delay	35.4	0.3	21.9	8.8	40.4	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	0.3	21.9	8.8	40.4	9.2
LOS	D	A	C	A	D	A
Approach Delay	23.7		21.2			21.9
Approach LOS	C		C			C
Queue Length 50th (ft)	197	0	106	0	107	73
Queue Length 95th (ft)	240	0	175	20	145	117
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1220	1583	1397	642	726	2156
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.23	0.37	0.05	0.53	0.26

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 22.5
 Intersection LOS: C
 Intersection Capacity Utilization 54.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Two-way stop	Delay (sec / veh):	33.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	81	4	0	0	0	1650	16	33	905	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	81	4	0	0	0	1650	16	33	905	3
Peak Hour Factor	1.0000	1.0000	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	22	1	0	0	0	446	4	9	245	1
Total Analysis Volume [veh/h]	0	0	88	4	0	0	0	1784	17	36	978	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.31	0.03	0.00	0.00	0.00	0.02	0.00	0.11	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	23.18	33.80	48.67	12.77	10.15	0.00	0.00	16.90	0.00	0.00
Movement LOS			C	D	E	B	B	A	A	C	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.27	0.10	0.10	0.10	0.00	0.00	0.00	0.35	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	31.86	2.39	2.39	2.39	0.00	0.00	0.00	8.84	0.00	0.00
d_A, Approach Delay [s/veh]	23.18		33.80				0.00		0.60			
Approach LOS	C		D				A		A			
d_I, Intersection Delay [s/veh]	0.96											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.836

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	139	372	1442	173	207	292
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	372	1442	173	207	292
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	102	395	47	57	80
Total Analysis Volume [veh/h]	152	408	1581	190	227	320
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume cr	0		0		0	
v_di, Inbound Pedestrian Volume cros	0		0		0	
v_co, Outbound Pedestrian Volume cr	0		0		0	
v_ci, Inbound Pedestrian Volume cros	0		0		0	
v_ab, Corner Pedestrian Volume [ped/	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	14	36	22	0	59	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	65	51	51	22	22
g / C, Green / Cycle	0.10	0.69	0.54	0.54	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.09	0.11	0.44	0.12	0.13	0.20
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	184	2439	1921	858	411	367
d1, Uniform Delay [s]	41.76	5.32	18.11	11.44	32.23	35.21
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.95	0.15	4.14	0.60	1.16	6.54
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.17	0.82	0.22	0.55	0.87
d, Delay for Lane Group [s/veh]	50.70	5.47	22.25	12.03	33.39	41.75
Lane Group LOS	D	A	C	B	C	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.91	1.30	14.27	2.14	4.67	7.65
50th-Percentile Queue Length [ft/ln]	97.80	32.49	356.65	53.49	116.64	191.16
95th-Percentile Queue Length [veh/ln]	7.04	2.34	20.46	3.85	8.21	12.18
95th-Percentile Queue Length [ft/ln]	176.04	58.49	511.51	96.28	205.20	304.53

Movement, Approach, & Intersection Results

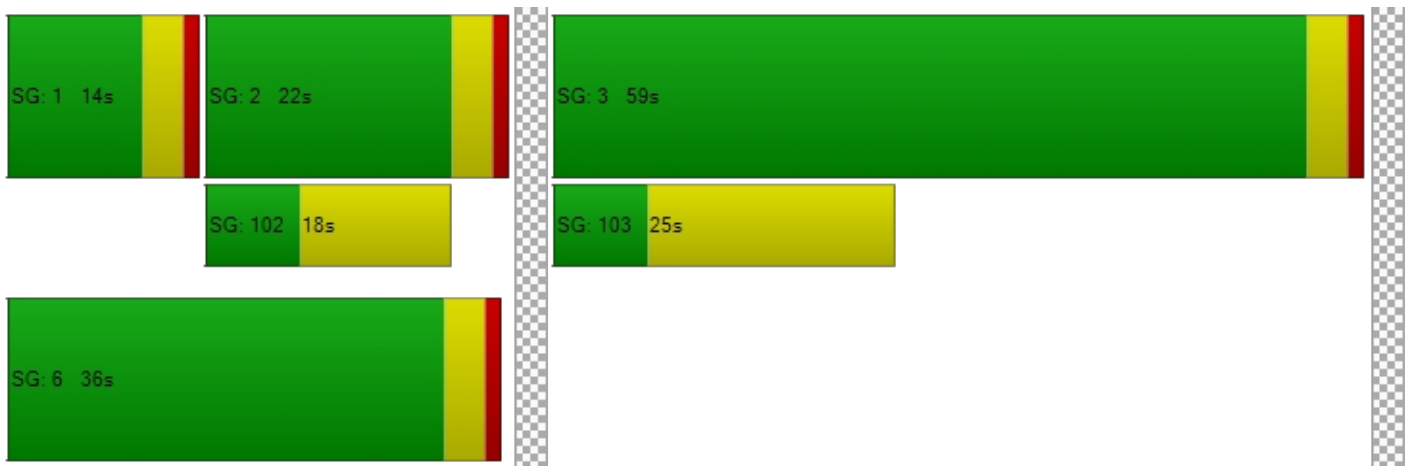
d_M, Delay for Movement [s/veh]	50.70	5.47	22.25	12.03	33.39	41.75
Movement LOS	D	A	C	B	C	D
d_A, Approach Delay [s/veh]	17.75		21.15		38.28	
Approach LOS	B		C		D	
d_I, Intersection Delay [s/veh]	23.75					
Intersection LOS	C					
Intersection V/C	0.836					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.14	0.00	37.14
I_p,int, Pedestrian LOS Score for Inter	2.782	0.000	2.231
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycl	2000	2000	2000
c_b, Capacity of the bicycle lane [bicyc	674	379	1158
d_b, Bicycle Delay [s]	20.89	31.21	8.42
I_b,int, Bicycle LOS Score for Intersect	2.022	3.021	1.560
Bicycle LOS	B	C	A


























Sequence

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
























HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing+Project
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	 
Traffic Volume (veh/h)	184	805	409	0	0	0	500	295	462	153	701	847
Future Volume (veh/h)	184	805	409	0	0	0	500	295	462	153	701	847
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	194	847	0				418	461	486	161	738	892
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	463	925					537	564	478	526	1049	1549
Arrive On Green	0.26	0.26	0.00				0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	194	847	0				418	461	486	161	738	892
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	9.5	24.3	0.0				22.5	24.0	31.7	7.4	19.4	21.9
Cycle Q Clear(g_c), s	9.5	24.3	0.0				22.5	24.0	31.7	7.4	19.4	21.9
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	463	925					537	564	478	526	1049	1549
V/C Ratio(X)	0.42	0.92					0.78	0.82	1.02	0.31	0.70	0.58
Avail Cap(c_a), veh/h	475	948					537	564	478	526	1049	1549
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	37.7	0.0				33.4	34.0	36.7	28.7	32.9	15.3
Incr Delay (d2), s/veh	0.6	13.1	0.0				10.6	12.4	45.3	1.5	4.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	11.8	0.0				10.9	12.4	17.7	3.3	8.6	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	50.9	0.0				44.0	46.3	81.9	30.2	36.9	16.8
LnGrp LOS	C	D					D	D	F	C	D	B
Approach Vol, veh/h		1041	A					1365			1791	
Approach Delay, s/veh		47.5						58.3			26.3	
Approach LOS		D						E			C	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		36.7		32.3				36.0				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		31.0		28.0				31.0				
Max Q Clear Time (g_c+I1), s		33.7		26.3				23.9				
Green Ext Time (p_c), s		0.0		1.0				4.8				
Intersection Summary												
HCM 6th Ctrl Delay			42.0									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing+Project
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	805	409	0	0	0	500	295	462	153	701	847
Future Volume (vph)	184	805	409	0	0	0	500	295	462	153	701	847
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.987		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1747	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.987		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1747	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			431						291			181
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	847	431	0	0	0	526	311	486	161	738	892
Shared Lane Traffic (%)							22%					
Lane Group Flow (vph)	194	847	431	0	0	0	410	427	486	161	738	892
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing+Project
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	33.0	33.0	33.0				36.0	36.0	36.0	36.0	36.0	33.0
Total Split (%)	31.4%	31.4%	31.4%				34.3%	34.3%	34.3%	34.3%	34.3%	31.4%
Maximum Green (s)	28.0	28.0	28.0				31.0	31.0	31.0	31.0	31.0	28.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	28.0	28.0	28.0				31.0	31.0	31.0	31.0	31.0	64.0
Actuated g/C Ratio	0.27	0.27	0.27				0.30	0.30	0.30	0.30	0.30	0.61
v/c Ratio	0.41	0.90	0.58				0.83	0.83	0.72	0.31	0.71	0.50
Control Delay	34.9	50.8	6.6				50.1	49.9	19.8	30.7	37.4	10.0
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	50.8	6.6				50.1	49.9	19.8	30.7	37.4	10.0
LOS	C	D	A				D	D	B	C	D	B
Approach Delay		35.8						38.9			23.1	
Approach LOS		D						D			C	
Queue Length 50th (ft)	107	288	0				269	281	116	84	232	138
Queue Length 95th (ft)	175	#400	77				#438	#450	244	141	300	189
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	472	943	738				496	515	672	522	1044	1769
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.90	0.58				0.83	0.83	0.72	0.31	0.71	0.50

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 31.7
 Intersection LOS: C
 Intersection Capacity Utilization 82.7%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report

Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.395

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	1065	25	250	650	0	185
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1065	25	250	650	0	185
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	1.0000	0.9840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	271	6	64	165	0	47
Total Analysis Volume [veh/h]	1082	25	254	661	0	188
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.41	0.01	0.00	0.39
d_M, Delay for Movement [s/veh]	0.00	0.00	14.61	0.00	0.00	17.40
Movement LOS	A	A	B	A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.96	0.00	0.00	1.86
95th-Percentile Queue Length [ft/ln]	0.00	0.00	49.07	0.00	0.00	46.50
d_A, Approach Delay [s/veh]	0.00		4.06		17.40	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.16					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	308	684	7	16	525	127	389	1	257	6	0	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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	308	684	7	16	525	127	389	1	257	6	0	7
Peak Hour Factor	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650
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]	80	177	2	4	136	33	101	0	67	2	0	2
Total Analysis Volume [veh/h]	319	709	7	17	544	132	403	1	266	6	0	7
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 cr	0			0			0			0		
v_di, Inbound Pedestrian Volume cros	0			0			0			0		
v_co, Outbound Pedestrian Volume cr	0			0			0			0		
v_ci, Inbound Pedestrian Volume cros	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permissi	Permissi	Protecte	Permissi	Permissi	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	35	0	10	29	0	0	35	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	52	52	2	44	44	18	18	18	2
g / C, Green / Cycle	0.11	0.58	0.58	0.02	0.49	0.49	0.20	0.20	0.20	0.02
(v / s)_i Volume / Saturation Flow Rate	0.09	0.19	0.19	0.01	0.15	0.08	0.11	0.11	0.17	0.01
s, saturation flow rate [veh/h]	3459	1870	1864	1781	3560	1589	1781	1781	1589	1672
c, Capacity [veh/h]	400	1077	1073	44	1727	771	360	360	321	33
d1, Uniform Delay [s]	38.86	10.03	10.03	43.32	14.11	13.04	32.38	32.38	34.47	43.65
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.70	0.83	0.83	5.58	0.48	0.48	1.37	1.37	5.44	7.29
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	0.80	0.33	0.33	0.39	0.32	0.17	0.56	0.56	0.83	0.39
d, Delay for Lane Group [s/veh]	42.56	10.86	10.86	48.90	14.59	13.52	33.75	33.75	39.92	50.94
Lane Group LOS	D	B	B	D	B	B	C	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	3.59	3.66	3.65	0.44	3.31	1.54	4.03	4.03	5.95	0.35
50th-Percentile Queue Length [ft/ln]	89.76	91.45	91.16	10.93	82.85	38.44	100.79	100.81	148.67	8.78
95th-Percentile Queue Length [veh/ln]	6.46	6.58	6.56	0.79	5.96	2.77	7.26	7.26	9.95	0.63
95th-Percentile Queue Length [ft/ln]	161.56	164.61	164.08	19.68	149.12	69.19	181.42	181.46	248.66	15.80

Movement, Approach, & Intersection Results

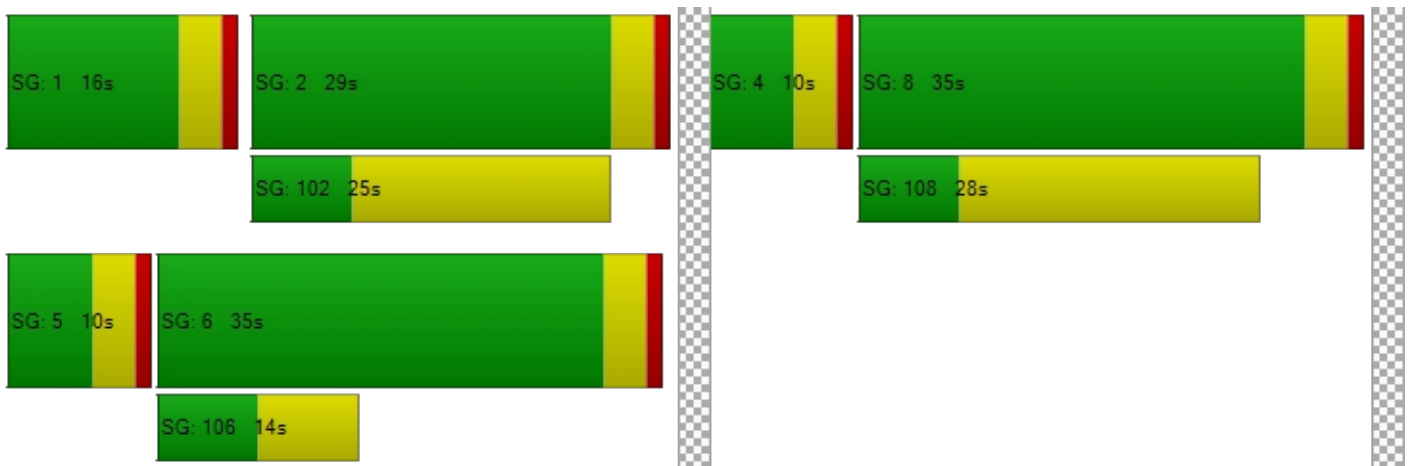
d_M, Delay for Movement [s/veh]	42.56	10.86	10.86	48.90	14.59	13.52	33.75	33.75	39.92	50.94	50.94	50.94
Movement LOS	D	B	B	D	B	B	C	C	D	D	D	D
d_A, Approach Delay [s/veh]	20.63			15.23			36.20			50.94		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	23.57											
Intersection LOS	C											
Intersection V/C	0.511											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			0.0			11.0			11.0		
M_corner, Corner Circulation Area [ft²]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			0.00			34.67			34.67		
I_p,int, Pedestrian LOS Score for Inter	2.753			0.000			2.518			1.733		
Crosswalk LOS	C			F			B			A		
s_b, Saturation Flow Rate of the bicycl	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicyc	689			556			689			133		
d_b, Bicycle Delay [s]	19.34			23.47			19.34			39.20		
I_b,int, Bicycle LOS Score for Intersect	2.413			2.131			2.665			1.581		
Bicycle LOS	B			B			B			A		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	13.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.071

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	52	1033	93	23	965	37	0	0	51	0	0	32
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	1033	93	23	965	37	0	0	51	0	0	32
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
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	262	24	6	245	9	0	0	13	0	0	8
Total Analysis Volume [veh/h]	53	1050	95	23	981	38	0	0	52	0	0	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings





















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.00	0.04	0.01	0.00	0.00	0.00	0.10	0.00	0.00	0.07
d_M, Delay for Movement [s/veh]	10.77	0.00	0.00	11.18	0.00	0.00	74.21	111.70	12.88	84.53	107.14	13.37
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	B
95th-Percentile Queue Length [veh/ln]	0.25	0.00	0.00	0.12	0.00	0.00	0.34	0.34	0.34	0.23	0.23	0.23
95th-Percentile Queue Length [ft/ln]	6.35	0.00	0.00	2.95	0.00	0.00	8.49	8.49	8.49	5.73	5.73	5.73
d_A, Approach Delay [s/veh]	0.48			0.25			12.88			13.37		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.83											
Intersection LOS	B											

HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1	81	83	22	647	40	474	210	0	976	33
Future Volume (veh/h)	75	1	81	83	22	647	40	474	210	0	976	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	77	1	83	85	22	660	41	484	214	0	996	34
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	242	22	219	512	125	669	99	1658	740	0	1247	43
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.06	0.47	0.47	0.00	0.36	0.36
Sat Flow, veh/h	434	53	518	1042	295	1585	1781	3554	1585	0	3599	120
Grp Volume(v), veh/h	161	0	0	107	0	660	41	484	214	0	505	525
Grp Sat Flow(s),veh/h/ln	1005	0	0	1337	0	1585	1781	1777	1585	0	1777	1849
Q Serve(g_s), s	6.2	0.0	0.0	0.0	0.0	37.1	2.0	7.6	7.5	0.0	23.0	23.0
Cycle Q Clear(g_c), s	11.1	0.0	0.0	5.0	0.0	37.1	2.0	7.6	7.5	0.0	23.0	23.0
Prop In Lane	0.48		0.52	0.79		1.00	1.00		1.00	0.00		0.06
Lane Grp Cap(c), veh/h	483	0	0	636	0	669	99	1658	740	0	632	657
V/C Ratio(X)	0.33	0.00	0.00	0.17	0.00	0.99	0.41	0.29	0.29	0.00	0.80	0.80
Avail Cap(c_a), veh/h	483	0	0	636	0	669	119	1658	740	0	632	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	0.0	0.0	16.4	0.0	25.7	41.1	14.8	14.8	0.0	26.1	26.1
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.1	0.0	31.2	2.8	0.4	1.0	0.0	10.2	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	1.4	0.0	18.9	0.9	3.0	2.7	0.0	10.9	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	16.5	0.0	56.9	43.8	15.3	15.8	0.0	36.3	35.9
LnGrp LOS	B	A	A	B	A	E	D	B	B	A	D	D
Approach Vol, veh/h		161			767			739			1030	
Approach Delay, s/veh		18.6			51.3			17.0			36.1	
Approach LOS		B			D			B			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.0		43.0	10.0	37.0		43.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		42.0		38.0	6.0	* 32		38.0				
Max Q Clear Time (g_c+11), s		9.6		13.1	4.0	25.0		39.1				
Green Ext Time (p_c), s		4.2		1.3	0.0	3.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				34.1								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1	81	83	22	647	40	474	210	0	976	33
Future Volume (vph)	75	1	81	83	22	647	40	474	210	0	976	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.930				0.850			0.850		0.995	
Flt Protected		0.977			0.962		0.950					
Satd. Flow (prot)	0	1693	0	0	1792	1583	1770	3539	1583	0	3522	0
Flt Permitted		0.818			0.723		0.950					
Satd. Flow (perm)	0	1417	0	0	1347	1583	1770	3539	1583	0	3522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		74				283			214			4
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	77	1	83	85	22	660	41	484	214	0	996	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	0	107	660	41	484	214	0	1030	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
PM Peak Hour



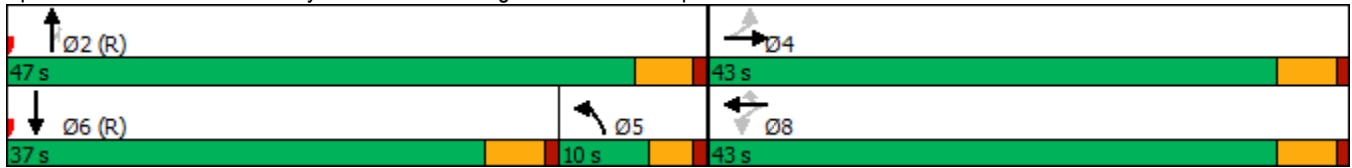
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	43.0	43.0		43.0	43.0	43.0	10.0	47.0	47.0		37.0	
Total Split (%)	47.8%	47.8%		47.8%	47.8%	47.8%	11.1%	52.2%	52.2%		41.1%	
Maximum Green (s)	38.0	38.0		38.0	38.0	38.0	6.0	42.0	42.0		32.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		31.3			31.3	31.3	6.0	48.7	48.7		42.7	
Actuated g/C Ratio		0.35			0.35	0.35	0.07	0.54	0.54		0.47	
v/c Ratio		0.30			0.23	0.90	0.35	0.25	0.22		0.62	
Control Delay		11.5			19.9	31.3	39.8	8.0	0.6		22.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		11.5			19.9	31.3	39.8	8.0	0.6		22.5	
LOS		B			B	C	D	A	A		C	
Approach Delay		11.5			29.7			7.6			22.5	
Approach LOS		B			C			A			C	
Queue Length 50th (ft)		33			41	207	22	47	0		252	
Queue Length 95th (ft)		71			72	#351	48	73	1		357	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		641			568	831	118	1915	954		1673	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.25			0.19	0.79	0.35	0.25	0.22		0.62	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	61 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	19.8
Intersection LOS:	B
Intersection Capacity Utilization:	74.8%
ICU Level of Service:	D
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	

Queue shown is maximum after two cycles.

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Existing+Project
 PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔	↔		↑↑	↑	
Traffic Volume (veh/h)	296	302	0	491	302	0
Future Volume (veh/h)	296	302	0	491	302	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	302	0	0	501	308	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	407		0	2741	1443	0
Arrive On Green	0.12	0.00	0.00	0.77	0.77	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	302	0	0	501	308	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	7.6	0.0	0.0	3.4	4.1	0.0
Cycle Q Clear(g_c), s	7.6	0.0	0.0	3.4	4.1	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	407		0	2741	1443	0
V/C Ratio(X)	0.74		0.00	0.18	0.21	0.00
Avail Cap(c_a), veh/h	1114		0	2741	1443	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.4	0.0	0.0	2.7	2.8	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	0.8	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.1	0.0	0.0	2.9	3.2	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	302	A		501	308	
Approach Delay, s/veh	41.1			2.9	3.2	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		74.4		15.6		74.4
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		51.0		29.0		51.0
Max Q Clear Time (g_c+I1), s		5.4		9.6		6.1
Green Ext Time (p_c), s		3.6		1.0		1.9

Intersection Summary

HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Existing+Project
 PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶↶	↷		↶↶	↶	
Traffic Volume (vph)	296	302	0	491	302	0
Future Volume (vph)	296	302	0	491	302	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		308				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	302	308	0	501	308	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	302	308	0	501	308	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Existing+Project
 PM Peak Hour

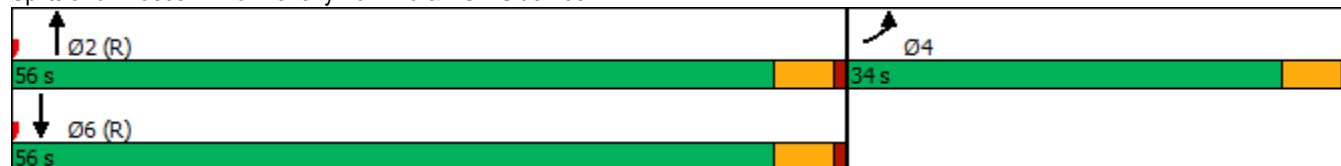


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	34.0			56.0	56.0	
Total Split (%)	37.8%			62.2%	62.2%	
Maximum Green (s)	29.0			51.0	51.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	13.3	90.0		66.7	66.7	
Actuated g/C Ratio	0.15	1.00		0.74	0.74	
v/c Ratio	0.60	0.19		0.19	0.22	
Control Delay	40.6	0.3		4.0	1.3	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	40.6	0.3		4.0	1.3	
LOS	D	A		A	A	
Approach Delay	20.2			4.0	1.3	
Approach LOS	C			A	A	
Queue Length 50th (ft)	83	0		36	6	
Queue Length 95th (ft)	119	0		62	11	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1106	1583		2624	1381	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.27	0.19		0.19	0.22	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	10.4
Intersection LOS:	B
Intersection Capacity Utilization:	32.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.107

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↶↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	5	97	161	102	53	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	97	161	102	53	5
Peak Hour Factor	0.8170	0.8170	0.8170	0.8170	0.8170	0.8170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	30	49	31	16	2
Total Analysis Volume [veh/h]	6	119	197	125	65	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.11	0.01
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	0.00	11.60	9.66
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.36	0.02
95th-Percentile Queue Length [ft/ln]	0.37	0.37	0.00	0.00	8.89	0.58
d_A, Approach Delay [s/veh]	0.38		0.00		11.44	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.66					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.236

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	43	5	7	9	3	87	51	119	18	7	88	8
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	5	7	9	3	87	51	119	18	7	88	8
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
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	1	2	2	1	22	13	30	5	2	23	2
Total Analysis Volume [veh/h]	44	5	7	9	3	89	52	122	18	7	90	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	746	861	815	803
Degree of Utilization, x	0.08	0.12	0.24	0.13

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.24	0.40	0.91	0.45
95th-Percentile Queue Length [ft]	6.06	9.93	22.84	11.22
Approach Delay [s/veh]	8.21	7.74	8.77	8.15
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.33			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.073

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	1	2	4	7	62	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	2	4	7	62	5
Peak Hour Factor	0.8540	0.8540	0.8540	0.8540	0.8540	0.8540
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	2	18	1
Total Analysis Volume [veh/h]	1	2	5	8	73	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.01
d_M, Delay for Movement [s/veh]	7.24	0.00	0.00	0.00	8.88	8.66
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.25	0.25
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	0.00	6.35	6.35
d_A, Approach Delay [s/veh]	2.41		0.00		8.86	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.45					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	81	102	161	5	5	109
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	102	161	5	5	109
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	27	43	1	1	29
Total Analysis Volume [veh/h]	86	108	171	5	5	116
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.01	0.13
d_M, Delay for Movement [s/veh]	7.74	0.00	0.00	0.00	12.50	9.84
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.20	0.00	0.00	0.00	0.50	0.50
95th-Percentile Queue Length [ft/ln]	4.90	0.00	0.00	0.00	12.42	12.42
d_A, Approach Delay [s/veh]	3.43		0.00		9.95	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.81					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	18.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	31	1099	807	30	14	50
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	1099	807	30	14	50
Peak Hour Factor	0.9850	0.9850	0.9850	0.9850	0.9850	0.9850
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	279	205	8	4	13
Total Analysis Volume [veh/h]	31	1116	819	30	14	51
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	0.05	0.09
d_M, Delay for Movement [s/veh]	9.78	0.00	0.00	0.00	17.95	12.37
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	0.46	0.46
95th-Percentile Queue Length [ft/ln]	3.08	0.00	0.00	0.00	11.52	11.52
d_A, Approach Delay [s/veh]	0.26		0.00		13.58	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.58					
Intersection LOS	C					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Existing+Project
 PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	536	143	0	307	860
Future Volume (veh/h)	0	536	143	0	307	860
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	564	151	0	323	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	1895	998	0	1229	
Arrive On Green	0.00	0.53	0.53	0.00	0.36	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	564	151	0	323	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	7.9	3.7	0.0	6.0	0.0
Cycle Q Clear(g_c), s	0.0	7.9	3.7	0.0	6.0	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1895	998	0	1229	
V/C Ratio(X)	0.00	0.30	0.15	0.00	0.26	
Avail Cap(c_a), veh/h	0	1895	998	0	1229	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	11.6	10.7	0.0	20.6	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.3	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	1.5	0.0	2.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	12.1	11.0	0.0	21.1	0.0
LnGrp LOS	A	B	B	A	C	
Approach Vol, veh/h		564	151		323	A
Approach Delay, s/veh		12.1	11.0		21.1	
Approach LOS		B	B		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				53.0	37.0	53.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				48.0	32.0	48.0
Max Q Clear Time (g_c+I1), s				9.9	8.0	5.7
Green Ext Time (p_c), s				3.9	1.1	0.8
Intersection Summary						
HCM 6th Ctrl Delay			14.7			
HCM 6th LOS			B			
Notes						
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.						

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing+Project
PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	536	143	0	307	860
Future Volume (vph)	0	536	143	0	307	860
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr t						0.850
Fl t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						893
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	564	151	0	323	905
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	564	151	0	323	905
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing+Project
PM Peak Hour

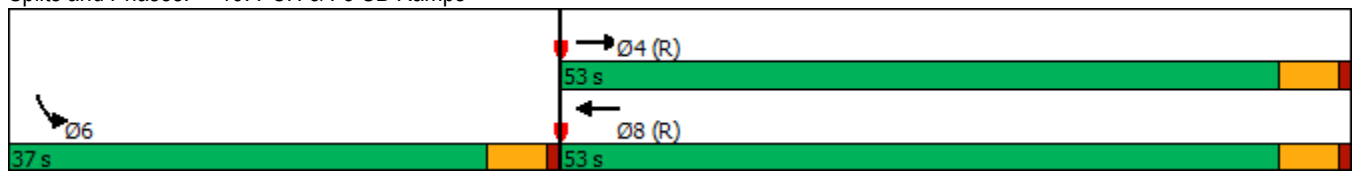


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		53.0	53.0		37.0	
Total Split (%)		58.9%	58.9%		41.1%	
Maximum Green (s)		48.0	48.0		32.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		48.0	48.0		32.0	90.0
Actuated g/C Ratio		0.53	0.53		0.36	1.00
v/c Ratio		0.30	0.15		0.26	0.57
Control Delay		12.2	6.1		21.4	1.5
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		12.2	6.1		21.4	1.5
LOS		B	A		C	A
Approach Delay		12.2	6.1		6.7	
Approach LOS		B	A		A	
Queue Length 50th (ft)		88	17		66	0
Queue Length 95th (ft)		121	30		98	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		1887	993		1220	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.30	0.15		0.26	0.57

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 8.3
 Intersection Capacity Utilization 31.9%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing+Project
 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	467	389	0	365	10	7	32	116	6	0	48
Future Volume (veh/h)	47	467	389	0	365	10	7	32	116	6	0	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	486	0	0	380	10	7	33	121	6	0	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	561	1856		0	2672	70	129	573	581	515	0	581
Arrive On Green	0.52	0.52	0.00	0.00	0.52	0.52	0.37	0.37	0.37	0.37	0.00	0.37
Sat Flow, veh/h	994	3554	1585	0	5285	134	223	1563	1585	1233	0	1585
Grp Volume(v), veh/h	49	486	0	0	252	138	40	0	121	6	0	50
Grp Sat Flow(s),veh/h/ln	994	1777	1585	0	1702	1846	1786	0	1585	1233	0	1585
Q Serve(g_s), s	2.4	6.8	0.0	0.0	3.4	3.5	0.0	0.0	4.7	0.3	0.0	1.9
Cycle Q Clear(g_c), s	5.9	6.8	0.0	0.0	3.4	3.5	1.2	0.0	4.7	1.5	0.0	1.9
Prop In Lane	1.00		1.00	0.00		0.07	0.17		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	561	1856		0	1778	964	702	0	581	515	0	581
V/C Ratio(X)	0.09	0.26		0.00	0.14	0.14	0.06	0.00	0.21	0.01	0.00	0.09
Avail Cap(c_a), veh/h	561	1856		0	1778	964	702	0	581	515	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.6	11.9	0.0	0.0	11.1	11.1	18.4	0.0	19.5	18.9	0.0	18.6
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.0	0.2	0.3	0.2	0.0	0.8	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.5	0.0	0.0	1.2	1.4	0.6	0.0	1.8	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	12.2	0.0	0.0	11.3	11.4	18.6	0.0	20.4	19.0	0.0	18.9
LnGrp LOS	B	B		A	B	B	B	A	C	B	A	B
Approach Vol, veh/h		535	A		390			161				56
Approach Delay, s/veh		12.3			11.3			19.9				18.9
Approach LOS		B			B			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.0		52.0		38.0		52.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		33.0		47.0		33.0		47.0				
Max Q Clear Time (g_c+I1), s		6.7		8.8		3.9		5.5				
Green Ext Time (p_c), s		0.6		3.6		0.3		2.4				

Intersection Summary





















HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing+Project
 PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	467	389	0	365	10	7	32	116	6	0	48
Future Volume (vph)	47	467	389	0	365	10	7	32	116	6	0	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996				0.850		0.850	
Flt Protected	0.950							0.991		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5065	0	0	1846	1583	1770	1583	0
Flt Permitted	0.513							0.971		0.731		
Satd. Flow (perm)	956	3539	1583	0	5065	0	0	1809	1583	1362	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			405		6				121		427	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	49	486	405	0	380	10	7	33	121	6	0	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	486	405	0	390	0	0	40	121	6	50	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing+Project
 PM Peak Hour

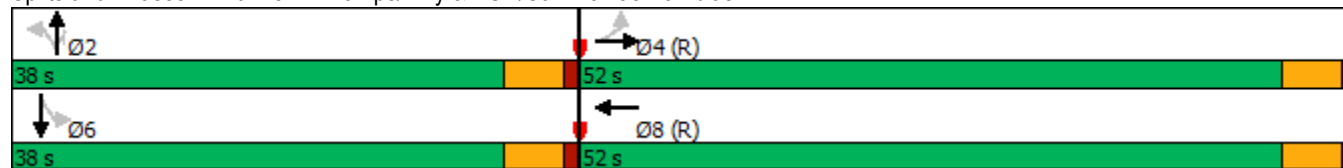


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	52.0	52.0			52.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)	57.8%	57.8%			57.8%		42.2%	42.2%	42.2%	42.2%	42.2%	
Maximum Green (s)	47.0	47.0			47.0		33.0	33.0	33.0	33.0	33.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	47.0	47.0	90.0		47.0		33.0	33.0	33.0	33.0	33.0	
Actuated g/C Ratio	0.52	0.52	1.00		0.52		0.37	0.37	0.37	0.37	0.37	
v/c Ratio	0.10	0.26	0.26		0.15		0.06	0.18	0.01	0.01	0.06	
Control Delay	7.7	8.4	0.4		11.1		18.9	4.6	18.3	0.1	0.1	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	7.7	8.4	0.4		11.1		18.9	4.6	18.3	0.1	0.1	
LOS	A	A	A		B		B	A	B	A	A	
Approach Delay		4.9			11.1		8.1				2.1	
Approach LOS		A			B		A				A	
Queue Length 50th (ft)	8	43	0		39		14	0	2	0	0	
Queue Length 95th (ft)	19	58	0		55		36	34	10	0	0	
Internal Link Dist (ft)		121			561		495				178	
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	499	1848	1583		2647		663	657	499	850		
Starvation Cap Reductn	0	0	0		0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0		0		0	0	0	0	0	
Storage Cap Reductn	0	0	0		0		0	0	0	0	0	
Reduced v/c Ratio	0.10	0.26	0.26		0.15		0.06	0.18	0.01	0.01	0.06	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.26
Intersection Signal Delay:	6.7
Intersection Capacity Utilization:	37.6%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Existing+Project
 PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↰	↰	↕↕	↰	↰↰	↕↕
Traffic Volume (veh/h)	954	390	596	35	490	646
Future Volume (veh/h)	954	390	596	35	490	646
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1004	0	627	0	516	680
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1128		1217		606	1998
Arrive On Green	0.33	0.00	0.34	0.00	0.18	0.56
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	1004	0	627	0	516	680
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	24.8	0.0	12.7	0.0	13.0	9.3
Cycle Q Clear(g_c), s	24.8	0.0	12.7	0.0	13.0	9.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1128		1217		606	1998
V/C Ratio(X)	0.89		0.52		0.85	0.34
Avail Cap(c_a), veh/h	1305		1217		730	1998
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	23.6	0.0	36.0	10.7
Incr Delay (d2), s/veh	7.2	0.0	1.6	0.0	8.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.0	5.2	0.0	5.9	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.9	0.0	25.2	0.0	44.2	11.1
LnGrp LOS	D		C		D	B
Approach Vol, veh/h	1004	A	627	A		1196
Approach Delay, s/veh	35.9		25.2			25.4
Approach LOS	D		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	19.8	35.8			55.6	34.4
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	19.0	23.0			46.0	34.0
Max Q Clear Time (g_c+I1), s	15.0	14.7			11.3	26.8
Green Ext Time (p_c), s	0.8	2.4			4.7	2.6

Intersection Summary













HCM 6th Ctrl Delay		29.1
HCM 6th LOS		C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing+Project
 PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	954	390	596	35	490	646
Future Volume (vph)	954	390	596	35	490	646
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		349		37		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1004	411	627	37	516	680
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1004	411	627	37	516	680
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing+Project
 PM Peak Hour

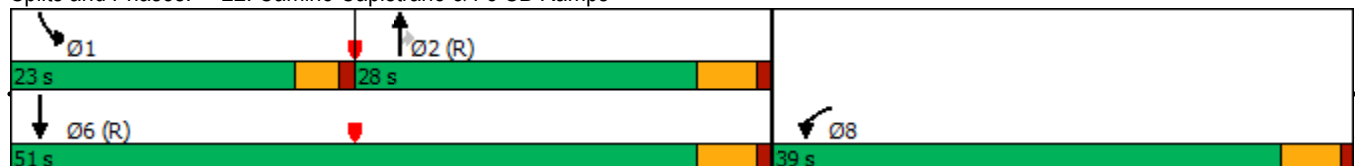


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	39.0		28.0	28.0	23.0	51.0
Total Split (%)	43.3%		31.1%	31.1%	25.6%	56.7%
Maximum Green (s)	34.0		23.0	23.0	19.0	46.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effect Green (s)	31.2	90.0	27.4	27.4	17.4	48.8
Actuated g/C Ratio	0.35	1.00	0.30	0.30	0.19	0.54
v/c Ratio	0.84	0.26	0.58	0.07	0.78	0.35
Control Delay	34.4	0.4	30.3	9.2	43.1	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	0.4	30.3	9.2	43.1	12.8
LOS	C	A	C	A	D	B
Approach Delay	24.5		29.2			25.9
Approach LOS	C		C			C
Queue Length 50th (ft)	261	0	164	0	142	112
Queue Length 95th (ft)	330	0	230	23	196	156
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1296	1583	1075	507	724	1917
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.26	0.58	0.07	0.71	0.35

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 26.0
 Intersection LOS: C
 Intersection Capacity Utilization 69.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Two-way stop	Delay (sec / veh):	39.1
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	35	4	0	0	0	1287	20	9	1452	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	35	4	0	0	0	1287	20	9	1452	3
Peak Hour Factor	1.0000	1.0000	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	1	0	0	0	333	5	2	376	1
Total Analysis Volume [veh/h]	0	0	36	4	0	0	0	1334	21	9	1505	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.09	0.04	0.00	0.00	0.00	0.01	0.00	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	14.85	39.14	35.11	16.48	13.19	0.00	0.00	12.28	0.00	0.00
Movement LOS			B	E	E	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.29	0.11	0.11	0.11	0.00	0.00	0.00	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	7.34	2.82	2.82	2.82	0.00	0.00	0.00	1.36	0.00	0.00
d_A, Approach Delay [s/veh]	14.85		39.14				0.00		0.07			
Approach LOS	B		E				A		A			
d_I, Intersection Delay [s/veh]	0.28											
Intersection LOS	E											

Intersection Level Of Service Report

Intersection 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	121	388	1016	137	121	172
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	388	1016	137	121	172
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	100	261	35	31	44
Total Analysis Volume [veh/h]	124	399	1044	141	124	177
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume cr	0		0		0	
v_di, Inbound Pedestrian Volume cros	0		0		0	
v_co, Outbound Pedestrian Volume cr	0		0		0	
v_ci, Inbound Pedestrian Volume cros	0		0		0	
v_ab, Corner Pedestrian Volume [ped/	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	24	46	22	0	44	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	70	58	58	12	12
g / C, Green / Cycle	0.09	0.77	0.64	0.64	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.07	0.11	0.29	0.09	0.07	0.11
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	158	2749	2274	1015	247	221
d1, Uniform Delay [s]	40.16	2.63	8.31	6.45	35.88	37.57
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.14	0.11	0.67	0.29	1.57	6.62
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.15	0.46	0.14	0.50	0.80
d, Delay for Lane Group [s/veh]	48.31	2.74	8.98	6.73	37.45	44.19
Lane Group LOS	D	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.01	0.67	4.74	1.03	2.59	4.12
50th-Percentile Queue Length [ft/ln]	75.29	16.82	118.53	25.74	64.85	103.05
95th-Percentile Queue Length [veh/ln]	5.42	1.21	8.31	1.85	4.67	7.42
95th-Percentile Queue Length [ft/ln]	135.52	30.28	207.80	46.33	116.73	185.48

Movement, Approach, & Intersection Results

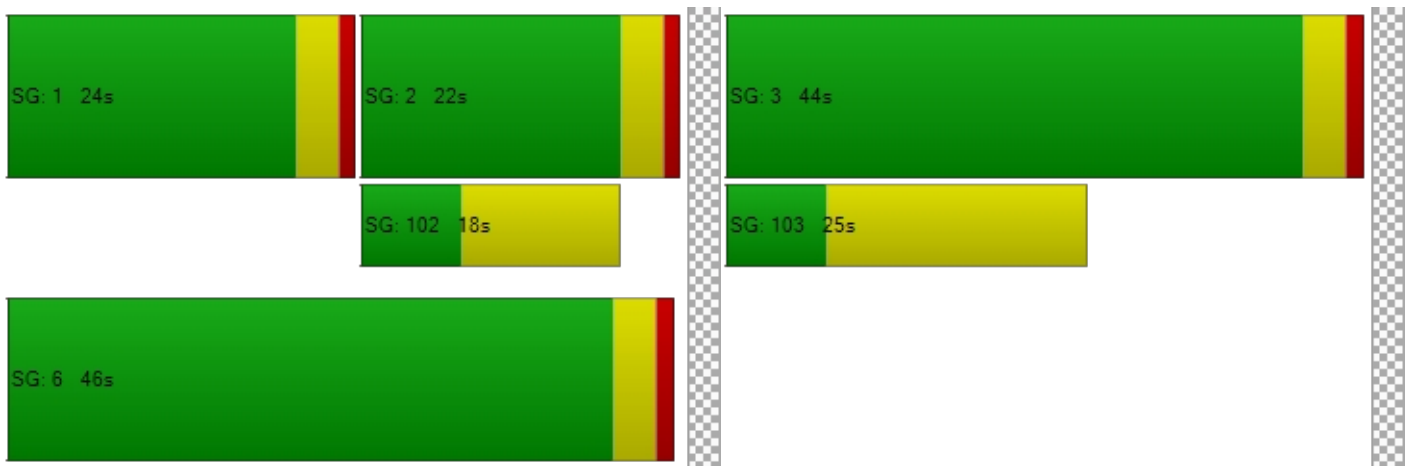
d_M, Delay for Movement [s/veh]	48.31	2.74	8.98	6.73	37.45	44.19
Movement LOS	D	A	A	A	D	D
d_A, Approach Delay [s/veh]	13.54		8.71		41.41	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	14.87					
Intersection LOS	B					
Intersection V/C	0.547					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
I_p,int, Pedestrian LOS Score for Inter	2.639	0.000	2.124
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycl	2000	2000	2000
c_b, Capacity of the bicycle lane [bicyc	933	400	889
d_b, Bicycle Delay [s]	12.80	28.80	13.89
I_b,int, Bicycle LOS Score for Intersect	1.991	2.537	1.560
Bicycle LOS	A	B	A






















Sequence

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



HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing+Project
 Sat Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	653	442	0	0	0	418	301	397	69	669	559
Future Volume (veh/h)	187	653	442	0	0	0	418	301	397	69	669	559
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	193	673	0				370	395	409	71	690	576
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	387	772					532	558	473	581	1160	1516
Arrive On Green	0.22	0.22	0.00				0.30	0.30	0.30	0.33	0.33	0.33
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	193	673	0				370	395	409	71	690	576
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	9.0	17.4	0.0				17.5	17.8	23.2	2.7	15.4	11.3
Cycle Q Clear(g_c), s	9.0	17.4	0.0				17.5	17.8	23.2	2.7	15.4	11.3
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	387	772					532	558	473	581	1160	1516
V/C Ratio(X)	0.50	0.87					0.70	0.71	0.86	0.12	0.60	0.38
Avail Cap(c_a), veh/h	413	823					532	558	473	581	1160	1516
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	35.9	0.0				29.5	29.6	31.5	22.5	26.8	12.5
Incr Delay (d2), s/veh	1.0	9.7	0.0				7.3	7.4	18.6	0.4	2.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	8.2	0.0				8.2	8.7	10.8	1.1	6.5	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.6	45.6	0.0				36.8	37.0	50.1	22.9	29.0	13.2
LnGrp LOS	C	D					D	D	D	C	C	B
Approach Vol, veh/h		866	A					1174			1337	
Approach Delay, s/veh		42.9						41.5			21.9	
Approach LOS		D						D			C	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		33.4		25.6				36.0				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		27.0		22.0				31.0				
Max Q Clear Time (g_c+I1), s		25.2		19.4				17.4				
Green Ext Time (p_c), s		1.0		1.3				6.0				

Intersection Summary






















HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing+Project
Sat Midday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	653	442	0	0	0	418	301	397	69	669	559
Future Volume (vph)	187	653	442	0	0	0	418	301	397	69	669	559
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.991		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1754	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.991		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1754	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			456						409			260
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	193	673	456	0	0	0	431	310	409	71	690	576
Shared Lane Traffic (%)							16%					
Lane Group Flow (vph)	193	673	456	0	0	0	362	379	409	71	690	576
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Existing+Project
Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	27.0	27.0	27.0				32.0	32.0	32.0	36.0	36.0	27.0
Total Split (%)	28.4%	28.4%	28.4%				33.7%	33.7%	33.7%	37.9%	37.9%	28.4%
Maximum Green (s)	22.0	22.0	22.0				27.0	27.0	27.0	31.0	31.0	22.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	22.0	22.0	22.0				27.0	27.0	27.0	31.0	31.0	58.0
Actuated g/C Ratio	0.23	0.23	0.23				0.28	0.28	0.28	0.33	0.33	0.61
v/c Ratio	0.47	0.82	0.64				0.76	0.76	0.55	0.12	0.60	0.32
Control Delay	36.0	44.3	7.6				42.9	42.6	6.0	23.3	29.4	5.1
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	44.3	7.6				42.9	42.6	6.0	23.3	29.4	5.1
LOS	D	D	A				D	D	A	C	C	A
Approach Delay		30.5						29.7			18.6	
Approach LOS		C						C			B	
Queue Length 50th (ft)	101	203	0				209	218	0	30	182	43
Queue Length 95th (ft)	169	#287	82				#347	#357	69	61	241	71
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	409	819	716				477	498	742	577	1154	1802
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.82	0.64				0.76	0.76	0.55	0.12	0.60	0.32

Intersection Summary

Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 26.1
 Intersection LOS: C
 Intersection Capacity Utilization 73.6%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report

Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.451

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	1065	17	169	728	0	204
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1065	17	169	728	0	204
Peak Hour Factor	0.9620	0.9620	0.9620	0.9620	1.0000	0.9620
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	277	4	44	189	0	53
Total Analysis Volume [veh/h]	1107	18	176	757	0	212
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.29	0.01	0.00	0.45
d_M, Delay for Movement [s/veh]	0.00	0.00	13.15	0.00	0.00	18.81
Movement LOS	A	A	B	A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.17	0.00	0.00	2.30
95th-Percentile Queue Length [ft/ln]	0.00	0.00	29.33	0.00	0.00	57.54
d_A, Approach Delay [s/veh]	0.00		2.48		18.81	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.78					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	398	592	3	36	573	126	436	0	251	1	2	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
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]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	398	592	3	36	573	126	436	0	251	1	2	0
Peak Hour Factor	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540	0.9540
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]	104	155	1	9	150	33	114	0	66	0	1	0
Total Analysis Volume [veh/h]	417	621	3	38	601	132	457	0	263	1	2	0
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 cr	0			0			0			0		
v_di, Inbound Pedestrian Volume cros	0			0			0			0		
v_co, Outbound Pedestrian Volume cr	0			0			0			0		
v_ci, Inbound Pedestrian Volume cros	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permissi	Permissi	Protecte	Permissi	Permissi	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	22	41	0	10	29	0	0	34	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	56	56	4	46	46	19	19	19	1
g / C, Green / Cycle	0.15	0.59	0.59	0.04	0.48	0.48	0.20	0.20	0.20	0.01
(v / s)_i Volume / Saturation Flow Rate	0.12	0.17	0.17	0.02	0.17	0.08	0.13	0.13	0.17	0.00
s, saturation flow rate [veh/h]	3459	1870	1867	1781	3560	1589	1781	1781	1589	1839
c, Capacity [veh/h]	504	1094	1092	73	1712	764	355	355	317	11
d1, Uniform Delay [s]	39.49	9.83	9.83	44.69	15.43	13.99	34.99	34.99	36.55	47.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.55	0.66	0.66	5.53	0.57	0.49	1.95	1.95	5.58	12.35
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	0.83	0.29	0.29	0.52	0.35	0.17	0.64	0.64	0.83	0.27
d, Delay for Lane Group [s/veh]	43.04	10.48	10.49	50.22	16.00	14.48	36.94	36.94	42.13	59.44
Lane Group LOS	D	B	B	D	B	B	D	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	4.92	3.21	3.21	0.98	4.04	1.66	4.98	4.98	6.25	0.11
50th-Percentile Queue Length [ft/ln]	122.93	80.27	80.14	24.62	100.93	41.45	124.55	124.55	156.23	2.71
95th-Percentile Queue Length [veh/ln]	8.55	5.78	5.77	1.77	7.27	2.98	8.64	8.64	10.35	0.20
95th-Percentile Queue Length [ft/ln]	213.85	144.48	144.25	44.31	181.68	74.61	216.07	216.07	258.73	4.88

Movement, Approach, & Intersection Results

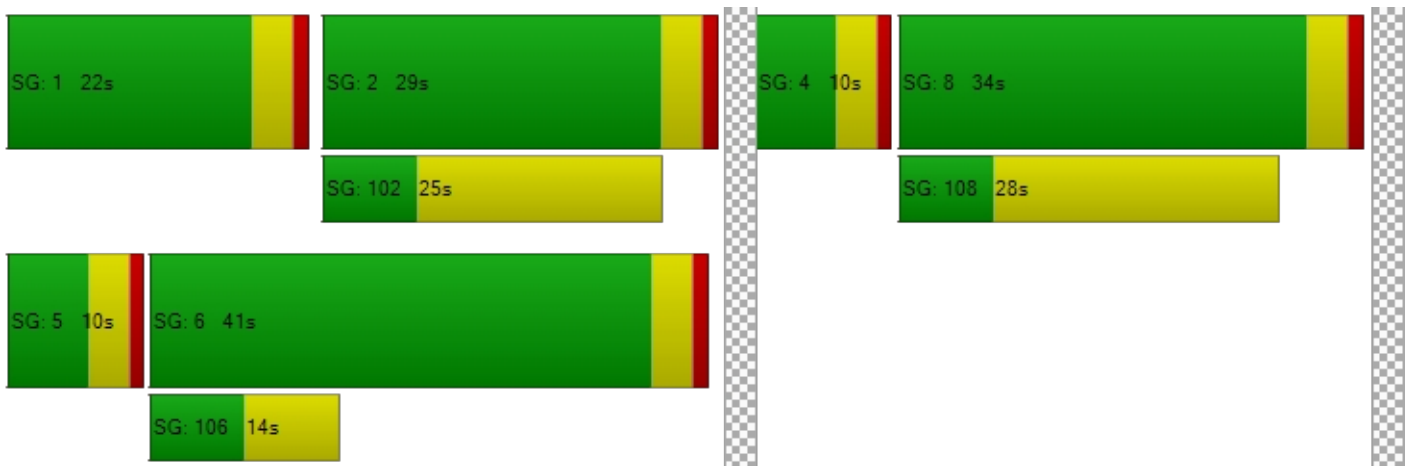
d_M, Delay for Movement [s/veh]	43.04	10.49	10.49	50.22	16.00	14.48	36.94	36.94	42.13	59.44	59.44	59.44
Movement LOS	D	B	B	D	B	B	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	23.53			17.43			38.84			59.44		
Approach LOS	C			B			D			E		
d_I, Intersection Delay [s/veh]	26.06											
Intersection LOS	C											
Intersection V/C	0.549											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			0.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ²]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ²]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	37.14			0.00			37.14			37.14		
I_p,int, Pedestrian LOS Score for Inter	2.765			0.000			2.550			1.739		
Crosswalk LOS	C			F			B			A		
s_b, Saturation Flow Rate of the bicycl	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicyc	779			526			632			126		
d_b, Bicycle Delay [s]	17.71			25.79			22.24			41.69		
I_b,int, Bicycle LOS Score for Intersect	2.418			2.196			2.748			1.565		
Bicycle LOS	B			B			B			A		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.069

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	53	1115	52	19	1028	33	0	0	33	0	0	29
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	1115	52	19	1028	33	0	0	33	0	0	29
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
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]	14	292	14	5	269	9	0	0	9	0	0	8
Total Analysis Volume [veh/h]	55	1166	54	20	1075	35	0	0	35	0	0	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings





















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.00	0.04	0.01	0.00	0.00	0.00	0.07	0.00	0.00	0.07
d_M, Delay for Movement [s/veh]	11.32	0.00	0.00	11.58	0.00	0.00	94.41	141.96	13.18	103.90	140.05	13.84
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	B
95th-Percentile Queue Length [veh/ln]	0.29	0.00	0.00	0.11	0.00	0.00	0.24	0.24	0.24	0.22	0.22	0.22
95th-Percentile Queue Length [ft/ln]	7.21	0.00	0.00	2.74	0.00	0.00	5.94	5.94	5.94	5.50	5.50	5.50
d_A, Approach Delay [s/veh]	0.49			0.20			13.18			13.84		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.70											
Intersection LOS	B											






















HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
 Sat Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	0	44	36	27	614	31	545	191	0	1042	37
Future Volume (veh/h)	48	0	44	36	27	614	31	545	191	0	1042	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	49	0	45	37	28	627	32	556	195	0	1063	38
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	269	18	208	412	296	649	102	1703	760	0	1283	46
Arrive On Green	0.41	0.00	0.41	0.41	0.41	0.41	0.06	0.48	0.48	0.00	0.37	0.37
Sat Flow, veh/h	508	45	508	853	722	1585	1781	3554	1585	0	3593	125
Grp Volume(v), veh/h	94	0	0	65	0	627	32	556	195	0	540	561
Grp Sat Flow(s),veh/h/ln	1061	0	0	1575	0	1585	1781	1777	1585	0	1777	1848
Q Serve(g_s), s	2.2	0.0	0.0	0.0	0.0	34.8	1.6	8.7	6.6	0.0	24.9	24.9
Cycle Q Clear(g_c), s	4.1	0.0	0.0	1.9	0.0	34.8	1.6	8.7	6.6	0.0	24.9	24.9
Prop In Lane	0.52		0.48	0.57		1.00	1.00		1.00	0.00		0.07
Lane Grp Cap(c), veh/h	495	0	0	708	0	649	102	1703	760	0	652	678
V/C Ratio(X)	0.19	0.00	0.00	0.09	0.00	0.97	0.31	0.33	0.26	0.00	0.83	0.83
Avail Cap(c_a), veh/h	497	0	0	710	0	652	119	1703	760	0	652	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	0.0	0.0	16.3	0.0	26.0	40.7	14.5	13.9	0.0	25.9	25.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	26.8	1.7	0.5	0.8	0.0	11.6	11.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.8	0.0	17.2	0.7	3.4	2.4	0.0	11.9	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	0.0	0.0	16.3	0.0	52.8	42.5	15.0	14.7	0.0	37.5	37.1
LnGrp LOS	B	A	A	B	A	D	D	B	B	A	D	D
Approach Vol, veh/h		94			692			783			1101	
Approach Delay, s/veh		16.9			49.4			16.0			37.3	
Approach LOS		B			D			B			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		48.1		41.9	10.1	38.0		41.9				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		43.0		37.0	6.0	* 33		37.0				
Max Q Clear Time (g_c+I1), s		10.7		6.1	3.6	26.9		36.8				
Green Ext Time (p_c), s		4.7		0.7	0.0	3.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				33.5								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
Sat Midday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	0	44	36	27	614	31	545	191	0	1042	37
Future Volume (vph)	48	0	44	36	27	614	31	545	191	0	1042	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.935				0.850			0.850		0.995	
Flt Protected		0.975			0.972		0.950					
Satd. Flow (prot)	0	1698	0	0	1811	1583	1770	3539	1583	0	3522	0
Flt Permitted		0.844			0.835		0.950					
Satd. Flow (perm)	0	1470	0	0	1555	1583	1770	3539	1583	0	3522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		85				239			195			4
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	49	0	45	37	28	627	32	556	195	0	1063	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	94	0	0	65	627	32	556	195	0	1101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Existing+Project
Sat Midday Peak Hour



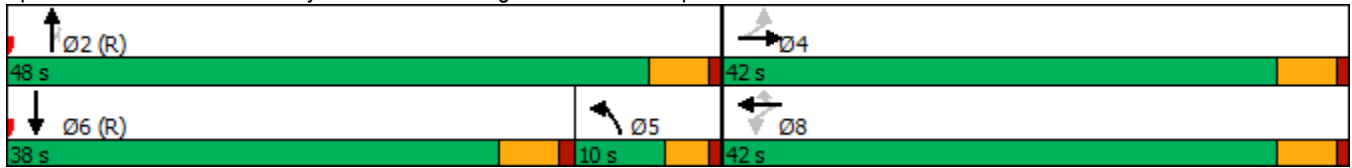
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	42.0	42.0		42.0	42.0	42.0	10.0	48.0	48.0		38.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%	46.7%	11.1%	53.3%	53.3%		42.2%	
Maximum Green (s)	37.0	37.0		37.0	37.0	37.0	6.0	43.0	43.0		33.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		30.7			30.7	30.7	6.0	49.3	49.3		43.3	
Actuated g/C Ratio		0.34			0.34	0.34	0.07	0.55	0.55		0.48	
v/c Ratio		0.17			0.12	0.90	0.27	0.29	0.20		0.65	
Control Delay		5.5			18.3	33.7	37.6	8.0	0.6		22.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		5.5			18.3	33.7	37.6	8.0	0.6		22.9	
LOS		A			B	C	D	A	A		C	
Approach Delay		5.5			32.2			7.4			22.9	
Approach LOS		A			C			A			C	
Queue Length 50th (ft)		3			24	209	17	56	0		276	
Queue Length 95th (ft)		32			48	#359	41	83	3		#387	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		654			639	791	118	1938	955		1696	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.14			0.10	0.79	0.27	0.29	0.20		0.65	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	58 (64%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	20.1
Intersection LOS:	C
Intersection Capacity Utilization:	70.9%
ICU Level of Service:	C
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	

Queue shown is maximum after two cycles.

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Existing+Project
 Sat Midday Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔	↔		↑↑	↓	
Traffic Volume (veh/h)	328	328	0	488	260	0
Future Volume (veh/h)	328	328	0	488	260	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	335	0	0	498	265	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	444		0	2702	1422	0
Arrive On Green	0.13	0.00	0.00	0.76	0.76	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	335	0	0	498	265	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	8.4	0.0	0.0	3.5	3.6	0.0
Cycle Q Clear(g_c), s	8.4	0.0	0.0	3.5	3.6	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	444		0	2702	1422	0
V/C Ratio(X)	0.75		0.00	0.18	0.19	0.00
Avail Cap(c_a), veh/h	1229		0	2702	1422	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.9	0.0	0.0	3.0	3.0	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.0	0.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	0.0	0.9	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.5	0.0	0.0	3.2	3.3	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	335	A		498	265	
Approach Delay, s/veh	40.5			3.2	3.3	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.4		16.6		73.4
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		48.0		32.0		48.0
Max Q Clear Time (g_c+I1), s		5.5		10.4		5.6
Green Ext Time (p_c), s		3.6		1.1		1.6

Intersection Summary

HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Existing+Project
 Sat Midday Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶↶	↷		↶↶	↶	
Traffic Volume (vph)	328	328	0	488	260	0
Future Volume (vph)	328	328	0	488	260	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		335				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	335	335	0	498	265	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	335	335	0	498	265	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Existing+Project
 Sat Midday Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	37.0			53.0	53.0	
Total Split (%)	41.1%			58.9%	58.9%	
Maximum Green (s)	32.0			48.0	48.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	14.2	90.0		65.8	65.8	
Actuated g/C Ratio	0.16	1.00		0.73	0.73	
v/c Ratio	0.62	0.21		0.19	0.19	
Control Delay	40.2	0.3		4.3	1.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	40.2	0.3		4.3	1.4	
LOS	D	A		A	A	
Approach Delay	20.3			4.3	1.4	
Approach LOS	C			A	A	
Queue Length 50th (ft)	92	0		38	6	
Queue Length 95th (ft)	129	0		65	11	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1220	1583		2588	1362	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.27	0.21		0.19	0.19	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	11.2
Intersection LOS:	B
Intersection Capacity Utilization:	31.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.105

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	5	74	94	111	69	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	74	94	111	69	5
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	20	26	31	19	1
Total Analysis Volume [veh/h]	6	82	104	123	76	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.10	0.01
d_M, Delay for Movement [s/veh]	7.70	0.00	0.00	0.00	10.54	9.12
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.35	0.02
95th-Percentile Queue Length [ft/ln]	0.34	0.34	0.00	0.00	8.73	0.52
d_A, Approach Delay [s/veh]	0.52		0.00		10.43	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.27					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.227

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	59	1	13	14	2	104	43	83	14	6	117	14
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	1	13	14	2	104	43	83	14	6	117	14
Peak Hour Factor	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060	0.8060
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	0	4	4	1	32	13	26	4	2	36	4
Total Analysis Volume [veh/h]	73	1	16	17	2	129	53	103	17	7	145	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	719	820	762	770
Degree of Utilization, x	0.13	0.18	0.23	0.22

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.43	0.66	0.87	0.83
95th-Percentile Queue Length [ft]	10.67	16.38	21.76	20.85
Approach Delay [s/veh]	8.72	8.35	9.10	8.98
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.82			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.113

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↰		↳		↔	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	0	3	1	7	76	2
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	1	7	76	2
Peak Hour Factor	0.6670	0.6670	0.6670	0.6670	0.6670	0.6670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	3	28	1
Total Analysis Volume [veh/h]	0	4	1	10	114	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.11	0.00
d_M, Delay for Movement [s/veh]	7.24	0.00	0.00	0.00	9.03	8.81
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.39	0.39
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	9.77	9.77
d_A, Approach Delay [s/veh]	0.00		0.00		9.02	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	108	102	115	5	5	105
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	102	115	5	5	105
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	28	31	1	1	28
Total Analysis Volume [veh/h]	117	110	124	5	5	113
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.01	0.12
d_M, Delay for Movement [s/veh]	7.69	0.00	0.00	0.00	12.71	9.51
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.26	0.00	0.00	0.00	0.45	0.45
95th-Percentile Queue Length [ft/ln]	6.54	0.00	0.00	0.00	11.37	11.37
d_A, Approach Delay [s/veh]	3.96		0.00		9.65	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.30					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	20.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.082

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	35	1097	890	32	21	48
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	1097	890	32	21	48
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	290	235	8	6	13
Total Analysis Volume [veh/h]	37	1161	942	34	22	51
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.08	0.10
d_M, Delay for Movement [s/veh]	10.41	0.00	0.00	0.00	20.40	13.77
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	0.65	0.65
95th-Percentile Queue Length [ft/ln]	4.16	0.00	0.00	0.00	16.15	16.15
d_A, Approach Delay [s/veh]	0.32		0.00		15.77	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.68					
Intersection LOS	C					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Existing+Project
 Sat Midday Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	501	116	0	181	630
Future Volume (veh/h)	0	501	116	0	181	630
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	522	121	0	189	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	2093	1101	0	1037	
Arrive On Green	0.00	0.59	0.59	0.00	0.30	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	522	121	0	189	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	6.4	2.6	0.0	3.6	0.0
Cycle Q Clear(g_c), s	0.0	6.4	2.6	0.0	3.6	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2093	1101	0	1037	
V/C Ratio(X)	0.00	0.25	0.11	0.00	0.18	
Avail Cap(c_a), veh/h	0	2093	1101	0	1037	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	8.1	0.0	23.3	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.2	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	1.0	0.0	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.2	8.3	0.0	23.7	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		522	121		189	A
Approach Delay, s/veh		9.2	8.3		23.7	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				58.0	32.0	58.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				53.0	27.0	53.0
Max Q Clear Time (g_c+I1), s				8.4	5.6	4.6
Green Ext Time (p_c), s				3.6	0.6	0.6

Intersection Summary

HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing+Project
Sat Midday Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	501	116	0	181	630
Future Volume (vph)	0	501	116	0	181	630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr _t						0.850
Fl _t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl _t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						656
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	522	121	0	189	656
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	522	121	0	189	656
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Existing+Project
Sat Midday Peak Hour

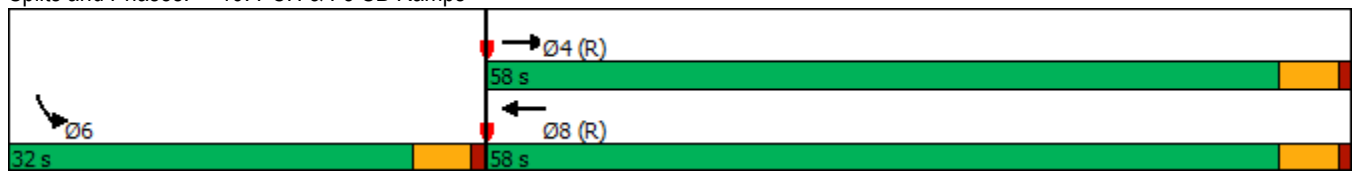


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		58.0	58.0		32.0	
Total Split (%)		64.4%	64.4%		35.6%	
Maximum Green (s)		53.0	53.0		27.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		53.0	53.0		27.0	90.0
Actuated g/C Ratio		0.59	0.59		0.30	1.00
v/c Ratio		0.25	0.11		0.18	0.41
Control Delay		9.3	2.7		23.9	0.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		9.3	2.7		23.9	0.8
LOS		A	A		C	A
Approach Delay		9.3	2.7		6.0	
Approach LOS		A	A		A	
Queue Length 50th (ft)		69	7		40	0
Queue Length 95th (ft)		96	12		67	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		2084	1097		1029	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.25	0.11		0.18	0.41

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 9 (10%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.41
 Intersection Signal Delay: 6.9
 Intersection LOS: A
 Intersection Capacity Utilization 27.3%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing+Project
 Sat Midday Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↗	
Traffic Volume (veh/h)	41	324	423	0	392	5	6	21	97	6	0	55
Future Volume (veh/h)	41	324	423	0	392	5	6	21	97	6	0	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	352	0	0	426	5	7	23	105	7	0	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	504	1737		0	2543	30	180	566	634	573	0	634
Arrive On Green	0.49	0.49	0.00	0.00	0.49	0.49	0.40	0.40	0.40	0.40	0.00	0.40
Sat Flow, veh/h	957	3554	1585	0	5371	61	327	1414	1585	1262	0	1585
Grp Volume(v), veh/h	45	352	0	0	278	153	30	0	105	7	0	60
Grp Sat Flow(s),veh/h/ln	957	1777	1585	0	1702	1859	1742	0	1585	1262	0	1585
Q Serve(g_s), s	2.5	5.1	0.0	0.0	4.1	4.1	0.0	0.0	3.8	0.3	0.0	2.1
Cycle Q Clear(g_c), s	6.6	5.1	0.0	0.0	4.1	4.1	0.9	0.0	3.8	1.2	0.0	2.1
Prop In Lane	1.00		1.00	0.00		0.03	0.23		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	504	1737		0	1664	909	746	0	634	573	0	634
V/C Ratio(X)	0.09	0.20		0.00	0.17	0.17	0.04	0.00	0.17	0.01	0.00	0.09
Avail Cap(c_a), veh/h	504	1737		0	1664	909	746	0	634	573	0	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	13.0	0.0	0.0	12.8	12.8	16.5	0.0	17.3	16.8	0.0	16.8
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.0	0.2	0.4	0.1	0.0	0.6	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.9	0.0	0.0	1.5	1.7	0.4	0.0	1.5	0.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.0	13.3	0.0	0.0	13.0	13.2	16.6	0.0	17.9	16.9	0.0	17.1
LnGrp LOS	B	B		A	B	B	B	A	B	B	A	B
Approach Vol, veh/h		397	A		431			135				67
Approach Delay, s/veh		13.5			13.1			17.6				17.1
Approach LOS		B			B			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		49.0		41.0		49.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		36.0		44.0		36.0		44.0				
Max Q Clear Time (g_c+I1), s		5.8		8.6		4.1		6.1				
Green Ext Time (p_c), s		0.5		2.5		0.3		2.7				

Intersection Summary

HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing+Project
 Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	324	423	0	392	5	6	21	97	6	0	55
Future Volume (vph)	41	324	423	0	392	5	6	21	97	6	0	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998				0.850		0.850	
Flt Protected	0.950							0.988		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5075	0	0	1840	1583	1770	1583	0
Flt Permitted	0.492							0.962		0.738		
Satd. Flow (perm)	916	3539	1583	0	5075	0	0	1792	1583	1375	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			460		3				105		353	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	352	460	0	426	5	7	23	105	7	0	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	352	460	0	431	0	0	30	105	7	60	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Existing+Project
 Sat Midday Peak Hour

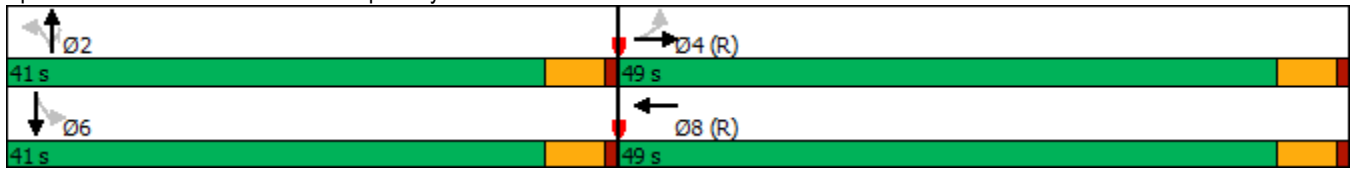


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	49.0	49.0			49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	54.4%	54.4%			54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	44.0	44.0			44.0		36.0	36.0	36.0	36.0	36.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	44.0	44.0	90.0		44.0		36.0	36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.49	0.49	1.00		0.49		0.40	0.40	0.40	0.40	0.40	
v/c Ratio	0.10	0.20	0.29		0.17		0.04	0.15	0.01	0.01	0.07	
Control Delay	10.1	10.2	0.8		13.0		16.8	4.2	16.5	0.2	0.2	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	10.1	10.2	0.8		13.0		16.8	4.2	16.5	0.2	0.2	
LOS	B	B	A		B		B	A	B	A	A	
Approach Delay		5.2			13.0		7.0				1.9	
Approach LOS		A			B		A				A	
Queue Length 50th (ft)	10	43	2		47		10	0	2	0	0	
Queue Length 95th (ft)	25	61	12		66		27	30	11	0	0	
Internal Link Dist (ft)		121			561		495				178	
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	447	1730	1583		2482		716	696	550	845		
Starvation Cap Reductn	0	0	0		0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0		0		0	0	0	0	0	
Storage Cap Reductn	0	0	0		0		0	0	0	0	0	
Reduced v/c Ratio	0.10	0.20	0.29		0.17		0.04	0.15	0.01	0.07		

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.29
Intersection Signal Delay:	7.5
Intersection Capacity Utilization	32.5%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Existing+Project
 Sat Midday Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	893	363	562	33	456	609
Future Volume (veh/h)	893	363	562	33	456	609
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	940	0	592	0	480	641
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1066		1316		573	2063
Arrive On Green	0.31	0.00	0.37	0.00	0.17	0.58
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	940	0	592	0	480	641
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	23.3	0.0	11.3	0.0	12.1	8.3
Cycle Q Clear(g_c), s	23.3	0.0	11.3	0.0	12.1	8.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1066		1316		573	2063
V/C Ratio(X)	0.88		0.45		0.84	0.31
Avail Cap(c_a), veh/h	1267		1316		730	2063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	0.0	21.4	0.0	36.4	9.7
Incr Delay (d2), s/veh	6.7	0.0	1.1	0.0	6.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	0.0	4.5	0.0	5.4	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.2	0.0	22.5	0.0	43.2	10.1
LnGrp LOS	D		C		D	B
Approach Vol, veh/h	940	A	592	A		1121
Approach Delay, s/veh	36.2		22.5			24.3
Approach LOS	D		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	18.9	38.3			57.2	32.8
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	19.0	24.0			47.0	33.0
Max Q Clear Time (g_c+I1), s	14.1	13.3			10.3	25.3
Green Ext Time (p_c), s	0.8	2.7			4.4	2.5

Intersection Summary

















HCM 6th Ctrl Delay			28.1			
HCM 6th LOS			C			

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
22: Camino Capistrano & I-5 SB Ramps

Existing+Project
Sat Midday Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	893	363	562	33	456	609
Future Volume (vph)	893	363	562	33	456	609
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		347		35		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	940	382	592	35	480	641
Shared Lane Traffic (%)						
Lane Group Flow (vph)	940	382	592	35	480	641
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Existing+Project
 Sat Midday Peak Hour



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	38.0		29.0	29.0	23.0	52.0
Total Split (%)	42.2%		32.2%	32.2%	25.6%	57.8%
Maximum Green (s)	33.0		24.0	24.0	19.0	47.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effect Green (s)	29.6	90.0	29.5	29.5	16.9	50.4
Actuated g/C Ratio	0.33	1.00	0.33	0.33	0.19	0.56
v/c Ratio	0.83	0.24	0.51	0.06	0.74	0.32
Control Delay	35.0	0.4	27.7	9.2	41.9	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	0.4	27.7	9.2	41.9	11.8
LOS	C	A	C	A	D	B
Approach Delay	25.0		26.7			24.7
Approach LOS	C		C			C
Queue Length 50th (ft)	248	0	145	0	132	98
Queue Length 95th (ft)	308	0	212	22	181	143
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1258	1583	1158	541	724	1981
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.24	0.51	0.06	0.66	0.32

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 25.2
 Intersection LOS: C
 Intersection Capacity Utilization 65.7%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Two-way stop	Delay (sec / veh):	34.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	33	4	0	0	0	1202	19	8	1364	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	33	4	0	0	0	1202	19	8	1364	3
Peak Hour Factor	1.0000	1.0000	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	1	0	0	0	311	5	2	353	1
Total Analysis Volume [veh/h]	0	0	34	4	0	0	0	1246	20	8	1413	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.08	0.03	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	14.11	34.65	31.65	15.49	12.54	0.00	0.00	11.71	0.00	0.00
Movement LOS			B	D	D	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.26	0.10	0.10	0.10	0.00	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	6.42	2.46	2.46	2.46	0.00	0.00	0.00	1.12	0.00	0.00
d_A, Approach Delay [s/veh]	14.11			34.65			0.00			0.07		
Approach LOS	B			D			A			A		
d_I, Intersection Delay [s/veh]	0.26											
Intersection LOS	D											

APPENDIX E-III

**EXISTING PLUS PROJECT TRAFFIC CONDITIONS
WITH IMPROVEMENTS**

Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.517

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
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	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	81	4	0	0	0	1650	16	33	905	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	81	4	0	0	0	1650	16	33	905	3
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	22	1	0	0	0	446	4	9	245	1
Total Analysis Volume [veh/h]	0	0	88	4	0	0	0	1784	17	36	978	3
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 cross	0			0			0			0		
v_di, Inbound Pedestrian Volume crossi	0			0			0			0		
v_co, Outbound Pedestrian Volume cros	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossin	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissi	Permissi	Permissi	Permissi	Permissi	Permissi	Protecte	Permissi	Permissi	Protecte	Permissi	Permissi
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	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [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
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	58	0	0	58	0	10	22	0	10	22	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	24	0	0	24	0	0	11	0	0	11	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	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	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]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	6	6	0	68	68	4	72	72
g / C, Green / Cycle	0.07	0.07	0.07	0.07	0.00	0.76	0.76	0.04	0.80	0.80
(v / s)_i Volume / Saturation Flow Rate	0.00	0.06	0.08	0.00	0.00	0.35	0.01	0.02	0.27	0.00
s, saturation flow rate [veh/h]	1417	1589	51	1589	1781	5094	1589	1781	3560	1589
c, Capacity [veh/h]	87	113	84	113	2	3844	1200	73	2828	1262
d1, Uniform Delay [s]	0.00	41.11	44.91	0.00	0.00	4.17	2.74	42.28	2.63	1.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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]	0.00	10.78	0.23	0.00	0.00	0.40	0.02	5.15	0.34	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.78	0.05	0.00	0.00	0.46	0.01	0.50	0.35	0.00
d, Delay for Lane Group [s/veh]	0.00	51.89	45.14	0.00	0.00	4.57	2.76	47.43	2.97	1.91
Lane Group LOS	A	D	D	A	A	A	A	D	A	A
Critical Lane Group	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.00	2.24	0.09	0.00	0.00	3.10	0.06	0.88	1.64	0.01
50th-Percentile Queue Length [ft/ln]	0.00	55.88	2.35	0.00	0.00	77.40	1.57	21.99	41.01	0.20
95th-Percentile Queue Length [veh/ln]	0.00	4.02	0.17	0.00	0.00	5.57	0.11	1.58	2.95	0.01
95th-Percentile Queue Length [ft/ln]	0.00	100.58	4.23	0.00	0.00	139.32	2.82	39.59	73.81	0.36

Movement, Approach, & Intersection Results

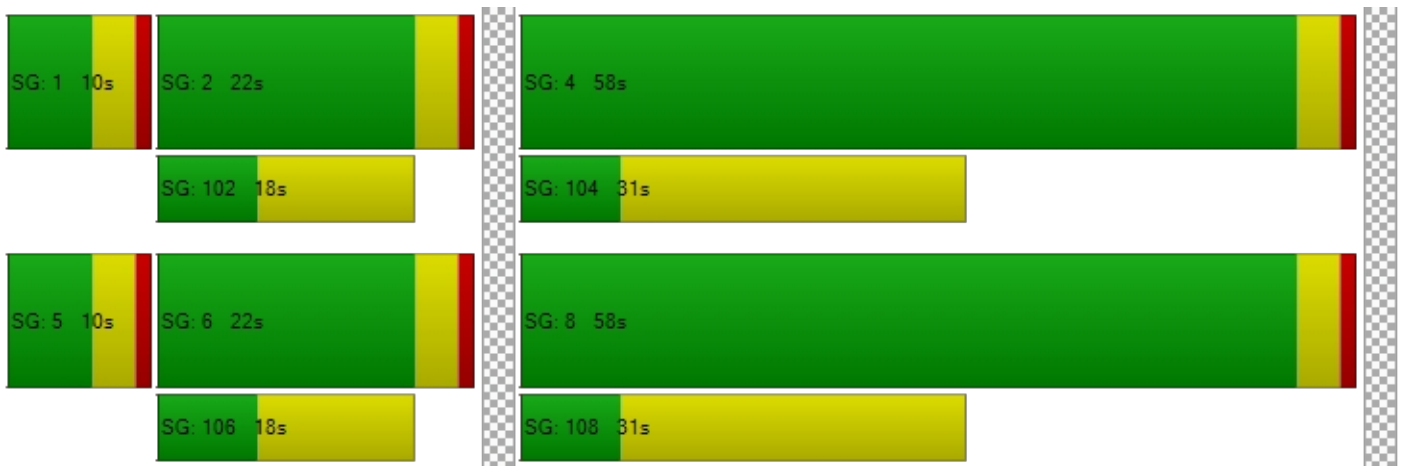
d_M, Delay for Movement [s/veh]	0.00	51.89	51.89	45.14	45.14	0.00	0.00	4.57	2.76	47.43	2.97	1.91
Movement LOS	A	D	D	D	D	A	A	A	A	D	A	A
d_A, Approach Delay [s/veh]	51.89			45.14			4.56			4.54		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	6.04											
Intersection LOS	A											
Intersection V/C	0.517											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Inter	1.986			1.942			2.980			3.002		
Crosswalk LOS	A			A			C			C		
s_b, Saturation Flow Rate of the bicycl	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicyc	1200			1200			400			400		
d_b, Bicycle Delay [s]	7.20			7.20			28.80			28.80		
I_b,int, Bicycle LOS Score for Intersect	1.705			1.566			2.550			2.399		
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 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Signalized	Delay (sec / veh):	3.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
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	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	35	4	0	0	0	1287	20	9	1452	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	35	4	0	0	0	1287	20	9	1452	3
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	1	0	0	0	348	5	2	392	1
Total Analysis Volume [veh/h]	0	0	38	4	0	0	0	1391	22	10	1570	3
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 cross	0			0			0			0		
v_di, Inbound Pedestrian Volume crossi	0			0			0			0		
v_co, Outbound Pedestrian Volume cros	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossin	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissi	Permissi	Permissi	Permissi	Permissi	Permissi	Protecte	Permissi	Permissi	Protecte	Permissi	Permissi
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	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [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
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	45	0	10	45	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	24	0	0	24	0	0	11	0	0	11	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	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	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]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	4	0	73	73	1	74	74
g / C, Green / Cycle	0.04	0.04	0.04	0.04	0.00	0.81	0.81	0.02	0.82	0.82
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.04	0.00	0.00	0.27	0.01	0.01	0.44	0.00
s, saturation flow rate [veh/h]	1417	1589	101	1589	1781	5094	1589	1781	3560	1589
c, Capacity [veh/h]	86	67	84	67	2	4119	1285	29	2931	1309
d1, Uniform Delay [s]	0.00	42.32	44.88	0.00	0.00	2.27	1.67	43.84	2.51	1.41
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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]	0.00	7.36	0.23	0.00	0.00	0.22	0.02	7.17	0.71	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.57	0.05	0.00	0.00	0.34	0.02	0.35	0.54	0.00
d, Delay for Lane Group [s/veh]	0.00	49.69	45.11	0.00	0.00	2.49	1.70	51.01	3.22	1.41
Lane Group LOS	A	D	D	A	A	A	A	D	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	0.96	0.09	0.00	0.00	1.28	0.05	0.28	2.40	0.01
50th-Percentile Queue Length [ft/ln]	0.00	23.94	2.35	0.00	0.00	31.97	1.26	6.89	59.95	0.14
95th-Percentile Queue Length [veh/ln]	0.00	1.72	0.17	0.00	0.00	2.30	0.09	0.50	4.32	0.01
95th-Percentile Queue Length [ft/ln]	0.00	43.10	4.22	0.00	0.00	57.54	2.27	12.40	107.91	0.25

Movement, Approach, & Intersection Results

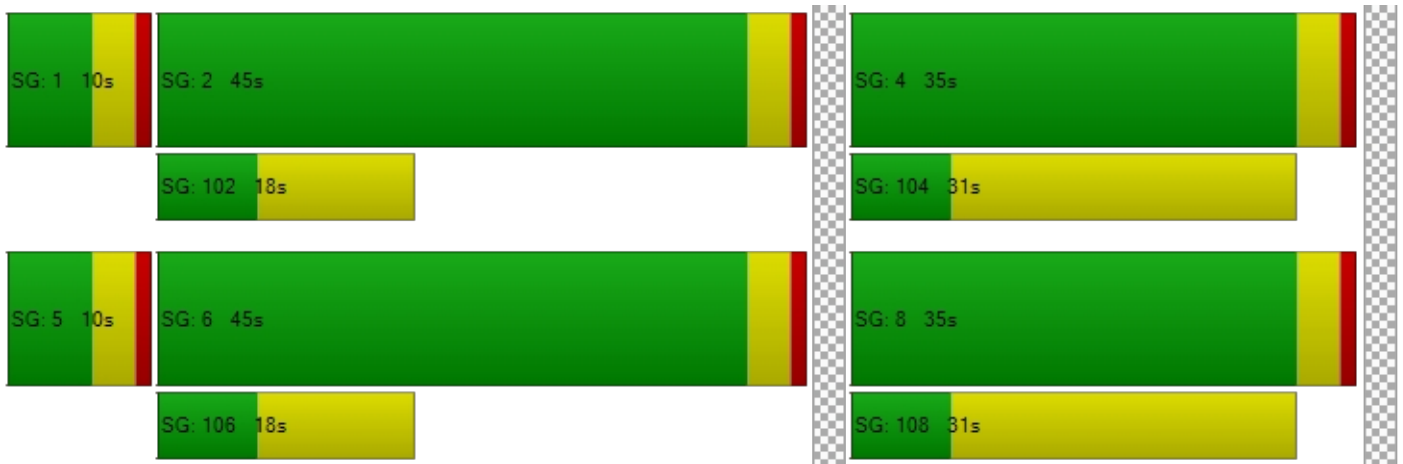
d_M, Delay for Movement [s/veh]	0.00	49.69	49.69	45.11	45.11	0.00	0.00	2.49	1.70	51.01	3.22	1.41
Movement LOS	A	D	D	D	D	A	A	A	A	D	A	A
d_A, Approach Delay [s/veh]	49.69		45.11				2.48		3.52			
Approach LOS	D		D				A		A			
d_I, Intersection Delay [s/veh]	3.67											
Intersection LOS	A											
Intersection V/C	0.555											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0		11.0				11.0		11.0			
M_corner, Corner Circulation Area [ft ² /	0.00		0.00				0.00		0.00			
M_CW, Crosswalk Circulation Area [ft ² /	0.00		0.00				0.00		0.00			
d_p, Pedestrian Delay [s]	34.67		34.67				34.67		34.67			
I_p,int, Pedestrian LOS Score for Inter	1.962		1.942				3.009		3.019			
Crosswalk LOS	A		A				C		C			
s_b, Saturation Flow Rate of the bicycl	2000		2000				2000		2000			
c_b, Capacity of the bicycle lane [bicyc	689		689				911		911			
d_b, Bicycle Delay [s]	19.34		19.34				13.34		13.34			
I_b,int, Bicycle LOS Score for Intersect	1.622		1.566				2.337		2.866			
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 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Signalized	Delay (sec / veh):	3.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
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	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	33	4	0	0	0	1202	19	8	1364	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	33	4	0	0	0	1202	19	8	1364	3
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	1	0	0	0	325	5	2	369	1
Total Analysis Volume [veh/h]	0	0	36	4	0	0	0	1299	21	9	1475	3
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 cross	0			0			0			0		
v_di, Inbound Pedestrian Volume crossi	0			0			0			0		
v_co, Outbound Pedestrian Volume cros	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossin	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissi	Permissi	Permissi	Permissi	Permissi	Permissi	Protecte	Permissi	Permissi	Protecte	Permissi	Permissi
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	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [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
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	45	0	10	45	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	24	0	0	24	0	0	11	0	0	11	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	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	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]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	4	0	73	73	1	74	74
g / C, Green / Cycle	0.04	0.04	0.04	0.04	0.00	0.81	0.81	0.01	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.04	0.00	0.00	0.26	0.01	0.01	0.41	0.00
s, saturation flow rate [veh/h]	1417	1589	103	1589	1781	5094	1589	1781	3560	1589
c, Capacity [veh/h]	86	65	84	65	2	4132	1289	26	2936	1311
d1, Uniform Delay [s]	0.00	42.39	44.88	0.00	0.00	2.15	1.63	43.93	2.36	1.39
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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]	0.00	7.24	0.23	0.00	0.00	0.20	0.02	7.56	0.62	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.56	0.05	0.00	0.00	0.31	0.02	0.34	0.50	0.00
d, Delay for Lane Group [s/veh]	0.00	49.62	45.11	0.00	0.00	2.35	1.65	51.49	2.98	1.39
Lane Group LOS	A	D	D	A	A	A	A	D	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	0.91	0.09	0.00	0.00	1.13	0.05	0.25	2.10	0.01
50th-Percentile Queue Length [ft/ln]	0.00	22.70	2.35	0.00	0.00	28.15	1.17	6.30	52.57	0.14
95th-Percentile Queue Length [veh/ln]	0.00	1.63	0.17	0.00	0.00	2.03	0.08	0.45	3.78	0.01
95th-Percentile Queue Length [ft/ln]	0.00	40.87	4.23	0.00	0.00	50.67	2.10	11.34	94.62	0.25

Movement, Approach, & Intersection Results

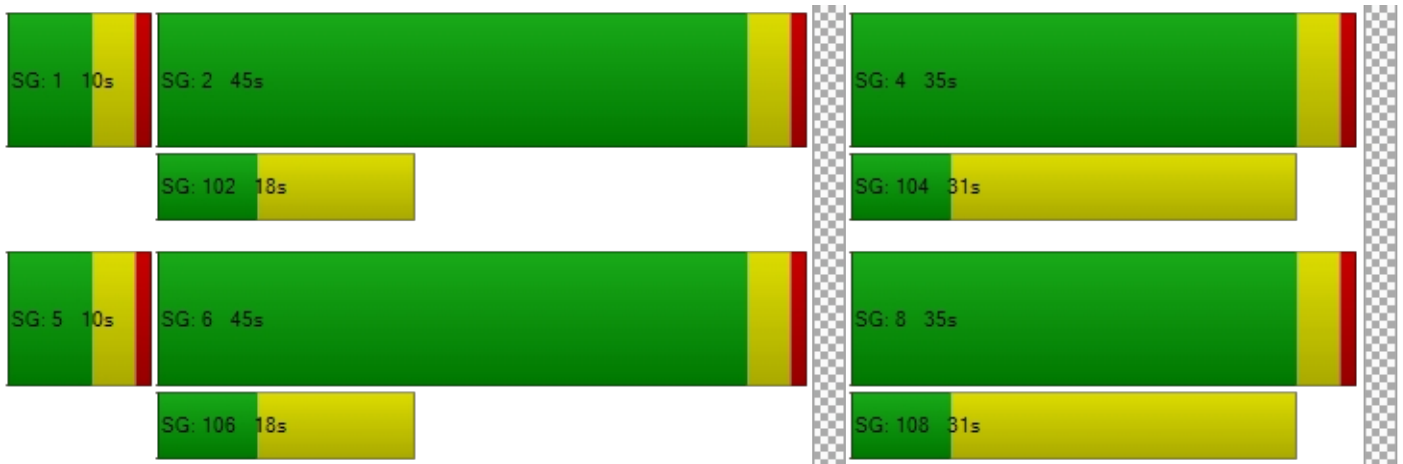
d_M, Delay for Movement [s/veh]	0.00	49.62	49.62	45.11	45.11	0.00	0.00	2.35	1.65	51.49	2.98	1.39
Movement LOS	A	D	D	D	D	A	A	A	A	D	A	A
d_A, Approach Delay [s/veh]	49.62		45.11			2.34		3.27				
Approach LOS	D		D			A		A				
d_I, Intersection Delay [s/veh]	3.48											
Intersection LOS	A											
Intersection V/C	0.523											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0		11.0			11.0		11.0			
M_corner, Corner Circulation Area [ft ² /	0.00		0.00			0.00		0.00			
M_CW, Crosswalk Circulation Area [ft ² /	0.00		0.00			0.00		0.00			
d_p, Pedestrian Delay [s]	34.67		34.67			34.67		34.67			
I_p,int, Pedestrian LOS Score for Inter	1.961		1.942			2.983		2.993			
Crosswalk LOS	A		A			C		C			
s_b, Saturation Flow Rate of the bicycl	2000		2000			2000		2000			
c_b, Capacity of the bicycle lane [bicyc	689		689			911		911			
d_b, Bicycle Delay [s]	19.34		19.34			13.34		13.34			
I_b,int, Bicycle LOS Score for Intersect	1.619		1.566			2.286		2.786			
Bicycle LOS	A		A			B		C			

Sequence

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



APPENDIX E-IV

YEAR 2045 BUILDOUT TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.566

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↩		↪		↩↪	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	213	646	906	233	128	185
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	213	646	906	233	128	185
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	162	227	58	32	46
Total Analysis Volume [veh/h]	213	646	906	233	128	185
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	39	61	22	0	29	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	69	52	52	13	13
g / C, Green / Cycle	0.14	0.77	0.58	0.58	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.12	0.18	0.25	0.15	0.07	0.12
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	256	2736	2066	923	254	227
d1, Uniform Delay [s]	37.51	2.95	10.63	9.29	35.64	37.44
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.96	0.20	0.68	0.66	1.54	6.96
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.24	0.44	0.25	0.50	0.81
d, Delay for Lane Group [s/veh]	44.48	3.16	11.31	9.95	37.18	44.39
Lane Group LOS	D	A	B	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.98	1.22	4.81	2.24	2.67	4.32
50th-Percentile Queue Length [ft/ln]	124.50	30.57	120.27	56.07	66.70	108.10
95th-Percentile Queue Length [veh/ln]	8.64	2.20	8.41	4.04	4.80	7.73
95th-Percentile Queue Length [ft/ln]	215.99	55.03	210.20	100.93	120.05	193.36

Movement, Approach, & Intersection Results

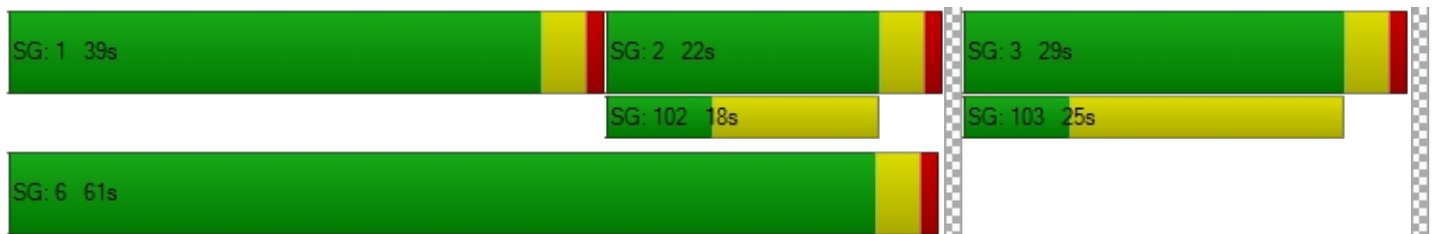
d_M, Delay for Movement [s/veh]	44.48	3.16	11.31	9.95	37.18	44.39
Movement LOS	D	A	B	A	D	D
d_A, Approach Delay [s/veh]	13.40		11.03		41.44	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	16.03					
Intersection LOS	B					
Intersection V/C	0.566					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.680	0.000	2.186
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1267	400	556
d_b, Bicycle Delay [s]	6.05	28.80	23.47
I_b,int, Bicycle LOS Score for Intersection	2.268	2.499	1.560
Bicycle LOS	B	B	A

Sequence

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



HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗				↘	↗	↗	↘	↑↑	↗↘
Traffic Volume (veh/h)	381	1314	341	0	0	0	439	477	345	64	351	676
Future Volume (veh/h)	381	1314	341	0	0	0	439	477	345	64	351	676
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	381	1314	0				439	477	345	64	351	676
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	609	1214					490	514	436	460	918	1674
Arrive On Green	0.34	0.34	0.00				0.28	0.28	0.28	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	381	1314	0				439	477	345	64	351	676
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	21.5	41.0	0.0				28.5	29.8	24.2	3.3	9.8	15.4
Cycle Q Clear(g_c), s	21.5	41.0	0.0				28.5	29.8	24.2	3.3	9.8	15.4
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	609	1214					490	514	436	460	918	1674
V/C Ratio(X)	0.63	1.08					0.90	0.93	0.79	0.14	0.38	0.40
Avail Cap(c_a), veh/h	609	1214					490	514	436	460	918	1674
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	39.5	0.0				41.9	42.3	40.3	34.2	36.6	12.7
Incr Delay (d2), s/veh	2.0	51.1	0.0				21.7	25.2	13.7	0.6	1.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	25.8	0.0				15.1	16.9	10.8	1.5	4.3	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	90.6	0.0				63.5	67.6	54.0	34.9	37.8	13.4
LnGrp LOS	D	F					E	E	D	C	D	B
Approach Vol, veh/h		1695	A				1261				1091	
Approach Delay, s/veh		78.1					62.4				22.5	
Approach LOS		E					E				C	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		38.0		46.0			36.0					
Change Period (Y+Rc), s		5.0		5.0			5.0					
Max Green Setting (Gmax), s		33.0		41.0			31.0					
Max Q Clear Time (g_c+I1), s		31.8		43.0			17.4					
Green Ext Time (p_c), s		0.7		0.0			4.5					

Intersection Summary

HCM 6th Ctrl Delay	58.3
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	381	1314	341	0	0	0	439	477	345	64	351	676
Future Volume (vph)	381	1314	341	0	0	0	439	477	345	64	351	676
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.996		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1763	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.996		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1763	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			341						241			234
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour 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
Adj. Flow (vph)	381	1314	341	0	0	0	439	477	345	64	351	676
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	381	1314	341	0	0	0	395	521	345	64	351	676
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	46.0	46.0	46.0				38.0	38.0	38.0	36.0	36.0	46.0
Total Split (%)	38.3%	38.3%	38.3%				31.7%	31.7%	31.7%	30.0%	30.0%	38.3%
Maximum Green (s)	41.0	41.0	41.0				33.0	33.0	33.0	31.0	31.0	41.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	41.0	41.0	41.0				33.0	33.0	33.0	31.0	31.0	77.0
Actuated g/C Ratio	0.34	0.34	0.34				0.28	0.28	0.28	0.26	0.26	0.64
v/c Ratio	0.63	1.09	0.45				0.85	1.08	0.57	0.14	0.38	0.36
Control Delay	38.8	90.8	4.9				60.0	104.7	15.2	35.3	38.1	6.8
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	90.8	4.9				60.0	104.7	15.2	35.3	38.1	6.8
LOS	D	F	A				E	F	B	D	D	A
Approach Delay		66.7						66.2			18.5	
Approach LOS		E						E			B	
Queue Length 50th (ft)	246	~601	0				306	~472	63	38	118	77
Queue Length 95th (ft)	354	#740	63				#485	#697	161	76	163	113
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	604	1209	765				462	484	610	457	914	1872
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.63	1.09	0.45				0.85	1.08	0.57	0.14	0.38	0.36

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle:	120
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.09
Intersection Signal Delay:	54.6
Intersection LOS:	D
Intersection Capacity Utilization:	83.6%
ICU Level of Service:	E
Analysis Period (min):	15

~ Volume exceeds capacity, queue is theoretically infinite.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045
AM Peak Hour

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report

Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	17.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	934	6	144	425	0	262
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	934	6	144	425	0	262
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	234	2	36	106	0	66
Total Analysis Volume [veh/h]	934	6	144	425	0	262
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.20	0.00	0.00	0.49
d_M, Delay for Movement [s/veh]	0.00	0.00	11.19	0.00	0.00	17.79
Movement LOS	A	A	B	A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.74	0.00	0.00	2.63
95th-Percentile Queue Length [ft/ln]	0.00	0.00	18.40	0.00	0.00	65.71
d_A, Approach Delay [s/veh]	0.00		2.83		17.79	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.54					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.324

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	147	770	5	5	380	40	165	5	76	5	5	5
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	770	5	5	380	40	165	5	76	5	5	5
Peak Hour 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
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]	37	193	1	1	95	10	41	1	19	1	1	1
Total Analysis Volume [veh/h]	147	770	5	5	380	40	165	5	76	5	5	5
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 in	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	19	38	0	10	29	0	0	32	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	65	65	1	59	59	7	7	7	2
g / C, Green / Cycle	0.07	0.72	0.72	0.01	0.66	0.66	0.08	0.08	0.08	0.02
(v / s)_i Volume / Saturation Flow Rate	0.04	0.21	0.21	0.00	0.11	0.03	0.05	0.05	0.05	0.01
s, saturation flow rate [veh/h]	3459	1870	1866	1781	3560	1589	1781	1786	1589	1739
c, Capacity [veh/h]	229	1338	1335	16	2344	1047	135	135	120	39
d1, Uniform Delay [s]	41.07	4.61	4.61	44.39	5.89	5.40	40.44	40.44	40.45	43.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.01	0.55	0.55	10.13	0.15	0.07	4.75	4.73	5.35	6.22
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	0.29	0.29	0.31	0.16	0.04	0.63	0.63	0.63	0.39
d, Delay for Lane Group [s/veh]	44.09	5.16	5.16	54.52	6.04	5.46	45.19	45.17	45.79	49.70
Lane Group LOS	D	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1.67	2.26	2.25	0.16	1.24	0.25	1.98	1.99	1.80	0.39
50th-Percentile Queue Length [ft/ln]	41.73	56.46	56.34	3.90	31.11	6.27	49.61	49.69	44.89	9.84
95th-Percentile Queue Length [veh/ln]	3.00	4.07	4.06	0.28	2.24	0.45	3.57	3.58	3.23	0.71
95th-Percentile Queue Length [ft/ln]	75.12	101.63	101.42	7.02	56.01	11.28	89.29	89.45	80.81	17.72

Movement, Approach, & Intersection Results

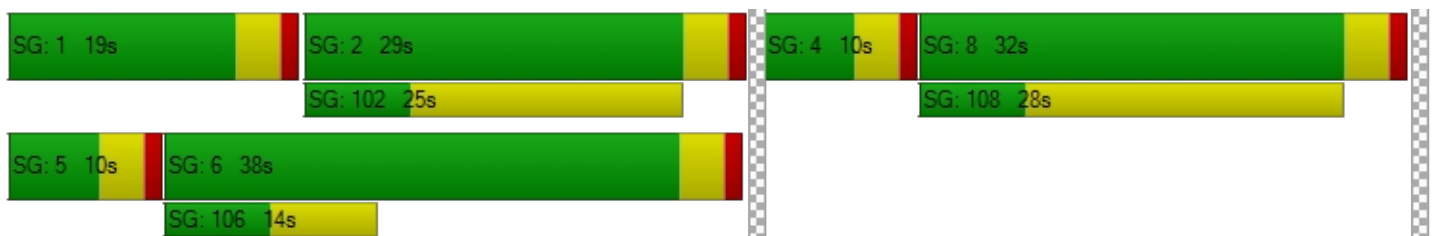
d_M, Delay for Movement [s/veh]	44.09	5.16	5.16	54.52	6.04	5.46	45.18	45.17	45.79	49.70	49.70	49.70
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	11.37			6.55			45.37			49.70		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	15.65											
Intersection LOS	B											
Intersection V/C	0.324											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	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]	34.67	0.00	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.677	0.000	2.385	1.729
Crosswalk LOS	B	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	756	556	622	133
d_b, Bicycle Delay [s]	17.42	23.47	21.36	39.20
I_b,int, Bicycle LOS Score for Intersection	2.320	1.910	1.966	1.584
Bicycle LOS	B	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	37	895	75	11	661	20	0	0	10	0	0	12
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	895	75	11	661	20	0	0	10	0	0	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9560	0.9560	1.0000	0.9560	0.9560	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	224	19	3	165	5	0	0	3	0	0	3
Total Analysis Volume [veh/h]	37	895	75	11	661	20	0	0	10	0	0	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings





















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	9.14	0.00	0.00	10.18	0.00	0.00	33.11	49.19	10.58	40.74	47.56	11.98
Movement LOS	A	A	A	B	A	A	D	E	B	E	E	B
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.05	0.07	0.07	0.07
95th-Percentile Queue Length [ft/ln]	3.18	0.00	0.00	1.19	0.00	0.00	1.16	1.16	1.16	1.74	1.74	1.74
d_A, Approach Delay [s/veh]	0.34			0.16			10.58			11.98		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.41											
Intersection LOS	B											




















HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	7	36	63	19	639	24	315	492	0	626	45
Future Volume (veh/h)	53	7	36	63	19	639	24	315	492	0	626	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	53	7	36	63	19	639	24	315	492	0	626	45
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	286	49	164	552	158	680	205	1633	728	0	971	70
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.12	0.46	0.46	0.00	0.29	0.29
Sat Flow, veh/h	522	115	382	1120	367	1585	1781	3554	1585	0	3456	241
Grp Volume(v), veh/h	96	0	0	82	0	639	24	315	492	0	330	341
Grp Sat Flow(s),veh/h/ln	1019	0	0	1487	0	1585	1781	1777	1585	0	1777	1827
Q Serve(g_s), s	2.5	0.0	0.0	0.0	0.0	34.7	1.1	4.7	21.9	0.0	14.6	14.7
Cycle Q Clear(g_c), s	5.1	0.0	0.0	2.6	0.0	34.7	1.1	4.7	21.9	0.0	14.6	14.7
Prop In Lane	0.55		0.37	0.77		1.00	1.00		1.00	0.00		0.13
Lane Grp Cap(c), veh/h	500	0	0	709	0	680	205	1633	728	0	513	528
V/C Ratio(X)	0.19	0.00	0.00	0.12	0.00	0.94	0.12	0.19	0.68	0.00	0.64	0.65
Avail Cap(c_a), veh/h	560	0	0	796	0	775	205	1633	728	0	513	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	0.0	15.4	0.0	24.6	35.7	14.4	19.1	0.0	28.0	28.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	17.9	0.3	0.3	5.0	0.0	6.1	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	1.0	0.0	15.6	0.5	1.9	8.4	0.0	6.8	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	0.0	0.0	15.4	0.0	42.4	36.0	14.7	24.0	0.0	34.1	33.9
LnGrp LOS	B	A	A	B	A	D	D	B	C	A	C	C
Approach Vol, veh/h		96			721			831			671	
Approach Delay, s/veh		16.1			39.4			20.8			34.0	
Approach LOS		B			D			C			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		46.4		43.6	15.4	31.0		43.6				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		36.0		44.0	6.0	* 26		44.0				
Max Q Clear Time (g_c+I1), s		23.9		7.1	3.1	16.7		36.7				
Green Ext Time (p_c), s		3.1		0.8	0.0	2.7		1.9				
Intersection Summary												
HCM 6th Ctrl Delay				30.2								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	7	36	63	19	639	24	315	492	0	626	45
Future Volume (vph)	53	7	36	63	19	639	24	315	492	0	626	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.949				0.850			0.850		0.990	
Flt Protected		0.973			0.963		0.950					
Satd. Flow (prot)	0	1720	0	0	1794	1583	1770	3539	1583	0	3504	0
Flt Permitted		0.819			0.749		0.950					
Satd. Flow (perm)	0	1448	0	0	1395	1583	1770	3539	1583	0	3504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36				394			492			8
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour 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
Adj. Flow (vph)	53	7	36	63	19	639	24	315	492	0	626	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	96	0	0	82	639	24	315	492	0	671	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	49.0	49.0		49.0	49.0	49.0	10.0	41.0	41.0		31.0	
Total Split (%)	54.4%	54.4%		54.4%	54.4%	54.4%	11.1%	45.6%	45.6%		34.4%	
Maximum Green (s)	44.0	44.0		44.0	44.0	44.0	6.0	36.0	36.0		26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		25.9			25.9	25.9	6.0	54.1	54.1		50.1	
Actuated g/C Ratio		0.29			0.29	0.29	0.07	0.60	0.60		0.56	
v/c Ratio		0.22			0.20	0.87	0.20	0.15	0.43		0.34	
Control Delay		13.4			21.1	22.9	40.3	8.1	1.6		15.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		13.4			21.1	22.9	40.3	8.1	1.6		15.5	
LOS		B			C	C	D	A	A		B	
Approach Delay		13.4			22.7			5.2			15.5	
Approach LOS		B			C			A			B	
Queue Length 50th (ft)		25			35	137	14	29	0		90	
Queue Length 95th (ft)		46			51	215	39	64	5		227	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		726			682	975	118	2128	1148		1955	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.13			0.12	0.66	0.20	0.15	0.43		0.34	

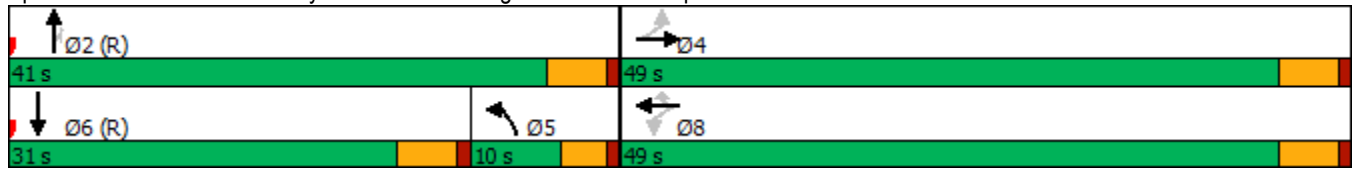
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	72 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	14.0
Intersection LOS:	B
Intersection Capacity Utilization:	66.3%
ICU Level of Service:	C
Analysis Period (min):	15

Lanes, Volumes, Timings
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
 AM Peak Hour

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Year 2045
 AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶↶	↷		↶↶	↶	
Traffic Volume (veh/h)	206	324	0	501	223	0
Future Volume (veh/h)	206	324	0	501	223	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	206	0	0	501	223	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	300		0	2850	1500	0
Arrive On Green	0.09	0.00	0.00	0.80	0.80	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	206	0	0	501	223	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	5.2	0.0	0.0	2.9	2.4	0.0
Cycle Q Clear(g_c), s	5.2	0.0	0.0	2.9	2.4	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	300		0	2850	1500	0
V/C Ratio(X)	0.69		0.00	0.18	0.15	0.00
Avail Cap(c_a), veh/h	1075		0	2850	1500	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.9	0.0	0.0	2.1	2.0	0.0
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.6	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.7	0.0	0.0	2.2	2.2	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	206	A		501	223	
Approach Delay, s/veh	42.7			2.2	2.2	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		77.2		12.8		77.2
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		52.0		28.0		52.0
Max Q Clear Time (g_c+I1), s		4.9		7.2		4.4
Green Ext Time (p_c), s		3.6		0.6		1.3

Intersection Summary

HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045
 AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔	↗		↕↕	↕	
Traffic Volume (vph)	206	324	0	501	223	0
Future Volume (vph)	206	324	0	501	223	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		324				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	206	324	0	501	223	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	206	324	0	501	223	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045
 AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	33.0			57.0	57.0	
Total Split (%)	36.7%			63.3%	63.3%	
Maximum Green (s)	28.0			52.0	52.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	10.7	90.0		69.3	69.3	
Actuated g/C Ratio	0.12	1.00		0.77	0.77	
v/c Ratio	0.50	0.20		0.18	0.16	
Control Delay	41.1	0.3		3.1	1.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	41.1	0.3		3.1	1.4	
LOS	D	A		A	A	
Approach Delay	16.1			3.1	1.4	
Approach LOS	B			A	A	
Queue Length 50th (ft)	57	0		31	6	
Queue Length 95th (ft)	88	0		53	12	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1068	1583		2723	1433	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.19	0.20		0.18	0.16	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.50
Intersection Signal Delay:	8.3
Intersection LOS:	A
Intersection Capacity Utilization:	28.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.047

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵		↴		↵↴	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	14	216	117	35	29	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	216	117	35	29	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	54	29	9	7	1
Total Analysis Volume [veh/h]	14	216	117	35	29	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.05	0.01
d_M, Delay for Movement [s/veh]	7.54	0.00	0.00	0.00	11.13	8.96
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.15	0.02
95th-Percentile Queue Length [ft/ln]	0.74	0.74	0.00	0.00	3.70	0.41
d_A, Approach Delay [s/veh]	0.46		0.00		10.81	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.14					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.211

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	144	5	8	8	5	59	21	94	17	8	129	10
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	144	5	8	8	5	59	21	94	17	8	129	10
Peak Hour 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
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]	36	1	2	2	1	15	5	24	4	2	32	3
Total Analysis Volume [veh/h]	144	5	8	8	5	59	21	94	17	8	129	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	743	829	777	778
Degree of Utilization, x	0.21	0.09	0.17	0.19

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.80	0.28	0.61	0.69
95th-Percentile Queue Length [ft]	19.88	7.11	15.23	17.33
Approach Delay [s/veh]	9.14	7.76	8.58	8.71
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.67			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	5	5	5	10	45	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	5	5	10	45	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	3	11	1
Total Analysis Volume [veh/h]	5	5	5	10	45	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.05	0.00
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	8.84	8.55
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.23	0.23	0.00	0.00	3.96	3.96
d_A, Approach Delay [s/veh]	3.63		0.00		8.81	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.36					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	105	198	96	14	21	67
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	198	96	14	21	67
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	50	24	4	5	17
Total Analysis Volume [veh/h]	105	198	96	14	21	67
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.04	0.07
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	0.00	13.01	9.38
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.23	0.00	0.00	0.00	0.38	0.38
95th-Percentile Queue Length [ft/ln]	5.72	0.00	0.00	0.00	9.57	9.57
d_A, Approach Delay [s/veh]	2.64		0.00		10.24	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.40					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	13.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	22	982	483	18	7	19
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	982	483	18	7	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	246	121	5	2	5
Total Analysis Volume [veh/h]	22	982	483	18	7	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.00	0.02	0.03
d_M, Delay for Movement [s/veh]	8.47	0.00	0.00	0.00	13.73	10.06
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.00	0.13	0.13
95th-Percentile Queue Length [ft/ln]	1.59	0.00	0.00	0.00	3.27	3.27
d_A, Approach Delay [s/veh]	0.19		0.00		11.05	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	B					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Year 2045
 AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	677	379	0	249	1165
Future Volume (veh/h)	0	677	379	0	249	1165
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	677	379	0	249	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	2211	1164	0	922	
Arrive On Green	0.00	0.62	0.62	0.00	0.27	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	677	379	0	249	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	8.0	8.6	0.0	5.1	0.0
Cycle Q Clear(g_c), s	0.0	8.0	8.6	0.0	5.1	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2211	1164	0	922	
V/C Ratio(X)	0.00	0.31	0.33	0.00	0.27	
Avail Cap(c_a), veh/h	0	2211	1164	0	922	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	7.9	8.1	0.0	26.1	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.7	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.7	3.1	0.0	2.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	8.3	8.8	0.0	26.8	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		677	379		249	A
Approach Delay, s/veh		8.3	8.8		26.8	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				61.0	29.0	61.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				56.0	24.0	56.0
Max Q Clear Time (g_c+I1), s				10.0	7.1	10.6
Green Ext Time (p_c), s				5.0	0.8	2.3
Intersection Summary						
HCM 6th Ctrl Delay			12.0			
HCM 6th LOS			B			

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045
AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	677	379	0	249	1165
Future Volume (vph)	0	677	379	0	249	1165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr _t						0.850
Fl _t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl _t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						676
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	677	379	0	249	1165
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	677	379	0	249	1165
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045
AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		61.0	61.0		29.0	
Total Split (%)		67.8%	67.8%		32.2%	
Maximum Green (s)		56.0	56.0		24.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		56.0	56.0		24.0	90.0
Actuated g/C Ratio		0.62	0.62		0.27	1.00
v/c Ratio		0.31	0.33		0.27	0.74
Control Delay		8.4	3.7		27.1	3.1
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		8.4	3.7		27.1	3.1
LOS		A	A		C	A
Approach Delay		8.4	3.7		7.3	
Approach LOS		A	A		A	
Queue Length 50th (ft)		85	17		57	0
Queue Length 95th (ft)		114	23		89	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		2202	1159		915	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.31	0.33		0.27	0.74

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 25 (28%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 7.1
 Intersection LOS: A
 Intersection Capacity Utilization 35.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↘	
Traffic Volume (veh/h)	73	357	526	0	905	124	1	28	116	31	0	103
Future Volume (veh/h)	73	357	526	0	905	124	1	28	116	31	0	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	357	0	0	905	124	1	28	116	31	0	103
Peak Hour 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
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	400	2369		0	3029	413	44	412	352	341	0	352
Arrive On Green	0.67	0.67	0.00	0.00	0.67	0.67	0.22	0.22	0.22	0.22	0.00	0.22
Sat Flow, veh/h	548	3554	1585	0	4711	620	11	1855	1585	1244	0	1585
Grp Volume(v), veh/h	73	357	0	0	677	352	29	0	116	31	0	103
Grp Sat Flow(s),veh/h/ln	548	1777	1585	0	1702	1759	1865	0	1585	1244	0	1585
Q Serve(g_s), s	5.8	3.4	0.0	0.0	7.5	7.5	0.0	0.0	5.5	1.8	0.0	4.9
Cycle Q Clear(g_c), s	13.3	3.4	0.0	0.0	7.5	7.5	1.1	0.0	5.5	2.9	0.0	4.9
Prop In Lane	1.00		1.00	0.00		0.35	0.03		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	400	2369		0	2269	1173	456	0	352	341	0	352
V/C Ratio(X)	0.18	0.15		0.00	0.30	0.30	0.06	0.00	0.33	0.09	0.00	0.29
Avail Cap(c_a), veh/h	400	2369		0	2269	1173	456	0	352	341	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	5.6	0.0	0.0	6.2	6.2	27.7	0.0	29.4	28.8	0.0	29.1
Incr Delay (d2), s/veh	1.0	0.1	0.0	0.0	0.3	0.7	0.3	0.0	2.5	0.5	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.0	0.0	0.0	2.2	2.4	0.5	0.0	2.3	0.6	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	5.7	0.0	0.0	6.6	6.9	27.9	0.0	31.9	29.3	0.0	31.2
LnGrp LOS	B	A		A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		430	A		1029			145				134
Approach Delay, s/veh		6.4			6.7			31.1				30.8
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		65.0		25.0		65.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		60.0		20.0		60.0				
Max Q Clear Time (g_c+I1), s		7.5		15.3		6.9		9.5				
Green Ext Time (p_c), s		0.4		3.4		0.5		8.0				

Intersection Summary

HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↖	↗	↘	↗	
Traffic Volume (vph)	73	357	526	0	905	124	1	28	116	31	0	103
Future Volume (vph)	73	357	526	0	905	124	1	28	116	31	0	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.982				0.850		0.850	
Flt Protected	0.950							0.998		0.950		
Satd. Flow (prot)	1770	3539	1583	0	4994	0	0	1859	1583	1770	1583	0
Flt Permitted	0.253							0.994		0.738		
Satd. Flow (perm)	471	3539	1583	0	4994	0	0	1852	1583	1375	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			526		59				116		184	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour 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
Adj. Flow (vph)	73	357	526	0	905	124	1	28	116	31	0	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	357	526	0	1029	0	0	29	116	31	103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	65.0	65.0			65.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	72.2%	72.2%			72.2%		27.8%	27.8%	27.8%	27.8%	27.8%	
Maximum Green (s)	60.0	60.0			60.0		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	60.0	60.0	90.0		60.0		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.67	0.67	1.00		0.67		0.22	0.22	0.22	0.22	0.22	
v/c Ratio	0.23	0.15	0.33		0.31		0.07	0.26	0.10	0.10	0.21	
Control Delay	6.2	4.2	1.1		6.2		28.3	7.5	29.0	29.0	1.0	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	6.2	4.2	1.1		6.2		28.3	7.5	29.0	29.0	1.0	
LOS	A	A	A		A		C	A	C	C	A	
Approach Delay		2.6			6.2		11.7				7.5	
Approach LOS		A			A		B				A	
Queue Length 50th (ft)	10	25	7		73		13	0	14	14	0	
Queue Length 95th (ft)	24	36	19		93		36	42	38	38	2	
Internal Link Dist (ft)		121			561		495				178	
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	314	2359	1583		3349		411	442	305	305	494	
Starvation Cap Reductn	0	0	0		0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0		0		0	0	0	0	0	
Storage Cap Reductn	0	0	0		0		0	0	0	0	0	
Reduced v/c Ratio	0.23	0.15	0.33		0.31		0.07	0.26	0.10	0.10	0.21	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.33
Intersection Signal Delay:	5.1
Intersection Capacity Utilization:	46.1%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Year 2045
 AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↕↕	↔	↔↔	↕↕
Traffic Volume (veh/h)	824	431	622	33	526	651
Future Volume (veh/h)	824	431	622	33	526	651
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	824	0	622	0	526	651
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	949		1387		620	2183
Arrive On Green	0.27	0.00	0.39	0.00	0.18	0.61
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	824	0	622	0	526	651
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	20.4	0.0	11.6	0.0	13.3	7.8
Cycle Q Clear(g_c), s	20.4	0.0	11.6	0.0	13.3	7.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	949		1387		620	2183
V/C Ratio(X)	0.87		0.45		0.85	0.30
Avail Cap(c_a), veh/h	1190		1387		768	2183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	0.0	20.3	0.0	35.7	8.2
Incr Delay (d2), s/veh	5.9	0.0	1.1	0.0	7.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	4.6	0.0	5.9	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.0	0.0	21.3	0.0	43.2	8.6
LnGrp LOS	D		C		D	A
Approach Vol, veh/h	824	A	622	A		1177
Approach Delay, s/veh	37.0		21.3			24.0
Approach LOS	D		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.1	40.1			60.3	29.7
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	20.0	25.0			49.0	31.0
Max Q Clear Time (g_c+I1), s	15.3	13.6			9.8	22.4
Green Ext Time (p_c), s	0.9	2.9			4.5	2.3

Intersection Summary

















HCM 6th Ctrl Delay			27.4			
HCM 6th LOS			C			

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045
 AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	824	431	622	33	526	651
Future Volume (vph)	824	431	622	33	526	651
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		431		33		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	824	431	622	33	526	651
Shared Lane Traffic (%)						
Lane Group Flow (vph)	824	431	622	33	526	651
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045
 AM Peak Hour

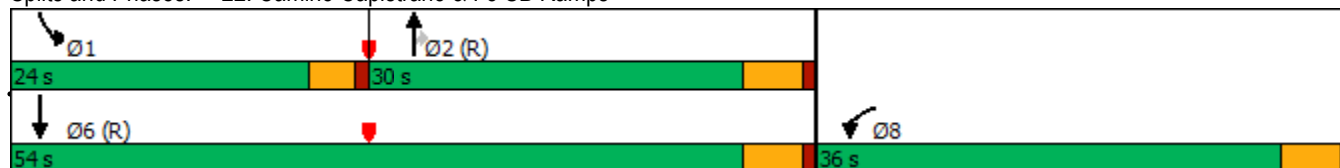


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	36.0		30.0	30.0	24.0	54.0
Total Split (%)	40.0%		33.3%	33.3%	26.7%	60.0%
Maximum Green (s)	31.0		25.0	25.0	20.0	49.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effect Green (s)	26.9	90.0	31.0	31.0	18.1	53.1
Actuated g/C Ratio	0.30	1.00	0.34	0.34	0.20	0.59
v/c Ratio	0.80	0.27	0.51	0.06	0.76	0.31
Control Delay	35.6	0.4	26.7	9.0	41.6	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	0.4	26.7	9.0	41.6	10.3
LOS	D	A	C	A	D	B
Approach Delay	23.5		25.8			24.3
Approach LOS	C		C			C
Queue Length 50th (ft)	219	0	149	0	144	92
Queue Length 95th (ft)	272	0	220	22	197	137
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1182	1583	1220	567	767	2089
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.27	0.51	0.06	0.69	0.31

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 24 (27%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 24.3
 Intersection LOS: C
 Intersection Capacity Utilization 67.4%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.655

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
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	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	89	162	0	44	50	1898	18	36	886	181
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	89	162	0	44	50	1898	18	36	886	181
Peak Hour 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
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	22	41	0	11	13	475	5	9	222	45
Total Analysis Volume [veh/h]	0	0	89	162	0	44	50	1898	18	36	886	181
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 in	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]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	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	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [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
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	36	0	0	36	0	10	49	0	10	49	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	24	0	0	24	0	0	11	0	0	11	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	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	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]	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20	20	4	59	59	4	58	58
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.05	0.62	0.62	0.04	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.00	0.06	0.18	0.03	0.03	0.37	0.01	0.02	0.25	0.11
s, saturation flow rate [veh/h]	1417	1589	904	1589	1781	5094	1589	1781	3560	1589
c, Capacity [veh/h]	86	341	270	341	82	3160	986	69	2182	974
d1, Uniform Delay [s]	0.00	31.04	39.33	30.14	44.45	10.91	6.93	44.79	9.48	8.04
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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]	0.00	0.40	2.16	0.17	6.98	0.85	0.03	5.97	0.56	0.42
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	0.00	0.26	0.60	0.13	0.61	0.60	0.02	0.52	0.41	0.19
d, Delay for Lane Group [s/veh]	0.00	31.44	41.49	30.30	51.43	11.77	6.96	50.77	10.04	8.46
Lane Group LOS	A	C	D	C	D	B	A	D	B	A
Critical Lane Group	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.00	1.72	3.79	0.82	1.31	7.43	0.14	0.94	4.49	1.61
50th-Percentile Queue Length [ft/ln]	0.00	43.04	94.67	20.60	32.66	185.74	3.47	23.51	112.18	40.23
95th-Percentile Queue Length [veh/ln]	0.00	3.10	6.82	1.48	2.35	11.90	0.25	1.69	7.96	2.90
95th-Percentile Queue Length [ft/ln]	0.00	77.47	170.41	37.08	58.79	297.49	6.25	42.33	199.03	72.41

Movement, Approach, & Intersection Results

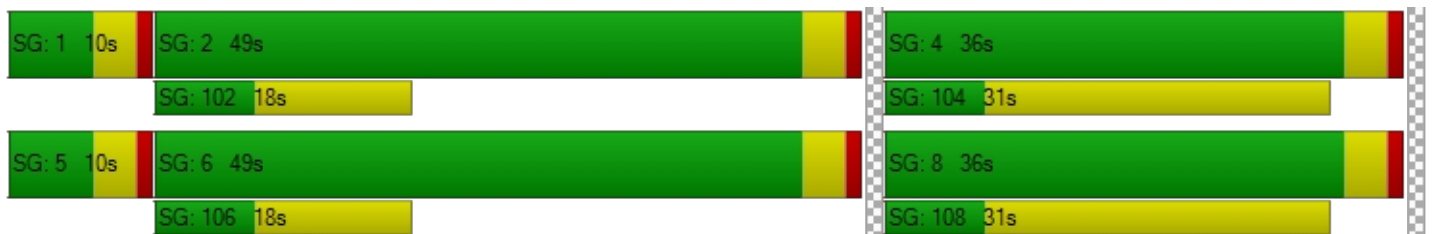
d_M, Delay for Movement [s/veh]	0.00	31.44	31.44	41.49	41.49	30.30	51.43	11.77	6.96	50.77	10.04	8.46
Movement LOS	A	C	C	D	D	C	D	B	A	D	B	A
d_A, Approach Delay [s/veh]	31.44			39.10			12.73			11.11		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	14.31											
Intersection LOS	B											
Intersection V/C	0.655											

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]	37.14			37.14			37.14			37.14		
I_p,int, Pedestrian LOS Score for Intersection	1.989			2.084			3.000			3.280		
Crosswalk LOS	A			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]	674			674			947			947		
d_b, Bicycle Delay [s]	20.89			20.89			13.16			13.16		
I_b,int, Bicycle LOS Score for Intersection	1.706			1.900			2.641			2.470		
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 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.880

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	162	577	1699	190	228	328
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	162	577	1699	190	228	328
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	144	425	48	57	82
Total Analysis Volume [veh/h]	162	577	1699	190	228	328
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	15	59	44	0	41	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	69	54	54	23	23
g / C, Green / Cycle	0.11	0.69	0.54	0.54	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.09	0.16	0.48	0.12	0.13	0.21
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	193	2446	1918	856	415	370
d1, Uniform Delay [s]	43.72	5.85	20.37	12.09	33.74	37.07
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.13
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.28	0.23	6.48	0.60	1.14	8.47
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.24	0.89	0.22	0.55	0.89
d, Delay for Lane Group [s/veh]	53.00	6.07	26.85	12.69	34.87	45.54
Lane Group LOS	D	A	C	B	C	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.40	2.08	17.86	2.28	4.95	8.49
50th-Percentile Queue Length [ft/ln]	109.96	51.93	446.41	57.12	123.71	212.13
95th-Percentile Queue Length [veh/ln]	7.84	3.74	24.79	4.11	8.60	13.26
95th-Percentile Queue Length [ft/ln]	195.95	93.47	619.66	102.81	214.91	331.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.00	6.07	26.85	12.69	34.87	45.54
Movement LOS	D	A	C	B	C	D
d_A, Approach Delay [s/veh]	16.36		25.42		41.16	
Approach LOS	B		C		D	
d_I, Intersection Delay [s/veh]	26.07					
Intersection LOS	C					
Intersection V/C	0.880					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	39.61	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	2.844	0.000	2.240
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	800	740
d_b, Bicycle Delay [s]	10.13	18.00	19.85
I_b,int, Bicycle LOS Score for Intersection	2.169	3.118	1.560
Bicycle LOS	B	C	A

Sequence

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



HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	999	472	0	0	0	610	438	429	179	905	943
Future Volume (veh/h)	301	999	472	0	0	0	610	438	429	179	905	943
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	301	999	0				524	558	429	179	905	943
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	511	1020					558	586	496	480	958	1553
Arrive On Green	0.29	0.29	0.00				0.31	0.31	0.31	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	301	999	0				524	558	429	179	905	943
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	16.7	32.1	0.0				32.9	33.6	29.3	9.4	28.7	26.0
Cycle Q Clear(g_c), s	16.7	32.1	0.0				32.9	33.6	29.3	9.4	28.7	26.0
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	511	1020					558	586	496	480	958	1553
V/C Ratio(X)	0.59	0.98					0.94	0.95	0.86	0.37	0.94	0.61
Avail Cap(c_a), veh/h	511	1020					558	586	496	480	958	1553
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	40.7	0.0				38.4	38.7	37.2	34.1	41.2	17.1
Incr Delay (d2), s/veh	1.8	23.2	0.0				25.8	27.2	17.9	2.2	18.4	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	16.8	0.0				17.8	19.2	13.4	4.3	14.6	13.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	63.9	0.0				64.2	65.9	55.1	36.3	59.6	18.9
LnGrp LOS	D	E					E	E	E	D	E	B
Approach Vol, veh/h		1300	A				1511				2027	
Approach Delay, s/veh		57.7					62.3				38.6	
Approach LOS		E					E				D	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		41.0		38.0			36.0					
Change Period (Y+Rc), s		5.0		5.0			5.0					
Max Green Setting (Gmax), s		36.0		33.0			31.0					
Max Q Clear Time (g_c+I1), s		35.6		34.1			30.7					
Green Ext Time (p_c), s		0.3		0.0			0.3					

Intersection Summary






















HCM 6th Ctrl Delay	51.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	301	999	472	0	0	0	610	438	429	179	905	943
Future Volume (vph)	301	999	472	0	0	0	610	438	429	179	905	943
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.991		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1754	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.991		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1754	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			472						229			144
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour 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
Adj. Flow (vph)	301	999	472	0	0	0	610	438	429	179	905	943
Shared Lane Traffic (%)							16%					
Lane Group Flow (vph)	301	999	472	0	0	0	512	536	429	179	905	943
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	38.0	38.0	38.0				41.0	41.0	41.0	36.0	36.0	38.0
Total Split (%)	33.0%	33.0%	33.0%				35.7%	35.7%	35.7%	31.3%	31.3%	33.0%
Maximum Green (s)	33.0	33.0	33.0				36.0	36.0	36.0	31.0	31.0	33.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	33.0	33.0	33.0				36.0	36.0	36.0	31.0	31.0	69.0
Actuated g/C Ratio	0.29	0.29	0.29				0.31	0.31	0.31	0.27	0.27	0.60
v/c Ratio	0.59	0.98	0.60				0.97	0.98	0.66	0.38	0.95	0.55
Control Delay	41.0	65.9	6.4				73.0	72.8	20.8	36.9	60.9	12.7
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	65.9	6.4				73.0	72.8	20.8	36.9	60.9	12.7
LOS	D	E	A				E	E	C	D	E	B
Approach Delay		45.8						57.8			36.4	
Approach LOS		D						E			D	
Queue Length 50th (ft)	192	386	0				393	411	126	108	346	185
Queue Length 95th (ft)	286	#530	82				#625	#648	243	174	#476	244
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	507	1015	790				526	549	652	477	953	1729
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.98	0.60				0.97	0.98	0.66	0.38	0.95	0.55

Intersection Summary

Area Type:	Other
Cycle Length:	115
Actuated Cycle Length:	115
Offset:	0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.98
Intersection Signal Delay:	45.5
Intersection LOS:	D
Intersection Capacity Utilization:	93.5%
ICU Level of Service:	F
Analysis Period (min):	15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report

Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	19.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.565

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	1180	27	324	846	0	176
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1180	27	324	846	0	176
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	295	7	81	212	0	44
Total Analysis Volume [veh/h]	1180	27	324	846	0	176
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.56	0.01	0.00	0.40
d_M, Delay for Movement [s/veh]	0.00	0.00	19.10	0.00	0.00	18.44
Movement LOS	A	A	C	A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	3.50	0.00	0.00	1.88
95th-Percentile Queue Length [ft/ln]	0.00	0.00	87.47	0.00	0.00	47.01
d_A, Approach Delay [s/veh]	0.00		5.29		18.44	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.70					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	23.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	339	773	5	14	692	140	428	5	283	5	5	6
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	339	773	5	14	692	140	428	5	283	5	5	6
Peak Hour 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
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]	85	193	1	4	173	35	107	1	71	1	1	2
Total Analysis Volume [veh/h]	339	773	5	14	692	140	428	5	283	5	5	6
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 in	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	35	0	10	29	0	0	35	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	51	51	2	42	42	19	19	19	2
g / C, Green / Cycle	0.12	0.57	0.57	0.02	0.47	0.47	0.21	0.21	0.21	0.02
(v / s)_i Volume / Saturation Flow Rate	0.10	0.21	0.21	0.01	0.19	0.09	0.12	0.12	0.18	0.01
s, saturation flow rate [veh/h]	3459	1870	1866	1781	3560	1589	1781	1783	1589	1729
c, Capacity [veh/h]	418	1056	1054	38	1656	739	380	380	339	40
d1, Uniform Delay [s]	38.64	10.79	10.79	43.55	16.02	14.15	31.76	31.76	33.95	43.41
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.83	0.99	0.99	6.02	0.78	0.57	1.35	1.34	5.40	6.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.81	0.37	0.37	0.37	0.42	0.19	0.57	0.57	0.83	0.40
d, Delay for Lane Group [s/veh]	42.47	11.78	11.78	49.57	16.80	14.72	33.11	33.11	39.34	49.56
Lane Group LOS	D	B	B	D	B	B	C	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	3.82	4.21	4.20	0.37	4.67	1.72	4.28	4.29	6.30	0.42
50th-Percentile Queue Length [ft/ln]	95.43	105.24	105.02	9.20	116.84	43.08	107.10	107.18	157.43	10.44
95th-Percentile Queue Length [veh/ln]	6.87	7.57	7.56	0.66	8.22	3.10	7.68	7.68	10.41	0.75
95th-Percentile Queue Length [ft/ln]	171.77	189.36	189.04	16.56	205.47	77.55	191.96	192.07	260.32	18.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.47	11.78	11.78	49.57	16.80	14.72	33.11	33.11	39.34	49.56	49.56	49.56
Movement LOS	D	B	B	D	B	B	C	C	D	D	D	D
d_A, Approach Delay [s/veh]	21.09			16.99			35.57			49.56		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	23.82											
Intersection LOS	C											
Intersection V/C	0.583											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	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]	34.67	0.00	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.793	0.000	2.533	1.734
Crosswalk LOS	C	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	556	689	133
d_b, Bicycle Delay [s]	19.34	23.47	19.34	39.20
I_b,int, Bicycle LOS Score for Intersection	2.481	2.258	2.741	1.586
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	33	1147	127	14	1031	23	0	0	17	0	0	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	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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	1147	127	14	1031	23	0	0	17	0	0	18
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9560	0.9560	1.0000	0.9560	0.9560	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	287	32	4	258	6	0	0	4	0	0	5
Total Analysis Volume [veh/h]	33	1147	127	14	1031	23	0	0	17	0	0	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings




















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	10.78	0.00	0.00	11.83	0.00	0.00	73.34	125.30	12.52	87.09	116.53	13.96
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	B
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.08	0.00	0.00	0.11	0.11	0.11	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	3.96	0.00	0.00	1.99	0.00	0.00	2.66	2.66	2.66	3.35	3.35	3.35
d_A, Approach Delay [s/veh]	0.27			0.16			12.52			13.96		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.41											
Intersection LOS	B											

HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	5	33	96	12	776	20	491	384	0	1028	20
Future Volume (veh/h)	40	5	33	96	12	776	20	491	384	0	1028	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	40	5	33	96	12	776	20	491	384	0	1028	20
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	267	47	185	658	78	722	99	1540	687	0	1149	22
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.06	0.43	0.43	0.00	0.32	0.32
Sat Flow, veh/h	452	103	407	1278	171	1585	1781	3554	1585	0	3659	69
Grp Volume(v), veh/h	78	0	0	108	0	776	20	491	384	0	512	536
Grp Sat Flow(s),veh/h/ln	962	0	0	1449	0	1585	1781	1777	1585	0	1777	1858
Q Serve(g_s), s	0.9	0.0	0.0	0.0	0.0	41.0	1.0	8.2	16.3	0.0	24.7	24.7
Cycle Q Clear(g_c), s	4.0	0.0	0.0	3.1	0.0	41.0	1.0	8.2	16.3	0.0	24.7	24.7
Prop In Lane	0.51		0.42	0.89		1.00	1.00		1.00	0.00		0.04
Lane Grp Cap(c), veh/h	499	0	0	736	0	722	99	1540	687	0	573	599
V/C Ratio(X)	0.16	0.00	0.00	0.15	0.00	1.07	0.20	0.32	0.56	0.00	0.89	0.89
Avail Cap(c_a), veh/h	499	0	0	736	0	722	119	1540	687	0	573	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	0.0	14.2	0.0	24.5	40.6	16.8	19.1	0.0	29.0	29.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	55.4	1.0	0.5	3.3	0.0	19.1	18.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	1.2	0.0	25.3	0.4	3.3	6.2	0.0	13.0	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	0.0	0.0	14.3	0.0	79.9	41.6	17.3	22.3	0.0	48.1	47.5
LnGrp LOS	B	A	A	B	A	F	D	B	C	A	D	D
Approach Vol, veh/h		78			884			895			1048	
Approach Delay, s/veh		14.3			71.9			20.0			47.8	
Approach LOS		B			E			C			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		44.0		46.0	10.0	34.0		46.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		39.0		41.0	6.0	* 29		41.0				
Max Q Clear Time (g_c+I1), s		18.3		6.0	3.0	26.7		43.0				
Green Ext Time (p_c), s		4.6		0.7	0.0	1.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	45.7
HCM 6th LOS	D

Notes

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

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕	↗	↖	↕↕	↗		↕↔	
Traffic Volume (vph)	40	5	33	96	12	776	20	491	384	0	1028	20
Future Volume (vph)	40	5	33	96	12	776	20	491	384	0	1028	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.943				0.850			0.850		0.997	
Flt Protected		0.975			0.957		0.950					
Satd. Flow (prot)	0	1713	0	0	1783	1583	1770	3539	1583	0	3529	0
Flt Permitted		0.846			0.724		0.950					
Satd. Flow (perm)	0	1486	0	0	1349	1583	1770	3539	1583	0	3529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33				249			384			2
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour 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
Adj. Flow (vph)	40	5	33	96	12	776	20	491	384	0	1028	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	78	0	0	108	776	20	491	384	0	1048	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
PM Peak Hour



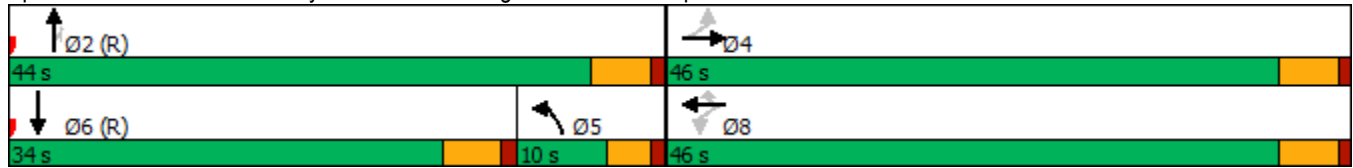
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	46.0	46.0		46.0	46.0	46.0	10.0	44.0	44.0		34.0	
Total Split (%)	51.1%	51.1%		51.1%	51.1%	51.1%	11.1%	48.9%	48.9%		37.8%	
Maximum Green (s)	41.0	41.0		41.0	41.0	41.0	6.0	39.0	39.0		29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		38.5			38.5	38.5	6.0	41.5	41.5		37.5	
Actuated g/C Ratio		0.43			0.43	0.43	0.07	0.46	0.46		0.42	
v/c Ratio		0.12			0.19	0.95	0.17	0.30	0.41		0.71	
Control Delay		9.6			16.0	38.3	35.0	11.2	1.5		27.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		9.6			16.0	38.3	35.0	11.2	1.5		27.5	
LOS		A			B	D	C	B	A		C	
Approach Delay		9.6			35.6			7.6			27.5	
Approach LOS		A			D			A			C	
Queue Length 50th (ft)		14			35	288	10	62	0		244	
Queue Length 95th (ft)		39			68	#552	29	88	0		#427	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		694			614	856	118	1630	936		1469	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.11			0.18	0.91	0.17	0.30	0.41		0.71	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 65 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 23.3 Intersection LOS: C
 Intersection Capacity Utilization 79.1% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Year 2045
 PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↗		↖↗	↖	
Traffic Volume (veh/h)	299	336	0	559	321	0
Future Volume (veh/h)	299	336	0	559	321	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	299	0	0	559	321	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	402		0	2745	1445	0
Arrive On Green	0.12	0.00	0.00	0.77	0.77	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	299	0	0	559	321	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	7.5	0.0	0.0	3.8	4.2	0.0
Cycle Q Clear(g_c), s	7.5	0.0	0.0	3.8	4.2	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	402		0	2745	1445	0
V/C Ratio(X)	0.74		0.00	0.20	0.22	0.00
Avail Cap(c_a), veh/h	1037		0	2745	1445	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.5	0.0	0.0	2.8	2.8	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	0.9	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.2	0.0	0.0	2.9	3.2	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	299	A		559	321	
Approach Delay, s/veh	41.2			2.9	3.2	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		74.5		15.5		74.5
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		53.0		27.0		53.0
Max Q Clear Time (g_c+I1), s		5.8		9.5		6.2
Green Ext Time (p_c), s		4.1		0.9		2.0

Intersection Summary

HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045
 PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶↶	↷		↶↶	↶	
Traffic Volume (vph)	299	336	0	559	321	0
Future Volume (vph)	299	336	0	559	321	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		336				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	299	336	0	559	321	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	299	336	0	559	321	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045
 PM Peak Hour

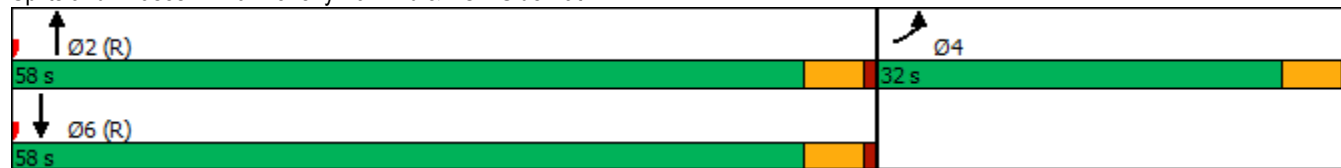


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	32.0			58.0	58.0	
Total Split (%)	35.6%			64.4%	64.4%	
Maximum Green (s)	27.0			53.0	53.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	13.2	90.0		66.8	66.8	
Actuated g/C Ratio	0.15	1.00		0.74	0.74	
v/c Ratio	0.60	0.21		0.21	0.23	
Control Delay	40.7	0.3		4.0	0.7	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	40.7	0.3		4.0	0.7	
LOS	D	A		A	A	
Approach Delay	19.3			4.0	0.7	
Approach LOS	B			A	A	
Queue Length 50th (ft)	82	0		41	5	
Queue Length 95th (ft)	118	0		69	m8	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1029	1583		2628	1383	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.29	0.21		0.21	0.23	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 9.7
 Intersection LOS: A
 Intersection Capacity Utilization 33.8%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.050

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵		↴		↵↴	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	11	132	194	55	31	9
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	132	194	55	31	9
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	33	49	14	8	2
Total Analysis Volume [veh/h]	11	132	194	55	31	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.05	0.01
d_M, Delay for Movement [s/veh]	7.76	0.00	0.00	0.00	11.11	9.45
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.16	0.03
95th-Percentile Queue Length [ft/ln]	0.63	0.63	0.00	0.00	3.94	0.83
d_A, Approach Delay [s/veh]	0.60		0.00		10.74	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.19					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.307

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	93	5	13	8	5	57	45	149	54	6	120	6
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	5	13	8	5	57	45	149	54	6	120	6
Peak Hour 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
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	1	3	2	1	14	11	37	14	2	30	2
Total Analysis Volume [veh/h]	93	5	13	8	5	57	45	149	54	6	120	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	719	798	808	772
Degree of Utilization, x	0.15	0.09	0.31	0.17

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.54	0.29	1.30	0.61
95th-Percentile Queue Length [ft]	13.61	7.20	32.61	15.34
Approach Delay [s/veh]	8.93	7.95	9.42	8.62
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.95			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.112

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	5	5	5	8	111	6
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	5	5	8	111	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	2	28	2
Total Analysis Volume [veh/h]	5	5	5	8	111	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.11	0.01
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	9.12	8.84
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.40	0.40
95th-Percentile Queue Length [ft/ln]	0.23	0.23	0.00	0.00	9.98	9.98
d_A, Approach Delay [s/veh]	3.62		0.00		9.11	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.87					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.038

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	95	113	177	12	19	131
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	95	113	177	12	19	131
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	28	44	3	5	33
Total Analysis Volume [veh/h]	95	113	177	12	19	131
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.04	0.15
d_M, Delay for Movement [s/veh]	7.79	0.00	0.00	0.00	13.22	10.26
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.22	0.00	0.00	0.00	0.70	0.70
95th-Percentile Queue Length [ft/ln]	5.52	0.00	0.00	0.00	17.46	17.46
d_A, Approach Delay [s/veh]	3.56		0.00		10.63	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.27					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	20.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.074

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	35	1155	937	39	20	69
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	1155	937	39	20	69
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	289	234	10	5	17
Total Analysis Volume [veh/h]	35	1155	937	39	20	69
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.07	0.13
d_M, Delay for Movement [s/veh]	10.39	0.00	0.00	0.00	20.53	13.99
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.00	0.76	0.76
95th-Percentile Queue Length [ft/ln]	3.93	0.00	0.00	0.00	19.08	19.08
d_A, Approach Delay [s/veh]	0.31		0.00		15.46	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.77					
Intersection LOS	C					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Year 2045
 PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	988	181	0	559	1247
Future Volume (veh/h)	0	988	181	0	559	1247
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	988	181	0	559	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	1935	1018	0	1190	
Arrive On Green	0.00	0.54	0.54	0.00	0.34	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	988	181	0	559	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	15.8	4.4	0.0	11.4	0.0
Cycle Q Clear(g_c), s	0.0	15.8	4.4	0.0	11.4	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1935	1018	0	1190	
V/C Ratio(X)	0.00	0.51	0.18	0.00	0.47	
Avail Cap(c_a), veh/h	0	1935	1018	0	1190	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	12.9	10.3	0.0	23.1	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.4	0.0	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.8	1.7	0.0	4.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	13.9	10.7	0.0	24.4	0.0
LnGrp LOS	A	B	B	A	C	
Approach Vol, veh/h		988	181		559	A
Approach Delay, s/veh		13.9	10.7		24.4	
Approach LOS		B	B		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				54.0	36.0	54.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				49.0	31.0	49.0
Max Q Clear Time (g_c+I1), s				17.8	13.4	6.4
Green Ext Time (p_c), s				7.7	2.0	1.0

Intersection Summary

HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045
PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	988	181	0	559	1247
Future Volume (vph)	0	988	181	0	559	1247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr t						0.850
Fl t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						860
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	988	181	0	559	1247
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	988	181	0	559	1247
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045
PM Peak Hour

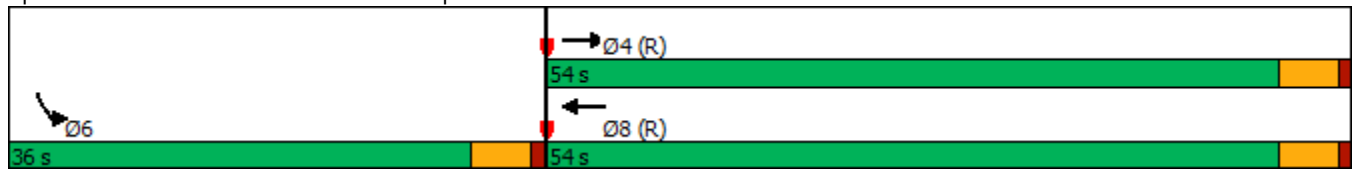


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		54.0	54.0		36.0	
Total Split (%)		60.0%	60.0%		40.0%	
Maximum Green (s)		49.0	49.0		31.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		49.0	49.0		31.0	90.0
Actuated g/C Ratio		0.54	0.54		0.34	1.00
v/c Ratio		0.51	0.18		0.47	0.79
Control Delay		14.1	8.1		24.7	4.0
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.1	8.1		24.7	4.0
LOS		B	A		C	A
Approach Delay		14.1	8.1		10.5	
Approach LOS		B	A		B	
Queue Length 50th (ft)		175	29		126	0
Queue Length 95th (ft)		227	47		174	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		1926	1014		1182	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.51	0.18		0.47	0.79

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 8 (9%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 11.5
 Intersection Capacity Utilization 64.5%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↗	
Traffic Volume (veh/h)	71	972	587	0	478	12	7	36	195	6	0	54
Future Volume (veh/h)	71	972	587	0	478	12	7	36	195	6	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	972	0	0	478	12	7	36	195	6	0	54
Peak Hour 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
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	586	2132		0	3074	77	100	467	458	393	0	458
Arrive On Green	0.60	0.60	0.00	0.00	0.60	0.60	0.29	0.29	0.29	0.29	0.00	0.29
Sat Flow, veh/h	906	3554	1585	0	5292	128	184	1615	1585	1149	0	1585
Grp Volume(v), veh/h	71	972	0	0	317	173	43	0	195	6	0	54
Grp Sat Flow(s),veh/h/ln	906	1777	1585	0	1702	1847	1799	0	1585	1149	0	1585
Q Serve(g_s), s	3.4	13.6	0.0	0.0	3.7	3.7	0.0	0.0	9.0	0.3	0.0	2.3
Cycle Q Clear(g_c), s	7.1	13.6	0.0	0.0	3.7	3.7	1.5	0.0	9.0	1.8	0.0	2.3
Prop In Lane	1.00		1.00	0.00		0.07	0.16		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	586	2132		0	2042	1108	566	0	458	393	0	458
V/C Ratio(X)	0.12	0.46		0.00	0.16	0.16	0.08	0.00	0.43	0.02	0.00	0.12
Avail Cap(c_a), veh/h	586	2132		0	2042	1108	566	0	458	393	0	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.5	9.9	0.0	0.0	7.9	7.9	23.3	0.0	25.9	24.0	0.0	23.6
Incr Delay (d2), s/veh	0.4	0.7	0.0	0.0	0.2	0.3	0.3	0.0	2.9	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.7	0.0	0.0	1.2	1.4	0.7	0.0	3.7	0.1	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.9	10.6	0.0	0.0	8.1	8.2	23.6	0.0	28.8	24.0	0.0	24.1
LnGrp LOS	A	B		A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1043	A		490			238				60
Approach Delay, s/veh		10.6			8.2			27.9				24.1
Approach LOS		B			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		59.0		31.0		59.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		54.0		26.0		54.0				
Max Q Clear Time (g_c+I1), s		11.0		15.6		4.3		5.7				
Green Ext Time (p_c), s		0.7		8.4		0.2		3.1				

Intersection Summary

HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045
 PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	972	587	0	478	12	7	36	195	6	0	54
Future Volume (vph)	71	972	587	0	478	12	7	36	195	6	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996				0.850		0.850	
Flt Protected	0.950							0.992		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5065	0	0	1848	1583	1770	1583	0
Flt Permitted	0.463							0.969		0.729		
Satd. Flow (perm)	862	3539	1583	0	5065	0	0	1805	1583	1358	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			504		7				129		390	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour 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
Adj. Flow (vph)	71	972	587	0	478	12	7	36	195	6	0	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	972	587	0	490	0	0	43	195	6	54	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045
 PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	59.0	59.0			59.0		31.0	31.0	31.0	31.0	31.0	31.0
Total Split (%)	65.6%	65.6%			65.6%		34.4%	34.4%	34.4%	34.4%	34.4%	34.4%
Maximum Green (s)	54.0	54.0			54.0		26.0	26.0	26.0	26.0	26.0	26.0
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	Max
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	54.0	54.0	90.0		54.0			26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.60	0.60	1.00		0.60			0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.14	0.46	0.37		0.16			0.08	0.36	0.02	0.07	0.07
Control Delay	5.7	7.5	0.6		8.0			24.0	11.5	23.2	0.2	0.2
Queue Delay	0.0	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	7.5	0.6		8.0			24.0	11.5	23.2	0.2	0.2
LOS	A	A	A		A			C	B	C	A	A
Approach Delay		5.0			8.0			13.7				2.5
Approach LOS		A			A			B				A
Queue Length 50th (ft)	9	124	0		41			18	28	2	0	0
Queue Length 95th (ft)	m20	138	0		56			43	82	12	0	0
Internal Link Dist (ft)		121			561			495				178
Turn Bay Length (ft)	315								270			
Base Capacity (vph)	517	2123	1583		3041			521	549	392	734	
Starvation Cap Reductn	0	0	0		0			0	0	0	0	0
Spillback Cap Reductn	0	0	0		0			0	0	0	0	0
Storage Cap Reductn	0	0	0		0			0	0	0	0	0
Reduced v/c Ratio	0.14	0.46	0.37		0.16			0.08	0.36	0.02	0.07	0.07

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.46
 Intersection Signal Delay: 6.4
 Intersection LOS: A
 Intersection Capacity Utilization 56.4%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Year 2045
 PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↶	↶	↶↶	↶	↶↶	↶↶
Traffic Volume (veh/h)	1248	553	719	39	603	794
Future Volume (veh/h)	1248	553	719	39	603	794
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1248	0	719	0	603	794
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1345		904		685	1769
Arrive On Green	0.39	0.00	0.25	0.00	0.20	0.50
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	1248	0	719	0	603	794
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	30.5	0.0	16.7	0.0	15.0	12.8
Cycle Q Clear(g_c), s	30.5	0.0	16.7	0.0	15.0	12.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1345		904		685	1769
V/C Ratio(X)	0.93		0.80		0.88	0.45
Avail Cap(c_a), veh/h	1407		904		743	1769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	0.0	30.8	0.0	34.4	14.4
Incr Delay (d2), s/veh	10.7	0.0	7.2	0.0	11.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	0.0	7.5	0.0	7.0	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.5	0.0	38.0	0.0	45.7	15.2
LnGrp LOS	D		D		D	B
Approach Vol, veh/h	1248	A	719	A		1397
Approach Delay, s/veh	36.5		38.0			28.4
Approach LOS	D		D			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.5	27.5			49.0	39.4
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	19.0	21.0			44.0	36.0
Max Q Clear Time (g_c+I1), s	17.0	18.7			14.8	32.5
Green Ext Time (p_c), s	0.5	1.0			5.5	1.9

Intersection Summary

















HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045
 PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	1248	553	719	39	603	794
Future Volume (vph)	1248	553	719	39	603	794
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		378		39		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1248	553	719	39	603	794
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1248	553	719	39	603	794
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045
 PM Peak Hour

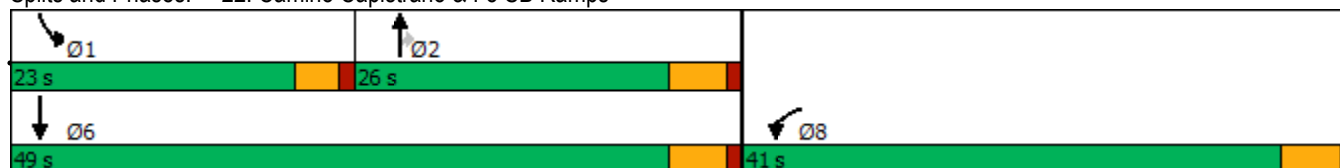


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	41.0		26.0	26.0	23.0	49.0
Total Split (%)	45.6%		28.9%	28.9%	25.6%	54.4%
Maximum Green (s)	36.0		21.0	21.0	19.0	44.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max
Act Effect Green (s)	34.8	88.9	21.8	21.8	18.3	44.0
Actuated g/C Ratio	0.39	1.00	0.25	0.25	0.21	0.49
v/c Ratio	0.93	0.35	0.83	0.09	0.86	0.45
Control Delay	39.0	0.6	42.3	9.9	47.4	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	0.6	42.3	9.9	47.4	15.9
LOS	D	A	D	A	D	B
Approach Delay	27.2		40.6			29.5
Approach LOS	C		D			C
Queue Length 50th (ft)	337	0	207	0	170	150
Queue Length 95th (ft)	#472	0	#305	25	#252	197
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1392	1583	866	417	734	1753
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.35	0.83	0.09	0.82	0.45

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 88.9
 Natural Cycle: 75
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 30.6
 Intersection LOS: C
 Intersection Capacity Utilization 84.3%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
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	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	39	131	0	36	34	1396	22	10	1645	123
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	39	131	0	36	34	1396	22	10	1645	123
Peak Hour 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
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	10	33	0	9	9	349	6	3	411	31
Total Analysis Volume [veh/h]	0	0	39	131	0	36	34	1396	22	10	1645	123
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 in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	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	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [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
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	75	0	10	75	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	24	0	0	24	0	0	11	0	0	11	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	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	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]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19	19	4	88	88	2	85	85
g / C, Green / Cycle	0.16	0.16	0.16	0.16	0.03	0.73	0.73	0.01	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.13	0.02	0.02	0.27	0.01	0.01	0.46	0.08
s, saturation flow rate [veh/h]	1417	1589	998	1589	1781	5094	1589	1781	3560	1589
c, Capacity [veh/h]	62	247	215	247	61	3719	1160	26	2529	1129
d1, Uniform Delay [s]	0.00	43.87	52.16	43.79	57.03	6.02	4.43	58.57	9.35	5.45
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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]	0.00	0.30	2.78	0.27	7.70	0.29	0.03	9.04	1.31	0.19
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	0.00	0.16	0.61	0.15	0.56	0.38	0.02	0.38	0.65	0.11
d, Delay for Lane Group [s/veh]	0.00	44.17	54.94	44.06	64.73	6.31	4.46	67.61	10.67	5.65
Lane Group LOS	A	D	D	D	E	A	A	E	B	A
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	1.03	4.03	0.95	1.15	4.02	0.15	0.37	10.81	0.96
50th-Percentile Queue Length [ft/ln]	0.00	25.76	100.72	23.72	28.66	100.41	3.65	9.17	270.16	24.08
95th-Percentile Queue Length [veh/ln]	0.00	1.85	7.25	1.71	2.06	7.23	0.26	0.66	16.20	1.73
95th-Percentile Queue Length [ft/ln]	0.00	46.36	181.30	42.70	51.59	180.74	6.57	16.50	404.94	43.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	44.17	44.17	54.94	54.94	44.06	64.73	6.31	4.46	67.61	10.67	5.65
Movement LOS	A	D	D	D	D	D	E	A	A	E	B	A
d_A, Approach Delay [s/veh]	44.17			52.59			7.65			10.64		
Approach LOS	D			D			A			B		
d_I, Intersection Delay [s/veh]	11.80											
Intersection LOS	B											
Intersection V/C	0.680											

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]	49.50			49.50			49.50			49.50		
I_p,int, Pedestrian LOS Score for Intersection	1.977			2.059			3.044			3.260		
Crosswalk LOS	A			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]	517			517			1183			1183		
d_b, Bicycle Delay [s]	33.00			33.00			10.00			10.00		
I_b,int, Bicycle LOS Score for Intersection	1.624			1.835			2.358			3.026		
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 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↩ ↑		↑↩		↩↩	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	150	618	1393	151	133	210
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	150	618	1393	151	133	210
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	155	348	38	33	53
Total Analysis Volume [veh/h]	150	618	1393	151	133	210
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	14	60	46	0	30	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	68	54	54	14	14
g / C, Green / Cycle	0.10	0.75	0.61	0.61	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.17	0.39	0.09	0.07	0.13
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	184	2679	2153	961	283	252
d1, Uniform Delay [s]	39.54	3.34	11.55	7.77	34.43	36.71
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.52	0.20	1.52	0.35	1.22	6.99
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.23	0.65	0.16	0.47	0.83
d, Delay for Lane Group [s/veh]	48.06	3.54	13.07	8.12	35.65	43.70
Lane Group LOS	D	A	B	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.64	1.31	8.45	1.26	2.71	4.88
50th-Percentile Queue Length [ft/ln]	90.94	32.74	211.14	31.46	67.63	122.10
95th-Percentile Queue Length [veh/ln]	6.55	2.36	13.21	2.27	4.87	8.51
95th-Percentile Queue Length [ft/ln]	163.68	58.94	330.29	56.63	121.74	212.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.06	3.54	13.07	8.12	35.65	43.70
Movement LOS	D	A	B	A	D	D
d_A, Approach Delay [s/veh]	12.24		12.59		40.58	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	16.10					
Intersection LOS	B					
Intersection V/C	0.701					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.762	0.000	2.149
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1244	933	578
d_b, Bicycle Delay [s]	6.42	12.80	22.76
I_b,int, Bicycle LOS Score for Intersection	2.193	2.833	1.560
Bicycle LOS	B	C	A

Sequence

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



HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045
 Sat Midday Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	904	559	0	0	0	629	446	368	82	869	652
Future Volume (veh/h)	322	904	559	0	0	0	629	446	368	82	869	652
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	322	904	0				538	574	368	82	869	652
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	484	966					614	645	547	460	918	1479
Arrive On Green	0.27	0.27	0.00				0.34	0.34	0.34	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	322	904	0				538	574	368	82	869	652
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	19.3	29.8	0.0				34.0	34.8	23.8	4.3	28.8	17.2
Cycle Q Clear(g_c), s	19.3	29.8	0.0				34.0	34.8	23.8	4.3	28.8	17.2
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	484	966					614	645	547	460	918	1479
V/C Ratio(X)	0.67	0.94					0.88	0.89	0.67	0.18	0.95	0.44
Avail Cap(c_a), veh/h	490	977					614	645	547	460	918	1479
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	42.7	0.0				36.9	37.1	33.5	34.6	43.7	17.3
Incr Delay (d2), s/veh	3.3	15.6	0.0				16.0	16.8	6.5	0.8	19.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	14.8	0.0				17.0	18.3	9.9	1.9	14.8	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	58.3	0.0				52.9	54.0	40.0	35.4	63.0	18.2
LnGrp LOS	D	E					D	D	D	D	E	B
Approach Vol, veh/h		1226	A					1480			1603	
Approach Delay, s/veh		54.1						50.1			43.4	
Approach LOS		D						D			D	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		46.4		37.6				36.0				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		41.0		33.0				31.0				
Max Q Clear Time (g_c+I1), s		36.8		31.8				30.8				
Green Ext Time (p_c), s		2.6		0.8				0.2				

Intersection Summary

HCM 6th Ctrl Delay	48.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045
Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	904	559	0	0	0	629	446	368	82	869	652
Future Volume (vph)	322	904	559	0	0	0	629	446	368	82	869	652
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.991		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1754	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.991		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1754	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			559						270			167
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour 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
Adj. Flow (vph)	322	904	559	0	0	0	629	446	368	82	869	652
Shared Lane Traffic (%)							16%					
Lane Group Flow (vph)	322	904	559	0	0	0	528	547	368	82	869	652
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045
 Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	38.0	38.0	38.0				46.0	46.0	46.0	36.0	36.0	38.0
Total Split (%)	31.7%	31.7%	31.7%				38.3%	38.3%	38.3%	30.0%	30.0%	31.7%
Maximum Green (s)	33.0	33.0	33.0				41.0	41.0	41.0	31.0	31.0	33.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	33.0	33.0	33.0				41.0	41.0	41.0	31.0	31.0	69.0
Actuated g/C Ratio	0.28	0.28	0.28				0.34	0.34	0.34	0.26	0.26	0.58
v/c Ratio	0.66	0.93	0.67				0.92	0.91	0.51	0.18	0.95	0.39
Control Delay	46.2	58.8	7.2				61.0	59.2	11.2	36.0	64.1	10.8
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	58.8	7.2				61.0	59.2	11.2	36.0	64.1	10.8
LOS	D	E	A				E	E	B	D	E	B
Approach Delay		40.4						47.6			40.9	
Approach LOS		D						D			D	
Queue Length 50th (ft)	222	359	0				410	424	53	50	349	107
Queue Length 95th (ft)	326	#484	95				#635	#648	143	93	#478	150
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	486	973	840				574	599	718	457	914	1673
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.93	0.67				0.92	0.91	0.51	0.18	0.95	0.39

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 42.7
 Intersection LOS: D
 Intersection Capacity Utilization 90.7%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report
Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.406

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑		↩↑↑		↗	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	1332	19	210	984	0	161
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1332	19	210	984	0	161
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	333	5	53	246	0	40
Total Analysis Volume [veh/h]	1332	19	210	984	0	161
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.42	0.01	0.00	0.41
d_M, Delay for Movement [s/veh]	0.00	0.00	17.09	0.00	0.00	20.17
Movement LOS	A	A	C	A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	2.02	0.00	0.00	1.93
95th-Percentile Queue Length [ft/ln]	0.00	0.00	50.55	0.00	0.00	48.18
d_A, Approach Delay [s/veh]	0.00		3.01		20.17	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.53					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.643

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	438	866	5	41	804	139	480	5	276	5	5	5
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	438	866	5	41	804	139	480	5	276	5	5	5
Peak Hour 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
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]	110	217	1	10	201	35	120	1	69	1	1	1
Total Analysis Volume [veh/h]	438	866	5	41	804	139	480	5	276	5	5	5
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 in	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]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	22	41	0	10	29	0	0	34	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	53	53	4	43	43	20	20	20	2
g / C, Green / Cycle	0.15	0.56	0.56	0.04	0.45	0.45	0.21	0.21	0.21	0.02
(v / s)_i Volume / Saturation Flow Rate	0.13	0.23	0.23	0.02	0.23	0.09	0.14	0.14	0.17	0.01
s, saturation flow rate [veh/h]	3459	1870	1866	1781	3560	1589	1781	1783	1589	1739
c, Capacity [veh/h]	524	1046	1043	77	1605	716	370	370	330	38
d1, Uniform Delay [s]	39.23	12.06	12.06	44.60	18.54	15.73	34.57	34.57	36.14	45.91
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.62	1.23	1.23	5.69	1.12	0.60	1.97	1.97	5.57	6.44
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	0.84	0.42	0.42	0.54	0.50	0.19	0.66	0.65	0.84	0.39
d, Delay for Lane Group [s/veh]	42.85	13.28	13.29	50.29	19.66	16.33	36.54	36.54	41.71	52.35
Lane Group LOS	D	B	B	D	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	5.16	5.31	5.30	1.06	6.27	1.89	5.27	5.27	6.54	0.42
50th-Percentile Queue Length [ft/ln]	129.08	132.82	132.62	26.54	156.67	47.13	131.68	131.76	163.48	10.39
95th-Percentile Queue Length [veh/ln]	8.89	9.09	9.08	1.91	10.37	3.39	9.03	9.04	10.73	0.75
95th-Percentile Queue Length [ft/ln]	222.24	227.33	227.05	47.76	259.31	84.83	225.78	225.88	268.33	18.71

Movement, Approach, & Intersection Results

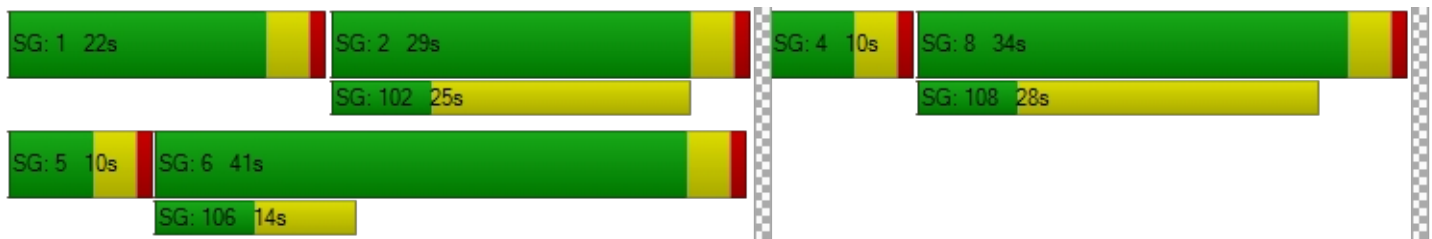
d_M, Delay for Movement [s/veh]	42.85	13.29	13.29	50.29	19.66	16.33	36.54	36.54	41.71	52.35	52.35	52.35
Movement LOS	D	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	23.18			20.47			38.41			52.35		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	26.23											
Intersection LOS	C											
Intersection V/C	0.643											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	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]	37.14	0.00	37.14	37.14
I_p,int, Pedestrian LOS Score for Intersection	2.844	0.000	2.564	1.749
Crosswalk LOS	C	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	779	526	632	126
d_b, Bicycle Delay [s]	17.71	25.79	22.24	41.69
I_b,int, Bicycle LOS Score for Intersection	2.640	2.371	2.815	1.584
Bicycle LOS	B	B	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.044

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	22	1286	102	11	1155	15	0	0	7	0	0	17
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	1286	102	11	1155	15	0	0	7	0	0	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9560	0.9560	1.0000	0.9560	0.9560	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	322	26	3	289	4	0	0	2	0	0	4
Total Analysis Volume [veh/h]	22	1286	102	11	1155	15	0	0	7	0	0	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings




















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	11.31	0.00	0.00	12.53	0.00	0.00	94.27	165.53	13.05	110.17	155.73	14.78
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.07	0.00	0.00	0.05	0.05	0.05	0.14	0.14	0.14
95th-Percentile Queue Length [ft/ln]	2.89	0.00	0.00	1.72	0.00	0.00	1.17	1.17	1.17	3.45	3.45	3.45
d_A, Approach Delay [s/veh]	0.18			0.12			13.05			14.78		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.28											
Intersection LOS	B											

HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
 Sat Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	19	44	13	818	14	564	359	0	1134	28
Future Volume (veh/h)	27	0	19	44	13	818	14	564	359	0	1134	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	27	0	19	44	13	818	14	564	359	0	1134	28
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	281	16	165	574	161	704	99	1579	704	0	1181	29
Arrive On Green	0.44	0.00	0.44	0.44	0.44	0.44	0.06	0.44	0.44	0.00	0.33	0.33
Sat Flow, veh/h	490	36	370	1132	362	1585	1781	3554	1585	0	3637	87
Grp Volume(v), veh/h	46	0	0	57	0	818	14	564	359	0	568	594
Grp Sat Flow(s),veh/h/ln	896	0	0	1494	0	1585	1781	1777	1585	0	1777	1855
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	40.0	0.7	9.4	14.6	0.0	28.2	28.2
Cycle Q Clear(g_c), s	1.6	0.0	0.0	1.6	0.0	40.0	0.7	9.4	14.6	0.0	28.2	28.2
Prop In Lane	0.59		0.41	0.77		1.00	1.00		1.00	0.00		0.05
Lane Grp Cap(c), veh/h	462	0	0	735	0	704	99	1579	704	0	592	618
V/C Ratio(X)	0.10	0.00	0.00	0.08	0.00	1.16	0.14	0.36	0.51	0.00	0.96	0.96
Avail Cap(c_a), veh/h	462	0	0	735	0	704	119	1579	704	0	592	618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	0.0	14.3	0.0	25.0	40.5	16.5	18.0	0.0	29.4	29.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	87.7	0.6	0.6	2.6	0.0	28.3	27.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.7	0.0	31.1	0.3	3.7	5.5	0.0	16.0	16.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.4	0.0	0.0	14.4	0.0	112.7	41.1	17.1	20.6	0.0	57.7	57.0
LnGrp LOS	B	A	A	B	A	F	D	B	C	A	E	E
Approach Vol, veh/h		46			875			937			1162	
Approach Delay, s/veh		14.4			106.3			18.8			57.4	
Approach LOS		B			F			B			E	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		45.0		45.0	10.0	35.0		45.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		40.0		40.0	6.0	* 30		40.0				
Max Q Clear Time (g_c+I1), s		16.6		3.6	2.7	30.2		42.0				
Green Ext Time (p_c), s		5.2		0.4	0.0	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				58.9								
HCM 6th LOS				E								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↖	↕	↗		↕	
Traffic Volume (vph)	27	0	19	44	13	818	14	564	359	0	1134	28
Future Volume (vph)	27	0	19	44	13	818	14	564	359	0	1134	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.944				0.850			0.850		0.996	
Flt Protected		0.971			0.963		0.950					
Satd. Flow (prot)	0	1707	0	0	1794	1583	1770	3539	1583	0	3525	0
Flt Permitted		0.869			0.815		0.950					
Satd. Flow (perm)	0	1528	0	0	1518	1583	1770	3539	1583	0	3525	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		85				207			359			3
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour 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
Adj. Flow (vph)	27	0	19	44	13	818	14	564	359	0	1134	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	57	818	14	564	359	0	1162	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045
Sat Midday Peak Hour



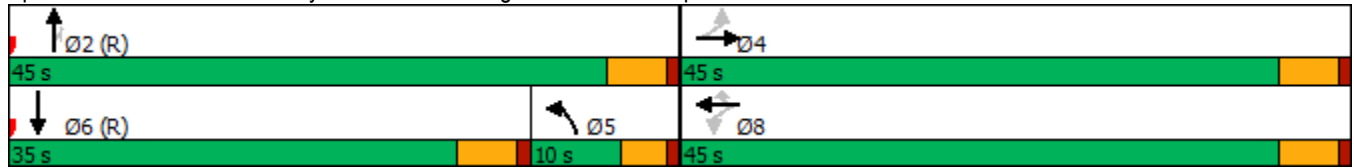
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2			6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0			6.0
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0			19.0
Total Split (s)	45.0	45.0		45.0	45.0	45.0	10.0	45.0	45.0			35.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	11.1%	50.0%	50.0%			38.9%
Maximum Green (s)	40.0	40.0		40.0	40.0	40.0	6.0	40.0	40.0			30.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0			4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0			1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0			0.0
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0			5.0
Lead/Lag							Lag					Lead
Lead-Lag Optimize?							Yes					Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max			C-Max
Walk Time (s)				7.0	7.0	7.0						7.0
Flash Dont Walk (s)				14.0	14.0	14.0						7.0
Pedestrian Calls (#/hr)				5	5	5						5
Act Effct Green (s)		40.0			40.0	40.0	6.0	40.0	40.0			38.0
Actuated g/C Ratio		0.44			0.44	0.44	0.07	0.44	0.44			0.42
v/c Ratio		0.06			0.08	1.00	0.12	0.36	0.40			0.78
Control Delay		1.1			15.0	52.0	34.6	11.3	1.3			28.1
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0			0.0
Total Delay		1.1			15.0	52.0	34.6	11.3	1.3			28.1
LOS		A			B	D	C	B	A			C
Approach Delay		1.1			49.6			7.8				28.1
Approach LOS		A			D			A				C
Queue Length 50th (ft)		0			18	369	8	69	0			278
Queue Length 95th (ft)		6			41	#644	23	93	0			#490
Internal Link Dist (ft)		461			635			87				398
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		726			674	818	118	1572	903			1490
Starvation Cap Reductn		0			0	0	0	0	0			0
Spillback Cap Reductn		0			0	0	0	0	0			0
Storage Cap Reductn		0			0	0	0	0	0			0
Reduced v/c Ratio		0.06			0.08	1.00	0.12	0.36	0.40			0.78

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	64 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.00
Intersection Signal Delay:	27.6
Intersection LOS:	C
Intersection Capacity Utilization:	83.7%
ICU Level of Service:	E
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	

Queue shown is maximum after two cycles.

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶↶	↷		↶↶	↶	
Traffic Volume (veh/h)	326	382	0	558	284	0
Future Volume (veh/h)	326	382	0	558	284	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	326	0	0	558	284	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	433		0	2713	1428	0
Arrive On Green	0.13	0.00	0.00	0.76	0.76	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	326	0	0	558	284	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	8.2	0.0	0.0	4.0	3.8	0.0
Cycle Q Clear(g_c), s	8.2	0.0	0.0	4.0	3.8	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	433		0	2713	1428	0
V/C Ratio(X)	0.75		0.00	0.21	0.20	0.00
Avail Cap(c_a), veh/h	1152		0	2713	1428	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.0	0.0	0.0	3.0	3.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	0.0	1.0	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.7	0.0	0.0	3.2	3.3	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	326	A		558	284	
Approach Delay, s/veh	40.7			3.2	3.3	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.7		16.3		73.7
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		50.0		30.0		50.0
Max Q Clear Time (g_c+I1), s		6.0		10.2		5.8
Green Ext Time (p_c), s		4.1		1.1		1.7

Intersection Summary

HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
10: Doheny Park Rd & PCH Side Path

Year 2045
Sat Midday Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶↶	↷		↶↶	↶	
Traffic Volume (vph)	326	382	0	558	284	0
Future Volume (vph)	326	382	0	558	284	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		382				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	326	382	0	558	284	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	326	382	0	558	284	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045
 Sat Midday Peak Hour

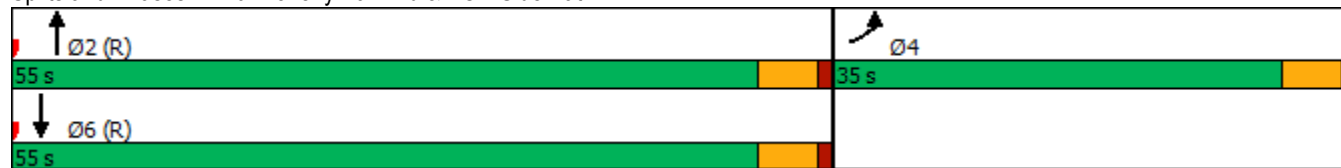


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	35.0			55.0	55.0	
Total Split (%)	38.9%			61.1%	61.1%	
Maximum Green (s)	30.0			50.0	50.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	13.9	90.0		66.1	66.1	
Actuated g/C Ratio	0.15	1.00		0.73	0.73	
v/c Ratio	0.62	0.24		0.21	0.21	
Control Delay	40.4	0.4		4.3	0.7	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	40.4	0.4		4.3	0.7	
LOS	D	A		A	A	
Approach Delay	18.8			4.3	0.7	
Approach LOS	B			A	A	
Queue Length 50th (ft)	90	0		43	5	
Queue Length 95th (ft)	126	0		72	m8	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1144	1583		2599	1368	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.28	0.24		0.21	0.21	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 10.3
 Intersection LOS: B
 Intersection Capacity Utilization 33.1%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↶↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	14	101	111	47	21	11
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	101	111	47	21	11
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	25	28	12	5	3
Total Analysis Volume [veh/h]	14	101	111	47	21	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	7.56	0.00	0.00	0.00	10.17	8.98
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.09	0.04
95th-Percentile Queue Length [ft/ln]	0.75	0.75	0.00	0.00	2.26	0.91
d_A, Approach Delay [s/veh]	0.92		0.00		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.37					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.249

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	132	5	12	6	5	50	30	112	57	5	140	5
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	5	12	6	5	50	30	112	57	5	140	5
Peak Hour 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
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]	33	1	3	2	1	13	8	28	14	1	35	1
Total Analysis Volume [veh/h]	132	5	12	6	5	50	30	112	57	5	140	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	725	800	799	768
Degree of Utilization, x	0.21	0.08	0.25	0.20

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.77	0.25	0.98	0.72
95th-Percentile Queue Length [ft]	19.21	6.17	24.58	18.05
Approach Delay [s/veh]	9.25	7.87	9.00	8.83
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.90			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.116

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	5	5	5	8	115	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	5	5	8	115	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	2	29	1
Total Analysis Volume [veh/h]	5	5	5	8	115	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.00
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	9.14	8.85
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.41	0.41
95th-Percentile Queue Length [ft/ln]	0.23	0.23	0.00	0.00	10.28	10.28
d_A, Approach Delay [s/veh]	3.62		0.00		9.13	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.91					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	137	110	124	5	5	126
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	110	124	5	5	126
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	28	31	1	1	32
Total Analysis Volume [veh/h]	137	110	124	5	5	126
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.00	0.00	0.00	0.01	0.14
d_M, Delay for Movement [s/veh]	7.73	0.00	0.00	0.00	13.29	9.59
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.31	0.00	0.00	0.00	0.51	0.51
95th-Percentile Queue Length [ft/ln]	7.77	0.00	0.00	0.00	12.85	12.85
d_A, Approach Delay [s/veh]	4.29		0.00		9.73	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.60					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	23.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.124

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	43	1354	1019	46	29	70
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	1354	1019	46	29	70
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	339	255	12	7	18
Total Analysis Volume [veh/h]	43	1354	1019	46	29	70
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.01	0.00	0.12	0.14
d_M, Delay for Movement [s/veh]	10.93	0.00	0.00	0.00	23.86	15.80
Movement LOS	B	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.21	0.00	0.00	0.00	1.06	1.06
95th-Percentile Queue Length [ft/ln]	5.30	0.00	0.00	0.00	26.40	26.40
d_A, Approach Delay [s/veh]	0.34		0.00		18.16	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.89					
Intersection LOS	C					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Year 2045
 Sat Midday Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	940	140	0	362	1111
Future Volume (veh/h)	0	940	140	0	362	1111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	940	140	0	362	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	2172	1143	0	960	
Arrive On Green	0.00	0.61	0.61	0.00	0.28	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	940	140	0	362	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	12.6	2.8	0.0	7.6	0.0
Cycle Q Clear(g_c), s	0.0	12.6	2.8	0.0	7.6	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2172	1143	0	960	
V/C Ratio(X)	0.00	0.43	0.12	0.00	0.38	
Avail Cap(c_a), veh/h	0	2172	1143	0	960	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	9.3	7.4	0.0	26.2	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.0	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	1.0	0.0	3.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.9	7.6	0.0	27.3	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		940	140		362	A
Approach Delay, s/veh		9.9	7.6		27.3	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				60.0	30.0	60.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				55.0	25.0	55.0
Max Q Clear Time (g_c+I1), s				14.6	9.6	4.8
Green Ext Time (p_c), s				7.6	1.1	0.8

Intersection Summary

HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045
Sat Midday Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	940	140	0	362	1111
Future Volume (vph)	0	940	140	0	362	1111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr't						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						901
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	940	140	0	362	1111
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	940	140	0	362	1111
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045
Sat Midday Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		60.0	60.0		30.0	
Total Split (%)		66.7%	66.7%		33.3%	
Maximum Green (s)		55.0	55.0		25.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		55.0	55.0		25.0	90.0
Actuated g/C Ratio		0.61	0.61		0.28	1.00
v/c Ratio		0.43	0.12		0.38	0.70
Control Delay		10.0	4.3		27.7	2.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		10.0	4.3		27.7	2.6
LOS		B	A		C	A
Approach Delay		10.0	4.3		8.8	
Approach LOS		B	A		A	
Queue Length 50th (ft)		135	13		85	0
Queue Length 95th (ft)		176	22		124	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		2162	1138		953	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.43	0.12		0.38	0.70

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 7 (8%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 9.0
 Intersection Capacity Utilization 44.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045
 Sat Midday Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↗	
Traffic Volume (veh/h)	58	702	646	0	516	5	7	23	162	6	0	63
Future Volume (veh/h)	58	702	646	0	516	5	7	23	162	6	0	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	702	0	0	516	5	7	23	162	6	0	63
Peak Hour 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
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	537	2014		0	2955	29	149	463	511	453	0	511
Arrive On Green	0.57	0.57	0.00	0.00	0.57	0.57	0.32	0.32	0.32	0.32	0.00	0.32
Sat Flow, veh/h	881	3554	1585	0	5383	50	311	1436	1585	1199	0	1585
Grp Volume(v), veh/h	58	702	0	0	337	184	30	0	162	6	0	63
Grp Sat Flow(s),veh/h/ln	881	1777	1585	0	1702	1861	1747	0	1585	1199	0	1585
Q Serve(g_s), s	3.1	9.6	0.0	0.0	4.3	4.3	0.0	0.0	6.9	0.3	0.0	2.5
Cycle Q Clear(g_c), s	7.3	9.6	0.0	0.0	4.3	4.3	1.0	0.0	6.9	1.3	0.0	2.5
Prop In Lane	1.00		1.00	0.00		0.03	0.23		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	537	2014		0	1929	1055	612	0	511	453	0	511
V/C Ratio(X)	0.11	0.35		0.00	0.17	0.17	0.05	0.00	0.32	0.01	0.00	0.12
Avail Cap(c_a), veh/h	537	2014		0	1929	1055	612	0	511	453	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.1	10.5	0.0	0.0	9.4	9.4	21.0	0.0	23.0	21.5	0.0	21.5
Incr Delay (d2), s/veh	0.4	0.5	0.0	0.0	0.2	0.4	0.2	0.0	1.6	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.4	0.0	0.0	1.5	1.6	0.5	0.0	2.8	0.1	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	11.0	0.0	0.0	9.6	9.7	21.2	0.0	24.7	21.5	0.0	22.0
LnGrp LOS	B	B		A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		760	A		521			192				69
Approach Delay, s/veh		11.0			9.6			24.1				22.0
Approach LOS		B			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		56.0		34.0		56.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		29.0		51.0		29.0		51.0				
Max Q Clear Time (g_c+I1), s		8.9		11.6		4.5		6.3				
Green Ext Time (p_c), s		0.6		5.6		0.3		3.4				

Intersection Summary

HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045
 Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↖	↗	↘	↗	
Traffic Volume (vph)	58	702	646	0	516	5	7	23	162	6	0	63
Future Volume (vph)	58	702	646	0	516	5	7	23	162	6	0	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.850		0.850	
Flt Protected	0.950							0.988		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5080	0	0	1840	1583	1770	1583	0
Flt Permitted	0.449							0.958		0.738		
Satd. Flow (perm)	836	3539	1583	0	5080	0	0	1785	1583	1375	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			646		2				162		335	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour 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
Adj. Flow (vph)	58	702	646	0	516	5	7	23	162	6	0	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	702	646	0	521	0	0	30	162	6	63	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045
 Sat Midday Peak Hour

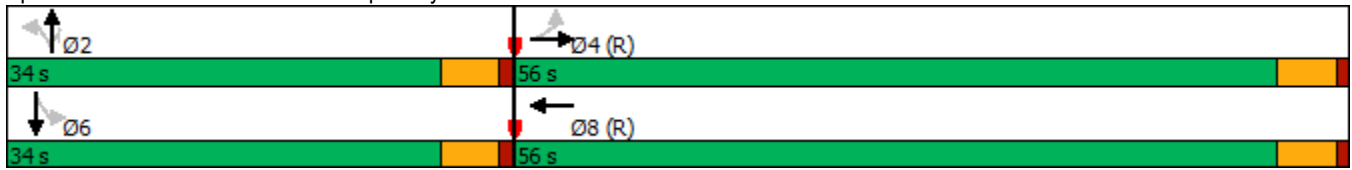


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	56.0	56.0			56.0		34.0	34.0	34.0	34.0	34.0	
Total Split (%)	62.2%	62.2%			62.2%		37.8%	37.8%	37.8%	37.8%	37.8%	
Maximum Green (s)	51.0	51.0			51.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	51.0	51.0	90.0		51.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.57	0.57	1.00		0.57		0.32	0.32	0.32	0.32	0.32	
v/c Ratio	0.12	0.35	0.41		0.18		0.05	0.26	0.01	0.01	0.09	
Control Delay	7.2	7.8	1.0		9.6		21.5	5.0	21.0	0.2	0.2	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	7.2	7.8	1.0		9.6		21.5	5.0	21.0	0.2	0.2	
LOS	A	A	A		A		C	A	C	A	A	
Approach Delay		4.7			9.6		7.5				2.0	
Approach LOS		A			A		A				A	
Queue Length 50th (ft)	10	70	5		48		12	0	2	0	0	
Queue Length 95th (ft)	23	88	10		65		31	42	11	0	0	
Internal Link Dist (ft)		121			561		495				178	
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	473	2005	1583		2879		575	619	443	737		
Starvation Cap Reductn	0	0	0		0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0		0		0	0	0	0	0	
Storage Cap Reductn	0	0	0		0		0	0	0	0	0	
Reduced v/c Ratio	0.12	0.35	0.41		0.18		0.05	0.26	0.01	0.01	0.09	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.41
Intersection Signal Delay:	6.0
Intersection LOS:	A
Intersection Capacity Utilization:	46.9%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Year 2045
 Sat Midday Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↶	↶	↕↕	↷	↶↶	↕↕
Traffic Volume (veh/h)	1105	515	681	35	479	712
Future Volume (veh/h)	1105	515	681	35	479	712
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1105	0	681	0	479	712
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1238		995		645	1866
Arrive On Green	0.36	0.00	0.28	0.00	0.19	0.53
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	1105	0	681	0	479	712
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	25.9	0.0	14.6	0.0	11.2	10.2
Cycle Q Clear(g_c), s	25.9	0.0	14.6	0.0	11.2	10.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1238		995		645	1866
V/C Ratio(X)	0.89		0.68		0.74	0.38
Avail Cap(c_a), veh/h	1411		995		686	1866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	27.5	0.0	32.9	12.1
Incr Delay (d2), s/veh	7.0	0.0	3.8	0.0	4.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	0.0	6.2	0.0	4.8	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.9	0.0	31.3	0.0	37.0	12.7
LnGrp LOS	C		C		D	B
Approach Vol, veh/h	1105	A	681	A		1191
Approach Delay, s/veh	32.9		31.3			22.5
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.0	29.0			50.0	35.7
Change Period (Y+Rc), s	5.0	* 5			5.0	5.0
Max Green Setting (Gmax), s	17.0	* 24			45.0	35.0
Max Q Clear Time (g_c+I1), s	13.2	16.6			12.2	27.9
Green Ext Time (p_c), s	0.7	2.5			4.9	2.8

Intersection Summary

















HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045
 Sat Midday Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	1105	515	681	35	479	712
Future Volume (vph)	1105	515	681	35	479	712
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		398		35		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1105	515	681	35	479	712
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1105	515	681	35	479	712
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045
 Sat Midday Peak Hour

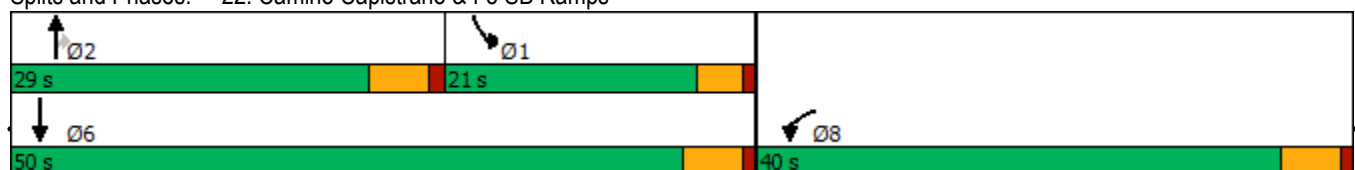


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	40.0		29.0	29.0	21.0	50.0
Total Split (%)	44.4%		32.2%	32.2%	23.3%	55.6%
Maximum Green (s)	35.0		24.0	24.0	17.0	45.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max
Act Effect Green (s)	32.2	87.3	24.0	24.0	17.0	45.1
Actuated g/C Ratio	0.37	1.00	0.27	0.27	0.19	0.52
v/c Ratio	0.87	0.33	0.70	0.08	0.72	0.39
Control Delay	34.4	0.5	33.5	9.3	40.3	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	0.5	33.5	9.3	40.3	14.0
LOS	C	A	C	A	D	B
Approach Delay	23.6		32.3			24.6
Approach LOS	C		C			C
Queue Length 50th (ft)	286	0	185	0	133	127
Queue Length 95th (ft)	369	0	247	22	187	170
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1379	1583	974	461	669	1827
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.33	0.70	0.08	0.72	0.39

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	87.3
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	25.7
Intersection LOS:	C
Intersection Capacity Utilization:	75.7%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
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	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	36	200	0	55	61	1351	21	9	1387	219
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	36	200	0	55	61	1351	21	9	1387	219
Peak Hour 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
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	50	0	14	15	338	5	2	347	55
Total Analysis Volume [veh/h]	0	0	36	200	0	55	61	1351	21	9	1387	219
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 in	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	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	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [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
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	45	0	10	45	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	24	0	0	24	0	0	11	0	0	11	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	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	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]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19	19	5	57	57	1	54	54
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.05	0.64	0.64	0.01	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.18	0.03	0.03	0.27	0.01	0.01	0.39	0.14
s, saturation flow rate [veh/h]	1417	1589	1090	1589	1781	5094	1589	1781	3560	1589
c, Capacity [veh/h]	86	342	314	342	94	3249	1014	25	2133	952
d1, Uniform Delay [s]	0.00	28.39	36.24	28.74	41.82	8.04	5.99	43.98	11.85	8.39
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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]	0.00	0.13	2.15	0.22	7.33	0.39	0.04	8.44	1.55	0.56
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	0.00	0.11	0.64	0.16	0.65	0.42	0.02	0.36	0.65	0.23
d, Delay for Lane Group [s/veh]	0.00	28.52	38.38	28.96	49.15	8.43	6.02	52.41	13.40	8.95
Lane Group LOS	A	C	D	C	D	A	A	D	B	A
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	0.63	4.37	0.97	1.51	3.90	0.14	0.26	8.56	1.96
50th-Percentile Queue Length [ft/ln]	0.00	15.74	109.18	24.37	37.64	97.40	3.54	6.39	214.03	49.01
95th-Percentile Queue Length [veh/ln]	0.00	1.13	7.79	1.75	2.71	7.01	0.26	0.46	13.36	3.53
95th-Percentile Queue Length [ft/ln]	0.00	28.33	194.86	43.87	67.75	175.32	6.38	11.51	334.00	88.21

Movement, Approach, & Intersection Results

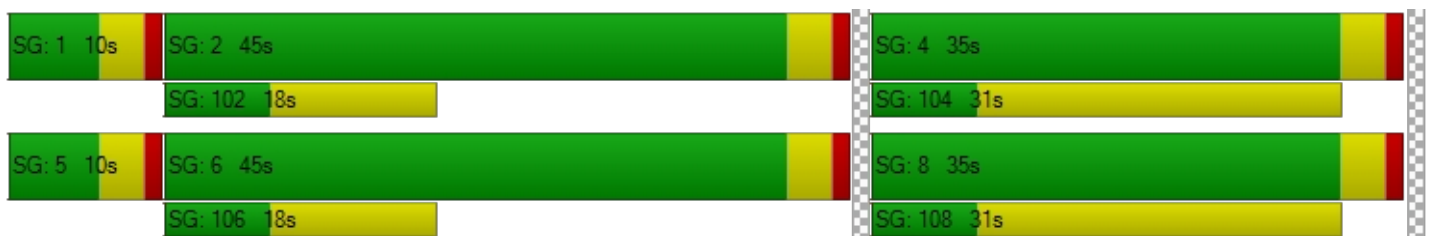
d_M, Delay for Movement [s/veh]	0.00	28.52	28.52	38.38	38.38	28.96	49.15	8.43	6.02	52.41	13.40	8.95
Movement LOS	A	C	C	D	D	C	D	A	A	D	B	A
d_A, Approach Delay [s/veh]	28.52			36.35			10.13			13.02		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	13.73											
Intersection LOS	B											
Intersection V/C	0.701											

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]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	1.961			2.114			2.994			3.324		
Crosswalk LOS	A			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]	689			689			911			911		
d_b, Bicycle Delay [s]	19.34			19.34			13.34			13.34		
I_b,int, Bicycle LOS Score for Intersection	1.619			1.980			2.348			2.892		
Bicycle LOS	A			A			B			C		

Sequence

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



APPENDIX E-V

**YEAR 2045 BUILDOUT PLUS PROJECT
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇐		⇐		⇐⇐	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	211	662	953	233	128	182
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	211	662	953	233	128	182
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	166	238	58	32	46
Total Analysis Volume [veh/h]	211	662	953	233	128	182
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	39	61	22	0	29	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	69	53	53	13	13
g / C, Green / Cycle	0.14	0.77	0.58	0.58	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.12	0.19	0.27	0.15	0.07	0.11
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	254	2742	2077	927	251	224
d1, Uniform Delay [s]	37.57	2.92	10.67	9.16	35.80	37.52
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.97	0.21	0.73	0.65	1.60	6.94
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.24	0.46	0.25	0.51	0.81
d, Delay for Lane Group [s/veh]	44.54	3.13	11.40	9.81	37.40	44.46
Lane Group LOS	D	A	B	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.94	1.24	5.10	2.22	2.68	4.26
50th-Percentile Queue Length [ft/ln]	123.38	31.02	127.62	55.52	66.93	106.39
95th-Percentile Queue Length [veh/ln]	8.58	2.23	8.81	4.00	4.82	7.64
95th-Percentile Queue Length [ft/ln]	214.47	55.84	220.26	99.94	120.48	190.97

Movement, Approach, & Intersection Results

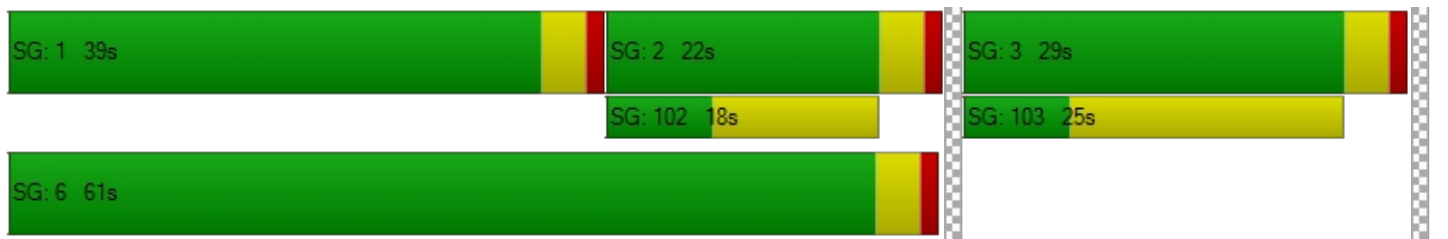
d_M, Delay for Movement [s/veh]	44.54	3.13	11.40	9.81	37.40	44.46
Movement LOS	D	A	B	A	D	D
d_A, Approach Delay [s/veh]	13.14		11.09		41.55	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	15.83					
Intersection LOS	B					
Intersection V/C	0.578					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.691	0.000	2.185
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1267	400	556
d_b, Bicycle Delay [s]	6.05	28.80	23.47
I_b,int, Bicycle LOS Score for Intersection	2.280	2.538	1.560
Bicycle LOS	B	B	A


























Sequence

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



HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	 
Traffic Volume (veh/h)	381	1314	342	0	0	0	452	490	392	64	396	676
Future Volume (veh/h)	381	1314	342	0	0	0	452	490	392	64	396	676
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	381	1314	0				452	490	392	64	396	676
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	609	1214					490	514	436	460	918	1674
Arrive On Green	0.34	0.34	0.00				0.28	0.28	0.28	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	381	1314	0				452	490	392	64	396	676
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	21.5	41.0	0.0				29.6	30.9	28.6	3.3	11.2	15.4
Cycle Q Clear(g_c), s	21.5	41.0	0.0				29.6	30.9	28.6	3.3	11.2	15.4
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	609	1214					490	514	436	460	918	1674
V/C Ratio(X)	0.63	1.08					0.92	0.95	0.90	0.14	0.43	0.40
Avail Cap(c_a), veh/h	609	1214					490	514	436	460	918	1674
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	39.5	0.0				42.3	42.7	41.9	34.2	37.1	12.7
Incr Delay (d2), s/veh	2.0	51.1	0.0				25.4	29.5	24.1	0.6	1.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	25.8	0.0				16.1	18.0	13.8	1.5	4.9	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	90.6	0.0				67.6	72.3	66.0	34.9	38.6	13.4
LnGrp LOS	D	F					E	E	E	C	D	B
Approach Vol, veh/h		1695	A					1334			1136	
Approach Delay, s/veh		78.1						68.8			23.4	
Approach LOS		E						E			C	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		38.0		46.0				36.0				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		33.0		41.0				31.0				
Max Q Clear Time (g_c+I1), s		32.9		43.0				17.4				
Green Ext Time (p_c), s		0.1		0.0				4.7				

Intersection Summary

HCM 6th Ctrl Delay	60.2
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	381	1314	342	0	0	0	452	490	392	64	396	676
Future Volume (vph)	381	1314	342	0	0	0	452	490	392	64	396	676
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.996		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1763	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.996		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1763	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			342						267			219
Link Speed (mph)		40			40			40				40
Link Distance (ft)		1049			847			684				549
Travel Time (s)		17.9			14.4			11.7				9.4
Peak Hour 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
Adj. Flow (vph)	381	1314	342	0	0	0	452	490	392	64	396	676
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	381	1314	342	0	0	0	407	535	392	64	396	676
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94				94
Detector 2 Size(ft)		6						6				6
Detector 2 Type		Cl+Ex						Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				0.0
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	46.0	46.0	46.0				38.0	38.0	38.0	36.0	36.0	46.0
Total Split (%)	38.3%	38.3%	38.3%				31.7%	31.7%	31.7%	30.0%	30.0%	38.3%
Maximum Green (s)	41.0	41.0	41.0				33.0	33.0	33.0	31.0	31.0	41.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	41.0	41.0	41.0				33.0	33.0	33.0	31.0	31.0	77.0
Actuated g/C Ratio	0.34	0.34	0.34				0.28	0.28	0.28	0.26	0.26	0.64
v/c Ratio	0.63	1.09	0.45				0.88	1.11	0.62	0.14	0.43	0.36
Control Delay	38.8	90.8	4.9				63.2	113.8	16.7	35.3	38.9	7.0
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	90.8	4.9				63.2	113.8	16.7	35.3	38.9	7.0
LOS	D	F	A				E	F	B	D	D	A
Approach Delay		66.6						69.8			19.7	
Approach LOS		E						E			B	
Queue Length 50th (ft)	246	~601	0				317	~496	79	38	135	81
Queue Length 95th (ft)	354	#740	64				#507	#724	189	76	184	117
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	604	1209	766				462	484	628	457	914	1866
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.63	1.09	0.45				0.88	1.11	0.62	0.14	0.43	0.36

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle:	120
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.11
Intersection Signal Delay:	55.7
Intersection LOS:	E
Intersection Capacity Utilization:	85.6%
ICU Level of Service:	E
Analysis Period (min):	15

~ Volume exceeds capacity, queue is theoretically infinite.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project
AM Peak Hour

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report

Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	959	6	137	469	0	309
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	959	6	137	469	0	309
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	240	2	34	117	0	77
Total Analysis Volume [veh/h]	959	6	137	469	0	309
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.19	0.00	0.00	0.58
d_M, Delay for Movement [s/veh]	0.00	0.00	11.29	0.00	0.00	20.85
Movement LOS	A	A	B	A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.71	0.00	0.00	3.70
95th-Percentile Queue Length [ft/ln]	0.00	0.00	17.78	0.00	0.00	92.49
d_A, Approach Delay [s/veh]	0.00		2.55		20.85	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.25					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	15.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.334

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	147	802	4	4	425	40	165	5	76	5	5	5
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	802	4	4	425	40	165	5	76	5	5	5
Peak Hour 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
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]	37	201	1	1	106	10	41	1	19	1	1	1
Total Analysis Volume [veh/h]	147	802	4	4	425	40	165	5	76	5	5	5
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 in	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	19	38	0	10	29	0	0	32	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	65	65	1	59	59	7	7	7	2
g / C, Green / Cycle	0.07	0.72	0.72	0.01	0.66	0.66	0.08	0.08	0.08	0.02
(v / s)_i Volume / Saturation Flow Rate	0.04	0.22	0.22	0.00	0.12	0.03	0.05	0.05	0.05	0.01
s, saturation flow rate [veh/h]	3459	1870	1867	1781	3560	1589	1781	1786	1589	1739
c, Capacity [veh/h]	229	1340	1338	14	2344	1047	135	135	120	39
d1, Uniform Delay [s]	41.07	4.61	4.61	44.50	5.97	5.40	40.44	40.44	40.45	43.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.01	0.58	0.58	11.31	0.17	0.07	4.75	4.73	5.35	6.22
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	0.30	0.30	0.29	0.18	0.04	0.63	0.63	0.63	0.39
d, Delay for Lane Group [s/veh]	44.09	5.19	5.19	55.81	6.14	5.46	45.19	45.17	45.79	49.70
Lane Group LOS	D	A	A	E	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1.67	2.35	2.35	0.13	1.41	0.25	1.98	1.99	1.80	0.39
50th-Percentile Queue Length [ft/ln]	41.73	58.85	58.76	3.28	35.31	6.27	49.61	49.69	44.89	9.84
95th-Percentile Queue Length [veh/ln]	3.00	4.24	4.23	0.24	2.54	0.45	3.57	3.58	3.23	0.71
95th-Percentile Queue Length [ft/ln]	75.12	105.94	105.77	5.90	63.56	11.28	89.29	89.45	80.81	17.72

Movement, Approach, & Intersection Results

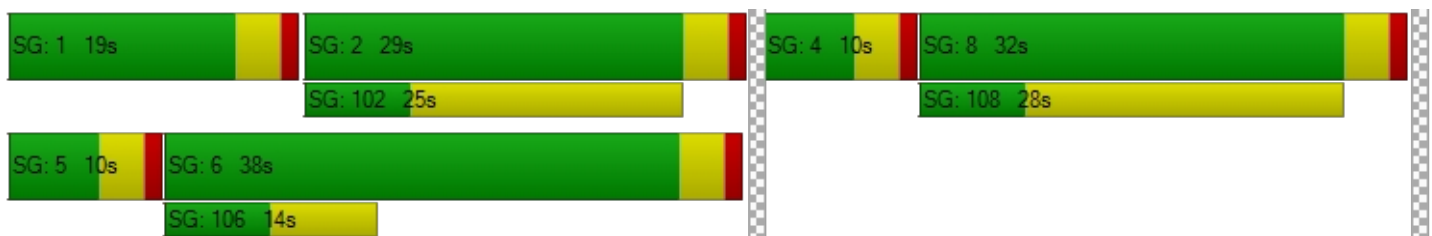
d_M, Delay for Movement [s/veh]	44.09	5.19	5.19	55.81	6.14	5.46	45.18	45.17	45.79	49.70	49.70	49.70
Movement LOS	D	A	A	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	11.19			6.51			45.37			49.70		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	15.22											
Intersection LOS	B											
Intersection V/C	0.334											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	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]	34.67	0.00	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.689	0.000	2.385	1.728
Crosswalk LOS	B	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	756	556	622	133
d_b, Bicycle Delay [s]	17.42	23.47	21.36	39.20
I_b,int, Bicycle LOS Score for Intersection	2.346	1.947	1.966	1.584
Bicycle LOS	B	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.047

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	73	959	63	12	704	37	0	0	16	0	0	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	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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	959	63	12	704	37	0	0	16	0	0	24
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9560	0.9560	1.0000	0.9560	0.9560	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	240	16	3	176	9	0	0	4	0	0	6
Total Analysis Volume [veh/h]	73	959	63	12	704	37	0	0	16	0	0	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings




















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	9.56	0.00	0.00	10.43	0.00	0.00	44.17	64.92	10.89	53.91	64.01	12.44
Movement LOS	A	A	A	B	A	A	E	F	B	F	F	B
95th-Percentile Queue Length [veh/ln]	0.28	0.00	0.00	0.05	0.00	0.00	0.08	0.08	0.08	0.15	0.15	0.15
95th-Percentile Queue Length [ft/ln]	6.92	0.00	0.00	1.36	0.00	0.00	1.96	1.96	1.96	3.71	3.71	3.71
d_A, Approach Delay [s/veh]	0.64			0.17			10.89			12.44		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.69											
Intersection LOS	B											

HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	7	46	63	46	680	41	349	492	0	656	65
Future Volume (veh/h)	65	7	46	63	46	680	41	349	492	0	656	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	65	7	46	63	46	680	41	349	492	0	656	65
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	283	43	169	451	313	717	164	1551	692	0	943	93
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.09	0.44	0.44	0.00	0.29	0.29
Sat Flow, veh/h	489	95	373	857	693	1585	1781	3554	1585	0	3359	323
Grp Volume(v), veh/h	118	0	0	109	0	680	41	349	492	0	357	364
Grp Sat Flow(s),veh/h/ln	957	0	0	1549	0	1585	1781	1777	1585	0	1777	1812
Q Serve(g_s), s	4.0	0.0	0.0	0.0	0.0	37.0	1.9	5.5	22.8	0.0	16.1	16.1
Cycle Q Clear(g_c), s	7.3	0.0	0.0	3.4	0.0	37.0	1.9	5.5	22.8	0.0	16.1	16.1
Prop In Lane	0.55		0.39	0.58		1.00	1.00		1.00	0.00		0.18
Lane Grp Cap(c), veh/h	495	0	0	764	0	717	164	1551	692	0	513	524
V/C Ratio(X)	0.24	0.00	0.00	0.14	0.00	0.95	0.25	0.22	0.71	0.00	0.69	0.70
Avail Cap(c_a), veh/h	530	0	0	820	0	775	164	1551	692	0	513	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	0.0	0.0	14.4	0.0	23.6	38.0	15.8	20.7	0.0	28.5	28.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	20.0	0.8	0.3	6.1	0.0	7.6	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	1.3	0.0	16.9	0.9	2.2	9.0	0.0	7.6	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	0.0	0.0	14.5	0.0	43.7	38.7	16.2	26.8	0.0	36.0	36.0
LnGrp LOS	B	A	A	B	A	D	D	B	C	A	D	D
Approach Vol, veh/h		118			789			882			721	
Approach Delay, s/veh		15.6			39.6			23.2			36.0	
Approach LOS		B			D			C			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		44.3		45.7	13.3	31.0		45.7				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		36.0		44.0	6.0	* 26		44.0				
Max Q Clear Time (g_c+I1), s		24.8		9.3	3.9	18.1		39.0				
Green Ext Time (p_c), s		3.2		1.1	0.0	2.7		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				31.7								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕		↕↕	
Traffic Volume (vph)	65	7	46	63	46	680	41	349	492	0	656	65
Future Volume (vph)	65	7	46	63	46	680	41	349	492	0	656	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.947				0.850			0.850		0.986	
Flt Protected		0.973			0.972		0.950					
Satd. Flow (prot)	0	1716	0	0	1811	1583	1770	3539	1583	0	3490	0
Flt Permitted		0.804			0.794		0.950					
Satd. Flow (perm)	0	1418	0	0	1479	1583	1770	3539	1583	0	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46				352			492			12
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour 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
Adj. Flow (vph)	65	7	46	63	46	680	41	349	492	0	656	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	118	0	0	109	680	41	349	492	0	721	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project
AM Peak Hour

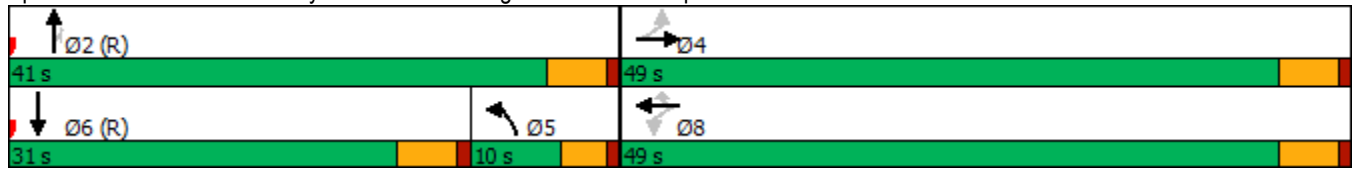


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	49.0	49.0		49.0	49.0	49.0	10.0	41.0	41.0		31.0	
Total Split (%)	54.4%	54.4%		54.4%	54.4%	54.4%	11.1%	45.6%	45.6%		34.4%	
Maximum Green (s)	44.0	44.0		44.0	44.0	44.0	6.0	36.0	36.0		26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		31.2			31.2	31.2	6.0	48.8	48.8		42.8	
Actuated g/C Ratio		0.35			0.35	0.35	0.07	0.54	0.54		0.48	
v/c Ratio		0.23			0.21	0.87	0.35	0.18	0.45		0.43	
Control Delay		11.3			18.6	24.6	42.8	9.6	1.7		20.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		11.3			18.6	24.6	42.8	9.6	1.7		20.2	
LOS		B			B	C	D	A	A		C	
Approach Delay		11.3			23.8			6.7			20.2	
Approach LOS		B			C			A			C	
Queue Length 50th (ft)		27			42	180	23	38	0		152	
Queue Length 95th (ft)		51			63	274	53	72	2		253	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		716			723	953	118	1917	1083		1665	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.16			0.15	0.71	0.35	0.18	0.45		0.43	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	68 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	16.2
Intersection LOS:	B
Intersection Capacity Utilization:	71.0%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Year 2045+Project
 AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶↶	↷		↶↶	↶	
Traffic Volume (veh/h)	242	324	0	515	232	0
Future Volume (veh/h)	242	324	0	515	232	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	242	0	0	515	232	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	341		0	2809	1478	0
Arrive On Green	0.10	0.00	0.00	0.79	0.79	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	242	0	0	515	232	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	6.1	0.0	0.0	3.2	2.7	0.0
Cycle Q Clear(g_c), s	6.1	0.0	0.0	3.2	2.7	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	341		0	2809	1478	0
V/C Ratio(X)	0.71		0.00	0.18	0.16	0.00
Avail Cap(c_a), veh/h	1114		0	2809	1478	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.3	0.0	0.0	2.3	2.3	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	0.7	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.1	0.0	0.0	2.5	2.5	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	242	A		515	232	
Approach Delay, s/veh	42.1			2.5	2.5	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		76.1		13.9		76.1
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		51.0		29.0		51.0
Max Q Clear Time (g_c+I1), s		5.2		8.1		4.7
Green Ext Time (p_c), s		3.8		0.8		1.4
Intersection Summary						
HCM 6th Ctrl Delay			12.2			
HCM 6th LOS			B			

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045+Project
 AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔	↗		↑↑	↑	
Traffic Volume (vph)	242	324	0	515	232	0
Future Volume (vph)	242	324	0	515	232	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		324				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	242	324	0	515	232	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	242	324	0	515	232	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

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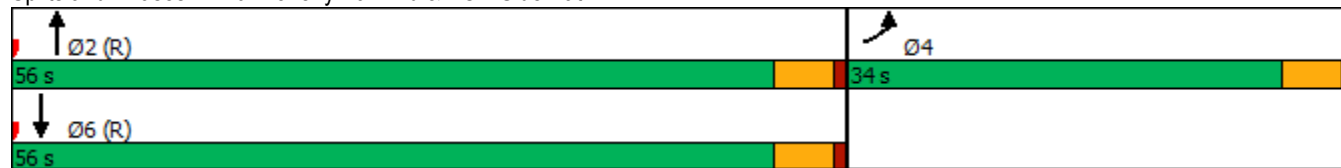


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	34.0			56.0	56.0	
Total Split (%)	37.8%			62.2%	62.2%	
Maximum Green (s)	29.0			51.0	51.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	11.7	90.0		68.3	68.3	
Actuated g/C Ratio	0.13	1.00		0.76	0.76	
v/c Ratio	0.54	0.20		0.19	0.16	
Control Delay	41.0	0.3		3.5	1.5	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	41.0	0.3		3.5	1.5	
LOS	D	A		A	A	
Approach Delay	17.7			3.5	1.5	
Approach LOS	B			A	A	
Queue Length 50th (ft)	67	0		34	7	
Queue Length 95th (ft)	100	0		58	13	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1106	1583		2686	1414	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.22	0.20		0.19	0.16	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	9.2
Intersection LOS:	A
Intersection Capacity Utilization:	29.5%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.092

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↶↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	5	186	101	64	61	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	186	101	64	61	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	47	25	16	15	1
Total Analysis Volume [veh/h]	5	186	101	64	61	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.09	0.01
d_M, Delay for Movement [s/veh]	7.56	0.00	0.00	0.00	10.98	8.95
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.30	0.02
95th-Percentile Queue Length [ft/ln]	0.27	0.27	0.00	0.00	7.57	0.41
d_A, Approach Delay [s/veh]	0.20		0.00		10.83	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.78					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.210

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	148	5	5	11	5	92	16	74	17	8	103	9
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	148	5	5	11	5	92	16	74	17	8	103	9
Peak Hour 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
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]	37	1	1	3	1	23	4	19	4	2	26	2
Total Analysis Volume [veh/h]	148	5	5	11	5	92	16	74	17	8	103	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	754	859	774	771
Degree of Utilization, x	0.21	0.13	0.14	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.79	0.43	0.48	0.55
95th-Percentile Queue Length [ft]	19.69	10.75	11.96	13.73
Approach Delay [s/veh]	9.04	7.80	8.40	8.53
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.50			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	5	5	5	10	34	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	5	5	10	34	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	3	9	1
Total Analysis Volume [veh/h]	5	5	5	10	34	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	8.79	8.51
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.23	0.23	0.00	0.00	3.05	3.05
d_A, Approach Delay [s/veh]	3.63		0.00		8.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.90					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	99	197	97	5	2	72
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	197	97	5	2	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	49	24	1	1	18
Total Analysis Volume [veh/h]	99	197	97	5	2	72
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.00	0.08
d_M, Delay for Movement [s/veh]	7.59	0.00	0.00	0.00	12.55	9.10
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.21	0.00	0.00	0.00	0.26	0.26
95th-Percentile Queue Length [ft/ln]	5.33	0.00	0.00	0.00	6.45	6.45
d_A, Approach Delay [s/veh]	2.54		0.00		9.19	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.03					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	19	1035	543	7	6	14
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	1035	543	7	6	14
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	259	136	2	2	4
Total Analysis Volume [veh/h]	19	1035	543	7	6	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	8.61	0.00	0.00	0.00	14.15	10.20
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.00	0.11	0.11
95th-Percentile Queue Length [ft/ln]	1.43	0.00	0.00	0.00	2.66	2.66
d_A, Approach Delay [s/veh]	0.16		0.00		11.39	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.24					
Intersection LOS	B					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Year 2045+Project
 AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	677	380	0	249	1197
Future Volume (veh/h)	0	677	380	0	249	1197
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	677	380	0	249	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	2211	1164	0	922	
Arrive On Green	0.00	0.62	0.62	0.00	0.27	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	677	380	0	249	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	8.0	8.7	0.0	5.1	0.0
Cycle Q Clear(g_c), s	0.0	8.0	8.7	0.0	5.1	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2211	1164	0	922	
V/C Ratio(X)	0.00	0.31	0.33	0.00	0.27	
Avail Cap(c_a), veh/h	0	2211	1164	0	922	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	7.9	8.1	0.0	26.1	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.7	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.7	3.2	0.0	2.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	8.3	8.8	0.0	26.8	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		677	380		249	A
Approach Delay, s/veh		8.3	8.8		26.8	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				61.0	29.0	61.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				56.0	24.0	56.0
Max Q Clear Time (g_c+I1), s				10.0	7.1	10.7
Green Ext Time (p_c), s				5.0	0.8	2.3
Intersection Summary						
HCM 6th Ctrl Delay			12.0			
HCM 6th LOS			B			
Notes						
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.						

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045+Project
AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	677	380	0	249	1197
Future Volume (vph)	0	677	380	0	249	1197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr t						0.850
Fl t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						675
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	677	380	0	249	1197
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	677	380	0	249	1197
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045+Project
AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		61.0	61.0		29.0	
Total Split (%)		67.8%	67.8%		32.2%	
Maximum Green (s)		56.0	56.0		24.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		56.0	56.0		24.0	90.0
Actuated g/C Ratio		0.62	0.62		0.27	1.00
v/c Ratio		0.31	0.33		0.27	0.76
Control Delay		8.4	3.7		27.1	3.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		8.4	3.7		27.1	3.4
LOS		A	A		C	A
Approach Delay		8.4	3.7		7.5	
Approach LOS		A	A		A	
Queue Length 50th (ft)		85	17		57	0
Queue Length 95th (ft)		114	24		89	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		2202	1159		915	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.31	0.33		0.27	0.76

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 25 (28%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 7.2
 Intersection LOS: A
 Intersection Capacity Utilization 35.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045+Project
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↖	
Traffic Volume (veh/h)	73	357	526	0	906	124	1	28	116	31	0	103
Future Volume (veh/h)	73	357	526	0	906	124	1	28	116	31	0	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	357	0	0	906	124	1	28	116	31	0	103
Peak Hour 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
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	399	2369		0	3029	413	44	412	352	341	0	352
Arrive On Green	0.67	0.67	0.00	0.00	0.67	0.67	0.22	0.22	0.22	0.22	0.00	0.22
Sat Flow, veh/h	548	3554	1585	0	4712	619	11	1855	1585	1244	0	1585
Grp Volume(v), veh/h	73	357	0	0	678	352	29	0	116	31	0	103
Grp Sat Flow(s),veh/h/ln	548	1777	1585	0	1702	1759	1865	0	1585	1244	0	1585
Q Serve(g_s), s	5.8	3.4	0.0	0.0	7.5	7.5	0.0	0.0	5.5	1.8	0.0	4.9
Cycle Q Clear(g_c), s	13.3	3.4	0.0	0.0	7.5	7.5	1.1	0.0	5.5	2.9	0.0	4.9
Prop In Lane	1.00		1.00	0.00		0.35	0.03		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	399	2369		0	2269	1173	456	0	352	341	0	352
V/C Ratio(X)	0.18	0.15		0.00	0.30	0.30	0.06	0.00	0.33	0.09	0.00	0.29
Avail Cap(c_a), veh/h	399	2369		0	2269	1173	456	0	352	341	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	5.6	0.0	0.0	6.2	6.3	27.7	0.0	29.4	28.8	0.0	29.1
Incr Delay (d2), s/veh	1.0	0.1	0.0	0.0	0.3	0.7	0.3	0.0	2.5	0.5	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.0	0.0	0.0	2.2	2.4	0.5	0.0	2.3	0.6	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	5.7	0.0	0.0	6.6	6.9	27.9	0.0	31.9	29.3	0.0	31.2
LnGrp LOS	B	A		A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		430	A		1030			145				134
Approach Delay, s/veh		6.4			6.7			31.1				30.8
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		65.0		25.0		65.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		60.0		20.0		60.0				
Max Q Clear Time (g_c+I1), s		7.5		15.3		6.9		9.5				
Green Ext Time (p_c), s		0.4		3.4		0.5		8.0				

Intersection Summary

HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045+Project
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↖	↗	↘	↖	
Traffic Volume (vph)	73	357	526	0	906	124	1	28	116	31	0	103
Future Volume (vph)	73	357	526	0	906	124	1	28	116	31	0	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.982				0.850		0.850	
Flt Protected	0.950							0.998		0.950		
Satd. Flow (prot)	1770	3539	1583	0	4994	0	0	1859	1583	1770	1583	0
Flt Permitted	0.253							0.994		0.738		
Satd. Flow (perm)	471	3539	1583	0	4994	0	0	1852	1583	1375	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			526		59				116		184	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour 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
Adj. Flow (vph)	73	357	526	0	906	124	1	28	116	31	0	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	357	526	0	1030	0	0	29	116	31	103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045+Project
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	65.0	65.0			65.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	72.2%	72.2%			72.2%		27.8%	27.8%	27.8%	27.8%	27.8%	
Maximum Green (s)	60.0	60.0			60.0		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	60.0	60.0	90.0		60.0		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.67	0.67	1.00		0.67		0.22	0.22	0.22	0.22	0.22	
v/c Ratio	0.23	0.15	0.33		0.31		0.07	0.26	0.10	0.10	0.21	
Control Delay	6.2	4.2	1.1		6.2		28.3	7.5	29.0	29.0	1.0	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	6.2	4.2	1.1		6.2		28.3	7.5	29.0	29.0	1.0	
LOS	A	A	A		A		C	A	C	C	A	
Approach Delay		2.6			6.2		11.7				7.5	
Approach LOS		A			A		B				A	
Queue Length 50th (ft)	10	25	7		73		13	0	14	14	0	
Queue Length 95th (ft)	24	36	19		93		36	42	38	38	2	
Internal Link Dist (ft)		121			561		495				178	
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	314	2359	1583		3349		411	442	305	305	494	
Starvation Cap Reductn	0	0	0		0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0		0		0	0	0	0	0	
Storage Cap Reductn	0	0	0		0		0	0	0	0	0	
Reduced v/c Ratio	0.23	0.15	0.33		0.31		0.07	0.26	0.10	0.10	0.21	

Intersection Summary

















Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.33
Intersection Signal Delay:	5.1
Intersection Capacity Utilization:	46.2%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Year 2045+Project
 AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	847	431	638	33	526	671
Future Volume (veh/h)	847	431	638	33	526	671
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	847	0	638	0	526	671
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	965		1371		620	2166
Arrive On Green	0.28	0.00	0.39	0.00	0.18	0.61
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	847	0	638	0	526	671
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	21.1	0.0	12.1	0.0	13.3	8.2
Cycle Q Clear(g_c), s	21.1	0.0	12.1	0.0	13.3	8.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	965		1371		620	2166
V/C Ratio(X)	0.88		0.47		0.85	0.31
Avail Cap(c_a), veh/h	1152		1371		768	2166
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	0.0	20.7	0.0	35.7	8.5
Incr Delay (d2), s/veh	6.9	0.0	1.1	0.0	7.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	4.8	0.0	5.9	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.9	0.0	21.8	0.0	43.2	8.8
LnGrp LOS	D		C		D	A
Approach Vol, veh/h	847	A	638	A		1197
Approach Delay, s/veh	37.9		21.8			23.9
Approach LOS	D		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.1	39.7			59.9	30.1
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	20.0	26.0			50.0	30.0
Max Q Clear Time (g_c+I1), s	15.3	14.1			10.2	23.1
Green Ext Time (p_c), s	0.9	3.1			4.7	2.1

Intersection Summary













HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045+Project
 AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	847	431	638	33	526	671
Future Volume (vph)	847	431	638	33	526	671
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		431		33		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	847	431	638	33	526	671
Shared Lane Traffic (%)						
Lane Group Flow (vph)	847	431	638	33	526	671
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045+Project
 AM Peak Hour

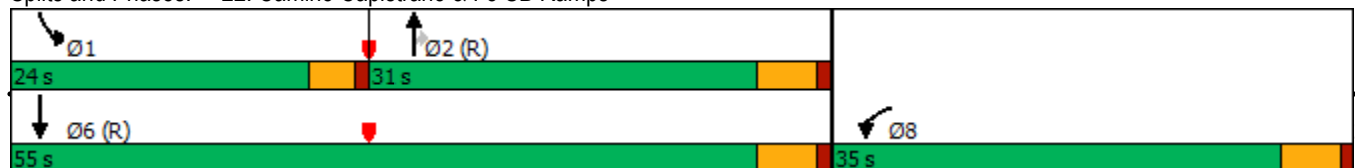


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	35.0		31.0	31.0	24.0	55.0
Total Split (%)	38.9%		34.4%	34.4%	26.7%	61.1%
Maximum Green (s)	30.0		26.0	26.0	20.0	50.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effect Green (s)	27.0	90.0	31.1	31.1	18.0	53.0
Actuated g/C Ratio	0.30	1.00	0.35	0.35	0.20	0.59
v/c Ratio	0.82	0.27	0.52	0.06	0.77	0.32
Control Delay	36.6	0.4	26.7	8.8	42.0	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	0.4	26.7	8.8	42.0	10.4
LOS	D	A	C	A	D	B
Approach Delay	24.4		25.8			24.3
Approach LOS	C		C			C
Queue Length 50th (ft)	226	0	155	0	144	96
Queue Length 95th (ft)	286	0	223	21	197	137
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1144	1583	1221	567	762	2085
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.27	0.52	0.06	0.69	0.32

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 24 (27%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 24.6
 Intersection LOS: C
 Intersection Capacity Utilization 68.5%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.655

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
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	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	89	162	0	44	50	1899	18	36	899	181
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	89	162	0	44	50	1899	18	36	899	181
Peak Hour 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
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	22	41	0	11	13	475	5	9	225	45
Total Analysis Volume [veh/h]	0	0	89	162	0	44	50	1899	18	36	899	181
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 in	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]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	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	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [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
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	36	0	0	36	0	10	49	0	10	49	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	24	0	0	24	0	0	11	0	0	11	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	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	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]	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20	20	4	59	59	4	58	58
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.05	0.62	0.62	0.04	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.00	0.06	0.18	0.03	0.03	0.37	0.01	0.02	0.25	0.11
s, saturation flow rate [veh/h]	1417	1589	904	1589	1781	5094	1589	1781	3560	1589
c, Capacity [veh/h]	86	341	270	341	82	3160	986	69	2182	974
d1, Uniform Delay [s]	0.00	31.04	39.33	30.14	44.45	10.92	6.93	44.79	9.53	8.04
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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]	0.00	0.40	2.16	0.17	6.98	0.85	0.03	5.97	0.58	0.42
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	0.00	0.26	0.60	0.13	0.61	0.60	0.02	0.52	0.41	0.19
d, Delay for Lane Group [s/veh]	0.00	31.44	41.49	30.30	51.43	11.77	6.96	50.77	10.10	8.46
Lane Group LOS	A	C	D	C	D	B	A	D	B	A
Critical Lane Group	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.00	1.72	3.79	0.82	1.31	7.44	0.14	0.94	4.58	1.61
50th-Percentile Queue Length [ft/ln]	0.00	43.04	94.67	20.60	32.66	185.90	3.47	23.51	114.40	40.23
95th-Percentile Queue Length [veh/ln]	0.00	3.10	6.82	1.48	2.35	11.91	0.25	1.69	8.08	2.90
95th-Percentile Queue Length [ft/ln]	0.00	77.47	170.41	37.08	58.79	297.70	6.25	42.33	202.11	72.41

Movement, Approach, & Intersection Results

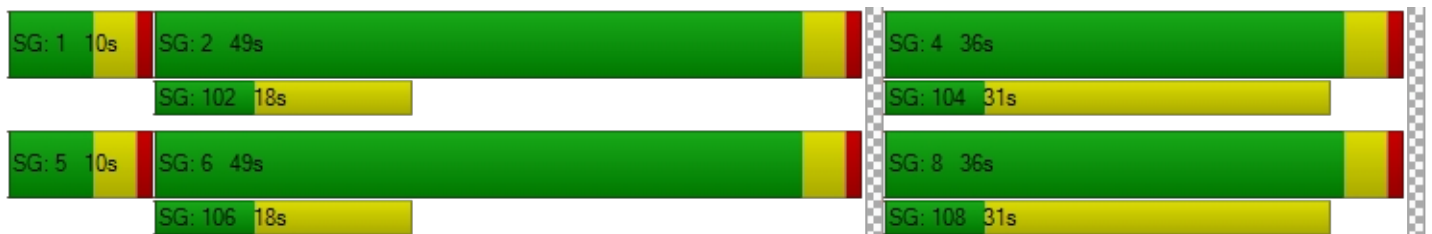
d_M, Delay for Movement [s/veh]	0.00	31.44	31.44	41.49	41.49	30.30	51.43	11.77	6.96	50.77	10.10	8.46
Movement LOS	A	C	C	D	D	C	D	B	A	D	B	A
d_A, Approach Delay [s/veh]	31.44			39.10			12.74			11.15		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	14.31											
Intersection LOS	B											
Intersection V/C	0.655											

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]	37.14			37.14			37.14			37.14		
I_p,int, Pedestrian LOS Score for Intersection	1.989			2.084			3.001			3.282		
Crosswalk LOS	A			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]	674			674			947			947		
d_b, Bicycle Delay [s]	20.89			20.89			13.16			13.16		
I_b,int, Bicycle LOS Score for Intersection	1.706			1.900			2.641			2.480		
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 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.900

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↩		↩		↩ ↩	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	160	612	1768	190	228	327
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	612	1768	190	228	327
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	153	442	48	57	82
Total Analysis Volume [veh/h]	160	612	1768	190	228	327
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	14	68	54	0	32	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	69	55	55	23	23
g / C, Green / Cycle	0.10	0.69	0.55	0.55	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.09	0.17	0.50	0.12	0.13	0.21
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	179	2461	1960	875	407	364
d1, Uniform Delay [s]	44.43	5.76	20.07	11.48	34.11	37.45
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.22
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.88	0.24	7.26	0.57	1.21	14.69
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.25	0.90	0.22	0.56	0.90
d, Delay for Lane Group [s/veh]	58.30	6.00	27.33	12.05	35.31	52.13
Lane Group LOS	E	A	C	B	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.58	2.19	18.82	2.21	4.98	9.12
50th-Percentile Queue Length [ft/ln]	114.45	54.65	470.48	55.21	124.61	227.92
95th-Percentile Queue Length [veh/ln]	8.09	3.93	25.93	3.97	8.65	14.07
95th-Percentile Queue Length [ft/ln]	202.17	98.37	648.35	99.37	216.15	351.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.30	6.00	27.33	12.05	35.31	52.13
Movement LOS	E	A	C	B	D	D
d_A, Approach Delay [s/veh]	16.84		25.85		45.22	
Approach LOS	B		C		D	
d_I, Intersection Delay [s/veh]	27.01					
Intersection LOS	C					
Intersection V/C	0.900					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	39.61	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	2.864	0.000	2.239
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1280	1000	560
d_b, Bicycle Delay [s]	6.48	12.50	25.92
I_b,int, Bicycle LOS Score for Intersection	2.197	3.175	1.560
Bicycle LOS	B	C	A






















Sequence

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
























HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	999	496	0	0	0	631	472	526	179	972	943
Future Volume (veh/h)	301	999	496	0	0	0	631	472	526	179	972	943
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	301	999	0				552	583	526	179	972	943
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	496	989					573	602	510	480	958	1528
Arrive On Green	0.28	0.28	0.00				0.32	0.32	0.32	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	301	999	0				552	583	526	179	972	943
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	16.9	32.0	0.0				35.0	35.3	37.0	9.4	31.0	26.6
Cycle Q Clear(g_c), s	16.9	32.0	0.0				35.0	35.3	37.0	9.4	31.0	26.6
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	496	989					573	602	510	480	958	1528
V/C Ratio(X)	0.61	1.01					0.96	0.97	1.03	0.37	1.01	0.62
Avail Cap(c_a), veh/h	496	989					573	602	510	480	958	1528
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	41.5	0.0				38.3	38.4	39.0	34.1	42.0	17.8
Incr Delay (d2), s/veh	2.1	31.2	0.0				29.5	29.8	48.2	2.2	32.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	17.8	0.0				19.3	20.5	20.6	4.3	17.5	13.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	72.7	0.0				67.9	68.2	87.2	36.3	74.8	19.6
LnGrp LOS	D	F					E	E	F	D	F	B
Approach Vol, veh/h		1300	A					1661			2094	
Approach Delay, s/veh		64.7						74.1			46.7	
Approach LOS		E						E			D	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		42.0		37.0				36.0				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		37.0		32.0				31.0				
Max Q Clear Time (g_c+I1), s		39.0		34.0				33.0				
Green Ext Time (p_c), s		0.0		0.0				0.0				
Intersection Summary												
HCM 6th Ctrl Delay			60.3									
HCM 6th LOS			E									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	301	999	496	0	0	0	631	472	526	179	972	943
Future Volume (vph)	301	999	496	0	0	0	631	472	526	179	972	943
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.992		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1755	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.992		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1755	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			496						232			141
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour 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
Adj. Flow (vph)	301	999	496	0	0	0	631	472	526	179	972	943
Shared Lane Traffic (%)							14%					
Lane Group Flow (vph)	301	999	496	0	0	0	543	560	526	179	972	943
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	37.0	37.0	37.0				42.0	42.0	42.0	36.0	36.0	37.0
Total Split (%)	32.2%	32.2%	32.2%				36.5%	36.5%	36.5%	31.3%	31.3%	32.2%
Maximum Green (s)	32.0	32.0	32.0				37.0	37.0	37.0	31.0	31.0	32.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	32.0	32.0	32.0				37.0	37.0	37.0	31.0	31.0	68.0
Actuated g/C Ratio	0.28	0.28	0.28				0.32	0.32	0.32	0.27	0.27	0.59
v/c Ratio	0.61	1.02	0.62				1.01	0.99	0.79	0.38	1.02	0.55
Control Delay	42.4	74.0	6.7				79.7	75.8	29.2	36.9	76.1	13.3
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	74.0	6.7				79.7	75.8	29.2	36.9	76.1	13.3
LOS	D	E	A				E	E	C	D	E	B
Approach Delay		50.1						62.0			44.5	
Approach LOS		D						E			D	
Queue Length 50th (ft)	194	~400	0				~425	432	206	108	~401	191
Queue Length 95th (ft)	290	#542	86				#666	#677	354	174	#532	252
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	492	984	798				540	564	666	477	953	1705
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.61	1.02	0.62				1.01	0.99	0.79	0.38	1.02	0.55

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 51.5
 Intersection Capacity Utilization 99.6%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service F
 ~ Volume exceeds capacity, queue is theoretically infinite.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

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Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report
Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	1298	27	373	885	0	208
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1298	27	373	885	0	208
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	325	7	93	221	0	52
Total Analysis Volume [veh/h]	1298	27	373	885	0	208
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.72	0.01	0.00	0.51
d_M, Delay for Movement [s/veh]	0.00	0.00	27.94	0.00	0.00	22.98
Movement LOS	A	A	D	A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	5.86	0.00	0.00	2.85
95th-Percentile Queue Length [ft/ln]	0.00	0.00	146.46	0.00	0.00	71.28
d_A, Approach Delay [s/veh]	0.00		8.28		22.98	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	5.45					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	23.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.602

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	339	892	9	17	735	140	428	5	283	8	5	8
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	339	892	9	17	735	140	428	5	283	8	5	8
Peak Hour 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
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]	85	223	2	4	184	35	107	1	71	2	1	2
Total Analysis Volume [veh/h]	339	892	9	17	735	140	428	5	283	8	5	8
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 in	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	35	0	10	29	0	0	35	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	50	50	2	42	42	19	19	19	3
g / C, Green / Cycle	0.12	0.56	0.56	0.02	0.46	0.46	0.21	0.21	0.21	0.03
(v / s)_i Volume / Saturation Flow Rate	0.10	0.24	0.24	0.01	0.21	0.09	0.12	0.12	0.18	0.01
s, saturation flow rate [veh/h]	3459	1870	1863	1781	3560	1589	1781	1783	1589	1721
c, Capacity [veh/h]	418	1040	1036	44	1637	731	380	380	339	49
d1, Uniform Delay [s]	38.64	11.71	11.71	43.32	16.58	14.43	31.77	31.77	33.96	43.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.83	1.32	1.32	5.58	0.89	0.58	1.35	1.35	5.41	5.72
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	0.81	0.43	0.43	0.39	0.45	0.19	0.57	0.57	0.83	0.43
d, Delay for Lane Group [s/veh]	42.47	13.03	13.03	48.90	17.47	15.01	33.12	33.12	39.37	48.79
Lane Group LOS	D	B	B	D	B	B	C	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	3.82	5.25	5.23	0.44	5.11	1.74	4.28	4.29	6.30	0.53
50th-Percentile Queue Length [ft/ln]	95.43	131.17	130.79	10.93	127.73	43.62	107.11	107.20	157.48	13.35
95th-Percentile Queue Length [veh/ln]	6.87	9.00	8.98	0.79	8.82	3.14	7.68	7.68	10.42	0.96
95th-Percentile Queue Length [ft/ln]	171.77	225.08	224.57	19.68	220.41	78.52	191.98	192.10	260.38	24.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.47	13.03	13.03	48.90	17.47	15.01	33.12	33.12	39.37	48.79	48.79	48.79
Movement LOS	D	B	B	D	B	B	C	C	D	D	D	D
d_A, Approach Delay [s/veh]	21.08			17.68			35.59			48.79		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	23.85											
Intersection LOS	C											
Intersection V/C	0.602											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	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]	34.67	0.00	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.821	0.000	2.533	1.740
Crosswalk LOS	C	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	556	689	133
d_b, Bicycle Delay [s]	19.34	23.47	19.34	39.20
I_b,int, Bicycle LOS Score for Intersection	2.583	2.296	2.741	1.594
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.091

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↻			↵↻			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	55	1271	154	24	1124	39	0	0	53	0	0	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	1271	154	24	1124	39	0	0	53	0	0	34
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9560	0.9560	1.0000	0.9560	0.9560	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	318	39	6	281	10	0	0	13	0	0	9
Total Analysis Volume [veh/h]	55	1271	154	24	1124	39	0	0	53	0	0	34
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings




















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.00	0.05	0.01	0.00	0.00	0.00	0.12	0.00	0.00	0.09
d_M, Delay for Movement [s/veh]	11.65	0.00	0.00	13.01	0.00	0.00	118.32	212.74	13.92	151.33	195.55	15.57
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	C
95th-Percentile Queue Length [veh/ln]	0.30	0.00	0.00	0.16	0.00	0.00	0.39	0.39	0.39	0.30	0.30	0.30
95th-Percentile Queue Length [ft/ln]	7.58	0.00	0.00	3.99	0.00	0.00	9.77	9.77	9.77	7.44	7.44	7.44
d_A, Approach Delay [s/veh]	0.43			0.26			13.92			15.57		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	0.81											
Intersection LOS	C											

HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	5	84	96	24	833	42	552	384	0	1129	46
Future Volume (veh/h)	100	5	84	96	24	833	42	552	384	0	1129	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	100	5	84	96	24	833	42	552	384	0	1129	46
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	237	28	163	511	120	687	99	1619	722	0	1199	49
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.06	0.46	0.46	0.00	0.34	0.34
Sat Flow, veh/h	405	64	375	1012	277	1585	1781	3554	1585	0	3573	142
Grp Volume(v), veh/h	189	0	0	120	0	833	42	552	384	0	576	599
Grp Sat Flow(s),veh/h/ln	844	0	0	1289	0	1585	1781	1777	1585	0	1777	1845
Q Serve(g_s), s	10.8	0.0	0.0	0.0	0.0	39.0	2.1	9.0	15.7	0.0	28.3	28.3
Cycle Q Clear(g_c), s	16.5	0.0	0.0	5.7	0.0	39.0	2.1	9.0	15.7	0.0	28.3	28.3
Prop In Lane	0.53		0.44	0.80		1.00	1.00		1.00	0.00		0.08
Lane Grp Cap(c), veh/h	427	0	0	631	0	687	99	1619	722	0	612	635
V/C Ratio(X)	0.44	0.00	0.00	0.19	0.00	1.21	0.42	0.34	0.53	0.00	0.94	0.94
Avail Cap(c_a), veh/h	427	0	0	631	0	687	119	1619	722	0	612	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	0.0	0.0	16.0	0.0	25.5	41.1	15.8	17.6	0.0	28.6	28.6
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.1	0.0	108.9	2.9	0.6	2.8	0.0	24.5	24.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	1.5	0.0	34.4	1.0	3.6	5.9	0.0	15.5	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	0.0	0.0	16.1	0.0	134.4	44.0	16.4	20.4	0.0	53.2	52.6
LnGrp LOS	C	A	A	B	A	F	D	B	C	A	D	D
Approach Vol, veh/h		189			953			978			1175	
Approach Delay, s/veh		20.1			119.5			19.1			52.9	
Approach LOS		C			F			B			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		46.0		44.0	10.0	36.0		44.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		41.0		39.0	6.0	* 31		39.0				
Max Q Clear Time (g_c+1), s		17.7		18.5	4.1	30.3		41.0				
Green Ext Time (p_c), s		5.2		1.7	0.0	0.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				60.3								
HCM 6th LOS				E								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	5	84	96	24	833	42	552	384	0	1129	46
Future Volume (vph)	100	5	84	96	24	833	42	552	384	0	1129	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.940				0.850			0.850		0.994	
Flt Protected		0.974			0.962		0.950					
Satd. Flow (prot)	0	1705	0	0	1792	1583	1770	3539	1583	0	3518	0
Flt Permitted		0.791			0.688		0.950					
Satd. Flow (perm)	0	1385	0	0	1282	1583	1770	3539	1583	0	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56				224			384			5
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour 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
Adj. Flow (vph)	100	5	84	96	24	833	42	552	384	0	1129	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	120	833	42	552	384	0	1175	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	44.0	44.0		44.0	44.0	44.0	10.0	46.0	46.0		36.0	
Total Split (%)	48.9%	48.9%		48.9%	48.9%	48.9%	11.1%	51.1%	51.1%		40.0%	
Maximum Green (s)	39.0	39.0		39.0	39.0	39.0	6.0	41.0	41.0		31.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		39.0			39.0	39.0	6.0	41.0	41.0		35.0	
Actuated g/C Ratio		0.43			0.43	0.43	0.07	0.46	0.46		0.39	
v/c Ratio		0.30			0.22	1.03	0.36	0.34	0.41		0.86	
Control Delay		13.0			17.3	58.9	40.1	10.6	1.3		34.3	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		13.0			17.3	58.9	40.1	10.6	1.3		34.3	
LOS		B			B	E	D	B	A		C	
Approach Delay		13.0			53.7			8.2			34.3	
Approach LOS		B			D			A			C	
Queue Length 50th (ft)		46			41	~431	23	64	0		340	
Queue Length 95th (ft)		94			79	#660	48	86	1		#486	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		631			555	812	118	1612	930		1371	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.30			0.22	1.03	0.36	0.34	0.41		0.86	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 63 (70%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 30.9
 Intersection Capacity Utilization 90.3%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service E

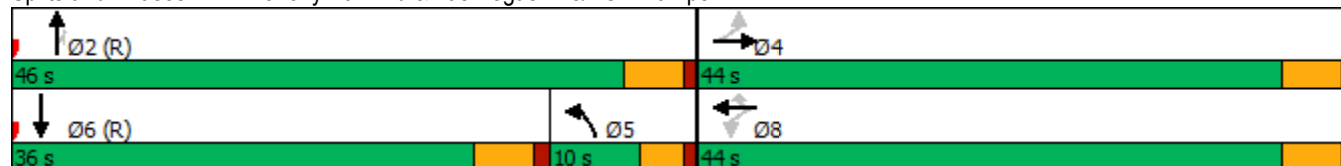
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Year 2045+Project
 PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰	↱		↕↕	↕	
Traffic Volume (veh/h)	355	336	0	577	347	0
Future Volume (veh/h)	355	336	0	577	347	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	355	0	0	577	347	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	463		0	2682	1412	0
Arrive On Green	0.13	0.00	0.00	0.75	0.75	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	355	0	0	577	347	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	8.9	0.0	0.0	4.3	5.0	0.0
Cycle Q Clear(g_c), s	8.9	0.0	0.0	4.3	5.0	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	463		0	2682	1412	0
V/C Ratio(X)	0.77		0.00	0.22	0.25	0.00
Avail Cap(c_a), veh/h	1075		0	2682	1412	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.6	0.0	0.0	3.2	3.3	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	1.1	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.3	0.0	0.0	3.4	3.7	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	355	A		577	347	
Approach Delay, s/veh	40.3			3.4	3.7	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		72.9		17.1		72.9
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		52.0		28.0		52.0
Max Q Clear Time (g_c+I1), s		6.3		10.9		7.0
Green Ext Time (p_c), s		4.3		1.1		2.2

Intersection Summary

HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045+Project
 PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↗		↑↑	↑	
Traffic Volume (vph)	355	336	0	577	347	0
Future Volume (vph)	355	336	0	577	347	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		336				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	355	336	0	577	347	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	355	336	0	577	347	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045+Project
 PM Peak Hour

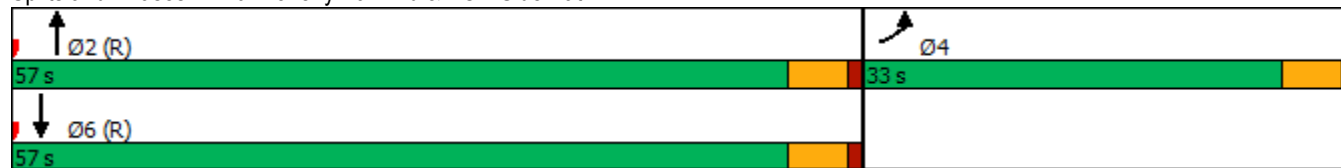


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	33.0			57.0	57.0	
Total Split (%)	36.7%			63.3%	63.3%	
Maximum Green (s)	28.0			52.0	52.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	14.6	90.0		65.4	65.4	
Actuated g/C Ratio	0.16	1.00		0.73	0.73	
v/c Ratio	0.64	0.21		0.22	0.26	
Control Delay	40.3	0.3		4.6	0.8	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	40.3	0.3		4.6	0.8	
LOS	D	A		A	A	
Approach Delay	20.8			4.6	0.8	
Approach LOS	C			A	A	
Queue Length 50th (ft)	98	0		46	7	
Queue Length 95th (ft)	135	0		77	m10	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1068	1583		2570	1353	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.33	0.21		0.22	0.26	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 10.7
 Intersection LOS: B
 Intersection Capacity Utilization 36.7%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.087

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↶↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	5	109	179	107	56	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	109	179	107	56	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	27	45	27	14	1
Total Analysis Volume [veh/h]	5	109	179	107	56	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.09	0.01
d_M, Delay for Movement [s/veh]	7.83	0.00	0.00	0.00	11.13	9.49
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.28	0.02
95th-Percentile Queue Length [ft/ln]	0.29	0.29	0.00	0.00	7.12	0.47
d_A, Approach Delay [s/veh]	0.34		0.00		10.99	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.54					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.320

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	99	5	8	10	5	92	55	144	54	8	107	9
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	5	8	10	5	92	55	144	54	8	107	9
Peak Hour 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
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	1	2	3	1	23	14	36	14	2	27	2
Total Analysis Volume [veh/h]	99	5	8	10	5	92	55	144	54	8	107	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	705	800	790	756
Degree of Utilization, x	0.16	0.13	0.32	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.56	0.46	1.38	0.58
95th-Percentile Queue Length [ft]	14.07	11.52	34.60	14.60
Approach Delay [s/veh]	9.07	8.19	9.68	8.69
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.10			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.122

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	5	5	5	8	121	6
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	5	5	8	121	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	2	30	2
Total Analysis Volume [veh/h]	5	5	5	8	121	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.12	0.01
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	9.17	8.89
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.44	0.44
95th-Percentile Queue Length [ft/ln]	0.23	0.23	0.00	0.00	10.96	10.96
d_A, Approach Delay [s/veh]	3.62		0.00		9.16	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	105	112	177	5	1	134
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	112	177	5	1	134
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	28	44	1	0	34
Total Analysis Volume [veh/h]	105	112	177	5	1	134
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.00	0.16
d_M, Delay for Movement [s/veh]	7.79	0.00	0.00	0.00	13.14	9.95
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.24	0.00	0.00	0.00	0.56	0.56
95th-Percentile Queue Length [ft/ln]	6.10	0.00	0.00	0.00	13.91	13.91
d_A, Approach Delay [s/veh]	3.77		0.00		9.97	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	21.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.065

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	34	1329	991	34	16	56
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	1329	991	34	16	56
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	332	248	9	4	14
Total Analysis Volume [veh/h]	34	1329	991	34	16	56
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.06	0.11
d_M, Delay for Movement [s/veh]	10.63	0.00	0.00	0.00	21.47	13.96
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.00	0.63	0.63
95th-Percentile Queue Length [ft/ln]	3.98	0.00	0.00	0.00	15.73	15.73
d_A, Approach Delay [s/veh]	0.27		0.00		15.63	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.60					
Intersection LOS	C					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Year 2045+Project
 PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	991	182	0	559	1288
Future Volume (veh/h)	0	991	182	0	559	1288
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	991	182	0	559	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	1935	1018	0	1190	
Arrive On Green	0.00	0.54	0.54	0.00	0.34	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	991	182	0	559	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	15.9	4.4	0.0	11.4	0.0
Cycle Q Clear(g_c), s	0.0	15.9	4.4	0.0	11.4	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1935	1018	0	1190	
V/C Ratio(X)	0.00	0.51	0.18	0.00	0.47	
Avail Cap(c_a), veh/h	0	1935	1018	0	1190	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	13.0	10.3	0.0	23.1	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.4	0.0	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.8	1.7	0.0	4.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	13.9	10.7	0.0	24.4	0.0
LnGrp LOS	A	B	B	A	C	
Approach Vol, veh/h		991	182		559	A
Approach Delay, s/veh		13.9	10.7		24.4	
Approach LOS		B	B		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				54.0	36.0	54.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				49.0	31.0	49.0
Max Q Clear Time (g_c+I1), s				17.9	13.4	6.4
Green Ext Time (p_c), s				7.7	2.0	1.0

Intersection Summary

HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045+Project
PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	991	182	0	559	1288
Future Volume (vph)	0	991	182	0	559	1288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr _t						0.850
Fl _t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl _t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						859
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	991	182	0	559	1288
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	991	182	0	559	1288
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045+Project
PM Peak Hour

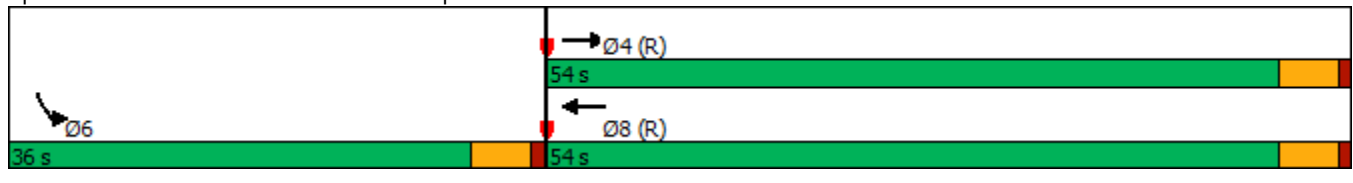


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		54.0	54.0		36.0	
Total Split (%)		60.0%	60.0%		40.0%	
Maximum Green (s)		49.0	49.0		31.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		49.0	49.0		31.0	90.0
Actuated g/C Ratio		0.54	0.54		0.34	1.00
v/c Ratio		0.51	0.18		0.47	0.81
Control Delay		14.2	8.1		24.7	4.7
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		14.2	8.1		24.7	4.7
LOS		B	A		C	A
Approach Delay		14.2	8.1		10.8	
Approach LOS		B	A		B	
Queue Length 50th (ft)		176	29		126	0
Queue Length 95th (ft)		228	47		174	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		1926	1014		1182	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.51	0.18		0.47	0.81

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 8 (9%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 11.7
 Intersection LOS: B
 Intersection Capacity Utilization 64.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045+Project
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↗	
Traffic Volume (veh/h)	71	975	587	0	479	12	7	36	195	6	0	54
Future Volume (veh/h)	71	975	587	0	479	12	7	36	195	6	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	975	0	0	479	12	7	36	195	6	0	54
Peak Hour 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
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	586	2132		0	3074	77	100	467	458	393	0	458
Arrive On Green	0.60	0.60	0.00	0.00	0.60	0.60	0.29	0.29	0.29	0.29	0.00	0.29
Sat Flow, veh/h	906	3554	1585	0	5292	128	184	1615	1585	1149	0	1585
Grp Volume(v), veh/h	71	975	0	0	318	173	43	0	195	6	0	54
Grp Sat Flow(s),veh/h/ln	906	1777	1585	0	1702	1847	1799	0	1585	1149	0	1585
Q Serve(g_s), s	3.4	13.6	0.0	0.0	3.7	3.7	0.0	0.0	9.0	0.3	0.0	2.3
Cycle Q Clear(g_c), s	7.1	13.6	0.0	0.0	3.7	3.7	1.5	0.0	9.0	1.8	0.0	2.3
Prop In Lane	1.00		1.00	0.00		0.07	0.16		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	586	2132		0	2042	1108	566	0	458	393	0	458
V/C Ratio(X)	0.12	0.46		0.00	0.16	0.16	0.08	0.00	0.43	0.02	0.00	0.12
Avail Cap(c_a), veh/h	586	2132		0	2042	1108	566	0	458	393	0	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.5	9.9	0.0	0.0	7.9	7.9	23.3	0.0	25.9	24.0	0.0	23.6
Incr Delay (d2), s/veh	0.4	0.7	0.0	0.0	0.2	0.3	0.3	0.0	2.9	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.7	0.0	0.0	1.2	1.4	0.7	0.0	3.7	0.1	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.9	10.6	0.0	0.0	8.1	8.2	23.6	0.0	28.8	24.0	0.0	24.1
LnGrp LOS	A	B		A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1046	A		491			238				60
Approach Delay, s/veh		10.6			8.2			27.9				24.1
Approach LOS		B			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		59.0		31.0		59.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		54.0		26.0		54.0				
Max Q Clear Time (g_c+I1), s		11.0		15.6		4.3		5.7				
Green Ext Time (p_c), s		0.7		8.5		0.2		3.2				

Intersection Summary

HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045+Project
 PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↖	↗	↘	↗	
Traffic Volume (vph)	71	975	587	0	479	12	7	36	195	6	0	54
Future Volume (vph)	71	975	587	0	479	12	7	36	195	6	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996				0.850		0.850	
Flt Protected	0.950							0.992		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5065	0	0	1848	1583	1770	1583	0
Flt Permitted	0.463							0.969		0.729		
Satd. Flow (perm)	862	3539	1583	0	5065	0	0	1805	1583	1358	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			503		7				128		389	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour 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
Adj. Flow (vph)	71	975	587	0	479	12	7	36	195	6	0	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	975	587	0	491	0	0	43	195	6	54	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045+Project
 PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	59.0	59.0			59.0		31.0	31.0	31.0	31.0	31.0	
Total Split (%)	65.6%	65.6%			65.6%		34.4%	34.4%	34.4%	34.4%	34.4%	
Maximum Green (s)	54.0	54.0			54.0		26.0	26.0	26.0	26.0	26.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	54.0	54.0	90.0		54.0			26.0	26.0	26.0	26.0	
Actuated g/C Ratio	0.60	0.60	1.00		0.60			0.29	0.29	0.29	0.29	
v/c Ratio	0.14	0.46	0.37		0.16			0.08	0.36	0.02	0.07	
Control Delay	5.7	7.5	0.6		8.0			24.0	11.6	23.2	0.2	
Queue Delay	0.0	0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay	5.7	7.5	0.6		8.0			24.0	11.6	23.2	0.2	
LOS	A	A	A		A			C	B	C	A	
Approach Delay		5.0			8.0			13.8			2.5	
Approach LOS		A			A			B			A	
Queue Length 50th (ft)	9	125	0		41			18	28	2	0	
Queue Length 95th (ft)	m20	138	0		56			43	82	12	0	
Internal Link Dist (ft)		121			561			495			178	
Turn Bay Length (ft)	315								270			
Base Capacity (vph)	517	2123	1583		3041			521	548	392	733	
Starvation Cap Reductn	0	0	0		0			0	0	0	0	
Spillback Cap Reductn	0	0	0		0			0	0	0	0	
Storage Cap Reductn	0	0	0		0			0	0	0	0	
Reduced v/c Ratio	0.14	0.46	0.37		0.16			0.08	0.36	0.02	0.07	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.46
 Intersection Signal Delay: 6.4
 Intersection LOS: A
 Intersection Capacity Utilization 56.5%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Year 2045+Project
 PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖	↕↕	↖	↖↗	↕↕
Traffic Volume (veh/h)	1285	553	754	39	603	820
Future Volume (veh/h)	1285	553	754	39	603	820
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1285	0	754	0	603	820
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1357		914		672	1763
Arrive On Green	0.39	0.00	0.26	0.00	0.19	0.50
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	1285	0	754	0	603	820
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	32.4	0.0	18.0	0.0	15.3	13.6
Cycle Q Clear(g_c), s	32.4	0.0	18.0	0.0	15.3	13.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1357		914		672	1763
V/C Ratio(X)	0.95		0.83		0.90	0.47
Avail Cap(c_a), veh/h	1382		914		691	1763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	31.5	0.0	35.4	14.8
Incr Delay (d2), s/veh	13.5	0.0	8.4	0.0	14.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.1	0.0	8.3	0.0	7.4	5.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.9	0.0	39.9	0.0	49.6	15.7
LnGrp LOS	D		D		D	B
Approach Vol, veh/h	1285	A	754	A		1423
Approach Delay, s/veh	39.9		39.9			30.1
Approach LOS	D		D			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.5	28.1			49.7	40.3
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	18.0	22.0			44.0	36.0
Max Q Clear Time (g_c+I1), s	17.3	20.0			15.6	34.4
Green Ext Time (p_c), s	0.2	0.9			5.7	1.0

Intersection Summary

















HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

Notes

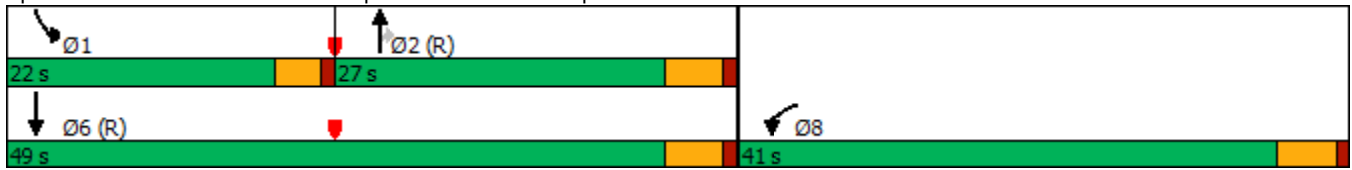
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045+Project
 PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	1285	553	754	39	603	820
Future Volume (vph)	1285	553	754	39	603	820
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		368		39		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1285	553	754	39	603	820
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1285	553	754	39	603	820
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.687

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
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	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	39	131	0	36	34	1420	22	10	1666	123
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	39	131	0	36	34	1420	22	10	1666	123
Peak Hour 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
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	10	33	0	9	9	355	6	3	417	31
Total Analysis Volume [veh/h]	0	0	39	131	0	36	34	1420	22	10	1666	123
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 in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	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	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [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
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	75	0	10	75	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	24	0	0	24	0	0	11	0	0	11	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	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	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

Intersection Level Of Service Report
Intersection 1: Camino Capistrano at Avenida Aeropuerto

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↩ ↑		↑↩		↩↩	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Avenida Aeropuerto	
Base Volume Input [veh/h]	148	656	1463	151	133	207
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	148	656	1463	151	133	207
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	164	366	38	33	52
Total Analysis Volume [veh/h]	148	656	1463	151	133	207
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	6	0	6	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	13	57	44	0	33	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	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
I, Upstream Filtering Factor	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	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	68	55	55	14	14
g / C, Green / Cycle	0.10	0.75	0.61	0.61	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.18	0.41	0.09	0.07	0.13
s, saturation flow rate [veh/h]	1781	3560	3560	1589	1781	1589
c, Capacity [veh/h]	180	2684	2166	967	280	250
d1, Uniform Delay [s]	39.70	3.35	11.72	7.63	34.54	36.75
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.11	0.22	1.71	0.34	1.25	6.84
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.24	0.68	0.16	0.47	0.83
d, Delay for Lane Group [s/veh]	48.81	3.56	13.42	7.97	35.79	43.59
Lane Group LOS	D	A	B	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.62	1.40	9.07	1.24	2.71	4.81
50th-Percentile Queue Length [ft/ln]	90.49	34.88	226.76	31.05	67.79	120.13
95th-Percentile Queue Length [veh/ln]	6.52	2.51	14.01	2.24	4.88	8.40
95th-Percentile Queue Length [ft/ln]	162.89	62.78	350.24	55.90	122.03	210.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.81	3.56	13.42	7.97	35.79	43.59
Movement LOS	D	A	B	A	D	D
d_A, Approach Delay [s/veh]	11.89		12.91		40.54	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	16.02					
Intersection LOS	B					
Intersection V/C	0.720					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.782	0.000	2.147
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1178	889	644
d_b, Bicycle Delay [s]	7.61	13.89	20.67
I_b,int, Bicycle LOS Score for Intersection	2.223	2.891	1.560
Bicycle LOS	B	C	A

Sequence

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



HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project
 Sat Midday Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	904	586	0	0	0	660	481	464	82	937	652
Future Volume (veh/h)	322	904	586	0	0	0	660	481	464	82	937	652
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	322	904	0				570	606	464	82	937	652
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	465	927					604	634	538	480	958	1480
Arrive On Green	0.26	0.26	0.00				0.34	0.34	0.34	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	322	904	0				570	606	464	82	937	652
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	18.8	29.0	0.0				35.8	36.4	31.5	4.1	30.1	16.5
Cycle Q Clear(g_c), s	18.8	29.0	0.0				35.8	36.4	31.5	4.1	30.1	16.5
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	465	927					604	634	538	480	958	1480
V/C Ratio(X)	0.69	0.98					0.94	0.96	0.86	0.17	0.98	0.44
Avail Cap(c_a), veh/h	465	927					604	634	538	480	958	1480
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	42.1	0.0				36.9	37.1	35.5	32.2	41.7	16.5
Incr Delay (d2), s/veh	4.4	23.6	0.0				25.1	26.3	16.6	0.8	24.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	15.3	0.0				19.1	20.6	14.1	1.8	15.9	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	65.7	0.0				62.0	63.5	52.1	32.9	65.9	17.5
LnGrp LOS	D	E					E	E	D	C	E	B
Approach Vol, veh/h		1226	A					1640			1671	
Approach Delay, s/veh		59.7						59.7			45.4	
Approach LOS		E						E			D	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		44.0		35.0				36.0				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		39.0		30.0				31.0				
Max Q Clear Time (g_c+I1), s		38.4		31.0				32.1				
Green Ext Time (p_c), s		0.4		0.0				0.0				

Intersection Summary






















HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project
 Sat Midday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	904	586	0	0	0	660	481	464	82	937	652
Future Volume (vph)	322	904	586	0	0	0	660	481	464	82	937	652
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	1		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950	0.992		0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	1681	1755	1583	1770	3539	2787
Flt Permitted	0.950						0.950	0.992		0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	1681	1755	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			586						333			144
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour 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
Adj. Flow (vph)	322	904	586	0	0	0	660	481	464	82	937	652
Shared Lane Traffic (%)							15%					
Lane Group Flow (vph)	322	904	586	0	0	0	561	580	464	82	937	652
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4					2	2		6	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project
Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				2	2	2	6	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	36.0	36.0	11.0
Total Split (s)	35.0	35.0	35.0				44.0	44.0	44.0	36.0	36.0	35.0
Total Split (%)	30.4%	30.4%	30.4%				38.3%	38.3%	38.3%	31.3%	31.3%	30.4%
Maximum Green (s)	30.0	30.0	30.0				39.0	39.0	39.0	31.0	31.0	30.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				C-Max	C-Max	C-Max	Max	Max	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										24.0	24.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)	30.0	30.0	30.0				39.0	39.0	39.0	31.0	31.0	66.0
Actuated g/C Ratio	0.26	0.26	0.26				0.34	0.34	0.34	0.27	0.27	0.57
v/c Ratio	0.70	0.98	0.69				0.98	0.97	0.61	0.17	0.98	0.39
Control Delay	47.7	67.7	7.7				72.5	69.5	12.6	33.4	67.5	10.9
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	67.7	7.7				72.5	69.5	12.6	33.4	67.5	10.9
LOS	D	E	A				E	E	B	C	E	B
Approach Delay		44.7						54.1			43.8	
Approach LOS		D						D			D	
Queue Length 50th (ft)	216	350	0				430	444	71	47	363	107
Queue Length 95th (ft)	320	#488	99				#675	#689	183	88	#503	151
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	461	923	846				570	595	756	477	953	1660
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.98	0.69				0.98	0.97	0.61	0.17	0.98	0.39

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 47.4
 Intersection LOS: D
 Intersection Capacity Utilization 94.3%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



Intersection Level Of Service Report
Intersection 3: Camino Capistrano at Camino Capistrano

Control Type:	Two-way stop	Delay (sec / veh):	30.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Camino Capistrano	
Base Volume Input [veh/h]	1417	19	258	1028	0	236
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1417	19	258	1028	0	236
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	354	5	65	257	0	59
Total Analysis Volume [veh/h]	1417	19	258	1028	0	236
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.55	0.01	0.00	0.64
d_M, Delay for Movement [s/veh]	0.00	0.00	21.68	0.00	0.00	30.12
Movement LOS	A	A	C	A		D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	3.27	0.00	0.00	4.19
95th-Percentile Queue Length [ft/ln]	0.00	0.00	81.68	0.00	0.00	104.74
d_A, Approach Delay [s/veh]	0.00		4.35		30.12	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	4.29					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: Camino Capistrano at Costco Driveway

Control Type:	Signalized	Delay (sec / veh):	25.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

Intersection Setup

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Camino Capistrano			Camino Capistrano			Costco Dwy			Retail Dwy		
Base Volume Input [veh/h]	438	953	4	40	841	139	480	5	276	3	5	3
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	438	953	4	40	841	139	480	5	276	3	5	3
Peak Hour 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
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]	110	238	1	10	210	35	120	1	69	1	1	1
Total Analysis Volume [veh/h]	438	953	4	40	841	139	480	5	276	3	5	3
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 in	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]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	6	6	0	6	6	0	0	6	0	0	6	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	22	41	0	10	29	0	0	34	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	18	0	0	21	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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	R	L	C	R	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	54	54	4	43	43	20	20	20	2
g / C, Green / Cycle	0.15	0.57	0.57	0.04	0.46	0.46	0.21	0.21	0.21	0.02
(v / s)_i Volume / Saturation Flow Rate	0.13	0.26	0.26	0.02	0.24	0.09	0.14	0.14	0.17	0.01
s, saturation flow rate [veh/h]	3459	1870	1867	1781	3560	1589	1781	1783	1589	1761
c, Capacity [veh/h]	524	1055	1054	76	1621	724	370	371	330	30
d1, Uniform Delay [s]	39.23	12.14	12.14	44.63	18.48	15.47	34.56	34.56	36.13	46.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
l, 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]	3.62	1.41	1.41	5.63	1.19	0.59	1.97	1.96	5.56	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	0.84	0.45	0.45	0.53	0.52	0.19	0.65	0.65	0.84	0.36
d, Delay for Lane Group [s/veh]	42.85	13.55	13.55	50.26	19.67	16.06	36.53	36.52	41.69	53.37
Lane Group LOS	D	B	B	D	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	5.16	5.94	5.93	1.04	6.58	1.87	5.27	5.27	6.54	0.32
50th-Percentile Queue Length [ft/ln]	129.08	148.43	148.28	25.89	164.50	46.63	131.66	131.73	163.43	7.89
95th-Percentile Queue Length [veh/ln]	8.89	9.93	9.93	1.86	10.79	3.36	9.03	9.03	10.73	0.57
95th-Percentile Queue Length [ft/ln]	222.24	248.33	248.14	46.61	269.67	83.93	225.75	225.85	268.26	14.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.85	13.55	13.55	50.26	19.67	16.06	36.53	36.52	41.69	53.37	53.37	53.37
Movement LOS	D	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	22.75			20.38			38.40			53.37		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	25.83											
Intersection LOS	C											
Intersection V/C	0.653											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	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]	37.14	0.00	37.14	37.14
I_p,int, Pedestrian LOS Score for Intersection	2.864	0.000	2.564	1.746
Crosswalk LOS	C	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	779	526	632	126
d_b, Bicycle Delay [s]	17.71	25.79	22.24	41.69
I_b,int, Bicycle LOS Score for Intersection	2.710	2.401	2.815	1.578
Bicycle LOS	B	B	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Doheny Park Road at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.090

Intersection Setup

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Doheny Park Road			Doheny Park Road			Domingo Avenue			Domingo Avenue		
Base Volume Input [veh/h]	55	1414	116	20	1262	34	0	0	34	0	0	31
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	1414	116	20	1262	34	0	0	34	0	0	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9560	0.9560	1.0000	0.9560	0.9560	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	354	29	5	316	9	0	0	9	0	0	8
Total Analysis Volume [veh/h]	55	1414	116	20	1262	34	0	0	34	0	0	31
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings




















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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.00	0.05	0.01	0.00	0.00	0.00	0.08	0.00	0.00	0.09
d_M, Delay for Movement [s/veh]	12.57	0.00	0.00	13.75	0.00	0.00	165.88	302.12	14.50	201.36	284.46	16.43
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	C
95th-Percentile Queue Length [veh/ln]	0.34	0.00	0.00	0.15	0.00	0.00	0.27	0.27	0.27	0.29	0.29	0.29
95th-Percentile Queue Length [ft/ln]	8.62	0.00	0.00	3.64	0.00	0.00	6.69	6.69	6.69	7.33	7.33	7.33
d_A, Approach Delay [s/veh]	0.44			0.21			14.50			16.43		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	0.66											
Intersection LOS	C											

HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project
 Sat Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	0	46	44	29	871	33	642	359	0	1247	50
Future Volume (veh/h)	63	0	46	44	29	871	33	642	359	0	1247	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	63	0	46	44	29	871	33	642	359	0	1247	50
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	266	16	160	463	291	704	99	1579	704	0	1161	47
Arrive On Green	0.44	0.00	0.44	0.44	0.44	0.44	0.06	0.44	0.44	0.00	0.33	0.33
Sat Flow, veh/h	456	37	360	898	654	1585	1781	3554	1585	0	3576	140
Grp Volume(v), veh/h	109	0	0	73	0	871	33	642	359	0	636	661
Grp Sat Flow(s),veh/h/ln	852	0	0	1552	0	1585	1781	1777	1585	0	1777	1845
Q Serve(g_s), s	4.3	0.0	0.0	0.0	0.0	40.0	1.6	11.0	14.6	0.0	30.0	30.0
Cycle Q Clear(g_c), s	6.5	0.0	0.0	2.1	0.0	40.0	1.6	11.0	14.6	0.0	30.0	30.0
Prop In Lane	0.58		0.42	0.60		1.00	1.00		1.00	0.00		0.08
Lane Grp Cap(c), veh/h	442	0	0	754	0	704	99	1579	704	0	592	615
V/C Ratio(X)	0.25	0.00	0.00	0.10	0.00	1.24	0.33	0.41	0.51	0.00	1.07	1.08
Avail Cap(c_a), veh/h	442	0	0	754	0	704	119	1579	704	0	592	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.4	0.0	0.0	14.5	0.0	25.0	40.9	17.0	18.0	0.0	30.0	30.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.1	0.0	118.4	2.0	0.8	2.6	0.0	58.2	58.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	0.8	0.0	37.1	0.7	4.4	5.5	0.0	21.6	22.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.7	0.0	0.0	14.5	0.0	143.4	42.8	17.7	20.6	0.0	88.2	88.1
LnGrp LOS	B	A	A	B	A	F	D	B	C	A	F	F
Approach Vol, veh/h		109			944			1034			1297	
Approach Delay, s/veh		15.7			133.4			19.5			88.2	
Approach LOS		B			F			B			F	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		45.0		45.0	10.0	35.0		45.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		40.0		40.0	6.0	* 30		40.0				
Max Q Clear Time (g_c+I1), s		16.6		8.5	3.6	32.0		42.0				
Green Ext Time (p_c), s		5.8		1.1	0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	77.5
HCM 6th LOS	E

Notes

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

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project
Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕		↕↕	
Traffic Volume (vph)	63	0	46	44	29	871	33	642	359	0	1247	50
Future Volume (vph)	63	0	46	44	29	871	33	642	359	0	1247	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.943				0.850			0.850		0.994	
Flt Protected		0.972			0.971		0.950					
Satd. Flow (prot)	0	1707	0	0	1809	1583	1770	3539	1583	0	3518	0
Flt Permitted		0.823			0.821		0.950					
Satd. Flow (perm)	0	1446	0	0	1529	1583	1770	3539	1583	0	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		85				163			359			5
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour 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
Adj. Flow (vph)	63	0	46	44	29	871	33	642	359	0	1247	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	109	0	0	73	871	33	642	359	0	1297	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project
Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	45.0	45.0		45.0	45.0	45.0	10.0	45.0	45.0		35.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	11.1%	50.0%	50.0%		38.9%	
Maximum Green (s)	40.0	40.0		40.0	40.0	40.0	6.0	40.0	40.0		30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		40.0			40.0	40.0	6.0	40.0	40.0		34.0	
Actuated g/C Ratio		0.44			0.44	0.44	0.07	0.44	0.44		0.38	
v/c Ratio		0.16			0.11	1.10	0.28	0.41	0.40		0.97	
Control Delay		5.7			15.2	83.9	37.3	11.4	1.4		49.3	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		5.7			15.2	83.9	37.3	11.4	1.4		49.3	
LOS		A			B	F	D	B	A		D	
Approach Delay		5.7			78.6			8.7			49.3	
Approach LOS		A			E			A			D	
Queue Length 50th (ft)		7			23	~512	17	76	0		~446	
Queue Length 95th (ft)		37			49	#743	40	107	0		#580	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		689			679	794	118	1572	903		1332	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.16			0.11	1.10	0.28	0.41	0.40		0.97	

Intersection Summary

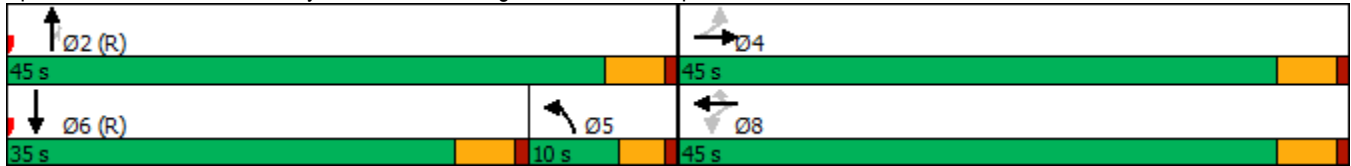
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	64 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	120
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.10
Intersection Signal Delay:	43.7
Intersection LOS:	D
Intersection Capacity Utilization:	90.5%
ICU Level of Service:	E
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite.	

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 10: Doheny Park Rd & PCH Side Path

Year 2045+Project
 Sat Midday Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶↶	↷		↶↶	↶	
Traffic Volume (veh/h)	394	382	0	586	310	0
Future Volume (veh/h)	394	382	0	586	310	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	0
Adj Flow Rate, veh/h	394	0	0	586	310	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	507		0	2637	1388	0
Arrive On Green	0.15	0.00	0.00	0.74	0.74	0.00
Sat Flow, veh/h	3456	1585	0	3741	1870	0
Grp Volume(v), veh/h	394	0	0	586	310	0
Grp Sat Flow(s),veh/h/ln	1728	1585	0	1777	1870	0
Q Serve(g_s), s	9.9	0.0	0.0	4.6	4.6	0.0
Cycle Q Clear(g_c), s	9.9	0.0	0.0	4.6	4.6	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	507		0	2637	1388	0
V/C Ratio(X)	0.78		0.00	0.22	0.22	0.00
Avail Cap(c_a), veh/h	1190		0	2637	1388	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.0	0.0	0.0	3.6	3.6	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.0	0.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	0.0	1.2	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.6	0.0	0.0	3.8	4.0	0.0
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	394	A		586	310	
Approach Delay, s/veh	39.6			3.8	4.0	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		71.8		18.2		71.8
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		49.0		31.0		49.0
Max Q Clear Time (g_c+I1), s		6.6		11.9		6.6
Green Ext Time (p_c), s		4.4		1.3		1.9

Intersection Summary

HCM 6th Ctrl Delay	14.8
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045+Project
 Sat Midday Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔↔	↔		↑↑	↑	
Traffic Volume (vph)	394	382	0	586	310	0
Future Volume (vph)	394	382	0	586	310	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195	0	0			0
Storage Lanes	2	1	0			0
Taper Length (ft)	60		60			
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	1583	0	3539	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1583	0	3539	1863	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		382				
Link Speed (mph)	30			35	35	
Link Distance (ft)	698			470	353	
Travel Time (s)	15.9			9.2	6.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	394	382	0	586	310	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	394	382	0	586	310	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1		2	2	
Detector Template	Left	Right		Thru	Thru	
Leading Detector (ft)	20	20		100	100	
Trailing Detector (ft)	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	
Detector 1 Size(ft)	20	20		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Free		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		Free				

Lanes, Volumes, Timings
 10: Doheny Park Rd & PCH Side Path

Year 2045+Project
 Sat Midday Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4			2	6	
Switch Phase						
Minimum Initial (s)	6.0			6.0	6.0	
Minimum Split (s)	11.0			11.0	19.0	
Total Split (s)	36.0			54.0	54.0	
Total Split (%)	40.0%			60.0%	60.0%	
Maximum Green (s)	31.0			49.0	49.0	
Yellow Time (s)	4.0			4.0	4.0	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			C-Max	C-Max	
Walk Time (s)					7.0	
Flash Dont Walk (s)					7.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)	15.7	90.0		64.3	64.3	
Actuated g/C Ratio	0.17	1.00		0.71	0.71	
v/c Ratio	0.66	0.24		0.23	0.23	
Control Delay	39.8	0.4		5.0	0.8	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	39.8	0.4		5.0	0.8	
LOS	D	A		A	A	
Approach Delay	20.4			5.0	0.8	
Approach LOS	C			A	A	
Queue Length 50th (ft)	108	0		50	6	
Queue Length 95th (ft)	146	0		84	m8	
Internal Link Dist (ft)	618			390	273	
Turn Bay Length (ft)	195					
Base Capacity (vph)	1182	1583		2527	1330	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.33	0.24		0.23	0.23	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 11.4
 Intersection LOS: B
 Intersection Capacity Utilization 35.9%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Doheny Park Rd & PCH Side Path



Intersection Level Of Service Report
Intersection 11: Camino Capistrano at Sepulveda Avenue

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.095

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↶↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Sepulveda Ave	
Base Volume Input [veh/h]	0	83	104	115	71	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	83	104	115	71	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	21	26	29	18	1
Total Analysis Volume [veh/h]	0	83	104	115	71	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.10	0.01
d_M, Delay for Movement [s/veh]	7.67	0.00	0.00	0.00	10.35	9.10
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.32	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	7.88	0.43
d_A, Approach Delay [s/veh]	0.00		0.00		10.27	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.06					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 12: Sepulveda Avenue at Victoria Boulevard

Control Type:	All-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.281

Intersection Setup

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sepulveda Ave			Sepulveda Ave			Victoria Blvd			Victoria Blvd		
Base Volume Input [veh/h]	141	4	14	15	5	109	46	109	57	7	144	16
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	4	14	15	5	109	46	109	57	7	144	16
Peak Hour 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
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	1	4	4	1	27	12	27	14	2	36	4
Total Analysis Volume [veh/h]	141	4	14	15	5	109	46	109	57	7	144	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	695	778	754	735
Degree of Utilization, x	0.23	0.17	0.28	0.23

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.88	0.59	1.15	0.87
95th-Percentile Queue Length [ft]	21.92	14.80	28.86	21.80
Approach Delay [s/veh]	9.70	8.55	9.64	9.34
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.37			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 13: Sepulveda Avenue at Domingo Avenue

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.143

Intersection Setup

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↶		↷		↷	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Sepulveda Ave		Sepulveda Ave		Domingo Ave	
Base Volume Input [veh/h]	5	5	5	8	141	5
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	5	5	8	141	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	1	2	35	1
Total Analysis Volume [veh/h]	5	5	5	8	141	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.14	0.00
d_M, Delay for Movement [s/veh]	7.25	0.00	0.00	0.00	9.27	8.98
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.52	0.52
95th-Percentile Queue Length [ft/ln]	0.23	0.23	0.00	0.00	12.89	12.89
d_A, Approach Delay [s/veh]	3.62		0.00		9.26	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.21					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Camino Capistrano at Victoria Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Camino Capistrano		Camino Capistrano		Victoria Blvd	
Base Volume Input [veh/h]	141	112	126	5	5	136
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	112	126	5	5	136
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	28	32	1	1	34
Total Analysis Volume [veh/h]	141	112	126	5	5	136
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.01	0.15
d_M, Delay for Movement [s/veh]	7.74	0.00	0.00	0.00	13.51	9.67
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.32	0.00	0.00	0.00	0.56	0.56
95th-Percentile Queue Length [ft/ln]	8.04	0.00	0.00	0.00	14.03	14.03
d_A, Approach Delay [s/veh]	4.31		0.00		9.80	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.71					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 18: Doheny Park Road at Smart & Final Dwy

Control Type:	Two-way stop	Delay (sec / veh):	24.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.110

Intersection Setup

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Doheny Park Road		Doheny Park Road		Smart & Final Dwy	
Base Volume Input [veh/h]	39	1498	1074	36	24	54
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]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	1498	1074	36	24	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	375	269	9	6	14
Total Analysis Volume [veh/h]	39	1498	1074	36	24	54
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.01	0.00	0.11	0.11
d_M, Delay for Movement [s/veh]	11.14	0.00	0.00	0.00	24.52	15.53
Movement LOS	B	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.20	0.00	0.00	0.00	0.84	0.84
95th-Percentile Queue Length [ft/ln]	4.98	0.00	0.00	0.00	21.12	21.12
d_A, Approach Delay [s/veh]	0.28		0.00		18.30	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.68					
Intersection LOS	C					

HCM 6th Signalized Intersection Summary
 19: PCH & I-5 SB Ramps

Year 2045+Project
 Sat Midday Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (veh/h)	0	943	143	0	362	1160
Future Volume (veh/h)	0	943	143	0	362	1160
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	943	143	0	362	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	2172	1143	0	960	
Arrive On Green	0.00	0.61	0.61	0.00	0.28	0.00
Sat Flow, veh/h	0	3741	1870	0	3456	1585
Grp Volume(v), veh/h	0	943	143	0	362	0
Grp Sat Flow(s),veh/h/ln	0	1777	1870	0	1728	1585
Q Serve(g_s), s	0.0	12.6	2.9	0.0	7.6	0.0
Cycle Q Clear(g_c), s	0.0	12.6	2.9	0.0	7.6	0.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2172	1143	0	960	
V/C Ratio(X)	0.00	0.43	0.13	0.00	0.38	
Avail Cap(c_a), veh/h	0	2172	1143	0	960	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	9.3	7.4	0.0	26.2	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.0	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	1.1	0.0	3.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.9	7.6	0.0	27.3	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		943	143		362	A
Approach Delay, s/veh		9.9	7.6		27.3	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				60.0	30.0	60.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				55.0	25.0	55.0
Max Q Clear Time (g_c+I1), s				14.6	9.6	4.9
Green Ext Time (p_c), s				7.6	1.1	0.8
Intersection Summary						
HCM 6th Ctrl Delay			14.0			
HCM 6th LOS			B			
Notes						
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.						

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045+Project
Sat Midday Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑		↑↑	↑
Traffic Volume (vph)	0	943	143	0	362	1160
Future Volume (vph)	0	943	143	0	362	1160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	1.00
Fr t						0.850
Fl t Protected					0.950	
Satd. Flow (prot)	0	3539	1863	0	3433	1583
Fl t Permitted					0.950	
Satd. Flow (perm)	0	3539	1863	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						898
Link Speed (mph)		40	40		30	
Link Distance (ft)		559	260		820	
Travel Time (s)		9.5	4.4		18.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	943	143	0	362	1160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	943	143	0	362	1160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	1
Detector Template		Thru	Thru		Left	Right
Leading Detector (ft)		100	100		20	20
Trailing Detector (ft)		0	0		0	0
Detector 1 Position(ft)		0	0		0	0
Detector 1 Size(ft)		6	6		20	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	Free
Protected Phases		4	8		6	
Permitted Phases						Free
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		6.0	6.0		6.0	

Lanes, Volumes, Timings
19: PCH & I-5 SB Ramps

Year 2045+Project
Sat Midday Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		11.0	11.0		11.0	
Total Split (s)		60.0	60.0		30.0	
Total Split (%)		66.7%	66.7%		33.3%	
Maximum Green (s)		55.0	55.0		25.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		Max	
Act Effect Green (s)		55.0	55.0		25.0	90.0
Actuated g/C Ratio		0.61	0.61		0.28	1.00
v/c Ratio		0.44	0.13		0.38	0.73
Control Delay		10.1	4.3		27.7	3.0
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		10.1	4.3		27.7	3.0
LOS		B	A		C	A
Approach Delay		10.1	4.3		8.9	
Approach LOS		B	A		A	
Queue Length 50th (ft)		136	13		85	0
Queue Length 95th (ft)		177	23		124	0
Internal Link Dist (ft)		479	180		740	
Turn Bay Length (ft)						
Base Capacity (vph)		2162	1138		953	1583
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.44	0.13		0.38	0.73

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 7 (8%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 9.1
 Intersection Capacity Utilization 44.7%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 19: PCH & I-5 SB Ramps



HCM 6th Signalized Intersection Summary
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045+Project
 Sat Midday Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↑	↗	↘	↗	
Traffic Volume (veh/h)	58	705	646	0	519	5	7	23	162	6	0	63
Future Volume (veh/h)	58	705	646	0	519	5	7	23	162	6	0	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	705	0	0	519	5	7	23	162	6	0	63
Peak Hour 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
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	536	2014		0	2955	28	149	463	511	453	0	511
Arrive On Green	0.57	0.57	0.00	0.00	0.57	0.57	0.32	0.32	0.32	0.32	0.00	0.32
Sat Flow, veh/h	878	3554	1585	0	5384	50	311	1436	1585	1199	0	1585
Grp Volume(v), veh/h	58	705	0	0	339	185	30	0	162	6	0	63
Grp Sat Flow(s),veh/h/ln	878	1777	1585	0	1702	1861	1747	0	1585	1199	0	1585
Q Serve(g_s), s	3.1	9.7	0.0	0.0	4.3	4.3	0.0	0.0	6.9	0.3	0.0	2.5
Cycle Q Clear(g_c), s	7.4	9.7	0.0	0.0	4.3	4.3	1.0	0.0	6.9	1.3	0.0	2.5
Prop In Lane	1.00		1.00	0.00		0.03	0.23		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	536	2014		0	1929	1055	612	0	511	453	0	511
V/C Ratio(X)	0.11	0.35		0.00	0.18	0.18	0.05	0.00	0.32	0.01	0.00	0.12
Avail Cap(c_a), veh/h	536	2014		0	1929	1055	612	0	511	453	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.2	10.5	0.0	0.0	9.4	9.4	21.0	0.0	23.0	21.5	0.0	21.5
Incr Delay (d2), s/veh	0.4	0.5	0.0	0.0	0.2	0.4	0.2	0.0	1.6	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.4	0.0	0.0	1.5	1.6	0.5	0.0	2.8	0.1	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	11.0	0.0	0.0	9.6	9.7	21.2	0.0	24.7	21.5	0.0	22.0
LnGrp LOS	B	B		A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		763	A		524			192				69
Approach Delay, s/veh		11.1			9.6			24.1				22.0
Approach LOS		B			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		56.0		34.0		56.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		29.0		51.0		29.0		51.0				
Max Q Clear Time (g_c+I1), s		8.9		11.7		4.5		6.3				
Green Ext Time (p_c), s		0.6		5.6		0.3		3.4				

Intersection Summary

HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045+Project
 Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗		↑↑↑			↖	↗	↘	↗	
Traffic Volume (vph)	58	705	646	0	519	5	7	23	162	6	0	63
Future Volume (vph)	58	705	646	0	519	5	7	23	162	6	0	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		0	0		0	0		270	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.850		0.850	
Flt Protected	0.950							0.988		0.950		
Satd. Flow (prot)	1770	3539	1583	0	5080	0	0	1840	1583	1770	1583	0
Flt Permitted	0.448							0.958		0.738		
Satd. Flow (perm)	835	3539	1583	0	5080	0	0	1785	1583	1375	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			646		2				162		333	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		201			641			575			258	
Travel Time (s)		3.4			10.9			13.1			5.9	
Peak Hour 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
Adj. Flow (vph)	58	705	646	0	519	5	7	23	162	6	0	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	705	646	0	524	0	0	30	162	6	63	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1		2		1	2	1	1	2	
Detector Template	Left	Thru	Right		Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20		100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0		0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20		6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		Free				2		2	6		

Lanes, Volumes, Timings
 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas

Year 2045+Project
 Sat Midday Peak Hour

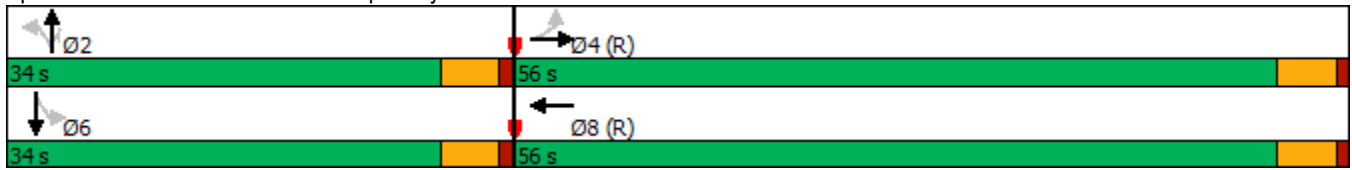


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4			8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Minimum Split (s)	11.0	11.0			26.0		11.0	11.0	11.0	11.0	11.0	
Total Split (s)	56.0	56.0			56.0		34.0	34.0	34.0	34.0	34.0	
Total Split (%)	62.2%	62.2%			62.2%		37.8%	37.8%	37.8%	37.8%	37.8%	
Maximum Green (s)	51.0	51.0			51.0		29.0	29.0	29.0	29.0	29.0	
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max			C-Max		Max	Max	Max	Max	Max	
Walk Time (s)					7.0							
Flash Dont Walk (s)					14.0							
Pedestrian Calls (#/hr)					5							
Act Effct Green (s)	51.0	51.0	90.0		51.0		29.0	29.0	29.0	29.0	29.0	
Actuated g/C Ratio	0.57	0.57	1.00		0.57		0.32	0.32	0.32	0.32	0.32	
v/c Ratio	0.12	0.35	0.41		0.18		0.05	0.26	0.01	0.09		
Control Delay	7.3	7.9	1.0		9.6		21.5	5.0	21.0	0.2		
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0		
Total Delay	7.3	7.9	1.0		9.6		21.5	5.0	21.0	0.2		
LOS	A	A	A		A		C	A	C	A		
Approach Delay		4.7			9.6		7.5				2.0	
Approach LOS		A			A		A				A	
Queue Length 50th (ft)	10	70	4		48		12	0	2	0		
Queue Length 95th (ft)	23	88	9		66		31	42	11	0		
Internal Link Dist (ft)		121			561		495				178	
Turn Bay Length (ft)	315							270				
Base Capacity (vph)	473	2005	1583		2879		575	619	443	735		
Starvation Cap Reductn	0	0	0		0		0	0	0	0		
Spillback Cap Reductn	0	0	0		0		0	0	0	0		
Storage Cap Reductn	0	0	0		0		0	0	0	0		
Reduced v/c Ratio	0.12	0.35	0.41		0.18		0.05	0.26	0.01	0.09		

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	88 (98%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.41
Intersection Signal Delay:	6.0
Intersection LOS:	A
Intersection Capacity Utilization:	47.0%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 20: I-5 NB Ramps/Dwy & PCH/Camino Las Ramblas



HCM 6th Signalized Intersection Summary
 22: Camino Capistrano & I-5 SB Ramps

Year 2045+Project
 Sat Midday Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖	↕↕	↖	↖↗	↕↕
Traffic Volume (veh/h)	1145	515	719	35	479	744
Future Volume (veh/h)	1145	515	719	35	479	744
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1145	0	719	0	479	744
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1251		1136		563	1872
Arrive On Green	0.36	0.00	0.32	0.00	0.16	0.53
Sat Flow, veh/h	3456	1585	3647	1585	3456	3647
Grp Volume(v), veh/h	1145	0	719	0	479	744
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1728	1777
Q Serve(g_s), s	28.5	0.0	15.5	0.0	12.1	11.3
Cycle Q Clear(g_c), s	28.5	0.0	15.5	0.0	12.1	11.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1251		1136		563	1872
V/C Ratio(X)	0.92		0.63		0.85	0.40
Avail Cap(c_a), veh/h	1344		1136		653	1872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	0.0	26.1	0.0	36.6	12.7
Incr Delay (d2), s/veh	9.5	0.0	2.7	0.0	9.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	0.0	6.5	0.0	5.6	4.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.9	0.0	28.8	0.0	45.9	13.4
LnGrp LOS	D		C		D	B
Approach Vol, veh/h	1145	A	719	A		1223
Approach Delay, s/veh	36.9		28.8			26.1
Approach LOS	D		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	18.7	33.8			52.4	37.6
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	17.0	24.0			45.0	35.0
Max Q Clear Time (g_c+I1), s	14.1	17.5			13.3	30.5
Green Ext Time (p_c), s	0.5	2.4			5.1	2.1

Intersection Summary

















HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045+Project
 Sat Midday Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	1145	515	719	35	479	744
Future Volume (vph)	1145	515	719	35	479	744
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		405	290	
Storage Lanes	2	1		1	2	
Taper Length (ft)	60				60	
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		384		35		
Link Speed (mph)	30		45			45
Link Distance (ft)	364		723			566
Travel Time (s)	8.3		11.0			8.6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1145	515	719	35	479	744
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1145	515	719	35	479	744
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Free	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		Free		2		

Lanes, Volumes, Timings
 22: Camino Capistrano & I-5 SB Ramps

Year 2045+Project
 Sat Midday Peak Hour



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	6.0		6.0	6.0	6.0	6.0
Minimum Split (s)	11.0		11.0	11.0	10.0	11.0
Total Split (s)	40.0		29.0	29.0	21.0	50.0
Total Split (%)	44.4%		32.2%	32.2%	23.3%	55.6%
Maximum Green (s)	35.0		24.0	24.0	17.0	45.0
Yellow Time (s)	4.0		4.0	4.0	3.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max
Act Effct Green (s)	33.7	90.0	26.3	26.3	16.0	46.3
Actuated g/C Ratio	0.37	1.00	0.29	0.29	0.18	0.51
v/c Ratio	0.89	0.33	0.70	0.07	0.79	0.41
Control Delay	36.4	0.5	33.2	9.3	45.3	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	0.5	33.2	9.3	45.3	14.6
LOS	D	A	C	A	D	B
Approach Delay	25.3		32.1			26.6
Approach LOS	C		C			C
Queue Length 50th (ft)	301	0	197	0	133	134
Queue Length 95th (ft)	#394	0	264	22	187	178
Internal Link Dist (ft)	284		643			486
Turn Bay Length (ft)				405	290	
Base Capacity (vph)	1335	1583	1034	487	648	1821
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.33	0.70	0.07	0.74	0.41

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 21 (23%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 27.1
 Intersection LOS: C
 Intersection Capacity Utilization 77.9%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 22: Camino Capistrano & I-5 SB Ramps



Intersection Level Of Service Report

Intersection 23: Proposed Ganahl Driveway at Stonehill Drive

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
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	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Dwy			Ganahl Dwy			Stonehill Dr			Stonehill Dr		
Base Volume Input [veh/h]	0	0	36	200	0	55	61	1378	21	9	1418	219
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	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	36	200	0	55	61	1378	21	9	1418	219
Peak Hour 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
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	50	0	14	15	345	5	2	355	55
Total Analysis Volume [veh/h]	0	0	36	200	0	55	61	1378	21	9	1418	219
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 in	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	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	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	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [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
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	45	0	10	45	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	24	0	0	24	0	0	11	0	0	11	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	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	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]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19	19	5	57	57	1	54	54
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.05	0.64	0.64	0.01	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.18	0.03	0.03	0.27	0.01	0.01	0.40	0.14
s, saturation flow rate [veh/h]	1417	1589	1090	1589	1781	5094	1589	1781	3560	1589
c, Capacity [veh/h]	86	342	314	342	94	3249	1014	25	2133	952
d1, Uniform Delay [s]	0.00	28.39	36.24	28.74	41.82	8.10	5.99	43.98	12.02	8.39
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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]	0.00	0.13	2.15	0.22	7.33	0.41	0.04	8.44	1.66	0.56
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	0.00	0.11	0.64	0.16	0.65	0.42	0.02	0.36	0.66	0.23
d, Delay for Lane Group [s/veh]	0.00	28.52	38.38	28.96	49.15	8.50	6.02	52.41	13.68	8.95
Lane Group LOS	A	C	D	C	D	A	A	D	B	A
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	0.63	4.37	0.97	1.51	4.00	0.14	0.26	8.89	1.96
50th-Percentile Queue Length [ft/ln]	0.00	15.74	109.18	24.37	37.64	100.09	3.54	6.39	222.31	49.01
95th-Percentile Queue Length [veh/ln]	0.00	1.13	7.79	1.75	2.71	7.21	0.26	0.46	13.78	3.53
95th-Percentile Queue Length [ft/ln]	0.00	28.33	194.86	43.87	67.75	180.16	6.38	11.51	344.57	88.21

Movement, Approach, & Intersection Results

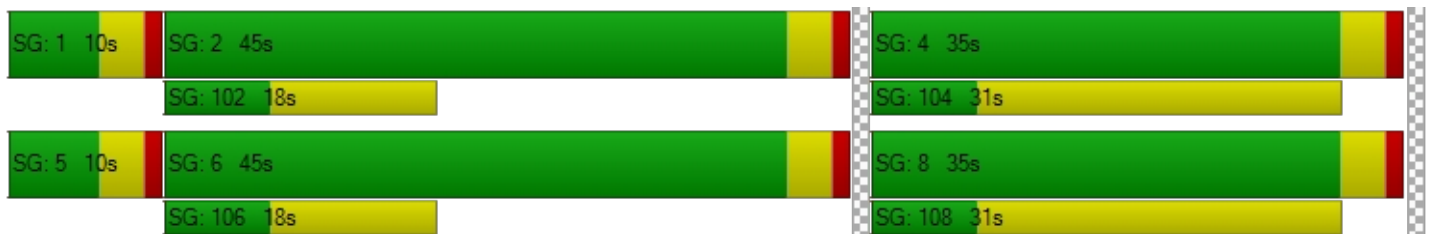
d_M, Delay for Movement [s/veh]	0.00	28.52	28.52	38.38	38.38	28.96	49.15	8.50	6.02	52.41	13.68	8.95
Movement LOS	A	C	C	D	D	C	D	A	A	D	B	A
d_A, Approach Delay [s/veh]	28.52			36.35			10.17			13.26		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	13.83											
Intersection LOS	B											
Intersection V/C	0.711											

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]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.961	2.114	3.002	3.332
Crosswalk LOS	A	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]	689	689	911	911
d_b, Bicycle Delay [s]	19.34	19.34	13.34	13.34
I_b,int, Bicycle LOS Score for Intersection	1.619	1.980	2.363	2.918
Bicycle LOS	A	A	B	C

Sequence

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




























APPENDIX E-VI

**YEAR 2045 BUILDOUT PLUS PROJECT
TRAFFIC CONDITIONS WITH IMPROVEMENTS**

HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project - MIT
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 				 	 
Traffic Volume (veh/h)	381	1314	342	0	0	0	452	490	392	64	396	676
Future Volume (veh/h)	381	1314	342	0	0	0	452	490	392	64	396	676
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	381	1314	0				452	490	392	64	396	676
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	713	1423					527	712	603	136	1081	1966
Arrive On Green	0.40	0.40	0.00				0.15	0.38	0.38	0.08	0.30	0.30
Sat Flow, veh/h	1781	3554	1585				3456	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	381	1314	0				452	490	392	64	396	676
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1728	1870	1585	1781	1777	1395
Q Serve(g_s), s	17.1	36.9	0.0				13.4	23.1	21.4	3.6	9.2	9.9
Cycle Q Clear(g_c), s	17.1	36.9	0.0				13.4	23.1	21.4	3.6	9.2	9.9
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	713	1423					527	712	603	136	1081	1966
V/C Ratio(X)	0.53	0.92					0.86	0.69	0.65	0.47	0.37	0.34
Avail Cap(c_a), veh/h	729	1455					527	712	603	136	1081	1966
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	29.9	0.0				43.4	27.3	26.8	46.5	28.6	6.0
Incr Delay (d2), s/veh	0.7	10.0	0.0				16.5	5.4	5.4	11.3	1.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	16.7	0.0				6.8	10.8	8.6	2.0	3.9	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	39.9	0.0				59.9	32.7	32.1	57.8	29.6	6.5
LnGrp LOS	C	D					E	C	C	E	C	A
Approach Vol, veh/h		1695	A					1334			1136	
Approach Delay, s/veh		36.5						41.7			17.4	
Approach LOS		D						D			B	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	13.0	44.9		47.1	21.0	36.9						
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0						
Max Green Setting (Gmax), s	8.0	39.0		43.0	16.0	31.0						
Max Q Clear Time (g_c+I1), s	5.6	25.1		38.9	15.4	11.9						
Green Ext Time (p_c), s	0.0	3.8		3.1	0.1	5.3						

Intersection Summary






















HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project - MIT
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	381	1314	342	0	0	0	452	490	392	64	396	676
Future Volume (vph)	381	1314	342	0	0	0	452	490	392	64	396	676
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	2		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	3433	1863	1583	1770	3539	2787
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	3433	1863	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			342						73			73
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour 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
Adj. Flow (vph)	381	1314	342	0	0	0	452	490	392	64	396	676
Shared Lane Traffic (%)												
Lane Group Flow (vph)	381	1314	342	0	0	0	452	490	392	64	396	676
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	4	4					5	2		1	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project - MIT
 AM Peak Hour



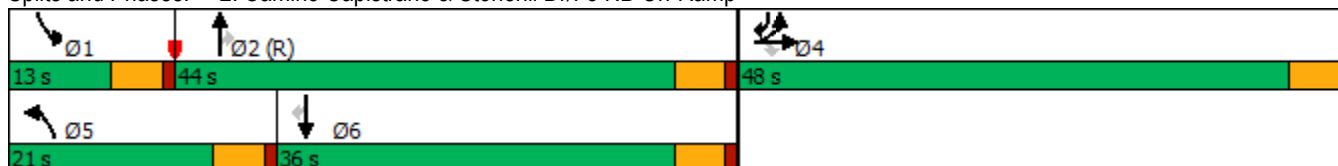
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				5	2	2	1	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	11.0	36.0	11.0
Total Split (s)	48.0	48.0	48.0				21.0	44.0	44.0	13.0	36.0	48.0
Total Split (%)	45.7%	45.7%	45.7%				20.0%	41.9%	41.9%	12.4%	34.3%	45.7%
Maximum Green (s)	43.0	43.0	43.0				16.0	39.0	39.0	8.0	31.0	43.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				Max	C-Max	C-Max	Max	Max	None
Walk Time (s)												7.0
Flash Dont Walk (s)												24.0
Pedestrian Calls (#/hr)												5
Act Effct Green (s)	43.0	43.0	43.0				16.0	39.0	39.0	8.0	31.0	79.0
Actuated g/C Ratio	0.41	0.41	0.41				0.15	0.37	0.37	0.08	0.30	0.75
v/c Ratio	0.53	0.91	0.40				0.86	0.71	0.62	0.48	0.38	0.32
Control Delay	26.6	39.5	3.7				61.2	34.9	26.6	58.9	30.7	4.2
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	39.5	3.7				61.2	34.9	26.6	58.9	30.7	4.2
LOS	C	D	A				E	C	C	E	C	A
Approach Delay		31.1						41.4				16.5
Approach LOS		C						D				B
Queue Length 50th (ft)	189	428	0				154	277	173	42	111	60
Queue Length 95th (ft)	280	#570	53				#238	399	277	86	154	83
Internal Link Dist (ft)		969			767			604				469
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	724	1449	850				523	691	633	134	1044	2114
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.91	0.40				0.86	0.71	0.62	0.48	0.38	0.32

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 13 (12%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 30.5
 Intersection LOS: C
 Intersection Capacity Utilization 79.6%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.




















Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project [MIT]
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	7	46	63	46	680	41	349	492	0	656	65
Future Volume (veh/h)	65	7	46	63	46	680	41	349	492	0	656	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	65	7	46	0	0	778	41	349	492	0	656	65
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	202	34	112	0	544	922	452	2125	948	0	943	93
Arrive On Green	0.29	0.29	0.29	0.00	0.00	0.29	0.25	0.60	0.60	0.00	0.29	0.29
Sat Flow, veh/h	482	118	384	0	1870	3170	1781	3554	1585	0	3359	323
Grp Volume(v), veh/h	118	0	0	0	0	778	41	349	492	0	357	364
Grp Sat Flow(s),veh/h/ln	984	0	0	0	1870	1585	1781	1777	1585	0	1777	1812
Q Serve(g_s), s	6.0	0.0	0.0	0.0	0.0	20.8	1.6	3.9	16.3	0.0	16.1	16.1
Cycle Q Clear(g_c), s	7.6	0.0	0.0	0.0	0.0	20.8	1.6	3.9	16.3	0.0	16.1	16.1
Prop In Lane	0.55		0.39	0.00		1.00	1.00		1.00	0.00		0.18
Lane Grp Cap(c), veh/h	348	0	0	0	544	922	452	2125	948	0	513	524
V/C Ratio(X)	0.34	0.00	0.00	0.00	0.00	0.84	0.09	0.16	0.52	0.00	0.69	0.70
Avail Cap(c_a), veh/h	533	0	0	0	914	1550	452	2125	948	0	513	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	0.0	0.0	0.0	0.0	30.0	25.7	8.1	10.5	0.0	28.5	28.5
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	2.2	0.1	0.2	2.0	0.0	7.6	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	0.0	0.0	7.9	0.7	1.4	5.5	0.0	7.6	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	0.0	0.0	0.0	0.0	32.2	25.7	8.2	12.6	0.0	36.0	36.0
LnGrp LOS	C	A	A	A	A	C	C	A	B	A	D	D
Approach Vol, veh/h		118			778			882			721	
Approach Delay, s/veh		25.5			32.2			11.5			36.0	
Approach LOS		C			C			B			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		58.8		31.2	27.8	31.0		31.2				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		36.0		44.0	6.0	* 26		44.0				
Max Q Clear Time (g_c+I1), s		18.3		9.6	3.6	18.1		22.8				
Green Ext Time (p_c), s		3.9		1.1	0.0	2.7		3.4				

Intersection Summary





















HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project [MIT]
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	7	46	63	46	680	41	349	492	0	656	65
Future Volume (vph)	65	7	46	63	46	680	41	349	492	0	656	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.947			0.891	0.850			0.850		0.986	
Flt Protected		0.973			0.992		0.950					
Satd. Flow (prot)	0	1716	0	0	1564	1504	1770	3539	1583	0	3490	0
Flt Permitted		0.245			0.934		0.950					
Satd. Flow (perm)	0	432	0	0	1473	1504	1770	3539	1583	0	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			210	352			492			12
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour 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
Adj. Flow (vph)	65	7	46	63	46	680	41	349	492	0	656	65
Shared Lane Traffic (%)						43%						
Lane Group Flow (vph)	0	118	0	0	401	388	41	349	492	0	721	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project [MIT]
AM Peak Hour



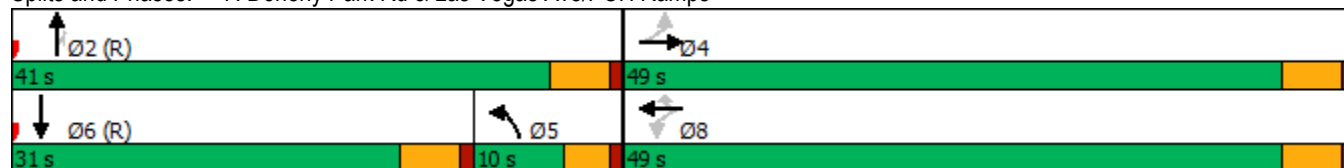
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	49.0	49.0		49.0	49.0	49.0	10.0	41.0	41.0		31.0	
Total Split (%)	54.4%	54.4%		54.4%	54.4%	54.4%	11.1%	45.6%	45.6%		34.4%	
Maximum Green (s)	44.0	44.0		44.0	44.0	44.0	6.0	36.0	36.0		26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		21.7			21.7	21.7	6.0	58.3	58.3		52.3	
Actuated g/C Ratio		0.24			0.24	0.24	0.07	0.65	0.65		0.58	
v/c Ratio		0.85			0.78	0.62	0.35	0.15	0.41		0.35	
Control Delay		63.9			24.2	8.2	42.8	6.0	1.3		13.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		63.9			24.2	8.2	42.8	6.0	1.3		13.5	
LOS		E			C	A	D	A	A		B	
Approach Delay		63.9			16.4			5.1			13.5	
Approach LOS		E			B			A			B	
Queue Length 50th (ft)		40			107	16	23	26	0		116	
Queue Length 95th (ft)		#113			176	75	53	59	2		216	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		234			827	915	118	2292	1198		2033	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.50			0.48	0.42	0.35	0.15	0.41		0.35	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	68 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	13.8
Intersection LOS:	B
Intersection Capacity Utilization:	67.7%
ICU Level of Service:	C
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	


























Queue shown is maximum after two cycles.

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps



HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project - MIT
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 				 	 
Traffic Volume (veh/h)	301	999	496	0	0	0	631	472	526	179	972	943
Future Volume (veh/h)	301	999	496	0	0	0	631	472	526	179	972	943
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	301	999	0				631	472	526	179	972	943
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	549	1095					691	728	617	258	1187	1791
Arrive On Green	0.31	0.31	0.00				0.20	0.39	0.39	0.14	0.33	0.33
Sat Flow, veh/h	1781	3554	1585				3456	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	301	999	0				631	472	526	179	972	943
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1728	1870	1585	1781	1777	1395
Q Serve(g_s), s	13.4	25.7	0.0				17.0	19.6	28.8	9.1	23.8	17.4
Cycle Q Clear(g_c), s	13.4	25.7	0.0				17.0	19.6	28.8	9.1	23.8	17.4
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	549	1095					691	728	617	258	1187	1791
V/C Ratio(X)	0.55	0.91					0.91	0.65	0.85	0.69	0.82	0.53
Avail Cap(c_a), veh/h	563	1122					691	728	617	258	1187	1791
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	31.6	0.0				37.2	23.7	26.5	38.6	29.0	9.2
Incr Delay (d2), s/veh	1.1	11.1	0.0				18.5	4.4	13.9	14.4	6.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	12.1	0.0				8.6	9.0	12.4	4.9	10.6	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	42.7	0.0				55.7	28.1	40.4	53.0	35.3	10.3
LnGrp LOS	C	D					E	C	D	D	D	B
Approach Vol, veh/h		1300	A					1629			2094	
Approach Delay, s/veh		39.4						42.8			25.6	
Approach LOS		D						D			C	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	18.7	42.0		34.3	24.0	36.7						
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0						
Max Green Setting (Gmax), s	13.0	37.0		30.0	19.0	31.0						
Max Q Clear Time (g_c+I1), s	11.1	30.8		27.7	19.0	25.8						
Green Ext Time (p_c), s	0.1	2.6		1.6	0.0	4.0						

Intersection Summary






















HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project - MIT
 PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	301	999	496	0	0	0	631	472	526	179	972	943
Future Volume (vph)	301	999	496	0	0	0	631	472	526	179	972	943
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	2		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	3433	1863	1583	1770	3539	2787
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	3433	1863	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			471						80			26
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour 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
Adj. Flow (vph)	301	999	496	0	0	0	631	472	526	179	972	943
Shared Lane Traffic (%)												
Lane Group Flow (vph)	301	999	496	0	0	0	631	472	526	179	972	943
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	4	4					5	2		1	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project - MIT
PM Peak Hour



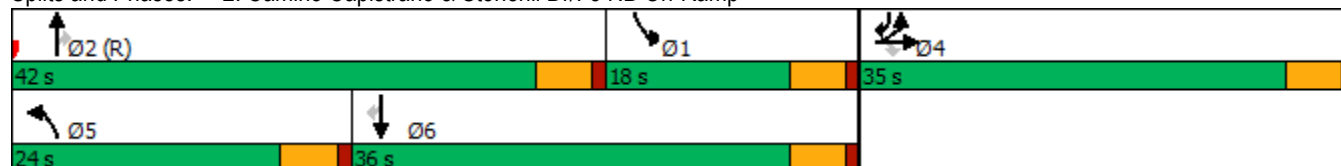
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				5	2	2	1	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	11.0	11.0				11.0	11.0	11.0	11.0	36.0	11.0
Total Split (s)	35.0	35.0	35.0				24.0	42.0	42.0	18.0	36.0	35.0
Total Split (%)	36.8%	36.8%	36.8%				25.3%	44.2%	44.2%	18.9%	37.9%	36.8%
Maximum Green (s)	30.0	30.0	30.0				19.0	37.0	37.0	13.0	31.0	30.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				Max	C-Max	C-Max	Max	Max	None
Walk Time (s)												7.0
Flash Dont Walk (s)												24.0
Pedestrian Calls (#/hr)												5
Act Effct Green (s)	30.0	30.0	30.0				19.0	37.0	37.0	13.0	31.0	66.0
Actuated g/C Ratio	0.32	0.32	0.32				0.20	0.39	0.39	0.14	0.33	0.69
v/c Ratio	0.54	0.89	0.60				0.92	0.65	0.79	0.74	0.84	0.49
Control Delay	31.1	42.8	6.7				57.8	28.9	31.8	59.0	37.8	7.5
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.1	42.8	6.7				57.8	28.9	31.8	59.0	37.8	7.5
LOS	C	D	A				E	C	C	E	D	A
Approach Delay		30.9						41.0			26.0	
Approach LOS		C						D			C	
Queue Length 50th (ft)	149	300	10				193	228	236	105	284	125
Queue Length 95th (ft)	232	#417	91				#295	338	#410	#205	#367	167
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	558	1117	822				686	725	665	242	1154	1944
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.89	0.60				0.92	0.65	0.79	0.74	0.84	0.49

Intersection Summary

Area Type:	Other
Cycle Length:	95
Actuated Cycle Length:	95
Offset:	0 (0%), Referenced to phase 2:NBT, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	32.0
Intersection LOS:	C
Intersection Capacity Utilization:	85.0%
ICU Level of Service:	E
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	




















Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project [MIT]
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	5	84	96	24	833	42	552	384	0	1129	46
Future Volume (veh/h)	100	5	84	96	24	833	42	552	384	0	1129	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	100	5	84	0	0	952	42	552	384	0	1129	46
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	205	26	136	0	642	1088	260	1940	865	0	1199	49
Arrive On Green	0.34	0.34	0.34	0.00	0.00	0.34	0.15	0.55	0.55	0.00	0.34	0.34
Sat Flow, veh/h	418	76	396	0	1870	3170	1781	3554	1585	0	3573	142
Grp Volume(v), veh/h	189	0	0	0	0	952	42	552	384	0	576	599
Grp Sat Flow(s),veh/h/ln	890	0	0	0	1870	1585	1781	1777	1585	0	1777	1845
Q Serve(g_s), s	13.0	0.0	0.0	0.0	0.0	25.4	1.9	7.5	13.1	0.0	28.3	28.3
Cycle Q Clear(g_c), s	14.8	0.0	0.0	0.0	0.0	25.4	1.9	7.5	13.1	0.0	28.3	28.3
Prop In Lane	0.53		0.44	0.00		1.00	1.00		1.00	0.00		0.08
Lane Grp Cap(c), veh/h	367	0	0	0	642	1088	260	1940	865	0	612	635
V/C Ratio(X)	0.52	0.00	0.00	0.00	0.00	0.88	0.16	0.28	0.44	0.00	0.94	0.94
Avail Cap(c_a), veh/h	442	0	0	0	810	1374	260	1940	865	0	612	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	0.0	0.0	0.0	27.8	33.6	11.0	12.3	0.0	28.6	28.6
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.0	0.0	5.5	0.3	0.4	1.6	0.0	24.5	24.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	0.0	0.0	10.0	0.8	2.8	4.6	0.0	15.5	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.8	0.0	0.0	0.0	0.0	33.2	33.9	11.4	13.9	0.0	53.2	52.6
LnGrp LOS	C	A	A	A	A	C	C	B	B	A	D	D
Approach Vol, veh/h		189			952			978			1175	
Approach Delay, s/veh		24.8			33.2			13.3			52.9	
Approach LOS		C			C			B			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		54.1		35.9	18.1	36.0		35.9				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		41.0		39.0	6.0	* 31		39.0				
Max Q Clear Time (g_c+I1), s		15.1		16.8	3.9	30.3		27.4				
Green Ext Time (p_c), s		5.3		1.9	0.0	0.5		3.5				

Intersection Summary

HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project [MIT]
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↖	↕	↗		↕	
Traffic Volume (vph)	100	5	84	96	24	833	42	552	384	0	1129	46
Future Volume (vph)	100	5	84	96	24	833	42	552	384	0	1129	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.940			0.887	0.850			0.850		0.994	
Flt Protected		0.974			0.990		0.950					
Satd. Flow (prot)	0	1705	0	0	1554	1504	1770	3539	1583	0	3518	0
Flt Permitted		0.215			0.891		0.950					
Satd. Flow (perm)	0	376	0	0	1399	1504	1770	3539	1583	0	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			216	224			384			5
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour 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
Adj. Flow (vph)	100	5	84	96	24	833	42	552	384	0	1129	46
Shared Lane Traffic (%)						44%						
Lane Group Flow (vph)	0	189	0	0	487	466	42	552	384	0	1175	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project [MIT]
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2		6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0		19.0	
Total Split (s)	44.0	44.0		44.0	44.0	44.0	10.0	46.0	46.0		36.0	
Total Split (%)	48.9%	48.9%		48.9%	48.9%	48.9%	11.1%	51.1%	51.1%		40.0%	
Maximum Green (s)	39.0	39.0		39.0	39.0	39.0	6.0	41.0	41.0		31.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0		5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				14.0	14.0	14.0					7.0	
Pedestrian Calls (#/hr)				5	5	5					5	
Act Effct Green (s)		28.1			28.1	28.1	6.0	51.9	51.9		45.9	
Actuated g/C Ratio		0.31			0.31	0.31	0.07	0.58	0.58		0.51	
v/c Ratio		1.22			0.83	0.75	0.36	0.27	0.36		0.65	
Control Delay		163.9			27.4	20.5	40.1	7.4	0.9		22.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay		163.9			27.4	20.5	40.1	7.4	0.9		22.5	
LOS		F			C	C	D	A	A		C	
Approach Delay		163.9			24.0			6.3			22.5	
Approach LOS		F			C			A			C	
Queue Length 50th (ft)		~107			151	126	23	50	0		277	
Queue Length 95th (ft)		#224			244	206	48	86	1		#486	
Internal Link Dist (ft)		461			635			87			398	
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		194			728	778	118	2042	1076		1798	
Starvation Cap Reductn		0			0	0	0	0	0		0	
Spillback Cap Reductn		0			0	0	0	0	0		0	
Storage Cap Reductn		0			0	0	0	0	0		0	
Reduced v/c Ratio		0.97			0.67	0.60	0.36	0.27	0.36		0.65	

Intersection Summary

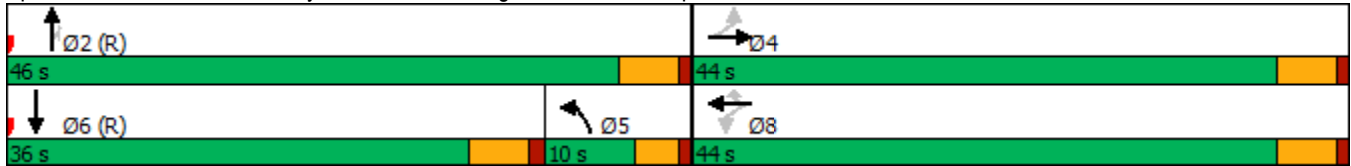
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	63 (70%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.22
Intersection Signal Delay:	26.2
Intersection LOS:	C
Intersection Capacity Utilization:	82.0%
ICU Level of Service:	E
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite.	

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.


























Queue shown is maximum after two cycles.

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps
























HCM 6th Signalized Intersection Summary
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project - MIT
 Sat Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 				 	 
Traffic Volume (veh/h)	322	904	586	0	0	0	660	481	464	82	937	652
Future Volume (veh/h)	322	904	586	0	0	0	660	481	464	82	937	652
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	322	904	0				660	481	464	82	937	652
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	511	1020					734	810	687	201	1186	1732
Arrive On Green	0.29	0.29	0.00				0.21	0.43	0.43	0.11	0.33	0.33
Sat Flow, veh/h	1781	3554	1585				3456	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	322	904	0				660	481	464	82	937	652
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1728	1870	1585	1781	1777	1395
Q Serve(g_s), s	14.2	21.9	0.0				16.7	17.7	21.1	3.9	21.5	10.4
Cycle Q Clear(g_c), s	14.2	21.9	0.0				16.7	17.7	21.1	3.9	21.5	10.4
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	511	1020					734	810	687	201	1186	1732
V/C Ratio(X)	0.63	0.89					0.90	0.59	0.68	0.41	0.79	0.38
Avail Cap(c_a), veh/h	534	1066					768	810	687	201	1186	1732
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	30.7	0.0				34.5	19.5	20.4	37.1	27.1	8.4
Incr Delay (d2), s/veh	2.2	8.9	0.0				13.2	3.2	5.3	1.3	5.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	10.0	0.0				8.0	7.7	8.1	1.7	9.3	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	39.6	0.0				47.7	22.6	25.7	38.4	32.5	9.1
LnGrp LOS	C	D					D	C	C	D	C	A
Approach Vol, veh/h		1226	A					1605			1671	
Approach Delay, s/veh		37.1						33.8			23.7	
Approach LOS		D						C			C	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	15.2	44.0		30.8	24.1	35.0						
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0						
Max Green Setting (Gmax), s	9.0	39.0		27.0	20.0	28.0						
Max Q Clear Time (g_c+I1), s	5.9	23.1		23.9	18.7	23.5						
Green Ext Time (p_c), s	0.0	4.2		1.9	0.4	3.2						
Intersection Summary												
HCM 6th Ctrl Delay			30.9									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project - MIT
 Sat Midday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	904	586	0	0	0	660	481	464	82	937	652
Future Volume (vph)	322	904	586	0	0	0	660	481	464	82	937	652
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		565	0		0	195		195	205		105
Storage Lanes	1		1	0		0	2		1	1		1
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	0.88
Frt			0.850						0.850			0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	0	0	0	3433	1863	1583	1770	3539	2787
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	0	0	0	3433	1863	1583	1770	3539	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			517						108			33
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1049			847			684			549	
Travel Time (s)		17.9			14.4			11.7			9.4	
Peak Hour 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
Adj. Flow (vph)	322	904	586	0	0	0	660	481	464	82	937	652
Shared Lane Traffic (%)												
Lane Group Flow (vph)	322	904	586	0	0	0	660	481	464	82	937	652
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1				1	2	1	1	2	1
Detector Template	Left	Thru	Right				Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20				20	100	20	20	100	20
Trailing Detector (ft)	0	0	0				0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0				0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20				20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA	Perm				Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	4	4					5	2		1	6	4
Permitted Phases			4						2			6

Lanes, Volumes, Timings
2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp

Year 2045+Project - MIT
Sat Midday Peak Hour



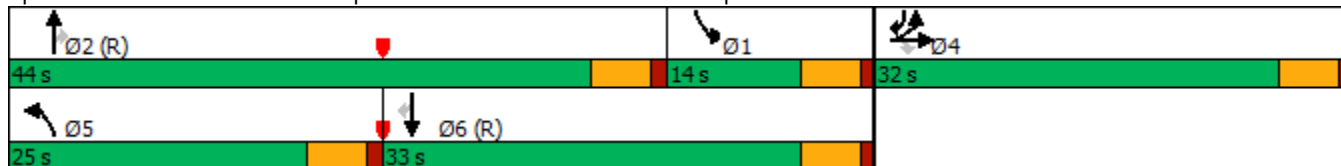
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4				5	2	2	1	6	4
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0				6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	23.0	23.0	23.0				11.0	23.0	23.0	11.0	23.0	23.0
Total Split (s)	32.0	32.0	32.0				25.0	44.0	44.0	14.0	33.0	32.0
Total Split (%)	35.6%	35.6%	35.6%				27.8%	48.9%	48.9%	15.6%	36.7%	35.6%
Maximum Green (s)	27.0	27.0	27.0				20.0	39.0	39.0	9.0	28.0	27.0
Yellow Time (s)	4.0	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0				5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None				None	C-Max	C-Max	None	C-Max	None
Walk Time (s)	7.0	7.0	7.0					7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0					11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	5	5	5					5	5		5	5
Act Effct Green (s)	27.0	27.0	27.0				19.5	41.8	41.8	8.4	28.5	60.5
Actuated g/C Ratio	0.30	0.30	0.30				0.22	0.46	0.46	0.09	0.32	0.67
v/c Ratio	0.61	0.85	0.70				0.89	0.56	0.59	0.50	0.84	0.35
Control Delay	32.7	39.0	9.4				49.5	21.6	17.9	49.3	37.0	6.6
Queue Delay	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	39.0	9.4				49.5	21.6	17.9	49.3	37.0	6.6
LOS	C	D	A				D	C	B	D	D	A
Approach Delay		28.3						32.0			25.7	
Approach LOS		C						C			C	
Queue Length 50th (ft)	156	253	29				187	203	151	45	261	75
Queue Length 95th (ft)	244	#354	139				#278	303	255	90	#364	105
Internal Link Dist (ft)		969			767			604			469	
Turn Bay Length (ft)	165		565				195		195	205		105
Base Capacity (vph)	531	1061	836				762	865	793	177	1119	1883
Starvation Cap Reductn	0	0	0				0	0	0	0	0	0
Spillback Cap Reductn	0	0	0				0	0	0	0	0	0
Storage Cap Reductn	0	0	0				0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.85	0.70				0.87	0.56	0.59	0.46	0.84	0.35

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	25 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	28.6
Intersection LOS:	C
Intersection Capacity Utilization:	82.2%
ICU Level of Service:	E
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	




















Queue shown is maximum after two cycles.

Splits and Phases: 2: Camino Capistrano & Stonehil Dr/I-5 NB On-Ramp



HCM 6th Signalized Intersection Summary
 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project [MIT]
 Sat Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	0	46	44	29	871	33	642	359	0	1247	50
Future Volume (veh/h)	63	0	46	44	29	871	33	642	359	0	1247	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	63	0	46	0	0	937	33	642	359	0	1247	50
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	215	16	123	0	635	1077	286	1952	871	0	1161	47
Arrive On Green	0.34	0.00	0.34	0.00	0.00	0.34	0.16	0.55	0.55	0.00	0.33	0.33
Sat Flow, veh/h	446	48	361	0	1870	3170	1781	3554	1585	0	3576	140
Grp Volume(v), veh/h	109	0	0	0	0	937	33	642	359	0	636	661
Grp Sat Flow(s),veh/h/ln	855	0	0	0	1870	1585	1781	1777	1585	0	1777	1845
Q Serve(g_s), s	5.8	0.0	0.0	0.0	0.0	24.9	1.4	8.9	11.9	0.0	30.0	30.0
Cycle Q Clear(g_c), s	7.3	0.0	0.0	0.0	0.0	24.9	1.4	8.9	11.9	0.0	30.0	30.0
Prop In Lane	0.58		0.42	0.00		1.00	1.00		1.00	0.00		0.08
Lane Grp Cap(c), veh/h	354	0	0	0	635	1077	286	1952	871	0	592	615
V/C Ratio(X)	0.31	0.00	0.00	0.00	0.00	0.87	0.12	0.33	0.41	0.00	1.07	1.08
Avail Cap(c_a), veh/h	439	0	0	0	831	1409	286	1952	871	0	592	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	0.0	0.0	0.0	0.0	27.9	32.3	11.2	11.8	0.0	30.0	30.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	4.9	0.2	0.5	1.4	0.0	58.2	58.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	0.0	0.0	9.8	0.6	3.3	4.1	0.0	21.6	22.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	0.0	0.0	0.0	0.0	32.8	32.5	11.6	13.3	0.0	88.2	88.1
LnGrp LOS	C	A	A	A	A	C	C	B	B	A	F	F
Approach Vol, veh/h		109			937			1034			1297	
Approach Delay, s/veh		22.1			32.8			12.9			88.2	
Approach LOS		C			C			B			F	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		54.4		35.6	19.4	35.0		35.6				
Change Period (Y+Rc), s		5.0		5.0	5.0	* 5		5.0				
Max Green Setting (Gmax), s		40.0		40.0	6.0	* 30		40.0				
Max Q Clear Time (g_c+I1), s		13.9		9.3	3.4	32.0		26.9				
Green Ext Time (p_c), s		6.0		1.1	0.0	0.0		3.6				

Intersection Summary

HCM 6th Ctrl Delay	47.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project [MIT]
Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↗	↗	↗		↕	
Traffic Volume (vph)	63	0	46	44	29	871	33	642	359	0	1247	50
Future Volume (vph)	63	0	46	44	29	871	33	642	359	0	1247	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		360	50		0	0		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	60			60			60			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.943			0.873	0.850			0.850		0.994	
Flt Protected		0.972			0.995		0.950					
Satd. Flow (prot)	0	1707	0	0	1537	1504	1770	3539	1583	0	3518	0
Flt Permitted		0.355			0.963		0.950					
Satd. Flow (perm)	0	624	0	0	1488	1504	1770	3539	1583	0	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		85			163	163			359			5
Link Speed (mph)		30			30			35				35
Link Distance (ft)		541			715			167				478
Travel Time (s)		12.3			16.3			3.3				9.3
Peak Hour 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
Adj. Flow (vph)	63	0	46	44	29	871	33	642	359	0	1247	50
Shared Lane Traffic (%)						46%						
Lane Group Flow (vph)	0	109	0	0	474	470	33	642	359	0	1297	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1			2
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	100		20	100	20	20	100	20			100
Trailing Detector (ft)	0	0		0	0	0	0	0	0			0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0			0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20			6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm			NA
Protected Phases		4			8		5	2				6
Permitted Phases	4			8		8			2			

Lanes, Volumes, Timings
7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

Year 2045+Project [MIT]
Sat Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	5	2	2			6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0			6.0
Minimum Split (s)	11.0	11.0		26.0	26.0	26.0	10.0	11.0	11.0			19.0
Total Split (s)	45.0	45.0		45.0	45.0	45.0	10.0	45.0	45.0			35.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	11.1%	50.0%	50.0%			38.9%
Maximum Green (s)	40.0	40.0		40.0	40.0	40.0	6.0	40.0	40.0			30.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0			4.0
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0			1.0
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0			0.0
Total Lost Time (s)		5.0			5.0	5.0	4.0	5.0	5.0			5.0
Lead/Lag							Lag					Lead
Lead-Lag Optimize?							Yes					Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None		None	None	None	None	C-Max	C-Max			C-Max
Walk Time (s)				7.0	7.0	7.0						7.0
Flash Dont Walk (s)				14.0	14.0	14.0						7.0
Pedestrian Calls (#/hr)				5	5	5						5
Act Effct Green (s)		29.0			29.0	29.0	6.0	51.0	51.0			45.0
Actuated g/C Ratio		0.32			0.32	0.32	0.07	0.57	0.57			0.50
v/c Ratio		0.42			0.80	0.79	0.28	0.32	0.34			0.74
Control Delay		11.4			27.8	26.7	37.3	7.9	1.0			25.2
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0			0.0
Total Delay		11.4			27.8	26.7	37.3	7.9	1.0			25.2
LOS		B			C	C	D	A	A			C
Approach Delay		11.4			27.3			6.5				25.2
Approach LOS		B			C			A				C
Queue Length 50th (ft)		9			170	166	17	58	0			328
Queue Length 95th (ft)		44			249	243	40	107	0			#580
Internal Link Dist (ft)		461			635			87				398
Turn Bay Length (ft)						360	50					
Base Capacity (vph)		324			751	759	118	2006	1053			1762
Starvation Cap Reductn		0			0	0	0	0	0			0
Spillback Cap Reductn		0			0	0	0	0	0			0
Storage Cap Reductn		0			0	0	0	0	0			0
Reduced v/c Ratio		0.34			0.63	0.62	0.28	0.32	0.34			0.74

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	64 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	19.6
Intersection LOS:	B
Intersection Capacity Utilization:	76.7%
ICU Level of Service:	D
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	

Queue shown is maximum after two cycles.

Splits and Phases: 7: Doheny Park Rd & Las Vegas Ave/PCH Ramps

