

Appendix E  
Intersection Level of Service Calculations and  
Parameter Adjustments





Existing LOS wkdy AM.ai

**Figure E.1**  
**EXISTING INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday AM Peak Period**



Existing LOS wkdy PM.ai

**Figure E.2**  
**EXISTING INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday PM Peak Period**



Existing LOS wkend.ai

**Figure E.3**  
**EXISTING INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekend Midday Peak Period**



Existing LOS wkdy AM.ais

19TH AVENUE CORRIDOR STUDY

**Figure E.4**  
**TIER 1 INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday AM Peak Period**



Existing LOS wkdy PM.ai

19TH AVENUE CORRIDOR STUDY

**Figure E.5**  
**TIER 1 INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday PM Peak Period**



Existing LOS wkend.ai

19TH AVENUE CORRIDOR STUDY

**Figure E.6**  
**TIER 1 INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekend Midday Peak Period**





Tier 2 LOS wkdy AM.ai

19TH AVENUE CORRIDOR STUDY

**Figure E.7**  
**TIER 2 INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday AM Peak Period**



Tier 2 LOS wkdy PM.ai

**Figure E.8**  
**TIER 2 INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday PM Peak Period**



Tier 2 LOS wkand.ai

19TH AVENUE CORRIDOR STUDY

**Figure E.9**  
**TIER 2 INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekend Midday Peak Period**



Tier 3 LOS wkdy AM.ai

19TH AVENUE CORRIDOR STUDY

**Figure E.10**  
**TIER 3 INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday AM Peak Period**



Tier 3 LOS wkdy PM.ai

19TH AVENUE CORRIDOR STUDY

**Figure E.11**  
**TIER 3 INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday PM Peak Period**



Tier 3 LOS wkand.ai

19TH AVENUE CORRIDOR STUDY

**Figure E.12**  
**TIER 3 INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekend Midday Peak Period**



Tier 4A LOS wkdy AM.ai

**Figure E.13**  
**TIER 4A INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday AM Peak Period**











Tier 4B LOS wkdy PM.ai

**Figure E.17**  
**TIER 4B INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday PM Peak Period**





Tier 4C LOS wkdy AM.ai

**Figure E.19**  
**TIER 4C INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday AM Peak Period**



Tier 4C LOS wkdy PM.ai

19TH AVENUE CORRIDOR STUDY

**Figure E.20**  
**TIER 4C INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekday PM Peak Period**



Tier 4C LOS wkend.ai

19TH AVENUE CORRIDOR STUDY

**Figure E.21**  
**TIER 4C INTERSECTION LEVEL OF SERVICE (LOS E/F Locations Only)**  
**Weekend Midday Peak Period**





Existing Conditions  
Weekday AM Peak Hour



19th Ave CS  
Existing

## Scenario Report

Scenario: Existing AM

Command: Default Command  
Volume: Existing AM  
Geometry: Existing AM  
Impact Fee: Default Impact Fee  
Trip Generation: No Projects  
Trip Distribution: AM  
Paths: Tier 2/3  
Routes: Tier 2/3  
Configuration: Existing

19th Ave CS  
Existing

Impact Analysis Report  
Level Of Service

Intersection	LOS	Base		Future		Change in	
		Del/ Veh	V/ C	LOS	Del/ Veh		
#1010 Claremont / Taraval / Dewey /	A	6.8	0.647	A	6.8	0.647	+ 0.000 V/C
#1020 Santa Clara / Portola / Vicent	C	26.5	0.762	C	26.5	0.762	+ 0.000 D/V
#1030 Junipero Serra / Sloat / West	E	65.2	0.964	E	65.2	0.964	+ 0.000 D/V
#1040 Junipero Serra / Ocean / Eucal	C	31.7	0.795	C	31.7	0.795	+ 0.000 D/V
#1050 Junipero Serra / Winston / Mer	C	29.1	0.581	C	29.1	0.581	+ 0.000 D/V
#1060 Junipero Serra / Holloway	C	29.8	0.630	C	29.8	0.630	+ 0.000 D/V
#1070 Junipero Serra / 19th	E	57.9	0.886	E	57.9	0.886	+ 0.000 D/V
#1075 Junipero Serra / Chumasero	A	2.2	0.701	A	2.2	0.701	+ 0.000 D/V
#1080 Junipero Serra / I-280 NB On-R	D	39.7	0.751	D	39.7	0.751	+ 0.000 D/V
#1090 Junipero Serra / I-280 SB On-R	B	19.8	0.544	B	19.8	0.544	+ 0.000 D/V
#1100 19th / Taraval	B	19.7	0.771	B	19.7	0.771	+ 0.000 D/V
#1110 19th / Sloat	E	58.1	1.429	E	58.1	1.429	+ 0.000 D/V
#1120 19th / Ocean	C	23.5	0.968	C	26.9	0.966	+ 3.409 D/V
#1130 19th / Eucalyptus	B	14.3	0.775	B	14.2	0.775	-0.037 D/V
#1140 19th / Winston	D	37.9	0.954	D	37.9	0.954	+ 0.000 D/V
#1150 19th / Buckingham	E	47.7	0.624	E	47.7	0.624	+ 0.000 D/V
#1160 19th / Holloway	D	40.6	0.815	D	40.6	0.815	+ 0.000 D/V
#1170 19th / Crespi	D	37.3	0.724	D	37.3	0.724	+ 0.044 D/V
#1181 Chumasero / Brotherhood	E	77.5	0.924	E	77.5	0.924	+ 0.000 D/V
#1190 Sunset / Taraval	B	17.7	0.677	B	17.7	0.677	+ 0.000 D/V
#1200 Sunset / Ocean	B	11.8	0.596	B	11.8	0.596	+ 0.000 D/V
#1210 Skyline / Sloat / 39th	B	14.5	0.577	B	14.5	0.577	+ 0.000 V/C
#1221 Skyline / Lake Merced (WBR)	B	11.9	0.126	B	11.9	0.126	+ 0.000 D/V
#1222 Skyline / Lake Merced (WBLT)	D	29.3	0.233	D	29.3	0.233	+ 0.000 D/V

19th Ave CS  
Existing

Intersection	Base		Future		Change in	
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C		
#1230 Sunset / Lake Merced	F 130.4	0.539	F 130.4	0.539	+ 0.000	D/V
#1240 Lake Merced / Winston	C 21.9	0.658	C 21.9	0.658	+ 0.021	D/V
#1250 Lake Merced / Font	D 39.1	0.686	D 39.4	0.686	+ 0.283	D/V
#1263 Lake Merced / Higuera	E 66.9	0.711	E 66.9	0.711	+ 0.000	D/V
#1270 Lake Merced / Brotherhood	D 42.7	1.836	D 42.7	1.836	-0.037	D/V

19th Ave CS  
Existing

Level of Service Computation Report  
FHWA Roundabout Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 6.8      Level Of Service: A  
\*\*\*\*\*

Street Name:	Claremont			Taraval / Dewey		
	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Approach:	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign
Lanes:	1	1	1	1	1	1

Volume Module:

Base Vol:	3	7	221	10	60	37	1	231	27	313	337	84
Growth 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
Initial Bse:	3	7	221	10	60	37	1	231	27	313	337	84
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	3	7	233	11	63	39	1	243	28	329	355	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	7	233	11	63	39	1	243	28	329	355	88
PCE 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
MLF 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
FinalVolume:	3	7	233	11	63	39	1	243	28	329	355	88

PCE Module:

AutoPCE:	3	7	233	11	63	39	1	243	28	329	355	88
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	3	7	233	11	63	39	1	243	28	329	355	88

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	255	687	403	12
MaxVolume:	1062	829	982	1194
PedVolume:	0	0	0	0
AdjMaxVol:	1062	829	982	1194
ApproachVol:	243	113	273	773
ApproachV/C:	0.23	0.14	0.28	0.65
ApproachDel:	4.4	5.0	5.1	8.4
ApproachLOS:	A	A	A	A
Queue:	0.9	0.5	1.1	5.0

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.762  
Loss Time (sec): 11 Average Delay (sec/veh): 26.5  
Optimal Cycle: 79 Level Of Service: C

\*\*\*\*\*  
Street Name: Santa Clara / Vicente Portola  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 23 23 23 23 23 23 9 36 36 9 36 36  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 0 0 0 0 1 0 0 1 0 1 0 1 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 18 264 86 82 202 30 24 1057 17 120 859 81  
Growth 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  
Initial Bse: 18 264 86 82 202 30 24 1057 17 120 859 81  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 19 278 91 86 213 32 25 1113 18 126 904 85  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 19 278 91 86 213 32 25 1113 18 126 904 85  
PCE 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  
MLF 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  
FinalVolume: 19 278 91 86 213 32 25 1113 18 126 904 85

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.93 0.93 0.65 0.65 0.65 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.05 0.72 0.23 0.26 0.64 0.10 1.00 1.97 0.03 1.00 1.83 0.17  
Final Sat.: 86 1263 412 324 799 119 1769 3475 56 1769 3191 301

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.22 0.22 0.22 0.27 0.27 0.27 0.01 0.32 0.32 0.07 0.28 0.28  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.30 0.30 0.30 0.30 0.30 0.30 0.11 0.45 0.45 0.11 0.45 0.45  
Volume/Cap: 0.73 0.73 0.73 0.89 0.89 0.89 0.13 0.71 0.71 0.63 0.63 0.63  
Delay/Veh: 33.9 33.9 33.9 52.0 52.0 52.0 33.3 20.5 20.5 48.4 18.8 18.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 33.9 33.9 33.9 52.0 52.0 52.0 33.3 20.5 20.5 48.4 18.8 18.8  
LOS by Move: C C C D D D C C C D B B  
HCM2kAvgQ: 10 10 10 11 11 11 1 13 13 4 11 11

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 0.964  
Loss Time (sec): 16 Average Delay (sec/veh): 65.2  
Optimal Cycle: 155 Level Of Service: E

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 48 48 27 27 27 20 20 20 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 972 1137 20 0 1092 176 646 416 322 23 347 8  
Growth 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  
Initial Bse: 972 1137 20 0 1092 176 646 416 322 23 347 8  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 1023 1197 21 0 1149 185 680 438 0 24 365 8  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1023 1197 21 0 1149 185 680 438 0 24 365 8  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1023 1197 21 0 1149 185 680 438 0 24 365 8

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3.00 1.97 0.03 0.00 2.58 0.42 3.00 1.00 1.00 0.12 1.84 0.04  
Final Sat.: 5096 3432 60 0 4329 698 5096 1843 1900 214 3228 74

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.20 0.35 0.35 0.00 0.27 0.27 0.13 0.24 0.00 0.11 0.11 0.11  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.18 0.44 0.44 0.00 0.26 0.26 0.22 0.22 0.00 0.19 0.19 0.19  
Volume/Cap: 1.10 0.79 0.79 0.00 1.03 1.03 0.62 1.10 0.00 0.59 0.59 0.59  
Delay/Veh: 102.1 29.5 29.5 0.0 72.9 72.9 39.7 114 0.0 42.6 42.6 42.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 102.1 29.5 29.5 0.0 72.9 72.9 39.7 114 0.0 42.6 42.6 42.6  
LOS by Move: F C C A E E D F A D D D  
HCM2kAvgQ: 16 18 18 0 23 23 8 23 0 7 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.795  
Loss Time (sec): 14 Average Delay (sec/veh): 31.7  
Optimal Cycle: 100 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Ocean / Eucalyptus  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:  
Base Vol: 189 1678 46 326 1061 90 85 384 45 54 366 324  
Growth 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  
Initial Bse: 189 1678 46 326 1061 90 85 384 45 54 366 324  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 199 1766 48 343 1117 95 89 404 47 57 385 341  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 199 1766 48 343 1117 95 89 404 47 57 385 341  
PCE 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  
MLF 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  
FinalVolume: 199 1766 48 343 1117 95 89 404 47 57 385 341

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.88 0.88 0.91 0.89 0.89 0.58 0.58 0.83 1.12 1.12 0.83  
Lanes: 1.00 2.92 0.08 2.00 2.77 0.23 0.36 1.64 1.00 0.13 0.87 1.00  
Final Sat.: 1751 4879 134 3466 4676 397 402 1818 1583 275 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.11 0.36 0.36 0.10 0.24 0.24 0.22 0.22 0.03 0.21 0.21 0.22  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 1.03 0.84 0.84 0.62 0.50 0.50 0.82 0.82 0.08 0.77 0.77 0.50  
Delay/Veh: 118.2 26.1 26.1 44.3 14.9 14.9 46.4 46.4 20.1 43.0 43.0 23.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 118.2 26.1 26.1 44.3 14.9 14.9 46.4 46.4 20.1 43.0 43.0 23.3  
LOS by Move: F C C D B B D D C D D C  
HCM2kAvgQ: 8 17 17 5 7 7 10 10 1 14 14 8

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.581  
Loss Time (sec): 14 Average Delay (sec/veh): 29.1  
Optimal Cycle: 100 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Winston / Mercedes  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1 0 1 0 1

Volume Module:  
Base Vol: 186 1681 29 103 1024 72 80 63 73 64 147 62  
Growth 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  
Initial Bse: 186 1681 29 103 1024 72 80 63 73 64 147 62  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 196 1769 31 108 1078 76 84 66 77 67 155 65  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 196 1769 31 108 1078 76 84 66 77 67 155 65  
PCE 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  
MLF 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  
FinalVolume: 196 1769 31 108 1078 76 84 66 77 67 155 65

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.59 0.98 0.83 0.70 0.98 0.83  
Lanes: 1.00 2.95 0.05 1.00 2.80 0.20 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4982 86 1769 4702 331 1115 1862 1583 1331 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.11 0.36 0.36 0.06 0.23 0.23 0.08 0.04 0.05 0.05 0.08 0.04  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.58 0.89 0.89 0.32 0.57 0.57 0.28 0.13 0.18 0.19 0.31 0.15  
Delay/Veh: 44.1 31.2 31.2 37.5 22.1 22.1 31.1 28.2 28.9 29.2 30.6 28.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 44.1 31.2 31.2 37.5 22.1 22.1 31.1 28.2 28.9 29.2 30.6 28.5  
LOS by Move: D C C D C C C C C C C C  
HCM2kAvgQ: 5 19 19 3 9 9 2 1 2 2 4 2

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS Existing

Level of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #1060 Junipero Serra / Holloway

Cycle (sec): 100 Critical Vol./Cap.(X): 0.630
Loss Time (sec): 14 Average Delay (sec/veh): 29.8
Optimal Cycle: 100 Level Of Service: C

Street Name: Junipero Serra Holloway

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1

Volume Module:
Base Vol: 234 1520 60 114 956 84 163 106 16 162 129 118
Growth 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
Initial Bse: 234 1520 60 114 956 84 163 106 16 162 129 118
User 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
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 246 1600 63 120 1006 88 172 112 17 171 136 124
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 246 1600 63 120 1006 88 172 112 17 171 136 124
PCE 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
MLF 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
FinalVolume: 246 1600 63 120 1006 88 172 112 17 171 136 124

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.62 0.98 0.83 0.67 0.98 0.83
Lanes: 1.00 2.89 0.11 1.00 2.76 0.24 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1769 4861 192 1769 4617 406 1184 1862 1583 1264 1862 1583

Capacity Analysis Module:
Vol/Sat: 0.14 0.33 0.33 0.07 0.22 0.22 0.14 0.06 0.01 0.13 0.07 0.08
Crit Moves: \*\*\*\*
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28
Volume/Cap: 0.73 0.84 0.84 0.36 0.56 0.56 0.52 0.21 0.04 0.48 0.26 0.28
Delay/Veh: 51.3 29.7 29.7 38.1 22.7 22.7 36.0 28.5 26.4 34.6 29.2 29.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 51.3 29.7 29.7 38.1 22.7 22.7 36.0 28.5 26.4 34.6 29.2 29.7
LOS by Move: D C C D C C D C C C C
HCM2kAvgQ: 6 15 15 3 8 8 5 3 0 5 3 3

Note: Queue reported is the number of cars per lane.

19th Ave CS Existing

Level of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #1070 Junipero Serra / 19th

Cycle (sec): 90 Critical Vol./Cap.(X): 0.886
Loss Time (sec): 0 Average Delay (sec/veh): 57.9
Optimal Cycle: 163 Level Of Service: E

Street Name: Junipero Serra 19th

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted
Rights: Include Ignore Ovl Include
Min. Green: 46 46 46 18 18 18 9 9 9 9 9 9
Y+R: 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

Volume Module:
Base Vol: 2208 1679 8 0 1210 4 0 71 3047 32 56 62
Growth 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
Initial Bse: 2208 1679 8 0 1210 4 0 71 3047 32 56 62
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 2324 1767 8 0 1274 0 0 75 3207 34 59 65
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 2324 1767 8 0 1274 0 0 75 3207 34 59 65
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 2324 1767 8 0 1274 0 0 75 3207 34 59 65

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.97 0.90 0.90 0.91 0.89 0.91 1.00 0.98 0.81 0.44 0.90 0.90
Lanes: 2.20 1.79 0.01 0.00 4.00 0.00 0.00 1.00 3.00 1.00 0.47 0.53
Final Sat.: 4043 3074 15 0 6778 0 0 1862 4596 827 814 901

Capacity Analysis Module:
Vol/Sat: 0.57 0.57 0.57 0.00 0.19 0.00 0.00 0.04 0.70 0.04 0.07 0.07
Crit Moves: \*\*\*\*
Green/Cycle: 0.51 0.51 0.51 0.20 0.20 0.20 0.10 0.10 0.67 0.10 0.10 0.10
Volume/Cap: 1.13 1.13 1.13 0.00 0.94 0.00 0.00 0.40 1.05 0.41 0.72 0.72
Delay/Veh: 77.9 77.9 77.9 0.0 49.2 0.0 0.0 44.3 35.9 52.2 62.5 62.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 77.9 77.9 77.9 0.0 49.2 0.0 0.0 44.3 35.9 52.2 62.5 62.5
LOS by Move: E E E A D A A D D D E E
HCM2kAvgQ: 50 46 46 0 12 0 0 2 47 1 5 5

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 0.751  
Loss Time (sec): 12 Average Delay (sec/veh): 39.7  
Optimal Cycle: 71 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
\*\*\*\*\*

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Split Phase, Split Phase, Split Phase), Rights (Ovl, Ovl, Include, Ovl), Min. Green (6, 6, 6, 31), Y+R (4.0, 4.0, 4.0, 4.0), Lanes (2, 0, 1, 1)

Volume Module: Base Vol: 337 335 364 104 169 262 665 779 99 59 746 303  
Growth 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  
Initial Bse: 337 335 364 104 169 262 665 779 99 59 746 303  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 355 353 383 109 178 276 700 820 104 62 785 319  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 355 353 383 109 178 276 700 820 104 62 785 319  
PCE 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  
MLF 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  
Final Volume: 355 353 383 109 178 276 700 820 104 62 785 319

Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.86 0.86 0.93 0.89 0.89 0.88 0.90 0.90 0.89 0.89 0.83  
Lanes: 2.00 1.44 1.56 1.00 0.78 1.22 2.00 2.00 1.00 1.00 3.00 1.00  
Final Sat.: 3432 2345 2548 1769 1327 2058 3326 3429 1714 1688 5063 1583

Capacity Analysis Module: Vol/Sat: 0.10 0.15 0.15 0.06 0.13 0.13 0.21 0.24 0.06 0.04 0.16 0.20  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.20 0.41 0.18 0.18 0.50 0.32 0.32 0.32 0.21 0.21 0.39  
Volume/Cap: 0.52 0.75 0.37 0.35 0.75 0.27 0.66 0.75 0.19 0.18 0.75 0.52  
Delay/Veh: 45.3 50.3 26.0 45.6 53.9 18.3 37.4 39.7 30.9 40.9 49.4 30.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 45.3 50.3 26.0 45.6 53.9 18.3 37.4 39.7 30.9 40.9 49.4 30.4  
LOS by Move: D D C D D B D D C D D C  
HCM2kAvgQ: 7 11 7 4 10 5 12 15 3 2 12 10

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.544  
Loss Time (sec): 8 Average Delay (sec/veh): 19.8  
Optimal Cycle: 35 Level Of Service: B

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
\*\*\*\*\*

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Split Phase, Split Phase, Split Phase), Rights (Ovl, Include, Include, Include), Min. Green (0, 0, 0, 0), Y+R (4.0, 4.0, 4.0, 4.0), Lanes (0, 0, 0, 2)

Volume Module: Base Vol: 0 0 316 0 0 0 0 1227 419 499 1001 0  
Growth 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  
Initial Bse: 0 0 316 0 0 0 0 1227 419 499 1001 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 0 333 0 0 0 0 1292 441 525 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 333 0 0 0 0 1292 441 525 0 0  
PCE 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  
MLF 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  
Final Volume: 0 0 333 0 0 0 0 1292 441 525 0 0

Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.86 0.86 0.90 0.95 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.24 0.76 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3645 1245 3432 3610 0

Capacity Analysis Module: Vol/Sat: 0.00 0.00 0.12 0.00 0.00 0.00 0.00 0.35 0.35 0.15 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.28 0.00 0.00 0.00 0.00 0.65 0.65 0.28 0.00 0.00  
Volume/Cap: 0.00 0.00 0.42 0.00 0.00 0.00 0.00 0.54 0.54 0.54 0.00 0.00  
Delay/Veh: 0.0 0.0 35.5 0.0 0.0 0.0 0.0 11.5 11.5 37.2 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 35.5 0.0 0.0 0.0 0.0 11.5 11.5 37.2 0.0 0.0  
LOS by Move: A A D A A A A B B D A A  
HCM2kAvgQ: 0 0 6 0 0 0 0 13 13 8 0 0

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*



19th Ave CS Existing

Level of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #1100 19th / Taraval

Cycle (sec): 90 Critical Vol./Cap.(X): 0.771
Loss Time (sec): 10 Average Delay (sec/veh): 19.7
Optimal Cycle: 89 Level Of Service: B

Table with columns for Street Name (19th, Taraval), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Include), Rights, Min. Green, Y+R, Lanes.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume for various approaches.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, Final Sat for various approaches.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ for various approaches.

Note: Queue reported is the number of cars per lane.

19th Ave CS Existing

Level of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #1110 19th / Sloat

Cycle (sec): 90 Critical Vol./Cap.(X): 1.429
Loss Time (sec): 9 Average Delay (sec/veh): 58.1
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name (19th, Sloat), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected, Permit+Prot, Include), Rights, Min. Green, Y+R, Lanes.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume for various approaches.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, Final Sat for various approaches.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ for various approaches.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.968  
Loss Time (sec): 9 Average Delay (sec/veh): 23.5  
Optimal Cycle: 144 Level Of Service: C

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: WideBypass WideBypass Include Include  
Min. Green: 54 54 54 54 54 54 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0 0

Volume Module:  
Base Vol: 0 1812 45 0 2776 187 83 274 47 21 230 157  
Growth 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  
Initial Bse: 0 1812 45 0 2776 187 83 274 47 21 230 157  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 1907 47 0 2922 197 87 288 49 22 242 165  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1907 47 0 2922 197 87 288 49 22 242 165  
PCE 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  
MLF 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  
FinalVolume: 0 1907 47 0 2922 197 87 288 49 22 242 165

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.88 0.88 0.80 0.96 0.96 0.90 0.90 0.90  
Lanes: 0.00 2.93 0.07 0.00 2.81 0.19 1.00 0.85 0.15 0.05 0.57 0.38  
Final Sat.: 0 4940 123 0 4720 318 1529 1554 267 88 962 657

Capacity Analysis Module:  
Vol/Sat: 0.00 0.39 0.39 0.00 0.62 0.62 0.06 0.19 0.19 0.25 0.25 0.25  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.61 0.61 0.00 0.61 0.61 0.29 0.29 0.29 0.29 0.29 0.29  
Volume/Cap: 0.00 0.63 0.63 0.00 1.01 1.01 0.20 0.64 0.64 0.87 0.87 0.87  
Delay/Veh: 0.0 7.1 7.1 0.0 29.1 29.1 25.1 33.9 33.9 49.1 49.1 49.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 7.1 7.1 0.0 29.1 29.1 25.1 33.9 33.9 49.1 49.1 49.1  
LOS by Move: A A A A C C C C D D D  
HCM2kAvgQ: 0 8 8 0 34 34 2 9 9 15 15 15

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.775  
Loss Time (sec): 9 Average Delay (sec/veh): 14.3  
Optimal Cycle: 90 Level Of Service: B

Street Name: 19th Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 56 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 1848 21 0 2818 58 74 125 90 10 148 14  
Growth 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  
Initial Bse: 0 1848 21 0 2818 58 74 125 90 10 148 14  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 1945 22 0 2966 61 78 132 95 11 156 15  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1945 22 0 2966 61 78 132 95 11 156 15  
PCE 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  
MLF 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  
FinalVolume: 0 1945 22 0 2966 61 78 132 95 11 156 15

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.71 0.71 0.71 0.95 0.95 0.95  
Lanes: 0.00 2.97 0.03 0.00 2.94 0.06 1.00 1.16 0.84 0.06 0.86 0.08  
Final Sat.: 0 5016 57 0 4966 102 1344 1562 1125 105 1551 147

Capacity Analysis Module:  
Vol/Sat: 0.00 0.39 0.39 0.00 0.60 0.60 0.06 0.08 0.08 0.10 0.10 0.10  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.62 0.62 0.00 0.62 0.62 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.00 0.62 0.62 0.00 0.96 0.96 0.21 0.30 0.30 0.36 0.36 0.36  
Delay/Veh: 0.0 6.4 6.4 0.0 17.4 17.4 25.2 26.4 26.4 28.1 28.1 28.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 6.4 6.4 0.0 17.4 17.4 25.2 26.4 26.4 28.1 28.1 28.1  
LOS by Move: A A A A B B C C C C C C  
HCM2kAvgQ: 0 8 8 0 25 25 2 3 3 4 4 4

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS Existing

Level of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #1140 19th / Winston

Cycle (sec): 90 Critical Vol./Cap.(X): 0.954
Loss Time (sec): 13 Average Delay (sec/veh): 37.9
Optimal Cycle: 132 Level Of Service: D

Street Name: 19th Winston

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Lanes, Min. Green, Y+R, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS Existing

Level of Service Computation Report 2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1150 19th / Buckingham

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: E[ 47.7]

Street Name: 19th Buckingham

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module table with columns for Critical Gp, FollowUpTim.

Capacity Module table with columns for Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS Existing

Level of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #1160 19th / Holloway

Cycle (sec): 90 Critical Vol./Cap.(X): 0.815
Loss Time (sec): 9 Average Delay (sec/veh): 40.6
Optimal Cycle: 90 Level Of Service: D

Street Name: 19th Holloway

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 48 48 48 48 48 48 33 33 33 33 33 33
Y+R: 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0
Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 0 2288 130 0 3078 138 56 143 55 37 370 50
Growth 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
Initial Bse: 0 2288 130 0 3078 138 56 143 55 37 370 50
User 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
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 2408 137 0 3240 145 59 151 58 39 389 53
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 2408 137 0 3240 145 59 151 58 39 389 53
PCE 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
MLF 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
FinalVolume: 0 2408 137 0 3240 145 59 151 58 39 389 53

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.88 0.88 1.00 0.98 0.74 0.68 0.69 0.67 0.82 0.83 0.81
Lanes: 0.00 2.84 0.16 0.00 3.00 1.00 0.44 1.12 0.44 0.16 1.62 0.22
Final Sat.: 0 4770 271 0 5592 1405 571 1458 561 253 2533 342

Capacity Analysis Module:
Vol/Sat: 0.00 0.50 0.50 0.00 0.58 0.10 0.10 0.10 0.10 0.15 0.15 0.15
Crit Moves: \*\*\*\*
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.37 0.37 0.37 0.37 0.37 0.37
Volume/Cap: 0.00 0.95 0.95 0.00 1.09 0.19 0.28 0.28 0.28 0.42 0.42 0.42
Delay/Veh: 0.0 22.8 22.8 0.0 60.4 8.4 20.9 20.9 20.9 22.5 22.5 22.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 22.8 22.8 0.0 60.4 8.4 20.9 20.9 20.9 22.5 22.5 22.5
LOS by Move: A C C A E A C C C C C C
HCM2kAvgQ: 0 25 25 0 43 1 3 3 3 5 5 5

Note: Queue reported is the number of cars per lane.

19th Ave CS Existing

Level of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #1170 19th / Crespi

Cycle (sec): 90 Critical Vol./Cap.(X): 0.724
Loss Time (sec): 0 Average Delay (sec/veh): 37.3
Optimal Cycle: 75 Level Of Service: D

Street Name: 19th Crespi

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase
Rights: Include Ignore Include Include
Min. Green: 48 48 48 53 53 53 22 22 22 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 3 0 0 0 0 3 0 1 1 0 0 0 0 0

Volume Module:
Base Vol: 0 2266 0 0 3060 110 152 0 68 0 0 0
Growth 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
Initial Bse: 0 2266 0 0 3060 110 152 0 68 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 2385 0 0 3221 0 160 0 72 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 2385 0 0 3221 0 160 0 72 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 2385 0 0 3221 0 160 0 72 0 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.89 1.00 1.00 0.89 1.00 0.93 1.00 0.83 1.00 1.00 1.00
Lanes: 1.00 3.00 0.00 0.00 3.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1900 5083 0 0 5083 1900 1769 0 1583 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.47 0.00 0.00 0.63 0.00 0.09 0.00 0.05 0.00 0.00 0.00
Crit Moves: \*\*\*\*
Green/Cycle: 0.53 0.53 0.53 0.59 0.59 0.59 0.24 0.24 0.24 0.00 0.00 0.00
Volume/Cap: 0.00 0.88 0.00 0.00 1.08 0.00 0.37 0.00 0.19 0.00 0.00 0.00
Delay/Veh: 0.0 17.6 0.0 0.0 52.4 0.0 30.7 0.0 28.0 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 17.6 0.0 0.0 52.4 0.0 30.7 0.0 28.0 0.0 0.0 0.0
LOS by Move: A B A A D A C A C A A A
HCM2kAvgQ: 0 22 0 0 41 0 4 0 2 0 0 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumaseero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.924  
Loss Time (sec): 12 Average Delay (sec/veh): 77.5  
Optimal Cycle: 122 Level Of Service: E

\*\*\*\*\*  
Street Name: Chumaseero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 20 20 20 21 47 47 21 47 47  
Y+R: 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0  
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

Volume Module:  
Base Vol: 28 16 99 119 26 54 26 1494 44 175 1656 168  
Growth 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  
Initial Bse: 28 16 99 119 26 54 26 1494 44 175 1656 168  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 29 17 104 125 27 57 27 1573 46 184 1743 177  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 29 17 104 125 27 57 27 1573 46 184 1743 177  
PCE 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  
MLF 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  
FinalVolume: 29 17 104 125 27 57 27 1573 46 184 1743 177

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.64 0.64 0.80 0.45 0.45 0.45 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.23 0.13 0.64 0.60 0.13 0.27 1.00 1.94 0.06 1.00 1.82 0.18  
Final Sat.: 275 157 972 506 111 230 1769 3423 101 1769 3167 321

Capacity Analysis Module:  
Vol/Sat: 0.11 0.11 0.11 0.25 0.25 0.25 0.02 0.46 0.46 0.10 0.55 0.55  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.20 0.20 0.20 0.20 0.20 0.21 0.47 0.47 0.21 0.47 0.47  
Volume/Cap: 0.54 0.54 0.54 1.24 1.24 1.24 0.07 0.98 0.98 0.50 1.17 1.17  
Delay/Veh: 43.0 43.0 43.0 187.4 187 187.4 32.1 38.4 38.4 39.5 105 105.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 43.0 43.0 43.0 187.4 187 187.4 32.1 38.4 38.4 39.5 105 105.4  
LOS by Move: D D D F F F C D D D F F  
HCM2kAvgQ: 4 4 5 14 14 14 1 32 32 5 52 52

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.677  
Loss Time (sec): 10 Average Delay (sec/veh): 17.7  
Optimal Cycle: 60 Level Of Service: B

\*\*\*\*\*  
Street Name: Sunset Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

Volume Module:  
Base Vol: 0 2021 17 0 1965 11 79 190 53 83 169 38  
Growth 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  
Initial Bse: 0 2021 17 0 1965 11 79 190 53 83 169 38  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 2127 18 0 2068 12 83 200 56 87 178 40  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2127 18 0 2068 12 83 200 56 87 178 40  
PCE 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  
MLF 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  
FinalVolume: 0 2127 18 0 2068 12 83 200 56 87 178 40

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.59 0.95 0.95 0.54 0.95 0.95  
Lanes: 0.00 2.97 0.03 0.00 2.98 0.02 1.00 0.78 0.22 1.00 0.82 0.18  
Final Sat.: 0 5036 42 0 5050 28 1125 1408 393 1028 1478 332

Capacity Analysis Module:  
Vol/Sat: 0.00 0.42 0.42 0.00 0.41 0.41 0.07 0.14 0.14 0.09 0.12 0.12  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 0.87 0.87 0.00 0.85 0.85 0.21 0.41 0.41 0.24 0.34 0.34  
Delay/Veh: 0.0 18.6 18.6 0.0 17.4 17.4 14.9 16.7 16.7 15.5 15.9 15.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 18.6 18.6 0.0 17.4 17.4 14.9 16.7 16.7 15.5 15.9 15.9  
LOS by Move: A B B A B B B B B B B  
HCM2kAvgQ: 0 17 17 0 16 16 1 4 4 1 3 3

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.596  
Loss Time (sec): 9 Average Delay (sec/veh): 11.8  
Optimal Cycle: 59 Level Of Service: B

Street Name: Sunset Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 0 1 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1318 12 0 1735 81 54 83 18 47 23 192  
Growth 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  
Initial Bse: 0 1318 12 0 1735 81 54 83 18 47 23 192  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 1387 13 0 1826 85 57 87 19 49 24 202  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1387 13 0 1826 85 57 87 19 49 24 202  
PCE 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  
MLF 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  
FinalVolume: 0 1387 13 0 1826 85 57 87 19 49 24 202

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.86 0.86 0.86 0.72 0.98 0.83  
Lanes: 0.00 2.97 0.03 0.00 2.87 0.13 0.35 0.53 0.12 1.00 1.00 1.00  
Final Sat.: 0 5032 46 0 4823 225 571 878 190 1363 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.28 0.28 0.00 0.38 0.38 0.10 0.10 0.10 0.04 0.01 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 0.52 0.52 0.00 0.71 0.71 0.31 0.31 0.31 0.11 0.04 0.40  
Delay/Veh: 0.0 9.7 9.7 0.0 12.1 12.1 17.1 17.1 17.1 15.1 14.3 18.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 9.7 9.7 0.0 12.1 12.1 17.1 17.1 17.1 15.1 14.3 18.5  
LOS by Move: A A A A B B B B B B B  
HCM2kAvgQ: 0 6 6 0 11 11 3 3 3 1 0 3

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1210 Skyline / Sloat / 39th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.577  
Loss Time (sec): 0 Average Delay (sec/veh): 14.5  
Optimal Cycle: 0 Level Of Service: B

Street Name: Skyline / 39th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Ignore Include Ignore Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 1 0 0 2 0 0 0 1 0 0 0 2 0 1 2 0 1 1 0

Volume Module:  
Base Vol: 251 0 646 0 14 7 0 332 194 341 280 60  
Growth 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  
Initial Bse: 251 0 646 0 14 7 0 332 194 341 280 60  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95  
PHF Volume: 264 0 0 0 15 7 0 349 0 359 295 63  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 264 0 0 0 15 7 0 349 0 359 295 63  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 264 0 0 0 15 7 0 349 0 359 295 63

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 1.00 0.00 2.00 0.00 0.67 0.33 0.00 2.00 1.00 2.00 1.65 0.35  
Final Sat.: 458 0 1061 0 296 148 0 954 518 983 881 193

Capacity Analysis Module:  
Vol/Sat: 0.58 xxxxx 0.00 xxxxx 0.05 0.05 xxxxx 0.37 0.00 0.37 0.33 0.33  
Crit Moves: \*\*\*\*  
Delay/Veh: 19.6 0.0 0.0 0.0 10.8 10.8 0.0 13.9 0.0 13.8 12.4 12.1  
Delay 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  
AdjDel/Veh: 19.6 0.0 0.0 0.0 10.8 10.8 0.0 13.9 0.0 13.8 12.4 12.1  
LOS by Move: C \* \* \* B B \* B \* B B B  
ApproachDel: 19.6 10.8 13.9 13.1  
Delay Adj: 1.00 1.00 1.00 1.00  
ApprAdjDel: 19.6 10.8 13.9 13.1  
LOS by Appr: C B B B  
AllWayAvgQ: 1.2 1.2 0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.5 0.5 0.5

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1221 Skyline / Lake Merced (WBR)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: B[ 11.9]

Street Name: Skyline Lake Merced (WBR)
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 2 0 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module:
Base Vol: 0 814 0 90 456 0 0 0 0 0 0 0 75
Growth 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
Initial Bse: 0 814 0 90 456 0 0 0 0 0 0 0 75
User 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
PHF 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
PHF Volume: 0 814 0 90 456 0 0 0 0 0 0 0 75
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 814 0 90 456 0 0 0 0 0 0 0 75

Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 6.9
FollowUpTim:xxxxx xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 3.3

Capacity Module:
Cnflct Vol: xxxx xxxx xxxxx 814 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 407
Potent Cap.: xxxx xxxx xxxxx 809 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 593
Move Cap.: xxxx xxxx xxxxx 809 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 593
Volume/Cap: xxxx xxxx xxxxx 0.11 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 0.13

Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx 0.4 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 0.4
Control Del:xxxxx xxxx xxxxx 10.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 11.9
LOS by Move: \* \* \* B \* \* \* \* \* \* \* \* \* B
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*
ApproachDel: xxxxxxx xxxxxxx xxxxxxx 11.9
ApproachLOS: \* \* \* B

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: D[ 29.3]

Street Name: Skyline Lake Merced (WBLT)
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 1 0 1 1 0 0 0 2 0 1 0 0 0 0 0 1 0 0 0

Volume Module:
Base Vol: 5 814 90 0 423 33 0 0 0 43 5 0
Growth 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
Initial Bse: 5 814 90 0 423 33 0 0 0 43 5 0
User 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
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 5 857 95 0 445 35 0 0 0 45 5 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 5 857 95 0 445 35 0 0 0 45 5 0

Critical Gap Module:
Critical Gp: 4.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 6.8 6.5 xxxxx
FollowUpTim: 2.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 3.5 4.0 xxxxx

Capacity Module:
Cnflct Vol: 480 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 1137 1395 xxxxx
Potent Cap.: 1079 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 195 140 xxxxx
Move Cap.: 1079 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 195 140 xxxxx
Volume/Cap: 0.00 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.23 0.04 xxxxx

Level Of Service Module:
2Way95thQ: 0.0 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 0.9 0.1 xxxxx
Control Del: 8.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 29.0 31.8 xxxxx
LOS by Move: A \* \* \* \* \* \* \* \* \* D D \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*
ApproachDel: xxxxxxx xxxxxxx xxxxxxx 29.3
ApproachLOS: \* \* \* D

Note: Queue reported is the number of cars per lane.





19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.686  
Loss Time (sec): 7 Average Delay (sec/veh): 39.1  
Optimal Cycle: 90 Level Of Service: D

Street Name: Lake Merced Font  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1746 48 147 1549 0 0 0 0 43 0 304  
Growth 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  
Initial Bse: 0 1746 48 147 1549 0 0 0 0 43 0 304  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 1838 0 155 1631 0 0 0 0 45 0 320  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1838 0 155 1631 0 0 0 0 45 0 320  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 1838 0 155 1631 0 0 0 0 45 0 320

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.52 0.00 0.09 0.46 0.00 0.00 0.00 0.00 0.03 0.00 0.20  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.48 0.00 0.17 0.64 0.00 0.00 0.00 0.00 0.29 0.00 0.29  
Volume/Cap: 0.00 1.09 0.00 0.52 0.72 0.00 0.00 0.00 0.00 0.09 0.00 0.69  
Delay/Veh: 0.0 68.5 0.0 40.8 6.8 0.0 0.0 0.0 0.0 23.3 0.0 36.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 68.5 0.0 40.8 6.8 0.0 0.0 0.0 0.0 23.3 0.0 36.0  
LOS by Move: A E A D A A A A A C A D  
HCM2kAvgQ: 0 41 0 4 10 0 0 0 0 1 0 9

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.711  
Loss Time (sec): 11 Average Delay (sec/veh): 66.9  
Optimal Cycle: 90 Level Of Service: E

Street Name: Lake Merced Higuera  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1694 144 41 1601 0 0 0 0 77 0 58  
Growth 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  
Initial Bse: 0 1694 144 41 1601 0 0 0 0 77 0 58  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 1783 152 43 1685 0 0 0 0 81 0 61  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1783 152 43 1685 0 0 0 0 81 0 61  
PCE 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  
MLF 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  
FinalVolume: 0 1783 152 43 1685 0 0 0 0 81 0 61

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.92 0.92 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 1.84 0.16 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3221 274 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.55 0.55 0.02 0.48 0.00 0.00 0.00 0.00 0.05 0.00 0.04  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.46 0.46 0.46 0.12 0.66 0.66 0.00 0.00 0.00 0.22 0.22 0.22  
Volume/Cap: 0.00 1.21 1.21 0.20 0.73 0.00 0.00 0.00 0.00 0.21 0.00 0.17  
Delay/Veh: 0.0 123 123.0 37.6 6.3 0.0 0.0 0.0 0.0 29.7 0.0 29.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 123 123.0 37.6 6.3 0.0 0.0 0.0 0.0 29.7 0.0 29.4  
LOS by Move: A F F D A A A A A C A C  
HCM2kAvgQ: 0 53 53 1 11 0 0 0 0 2 0 1

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 1.836  
Loss Time (sec): 15 Average Delay (sec/veh): 42.7  
Optimal Cycle: 180 Level Of Service: D  
\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Split Phase		Split Phase								
Rights:	WideBypass		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	416	209	1478	225	0	0	0	0	139	0	1483
Growth 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
Initial Bse:	0	416	209	1478	225	0	0	0	0	139	0	1483
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	438	220	1556	0	0	0	0	0	146	0	1561
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	438	220	1556	0	0	0	0	0	146	0	1561
PCE 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
MLF 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
FinalVolume:	0	438	220	1556	0	0	0	0	0	146	0	1561

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.12	0.14	0.45	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.99
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	0.60	0.68	1.05	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.99
Delay/Veh:	0.0	42.2	50.0	65.6	0.0	0.0	0.0	0.0	0.0	37.7	0.0	19.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	42.2	50.0	65.6	0.0	0.0	0.0	0.0	0.0	37.7	0.0	19.6
LOS by Move:	A	D	D	E	A	A	A	A	A	D	A	B
HCM2kAvgQ:	0	7	8	37	0	0	0	0	0	4	0	13

Note: Queue reported is the number of cars per lane.

Existing Conditions  
Weekday PM Peak Hour



19th Ave CS  
Existing

## Scenario Report

Scenario: Existing PM

Command: Default Command  
Volume: Existing PM  
Geometry: Existing PM  
Impact Fee: Default Impact Fee  
Trip Generation: No Projects  
Trip Distribution: PM  
Paths: Tier 2/3  
Routes: Tier 2/3  
Configuration: Existing

19th Ave CS  
Existing

Impact Analysis Report  
Level Of Service

Intersection	LOS	Base		Future		Change in	
		Del/ Veh	V/ C	Del/ Veh	V/ C		
#1010 Claremont / Taraval / Dewey /	B	14.3	0.886	B	14.3	0.886	+ 0.000 V/C
#1020 Santa Clara / Portola / Vicent	C	29.4	0.808	C	29.4	0.808	+ 0.000 D/V
#1030 Junipero Serra / Sloat / West	F	81.1	1.012	F	81.1	1.012	+ 0.000 D/V
#1040 Junipero Serra / Ocean / Eucal	C	31.8	0.778	C	31.8	0.778	+ 0.000 D/V
#1050 Junipero Serra / Winston / Mer	C	28.4	0.622	C	28.4	0.622	+ 0.000 D/V
#1060 Junipero Serra / Holloway	C	28.6	0.639	C	28.6	0.639	+ 0.000 D/V
#1070 Junipero Serra / 19th	F	80.9	1.149	F	101.5	1.149	+20.605 D/V
#1075 Junipero Serra / Chumasero	A	2.7	0.708	A	2.7	0.708	+ 0.000 D/V
#1080 Junipero Serra / I-280 NB On-R	E	74.0	1.053	E	74.0	1.053	+ 0.000 D/V
#1090 Junipero Serra / I-280 SB On-R	C	33.6	0.952	C	33.6	0.952	+ 0.000 D/V
#1100 19th / Taraval	B	16.4	0.755	B	16.4	0.755	+ 0.000 D/V
#1110 19th / Sloat	F	93.8	1.538	F	93.8	1.538	+ 0.000 D/V
#1120 19th / Ocean	F	113.6	1.411	F	117.6	1.405	+ 3.966 D/V
#1130 19th / Eucalyptus	D	49.9	0.996	D	49.9	0.995	-0.057 D/V
#1140 19th / Winston	F	94.9	1.291	F	94.9	1.291	+ 0.000 D/V
#1150 19th / Buckingham	F	211.2	1.311	F	211.2	1.311	+ 0.000 D/V
#1160 19th / Holloway	A	9.0	0.748	E	61.2	0.748	+52.218 D/V
#1170 19th / Crespi	B	19.7	0.743	B	19.7	0.743	+ 0.000 D/V
#1181 Chumasero / Brotherhood	E	68.1	0.770	E	68.1	0.770	+ 0.000 D/V
#1190 Sunset / Taraval	C	20.9	0.747	C	20.9	0.747	+ 0.000 D/V
#1200 Sunset / Ocean	B	12.0	0.590	B	12.0	0.590	+ 0.000 D/V
#1210 Skyline / Sloat / 39th	C	21.4	0.803	C	21.4	0.803	+ 0.000 V/C
#1221 Skyline / Lake Merced (WBR)	B	13.1	0.231	B	13.1	0.231	+ 0.000 D/V
#1222 Skyline / Lake Merced (WBLT)	E	42.8	0.463	E	42.8	0.463	+ 0.000 D/V

19th Ave CS  
Existing

Intersection	Base		Future		Change in	
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C		
#1230 Sunset / Lake Merced	D 28.2	0.526	D 28.2	0.526	+ 0.000	D/V
#1240 Lake Merced / Winston	D 48.2	0.640	E 70.5	0.640	+22.297	D/V
#1250 Lake Merced / Font	C 32.8	0.598	C 33.1	0.598	+ 0.314	D/V
#1263 Lake Merced / Higuera	E 59.2	0.726	E 59.2	0.726	+ 0.000	D/V
#1270 Lake Merced / Brotherhood	C 30.3	1.677	C 30.2	1.677	-0.018	D/V

19th Ave CS  
Existing

Level of Service Computation Report  
FHWA Roundabout Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*  
Average Delay (sec/veh): 14.3      Level Of Service: B  
\*\*\*\*\*

Street Name:	Claremont			Taraval / Dewey		
	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Approach:	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign
Lanes:	1	1	1	1	1	1

Volume Module:

Base Vol:	17	24	239	50	63	5	10	259	55	324	338	324
Growth 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
Initial Bse:	17	24	239	50	63	5	10	259	55	324	338	324
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	18	25	252	53	66	5	11	273	58	341	356	341
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	25	252	53	66	5	11	273	58	341	356	341
PCE 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
MLF 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
FinalVolume:	18	25	252	53	66	5	11	273	58	341	356	341

PCE Module:

AutoPCE:	18	25	252	53	66	5	11	273	58	341	356	341
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	18	25	252	53	66	5	11	273	58	341	356	341

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	336	715	460	54
MaxVolume:	1019	814	952	1171
PedVolume:	0	0	0	0
AdjMaxVol:	1019	814	952	1171
ApproachVol:	295	124	341	1038
ApproachV/C:	0.29	0.15	0.36	0.89
ApproachDel:	5.0	5.2	5.9	20.9
ApproachLOS:	A	A	A	C
Queue:	1.2	0.5	1.6	13.1

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #1020 Santa Clara / Portola / Vicente

Cycle (sec): 80 Critical Vol./Cap.(X): 0.808  
Loss Time (sec): 11 Average Delay (sec/veh): 29.4  
Optimal Cycle: 79 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module. Includes data for Santa Clara, Portola, and Vicente approaches.

Volume Module:

Table showing traffic volume data for various approaches and movements, including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table showing saturation flow data for different lane configurations, including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis data, including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis

Cycle (sec): 105 Critical Vol./Cap.(X): 1.012  
Loss Time (sec): 16 Average Delay (sec/veh): 81.1  
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module. Includes data for Junipero Serra, Sloat, West Portal, and St. Francis approaches.

Volume Module:

Table showing traffic volume data for various approaches and movements, including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table showing saturation flow data for different lane configurations, including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis data, including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.778  
Loss Time (sec): 14 Average Delay (sec/veh): 31.8  
Optimal Cycle: 100 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Ocean / Eucalyptus  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:  
Base Vol: 176 1567 35 356 1065 96 140 356 58 77 332 333  
Growth 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  
Initial Bse: 176 1567 35 356 1065 96 140 356 58 77 332 333  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 185 1649 37 375 1121 101 147 375 61 81 349 351  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 185 1649 37 375 1121 101 147 375 61 81 349 351  
PCE 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  
MLF 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  
FinalVolume: 185 1649 37 375 1121 101 147 375 61 81 349 351

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.97 0.88 0.90 0.88 0.88 0.60 0.60 0.83 0.89 0.89 0.83  
Lanes: 1.00 2.93 0.07 2.00 2.75 0.25 0.56 1.44 1.00 0.19 0.81 1.00  
Final Sat.: 1751 5387 120 3432 4607 415 648 1648 1583 320 1378 1583

Capacity Analysis Module:  
Vol/Sat: 0.11 0.31 0.31 0.11 0.24 0.24 0.23 0.23 0.04 0.25 0.25 0.22  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 0.96 0.71 0.71 0.68 0.51 0.51 0.84 0.84 0.10 0.94 0.94 0.52  
Delay/Veh: 99.9 22.0 22.0 46.3 15.0 15.0 47.5 47.5 20.3 64.9 64.9 23.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 99.9 22.0 22.0 46.3 15.0 15.0 47.5 47.5 20.3 64.9 64.9 23.6  
LOS by Move: F C C D B B D D C E E C  
HCM2kAvgQ: 7 14 12 5 7 7 11 11 1 17 17 8

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.622  
Loss Time (sec): 14 Average Delay (sec/veh): 28.4  
Optimal Cycle: 100 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Winston / Mercedes  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1 0 1 0 1

Volume Module:  
Base Vol: 224 1516 52 85 1130 117 169 152 81 74 103 36  
Growth 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  
Initial Bse: 224 1516 52 85 1130 117 169 152 81 74 103 36  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 236 1596 55 89 1189 123 178 160 85 78 108 38  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 236 1596 55 89 1189 123 178 160 85 78 108 38  
PCE 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  
MLF 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  
FinalVolume: 236 1596 55 89 1189 123 178 160 85 78 108 38

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.67 0.98 0.83 0.58 0.98 0.83  
Lanes: 1.00 2.90 0.10 1.00 2.72 0.28 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4890 168 1769 4542 470 1274 1862 1583 1099 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.13 0.33 0.33 0.05 0.26 0.26 0.14 0.09 0.05 0.07 0.06 0.02  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.70 0.82 0.82 0.27 0.65 0.65 0.52 0.32 0.20 0.26 0.22 0.09  
Delay/Veh: 49.4 27.7 27.7 36.5 23.5 23.5 36.4 30.8 29.2 30.8 29.3 27.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 49.4 27.7 27.7 36.5 23.5 23.5 36.4 30.8 29.2 30.8 29.3 27.7  
LOS by Move: D C C D C C D C C C C C  
HCM2kAvgQ: 7 16 16 2 11 11 4 4 2 2 3 1

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*



19th Ave CS Existing

Level of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #1060 Junipero Serra / Holloway

Cycle (sec): 100 Critical Vol./Cap.(X): 0.639
Loss Time (sec): 14 Average Delay (sec/veh): 28.6
Optimal Cycle: 100 Level Of Service: C

Street Name: Junipero Serra Holloway

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

Volume Module:
Base Vol: 183 1398 101 176 1001 104 117 140 23 143 96 107
Growth 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
Initial Bse: 183 1398 101 176 1001 104 117 140 23 143 96 107
User 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
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 193 1472 106 185 1054 109 123 147 24 151 101 113
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 193 1472 106 185 1054 109 123 147 24 151 101 113
PCE 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
MLF 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
FinalVolume: 193 1472 106 185 1054 109 123 147 24 151 101 113

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.88 0.88 0.93 0.88 0.88 0.68 0.98 0.83 0.60 0.98 0.83
Lanes: 1.00 2.80 0.20 1.00 2.72 0.28 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1769 4693 339 1769 4540 472 1283 1862 1583 1149 1862 1583

Capacity Analysis Module:
Vol/Sat: 0.11 0.31 0.31 0.10 0.23 0.23 0.10 0.08 0.02 0.13 0.05 0.07
Crit Moves: \*\*\*\*
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28
Volume/Cap: 0.57 0.80 0.80 0.55 0.60 0.60 0.34 0.28 0.05 0.47 0.19 0.25
Delay/Veh: 43.8 28.1 28.1 43.0 23.3 23.3 31.3 29.5 26.6 34.7 28.2 29.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 43.8 28.1 28.1 43.0 23.3 23.3 31.3 29.5 26.6 34.7 28.2 29.3
LOS by Move: D C C D C C C C C C C C
HCM2kAvgQ: 5 14 14 5 9 9 3 4 1 4 2 3

Note: Queue reported is the number of cars per lane.

19th Ave CS Existing

Level of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative)

Intersection #1070 Junipero Serra / 19th

Cycle (sec): 100 Critical Vol./Cap.(X): 1.149
Loss Time (sec): 17 Average Delay (sec/veh): 80.9
Optimal Cycle: 180 Level Of Service: F

Street Name: Junipero Serra 19th

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted
Rights: Ignore Ignore Ovl Include
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

Volume Module:
Base Vol: 2410 1660 25 0 1178 17 0 123 3060 31 47 50
Growth 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
Initial Bse: 2410 1660 25 0 1178 17 0 123 3060 31 47 50
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.00 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 2537 1747 0 0 1240 0 0 129 3221 33 49 53
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 2537 1747 0 0 1240 0 0 129 3221 33 49 53
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 2537 1747 0 0 1240 0 0 129 3221 33 49 53

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.88 0.90 0.95 0.91 0.89 0.91 1.00 0.98 0.73 0.56 0.90 0.90
Lanes: 2.40 1.60 0.00 0.00 4.00 0.00 0.00 1.00 3.00 1.00 0.48 0.52
Final Sat.: 3995 2752 0 0 6778 0 0 1862 4178 1065 833 886

Capacity Analysis Module:
Vol/Sat: 0.63 0.63 0.00 0.00 0.18 0.00 0.00 0.07 0.77 0.03 0.06 0.06
Crit Moves: \*\*\*\*
Green/Cycle: 0.54 0.54 0.54 0.20 0.20 0.20 0.09 0.09 0.68 0.09 0.09 0.09
Volume/Cap: 1.18 1.18 0.00 0.00 0.91 0.00 0.00 0.77 1.13 0.34 0.66 0.66
Delay/Veh: 98.4 98.4 0.0 0.0 50.2 0.0 0.0 73.0 70.5 52.1 64.0 64.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 98.4 98.4 0.0 0.0 50.2 0.0 0.0 73.0 70.5 52.1 64.0 64.0
LOS by Move: F F A A D A A E E D E E
HCM2kAvgQ: 58 58 0 0 12 0 0 6 58 1 4 4

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 1.053  
Loss Time (sec): 12 Average Delay (sec/veh): 74.0  
Optimal Cycle: 180 Level Of Service: E

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
\*\*\*\*\*

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement, Control, Rights, Min. Green, Y+R, Lanes.

Volume Module: Table with 12 columns and 12 rows of traffic volume and delay data.

Saturation Flow Module: Table with 12 columns and 4 rows of saturation flow and adjustment data.

Capacity Analysis Module: Table with 12 columns and 12 rows of capacity analysis data.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.952  
Loss Time (sec): 8 Average Delay (sec/veh): 33.6  
Optimal Cycle: 154 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
\*\*\*\*\*

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement, Control, Rights, Min. Green, Y+R, Lanes.

Volume Module: Table with 12 columns and 12 rows of traffic volume and delay data.

Saturation Flow Module: Table with 12 columns and 4 rows of saturation flow and adjustment data.

Capacity Analysis Module: Table with 12 columns and 12 rows of capacity analysis data.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.755  
Loss Time (sec): 10 Average Delay (sec/veh): 16.4  
Optimal Cycle: 99 Level Of Service: B

Street Name: 19th Taraval  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 66 66 66 66 66 66 23 23 23 23 23 23  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 1 0 1 0 0 1 0 1 0

Volume Module:  
Base Vol: 0 2131 104 0 2591 31 3 334 84 0 358 51  
Growth 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  
Initial Bse: 0 2131 104 0 2591 31 3 334 84 0 358 51  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 2243 109 0 2727 33 3 352 88 0 377 54  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2243 109 0 2727 33 3 352 88 0 377 54  
PCE 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  
MLF 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  
FinalVolume: 0 2243 109 0 2727 33 3 352 88 0 377 54

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.86 0.86 0.86 0.95 0.91 0.91  
Lanes: 0.00 2.86 0.14 0.00 2.96 0.04 0.01 1.59 0.40 0.00 1.75 0.25  
Final Sat.: 0 4813 235 0 5013 60 23 2595 653 0 3038 433

Capacity Analysis Module:  
Vol/Sat: 0.00 0.47 0.47 0.00 0.54 0.54 0.14 0.14 0.14 0.00 0.12 0.12  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.67 0.67 0.00 0.67 0.67 0.23 0.23 0.23 0.00 0.23 0.23  
Volume/Cap: 0.00 0.70 0.70 0.00 0.81 0.81 0.59 0.59 0.59 0.00 0.54 0.54  
Delay/Veh: 0.0 11.4 11.4 0.0 14.2 14.2 37.7 37.7 37.7 0.0 36.5 36.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 11.4 11.4 0.0 14.2 14.2 37.7 37.7 37.7 0.0 36.5 36.5  
LOS by Move: A B B A B B D D D A D D  
HCM2kAvgQ: 0 17 17 0 24 24 7 7 7 0 7 7

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.538  
Loss Time (sec): 9 Average Delay (sec/veh): 93.8  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2446 66 235 2609 321 185 1440 74 0 870 497  
Growth 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  
Initial Bse: 0 2446 66 235 2609 321 185 1440 74 0 870 497  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 2575 69 247 2746 338 195 1516 78 0 916 523  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2575 69 247 2746 338 195 1516 78 0 916 523  
PCE 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  
MLF 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  
FinalVolume: 0 2575 69 247 2746 338 195 1516 78 0 916 523

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.87 0.32 0.88 0.87 1.00 0.89 0.68  
Lanes: 0.00 2.92 0.08 1.00 2.67 0.33 1.00 2.85 0.15 0.00 3.00 1.00  
Final Sat.: 0 4929 133 1769 4448 547 608 4775 245 0 5083 1283

Capacity Analysis Module:  
Vol/Sat: 0.00 0.52 0.52 0.14 0.62 0.62 0.32 0.32 0.32 0.00 0.18 0.41  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.11 0.54 0.54 0.37 0.37 0.37 0.00 0.29 0.29  
Volume/Cap: 0.00 1.21 1.21 1.27 1.14 1.14 0.76 0.86 0.86 0.00 0.63 1.42  
Delay/Veh: 0.0 126 125.6 200.5 85.6 85.6 42.1 33.9 33.9 0.0 33.0 238.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 126 125.6 200.5 85.6 85.6 42.1 33.9 33.9 0.0 33.0 238.4  
LOS by Move: A F F F F F D C C A C F  
HCM2kAvgQ: 0 49 49 17 55 55 8 19 19 0 10 37

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.411  
Loss Time (sec): 9 Average Delay (sec/veh): 113.6  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 64 64 64 64 64 64 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0 0

Volume Module:  
Base Vol: 0 2340 47 0 2579 164 64 293 25 25 271 127  
Growth 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  
Initial Bse: 0 2340 47 0 2579 164 64 293 25 25 271 127  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 2463 49 0 2715 173 67 308 26 26 285 134  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2463 49 0 2715 173 67 308 26 26 285 134  
PCE 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  
MLF 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  
FinalVolume: 0 2463 49 0 2715 173 67 308 26 26 285 134

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.44 0.89 1.00 0.88 0.88 0.87 0.97 0.97 0.78 0.78 0.78  
Lanes: 0.00 2.97 0.03 0.00 2.82 0.18 1.00 0.92 0.08 0.06 0.64 0.30  
Final Sat.: 0 2509 50 0 4736 301 1644 1695 145 87 944 442

Capacity Analysis Module:  
Vol/Sat: 0.00 0.98 0.98 0.00 0.57 0.57 0.04 0.18 0.18 0.30 0.30 0.30  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.65 0.65 0.00 0.65 0.65 0.26 0.26 0.26 0.26 0.26 0.26  
Volume/Cap: 0.00 1.51 1.51 0.00 0.88 0.88 0.16 0.70 0.70 1.16 1.16 1.16  
Delay/Veh: 0.0 241 240.5 0.0 10.1 10.1 29.3 41.7 41.7 135.2 135 135.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 241 240.5 0.0 10.1 10.1 29.3 41.7 41.7 135.2 135 135.2  
LOS by Move: A F F A B B C D D F F F  
HCM2kAvgQ: 0 64 128 0 18 18 2 10 10 25 25 25

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.996  
Loss Time (sec): 9 Average Delay (sec/veh): 49.9  
Optimal Cycle: 180 Level Of Service: D

Street Name: 19th Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 66 66 66 66 66 66 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 2277 26 0 2555 114 170 169 54 9 167 17  
Growth 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  
Initial Bse: 0 2277 26 0 2555 114 170 169 54 9 167 17  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 2397 27 0 2689 120 179 178 57 9 176 18  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2397 27 0 2689 120 179 178 57 9 176 18  
PCE 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  
MLF 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  
FinalVolume: 0 2397 27 0 2689 120 179 178 57 9 176 18

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.53 0.89 1.00 0.89 0.89 0.64 0.64 0.64 0.95 0.95 0.95  
Lanes: 0.00 2.98 0.02 0.00 2.87 0.13 1.30 1.29 0.41 0.05 0.86 0.09  
Final Sat.: 0 3023 35 0 4837 216 1582 1573 503 84 1563 159

Capacity Analysis Module:  
Vol/Sat: 0.00 0.79 0.79 0.00 0.56 0.56 0.11 0.11 0.11 0.11 0.11 0.11  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.66 0.66 0.00 0.66 0.66 0.25 0.25 0.25 0.25 0.25 0.25  
Volume/Cap: 0.00 1.20 1.20 0.00 0.84 0.84 0.45 0.45 0.45 0.45 0.45 0.45  
Delay/Veh: 0.0 103 102.5 0.0 8.1 8.1 33.3 33.3 33.3 34.9 34.9 34.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 103 102.5 0.0 8.1 8.1 33.3 33.3 33.3 34.9 34.9 34.9  
LOS by Move: A F F A A A C C C C C C  
HCM2kAvgQ: 0 48 77 0 16 16 4 4 4 6 6 6

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1140 19th / Winston

Cycle (sec): 100 Critical Vol./Cap.(X): 1.291  
Loss Time (sec): 13 Average Delay (sec/veh): 94.9  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Winston

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table showing traffic volume data for each approach and movement, including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table showing saturation flow data for each approach and movement, including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis data for each approach and movement, including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1150 19th / Buckingham

Average Delay (sec/veh): 17.6 Worst Case Level Of Service: F[211.2]

Street Name: 19th Buckingham

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, and Lanes.

Volume Module:

Table showing traffic volume data for each approach and movement, including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module:

Table showing critical gap and follow-up time data for each approach and movement.

Capacity Module:

Table showing capacity data for each approach and movement, including Conflict Vol, Potent Cap, Move Cap, and Volume/Cap.

Level Of Service Module:

Table showing level of service data for each approach and movement, including 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap, Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.748  
Loss Time (sec): 0 Average Delay (sec/veh): 9.0  
Optimal Cycle: 91 Level Of Service: A

Street Name: 19th Holloway  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 59 59 0 59 59 32 32 32 32 32 32  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 0 2489 143 0 3047 145 88 167 88 45 296 41  
Growth 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  
Initial Bse: 0 2489 143 0 3047 145 88 167 88 45 296 41  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 2620 151 0 3207 153 93 176 93 47 312 43  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2620 151 0 3207 153 93 176 93 47 312 43  
PCE 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  
MLF 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  
FinalVolume: 0 2620 151 0 3207 153 93 176 93 47 312 43

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.88 1.00 0.94 0.76 0.64 0.66 0.63 0.79 0.80 0.79  
Lanes: 0.00 2.83 0.17 0.00 3.00 1.00 0.52 0.95 0.53 0.24 1.54 0.22  
Final Sat.: 0 4992 287 0 5337 1443 629 1194 629 358 2357 327

Capacity Analysis Module:  
Vol/Sat: 0.00 0.52 0.52 0.00 0.60 0.11 0.15 0.15 0.15 0.13 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.68 0.68 0.00 0.68 0.68 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 0.77 0.77 0.00 0.88 0.16 0.46 0.46 0.46 0.41 0.41 0.41  
Delay/Veh: 0.0 5.3 5.3 0.0 7.8 2.3 29.1 29.1 29.1 27.9 27.9 27.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 5.3 5.3 0.0 7.8 2.3 29.1 29.1 29.1 27.9 27.9 27.9  
LOS by Move: A A A A A C C C C C C  
HCM2kAvgQ: 0 11 10 0 20 1 5 5 5 5 5 5

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.743  
Loss Time (sec): 10 Average Delay (sec/veh): 19.7  
Optimal Cycle: 95 Level Of Service: B

Street Name: 19th Crespi  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Ignore Include  
Min. Green: 59 59 0 0 64 64 21 0 21 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 0 0 0 2 1 0 1 0 1 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 2485 0 0 3081 99 147 0 97 0 0 0  
Growth 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  
Initial Bse: 0 2485 0 0 3081 99 147 0 97 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.00 0.95 0.95 0.95  
PHF Volume: 0 2616 0 0 3243 0 155 0 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2616 0 0 3243 0 155 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 0 2616 0 0 3243 0 155 0 0 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 0.91 0.89 0.95 0.95 1.00 1.00 1.00  
Lanes: 0.00 3.00 0.00 0.00 3.00 0.00 3.00 0.00 0.00 0.00 0.00 0.00  
Final Sat.: 0 5083 0 0 5083 0 5052 0 0 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.51 0.00 0.00 0.64 0.00 0.03 0.00 0.00 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.59 0.59 0.59 0.64 0.64 0.64 0.21 0.21 0.21 0.00 0.00 0.00  
Volume/Cap: 0.00 0.87 0.00 0.00 1.00 0.00 0.15 0.00 0.00 0.00 0.00 0.00  
Delay/Veh: 0.0 14.2 0.0 0.0 23.5 0.0 32.5 0.0 0.0 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 14.2 0.0 0.0 23.5 0.0 32.5 0.0 0.0 0.0 0.0 0.0  
LOS by Move: A B A A C A C A A A A  
HCM2kAvgQ: 0 23 0 0 41 0 1 0 0 0 0 0

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumaseero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.770  
Loss Time (sec): 12 Average Delay (sec/veh): 68.1  
Optimal Cycle: 100 Level Of Service: E

\*\*\*\*\*  
Street Name: Chumaseero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 20 20 20 20 48 48 20 48 48  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0

Volume Module:  
Base Vol: 12 5 32 75 4 12 39 1460 11 33 1613 236  
Growth 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  
Initial Bse: 12 5 32 75 4 12 39 1460 11 33 1613 236  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 13 5 34 79 4 13 41 1537 12 35 1698 248  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 13 5 34 79 4 13 41 1537 12 35 1698 248  
PCE 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  
MLF 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  
FinalVolume: 13 5 34 79 4 13 41 1537 12 35 1698 248

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.67 0.67 0.84 0.54 0.54 0.54 0.93 0.93 0.93 0.93 0.91 0.91  
Lanes: 0.28 0.12 0.60 0.83 0.04 0.13 1.00 1.99 0.01 1.00 1.74 0.26  
Final Sat.: 361 150 963 846 45 135 1769 3508 26 1769 3028 443

Capacity Analysis Module:  
Vol/Sat: 0.03 0.03 0.03 0.09 0.09 0.09 0.02 0.44 0.44 0.02 0.56 0.56  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.48 0.48 0.20 0.48 0.48  
Volume/Cap: 0.17 0.17 0.17 0.47 0.47 0.47 0.12 0.91 0.91 0.10 1.17 1.17  
Delay/Veh: 34.5 34.5 34.5 42.7 42.7 42.7 33.4 28.2 28.2 33.2 103 103.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 34.5 34.5 34.5 42.7 42.7 42.7 33.4 28.2 28.2 33.2 103 103.3  
LOS by Move: C C C D D D C C C F F  
HCM2kAvgQ: 1 1 2 3 3 3 1 26 26 1 53 53

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.747  
Loss Time (sec): 10 Average Delay (sec/veh): 20.9  
Optimal Cycle: 60 Level Of Service: C

\*\*\*\*\*  
Street Name: Sunset Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

Volume Module:  
Base Vol: 0 2129 96 0 1790 117 70 238 37 76 243 30  
Growth 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  
Initial Bse: 0 2129 96 0 1790 117 70 238 37 76 243 30  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 2241 101 0 1884 123 74 251 39 80 256 32  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2241 101 0 1884 123 74 251 39 80 256 32  
PCE 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  
MLF 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  
FinalVolume: 0 2241 101 0 1884 123 74 251 39 80 256 32

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.88 0.88 0.50 0.96 0.96 0.50 0.96 0.96  
Lanes: 0.00 2.87 0.13 0.00 2.82 0.18 1.00 0.87 0.13 1.00 0.89 0.11  
Final Sat.: 0 4835 218 0 4728 309 953 1579 246 948 1631 201

Capacity Analysis Module:  
Vol/Sat: 0.00 0.46 0.46 0.00 0.40 0.40 0.08 0.16 0.16 0.08 0.16 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 0.96 0.96 0.00 0.82 0.82 0.22 0.45 0.45 0.24 0.45 0.45  
Delay/Veh: 0.0 25.8 25.8 0.0 16.6 16.6 15.3 17.4 17.4 15.6 17.3 17.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 25.8 25.8 0.0 16.6 16.6 15.3 17.4 17.4 15.6 17.3 17.3  
LOS by Move: A C C A B B B B B B B  
HCM2kAvgQ: 0 22 22 0 14 14 1 5 5 1 4 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.590  
Loss Time (sec): 9 Average Delay (sec/veh): 12.0  
Optimal Cycle: 59 Level Of Service: B

\*\*\*\*\*  
Street Name: Sunset Ocean  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1682 14 0 1589 60 30 61 18 37 47 226  
Growth 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  
Initial Bse: 0 1682 14 0 1589 60 30 61 18 37 47 226  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 1771 15 0 1673 63 32 64 19 39 49 238  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1771 15 0 1673 63 32 64 19 39 49 238  
PCE 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  
MLF 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  
FinalVolume: 0 1771 15 0 1673 63 32 64 19 39 49 238

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.88 0.88 0.88 0.76 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.00 2.89 0.11 0.28 0.56 0.16 1.00 1.00 1.00  
Final Sat.: 0 5036 42 0 4874 184 463 941 278 1445 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.35 0.35 0.00 0.34 0.34 0.07 0.07 0.07 0.03 0.03 0.15  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 0.66 0.66 0.00 0.64 0.64 0.22 0.22 0.22 0.09 0.08 0.47  
Delay/Veh: 0.0 11.4 11.4 0.0 11.1 11.1 16.0 16.0 16.0 14.8 14.7 19.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 11.4 11.4 0.0 11.1 11.1 16.0 16.0 16.0 14.8 14.7 19.7  
LOS by Move: A B B A B B B B B B B B  
HCM2kAvgQ: 0 8 8 0 9 9 2 2 2 0 1 3

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1210 Skyline / Sloat / 39th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.803  
Loss Time (sec): 0 Average Delay (sec/veh): 21.4  
Optimal Cycle: 0 Level Of Service: C

\*\*\*\*\*  
Street Name: Skyline / 39th Sloat  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Ignore Include Ignore Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 1 0 0 2 0 0 0 1 0 0 0 2 0 1 2 0 1 1 0

Volume Module:  
Base Vol: 327 0 565 0 21 7 0 352 163 450 435 64  
Growth 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  
Initial Bse: 327 0 565 0 21 7 0 352 163 450 435 64  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95  
PHF Volume: 344 0 0 0 22 7 0 371 0 474 458 67  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 344 0 0 0 22 7 0 371 0 474 458 67  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 344 0 0 0 22 7 0 371 0 474 458 67

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 1.00 0.00 2.00 0.00 0.75 0.25 0.00 2.00 1.00 2.00 1.74 0.26  
Final Sat.: 429 0 970 0 297 99 0 818 435 905 852 127

Capacity Analysis Module:  
Vol/Sat: 0.80 xxxxx 0.00 xxxxx 0.07 0.07 xxxxx 0.45 0.00 0.52 0.54 0.53  
Crit Moves: \*\*\*\*  
Delay/Veh: 35.8 0.0 0.0 0.0 12.0 12.0 0.0 17.5 0.0 18.5 17.8 17.3  
Delay 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  
AdjDel/Veh: 35.8 0.0 0.0 0.0 12.0 12.0 0.0 17.5 0.0 18.5 17.8 17.3  
LOS by Move: E \* \* \* B B \* C \* C C C  
ApproachDel: 35.8 12.0 17.5 18.1  
Delay Adj: 1.00 1.00 1.00  
ApprAdjDel: 35.8 12.0 17.5 18.1  
LOS by Appr: E B C C  
AllWayAvgQ: 3.0 3.0 0.0 0.1 0.1 0.1 0.0 0.7 0.0 1.0 1.1 1.0

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*



19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1221 Skyline / Lake Merced (WBR)  
\*\*\*\*\*

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: B[ 13.1]  
\*\*\*\*\*

Street Name:	Skyline				Lake Merced (WBR)				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign		
Rights:	Include		Include		Include		Include		
Lanes:	0	0	2	0	0	1	0	0	1

Volume Module:

Base Vol:	0	853	0	100	489	0	0	0	0	0	133
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	853	0	100	489	0	0	0	0	0	133
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	853	0	100	489	0	0	0	0	0	133
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	853	0	100	489	0	0	0	0	0	133

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	853	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	427
Potent Cap.:	xxxx	xxxx	xxxxx	782	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	576
Move Cap.:	xxxx	xxxx	xxxxx	782	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	576
Volume/Cap:	xxxx	xxxx	xxxx	0.13	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.23

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.9
Control Del:	xxxxx	xxxx	xxxxx	10.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.1
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		13.1	
ApproachLOS:	*		*		*		*		*		B	

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)  
\*\*\*\*\*

Average Delay (sec/veh): 2.2 Worst Case Level Of Service: E[ 42.8]  
\*\*\*\*\*

Street Name:	Skyline				Lake Merced (WBLT)				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign		
Rights:	Include		Include		Include		Include		
Lanes:	1	0	1	1	0	0	2	0	1

Volume Module:

Base Vol:	8	853	118	0	468	21	0	0	0	75	3	0
Growth 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
Initial Bse:	8	853	118	0	468	21	0	0	0	75	3	0
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	898	124	0	493	22	0	0	0	79	3	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	8	898	124	0	493	22	0	0	0	79	3	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.8	6.5	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.5	4.0	xxxxx

Capacity Module:

Cnflct Vol:	515	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1223	1492	xxxxx
Potent Cap.:	1047	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	172	122	xxxxx
Move Cap.:	1047	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	171	121	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.46	0.03	xxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	2.2	0.1	xxxxx
Control Del:	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	43.1	35.4	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	E	E	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		42.8	
ApproachLOS:	*		*		*		*		*		E	

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1230 Sunset / Lake Merced  
\*\*\*\*\*

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: D[ 28.2]

Street Name: Sunset Lake Merced

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Ignore), and Lanes (1 0 2 0 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across four approaches.

Critical Gap Module table with columns for Critical Gap, FollowUpTim, and values for four approaches.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. across four approaches.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1240 Lake Merced / Winston  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.640

Loss Time (sec): 9 Average Delay (sec/veh): 48.2

Optimal Cycle: 89 Level Of Service: D

Street Name: Lake Merced Winston

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Permitted, Protected, Split Phase), Rights (WideBypass, Include), and Lanes (0 0 2 1 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across four approaches.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across four approaches.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.598  
Loss Time (sec): 7 Average Delay (sec/veh): 32.8  
Optimal Cycle: 180 Level Of Service: C

Street Name: Lake Merced Font

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1683 17 176 1644 0 0 0 0 104 0 331  
Growth 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  
Initial Bse: 0 1683 17 176 1644 0 0 0 0 104 0 331  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 1772 0 185 1731 0 0 0 0 109 0 348  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1772 0 185 1731 0 0 0 0 109 0 348  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 1772 0 185 1731 0 0 0 0 109 0 348

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.50 0.00 0.10 0.49 0.00 0.00 0.00 0.00 0.06 0.00 0.22  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.00 0.20 0.68 0.00 0.00 0.00 0.00 0.24 0.00 0.24  
Volume/Cap: 0.00 1.05 0.00 0.52 0.72 0.00 0.00 0.00 0.00 0.25 0.00 0.90  
Delay/Veh: 0.0 54.5 0.0 37.6 5.1 0.0 0.0 0.0 0.0 28.8 0.0 59.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 54.5 0.0 37.6 5.1 0.0 0.0 0.0 0.0 28.8 0.0 59.4  
LOS by Move: A D A D A A A A A C A E  
HCM2kAvgQ: 0 37 0 5 9 0 0 0 0 3 0 13

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.726  
Loss Time (sec): 11 Average Delay (sec/veh): 59.2  
Optimal Cycle: 90 Level Of Service: E

Street Name: Lake Merced Higuera

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 0 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1675 127 59 1717 0 0 0 0 102 0 57  
Growth 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  
Initial Bse: 0 1675 127 59 1717 0 0 0 0 102 0 57  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 1763 134 62 1807 0 0 0 0 107 0 60  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1763 134 62 1807 0 0 0 0 107 0 60  
PCE 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  
MLF 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  
FinalVolume: 0 1763 134 62 1807 0 0 0 0 107 0 60

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.92 0.92 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 1.86 0.14 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3256 247 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.54 0.54 0.04 0.51 0.00 0.00 0.00 0.00 0.06 0.00 0.04  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.46 0.46 0.46 0.12 0.66 0.66 0.00 0.00 0.00 0.22 0.22 0.22  
Volume/Cap: 0.00 1.19 1.19 0.29 0.78 0.00 0.00 0.00 0.00 0.27 0.00 0.17  
Delay/Veh: 0.0 112 111.8 39.3 7.3 0.0 0.0 0.0 0.0 30.7 0.0 29.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 112 111.8 39.3 7.3 0.0 0.0 0.0 0.0 30.7 0.0 29.3  
LOS by Move: A F F D A A A A A C A C  
HCM2kAvgQ: 0 50 50 2 14 0 0 0 0 3 0 1

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 1.677  
Loss Time (sec): 15 Average Delay (sec/veh): 30.3  
Optimal Cycle: 180 Level Of Service: C  
\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Split Phase		Split Phase								
Rights:	WideBypass		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	504	195	1342	517	0	0	0	0	267	0	1323
Growth 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
Initial Bse:	0	504	195	1342	517	0	0	0	0	267	0	1323
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	531	205	1413	0	0	0	0	0	281	0	1393
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	531	205	1413	0	0	0	0	0	281	0	1393
PCE 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
MLF 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
FinalVolume:	0	531	205	1413	0	0	0	0	0	281	0	1393

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.15	0.13	0.41	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.88
Crit Moves:	****			****								****
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	0.73	0.63	0.96	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.88
Delay/Veh:	0.0	46.1	47.8	40.7	0.0	0.0	0.0	0.0	0.0	48.5	0.0	7.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	46.1	47.8	40.7	0.0	0.0	0.0	0.0	0.0	48.5	0.0	7.3
LOS by Move:	A	D	D	D	A	A	A	A	A	D	A	A
HCM2kAvgQ:	0	10	7	29	0	0	0	0	0	10	0	6

Note: Queue reported is the number of cars per lane.

Existing Conditions  
Weekend Midday Peak Hour



19th Ave CS  
Existing Weekend

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.002  
Loss Time (sec): 16 Average Delay (sec/veh): 125.2  
Optimal Cycle: 180 Level Of Service: F

Street Name: Junipero Serra / West Portal Sloat / St. Francis  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 50 50 29 29 29 18 18 18 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 1575 1246 23 0 787 272 895 346 371 14 293 26  
Growth 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  
Initial Bse: 1575 1246 23 0 787 272 895 346 371 14 293 26  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95  
PHF Volume: 1658 1312 24 0 828 286 942 364 0 15 308 27  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1658 1312 24 0 828 286 942 364 0 15 308 27  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1658 1312 24 0 828 286 942 364 0 15 308 27

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.87 0.87 0.89 0.97 1.00 0.92 0.92 0.92  
Lanes: 3.00 1.96 0.04 0.00 2.23 0.77 3.00 1.00 1.00 0.08 1.76 0.16  
Final Sat.: 5096 3429 63 0 3667 1267 5096 1843 1900 147 3069 272

Capacity Analysis Module:  
Vol/Sat: 0.33 0.38 0.38 0.00 0.23 0.23 0.18 0.20 0.00 0.10 0.10 0.10  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.21 0.49 0.49 0.00 0.28 0.28 0.17 0.17 0.00 0.19 0.19 0.19  
Volume/Cap: 1.55 0.79 0.79 0.00 0.82 0.82 1.08 1.15 0.00 0.53 0.53 0.53  
Delay/Veh: 295.0 21.5 21.5 0.0 41.1 41.1 97.4 142 0.0 41.2 41.2 41.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 295.0 21.5 21.5 0.0 41.1 41.1 97.4 142 0.0 41.2 41.2 41.2  
LOS by Move: F C C A D D F F A D D D  
HCM2kAvgQ: 43 17 17 0 14 14 17 21 0 6 6 6

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing Weekend

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.638  
Loss Time (sec): 17 Average Delay (sec/veh): 193.1  
Optimal Cycle: 180 Level Of Service: F

Street Name: Junipero Serra 19th  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Ignore Ignore Ovl Include  
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

Volume Module:  
Base Vol: 2245 1828 70 0 1917 12 0 85 4216 28 48 28  
Growth 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  
Initial Bse: 2245 1828 70 0 1917 12 0 85 4216 28 48 28  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.95 0.95 0.00 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 2363 1924 0 0 2018 0 0 89 4438 29 51 29  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2363 1924 0 0 2018 0 0 89 4438 29 51 29  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2363 1924 0 0 2018 0 0 89 4438 29 51 29

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 0.91 0.95 0.91 0.89 0.91 1.00 0.98 0.73 0.68 0.93 0.93  
Lanes: 2.23 1.77 0.00 0.00 4.00 0.00 0.00 1.00 3.00 1.00 0.63 0.37  
Final Sat.: 3731 3038 0 0 6778 0 0 1862 4178 1300 1111 648

Capacity Analysis Module:  
Vol/Sat: 0.63 0.63 0.00 0.00 0.30 0.00 0.00 0.05 1.06 0.02 0.05 0.05  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.54 0.54 0.54 0.20 0.20 0.20 0.09 0.09 0.68 0.09 0.09 0.09  
Volume/Cap: 1.17 1.17 0.00 0.00 1.49 0.00 0.00 0.53 1.56 0.25 0.51 0.51  
Delay/Veh: 97.1 97.1 0.0 0.0 264 0.0 0.0 55.2 260.0 47.5 54.4 54.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 97.1 97.1 0.0 0.0 264 0.0 0.0 55.2 260.0 47.5 54.4 54.4  
LOS by Move: F F A A F A A E F D D D  
HCM2kAvgQ: 58 58 0 0 40 0 0 3 125 1 3 3

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Existing Weekend

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #1110 19th / Sloat

Cycle (sec): 100 Critical Vol./Cap.(X): 1.445  
Loss Time (sec): 9 Average Delay (sec/veh): 56.0  
Optimal Cycle: 180 Level Of Service: E

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2032 83 275 2702 314 266 1157 123 0 1123 426  
Growth 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  
Initial Bse: 0 2032 83 275 2702 314 266 1157 123 0 1123 426  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 0 2139 87 289 2844 331 280 1218 129 0 1182 448  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2139 87 289 2844 331 280 1218 129 0 1182 448  
PCE 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  
MLF 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  
FinalVolume: 0 2139 87 289 2844 331 280 1218 129 0 1182 448

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.88 0.93 0.88 0.87 0.60 0.87 0.86 1.00 0.89 0.68  
Lanes: 0.00 2.88 0.12 1.00 2.68 0.32 1.00 2.71 0.29 0.00 3.00 1.00  
Final Sat.: 0 4853 198 1769 4476 520 1134 4492 478 0 5083 1283

Capacity Analysis Module:  
Vol/Sat: 0.00 0.44 0.44 0.16 0.64 0.64 0.25 0.27 0.27 0.00 0.23 0.35  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.18 0.61 0.61 0.30 0.30 0.30 0.00 0.24 0.24  
Volume/Cap: 0.00 1.02 1.02 0.90 1.04 1.04 1.01 0.91 0.91 0.00 0.97 1.46  
Delay/Veh: 0.0 50.5 50.5 70.4 38.1 38.1 24.6 42.1 42.1 0.0 57.0 260.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 50.5 50.5 70.4 38.1 38.1 24.6 42.1 42.1 0.0 57.0 260.5  
LOS by Move: A D D E D D C D D A E F  
HCM2kAvgQ: 0 27 27 12 47 47 15 19 18 0 18 33

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing Weekend

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #1140 19th / Winston

Cycle (sec): 100 Critical Vol./Cap.(X): 0.899  
Loss Time (sec): 13 Average Delay (sec/veh): 42.0  
Optimal Cycle: 111 Level Of Service: D

Street Name: 19th Winston  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Permitted Permitted Permitted  
Rights: Include Include AddLane Include  
Min. Green: 16 45 45 45 45 45 24 24 24 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 424 1667 58 0 2144 200 155 253 325 17 319 25  
Growth 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  
Initial Bse: 424 1667 58 0 2144 200 155 253 325 17 319 25  
User 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  
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95  
PHF Volume: 446 1755 61 0 2257 211 163 266 342 18 336 26  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 446 1755 61 0 2257 211 163 266 342 18 336 26  
PCE 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  
MLF 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  
FinalVolume: 446 1755 61 0 2257 211 163 266 342 18 336 26

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.89 0.88 1.00 1.34 0.72 0.25 0.19 0.69 0.85 0.86 0.85  
Lanes: 2.00 2.90 0.10 0.00 3.00 1.00 0.97 2.03 1.00 0.09 1.77 0.14  
Final Sat.: 3432 4887 170 0 7625 1367 459 748 1309 154 2881 226

Capacity Analysis Module:  
Vol/Sat: 0.13 0.36 0.36 0.00 0.30 0.15 0.36 0.36 0.26 0.12 0.12 0.12  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.16 0.44 0.44 0.44 0.44 0.44 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.81 0.82 0.82 0.00 0.67 0.35 1.34 1.34 0.99 0.44 0.44 0.44  
Delay/Veh: 53.0 24.2 24.2 0.0 20.0 17.3 210.5 211 81.5 32.2 32.2 32.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 53.0 24.2 24.2 0.0 20.0 17.3 210.5 211 81.5 32.2 32.2 32.2  
LOS by Move: D C C A B B F F F C C C  
HCM2kAvgQ: 7 17 17 0 18 4 13 11 16 5 5 5

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Existing Weekend

Level of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1150 19th / Buckingham  
\*\*\*\*\*

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: D[ 30.2]

Street Name: 19th Buckingham

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L-T-R). Rows include Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0 0 3 0 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across four approaches.

Critical Gap Module table with columns for Critical Gap (6.9) and FollowUpTim (3.3).

Capacity Module table with columns for Potent Cap, Move Cap, and Volume/Cap (0.54).

Level Of Service Module table with columns for 2Way95thQ (3.0) and Control Del (30.2).

Movement table with columns for Shared Cap, Shared Queue, Shrd ConDel, Shared LOS, ApproachDel (30.2), and ApproachLOS (D).

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing Weekend

Level of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.673

Loss Time (sec): 9 Average Delay (sec/veh): 14.3

Optimal Cycle: 100 Level Of Service: B

Street Name: 19th Holloway

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L-T-R). Rows include Control (Permitted), Rights (Include), and Lanes (0 0 2 1 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, PCE Adj, MLF Adj, and Final Volume across four approaches.

Saturation Flow Module table with columns for Sat/Lane (1900) and Adjustment (1.00).

Capacity Analysis Module table with columns for Vol/Sat (0.00), Crit Moves (\*\*\*\*), Green/Cycle (0.00), Volume/Cap (0.00), Delay/Veh (11.4), User DelAdj (1.00), AdjDel/Veh (11.4), LOS by Move (A B B A B A C C C C C C), and HCM2kAvgQ (0 15 15 0 25 1 3 3 3 3 3 3).

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Existing Weekend

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 1.369  
Loss Time (sec): 15 Average Delay (sec/veh): 25.1  
Optimal Cycle: 180 Level Of Service: C  
\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Split Phase		Split Phase								
Rights:	WideBypass		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	535	223	1076	498	0	0	0	0	216	0	1034
Growth 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
Initial Bse:	0	535	223	1076	498	0	0	0	0	216	0	1034
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	563	235	1133	0	0	0	0	0	227	0	1088
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	563	235	1133	0	0	0	0	0	227	0	1088
PCE 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
MLF 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
FinalVolume:	0	563	235	1133	0	0	0	0	0	227	0	1088

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.16	0.15	0.33	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.69
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	0.77	0.72	0.77	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.69
Delay/Veh:	0.0	48.0	52.6	26.2	0.0	0.0	0.0	0.0	0.0	42.8	0.0	2.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	48.0	52.6	26.2	0.0	0.0	0.0	0.0	0.0	42.8	0.0	2.5
LOS by Move:	A	D	D	C	A	A	A	A	A	D	A	A
HCM2kAvgQ:	0	11	8	16	0	0	0	0	0	7	0	2

Note: Queue reported is the number of cars per lane.

Tier 1 Conditions  
Weekday AM Peak Hour



19th Ave CS  
Tier 1

## Scenario Report

Scenario: Tier 1 AM  
Command: Default Command  
Volume: Tier 1 AM  
Geometry: Existing AM  
Impact Fee: Default Impact Fee  
Trip Generation: No Projects  
Trip Distribution: AM  
Paths: Tier 2/3  
Routes: Tier 2/3  
Configuration: Existing

19th Ave CS  
Tier 1

Impact Analysis Report  
Level Of Service

Intersection	LOS	Base		LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
#1010 Claremont / Taraval / Dewey /	A	6.9	0.657	A	6.9	0.657	+ 0.000 V/C
#1020 Santa Clara / Portola / Vicent	C	30.5	0.848	C	30.5	0.848	+ 0.000 D/V
#1030 Junipero Serra / Sloat / West	F	93.4	1.087	F	93.4	1.087	+ 0.000 D/V
#1040 Junipero Serra / Ocean / Eucal	D	41.7	0.770	D	41.7	0.770	+ 0.000 D/V
#1050 Junipero Serra / Winston / Mer	D	35.7	0.639	D	35.7	0.639	+ 0.000 D/V
#1060 Junipero Serra / Holloway	C	33.2	0.683	C	33.2	0.683	+ 0.000 D/V
#1070 Junipero Serra / 19th	F	96.4	0.951	F	96.4	0.951	+ 0.000 D/V
#1075 Junipero Serra / Chumasero	A	2.2	0.701	A	2.2	0.701	+ 0.000 D/V
#1080 Junipero Serra / I-280 NB On-R	D	40.4	0.796	D	40.4	0.796	+ 0.000 D/V
#1090 Junipero Serra / I-280 SB On-R	C	20.5	0.574	C	20.5	0.574	+ 0.000 D/V
#1100 19th / Taraval	C	26.9	0.823	C	26.9	0.823	+ 0.000 D/V
#1110 19th / Sloat	F	111.3	1.475	F	111.3	1.475	+ 0.000 D/V
#1120 19th / Ocean	D	44.8	1.098	D	46.9	1.101	+ 2.044 D/V
#1130 19th / Eucalyptus	C	22.7	0.840	C	22.7	0.840	-0.037 D/V
#1140 19th / Winston	D	52.9	0.991	D	52.9	0.991	+ 0.000 D/V
#1150 19th / Buckingham	F	60.8	0.699	F	60.8	0.699	+ 0.000 D/V
#1160 19th / Holloway	E	65.9	0.859	E	65.9	0.859	+ 0.000 D/V
#1170 19th / Crespi	E	58.0	0.770	E	58.1	0.770	+ 0.050 D/V
#1181 Chumasero / Brotherhood	F	99.6	0.973	F	99.6	0.973	+ 0.000 D/V
#1190 Sunset / Taraval	C	21.8	0.724	C	21.8	0.724	+ 0.000 D/V
#1200 Sunset / Ocean	B	12.1	0.612	B	12.1	0.612	+ 0.000 D/V
#1210 Skyline / Sloat / 39th	C	17.2	0.693	C	17.2	0.693	+ 0.000 V/C
#1221 Skyline / Lake Merced (WBR)	C	15.2	0.213	C	15.2	0.213	+ 0.000 D/V
#1222 Skyline / Lake Merced (WBLT)	F	54.5	0.392	F	54.5	0.392	+ 0.000 D/V

19th Ave CS  
Tier 1

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
#1230 Sunset / Lake Merced	F 166.2	0.626	F 166.2	0.626	+ 0.000 D/V
#1240 Lake Merced / Winston	C 30.1	0.698	C 29.2	0.698	-0.868 D/V
#1250 Lake Merced / Font	E 64.2	0.753	E 64.6	0.753	+ 0.314 D/V
#1263 Lake Merced / Higuera	F 98.9	0.786	F 98.9	0.786	+ 0.000 D/V
#1270 Lake Merced / Brotherhood	F 100.4	2.124	F 100.3	2.124	-0.060 D/V

19th Ave CS  
Tier 1

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 6.9      Level Of Service: A  
\*\*\*\*\*

Street Name:	Claremont			Taraval / Dewey		
	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign
Lanes:	1	1	1	1	1	1

Volume Module:

Base Vol:	3	7	221	10	60	37	1	231	27	313	337	84
Growth Adj:	1.03	1.02	1.02	1.02	1.02	1.03	1.02	1.01	1.02	1.03	1.04	1.03
Initial Bse:	3	7	224	10	61	38	1	233	27	323	351	87
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	7	224	10	61	38	1	233	27	323	351	87
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	3	7	231	10	63	39	1	241	28	333	361	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	7	231	10	63	39	1	241	28	333	361	89
PCE 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
MLF 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
FinalVolume:	3	7	231	10	63	39	1	241	28	333	361	89

PCE Module:

AutoPCE:	3	7	231	10	63	39	1	241	28	333	361	89
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	3	7	231	10	63	39	1	241	28	333	361	89

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	252	698	407	12
MaxVolume:	1064	823	980	1194
PedVolume:	0	0	0	0
AdjMaxVol:	1064	823	980	1194
ApproachVol:	242	113	270	784
ApproachV/C:	0.23	0.14	0.28	0.66
ApproachDel:	4.4	5.1	5.1	8.6
ApproachLOS:	A	A	A	A
Queue:	0.9	0.5	1.1	5.2

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.848  
Loss Time (sec): 11 Average Delay (sec/veh): 30.5  
Optimal Cycle: 80 Level Of Service: C

\*\*\*\*\*  
Street Name: Santa Clara / Vicente Portola  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	23	23	23	23	23	23	9	36	36	9	36	36
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1	0	0	1	0	0	1	0	0	1

Volume Module:  
Base Vol: 18 264 86 82 202 30 24 1057 17 120 859 81  
Growth Adj: 1.05 1.04 1.09 1.12 1.10 1.08 1.09 1.13 1.12 1.08 1.05 1.05  
Initial Bse: 19 276 94 92 223 32 26 1197 19 129 903 85  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 19 276 94 92 223 32 26 1197 19 129 903 85  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 19 284 97 95 230 33 27 1234 20 133 931 87  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 19 284 97 95 230 33 27 1234 20 133 931 87  
PCE 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  
MLF 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  
FinalVolume: 19 284 97 95 230 33 27 1234 20 133 931 87

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.93 0.93 0.62 0.62 0.62 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.05 0.71 0.24 0.26 0.65 0.09 1.00 1.97 0.03 1.00 1.83 0.17  
Final Sat.: 85 1249 424 314 763 111 1769 3476 55 1769 3192 300

Capacity Analysis Module:  
Vol/Sat: 0.23 0.23 0.23 0.30 0.30 0.30 0.02 0.36 0.36 0.08 0.29 0.29  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.30 0.30 0.30 0.30 0.30 0.30 0.11 0.45 0.45 0.11 0.45 0.45  
Volume/Cap: 0.76 0.76 0.76 1.00 1.00 1.00 0.14 0.79 0.79 0.67 0.65 0.65  
Delay/Veh: 35.2 35.2 35.2 76.7 76.7 76.7 33.4 22.8 22.8 50.6 19.2 19.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 35.2 35.2 35.2 76.7 76.7 76.7 33.4 22.8 22.8 50.6 19.2 19.2  
LOS by Move: D D D E E E C C C D B B  
HCM2kAvgQ: 11 11 11 15 15 15 1 16 16 5 11 11

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.087  
Loss Time (sec): 16 Average Delay (sec/veh): 93.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Ignore			Include		
Min. Green:	16	48	48	27	27	27	20	20	20	20	20	20
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	3	0	1	0	0	2	1	0	1	0	1	0

Volume Module:  
Base Vol: 972 1137 20 0 1092 176 646 416 322 23 347 8  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 1129 1292 23 0 1192 200 750 494 367 26 412 9  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1129 1292 23 0 1192 200 750 494 367 26 412 9  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.00 0.97 0.97 0.97  
PHF Volume: 1164 1332 24 0 1229 207 774 509 0 27 424 10  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1164 1332 24 0 1229 207 774 509 0 27 424 10  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1164 1332 24 0 1229 207 774 509 0 27 424 10

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3.00 1.96 0.04 0.00 2.57 0.43 3.00 1.00 1.00 0.12 1.84 0.04  
Final Sat.: 5096 3430 62 0 4298 723 5096 1843 1900 206 3237 73

Capacity Analysis Module:  
Vol/Sat: 0.23 0.39 0.39 0.00 0.29 0.29 0.15 0.28 0.00 0.13 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.18 0.44 0.44 0.00 0.26 0.26 0.22 0.22 0.00 0.19 0.19 0.19  
Volume/Cap: 1.26 0.89 0.89 0.00 1.11 1.11 0.69 1.26 0.00 0.69 0.69 0.69  
Delay/Veh: 169.2 35.0 35.0 0.0 101 100.9 41.3 177 0.0 45.3 45.3 45.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 169.2 35.0 35.0 0.0 101 100.9 41.3 177 0.0 45.3 45.3 45.3  
LOS by Move: F D D A F F D F A D D D  
HCM2kAvgQ: 23 21 21 0 27 27 9 32 0 9 9 9

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 1

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1040 Junipero Serra / Ocean / Eucalyptus
Cycle (sec): 100 Critical Vol./Cap.(X): 0.770
Loss Time (sec): 14 Average Delay (sec/veh): 41.7
Optimal Cycle: 100 Level Of Service: D

Street Name: Junipero Serra Ocean / Eucalyptus
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: Include Include Ovl Ovl
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:
Base Vol: 189 1678 46 326 1061 90 85 384 45 54 368 324
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16
Initial Bse: 220 1907 53 371 1159 103 99 456 51 62 437 376
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 220 1907 53 371 1159 103 99 456 51 62 437 376
User 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
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 226 1966 55 383 1194 106 102 470 53 63 450 388
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 226 1966 55 383 1194 106 102 470 53 63 450 388
PCE 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
MLF 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
FinalVolume: 226 1966 55 383 1194 106 102 470 53 63 450 388

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.88 0.88 0.91 0.89 0.89 0.60 0.60 0.83 0.98 0.98 0.83
Lanes: 1.00 2.92 0.08 2.00 2.76 0.24 0.36 1.64 1.00 0.12 0.88 1.00
Final Sat.: 1751 4876 137 3466 4660 412 408 1881 1583 229 1625 1583

Capacity Analysis Module:
Vol/Sat: 0.13 0.40 0.40 0.11 0.26 0.26 0.25 0.25 0.03 0.28 0.28 0.25
Crit Moves: \*\*\*\*
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43
Volume/Cap: 1.17 0.94 0.94 0.69 0.53 0.53 0.93 0.93 0.09 1.03 1.03 0.57
Delay/Veh: 164.3 32.9 32.9 46.6 15.3 15.3 57.4 57.4 20.2 83.3 83.3 25.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 164.3 32.9 32.9 46.6 15.3 15.3 57.4 57.4 20.2 83.3 83.3 25.0
LOS by Move: F C C D B B E E C F F C
HCM2kAvgQ: 11 20 20 5 7 7 13 13 1 23 23 9

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 1

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1050 Junipero Serra / Winston / Mercedes
Cycle (sec): 100 Critical Vol./Cap.(X): 0.639
Loss Time (sec): 14 Average Delay (sec/veh): 35.7
Optimal Cycle: 100 Level Of Service: D

Street Name: Junipero Serra Winston / Mercedes
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: WideBypass Include Include
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1 0 1 0 1

Volume Module:
Base Vol: 186 1681 29 103 1024 72 80 63 73 64 147 62
Growth Adj: 1.07 1.14 1.16 1.14 1.09 1.05 1.16 1.19 1.14 1.05 1.00 1.07
Initial Bse: 199 1911 34 117 1118 75 93 75 83 67 147 66
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 199 1911 34 117 1118 75 93 75 83 67 147 66
User 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
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 205 1970 35 121 1153 78 96 77 86 69 152 68
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 205 1970 35 121 1153 78 96 77 86 69 152 68
PCE 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
MLF 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
FinalVolume: 205 1970 35 121 1153 78 96 77 86 69 152 68

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.59 0.98 0.83 0.69 0.98 0.83
Lanes: 1.00 2.95 0.05 1.00 2.81 0.19 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1769 4980 88 1769 4720 318 1125 1862 1583 1315 1862 1583

Capacity Analysis Module:
Vol/Sat: 0.12 0.40 0.40 0.07 0.24 0.24 0.09 0.04 0.05 0.05 0.08 0.04
Crit Moves: \*\*\*\*
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27
Volume/Cap: 0.61 0.99 0.99 0.36 0.61 0.61 0.32 0.15 0.20 0.19 0.30 0.16
Delay/Veh: 45.1 44.1 44.1 38.2 22.7 22.7 31.8 28.4 29.2 29.3 30.5 28.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 45.1 44.1 44.1 38.2 22.7 22.7 31.8 28.4 29.2 29.3 30.5 28.6
LOS by Move: D D D D C C C C C C C C
HCM2kAvgQ: 5 24 24 3 10 10 2 2 2 2 4 2

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.683  
Loss Time (sec): 14 Average Delay (sec/veh): 33.2  
Optimal Cycle: 100 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 234 1520 60 114 956 84 163 106 16 162 129 118  
Growth Adj: 1.08 1.14 1.07 1.05 1.09 1.06 1.07 1.01 1.05 1.06 1.02 1.08  
Initial Bse: 253 1728 64 120 1044 89 175 107 17 171 132 128  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 253 1728 64 120 1044 89 175 107 17 171 132 128  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 261 1781 66 124 1076 92 180 110 17 177 136 131  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 261 1781 66 124 1076 92 180 110 17 177 136 131  
PCE 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  
MLF 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  
FinalVolume: 261 1781 66 124 1076 92 180 110 17 177 136 131

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.62 0.98 0.83 0.67 0.98 0.83  
Lanes: 1.00 2.89 0.11 1.00 2.76 0.24 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4876 182 1769 4628 394 1184 1862 1583 1270 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.15 0.37 0.37 0.07 0.23 0.23 0.15 0.06 0.01 0.14 0.07 0.08  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.78 0.94 0.94 0.37 0.60 0.60 0.54 0.21 0.04 0.50 0.26 0.30  
Delay/Veh: 54.5 36.5 36.5 38.3 23.3 23.3 36.9 28.5 26.4 35.0 29.2 30.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 54.5 36.5 36.5 38.3 23.3 23.3 36.9 28.5 26.4 35.0 29.2 30.0  
LOS by Move: D D D D C C D C C D C C  
HCM2kAvgQ: 7 19 19 3 9 9 5 3 0 5 3 3

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.951  
Loss Time (sec): 0 Average Delay (sec/veh): 96.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Ignore Ovl Include  
Min. Green: 46 46 46 18 18 18 9 9 9 9 9 9  
Y+R: 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0  
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 2208 1679 8 0 1210 4 0 71 3047 32 56 62  
Growth Adj: 1.13 1.14 1.12 1.10 1.09 1.11 1.12 1.10 1.10 1.11 1.12 1.13  
Initial Bse: 2494 1908 9 0 1321 4 0 78 3345 35 63 70  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2494 1908 9 0 1321 4 0 78 3345 35 63 70  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.00 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 2571 1967 9 0 1362 0 0 81 3449 37 65 72  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2571 1967 9 0 1362 0 0 81 3449 37 65 72  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2571 1967 9 0 1362 0 0 81 3449 37 65 72

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.97 0.91 0.91 0.91 0.89 0.91 1.00 0.98 0.81 0.44 0.90 0.90  
Lanes: 2.20 1.79 0.01 0.00 4.00 0.00 0.00 1.00 3.00 1.00 0.47 0.53  
Final Sat.: 4035 3088 15 0 6778 0 0 1862 4596 827 811 904

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.64 0.64 0.64 0.00 0.20 0.00 0.00 0.04 0.75 0.04 0.08 0.08  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.51 0.51 0.51 0.20 0.20 0.20 0.10 0.10 0.67 0.10 0.10 0.10  
Volume/Cap: 1.25 1.25 1.25 0.00 1.00 0.00 0.00 0.43 1.13 0.44 0.80 0.80  
Delay/Veh: 131.1 131 131.1 0.0 61.6 0.0 0.0 45.3 67.1 54.3 70.6 70.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 131.1 131 131.1 0.0 61.6 0.0 0.0 45.3 67.1 54.3 70.6 70.6  
LOS by Move: F F F A E A A D E D E E  
HCM2kAvgQ: 67 61 61 0 14 0 0 3 57 2 6 6

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 0.796  
Loss Time (sec): 12 Average Delay (sec/veh): 40.4  
Optimal Cycle: 81 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Ovl Include Ovl  
Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

Volume Module:  
Base Vol: 337 335 364 104 169 262 665 779 99 59 746 303  
Growth Adj: 1.05 1.12 1.14 1.00 1.00 1.00 1.14 1.16 1.00 1.00 1.00 1.05  
Initial Bse: 354 374 414 104 169 262 756 902 99 59 746 318  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 354 374 414 104 169 262 756 902 99 59 746 318  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 364 386 427 107 174 270 780 930 102 61 769 328  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 364 386 427 107 174 270 780 930 102 61 769 328  
PCE 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  
MLF 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  
FinalVolume: 364 386 427 107 174 270 780 930 102 61 769 328

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.86 0.86 0.93 0.89 0.89 0.88 0.90 0.90 0.89 0.89 0.83  
Lanes: 2.00 1.42 1.58 1.00 0.78 1.22 2.00 2.00 1.00 1.00 3.00 1.00  
Final Sat.: 3432 2320 2567 1769 1327 2058 3333 3436 1718 1688 5063 1583

Capacity Analysis Module:  
Vol/Sat: 0.11 0.17 0.17 0.06 0.13 0.13 0.23 0.27 0.06 0.04 0.15 0.21  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.21 0.21 0.40 0.16 0.16 0.50 0.34 0.34 0.34 0.19 0.19 0.36  
Volume/Cap: 0.51 0.80 0.42 0.37 0.80 0.26 0.69 0.80 0.17 0.19 0.80 0.58  
Delay/Veh: 44.4 51.4 27.2 47.2 58.0 17.7 36.4 39.4 29.0 42.5 52.6 34.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 44.4 51.4 27.2 47.2 58.0 17.7 36.4 39.4 29.0 42.5 52.6 34.3  
LOS by Move: D D C D E B D D C D D C  
HCM2kAvgQ: 7 12 8 4 10 5 14 17 3 2 12 11

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.574  
Loss Time (sec): 8 Average Delay (sec/veh): 20.5  
Optimal Cycle: 37 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 2 0 0 0 0 0 0 0 2 1 0 2 0 2 0 0

Volume Module:  
Base Vol: 0 0 316 0 0 0 0 1227 419 499 1001 0  
Growth Adj: 1.02 1.00 1.01 1.13 1.23 1.13 1.01 1.03 1.13 1.13 1.03 1.02  
Initial Bse: 0 0 320 0 0 0 0 1261 472 564 1035 0  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 320 0 0 0 0 1261 472 564 1035 0  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 0 330 0 0 0 0 1300 487 581 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 330 0 0 0 0 1300 487 581 0 0  
PCE 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  
MLF 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  
FinalVolume: 0 0 330 0 0 0 0 1300 487 581 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.86 0.86 0.90 0.95 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.18 0.82 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3547 1328 3432 3610 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.12 0.00 0.00 0.00 0.00 0.37 0.37 0.17 0.00 0.00  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.00 0.00 0.29 0.00 0.00 0.00 0.00 0.64 0.64 0.29 0.00 0.00  
Volume/Cap: 0.00 0.00 0.40 0.00 0.00 0.00 0.00 0.57 0.57 0.57 0.00 0.00  
Delay/Veh: 0.0 0.0 34.2 0.0 0.0 0.0 0.0 12.6 12.6 36.7 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 34.2 0.0 0.0 0.0 0.0 12.6 12.6 36.7 0.0 0.0  
LOS by Move: A A C A A A A A B B D A A  
HCM2kAvgQ: 0 0 6 0 0 0 0 14 14 9 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 1

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1100 19th / Taraval

Cycle (sec): 90 Critical Vol./Cap.(X): 0.823
Loss Time (sec): 10 Average Delay (sec/veh): 26.9
Optimal Cycle: 89 Level Of Service: C

Table with columns for Street Name (19th, Taraval), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Include), Rights, Min. Green, Y+R, Lanes.

Table with columns for Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns for Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 1

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1110 19th / Sloat

Cycle (sec): 90 Critical Vol./Cap.(X): 1.475
Loss Time (sec): 9 Average Delay (sec/veh): 111.3
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (19th, Sloat), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected, Permit+Prot, Include), Rights, Min. Green, Y+R, Lanes.

Table with columns for Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns for Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.101  
Loss Time (sec): 9 Average Delay (sec/veh): 46.9  
Optimal Cycle: 180 Level Of Service: D

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: WideBypass WideBypass Include Include  
Min. Green: 54 54 54 54 54 54 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 1 0 0 0 2 1 0 1 0 0 1 0 0

Volume Module:  
Base Vol: 2 1809 45 0 2766 187 83 274 47 21 230 157  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 2 2056 52 0 3020 213 96 325 54 24 273 182  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2 2056 52 0 3020 213 96 325 54 24 273 182  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 2 2120 54 0 3114 220 99 335 55 25 281 188  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2 2120 54 0 3114 220 99 335 55 25 281 188  
PCE 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  
MLF 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  
FinalVolume: 2 2120 54 0 3114 220 99 335 55 25 281 188

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.78 0.78 0.78 1.00 0.88 0.88 0.83 0.96 0.96 0.79 0.79 0.79  
Lanes: 0.01 2.92 0.07 0.00 2.80 0.20 1.00 0.86 0.14 0.05 0.57 0.38  
Final Sat.: 5 4330 110 0 4701 332 1575 1565 258 75 856 572

Capacity Analysis Module:  
Vol/Sat: 0.49 0.49 0.49 0.00 0.66 0.66 0.06 0.21 0.21 0.33 0.33 0.33  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.60 0.60 0.60 0.60 0.60 0.60 0.29 0.29 0.29 0.29 0.29 0.29  
Volume/Cap: 0.82 0.82 0.82 0.00 1.10 1.10 0.21 0.73 0.73 1.12 1.12 1.12  
Delay/Veh: 11.0 11.0 11.0 0.0 62.8 62.8 25.0 36.9 36.9 109.9 110 109.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 11.0 11.0 11.0 0.0 62.8 62.8 25.0 36.9 36.9 109.9 110 109.9  
LOS by Move: B B B A E E C D D F F F  
HCM2kAvgQ: 14 14 14 0 46 46 2 10 10 24 24 24

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.840  
Loss Time (sec): 9 Average Delay (sec/veh): 22.7  
Optimal Cycle: 90 Level Of Service: C

Street Name: 19th Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 56 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 1848 21 0 2818 58 74 125 90 10 148 14  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 0 2100 24 0 3077 66 86 148 103 11 176 16  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2100 24 0 3077 66 86 148 103 11 176 16  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2165 25 0 3172 68 89 153 106 12 181 17  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2165 25 0 3172 68 89 153 106 12 181 17  
PCE 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  
MLF 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  
FinalVolume: 0 2165 25 0 3172 68 89 153 106 12 181 17

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.68 0.68 0.68 0.95 0.95 0.95  
Lanes: 0.00 2.97 0.03 0.00 2.94 0.06 1.00 1.18 0.82 0.06 0.86 0.08  
Final Sat.: 0 5015 58 0 4961 107 1298 1535 1061 101 1554 144

Capacity Analysis Module:  
Vol/Sat: 0.00 0.43 0.43 0.00 0.64 0.64 0.07 0.10 0.10 0.12 0.12 0.12  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.62 0.62 0.62 0.62 0.62 0.62 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.00 0.69 0.69 0.00 1.03 1.03 0.24 0.35 0.35 0.41 0.41 0.41  
Delay/Veh: 0.0 7.1 7.1 0.0 32.4 32.4 25.2 26.7 26.7 28.6 28.6 28.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 7.1 7.1 0.0 32.4 32.4 25.2 26.7 26.7 28.6 28.6 28.6  
LOS by Move: A A A A C C C C C C C C  
HCM2kAvgQ: 0 10 10 0 36 36 2 3 3 5 5 5

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 1

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\* Intersection #1140 19th / Winston \*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.991
Loss Time (sec): 13 Average Delay (sec/veh): 52.9
Optimal Cycle: 159 Level Of Service: D

\*\*\*\*\* Street Name: 19th Winston \*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted
Rights: Include Include AddLane Include
Min. Green: 15 43 43 43 43 43 18 18 18 18 18 18
Y+R: 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 386 1920 59 0 2985 60 56 164 171 51 291 28
Growth Adj: 1.06 1.14 1.00 1.00 1.09 1.04 1.00 1.00 1.00 1.04 1.00 1.06
Initial Bse: 409 2182 59 0 3260 62 56 164 171 53 291 30
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 409 2182 59 0 3260 62 56 164 171 53 291 30
User 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
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 421 2250 61 0 3360 64 58 169 176 54 300 31
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 421 2250 61 0 3360 64 58 169 176 54 300 31
PCE 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
MLF 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
FinalVolume: 421 2250 61 0 3360 64 58 169 176 54 300 31

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.89 0.89 1.00 1.11 0.83 0.30 0.23 0.83 0.80 0.80 0.80
Lanes: 2.00 2.92 0.08 0.00 3.00 1.00 1.00 2.00 1.00 0.28 1.56 0.16
Final Sat.: 3432 4930 133 0 6354 1583 575 862 1583 430 2367 241

Capacity Analysis Module:
Vol/Sat: 0.12 0.46 0.46 0.00 0.53 0.04 0.10 0.20 0.11 0.13 0.13 0.13
Crit Moves: \*\*\*\*
Green/Cycle: 0.17 0.48 0.48 0.48 0.48 0.48 0.20 0.20 0.20 0.20 0.20 0.20
Volume/Cap: 0.74 0.96 0.96 0.00 1.11 0.08 0.50 0.98 0.56 0.63 0.63 0.63
Delay/Veh: 43.8 28.5 28.5 0.0 72.4 10.4 36.0 90.1 39.3 38.0 38.0 38.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 43.8 28.5 28.5 0.0 72.4 10.4 36.0 90.1 39.3 38.0 38.0 38.0
LOS by Move: D C C A E B D F D D D D
HCM2kAvgQ: 5 21 21 0 53 1 2 5 5 5 5 5

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 1

Level of Service Computation Report 2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\* Intersection #1150 19th / Buckingham \*\*\*\*\*

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: F[ 60.8]

\*\*\*\*\* Street Name: 19th Buckingham \*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 3 0 0 0 0 3 0 1 0 0 0 0 1 0 0 0 0 0

Volume Module:
Base Vol: 0 2365 0 0 3145 61 0 0 122 0 0 0
Growth Adj: 1.00 1.14 1.04 1.02 1.09 1.00 1.04 1.00 1.02 1.00 1.00 1.00
Initial Bse: 0 2688 0 0 3434 61 0 0 124 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 2688 0 0 3434 61 0 0 124 0 0 0
User 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
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 0 2771 0 0 3541 63 0 0 128 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 2771 0 0 3541 63 0 0 128 0 0 0

Critical Gap Module:
Critical Gp: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx 6.9 xxxxxx xxxxx xxxxxx
FollowUpTim: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx 3.3 xxxxxx xxxxx xxxxxx

Capacity Module:
Conflict Vol: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx 1180 xxxxx xxxxx xxxxxx
Potent Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx 183 xxxxx xxxxx xxxxxx
Move Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx 183 xxxxx xxxxx xxxxxx
Volume/Cap: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx 0.70 xxxxx xxxxx xxxxxx

Level of Service Module:
2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx 4.3 xxxxx xxxxx xxxxxx
Control Del: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx 60.8 xxxxxx xxxxx xxxxxx
LOS by Move: \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxx xxxxxx
Shrd ConDel: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxx xxxxxx
Shared LOS: \*
ApproachDel: xxxxxxx xxxxxxx 60.8 xxxxxxx
ApproachLOS: \*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.859  
Loss Time (sec): 9 Average Delay (sec/veh): 65.9  
Optimal Cycle: 90 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 48 48 48 48 48 48 33 33 33 33 33 33  
Y+R: 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0  
Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 0 2288 130 0 3078 138 56 143 55 37 370 50  
Growth Adj: 1.07 1.14 1.18 1.16 1.09 1.05 1.18 1.23 1.16 1.05 1.00 1.07  
Initial Bse: 0 2601 154 0 3361 144 66 176 64 39 370 53  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2601 154 0 3361 144 66 176 64 39 370 53  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2681 158 0 3465 149 68 181 66 40 381 55  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2681 158 0 3465 149 68 181 66 40 381 55  
PCE 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  
MLF 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  
FinalVolume: 0 2681 158 0 3465 149 68 181 66 40 381 55

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.88 0.88 1.00 0.98 0.83 0.68 0.68 0.68 0.82 0.82 0.82  
Lanes: 0.00 2.83 0.17 0.00 3.00 1.00 0.43 1.15 0.42 0.17 1.60 0.23  
Final Sat.: 0 4761 281 0 5592 1583 556 1475 536 260 2484 358

Capacity Analysis Module:  
Vol/Sat: 0.00 0.56 0.56 0.00 0.62 0.09 0.12 0.12 0.12 0.15 0.15 0.15  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.37 0.37 0.37 0.37 0.37 0.37  
Volume/Cap: 0.00 1.06 1.06 0.00 1.16 0.18 0.33 0.33 0.33 0.42 0.42 0.42  
Delay/Veh: 0.0 49.3 49.3 0.0 91.9 8.2 21.5 21.5 21.5 22.5 22.5 22.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 49.3 49.3 0.0 91.9 8.2 21.5 21.5 21.5 22.5 22.5 22.5  
LOS by Move: A D D A F A C C C C C C  
HCM2kAvgQ: 0 35 35 0 55 1 3 3 3 5 5 5

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.770  
Loss Time (sec): 0 Average Delay (sec/veh): 58.1  
Optimal Cycle: 81 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Crespi  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Include Include  
Min. Green: 48 48 48 53 53 53 22 22 22 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 3 0 0 0 0 3 0 1 1 0 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 2266 0 0 3060 110 152 0 68 0 0 0  
Growth Adj: 1.14 1.14 1.05 1.02 1.09 1.12 1.05 1.00 1.02 1.12 1.14 1.14  
Initial Bse: 0 2576 0 0 3342 123 159 0 70 0 0 0  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2576 0 0 3342 123 159 0 70 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.00 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2655 0 0 3445 0 164 0 72 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2655 0 0 3445 0 164 0 72 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2655 0 0 3445 0 164 0 72 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 1.00 0.93 1.00 0.83 1.00 1.00 1.00  
Lanes: 1.00 3.00 0.00 0.00 3.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 1900 5083 0 0 5083 1900 1769 0 1583 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.52 0.00 0.00 0.68 0.00 0.09 0.00 0.05 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.53 0.53 0.53 0.59 0.59 0.59 0.24 0.24 0.24 0.00 0.00 0.00  
Volume/Cap: 0.00 0.98 0.00 0.00 1.15 0.00 0.38 0.00 0.19 0.00 0.00 0.00  
Delay/Veh: 0.0 27.7 0.0 0.0 83.4 0.0 30.8 0.0 28.0 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 27.7 0.0 0.0 83.4 0.0 30.8 0.0 28.0 0.0 0.0 0.0  
LOS by Move: A C A A F A C A C A A A  
HCM2kAvgQ: 0 33 0 0 53 0 4 0 2 0 0 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumaseero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.973  
Loss Time (sec): 12 Average Delay (sec/veh): 99.6  
Optimal Cycle: 158 Level Of Service: F

\*\*\*\*\*  
Street Name: Chumaseero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 20 20 20 21 47 47 21 47 47  
Y+R: 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0  
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 28 16 99 119 26 54 26 1494 44 175 1656 168  
Growth Adj: 1.08 1.06 1.07 1.01 1.00 1.02 1.07 1.08 1.01 1.02 1.09 1.08  
Initial Bse: 30 17 106 121 26 55 28 1609 45 179 1812 181  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 30 17 106 121 26 55 28 1609 45 179 1812 181  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 31 17 109 124 27 57 29 1659 46 185 1868 187  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 31 17 109 124 27 57 29 1659 46 185 1868 187  
PCE 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  
MLF 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  
FinalVolume: 31 17 109 124 27 57 29 1659 46 185 1868 187

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.64 0.64 0.79 0.44 0.44 0.44 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.23 0.13 0.64 0.60 0.13 0.27 1.00 1.95 0.05 1.00 1.82 0.18  
Final Sat.: 276 155 969 496 107 227 1769 3429 95 1769 3171 317

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.11 0.11 0.11 0.25 0.25 0.25 0.02 0.48 0.48 0.10 0.59 0.59  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.20 0.20 0.20 0.20 0.20 0.21 0.47 0.47 0.21 0.47 0.47  
Volume/Cap: 0.56 0.56 0.56 1.25 1.25 1.25 0.08 1.03 1.03 0.50 1.25 1.25  
Delay/Veh: 44.0 44.0 44.0 194.4 194 194.4 32.1 51.5 51.5 39.5 141 140.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 44.0 44.0 44.0 194.4 194 194.4 32.1 51.5 51.5 39.5 141 140.5  
LOS by Move: D D D F F F C D D D F F  
HCM2kAvgQ: 5 5 5 14 14 14 1 37 37 5 62 62

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.724  
Loss Time (sec): 10 Average Delay (sec/veh): 21.8  
Optimal Cycle: 60 Level Of Service: C

\*\*\*\*\*  
Street Name: Sunset Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 0 2021 17 0 1965 11 79 190 53 83 169 38  
Growth Adj: 1.10 1.12 1.06 1.05 1.08 1.08 1.06 1.01 1.05 1.08 1.08 1.10  
Initial Bse: 0 2254 18 0 2130 12 84 193 56 90 183 42  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2254 18 0 2130 12 84 193 56 90 183 42  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2324 19 0 2196 12 87 199 57 93 188 43  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2324 19 0 2196 12 87 199 57 93 188 43  
PCE 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  
MLF 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  
FinalVolume: 0 2324 19 0 2196 12 87 199 57 93 188 43

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.57 0.95 0.95 0.54 0.95 0.95  
Lanes: 0.00 2.98 0.02 0.00 2.98 0.02 1.00 0.78 0.22 1.00 0.81 0.19  
Final Sat.: 0 5038 40 0 5050 28 1091 1396 403 1028 1473 337

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.00 0.46 0.46 0.00 0.43 0.43 0.08 0.14 0.14 0.09 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 0.95 0.95 0.00 0.90 0.90 0.23 0.41 0.41 0.26 0.36 0.36  
Delay/Veh: 0.0 25.1 25.1 0.0 20.0 20.0 15.1 16.7 16.7 15.7 16.2 16.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 25.1 25.1 0.0 20.0 20.0 15.1 16.7 16.7 15.7 16.2 16.2  
LOS by Move: A C C A B B B B B B B B  
HCM2kAvgQ: 0 22 22 0 18 18 1 4 4 1 3 3

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.612  
Loss Time (sec): 9 Average Delay (sec/veh): 12.1  
Optimal Cycle: 59 Level Of Service: B

\*\*\*\*\*  
Street Name: Sunset Ocean  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 0 1 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1318 12 0 1735 81 54 83 18 47 23 192  
Growth Adj: 1.00 1.00 1.07 1.11 1.07 1.01 1.07 1.15 1.11 1.01 1.00 1.00  
Initial Bse: 0 1318 13 0 1853 82 58 95 20 48 23 192  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1318 13 0 1853 82 58 95 20 48 23 192  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 1359 13 0 1911 85 59 98 21 49 24 198  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1359 13 0 1911 85 59 98 21 49 24 198  
PCE 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  
MLF 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  
FinalVolume: 0 1359 13 0 1911 85 59 98 21 49 24 198

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.87 0.87 0.87 0.71 0.98 0.83  
Lanes: 0.00 2.97 0.03 0.00 2.87 0.13 0.33 0.55 0.12 1.00 1.00 1.00  
Final Sat.: 0 5029 49 0 4839 214 550 907 190 1352 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.27 0.27 0.00 0.39 0.39 0.11 0.11 0.11 0.04 0.01 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 0.51 0.51 0.00 0.74 0.74 0.34 0.34 0.34 0.11 0.04 0.39  
Delay/Veh: 0.0 9.6 9.6 0.0 12.7 12.7 17.5 17.5 17.5 15.1 14.3 18.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 9.6 9.6 0.0 12.7 12.7 17.5 17.5 17.5 15.1 14.3 18.3  
LOS by Move: A A A A B B B B B B B B  
HCM2kAvgQ: 0 5 5 0 12 12 3 3 3 1 0 3

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1210 Skyline / Sloat / 39th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.693  
Loss Time (sec): 0 Average Delay (sec/veh): 17.2  
Optimal Cycle: 0 Level Of Service: C

\*\*\*\*\*  
Street Name: Skyline / 39th Sloat  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Ignore Include Ignore Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 0 1 0

Volume Module:  
Base Vol: 251 0 646 0 14 7 1 331 194 341 280 60  
Growth Adj: 1.19 1.41 1.35 1.15 1.00 1.00 1.35 1.29 1.15 1.00 1.00 1.19  
Initial Bse: 299 0 872 0 14 7 1 427 222 341 280 72  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 299 0 872 0 14 7 1 427 222 341 280 72  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.00 0.97 0.97 0.97 0.97 0.97 0.00 0.97 0.97 0.97  
PHF Volume: 309 0 0 0 14 7 1 440 0 352 289 74  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 309 0 0 0 14 7 1 440 0 352 289 74  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 309 0 0 0 14 7 1 440 0 352 289 74

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 1.00 0.00 2.00 0.00 0.67 0.33 0.01 1.99 1.00 2.00 1.59 0.41  
Final Sat.: 446 0 1023 0 276 138 3 918 498 921 795 208

Capacity Analysis Module:  
Vol/Sat: 0.69 xxxxx 0.00 xxxxx 0.05 0.05 0.48 0.48 0.00 0.38 0.36 0.35  
Crit Moves: \*\*\*\*  
Delay/Veh: 25.6 0.0 0.0 0.0 11.4 11.4 16.7 16.7 0.0 14.8 13.5 13.1  
Delay 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  
AdjDel/Veh: 25.6 0.0 0.0 0.0 11.4 11.4 16.7 16.7 0.0 14.8 13.5 13.1  
LOS by Move: D \* \* \* B B C C \* B B B  
ApproachDel: 25.6 11.4 16.7 14.1  
Delay Adj: 1.00 1.00 1.00 1.00  
ApprAdjDel: 25.6 11.4 16.7 14.1  
LOS by Appr: D B C B  
AllWayAvgQ: 1.9 1.9 0.0 0.0 0.0 0.8 0.8 0.0 0.6 0.5 0.5

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1221 Skyline / Lake Merced (WBR)  
\*\*\*\*\*

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: C[ 15.2]

Street Name: Skyline Lake Merced (WBR)  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 0 0 2 0 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 814 0 90 456 0 0 0 0 0 0 0 75  
Growth Adj: 1.23 1.42 1.30 1.09 1.00 1.02 1.30 1.18 1.09 1.02 1.04 1.23  
Initial Bse: 0 1156 0 98 456 0 0 0 0 0 0 0 92  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1156 0 98 456 0 0 0 0 0 0 0 92  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 1192 0 101 470 0 0 0 0 0 0 0 95  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 1192 0 101 470 0 0 0 0 0 0 0 95

Critical Gap Module:  
Critical Gp:xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.9  
FollowUpTim:xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.3

Capacity Module:  
Cnflct Vol: xxxxx xxxxx xxxxx 1192 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 596  
Potent Cap.: xxxxx xxxxx xxxxx 582 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 447  
Move Cap.: xxxxx xxxxx xxxxx 582 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 447  
Volume/Cap: xxxxx xxxxx xxxxx 0.17 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.21

Level of Service Module:  
2Way95thQ: xxxxx xxxxx xxxxx 0.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.8  
Control Del:xxxxx xxxxx xxxxx 12.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 15.2  
LOS by Move: \* \* \* B \* \* \* \* \* \* \* \* \* \* C  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \*  
ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx 15.2  
ApproachLOS: \* \* \* \* C

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)  
\*\*\*\*\*

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: F[ 54.5]

Street Name: Skyline Lake Merced (WBLT)  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 1 0 1 1 0 0 0 2 0 1 0 0 0 0 0 1 0 0 0

Volume Module:  
Base Vol: 5 814 90 0 423 33 0 0 0 43 5 0  
Growth Adj: 1.23 1.42 1.30 1.09 1.00 1.02 1.30 1.18 1.09 1.02 1.04 1.23  
Initial Bse: 6 1155 117 0 424 34 0 0 0 44 5 0  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 6 1155 117 0 424 34 0 0 0 44 5 0  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 6 1191 121 0 437 35 0 0 0 45 5 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 6 1191 121 0 437 35 0 0 0 45 5 0

Critical Gap Module:  
Critical Gp: 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.8 6.5 xxxxx  
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 4.0 xxxxx

Capacity Module:  
Cnflct Vol: 472 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1482 1736 xxxxx  
Potent Cap.: 1086 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 116 87 xxxxx  
Move Cap.: 1086 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 115 86 xxxxx  
Volume/Cap: 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.39 0.06 xxxxx

Level of Service Module:  
2Way95thQ: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1.6 0.2 xxxxx  
Control Del: 8.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 55.0 49.6 xxxxx  
LOS by Move: A \* \* \* \* \* \* \* \* \* \* F \* E \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \*  
ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx 54.5  
ApproachLOS: \* \* \* \* F

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS Tier 1

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1230 Sunset / Lake Merced

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: F[166.2]

Street Name: Sunset Lake Merced

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Rights: Ignore Ignore Ignore Ignore

Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 1 0 0

Volume Module:

Table with traffic volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for various approaches and movements.

Critical Gap Module:

Table with critical gap and follow-up time data for different movements.

Capacity Module:

Table with capacity data including conflict volume, potent capacity, move capacity, and volume/capacity ratios.

Level of Service Module:

Table with level of service data including 2-way 95th percentile delay and control delay.

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: Shared Queue: Shrd ConDel: Shared LOS: ApproachDel: ApproachLOS:

Table with shared capacity, queue, shared delay, shared LOS, approach delay, and approach LOS data.

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 1

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #1240 Lake Merced / Winston

Cycle (sec): 90 Critical Vol./Cap.(X): 0.698

Loss Time (sec): 9 Average Delay (sec/veh): 29.2

Optimal Cycle: 180 Level Of Service: C

Street Name: Lake Merced Winston

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase

Rights: WideBypass Include Include Include

Min. Green: 34 34 34 17 55 55 0 0 0 25 25 25

Y+R: 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0

Lanes: 0 0 2 1 0 2 0 2 0 0 0 0 0 0 2 0 0 0 1

Volume Module:

Table with traffic volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, PCE Adj, MLF Adj, and Final Volume for various approaches and movements.

Saturation Flow Module:

Table with saturation flow data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with capacity analysis data including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.753  
Loss Time (sec): 7 Average Delay (sec/veh): 64.6  
Optimal Cycle: 90 Level Of Service: E

\*\*\*\*\*  
Street Name: Lake Merced Font  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1746 48 147 1549 0 0 0 0 43 0 304  
Growth Adj: 1.09 1.14 1.07 1.05 1.09 1.07 1.07 1.01 1.05 1.07 1.04 1.09  
Initial Bse: 0 1985 51 154 1692 0 0 0 0 46 0 331  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1985 51 154 1692 0 0 0 0 46 0 331  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.00 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2046 0 159 1744 0 0 0 0 47 0 341  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2046 0 159 1744 0 0 0 0 47 0 341  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2046 0 159 1744 0 0 0 0 47 0 341

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.58 0.00 0.09 0.49 0.00 0.00 0.00 0.00 0.03 0.00 0.22  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.21 0.00 0.54 0.73 0.00 0.00 0.00 0.00 0.11 0.00 0.88  
Delay/Veh: 0.0 119 0.0 41.2 5.1 0.0 0.0 0.0 0.0 26.9 0.0 56.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 119 0.0 41.2 5.1 0.0 0.0 0.0 0.0 26.9 0.0 56.6  
LOS by Move: A F A D A A A A A C A E  
HCM2kAvgQ: 0 55 0 5 9 0 0 0 0 1 0 12

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.786  
Loss Time (sec): 11 Average Delay (sec/veh): 98.9  
Optimal Cycle: 90 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1694 144 41 1601 0 0 0 0 77 0 58  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.10 1.12  
Initial Bse: 0 1925 160 45 1748 0 0 0 0 84 0 65  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1925 160 45 1748 0 0 0 0 84 0 65  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 1985 165 46 1802 0 0 0 0 87 0 67  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1985 165 46 1802 0 0 0 0 87 0 67  
PCE 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  
MLF 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  
FinalVolume: 0 1985 165 46 1802 0 0 0 0 87 0 67

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.92 0.92 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 1.85 0.15 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3228 268 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.61 0.61 0.03 0.51 0.00 0.00 0.00 0.00 0.05 0.00 0.04  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.46 0.46 0.46 0.12 0.66 0.66 0.00 0.00 0.00 0.22 0.22 0.22  
Volume/Cap: 0.00 1.35 1.35 0.21 0.78 0.00 0.00 0.00 0.00 0.22 0.00 0.19  
Delay/Veh: 0.0 182 182.0 37.8 7.2 0.0 0.0 0.0 0.0 29.9 0.0 29.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 182 182.0 37.8 7.2 0.0 0.0 0.0 0.0 29.9 0.0 29.6  
LOS by Move: A F F D A A A A A C A C  
HCM2kAvgQ: 0 68 68 1 13 0 0 0 0 2 0 2

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 2.124  
Loss Time (sec): 15 Average Delay (sec/veh): 100.3  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Split Phase		Split Phase								
Rights:	WideBypass		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	416	209	1478	225	0	0	0	0	139	0	1483
Growth Adj:	1.13	1.14	1.29	1.26	1.09	1.11	1.29	1.44	1.26	1.11	1.12	1.13
Initial Bse:	0	473	269	1868	246	0	0	0	0	154	0	1674
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	473	269	1868	246	0	0	0	0	154	0	1674
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	487	277	1926	0	0	0	0	0	159	0	1725
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	487	277	1926	0	0	0	0	0	159	0	1725
PCE 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
MLF 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
FinalVolume:	0	487	277	1926	0	0	0	0	0	159	0	1725

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.14	0.18	0.56	0.00	0.00	0.00	0.00	0.00	0.09	0.00	1.09
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	0.67	0.85	1.31	0.00	0.00	0.00	0.00	0.00	0.40	0.00	1.09
Delay/Veh:	0.0	44.0	64.4	168.7	0.0	0.0	0.0	0.0	0.0	38.3	0.0	51.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	44.0	64.4	168.7	0.0	0.0	0.0	0.0	0.0	38.3	0.0	51.4
LOS by Move:	A	D	E	F	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	9	11	63	0	0	0	0	0	5	0	26

Note: Queue reported is the number of cars per lane.

Tier 1 Conditions  
Weekday PM Peak Hour



-----  
 19th Ave CS  
 Tier 1  
 -----

## Scenario Report

Scenario: Tier 1 PM  
 Command: Default Command  
 Volume: Tier 1 PM  
 Geometry: Existing PM  
 Impact Fee: Default Impact Fee  
 Trip Generation: No Projects  
 Trip Distribution: PM  
 Paths: Tier 2/3  
 Routes: Tier 2/3  
 Configuration: Existing

-----  
 19th Ave CS  
 Tier 1  
 -----

Impact Analysis Report  
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
#1010 Claremont / Taraval / Dewey /	A	7.2	0.660	A	7.2	0.660	+ 0.000 V/C
#1020 Santa Clara / Portola / Vicent	C	31.2	0.853	C	31.2	0.853	+ 0.000 D/V
#1030 Junipero Serra / Sloat / West	F	104.5	1.125	F	104.5	1.125	+ 0.000 D/V
#1040 Junipero Serra / Ocean / Eucal	D	41.0	0.834	D	41.0	0.834	+ 0.000 D/V
#1050 Junipero Serra / Winston / Mer	C	30.8	0.685	C	30.8	0.685	+ 0.000 D/V
#1060 Junipero Serra / Holloway	C	30.7	0.700	C	30.7	0.700	+ 0.000 D/V
#1070 Junipero Serra / 19th	F	115.7	1.249	F	137.8	1.249	+22.156 D/V
#1075 Junipero Serra / Chumasero	A	2.7	0.708	A	2.7	0.708	+ 0.000 D/V
#1080 Junipero Serra / I-280 NB On-R	F	132.2	1.307	F	132.2	1.307	+ 0.000 D/V
#1090 Junipero Serra / I-280 SB On-R	D	52.5	1.065	D	52.5	1.065	+ 0.000 D/V
#1100 19th / Taraval	B	20.0	0.847	B	20.0	0.847	+ 0.000 D/V
#1110 19th / Sloat	F	132.1	1.562	F	132.1	1.562	+ 0.000 D/V
#1120 19th / Ocean	F	152.3	1.590	F	157.9	1.580	+ 5.661 D/V
#1130 19th / Eucalyptus	E	72.8	1.090	E	72.7	1.090	-0.058 D/V
#1140 19th / Winston	F	100.5	1.336	F	100.5	1.336	+ 0.000 D/V
#1150 19th / Buckingham	F	432.5	1.812	F	432.5	1.812	+ 0.000 D/V
#1160 19th / Holloway	B	18.4	0.876	F	111.4	0.876	+93.035 D/V
#1170 19th / Crespi	D	53.7	0.852	D	53.7	0.852	+ 0.000 D/V
#1181 Chumasero / Brotherhood	F	233.4	1.116	F	233.4	1.116	+ 0.000 D/V
#1190 Sunset / Taraval	D	53.1	0.852	D	53.1	0.852	+ 0.000 D/V
#1200 Sunset / Ocean	B	13.5	0.694	B	13.5	0.694	+ 0.000 D/V
#1210 Skyline / Sloat / 39th	D	27.9	0.920	D	27.9	0.920	+ 0.000 V/C
#1221 Skyline / Lake Merced (WBR)	C	17.7	0.424	C	17.7	0.424	+ 0.000 D/V
#1222 Skyline / Lake Merced (WBLT)	F	125.5	0.924	F	125.5	0.924	+ 0.000 D/V

19th Ave CS  
Tier 1

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
#1230 Sunset / Lake Merced	F OVRFL	1.370	F OVRFL	1.370	Nan D/V
#1240 Lake Merced / Winston	E	69.5 0.981	F	105.7 0.981	+36.186 D/V
#1250 Lake Merced / Font	D	49.2 0.791	D	49.7 0.791	+ 0.548 D/V
#1263 Lake Merced / Higuera	F	82.1 0.852	F	82.1 0.852	+ 0.000 D/V
#1270 Lake Merced / Brotherhood	F	143.8 2.455	F	143.8 2.455	-0.033 D/V

19th Ave CS  
Tier 1

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 7.2      Level Of Service: A  
\*\*\*\*\*

Street Name:	Claremont				Taraval / Dewey					
	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Yield Sign		Yield Sign		Yield Sign		Yield Sign		Yield Sign	
Lanes:	1		1		1		1		1	

Volume Module:

Base Vol:	17	24	239	50	63	5	10	259	55	324	338	31
Growth Adj:	1.09	1.10	1.07	1.06	1.09	1.08	1.07	1.04	1.06	1.08	1.08	1.09
Initial Bse:	18	26	255	53	69	5	11	269	59	351	364	34
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	26	255	53	69	5	11	269	59	351	364	34
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	19	27	263	55	71	6	11	277	60	362	375	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	27	263	55	71	6	11	277	60	362	375	35
PCE 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
MLF 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
FinalVolume:	19	27	263	55	71	6	11	277	60	362	375	35

PCE Module:

AutoPCE:	19	27	263	55	71	6	11	277	60	362	375	35
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	19	27	263	55	71	6	11	277	60	362	375	35

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	343	756	487	57
MaxVolume:	1015	792	937	1169
PedVolume:	0	0	0	0
AdjMaxVol:	1015	792	937	1169
ApproachVol:	309	131	349	771
ApproachV/C:	0.30	0.17	0.37	0.66
ApproachDel:	5.1	5.4	6.1	8.8
ApproachLOS:	A	A	A	A
Queue:	1.3	0.6	1.7	5.3



19th Ave CS Tier 1

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1020 Santa Clara / Portola / Vicente

Cycle (sec): 80 Critical Vol./Cap.(X): 0.853
Loss Time (sec): 11 Average Delay (sec/veh): 31.2
Optimal Cycle: 81 Level Of Service: C

Street Name: Santa Clara / Vicente Portola

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 23 23 23 23 23 23 9 36 36 9 36 36
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

Volume Module:
Base Vol: 22 273 85 86 191 48 48 1051 33 147 987 108
Growth Adj: 1.03 1.00 1.03 1.07 1.03 1.07 1.03 1.10 1.07 1.07 1.10 1.03
Initial Bse: 23 273 88 92 198 51 50 1155 35 157 1087 112
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 23 273 88 92 198 51 50 1155 35 157 1087 112
User 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
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 23 281 91 95 204 53 51 1191 36 162 1120 115
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 23 281 91 95 204 53 51 1191 36 162 1120 115
PCE 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
MLF 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
FinalVolume: 23 281 91 95 204 53 51 1191 36 162 1120 115

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.92 0.92 0.62 0.62 0.62 0.93 0.93 0.93 0.93 0.92 0.92
Lanes: 0.06 0.71 0.23 0.27 0.58 0.15 1.00 1.94 0.06 1.00 1.81 0.19
Final Sat.: 104 1247 401 320 688 179 1769 3419 104 1769 3163 325

Capacity Analysis Module:
Vol/Sat: 0.23 0.23 0.23 0.30 0.30 0.30 0.03 0.35 0.35 0.09 0.35 0.35
Crit Moves: \*\*\*\*
Green/Cycle: 0.30 0.30 0.30 0.30 0.30 0.30 0.11 0.45 0.45 0.11 0.45 0.45
Volume/Cap: 0.75 0.75 0.75 0.99 0.99 0.99 0.26 0.77 0.77 0.81 0.79 0.79
Delay/Veh: 34.9 34.9 34.9 72.3 72.3 72.3 35.5 22.3 22.3 63.9 22.8 22.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 34.9 34.9 34.9 72.3 72.3 72.3 35.5 22.3 22.3 63.9 22.8 22.8
LOS by Move: C C C E E E D C C E C C
HCM2kAvgQ: 11 11 11 14 14 14 1 15 15 6 16 16

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 1

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis

Cycle (sec): 105 Critical Vol./Cap.(X): 1.125
Loss Time (sec): 16 Average Delay (sec/veh): 104.5
Optimal Cycle: 180 Level Of Service: F

Street Name: Junipero Serra / West Portal Sloat / St. Francis

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase
Rights: Include Include Ignore Include
Min. Green: 16 53 53 32 32 32 15 15 15 20 20 20
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 1027 1005 60 0 1045 261 852 420 471 20 405 10
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13
Initial Bse: 1162 1121 66 0 1232 303 937 455 533 23 464 11
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1162 1121 66 0 1232 303 937 455 533 23 464 11
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.00 0.97 0.97 0.97
PHF Volume: 1198 1156 68 0 1270 313 965 469 0 24 479 12
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1198 1156 68 0 1270 313 965 469 0 24 479 12
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 1198 1156 68 0 1270 313 965 469 0 24 479 12

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.89 0.91 0.91 1.00 0.87 0.87 0.89 0.97 1.00 0.93 0.93 0.93
Lanes: 3.00 1.89 0.11 0.00 2.41 0.59 3.00 1.00 1.00 0.09 1.86 0.05
Final Sat.: 5096 3281 193 0 3996 985 5096 1843 1900 164 3276 80

Capacity Analysis Module:
Vol/Sat: 0.24 0.35 0.35 0.00 0.32 0.32 0.19 0.25 0.00 0.15 0.15 0.15
Crit Moves: \*\*\*\*
Green/Cycle: 0.17 0.47 0.47 0.00 0.30 0.30 0.18 0.18 0.00 0.19 0.19 0.19
Volume/Cap: 1.39 0.74 0.74 0.00 1.04 1.04 1.03 1.39 0.00 0.77 0.77 0.77
Delay/Veh: 225.8 21.1 21.1 0.0 70.9 70.9 81.5 235 0.0 48.5 48.5 48.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 225.8 21.1 21.1 0.0 70.9 70.9 81.5 235 0.0 48.5 48.5 48.5
LOS by Move: F C C A E E F F A D D D
HCM2kAvgQ: 27 15 15 0 27 27 17 33 0 10 10 10

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.834  
Loss Time (sec): 14 Average Delay (sec/veh): 41.0  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Ocean / Eucalyptus  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:  
Base Vol: 176 1567 35 356 1065 96 140 356 58 77 332 333  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 199 1748 38 403 1255 112 154 386 66 90 381 377  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 199 1748 38 403 1255 112 154 386 66 90 381 377  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 205 1802 40 415 1294 115 159 398 68 92 393 388  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 205 1802 40 415 1294 115 159 398 68 92 393 388  
PCE 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  
MLF 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  
FinalVolume: 205 1802 40 415 1294 115 159 398 68 92 393 388

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.97 0.88 0.90 0.88 0.88 0.62 0.62 0.83 0.80 0.80 0.83  
Lanes: 1.00 2.93 0.07 2.00 2.75 0.25 0.57 1.43 1.00 0.19 0.81 1.00  
Final Sat.: 1751 5389 119 3432 4612 410 672 1684 1583 289 1230 1583

Capacity Analysis Module:  
Vol/Sat: 0.12 0.33 0.33 0.12 0.28 0.28 0.24 0.24 0.04 0.32 0.32 0.25  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 1.07 0.78 0.78 0.76 0.58 0.58 0.87 0.87 0.11 1.18 1.18 0.57  
Delay/Veh: 127.7 23.6 23.6 49.5 16.0 16.0 50.3 50.3 20.5 140.7 141 25.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 127.7 23.6 23.6 49.5 16.0 16.0 50.3 50.3 20.5 140.7 141 25.0  
LOS by Move: F C C D B B D D C F F C  
HCM2kAvgQ: 8 16 14 6 8 8 12 12 1 27 27 9

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.685  
Loss Time (sec): 14 Average Delay (sec/veh): 30.8  
Optimal Cycle: 100 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Winston / Mercedes  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1 0 1 0 1

Volume Module:  
Base Vol: 224 1516 52 85 1130 117 169 152 81 74 103 36  
Growth Adj: 1.05 1.12 1.11 1.15 1.18 1.08 1.11 1.11 1.15 1.08 1.00 1.05  
Initial Bse: 236 1691 58 97 1332 127 188 169 93 80 103 38  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 236 1691 58 97 1332 127 188 169 93 80 103 38  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 243 1743 60 100 1373 131 194 174 96 83 106 39  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 243 1743 60 100 1373 131 194 174 96 83 106 39  
PCE 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  
MLF 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  
FinalVolume: 243 1743 60 100 1373 131 194 174 96 83 106 39

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.67 0.98 0.83 0.55 0.98 0.83  
Lanes: 1.00 2.90 0.10 1.00 2.74 0.26 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4890 168 1769 4581 436 1275 1862 1583 1054 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.14 0.36 0.36 0.06 0.30 0.30 0.15 0.09 0.06 0.08 0.06 0.02  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.72 0.89 0.89 0.30 0.75 0.75 0.56 0.35 0.22 0.29 0.21 0.09  
Delay/Veh: 50.7 31.5 31.5 37.0 25.6 25.6 38.0 31.3 29.6 31.5 29.2 27.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 50.7 31.5 31.5 37.0 25.6 25.6 38.0 31.3 29.6 31.5 29.2 27.7  
LOS by Move: D C C D C C D C C C C C  
HCM2kAvgQ: 7 19 19 2 14 14 5 4 2 2 3 1

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.700  
Loss Time (sec): 14 Average Delay (sec/veh): 30.7  
Optimal Cycle: 100 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.249  
Loss Time (sec): 17 Average Delay (sec/veh): 137.8  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*  
Cycle (sec): 125 Critical Vol./Cap.(X): 1.307  
Loss Time (sec): 12 Average Delay (sec/veh): 132.2  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Ovl Include Ovl  
Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1  
-----|-----|-----|-----|

Volume Module:  
Base Vol: 621 381 328 210 383 857 667 495 160 122 895 232  
Growth Adj: 1.19 1.13 1.11 1.28 1.47 1.36 1.11 1.09 1.28 1.36 1.25 1.19  
Initial Bse: 739 429 363 268 562 1167 738 537 204 166 1122 276  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 739 429 363 268 562 1167 738 537 204 166 1122 276  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 762 442 374 276 580 1203 761 554 211 171 1157 285  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 762 442 374 276 580 1203 761 554 211 171 1157 285  
PCE 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  
MLF 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  
FinalVolume: 762 442 374 276 580 1203 761 554 211 171 1157 285  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.87 0.87 0.93 0.88 0.88 0.86 0.89 0.89 0.89 0.89 0.83  
Lanes: 2.00 1.63 1.37 1.00 0.65 1.35 2.34 1.66 1.00 1.00 3.00 1.00  
Final Sat.: 3432 2677 2263 1769 1089 2259 3843 2799 1690 1684 5053 1583  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.22 0.17 0.17 0.16 0.53 0.53 0.20 0.20 0.12 0.10 0.23 0.18  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.15 0.15 0.30 0.36 0.36 0.60 0.25 0.25 0.25 0.15 0.15 0.51  
Volume/Cap: 1.50 1.12 0.55 0.44 1.50 0.88 0.80 0.80 0.50 0.67 1.50 0.35  
Delay/Veh: 288.1 123 37.0 31.3 269 26.0 46.5 46.5 40.5 50.8 284 18.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 288.1 123 37.0 31.3 269 26.0 46.5 46.5 40.5 50.8 284 18.7  
LOS by Move: F F D C F C D D D D F B  
HCM2kAvgQ: 33 18 10 8 71 32 12 12 7 8 35 6  
\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*  
Cycle (sec): 120 Critical Vol./Cap.(X): 1.065  
Loss Time (sec): 8 Average Delay (sec/veh): 52.5  
Optimal Cycle: 180 Level Of Service: D  
\*\*\*\*\*

Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 2 0 0 0 0 0 0 0 2 1 0 2 0 2 0 0  
-----|-----|-----|-----|

Volume Module:  
Base Vol: 0 0 350 0 0 0 0 972 427 722 1966 0  
Growth Adj: 1.05 1.00 1.04 1.32 1.55 1.33 1.04 1.09 1.32 1.33 1.10 1.05  
Initial Bse: 0 0 365 0 0 0 0 1058 563 958 2172 0  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 365 0 0 0 0 1058 563 958 2172 0  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 0 377 0 0 0 0 1091 580 987 2239 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 377 0 0 0 0 1091 580 987 2239 0  
PCE 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  
MLF 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  
FinalVolume: 0 0 377 0 0 0 0 1091 580 987 2239 0  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.85 0.85 0.90 0.93 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.00 1.00 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3213 1606 3432 3538 0  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.14 0.00 0.00 0.00 0.00 0.34 0.36 0.29 0.63 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.00 0.59 0.00 0.00 0.00 0.00 0.34 0.34 0.59 0.59 0.00  
Volume/Cap: 0.00 0.00 0.23 0.00 0.00 0.00 0.00 1.00 1.07 0.48 1.07 0.00  
Delay/Veh: 0.0 0.0 11.5 0.0 0.0 0.0 0.0 61.9 82.0 14.1 64.1 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 11.5 0.0 0.0 0.0 0.0 61.9 82.0 14.1 64.1 0.0  
LOS by Move: A A B A A A A E F B E A  
HCM2kAvgQ: 0 0 4 0 0 0 0 29 33 10 49 0  
\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.847  
Loss Time (sec): 10 Average Delay (sec/veh): 20.0  
Optimal Cycle: 99 Level Of Service: B

Street Name: 19th Taraval  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 66 66 66 66 66 66 23 23 23 23 23 23  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 1 0 1 0 0 1 0 1 0

Volume Module:  
Base Vol: 0 2131 104 0 2591 31 3 331 84 22 336 51  
Growth Adj: 1.06 1.12 1.06 1.09 1.18 1.09 1.06 1.00 1.09 1.09 1.00 1.06  
Initial Bse: 0 2377 110 0 3053 34 3 331 91 24 336 54  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2377 110 0 3053 34 3 331 91 24 336 54  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2450 113 0 3148 35 3 341 94 25 346 56  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2450 113 0 3148 35 3 341 94 25 346 56  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2450 113 0 3148 35 3 341 94 25 346 56

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.86 0.86 0.86 0.83 0.83 0.83  
Lanes: 0.00 2.87 0.13 0.00 2.97 0.03 0.01 1.56 0.43 0.12 1.62 0.26  
Final Sat.: 0 4825 223 0 5018 55 24 2538 701 182 2559 410

Capacity Analysis Module:  
Vol/Sat: 0.00 0.51 0.51 0.00 0.63 0.63 0.13 0.13 0.13 0.14 0.14 0.14  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.67 0.67 0.00 0.67 0.67 0.23 0.23 0.23 0.23 0.23 0.23  
Volume/Cap: 0.00 0.76 0.76 0.00 0.94 0.94 0.58 0.58 0.58 0.59 0.59 0.59  
Delay/Veh: 0.0 12.7 12.7 0.0 21.0 21.0 37.6 37.6 37.6 37.8 37.8 37.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 12.7 12.7 0.0 21.0 21.0 37.6 37.6 37.6 37.8 37.8 37.8  
LOS by Move: A B B A C C D D D D D D  
HCM2kAvgQ: 0 20 20 0 37 37 7 7 7 7 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.562  
Loss Time (sec): 9 Average Delay (sec/veh): 132.1  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2446 66 235 2609 321 185 1440 74 0 870 497  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2728 73 266 3075 373 203 1560 84 0 998 562  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2728 73 266 3075 373 203 1560 84 0 998 562  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2812 75 274 3170 385 210 1608 86 0 1029 580  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2812 75 274 3170 385 210 1608 86 0 1029 580  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2812 75 274 3170 385 210 1608 86 0 1029 580

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.88 0.38 0.88 0.88 1.00 0.89 0.83  
Lanes: 0.00 2.92 0.08 1.00 2.68 0.32 1.00 2.85 0.15 0.00 3.00 1.00  
Final Sat.: 0 4932 131 1769 4460 541 715 4767 256 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.57 0.57 0.15 0.71 0.71 0.29 0.34 0.34 0.00 0.20 0.37  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.12 0.55 0.55 0.37 0.37 0.37 0.00 0.27 0.27  
Volume/Cap: 0.00 1.33 1.33 1.35 1.30 1.30 0.74 0.92 0.92 0.00 0.74 1.35  
Delay/Veh: 0.0 175 174.6 229.3 155 155.3 41.7 39.0 39.0 0.0 36.9 207.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 175 174.6 229.3 155 155.3 41.7 39.0 39.0 0.0 36.9 207.0  
LOS by Move: A F F F F F D D D A D F  
HCM2kAvgQ: 0 62 62 19 78 78 8 23 23 0 12 38

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.580  
Loss Time (sec): 9 Average Delay (sec/veh): 157.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Ocean  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 64 64 64 64 64 64 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0 0 0 0 1! 0 0

Volume Module:  
Base Vol: 0 2340 47 0 2579 164 64 293 25 25 271 127  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2610 52 0 3039 191 70 317 28 29 311 144  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2610 52 0 3039 191 70 317 28 29 311 144  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2691 53 0 3133 197 73 327 29 30 320 148  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2691 53 0 3133 197 73 327 29 30 320 148  
PCE 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  
MLF 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  
FinalVolume: 0 2691 53 0 3133 197 73 327 29 30 320 148

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.44 0.89 1.00 0.88 0.88 0.89 0.97 0.97 0.72 0.72 0.72  
Lanes: 0.00 2.97 0.03 0.00 2.82 0.18 1.00 0.92 0.08 0.06 0.64 0.30  
Final Sat.: 0 2509 50 0 4740 297 1693 1689 150 82 876 405

Capacity Analysis Module:  
Vol/Sat: 0.00 1.07 1.07 0.00 0.66 0.66 0.04 0.19 0.19 0.37 0.37 0.37  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.64 0.64 0.64 0.64 0.64 0.64 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.00 1.68 1.68 0.00 1.03 1.03 0.16 0.73 0.73 1.38 1.38 1.38  
Delay/Veh: 0.0 315 315.1 0.0 33.5 33.5 29.0 42.8 42.8 224.7 225 224.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 315 315.1 0.0 33.5 33.5 29.0 42.8 42.8 224.7 225 224.7  
LOS by Move: A F F A C C C D D F F F  
HCM2kAvgQ: 0 78 156 0 41 41 2 11 11 34 34 34

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.090  
Loss Time (sec): 9 Average Delay (sec/veh): 72.7  
Optimal Cycle: 180 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Eucalyptus  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 66 66 66 66 66 66 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 0 1! 0 0

Volume Module:  
Base Vol: 0 2277 26 0 2555 114 170 169 54 9 167 17  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2540 29 0 3011 133 187 183 61 10 192 19  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2540 29 0 3011 133 187 183 61 10 192 19  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2618 29 0 3104 137 193 189 63 11 197 20  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2618 29 0 3104 137 193 189 63 11 197 20  
PCE 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  
MLF 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  
FinalVolume: 0 2618 29 0 3104 137 193 189 63 11 197 20

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.53 0.89 1.00 0.89 0.89 0.63 0.63 0.63 0.95 0.95 0.95  
Lanes: 0.00 2.98 0.02 0.00 2.87 0.13 1.30 1.27 0.43 0.05 0.86 0.09  
Final Sat.: 0 3023 34 0 4840 213 1559 1527 509 85 1562 157

Capacity Analysis Module:  
Vol/Sat: 0.00 0.87 0.87 0.00 0.64 0.64 0.12 0.12 0.12 0.13 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.66 0.66 0.66 0.66 0.66 0.66 0.26 0.26 0.26 0.26 0.26 0.26  
Volume/Cap: 0.00 1.31 1.31 0.00 0.97 0.97 0.48 0.48 0.48 0.50 0.50 0.50  
Delay/Veh: 0.0 151 151.0 0.0 16.8 16.8 33.5 33.5 33.5 35.5 35.5 35.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 151 151.0 0.0 16.8 16.8 33.5 33.5 33.5 35.5 35.5 35.5  
LOS by Move: A F F A B B C C C D D D  
HCM2kAvgQ: 0 59 96 0 30 30 5 5 5 6 6 6

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.336  
Loss Time (sec): 13 Average Delay (sec/veh): 100.5  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Winston  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1150 19th / Buckingham  
\*\*\*\*\*

Average Delay (sec/veh): 19.0 Worst Case Level Of Service: F[432.5]

\*\*\*\*\*  
Street Name: 19th Buckingham  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module: Table with columns for Critical Gap, FollowUpTim.

Capacity Module: Table with columns for Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Level of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.876  
Loss Time (sec): 0 Average Delay (sec/veh): 111.4  
Optimal Cycle: 116 Level Of Service: F

Street Name: 19th Holloway  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 59 59 0 59 59 32 32 32 32 32 32  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 0 2489 143 0 3047 145 88 167 88 45 296 41  
Growth Adj: 1.23 1.12 1.15 1.18 1.18 1.27 1.15 1.19 1.18 1.27 1.35 1.23  
Initial Bse: 0 2776 165 0 3591 184 101 199 104 57 401 51  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2776 165 0 3591 184 101 199 104 57 401 51  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2862 170 0 3702 189 105 205 107 59 413 52  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2862 170 0 3702 189 105 205 107 59 413 52  
PCE 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  
MLF 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  
FinalVolume: 0 2862 170 0 3702 189 105 205 107 59 413 52

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.88 1.00 0.94 0.83 0.60 0.60 0.60 0.78 0.78 0.78  
Lanes: 0.00 2.82 0.18 0.00 3.00 1.00 0.50 0.98 0.52 0.22 1.58 0.20  
Final Sat.: 0 4984 296 0 5337 1583 574 1124 590 331 2327 294

Capacity Analysis Module:  
Vol/Sat: 0.00 0.57 0.57 0.00 0.69 0.12 0.18 0.18 0.18 0.18 0.18 0.18  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.52 0.52 0.52 0.52 0.52 0.32 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 1.10 1.10 0.00 1.33 0.23 0.57 0.57 0.57 0.56 0.56 0.56  
Delay/Veh: 0.0 70.7 70.7 0.0 170 10.3 31.5 31.5 31.5 30.5 30.5 30.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 70.7 70.7 0.0 170 10.3 31.5 31.5 31.5 30.5 30.5 30.5  
LOS by Move: A E E A F B C C C C C C  
HCM2kAvgQ: 0 46 44 0 81 2 6 6 6 8 8 8

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.852  
Loss Time (sec): 10 Average Delay (sec/veh): 53.7  
Optimal Cycle: 95 Level Of Service: D

Street Name: 19th Crespi  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Ignore Include  
Min. Green: 59 59 0 0 64 64 21 0 21 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 0 0 0 2 1 0 1 0 1 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 2485 0 0 3081 99 147 0 97 0 0 0  
Growth Adj: 1.15 1.12 1.00 1.00 1.18 1.18 1.00 1.00 1.00 1.18 1.19 1.15  
Initial Bse: 0 2772 0 0 3631 117 147 0 97 0 0 0  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2772 0 0 3631 117 147 0 97 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.00 0.97 0.97 0.00 0.97 0.97 0.97  
PHF Volume: 0 2857 0 0 3743 0 152 0 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2857 0 0 3743 0 152 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 0 2857 0 0 3743 0 152 0 0 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 0.91 0.89 0.95 0.95 1.00 1.00 1.00  
Lanes: 0.00 3.00 0.00 0.00 3.00 0.00 3.00 0.00 0.00 0.00 0.00 0.00  
Final Sat.: 0 5083 0 0 5083 0 5052 0 0 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.56 0.00 0.00 0.74 0.00 0.03 0.00 0.00 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.59 0.59 0.59 0.64 0.64 0.64 0.21 0.21 0.21 0.00 0.00 0.00  
Volume/Cap: 0.00 0.95 0.00 0.00 1.15 0.00 0.14 0.00 0.00 0.00 0.00 0.00  
Delay/Veh: 0.0 20.1 0.0 0.0 80.2 0.0 32.5 0.0 0.0 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 20.1 0.0 0.0 80.2 0.0 32.5 0.0 0.0 0.0 0.0 0.0  
LOS by Move: A C A A F A C A A A A A  
HCM2kAvgQ: 0 33 0 0 61 0 1 0 0 0 0 0

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumaseero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.116  
Loss Time (sec): 12 Average Delay (sec/veh): 233.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Chumaseero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 20 20 20 20 48 48 20 48 48  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 12 5 32 75 4 12 39 1460 11 33 1613 236  
Growth Adj: 1.28 1.00 1.08 1.27 1.38 1.47 1.08 1.16 1.27 1.47 1.57 1.28  
Initial Bse: 15 5 34 95 6 18 42 1698 14 49 2532 302  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 15 5 34 95 6 18 42 1698 14 49 2532 302  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 16 5 35 98 6 18 43 1750 14 50 2610 311  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 16 5 35 98 6 18 43 1750 14 50 2610 311  
PCE 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  
MLF 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  
FinalVolume: 16 5 35 98 6 18 43 1750 14 50 2610 311

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.66 0.66 0.83 0.54 0.54 0.54 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.32 0.10 0.58 0.80 0.05 0.15 1.00 1.98 0.02 1.00 1.79 0.21  
Final Sat.: 404 132 906 831 48 154 1769 3505 29 1769 3110 371

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.04 0.04 0.04 0.12 0.12 0.12 0.02 0.50 0.50 0.03 0.84 0.84  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.48 0.48 0.20 0.48 0.48  
Volume/Cap: 0.20 0.20 0.20 0.59 0.59 0.59 0.12 1.04 1.04 0.14 1.75 1.75  
Delay/Veh: 34.8 34.8 34.8 48.2 48.2 48.2 33.5 53.8 53.8 33.8 360 359.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 34.8 34.8 34.8 48.2 48.2 48.2 33.5 53.8 53.8 33.8 360 359.8  
LOS by Move: C C C D D D C D D C F F  
HCM2kAvgQ: 1 1 2 4 4 4 1 39 39 1 127 127

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.852  
Loss Time (sec): 10 Average Delay (sec/veh): 53.1  
Optimal Cycle: 69 Level Of Service: D

\*\*\*\*\*  
Street Name: Sunset Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 0 2129 96 0 1790 117 70 238 37 76 243 30  
Growth Adj: 1.14 1.20 1.12 1.15 1.26 1.17 1.12 1.04 1.15 1.17 1.08 1.14  
Initial Bse: 0 2553 108 0 2261 137 79 249 43 89 263 34  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2553 108 0 2261 137 79 249 43 89 263 34  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2632 111 0 2331 141 81 256 44 92 271 35  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2632 111 0 2331 141 81 256 44 92 271 35  
PCE 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  
MLF 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  
FinalVolume: 0 2632 111 0 2331 141 81 256 44 92 271 35

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.88 0.88 0.48 0.96 0.96 0.49 0.96 0.96  
Lanes: 0.00 2.88 0.12 0.00 2.83 0.17 1.00 0.85 0.15 1.00 0.88 0.12  
Final Sat.: 0 4848 204 0 4750 288 909 1554 267 922 1619 211

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.00 0.54 0.54 0.00 0.49 0.49 0.09 0.16 0.16 0.10 0.17 0.17  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 1.12 1.12 0.00 1.02 1.02 0.25 0.47 0.47 0.28 0.48 0.48  
Delay/Veh: 0.0 77.0 77.0 0.0 37.7 37.7 15.8 17.7 17.7 16.3 17.8 17.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 77.0 77.0 0.0 37.7 37.7 15.8 17.7 17.7 16.3 17.8 17.8  
LOS by Move: A E E A D D B B B B B B  
HCM2kAvgQ: 0 37 37 0 27 27 1 5 5 1 5 5

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.694  
Loss Time (sec): 9 Average Delay (sec/veh): 13.5  
Optimal Cycle: 59 Level Of Service: B

\*\*\*\*\*  
Street Name: Sunset Ocean  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 1 1 1 0 0 0 0 1 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1682 14 1 1588 60 30 61 18 37 47 226  
Growth Adj: 1.11 1.24 1.10 1.00 1.00 1.00 1.10 1.00 1.00 1.00 1.00 1.11  
Initial Bse: 0 2085 15 1 1589 60 33 61 18 37 47 252  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2085 15 1 1589 60 33 61 18 37 47 252  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2149 16 1 1638 62 34 63 19 38 48 259  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2149 16 1 1638 62 34 63 19 38 48 259  
PCE 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  
MLF 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  
FinalVolume: 0 2149 16 1 1638 62 34 63 19 38 48 259

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.83 0.83 0.83 0.88 0.88 0.88 0.76 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.01 2.89 0.10 0.30 0.54 0.16 1.00 1.00 1.00  
Final Sat.: 0 5041 37 3 4579 173 492 908 268 1447 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.43 0.43 0.36 0.36 0.36 0.07 0.07 0.07 0.03 0.03 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.53 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 0.80 0.80 0.67 0.67 0.67 0.22 0.22 0.22 0.08 0.08 0.52  
Delay/Veh: 0.0 14.0 14.0 11.6 11.6 11.6 16.0 16.0 16.0 14.7 14.7 20.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 14.0 14.0 11.6 11.6 11.6 16.0 16.0 16.0 14.7 14.7 20.5  
LOS by Move: A B B B B B B B B B C  
HCM2kAvgQ: 0 11 11 9 9 9 2 2 2 0 1 4

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1210 Skyline / Sloat / 39th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.920  
Loss Time (sec): 0 Average Delay (sec/veh): 27.9  
Optimal Cycle: 0 Level Of Service: D

\*\*\*\*\*  
Street Name: Skyline / 39th Sloat  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Ignore Include Ignore Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 2 0 1 1 0

Volume Module:  
Base Vol: 327 0 565 0 21 7 2 350 163 450 435 64  
Growth Adj: 1.13 1.23 1.24 1.16 1.08 1.05 1.24 1.25 1.16 1.05 1.03 1.13  
Initial Bse: 371 0 701 0 23 7 2 437 189 475 450 73  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 371 0 701 0 23 7 2 437 189 475 450 73  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.00 0.97 0.97 0.97 0.97 0.97 0.00 0.97 0.97 0.97  
PHF Volume: 382 0 0 0 23 8 3 450 0 489 464 75  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 382 0 0 0 23 8 3 450 0 489 464 75  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 382 0 0 0 23 8 3 450 0 489 464 75

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 1.00 0.00 2.00 0.00 0.75 0.25 0.01 1.99 1.00 2.00 1.72 0.28  
Final Sat.: 415 0 929 0 289 94 4 777 412 852 788 129

Capacity Analysis Module:  
Vol/Sat: 0.92 xxxxx 0.00 xxxxx 0.08 0.08 0.58 0.58 0.00 0.57 0.59 0.58  
Crit Moves: \*\*\*\*  
Delay/Veh: 54.5 0.0 0.0 0.0 12.7 12.7 22.5 22.5 0.0 21.3 20.5 20.0  
Delay 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  
AdjDel/Veh: 54.5 0.0 0.0 0.0 12.7 12.7 22.5 22.5 0.0 21.3 20.5 20.0  
LOS by Move: F \* \* \* B B C C \* C C C  
ApproachDel: 54.5 12.7 22.5 20.9  
Delay Adj: 1.00 1.00 1.00 1.00  
ApprAdjDel: 54.5 12.7 22.5 20.9  
LOS by Appr: F B C C  
AllWayAvgQ: 5.0 5.0 0.0 0.1 0.1 0.1 1.2 1.2 0.0 1.2 1.3 1.2

Note: Queue reported is the number of cars per lane.

19th Ave CS
Tier 1

Level of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1221 Skyline / Lake Merced (WBR)

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: C[ 17.7]

Table with columns for Street Name (Skyline, Lake Merced (WBR)), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each approach.

Critical Gap Module table showing Critical Gap, FollowUpTim, and Capacity Module values.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each approach.

Level of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS
Tier 1

Level of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1222 Skyline / Lake Merced (WBLT)

Average Delay (sec/veh): 7.8 Worst Case Level Of Service: F[125.5]

Table with columns for Street Name (Skyline, Lake Merced (WBLT)), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each approach.

Critical Gap Module table showing Critical Gap, FollowUpTim, and Capacity Module values.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each approach.

Level of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1230 Sunset / Lake Merced  
\*\*\*\*\*

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

\*\*\*\*\*

Street Name: Sunset Lake Merced

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Rights: Ignore Ignore Ignore Ignore

Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 0 0 0

Volume Module:

Table with 13 columns for traffic movements and rows for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module:

Table with 13 columns for traffic movements and rows for Critical Gap, FollowUpTim.

Capacity Module:

Table with 13 columns for traffic movements and rows for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level of Service Module:

Table with 13 columns for traffic movements and rows for 2Way95thQ, Control Del, LOS by Move.

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx

SharedQueue: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx

Shrd ConDel: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx

Shared LOS: \*

ApproachDel: xxxxxx xxxxxx +Inf xxxxxx

ApproachLOS: \* \* \* \* \* F \* \* \* \* \*

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

19th Ave CS  
Tier 1

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1240 Lake Merced / Winston  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.981

Loss Time (sec): 9 Average Delay (sec/veh): 105.7

Optimal Cycle: 158 Level Of Service: F

Street Name: Lake Merced Winston

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase

Rights: WideBypass Include Include Include

Min. Green: 34 34 34 17 55 55 0 0 0 25 25 25

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 1 0 2 0 2 0 0 0 0 0 0 0 2 0 0 0 1

Volume Module:

Table with 13 columns for traffic movements and rows for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for traffic movements and rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for traffic movements and rows for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.791  
Loss Time (sec): 7 Average Delay (sec/veh): 49.7  
Optimal Cycle: 90 Level Of Service: D

\*\*\*\*\*  
Street Name: Lake Merced Font  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:

Base Vol: 0 1683 17 176 1644 0 0 0 0 104 0 331  
Growth Adj: 1.08 1.12 1.10 1.13 1.18 1.11 1.10 1.08 1.13 1.11 1.04 1.08  
Initial Bse: 0 1877 19 198 1937 0 0 0 0 115 0 357  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1877 19 198 1937 0 0 0 0 115 0 357  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.00 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 1935 0 204 1997 0 0 0 0 119 0 368  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1935 0 204 1997 0 0 0 0 119 0 368  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 1935 0 204 1997 0 0 0 0 119 0 368

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:

Vol/Sat: 0.00 0.55 0.00 0.12 0.56 0.00 0.00 0.00 0.00 0.07 0.00 0.23  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.14 0.00 0.69 0.83 0.00 0.00 0.00 0.00 0.28 0.00 0.95  
Delay/Veh: 0.0 91.5 0.0 48.0 7.3 0.0 0.0 0.0 0.0 29.1 0.0 68.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 91.5 0.0 48.0 7.3 0.0 0.0 0.0 0.0 29.1 0.0 68.4  
LOS by Move: A F A D A A A A A C A E  
HCM2kAvgQ: 0 48 0 7 15 0 0 0 0 3 0 15

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.852  
Loss Time (sec): 11 Average Delay (sec/veh): 82.1  
Optimal Cycle: 90 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 0 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module:

Base Vol: 0 1675 127 59 1717 0 0 0 0 102 0 57  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 1868 147 70 2023 0 0 0 0 195 0 107  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1868 147 70 2023 0 0 0 0 195 0 107  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 1926 152 72 2086 0 0 0 0 201 0 110  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1926 152 72 2086 0 0 0 0 201 0 110  
PCE 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  
MLF 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  
FinalVolume: 0 1926 152 72 2086 0 0 0 0 201 0 110

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.92 0.92 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 1.85 0.15 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3243 255 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:

Vol/Sat: 0.00 0.59 0.59 0.04 0.59 0.00 0.00 0.00 0.00 0.11 0.00 0.07  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.46 0.46 0.46 0.12 0.66 0.66 0.00 0.00 0.00 0.22 0.22 0.22  
Volume/Cap: 0.00 1.30 1.30 0.33 0.90 0.00 0.00 0.00 0.00 0.51 0.00 0.31  
Delay/Veh: 0.0 161 161.5 40.3 11.6 0.0 0.0 0.0 0.0 35.4 0.0 31.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 161 161.5 40.3 11.6 0.0 0.0 0.0 0.0 35.4 0.0 31.6  
LOS by Move: A F F D B A A A A D A C  
HCM2kAvgQ: 0 63 63 2 24 0 0 0 0 5 0 3

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 2.455  
Loss Time (sec): 15 Average Delay (sec/veh): 143.8  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Split Phase		Split Phase								
Rights:	WideBypass		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	504	195	1342	517	0	0	0	0	267	0	1323
Growth Adj:	1.71	1.12	1.14	1.17	1.18	1.74	1.14	1.16	1.17	1.74	2.31	1.71
Initial Bse:	0	562	222	1572	609	0	0	0	0	465	0	2264
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	562	222	1572	609	0	0	0	0	465	0	2264
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	579	229	1620	0	0	0	0	0	480	0	2334
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	579	229	1620	0	0	0	0	0	480	0	2334
PCE 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
MLF 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
FinalVolume:	0	579	229	1620	0	0	0	0	0	480	0	2334

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.16	0.14	0.47	0.00	0.00	0.00	0.00	0.00	0.27	0.00	1.47
Crit Moves:	****			****								****
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	0.80	0.70	1.10	0.00	0.00	0.00	0.00	0.00	1.21	0.00	1.47
Delay/Veh:	0.0	49.2	51.5	81.3	0.0	0.0	0.0	0.0	0.0	156.9	0.0	217.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	49.2	51.5	81.3	0.0	0.0	0.0	0.0	0.0	156.9	0.0	217.0
LOS by Move:	A	D	D	F	A	A	A	A	A	F	A	F
HCM2kAvgQ:	0	11	8	41	0	0	0	0	0	29	0	97

Note: Queue reported is the number of cars per lane.

Tier 1 Conditions  
Weekend Midday Peak Hour





19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.112  
Loss Time (sec): 16 Average Delay (sec/veh): 155.8  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 50 50 29 29 29 18 18 18 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 1575 1246 23 0 787 272 895 346 371 14 293 26  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 1781 1390 25 0 927 316 984 375 420 16 336 29  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1781 1390 25 0 927 316 984 375 420 16 336 29  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.00 0.97 0.97 0.97  
PHF Volume: 1837 1433 26 0 956 326 1014 386 0 17 346 30  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1837 1433 26 0 956 326 1014 386 0 17 346 30  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1837 1433 26 0 956 326 1014 386 0 17 346 30

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.87 0.87 0.89 0.97 1.00 0.92 0.92 0.92  
Lanes: 3.00 1.96 0.04 0.00 2.24 0.76 3.00 1.00 1.00 0.09 1.76 0.15  
Final Sat.: 5096 3430 62 0 3683 1256 5096 1843 1900 149 3071 269

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.36 0.42 0.42 0.00 0.26 0.26 0.20 0.21 0.00 0.11 0.11 0.11  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.21 0.49 0.49 0.00 0.28 0.28 0.17 0.17 0.00 0.19 0.19 0.19  
Volume/Cap: 1.72 0.86 0.86 0.00 0.94 0.94 1.16 1.22 0.00 0.59 0.59 0.59  
Delay/Veh: 369.6 24.8 24.8 0.0 50.8 50.8 128.7 169 0.0 42.6 42.6 42.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 369.6 24.8 24.8 0.0 50.8 50.8 128.7 169 0.0 42.6 42.6 42.6  
LOS by Move: F C C A D D F F A D D D  
HCM2kAvgQ: 52 21 21 0 19 19 20 24 0 7 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.784  
Loss Time (sec): 17 Average Delay (sec/veh): 249.2  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Ignore Ignore Ovl Include  
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 2245 1828 70 0 1917 12 0 85 4216 28 48 36  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09  
Initial Bse: 2442 2039 74 0 2259 13 0 86 4610 31 51 39  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2442 2039 74 0 2259 13 0 86 4610 31 51 39  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.97 0.97 0.00 0.97 0.97 0.00 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 2517 2102 0 0 2329 0 0 88 4752 32 52 40  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2517 2102 0 0 2329 0 0 88 4752 32 52 40  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2517 2102 0 0 2329 0 0 88 4752 32 52 40

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 0.91 0.95 0.91 0.89 0.91 1.00 0.98 0.73 0.68 0.92 0.92  
Lanes: 2.21 1.79 0.00 0.00 4.00 0.00 0.00 1.00 3.00 1.00 0.57 0.43  
Final Sat.: 3690 3081 0 0 6778 0 0 1862 4178 1300 984 757

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.68 0.68 0.00 0.00 0.34 0.00 0.00 0.05 1.14 0.02 0.05 0.05  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.54 0.54 0.54 0.20 0.20 0.20 0.09 0.09 0.68 0.09 0.09 0.09  
Volume/Cap: 1.26 1.26 0.00 0.00 1.72 0.00 0.00 0.53 1.67 0.28 0.59 0.59  
Delay/Veh: 136.9 137 0.0 0.0 366 0.0 0.0 54.8 309.6 48.2 59.1 59.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 136.9 137 0.0 0.0 366 0.0 0.0 54.8 309.6 48.2 59.1 59.1  
LOS by Move: F F A A F A A D F D E E  
HCM2kAvgQ: 70 70 0 0 52 0 0 3 143 1 4 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.511  
Loss Time (sec): 9 Average Delay (sec/veh): 91.3  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2032 83 275 2702 314 266 1157 123 0 1123 426  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2266 91 311 3184 365 292 1253 139 0 1288 482  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2266 91 311 3184 365 292 1253 139 0 1288 482  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 0 2336 94 321 3283 376 301 1292 143 0 1328 497  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2336 94 321 3283 376 301 1292 143 0 1328 497  
PCE 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  
MLF 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  
FinalVolume: 0 2336 94 321 3283 376 301 1292 143 0 1328 497

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.88 0.61 0.87 0.87 1.00 0.89 0.83  
Lanes: 0.00 2.88 0.12 1.00 2.69 0.31 1.00 2.70 0.30 0.00 3.00 1.00  
Final Sat.: 0 4857 196 1769 4492 515 1167 4480 497 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.48 0.48 0.18 0.73 0.73 0.26 0.29 0.29 0.00 0.26 0.31  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.18 0.61 0.61 0.30 0.30 0.30 0.00 0.24 0.24  
Volume/Cap: 0.00 1.12 1.12 1.00 1.20 1.20 1.08 0.97 0.97 0.00 1.09 1.31  
Delay/Veh: 0.0 84.8 84.8 90.9 102 102.0 47.0 49.1 49.1 0.0 91.3 194.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 84.8 84.8 90.9 102 102.0 47.0 49.1 49.1 0.0 91.3 194.3  
LOS by Move: A F F F F F D D D A F F  
HCM2kAvgQ: 0 37 37 15 70 70 17 21 21 0 24 32

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.947  
Loss Time (sec): 13 Average Delay (sec/veh): 40.4  
Optimal Cycle: 137 Level Of Service: D

Street Name: 19th Winston  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Permitted Permitted Permitted  
Rights: Include Include AddLane Include  
Min. Green: 16 45 45 45 45 45 24 24 24 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 424 1667 58 0 2144 200 155 253 325 17 319 25  
Growth Adj: 1.03 1.12 1.05 1.09 1.18 1.06 1.05 1.00 1.09 1.06 1.00 1.03  
Initial Bse: 436 1859 61 0 2527 212 163 253 353 18 319 26  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 436 1859 61 0 2527 212 163 253 353 18 319 26  
User 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  
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97  
PHF Volume: 449 1917 63 0 2605 218 168 261 364 19 329 26  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 449 1917 63 0 2605 218 168 261 364 19 329 26  
PCE 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  
MLF 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  
FinalVolume: 449 1917 63 0 2605 218 168 261 364 19 329 26

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.89 0.89 1.00 1.34 0.83 0.26 0.19 0.83 0.86 0.86 0.86  
Lanes: 2.00 2.90 0.10 0.00 3.00 1.00 0.98 2.02 1.00 0.10 1.76 0.14  
Final Sat.: 3432 4897 161 0 7625 1583 480 743 1583 162 2862 231

Capacity Analysis Module:  
Vol/Sat: 0.13 0.39 0.39 0.00 0.34 0.14 0.35 0.35 0.23 0.11 0.11 0.11  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.16 0.44 0.44 0.44 0.44 0.44 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.82 0.89 0.89 0.00 0.78 0.31 1.33 1.33 0.87 0.43 0.43 0.43  
Delay/Veh: 53.4 27.7 27.7 0.0 22.0 16.6 202.9 203 55.8 32.1 32.1 32.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 53.4 27.7 27.7 0.0 22.0 16.6 202.9 203 55.8 32.1 32.1 32.1  
LOS by Move: D C C A C B F F E C C C  
HCM2kAvgQ: 7 20 20 0 23 4 13 10 14 5 5 5

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 1

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1150 19th / Buckingham  
\*\*\*\*\*  
Average Delay (sec/veh): 1.5 Worst Case Level Of Service: E[ 49.2]  
\*\*\*\*\*

Street Name: 19th Buckingham

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	3	0	0	3	0	0	1	0	0	0

Volume Module:

Base Vol:	0	2149	0	0	2446	40	0	0	154	0	0	0
Growth Adj:	1.04	1.12	1.07	1.10	1.18	1.07	1.07	1.02	1.10	1.07	1.00	1.04
Initial Bse:	0	2397	0	0	2883	43	0	0	169	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2397	0	0	2883	43	0	0	169	0	0	0
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	2471	0	0	2972	44	0	0	174	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	2471	0	0	2972	44	0	0	174	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	991	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	245	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	245	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.71	xxxx	xxxx	xxxxx

Level of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	4.8	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	49.2	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	E	*	*	*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx		xxxxxx						49.2	xxxxxx		xxxxxx
ApproachLOS:	*		*			*			E	*		*

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 1

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec):	100	Critical Vol./Cap.(X):	0.778
Loss Time (sec):	9	Average Delay (sec/veh):	25.7
Optimal Cycle:	100	Level Of Service:	C

Street Name: 19th Holloway

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	59	59	0	59	59	32	32	32	32	32	32
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1	0	0	0	0	3	0	1	0

Volume Module:

Base Vol:	0	2096	105	0	2538	96	61	96	64	36	148	34
Growth Adj:	1.23	1.12	1.15	1.18	1.18	1.27	1.15	1.19	1.18	1.27	1.35	1.23
Initial Bse:	0	2338	121	0	2991	122	70	114	76	46	200	42
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2338	121	0	2991	122	70	114	76	46	200	42
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	2410	125	0	3084	125	72	118	78	47	207	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2410	125	0	3084	125	72	118	78	47	207	43
PCE 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
MLF 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
FinalVolume:	0	2410	125	0	3084	125	72	118	78	47	207	43

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.89	0.89	1.00	0.89	0.83	0.70	0.70	0.70	0.78	0.78	0.78
Lanes:	0.00	2.85	0.15	0.00	3.00	1.00	0.54	0.88	0.58	0.32	1.39	0.29
Final Sat.:	0	4799	248	0	5083	1583	716	1164	772	472	2073	434

Capacity Analysis Module:

Vol/Sat:	0.00	0.50	0.50	0.00	0.61	0.08	0.10	0.10	0.10	0.10	0.10	0.10
Crit Moves:				****			****					
Green/Cycle:	0.00	0.59	0.59	0.00	0.59	0.59	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.00	0.85	0.85	0.00	1.03	0.13	0.32	0.32	0.32	0.31	0.31	0.31
Delay/Veh:	0.0	13.4	13.4	0.0	36.4	5.8	26.7	26.7	26.7	26.5	26.5	26.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.4	13.4	0.0	36.4	5.8	26.7	26.7	26.7	26.5	26.5	26.5
LOS by Move:	A	B	B	A	D	A	C	C	C	C	C	C
HCM2kAvgQ:	0	18	18	0	43	1	3	3	3	4	4	4

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 1

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 1.983  
Loss Time (sec): 15 Average Delay (sec/veh): 59.2  
Optimal Cycle: 180 Level Of Service: E

\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Split Phase		Split Phase								
Rights:	WideBypass		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	535	223	1076	498	0	0	0	0	216	0	1034
Growth Adj:	1.71	1.12	1.14	1.17	1.18	1.74	1.14	1.16	1.17	1.74	2.31	1.71
Initial Bse:	0	597	254	1260	587	0	0	0	0	376	0	1769
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	597	254	1260	587	0	0	0	0	376	0	1769
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	615	262	1299	0	0	0	0	0	388	0	1824
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	615	262	1299	0	0	0	0	0	388	0	1824
PCE 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
MLF 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
FinalVolume:	0	615	262	1299	0	0	0	0	0	388	0	1824

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.17	0.17	0.38	0.00	0.00	0.00	0.00	0.00	0.22	0.00	1.15
Crit Moves:	****			****								****
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	0.85	0.81	0.88	0.00	0.00	0.00	0.00	0.00	0.98	0.00	1.15
Delay/Veh:	0.0	52.5	59.3	31.9	0.0	0.0	0.0	0.0	0.0	81.2	0.0	76.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	52.5	59.3	31.9	0.0	0.0	0.0	0.0	0.0	81.2	0.0	76.3
LOS by Move:	A	D	E	C	A	A	A	A	A	F	A	E
HCM2kAvgQ:	0	13	10	22	0	0	0	0	0	18	0	36

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

Tier 2 Conditions  
Weekday AM Peak Hour



19th Ave CS  
Tier 2

## Scenario Report

Scenario: Tier 2 AM  
Command: Default Command  
Volume: Tier 2 AM  
Geometry: Existing AM  
Impact Fee: Default Impact Fee  
Trip Generation: Projects AM  
Trip Distribution: AM  
Paths: Tier 2/3  
Routes: Tier 2/3  
Configuration: Existing

19th Ave CS  
Tier 2

Impact Analysis Report  
Level Of Service

Intersection	LOS	Base		LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
#1010 Claremont / Taraval / Dewey /	A	6.8	0.650	A	7.0	0.665	+ 0.015 V/C
#1020 Santa Clara / Portola / Vicent	C	29.7	0.837	D	40.2	0.960	+10.494 D/V
#1030 Junipero Serra / Sloat / West	F	90.5	1.076	F	96.9	1.094	+ 6.429 D/V
#1040 Junipero Serra / Ocean / Eucal	D	40.4	0.758	D	46.9	0.802	+ 6.482 D/V
#1050 Junipero Serra / Winston / Mer	C	34.6	0.632	D	38.3	0.772	+ 3.680 D/V
#1060 Junipero Serra / Holloway	C	32.7	0.675	D	36.9	0.716	+ 4.265 D/V
#1070 Junipero Serra / 19th	F	91.7	0.942	F	108.3	0.968	+16.664 D/V
#1075 Junipero Serra / Chumasero	A	2.3	0.715	B	10.3	0.862	+ 8.047 D/V
#1080 Junipero Serra / I-280 NB On-R	D	40.2	0.788	D	40.5	0.800	+ 0.271 D/V
#1090 Junipero Serra / I-280 SB On-R	C	20.4	0.568	C	20.4	0.620	-0.007 D/V
#1100 19th / Taraval	C	25.5	0.815	C	28.9	0.829	+ 3.420 D/V
#1110 19th / Sloat	F	107.3	1.464	F	119.3	1.508	+11.977 D/V
#1120 19th / Ocean	D	41.4	1.084	D	46.1	1.093	+ 4.780 D/V
#1130 19th / Eucalyptus	C	21.0	0.831	C	23.1	0.865	+ 2.060 D/V
#1140 19th / Winston	D	50.0	0.977	F	84.1	1.322	+34.127 D/V
#1150 19th / Buckingham	F	57.6	0.679	F	77.7	0.826	+20.071 D/V
#1160 19th / Holloway	E	61.9	0.850	E	59.7	0.930	-2.282 D/V
#1170 19th / Crespi	D	54.5	0.762	E	64.8	0.752	+10.238 D/V
#1181 Chumasero / Brotherhood	F	95.4	0.961	F	241.8	1.481	+146.420 D/
#1190 Sunset / Taraval	C	21.0	0.717	D	43.0	0.799	+21.964 D/V
#1200 Sunset / Ocean	B	12.0	0.605	B	13.7	0.664	+ 1.687 D/V
#1210 Skyline / Sloat / 39th	C	17.0	0.684	C	17.5	0.692	+ 0.009 V/C
#1221 Skyline / Lake Merced (WBR)	C	15.1	0.209	C	15.1	0.209	+ 0.010 D/V
#1222 Skyline / Lake Merced (WBLT)	F	52.5	0.379	F	52.8	0.381	+ 0.284 D/V

19th Ave CS  
Tier 2

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
#1230 Sunset / Lake Merced	F 154.0	0.594	F 425.0	1.103	+270.952 D/
#1240 Lake Merced / Winston	C 28.8	0.691	F 96.8	0.805	+68.066 D/V
#1250 Lake Merced / Font	E 61.6	0.746	F 171.6	1.471	+109.946 D/
#1263 Lake Merced / Higuera	F 95.7	0.778	F 140.7	1.202	+45.089 D/V
#1270 Lake Merced / Brotherhood	F 96.3	2.103	F 140.2	2.246	+43.892 D/V

19th Ave CS  
Tier 2

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 7.0      Level Of Service: A  
\*\*\*\*\*

Street Name:	Claremont			Taraval / Dewey		
	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign
Lanes:	1	1	1	1	1	1

Volume Module:

Base Vol:	3	7	221	10	60	37	1	231	27	313	337	84
Growth Adj:	1.03	1.02	1.02	1.02	1.02	1.03	1.02	1.01	1.02	1.03	1.04	1.03
Initial Bse:	3	7	224	10	61	38	1	233	27	323	351	87
Added Vol:	1	0	5	0	0	0	0	0	0	17	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	7	229	10	61	38	1	233	27	340	351	87
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	4	7	234	10	63	39	1	238	28	347	358	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	7	234	10	63	39	1	238	28	347	358	88
PCE 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
MLF 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
FinalVolume:	4	7	234	10	63	39	1	238	28	347	358	88

PCE Module:

AutoPCE:	4	7	234	10	63	39	1	238	28	347	358	88
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	4	7	234	10	63	39	1	238	28	347	358	88

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	250	709	420	13
MaxVolume:	1065	817	973	1193
PedVolume:	0	0	0	0
AdjMaxVol:	1065	817	973	1193
ApproachVol:	246	112	267	793
ApproachV/C:	0.23	0.14	0.27	0.66
ApproachDel:	4.4	5.1	5.1	8.8
ApproachLOS:	A	A	A	A
Queue:	0.9	0.5	1.1	5.4



19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.960  
Loss Time (sec): 11 Average Delay (sec/veh): 40.2  
Optimal Cycle: 124 Level Of Service: D

\*\*\*\*\*  
Street Name: Santa Clara / Vicente Portola  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 23 23 23 23 23 23 9 36 36 9 36 36  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 18 264 86 82 202 30 24 1057 17 120 859 81  
Growth Adj: 1.05 1.04 1.09 1.12 1.10 1.08 1.09 1.13 1.12 1.08 1.05 1.05  
Initial Bse: 19 276 94 92 223 32 26 1197 19 129 903 85  
Added Vol: 0 0 0 26 0 4 0 131 0 0 79 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 19 276 94 118 223 36 26 1328 19 129 982 85  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 19 281 96 120 227 37 27 1355 19 132 1002 87  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 19 281 96 120 227 37 27 1355 19 132 1002 87  
PCE 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  
MLF 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  
FinalVolume: 19 281 96 120 227 37 27 1355 19 132 1002 87

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.92 0.92 0.56 0.56 0.56 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.05 0.71 0.24 0.31 0.59 0.10 1.00 1.97 0.03 1.00 1.84 0.16  
Final Sat.: 85 1248 424 330 625 102 1769 3481 50 1769 3217 278

Capacity Analysis Module:

Vol/Sat: 0.23 0.23 0.23 0.36 0.36 0.36 0.02 0.39 0.39 0.07 0.31 0.31  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.30 0.30 0.30 0.30 0.30 0.30 0.11 0.45 0.45 0.11 0.45 0.45  
Volume/Cap: 0.75 0.75 0.75 1.21 1.21 1.21 0.13 0.87 0.87 0.66 0.69 0.69  
Delay/Veh: 34.8 34.8 34.8 149.4 149 149.4 33.4 26.4 26.4 50.1 20.1 20.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 34.8 34.8 34.8 149.4 149 149.4 33.4 26.4 26.4 50.1 20.1 20.1  
LOS by Move: C C C F F F C C C D C C  
HCM2kAvgQ: 11 11 11 21 21 21 1 19 19 4 12 12

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.094  
Loss Time (sec): 16 Average Delay (sec/veh): 96.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 48 48 27 27 27 20 20 20 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 972 1137 20 0 1092 176 646 416 322 23 347 8  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 1129 1292 23 0 1192 200 750 494 367 26 412 9  
Added Vol: 22 110 0 0 53 0 2 0 7 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1151 1402 23 0 1245 200 752 494 374 26 412 9  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1174 1431 24 0 1271 205 768 504 0 27 420 9

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3.00 1.97 0.03 0.00 2.58 0.42 3.00 1.00 1.00 0.12 1.84 0.04  
Final Sat.: 5096 3438 57 0 4329 697 5096 1843 1900 206 3237 73

Capacity Analysis Module:

Vol/Sat: 0.23 0.42 0.42 0.00 0.29 0.29 0.15 0.27 0.00 0.13 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.18 0.44 0.44 0.00 0.26 0.26 0.22 0.22 0.00 0.19 0.19 0.19  
Volume/Cap: 1.26 0.95 0.95 0.00 1.14 1.14 0.69 1.26 0.00 0.68 0.68 0.68  
Delay/Veh: 168.3 41.4 41.4 0.0 113 112.5 41.5 177 0.0 45.1 45.1 45.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 168.3 41.4 41.4 0.0 113 112.5 41.5 177 0.0 45.1 45.1 45.1  
LOS by Move: F D D A F F D F A D D D  
HCM2kAvgQ: 23 23 23 0 29 29 9 31 0 8 8 8

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 0.802  
Loss Time (sec): 14 Average Delay (sec/veh): 46.9  
Optimal Cycle: 100 Level Of Service: D  
\*\*\*\*\*

Street Name: Junipero Serra Ocean / Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:  
Base Vol: 189 1678 46 326 1061 90 85 384 45 54 368 324  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 220 1907 53 371 1159 103 99 456 51 62 437 376  
Added Vol: 0 107 4 14 42 4 2 16 0 1 33 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 220 2014 57 385 1201 107 101 472 51 63 470 399  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 224 2055 59 393 1225 109 103 481 52 64 479 407  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 224 2055 59 393 1225 109 103 481 52 64 479 407  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 224 2055 59 393 1225 109 103 481 52 64 479 407

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.88 0.88 0.91 0.89 0.89 0.60 0.60 0.83 0.96 0.96 0.83  
Lanes: 1.00 2.92 0.08 2.00 2.76 0.24 0.35 1.65 1.00 0.12 0.88 1.00  
Final Sat.: 1751 4873 139 3466 4659 413 403 1889 1583 214 1605 1583

Capacity Analysis Module:  
Vol/Sat: 0.13 0.42 0.42 0.11 0.26 0.26 0.25 0.25 0.03 0.30 0.30 0.26  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 1.16 0.98 0.98 0.71 0.55 0.55 0.94 0.94 0.09 1.11 1.11 0.60  
Delay/Veh: 160.1 39.5 39.5 47.3 15.5 15.5 60.4 60.4 20.2 109.2 109 25.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 160.1 39.5 39.5 47.3 15.5 15.5 60.4 60.4 20.2 109.2 109 25.7  
LOS by Move: F D D D B B E E C F F C  
HCM2kAvgQ: 10 23 23 5 8 8 14 14 1 27 27 10

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 0.772  
Loss Time (sec): 14 Average Delay (sec/veh): 38.3  
Optimal Cycle: 100 Level Of Service: D  
\*\*\*\*\*

Street Name: Junipero Serra Winston / Mercedes  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1 0 1 0 1

Volume Module:  
Base Vol: 186 1681 29 103 1024 72 80 63 73 64 147 62  
Growth Adj: 1.07 1.14 1.16 1.14 1.09 1.05 1.16 1.19 1.14 1.05 1.00 1.07  
Initial Bse: 199 1911 34 117 1118 75 93 75 83 67 147 66  
Added Vol: 56 38 4 1 -24 65 73 48 29 -6 82 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 255 1949 38 118 1094 140 166 123 112 61 229 66  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 260 1988 38 121 1117 143 169 125 115 62 234 68  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 260 1988 38 121 1117 143 169 125 115 62 234 68  
PCE 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  
MLF 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  
FinalVolume: 260 1988 38 121 1117 143 169 125 115 62 234 68

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.46 0.98 0.83 0.64 0.98 0.83  
Lanes: 1.00 2.94 0.06 1.00 2.66 0.34 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4972 96 1769 4429 568 868 1862 1583 1216 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.15 0.40 0.40 0.07 0.25 0.25 0.20 0.07 0.07 0.05 0.13 0.04  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.77 1.00 1.00 0.36 0.63 0.63 0.72 0.25 0.27 0.19 0.46 0.16  
Delay/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6  
LOS by Move: D D D D C C D C C C C C  
HCM2kAvgQ: 7 25 25 3 10 10 4 3 3 2 6 2

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.716  
Loss Time (sec): 14 Average Delay (sec/veh): 36.9  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 234 1520 60 114 956 84 163 106 16 162 129 118  
Growth Adj: 1.08 1.14 1.07 1.05 1.09 1.06 1.07 1.01 1.05 1.06 1.02 1.08  
Initial Bse: 253 1728 64 120 1044 89 175 107 17 171 132 128  
Added Vol: 63 59 2 12 5 -18 25 -12 0 -6 -12 14  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 316 1787 66 132 1049 71 200 95 17 165 120 142  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 322 1823 68 135 1070 72 204 97 17 169 123 144  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 322 1823 68 135 1070 72 204 97 17 169 123 144  
PCE 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  
MLF 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  
FinalVolume: 322 1823 68 135 1070 72 204 97 17 169 123 144

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.65 0.98 0.83 0.68 0.98 0.83  
Lanes: 1.00 2.89 0.11 1.00 2.81 0.19 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4877 181 1769 4719 319 1227 1862 1583 1289 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.18 0.37 0.37 0.08 0.23 0.23 0.17 0.05 0.01 0.13 0.07 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.96 0.96 0.96 0.40 0.58 0.58 0.59 0.19 0.04 0.47 0.24 0.33  
Delay/Veh: 79.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 79.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5  
LOS by Move: E D D D C C D C C C C C  
HCM2kAvgQ: 10 20 20 3 9 9 6 2 0 5 3 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.968  
Loss Time (sec): 0 Average Delay (sec/veh): 108.3  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Ignore Ovl Include  
Min. Green: 46 46 46 18 18 18 9 9 9 9 9 9  
Y+R: 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0  
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 2208 1679 8 0 1210 4 0 71 3047 32 56 62  
Growth Adj: 1.13 1.14 1.12 1.10 1.09 1.11 1.12 1.10 1.10 1.11 1.12 1.13  
Initial Bse: 2494 1908 9 0 1321 4 0 78 3345 35 63 70  
Added Vol: 61 108 3 0 -1 0 0 0 21 119 0 0 15  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2555 2016 12 0 1320 4 0 99 3464 35 63 85  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2607 2058 12 0 1347 0 0 101 3535 36 64 87  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2607 2058 12 0 1347 0 0 101 3535 36 64 87  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2607 2058 12 0 1347 0 0 101 3535 36 64 87

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.97 0.91 0.91 0.91 0.89 0.91 1.00 0.98 0.81 0.44 0.90 0.90  
Lanes: 2.17 1.82 0.01 0.00 4.00 0.00 0.00 1.00 3.00 1.00 0.43 0.57  
Final Sat.: 3977 3139 19 0 6778 0 0 1862 4596 827 723 979

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.66 0.66 0.66 0.00 0.20 0.00 0.00 0.05 0.77 0.04 0.09 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.51 0.51 0.51 0.20 0.20 0.20 0.10 0.10 0.67 0.10 0.10 0.10  
Volume/Cap: 1.29 1.29 1.29 0.00 0.99 0.00 0.00 0.54 1.15 0.44 0.89 0.89  
Delay/Veh: 147.1 147 147.1 0.0 59.0 0.0 0.0 49.5 79.0 54.0 84.3 84.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 147.1 147 147.1 0.0 59.0 0.0 0.0 49.5 79.0 54.0 84.3 84.3  
LOS by Move: F F F A E A A D E D F F  
HCM2kAvgQ: 71 65 65 0 14 0 0 3 62 2 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*  
Cycle (sec): 125 Critical Vol./Cap.(X): 0.800  
Loss Time (sec): 12 Average Delay (sec/veh): 40.5  
Optimal Cycle: 82 Level Of Service: D  
\*\*\*\*\*

Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Ovl Include Ovl  
Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

Volume Module:  
Base Vol: 337 335 364 104 169 262 665 779 99 59 746 303  
Growth Adj: 1.05 1.12 1.14 1.00 1.00 1.00 1.14 1.16 1.00 1.00 1.00 1.05  
Initial Bse: 354 374 414 104 169 262 756 902 99 59 746 318  
Added Vol: 73 21 0 0 0 0 1 11 201 0 0 7  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 427 395 414 104 169 262 757 913 300 59 746 325  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 435 403 422 106 172 267 773 931 306 60 761 332  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 435 403 422 106 172 267 773 931 306 60 761 332  
PCE 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  
MLF 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  
FinalVolume: 435 403 422 106 172 267 773 931 306 60 761 332

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.86 0.86 0.93 0.89 0.89 0.87 0.89 0.89 0.89 0.89 0.83  
Lanes: 2.00 1.47 1.53 1.00 0.78 1.22 2.00 2.00 1.00 1.00 3.00 1.00  
Final Sat.: 3432 2392 2506 1769 1327 2058 3289 3391 1695 1688 5063 1583

Capacity Analysis Module:  
Vol/Sat: 0.13 0.17 0.17 0.06 0.13 0.13 0.23 0.27 0.18 0.04 0.15 0.21  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.21 0.21 0.40 0.16 0.16 0.51 0.34 0.34 0.34 0.19 0.19 0.35  
Volume/Cap: 0.60 0.80 0.42 0.37 0.80 0.26 0.68 0.80 0.53 0.19 0.80 0.60  
Delay/Veh: 46.0 51.4 27.3 47.5 58.6 17.6 35.9 39.1 33.0 42.8 53.1 35.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 46.0 51.4 27.3 47.5 58.6 17.6 35.9 39.1 33.0 42.8 53.1 35.2  
LOS by Move: D D C D E B D D C D D D  
HCM2kAvgQ: 8 13 8 4 10 5 13 17 9 2 12 11

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*  
Cycle (sec): 120 Critical Vol./Cap.(X): 0.620  
Loss Time (sec): 8 Average Delay (sec/veh): 20.4  
Optimal Cycle: 41 Level Of Service: C  
\*\*\*\*\*

Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 2 0 0 0 0 0 0 0 2 1 0 2 0 2 0 0

Volume Module:  
Base Vol: 0 0 316 0 0 0 0 1227 419 499 1001 0  
Growth Adj: 1.02 1.00 1.01 1.13 1.23 1.13 1.01 1.03 1.13 1.13 1.03 1.02  
Initial Bse: 0 0 320 0 0 0 0 1261 472 564 1035 0  
Added Vol: 0 0 23 0 0 0 0 190 47 0 73 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 343 0 0 0 0 1451 519 564 1108 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 350 0 0 0 0 1480 530 575 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 350 0 0 0 0 1480 530 575 0 0  
PCE 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  
MLF 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  
FinalVolume: 0 0 350 0 0 0 0 1480 530 575 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.86 0.86 0.90 0.95 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.21 0.79 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3598 1287 3432 3610 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.13 0.00 0.00 0.00 0.00 0.41 0.41 0.17 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.27 0.00 0.00 0.00 0.00 0.66 0.66 0.27 0.00 0.00  
Volume/Cap: 0.00 0.00 0.47 0.00 0.00 0.00 0.00 0.62 0.62 0.62 0.00 0.00  
Delay/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0  
LOS by Move: A A D A A A A B B D A A  
HCM2kAvgQ: 0 0 6 0 0 0 0 16 16 9 0 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.829  
Loss Time (sec): 10 Average Delay (sec/veh): 28.9  
Optimal Cycle: 89 Level Of Service: C

Street Name: 19th Taraval  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 56 23 23 23 23 23 23  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 1 1 1 0 0 1 0 1 0 0 1 0 1 0

Volume Module:  
Base Vol: 0 2276 57 2 2656 58 2 201 50 0 228 50  
Growth Adj: 1.10 1.14 1.06 1.04 1.09 1.08 1.06 1.00 1.04 1.08 1.07 1.10  
Initial Bse: 0 2587 61 2 2900 63 2 201 52 0 244 55  
Added Vol: 0 146 3 0 60 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2733 64 2 2960 63 2 201 52 0 244 55  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2789 65 2 3021 64 2 205 53 0 249 56  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2789 65 2 3021 64 2 205 53 0 249 56  
PCE 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  
MLF 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  
FinalVolume: 0 2789 65 2 3021 64 2 205 53 0 249 56

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.84 0.84 0.84 0.86 0.86 0.86 0.95 0.90 0.90  
Lanes: 0.00 2.93 0.07 0.01 2.93 0.06 0.02 1.57 0.41 0.00 1.63 0.37  
Final Sat.: 0 4953 115 3 4662 99 27 2571 665 0 2805 634

Capacity Analysis Module:  
Vol/Sat: 0.00 0.56 0.56 0.65 0.65 0.65 0.08 0.08 0.08 0.00 0.09 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.63 0.63 0.63 0.63 0.63 0.26 0.26 0.26 0.00 0.26 0.26  
Volume/Cap: 0.00 0.89 0.89 1.02 1.02 1.02 0.31 0.31 0.31 0.00 0.35 0.35  
Delay/Veh: 0.0 18.0 18.0 39.1 39.1 39.1 28.1 28.1 28.1 0.0 28.5 28.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 18.0 18.0 39.1 39.1 39.1 28.1 28.1 28.1 0.0 28.5 28.5  
LOS by Move: A B B D D D C C C A C C  
HCM2kAvgQ: 0 28 28 42 42 42 3 3 3 0 4 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.508  
Loss Time (sec): 9 Average Delay (sec/veh): 119.3  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 33 33 33 12 49 49 4 32 32 23 23 23  
Y+R: 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 1964 25 312 2778 127 247 1029 62 0 873 403  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 0 2232 29 355 3034 145 287 1221 71 0 1036 468  
Added Vol: 0 110 2 4 35 5 7 3 0 0 13 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2342 31 359 3069 150 294 1224 71 0 1049 491  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2390 32 367 3131 153 300 1249 72 0 1070 501  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2390 32 367 3131 153 300 1249 72 0 1070 501  
PCE 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  
MLF 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  
FinalVolume: 0 2390 32 367 3131 153 300 1249 72 0 1070 501

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.89 0.89 0.58 0.88 0.88 1.00 0.89 0.83  
Lanes: 0.00 2.96 0.04 1.00 2.86 0.14 1.00 2.84 0.16 0.00 3.00 1.00  
Final Sat.: 0 5007 66 1769 4813 235 1106 4729 273 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.48 0.48 0.21 0.65 0.65 0.27 0.26 0.26 0.00 0.21 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.37 0.37 0.15 0.52 0.52 0.38 0.38 0.38 0.00 0.26 0.26  
Volume/Cap: 0.00 1.30 1.30 1.39 1.26 1.26 0.75 0.69 0.69 0.00 0.82 1.24  
Delay/Veh: 0.0 166 166.3 237.4 137 137.5 36.1 24.8 24.8 0.0 37.6 160.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 166 166.3 237.4 137 137.5 36.1 24.8 24.8 0.0 37.6 160.4  
LOS by Move: A F F F F F D C C A D F  
HCM2kAvgQ: 0 49 49 25 66 66 10 12 12 0 13 29

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.093  
Loss Time (sec): 9 Average Delay (sec/veh): 46.1  
Optimal Cycle: 180 Level Of Service: D

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: WideBypass WideBypass Include Include  
Min. Green: 54 54 54 54 54 54 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 1 0 0 0 2 1 0 1 0 0 1 0 0

Volume Module:  
Base Vol: 2 1809 45 0 2766 187 83 274 47 21 230 157  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 2 2056 52 0 3020 213 96 325 54 24 273 182  
Added Vol: 0 112 0 0 35 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2 2168 52 0 3055 213 96 325 54 24 273 182  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2 2212 53 0 3118 217 98 332 55 24 278 186  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2 2212 53 0 3118 217 98 332 55 24 278 186  
PCE 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  
MLF 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  
FinalVolume: 2 2212 53 0 3118 217 98 332 55 24 278 186

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.78 0.78 0.78 1.00 0.88 0.88 0.83 0.96 0.96 0.80 0.80 0.80  
Lanes: 0.01 2.92 0.07 0.00 2.80 0.20 1.00 0.86 0.14 0.05 0.57 0.38  
Final Sat.: 5 4336 105 0 4704 328 1570 1565 258 76 867 580

Capacity Analysis Module:  
Vol/Sat: 0.51 0.51 0.51 0.00 0.66 0.66 0.06 0.21 0.21 0.32 0.32 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.60 0.60 0.60 0.60 0.60 0.60 0.29 0.29 0.29 0.29 0.29 0.29  
Volume/Cap: 0.85 0.85 0.85 0.00 1.10 1.10 0.21 0.72 0.72 1.09 1.09 1.09  
Delay/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
LOS by Move: B B B A E E C D D F F F  
HCM2kAvgQ: 16 16 16 0 46 46 2 10 10 23 23 23

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.865  
Loss Time (sec): 9 Average Delay (sec/veh): 23.1  
Optimal Cycle: 90 Level Of Service: C

Street Name: 19th Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 56 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 1848 21 0 2818 58 74 125 90 10 148 14  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 0 2100 24 0 3077 66 86 148 103 11 176 16  
Added Vol: 0 105 3 0 19 16 8 14 0 7 30 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2205 27 0 3096 82 94 162 103 18 206 16  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2250 28 0 3159 84 96 166 105 19 210 17  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2250 28 0 3159 84 96 166 105 19 210 17  
PCE 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  
MLF 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  
FinalVolume: 0 2250 28 0 3159 84 96 166 105 19 210 17

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.66 0.66 0.66 0.94 0.94 0.94  
Lanes: 0.00 2.96 0.04 0.00 2.92 0.08 1.00 1.23 0.77 0.08 0.85 0.07  
Final Sat.: 0 5011 62 0 4932 131 1251 1533 969 136 1522 120

Capacity Analysis Module:  
Vol/Sat: 0.00 0.45 0.45 0.00 0.64 0.64 0.08 0.11 0.11 0.14 0.14 0.14  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.62 0.62 0.62 0.62 0.62 0.62 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.00 0.72 0.72 0.00 1.03 1.03 0.27 0.38 0.38 0.49 0.49 0.49  
Delay/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
LOS by Move: A A A A C C C C C C C  
HCM2kAvgQ: 0 11 11 0 36 36 2 3 3 6 6 6

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.322  
Loss Time (sec): 13 Average Delay (sec/veh): 84.1  
Optimal Cycle: 180 Level Of Service: F

Street Name:	19th				Winston				
	North Bound		South Bound		East Bound		West Bound		
Approach:	L	T	R	L	T	R	L	T	R
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Permitted		Permitted		Permitted		
Rights:	Include		Include		AddLane		Include		
Min. Green:	15	43	43	43	43	43	18	18	18
Y+R:	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Lanes:	2	0	2	1	0	0	1	1	1

Volume Module:	19th		19th		Winston		Winston	
Base Vol:	386	1920	59	0	2985	60	56	164
Growth Adj:	1.06	1.14	1.00	1.00	1.09	1.04	1.00	1.00
Initial Bse:	409	2182	59	0	3260	62	56	164
Added Vol:	83	43	-30	0	-34	65	64	181
PasserByVol:	0	0	0	0	0	0	0	0
Initial Fut:	492	2225	29	0	3226	127	120	345
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	502	2271	30	0	3291	130	122	352
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	502	2271	30	0	3291	130	122	352
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	502	2271	30	0	3291	130	122	352

Saturation Flow Module:	19th		19th		Winston		Winston	
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	1.00	1.11	0.83	0.26	0.20
Lanes:	2	0	2	0	3	0	1	0
Final Sat.:	3432	5008	65	0	6354	1583	502	754

Capacity Analysis Module:	19th		19th		Winston		Winston	
Vol/Sat:	0.15	0.45	0.45	0.00	0.52	0.08	0.24	0.47
Crit Moves:	****		****		****		****	
Green/Cycle:	0.17	0.48	0.48	0.48	0.48	0.48	0.20	0.20
Volume/Cap:	0.88	0.95	0.95	0.00	1.08	0.17	1.22	2.34
Delay/Veh:	53.7	27.7	27.7	0.0	63.2	11.2	155.6	652
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.7	27.7	27.7	0.0	63.2	11.2	155.6	652
LOS by Move:	D	C	C	A	E	B	F	F
HCM2kAvgQ:	7	21	21	0	50	2	9	19

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1150 19th / Buckingham  
\*\*\*\*\*

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: F[ 77.7]  
\*\*\*\*\*

Street Name:	19th				Buckingham				
	North Bound		South Bound		East Bound		West Bound		
Approach:	L	T	R	L	T	R	L	T	R
Movement:	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign		
Rights:	Include		Include		Include		Include		
Lanes:	0	0	3	0	0	0	3	0	

Volume Module:	19th		19th		Buckingham		Buckingham	
Base Vol:	0	2365	0	0	3145	61	0	0
Growth Adj:	1.00	1.14	1.04	1.02	1.09	1.00	1.04	1.00
Initial Bse:	0	2688	0	0	3434	61	0	0
Added Vol:	0	96	0	0	-28	59	0	0
PasserByVol:	0	0	0	0	0	0	0	0
Initial Fut:	0	2784	0	0	3406	120	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	2841	0	0	3476	122	0	0
Reduct Vol:	0	0	0	0	0	0	0	0
FinalVolume:	0	2841	0	0	3476	122	0	0

Critical Gap Module:	19th		19th		Buckingham		Buckingham	
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.9	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	3.3	xxxxx

Capacity Module:	19th		19th		Buckingham		Buckingham	
Cnflct Vol:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	1159	xxxxx
Potent Cap.:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	189	xxxxx
Move Cap.:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	189	xxxxx
Volume/Cap:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.83	xxxxx

Level of Service Module:	19th		19th		Buckingham		Buckingham	
2Way95thQ:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	5.9	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	77.7	xxxxx
LOS by Move:	*	*	*	*	*	*	F	*
Movement:	LT	-LTR	-RT	LT	-LTR	-RT	LT	-LTR
Shared Cap.:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxx	xxxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxxx	xxxxxx	xxxxx	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxxx			xxxxxxx			77.7	xxxxxxx
ApproachLOS:	*			*			F	*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.930  
Loss Time (sec): 9 Average Delay (sec/veh): 59.7  
Optimal Cycle: 114 Level Of Service: E

Street Name: 19th Holloway  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 48 48 48 48 48 48 33 33 33 33 33 33  
Y+R: 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0  
Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 0 2288 130 0 3078 138 56 143 55 37 370 50  
Growth Adj: 1.07 1.14 1.18 1.16 1.09 1.05 1.18 1.23 1.16 1.05 1.00 1.07  
Initial Bse: 0 2601 154 0 3361 144 66 176 64 39 370 53  
Added Vol: 0 29 -21 0 -22 22 66 34 85 -4 37 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2630 133 0 3339 166 132 210 149 35 407 53  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2683 135 0 3407 170 135 214 152 35 415 54  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2683 135 0 3407 170 135 214 152 35 415 54  
PCE 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  
MLF 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  
FinalVolume: 0 2683 135 0 3407 170 135 214 152 35 415 54

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.98 0.83 0.58 0.58 0.58 0.81 0.81 0.81  
Lanes: 0.00 2.86 0.14 0.00 3.00 1.00 0.54 0.85 0.61 0.14 1.64 0.22  
Final Sat.: 0 4805 242 0 5592 1583 593 940 667 216 2533 332

Capacity Analysis Module:  
Vol/Sat: 0.00 0.56 0.56 0.00 0.61 0.11 0.23 0.23 0.23 0.16 0.16 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.37 0.37 0.37 0.37 0.37 0.37  
Volume/Cap: 0.00 1.05 1.05 0.00 1.14 0.20 0.62 0.62 0.62 0.45 0.45 0.45  
Delay/Veh: 0.0 46.2 46.2 0.0 83.6 8.3 26.9 26.9 26.9 22.9 22.9 22.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 46.2 46.2 0.0 83.6 8.3 26.9 26.9 26.9 22.9 22.9 22.9  
LOS by Move: A D D A F A C C C C C C  
HCM2kAvgQ: 0 34 34 0 52 1 7 7 7 6 6 6

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.752  
Loss Time (sec): 0 Average Delay (sec/veh): 64.8  
Optimal Cycle: 75 Level Of Service: E

Street Name: 19th Crespi  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Include Include  
Min. Green: 48 48 48 53 53 53 22 22 22 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 3 0 0 0 0 3 0 1 1 0 0 0 0 0

Volume Module:  
Base Vol: 0 2266 0 0 3060 110 152 0 68 0 0 0  
Growth Adj: 1.14 1.14 1.05 1.02 1.09 1.12 1.05 1.00 1.02 1.12 1.14 1.14  
Initial Bse: 0 2576 0 0 3342 123 159 0 70 0 0 0  
Added Vol: 0 61 0 0 102 -43 -53 0 38 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2637 0 0 3444 80 106 0 108 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2690 0 0 3514 0 108 0 110 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2690 0 0 3514 0 108 0 110 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2690 0 0 3514 0 108 0 110 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 1.00 0.93 1.00 0.83 1.00 1.00 1.00  
Lanes: 1.00 3.00 0.00 0.00 3.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 1900 5083 0 0 5083 1900 1769 0 1583 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.53 0.00 0.00 0.69 0.00 0.06 0.00 0.07 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.53 0.53 0.53 0.59 0.59 0.59 0.24 0.24 0.24 0.00 0.00 0.00  
Volume/Cap: 0.00 0.99 0.00 0.00 1.17 0.00 0.25 0.00 0.28 0.00 0.00 0.00  
Delay/Veh: 0.0 30.4 0.0 0.0 93.3 0.0 28.7 0.0 29.4 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 30.4 0.0 0.0 93.3 0.0 28.7 0.0 29.4 0.0 0.0 0.0  
LOS by Move: A C A A F A C A C A A A  
HCM2kAvgQ: 0 35 0 0 57 0 3 0 3 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumaseero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.481  
Loss Time (sec): 12 Average Delay (sec/veh): 241.8  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Chumaseero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 20 20 20 21 47 47 21 47 47  
Y+R: 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0  
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 28 16 99 119 26 54 26 1494 44 175 1656 168  
Growth Adj: 1.08 1.06 1.07 1.01 1.00 1.02 1.07 1.08 1.01 1.02 1.09 1.08  
Initial Bse: 30 17 106 121 26 55 28 1609 45 179 1812 181  
Added Vol: 0 0 0 283 0 -14 -18 341 0 0 63 155  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 30 17 106 404 26 41 10 1950 45 179 1875 336  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 31 17 108 412 27 42 10 1990 46 183 1913 343  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 31 17 108 412 27 42 10 1990 46 183 1913 343  
PCE 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  
MLF 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  
FinalVolume: 31 17 108 412 27 42 10 1990 46 183 1913 343

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.69 0.69 0.86 0.39 0.39 0.39 0.93 0.93 0.93 0.93 0.91 0.91  
Lanes: 0.23 0.13 0.64 0.86 0.05 0.09 1.00 1.96 0.04 1.00 1.70 0.30  
Final Sat.: 300 169 1053 639 41 65 1769 3448 79 1769 2931 525

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.10 0.10 0.10 0.65 0.65 0.65 0.01 0.58 0.58 0.10 0.65 0.65  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.20 0.20 0.20 0.20 0.20 0.21 0.47 0.47 0.21 0.47 0.47  
Volume/Cap: 0.51 0.51 0.51 3.23 3.23 3.23 0.03 1.23 1.23 0.49 1.39 1.39  
Delay/Veh: 41.7 41.7 41.7 1059 1059 1059 31.5 130 129.6 39.4 200 200.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 41.7 41.7 41.7 1059 1059 1059 31.5 130 129.6 39.4 200 200.2  
LOS by Move: D D D F F F C F F D F F  
HCM2kAvgQ: 4 4 5 56 56 56 0 59 59 5 78 78

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.799  
Loss Time (sec): 10 Average Delay (sec/veh): 43.0  
Optimal Cycle: 60 Level Of Service: D

\*\*\*\*\*  
Street Name: Sunset Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 0 2021 17 0 1965 11 79 190 53 83 169 38  
Growth Adj: 1.10 1.12 1.06 1.05 1.08 1.08 1.06 1.01 1.05 1.08 1.08 1.10  
Initial Bse: 0 2254 18 0 2130 12 84 193 56 90 183 42  
Added Vol: 0 342 0 0 212 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2596 18 0 2342 12 84 193 56 90 183 42  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2649 18 0 2390 12 86 197 57 92 186 43  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2649 18 0 2390 12 86 197 57 92 186 43  
PCE 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  
MLF 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  
FinalVolume: 0 2649 18 0 2390 12 86 197 57 92 186 43

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.58 0.95 0.95 0.54 0.95 0.95  
Lanes: 0.00 2.98 0.02 0.00 2.98 0.02 1.00 0.78 0.22 1.00 0.81 0.19  
Final Sat.: 0 5043 35 0 5053 26 1097 1396 403 1035 1473 337

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.00 0.53 0.53 0.00 0.47 0.47 0.08 0.14 0.14 0.09 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 1.09 1.09 0.00 0.98 0.98 0.22 0.40 0.40 0.25 0.36 0.36  
Delay/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1  
LOS by Move: A E E A C C B B B B B B  
HCM2kAvgQ: 0 33 33 0 24 24 1 4 4 1 3 3

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1200 Sunset / Ocean

Cycle (sec): 60 Critical Vol./Cap.(X): 0.664
Loss Time (sec): 9 Average Delay (sec/veh): 13.7
Optimal Cycle: 59 Level Of Service: B

Street Name: Sunset Ocean
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 2 1 0 0 0 2 1 0 0 0 1 0 0 1 0 1 0 1

Volume Module:
Base Vol: 0 1318 12 0 1735 81 54 83 18 47 23 192
Growth Adj: 1.00 1.00 1.07 1.11 1.07 1.01 1.07 1.15 1.11 1.01 1.00 1.00
Initial Bse: 0 1318 13 0 1853 82 58 95 20 48 23 192
Added Vol: 0 468 0 0 247 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1786 13 0 2100 82 58 95 20 48 23 192
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 1822 13 0 2143 84 59 97 20 49 23 196
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1822 13 0 2143 84 59 97 20 49 23 196
PCE 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
MLF 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
FinalVolume: 0 1822 13 0 2143 84 59 97 20 49 23 196

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.87 0.87 0.87 0.71 0.98 0.83
Lanes: 0.00 2.98 0.02 0.00 2.89 0.11 0.33 0.55 0.12 1.00 1.00 1.00
Final Sat.: 0 5042 36 0 4863 190 550 908 190 1354 1862 1583

Capacity Analysis Module:
Vol/Sat: 0.00 0.36 0.36 0.00 0.44 0.44 0.11 0.11 0.11 0.04 0.01 0.12
Crit Moves: \*\*\*\*
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32
Volume/Cap: 0.00 0.68 0.68 0.00 0.83 0.83 0.34 0.34 0.34 0.11 0.04 0.39
Delay/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3
LOS by Move: A B B A B B B B B B B
HCM2kAvgQ: 0 8 8 0 15 15 3 3 3 1 0 3

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1210 Skyline / Sloat / 39th

Cycle (sec): 100 Critical Vol./Cap.(X): 0.692
Loss Time (sec): 0 Average Delay (sec/veh): 17.5
Optimal Cycle: 0 Level Of Service: C

Street Name: Skyline / 39th Sloat
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Ignore Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 251 0 646 0 14 7 1 331 194 341 280 60
Growth Adj: 1.19 1.41 1.35 1.15 1.00 1.00 1.35 1.29 1.15 1.00 1.00 1.19
Initial Bse: 299 0 872 0 14 7 1 427 222 341 280 72
Added Vol: 0 0 1 0 0 0 0 16 0 3 34 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 299 0 873 0 14 7 1 443 222 344 314 72
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98
PHF Volume: 306 0 0 0 14 7 1 452 0 351 320 73
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 306 0 0 0 14 7 1 452 0 351 320 73
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 306 0 0 0 14 7 1 452 0 351 320 73

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 2.00 0.00 0.67 0.33 0.01 1.99 1.00 2.00 1.63 0.37
Final Sat.: 442 0 1009 0 274 137 3 912 493 919 810 189

Capacity Analysis Module:
Vol/Sat: 0.69 xxxxx 0.00 xxxxx 0.05 0.05 0.50 0.50 0.00 0.38 0.40 0.39
Crit Moves: \*\*\*\*
Delay/Veh: 25.8 0.0 0.0 0.0 11.4 11.4 17.3 17.3 0.0 14.9 14.1 13.7
Delay 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
AdjDel/Veh: 25.8 0.0 0.0 0.0 11.4 11.4 17.3 17.3 0.0 14.9 14.1 13.7
LOS by Move: D \* \* \* B B C C \* B B B
ApproachDel: 25.8 11.4 17.3 14.4
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 25.8 11.4 17.3 14.4
LOS by Appr: D B C B
AllWayAvgQ: 1.9 1.9 0.0 0.0 0.0 0.9 0.9 0.0 0.6 0.6 0.6

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1221 Skyline / Lake Merced (WBR)

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C[ 15.1]

Street Name: Skyline Lake Merced (WBR) Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R Control: Uncontrolled Uncontrolled Stop Sign Stop Sign Rights: Include Include Include Include Lanes: 0 0 2 0 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module: Base Vol: 0 814 0 90 456 0 0 0 0 0 0 0 75 Growth Adj: 1.23 1.42 1.30 1.09 1.00 1.02 1.30 1.18 1.09 1.02 1.04 1.23 Initial Bse: 0 1156 0 98 456 0 0 0 0 0 0 0 92 Added Vol: 0 1 0 0 3 0 0 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 0 1157 0 98 459 0 0 0 0 0 0 0 92 User 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 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 PHF Volume: 0 1180 0 100 468 0 0 0 0 0 0 0 94 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 FinalVolume: 0 1180 0 100 468 0 0 0 0 0 0 0 94

Critical Gap Module: Critical Gap: 4.1 6.9 FollowUpTim: 2.2 3.3

Capacity Module: Cnflict Vol: 1180 451 451 0.21 Potent Cap.: 587 451 Move Cap.: 587 451 Volume/Cap: 0.17 0.21

Level of Service Module: 2Way95thQ: 0.6 Control Del: 12.4 LOS by Move: B ApproachDel: 15.1 ApproachLOS: C

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1222 Skyline / Lake Merced (WBLT)

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: F[ 52.8]

Street Name: Skyline Lake Merced (WBLT) Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R Control: Uncontrolled Uncontrolled Stop Sign Stop Sign Rights: Include Include Include Include Lanes: 1 0 1 1 0 0 0 2 0 1 0 0 0 0 0 1 0 0 0

Volume Module: Base Vol: 5 814 90 0 423 33 0 0 0 43 5 0 Growth Adj: 1.23 1.42 1.30 1.09 1.00 1.02 1.30 1.18 1.09 1.02 1.04 1.23 Initial Bse: 6 1155 117 0 424 34 0 0 0 44 5 0 Added Vol: 0 1 0 0 3 0 0 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 6 1156 117 0 427 34 0 0 0 44 5 0 User 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 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 PHF Volume: 6 1179 119 0 436 34 0 0 0 45 5 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 FinalVolume: 6 1179 119 0 436 34 0 0 0 45 5 0

Critical Gap Module: Critical Gap: 4.1 6.8 6.5 FollowUpTim: 2.2 3.5 4.0

Capacity Module: Cnflict Vol: 1470 1722 118 88 118 88 0.38 0.06 Potent Cap.: 1088 118 88 118 88 Move Cap.: 1088 118 88 118 88 Volume/Cap: 0.01 0.38 0.06

Level of Service Module: 2Way95thQ: 0.0 Control Del: 8.3 LOS by Move: A F E ApproachDel: 52.8 ApproachLOS: F

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1230 Sunset / Lake Merced
Average Delay (sec/veh): 3.7 Worst Case Level Of Service: F[425.0]
Street Name: Sunset Lake Merced
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Ignore Ignore Ignore Ignore
Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 1 0 0
Volume Module: Base Vol: 87 1279 0 0 1822 29 28 0 146 0 0 0
Growth Adj: 1.01 1.00 1.02 1.07 1.09 1.06 1.02 1.06 1.07 1.06 1.04 1.01
Initial Bse: 88 1279 0 0 1981 31 29 0 157 0 0 0
Added Vol: 0 468 0 0 247 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 88 1747 0 0 2228 31 29 0 157 0 0 0
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.00
PHF Volume: 90 1783 0 0 2273 0 29 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 90 1783 0 0 2273 0 29 0 0 0 0 0
Critical Gap Module: Critical Gap: 4.1 xxx x 4.8 xxx 6.9 7.5 2.5 6.9
FollowUpTim: 2.2 xxx x 3.5 xxx 3.3 3.5 4.0 3.3
Capacity Module: Cnflct Vol: 2273 xxx x 3344 xxx x 1137 3099 4235 891
Potent Cap.: 221 xxx x 39 xxx x 196 5 215 285
Move Cap.: 221 xxx x 26 xxx x 196 3 128 285
Volume/Cap: 0.41 xxx x 1.10 xxx x 0.00 0.00 0.00 0.00
Level of Service Module: 2Way95thQ: 1.8 xxx x 3.5 xxx x xxx x xxx x xxx x
Control Del: 32.0 xxx x 425.0 xxx x xxx x xxx x xxx x
LOS by Move: D \* \* \* \* F \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxx x xxx x xxx x xxx x xxx x xxx x xxx x 0 xxx x
SharedQueue: xxx x xxx x xxx x xxx x xxx x xxx x xxx x xxx x xxx x
Shrd ConDel: xxx x xxx x xxx x xxx x xxx x xxx x xxx x xxx x xxx x
Shared LOS: \*
ApproachDel: xxx x xxx x 425.0 xxx x xxx x
ApproachLOS: \* \* \* \* F \* \*
Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1240 Lake Merced / Winston
Cycle (sec): 90 Critical Vol./Cap.(X): 0.805
Loss Time (sec): 9 Average Delay (sec/veh): 96.8
Optimal Cycle: 89 Level Of Service: F
Street Name: Lake Merced Winston
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Protected Split Phase Split Phase
Rights: WideBypass Include Include Include
Min. Green: 34 34 34 17 55 55 0 0 0 25 25 25
Y+R: 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0
Lanes: 0 0 2 1 0 2 0 2 0 0 0 0 0 0 2 0 0 0 1
Volume Module: Base Vol: 0 1384 215 218 1789 0 0 0 0 196 0 181
Growth Adj: 1.00 1.14 1.18 1.16 1.09 1.00 1.18 1.22 1.16 1.00 1.00 1.00
Initial Bse: 0 1573 254 252 1954 0 0 0 0 196 0 181
Added Vol: 0 393 266 116 131 0 0 0 0 139 0 74
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1966 520 368 2085 0 0 0 0 335 0 255
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 2006 530 376 2127 0 0 0 0 342 0 260
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 2006 530 376 2127 0 0 0 0 342 0 260
PCE 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
MLF 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
FinalVolume: 0 2006 530 376 2127 0 0 0 0 342 0 260
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.86 0.86 0.90 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.83
Lanes: 0.00 2.37 0.63 2.00 2.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00
Final Sat.: 0 3896 1030 3432 3538 0 0 0 0 3432 0 1583
Capacity Analysis Module: Vol/Sat: 0.00 0.51 0.51 0.11 0.60 0.00 0.00 0.00 0.00 0.10 0.00 0.16
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
Green/Cycle: 0.38 0.38 0.38 0.19 0.62 0.62 0.00 0.00 0.00 0.28 0.28 0.28
Volume/Cap: 0.00 1.34 1.34 0.56 0.97 0.00 0.00 0.00 0.00 0.36 0.00 0.59
Delay/Veh: 0.0 184 183.5 36.2 23.0 0.0 0.0 0.0 0.0 27.1 0.0 33.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 184 183.5 36.2 23.0 0.0 0.0 0.0 0.0 27.1 0.0 33.8
LOS by Move: A F F D C A A A A C A C
HCM2kAvgQ: 0 56 56 5 32 0 0 0 0 4 0 7
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.471  
Loss Time (sec): 7 Average Delay (sec/veh): 171.6  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Font  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1746 48 147 1549 0 0 0 0 43 0 304  
Growth Adj: 1.09 1.14 1.07 1.05 1.09 1.07 1.07 1.01 1.05 1.07 1.04 1.09  
Initial Bse: 0 1985 51 154 1692 0 0 0 0 46 0 331  
Added Vol: 0 342 21 193 109 0 0 0 0 20 0 422  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2327 72 347 1801 0 0 0 0 66 0 753  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2374 0 354 1837 0 0 0 0 67 0 768  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2374 0 354 1837 0 0 0 0 67 0 768  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2374 0 354 1837 0 0 0 0 67 0 768

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.67 0.00 0.20 0.52 0.00 0.00 0.00 0.00 0.04 0.00 0.49  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.40 0.00 1.20 0.77 0.00 0.00 0.00 0.00 0.16 0.00 1.99  
Delay/Veh: 0.0 204 0.0 156.1 5.7 0.0 0.0 0.0 0.0 27.5 0.0 486.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 204 0.0 156.1 5.7 0.0 0.0 0.0 0.0 27.5 0.0 486.6  
LOS by Move: A F A F A A A A A C A F  
HCM2kAvgQ: 0 80 0 20 11 0 0 0 0 2 0 69

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.202  
Loss Time (sec): 11 Average Delay (sec/veh): 140.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1694 144 41 1601 0 0 0 0 77 0 58  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.10 1.12  
Initial Bse: 0 1925 160 45 1748 0 0 0 0 84 0 65  
Added Vol: 0 96 97 69 60 0 0 0 0 473 0 268  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2021 257 114 1808 0 0 0 0 557 0 333  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2063 262 116 1845 0 0 0 0 569 0 340  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2063 262 116 1845 0 0 0 0 569 0 340  
PCE 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  
MLF 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  
FinalVolume: 0 2063 262 116 1845 0 0 0 0 569 0 340

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.92 0.92 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 1.77 0.23 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3086 392 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.67 0.67 0.07 0.52 0.00 0.00 0.00 0.00 0.32 0.00 0.21  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.46 0.46 0.46 0.12 0.66 0.66 0.00 0.00 0.00 0.22 0.22 0.22  
Volume/Cap: 0.00 1.47 1.47 0.54 0.80 0.00 0.00 0.00 0.00 1.45 0.00 0.97  
Delay/Veh: 0.0 234 234.0 46.3 7.6 0.0 0.0 0.0 0.0 250.0 0.0 74.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 234 234.0 46.3 7.6 0.0 0.0 0.0 0.0 250.0 0.0 74.7  
LOS by Move: A F F D A A A A A F A E  
HCM2kAvgQ: 0 82 82 3 15 0 0 0 0 39 0 14

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 2.246  
Loss Time (sec): 15 Average Delay (sec/veh): 140.2  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Split Phase		Split Phase								
Rights:	WideBypass		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	416	209	1478	225	0	0	0	0	139	0	1483
Growth Adj:	1.13	1.14	1.29	1.26	1.09	1.11	1.29	1.44	1.26	1.11	1.12	1.13
Initial Bse:	0	473	269	1868	246	0	0	0	0	154	0	1674
Added Vol:	0	117	-18	259	274	0	0	0	0	-16	0	76
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	590	251	2127	520	0	0	0	0	138	0	1750
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	602	256	2171	0	0	0	0	0	141	0	1785
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	602	256	2171	0	0	0	0	0	141	0	1785
PCE 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
MLF 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
FinalVolume:	0	602	256	2171	0	0	0	0	0	141	0	1785

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.17	0.16	0.63	0.00	0.00	0.00	0.00	0.00	0.08	0.00	1.13
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	0.83	0.79	1.47	0.00	0.00	0.00	0.00	0.00	0.35	0.00	1.13
Delay/Veh:	0.0	51.1	57.6	242.0	0.0	0.0	0.0	0.0	0.0	37.4	0.0	66.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	51.1	57.6	242.0	0.0	0.0	0.0	0.0	0.0	37.4	0.0	66.3
LOS by Move:	A	D	E	F	A	A	A	A	A	D	A	E
HCM2kAvgQ:	0	12	10	81	0	0	0	0	0	4	0	32

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

Tier 2 Conditions  
Weekday PM Peak Hour





19th Ave CS  
 Tier 2

 Impact Analysis Report  
 Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in	
#1010 Claremont / Taraval / Dewey /	A	7.1	0.653	A	7.4	0.672	+ 0.020	V/C
#1020 Santa Clara / Portola / Vicent	C	30.5	0.841	D	39.0	0.936	+ 8.525	D/V
#1030 Junipero Serra / Sloat / West	F	101.4	1.113	F	117.2	1.170	+15.817	D/V
#1040 Junipero Serra / Ocean / Eucal	D	39.7	0.820	E	70.2	1.063	+30.533	D/V
#1050 Junipero Serra / Winston / Mer	C	30.4	0.678	D	49.3	1.062	+18.865	D/V
#1060 Junipero Serra / Holloway	C	30.4	0.692	D	37.4	0.724	+ 7.049	D/V
#1070 Junipero Serra / 19th	F	110.5	1.236	F	163.1	1.302	+52.549	D/V
#1075 Junipero Serra / Chumasero	A	2.8	0.723	A	8.2	0.842	+ 5.362	D/V
#1080 Junipero Serra / I-280 NB On-R	F	129.3	1.294	F	151.9	1.400	+22.632	D/V
#1090 Junipero Serra / I-280 SB On-R	D	49.9	1.054	F	89.9	1.172	+40.016	D/V
#1100 19th / Taraval	B	19.4	0.839	C	24.0	0.883	+ 4.578	D/V
#1110 19th / Sloat	F	127.7	1.550	F	154.7	1.630	+26.999	D/V
#1120 19th / Ocean	F	146.9	1.568	F	180.5	1.633	+33.636	D/V
#1130 19th / Eucalyptus	E	69.7	1.079	F	86.4	1.180	+16.707	D/V
#1140 19th / Winston	F	97.7	1.325	F	207.7	1.699	+109.967	D/
#1150 19th / Buckingham	F	408.9	1.759	F	604.0	2.196	+195.131	D/
#1160 19th / Holloway	B	16.9	0.866	F	120.8	1.027	+103.936	D/
#1170 19th / Crespi	D	50.4	0.843	E	69.9	0.872	+19.468	D/V
#1181 Chumasero / Brotherhood	F	227.5	1.104	F	456.0	1.737	+228.550	D/
#1190 Sunset / Taraval	D	49.8	0.843	F	125.6	0.960	+75.784	D/V
#1200 Sunset / Ocean	B	13.3	0.687	C	30.5	0.827	+17.163	D/V
#1210 Skyline / Sloat / 39th	D	27.0	0.908	D	29.4	0.925	+ 0.017	V/C
#1221 Skyline / Lake Merced (WBR)	C	17.4	0.416	C	17.5	0.417	+ 0.048	D/V
#1222 Skyline / Lake Merced (WBLT)	F	116.8	0.894	F	118.6	0.900	+ 1.760	D/V

 19th Ave CS  
 Tier 2

## Intersection

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh	Del/ LOS	V/ Veh	
#1230 Sunset / Lake Merced	F	OVRFL 1.328	F	OVRFL 2.491	Nan D/V
#1240 Lake Merced / Winston	E	66.6 0.971	F	188.9 1.372	+122.395 D/
#1250 Lake Merced / Font	D	46.9 0.783	F	209.4 1.643	+162.431 D/
#1263 Lake Merced / Higuera	E	79.1 0.844	F	226.5 1.566	+147.310 D/
#1270 Lake Merced / Brotherhood	F	139.0 2.430	F	213.0 2.861	+74.026 D/V

19th Ave CS Tier 2

Level of Service Computation Report FHWA Roundabout Method (Future Volume Alternative)

Intersection #1010 Claremont / Taraval / Dewey / Kensington

Average Delay (sec/veh): 7.4 Level of Service: A

Street Name: Claremont Taraval / Dewey

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R) for Control and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

PCE Module:

Table with columns for AutoPCE, TruckPCE, ComboPCE, BicyclePCE, AdjVolume.

Delay Module: >> Time Period: 0.25 hours <<

Table with columns for CircVolume, MaxVolume, PedVolume, AdjMaxVol, ApproachVol, ApproachV/C, ApproachDel, ApproachLOS, Queue.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1020 Santa Clara / Portola / Vicente

Cycle (sec): 80 Critical Vol./Cap.(X): 0.936

Loss Time (sec): 11 Average Delay (sec/veh): 39.0

Optimal Cycle: 111 Level of Service: D

Street Name: Santa Clara / Vicente Portola

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R) for Control and Rights.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.170  
Loss Time (sec): 16 Average Delay (sec/veh): 117.2  
Optimal Cycle: 180 Level Of Service: F

Street Name: Junipero Serra / West Portal Sloat / St. Francis  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 53 53 32 32 32 15 15 15 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 1027 1005 60 0 1045 261 852 420 471 20 405 10  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 1162 1121 66 0 1232 303 937 455 533 23 464 11  
Added Vol: 33 120 0 0 209 0 2 0 29 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1195 1241 66 0 1441 303 939 455 562 23 464 11  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1219 1266 67 0 1470 310 958 464 0 24 474 12  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1219 1266 67 0 1470 310 958 464 0 24 474 12  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1219 1266 67 0 1470 310 958 464 0 24 474 12

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3 0 1 1 0 0 0 2 4 8 0 5 2 3 0 0 9 1 8 6 0 5  
Final Sat.: 5096 3302 176 0 4130 870 5096 1843 1900 164 3276 80

Capacity Analysis Module:  
Vol/Sat: 0.24 0.38 0.38 0.00 0.36 0.36 0.19 0.25 0.00 0.14 0.14 0.14  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.17 0.48 0.48 0.00 0.30 0.30 0.18 0.18 0.00 0.19 0.19 0.19  
Volume/Cap: 1.39 0.80 0.80 0.00 1.17 1.17 1.04 1.39 0.00 0.76 0.76 0.76  
Delay/Veh: 227.4 23.0 23.0 0.0 119 118.7 83.6 238 0.0 48.1 48.1 48.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 227.4 23.0 23.0 0.0 119 118.7 83.6 238 0.0 48.1 48.1 48.1  
LOS by Move: F C C A F F F F A D D D  
HCM2kAvgQ: 28 17 17 0 36 36 17 33 0 10 10 10

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.063  
Loss Time (sec): 14 Average Delay (sec/veh): 70.2  
Optimal Cycle: 180 Level Of Service: E

Street Name: Junipero Serra Ocean / Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:  
Base Vol: 176 1567 35 356 1065 96 140 356 58 77 332 333  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 199 1748 38 403 1255 112 154 386 66 90 381 377  
Added Vol: 0 107 43 35 194 9 12 91 0 25 66 34  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 199 1855 81 438 1449 121 166 477 66 115 447 411  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 203 1893 83 446 1479 123 169 486 67 117 456 419  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 203 1893 83 446 1479 123 169 486 67 117 456 419  
PCE 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  
MLF 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  
FinalVolume: 203 1893 83 446 1479 123 169 486 67 117 456 419

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.97 0.88 0.90 0.88 0.88 0.63 0.63 0.83 0.63 0.63 0.83  
Lanes: 1 00 2 86 0 14 2 00 2 77 0 23 0 52 1 48 1 00 0 20 0 80 1 00  
Final Sat.: 1751 5249 231 3432 4636 386 616 1770 1583 244 951 1583

Capacity Analysis Module:  
Vol/Sat: 0.12 0.36 0.36 0.13 0.32 0.32 0.27 0.27 0.04 0.48 0.48 0.26  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 1.05 0.84 0.84 0.81 0.66 0.66 1.02 1.02 0.11 1.77 1.77 0.62  
Delay/Veh: 124.5 25.6 25.6 53.0 17.3 17.3 76.5 76.5 20.4 397.3 397 26.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 124.5 25.6 25.6 53.0 17.3 17.3 76.5 76.5 20.4 397.3 397 26.2  
LOS by Move: F C C D B B E E C F F C  
HCM2kAvgQ: 8 18 17 6 10 10 17 17 1 49 49 11

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1050 Junipero Serra / Winston / Mercedes

Cycle (sec): 100 Critical Vol./Cap.(X): 1.062
Loss Time (sec): 14 Average Delay (sec/veh): 49.3
Optimal Cycle: 180 Level Of Service: D

Street Name: Junipero Serra Winston / Mercedes

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: WideBypass Include Include Include
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

Volume Module:
Base Vol: 224 1516 52 85 1130 117 169 152 81 74 103 36
Growth Adj: 1.05 1.12 1.11 1.15 1.18 1.08 1.11 1.11 1.15 1.08 1.00 1.05
Initial Bse: 236 1691 58 97 1332 127 188 169 93 80 103 38
Added Vol: 73 15 2 1 62 156 135 157 48 1 133 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 309 1706 60 98 1394 283 323 326 141 81 236 38
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 315 1741 61 100 1422 289 330 333 144 83 241 39
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 315 1741 61 100 1422 289 330 333 144 83 241 39
PCE 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
MLF 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
FinalVolume: 315 1741 61 100 1422 289 330 333 144 83 241 39

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.89 0.89 0.93 0.87 0.87 0.44 0.98 0.83 0.30 0.98 0.83
Lanes: 1.00 2.90 0.10 1.00 2.49 0.51 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1769 4886 172 1769 4120 836 845 1862 1583 579 1862 1583

Capacity Analysis Module:
Vol/Sat: 0.18 0.36 0.36 0.06 0.35 0.35 0.39 0.18 0.09 0.14 0.13 0.02
Crit Moves: \*\*\*\*
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27
Volume/Cap: 0.94 0.89 0.89 0.30 0.86 0.86 1.45 0.66 0.34 0.53 0.48 0.09
Delay/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7
LOS by Move: E C C D C C F D C D C C
HCM2kAvgQ: 10 18 18 2 18 18 22 8 3 3 7 1

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1060 Junipero Serra / Holloway

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724
Loss Time (sec): 14 Average Delay (sec/veh): 37.4
Optimal Cycle: 100 Level Of Service: D

Street Name: Junipero Serra Holloway

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

Volume Module:
Base Vol: 183 1398 101 176 1001 104 117 140 23 143 96 107
Growth Adj: 1.11 1.12 1.08 1.11 1.18 1.14 1.08 1.04 1.11 1.14 1.10 1.11
Initial Bse: 202 1559 109 195 1180 118 126 145 25 163 105 118
Added Vol: 151 60 1 31 39 41 7 -21 0 1 0 23
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 353 1619 110 226 1219 159 133 124 25 164 105 141
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 360 1652 112 230 1244 162 136 126 26 167 107 144
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 360 1652 112 230 1244 162 136 126 26 167 107 144
PCE 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
MLF 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
FinalVolume: 360 1652 112 230 1244 162 136 126 26 167 107 144

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.88 0.88 0.93 0.88 0.88 0.67 0.98 0.83 0.64 0.98 0.83
Lanes: 1.00 2.81 0.19 1.00 2.65 0.35 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1769 4718 319 1769 4419 577 1275 1862 1583 1218 1862 1583

Capacity Analysis Module:
Vol/Sat: 0.20 0.35 0.35 0.13 0.28 0.28 0.11 0.07 0.02 0.14 0.06 0.09
Crit Moves: \*\*\*\*
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28
Volume/Cap: 1.07 0.90 0.90 0.69 0.72 0.72 0.38 0.24 0.06 0.49 0.21 0.33
Delay/Veh: 110.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 110.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5
LOS by Move: F C C D C C C C C C C C
HCM2kAvgQ: 14 17 17 6 12 12 4 3 1 5 3 4

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 1.302  
Loss Time (sec): 17 Average Delay (sec/veh): 163.1  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: Junipero Serra 19th  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Ignore Ignore Ovl Include  
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

Volume Module:  
Base Vol: 2410 1660 25 0 1178 17 0 123 3060 31 47 50  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09  
Initial Bse: 2621 1851 27 0 1388 19 0 124 3346 35 50 54  
Added Vol: 98 186 2 0 41 0 0 37 199 0 1 26  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2719 2037 29 0 1429 19 0 161 3545 35 51 80  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2775 2079 0 0 1458 0 0 164 3617 35 52 82  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2775 2079 0 0 1458 0 0 164 3617 35 52 82  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2775 2079 0 0 1458 0 0 164 3617 35 52 82

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 0.90 0.95 0.91 0.89 0.91 1.00 0.98 0.73 0.51 0.89 0.89  
Lanes: 2.32 1.68 0.00 0.00 4.00 0.00 0.00 1.00 3.00 1.00 0.39 0.61  
Final Sat.: 3863 2895 0 0 6778 0 0 1862 4178 966 655 1036

Capacity Analysis Module:  
Vol/Sat: 0.72 0.72 0.00 0.00 0.22 0.00 0.00 0.09 0.87 0.04 0.08 0.08  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.50 0.50 0.50 0.20 0.20 0.20 0.14 0.14 0.68 0.14 0.14 0.14  
Volume/Cap: 1.44 1.44 0.00 0.00 1.08 0.00 0.00 0.63 1.27 0.26 0.57 0.57  
Delay/Veh: 217.3 217 0.0 0.0 87.7 0.0 0.0 51.6 131.1 43.0 49.6 49.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 217.3 217 0.0 0.0 87.7 0.0 0.0 51.6 131.1 43.0 49.6 49.6  
LOS by Move: F F A A F A A D F D D D  
HCM2kAvgQ: 87 87 0 0 18 0 0 6 79 1 5 5

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*  
Cycle (sec): 125 Critical Vol./Cap.(X): 1.400  
Loss Time (sec): 12 Average Delay (sec/veh): 151.9  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Ovl Include Ovl  
Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

Volume Module:  
Base Vol: 621 381 328 210 383 857 667 495 160 122 895 232  
Growth Adj: 1.19 1.13 1.11 1.28 1.47 1.36 1.11 1.09 1.28 1.36 1.25 1.19  
Initial Bse: 739 429 363 268 562 1167 738 537 204 166 1122 276  
Added Vol: 283 53 0 0 0 0 -1 18 187 0 0 14  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1022 482 363 268 562 1167 737 555 391 166 1122 290  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 1043 492 370 274 574 1190 752 567 399 169 1145 296  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1043 492 370 274 574 1190 752 567 399 169 1145 296  
PCE 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  
MLF 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  
FinalVolume: 1043 492 370 274 574 1190 752 567 399 169 1145 296

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.87 0.87 0.93 0.88 0.88 0.85 0.88 0.88 0.89 0.89 0.83  
Lanes: 2.00 1.71 1.29 1.00 0.65 1.35 2.22 1.63 1.15 1.00 3.00 1.00  
Final Sat.: 3432 2834 2133 1769 1089 2259 3608 2720 1916 1684 5053 1583

Capacity Analysis Module:  
Vol/Sat: 0.30 0.17 0.17 0.15 0.53 0.53 0.21 0.21 0.21 0.10 0.23 0.19  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.19 0.33 0.33 0.33 0.57 0.25 0.25 0.25 0.14 0.14 0.47  
Volume/Cap: 1.61 0.92 0.53 0.47 1.61 0.92 0.84 0.84 0.84 0.72 1.61 0.40  
Delay/Veh: 333.3 63.8 34.4 34.1 322 31.3 47.9 47.9 47.9 52.7 335 22.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 333.3 63.8 34.4 34.1 322 31.3 47.9 47.9 47.9 52.7 335 22.2  
LOS by Move: F E C C F C D D D D F C  
HCM2kAvgQ: 47 15 10 8 75 34 12 12 12 8 37 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 1.172  
Loss Time (sec): 8 Average Delay (sec/veh): 89.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 2 0 0 0 0 0 0 0

Volume Module:

Base Vol: 0 0 350 0 0 0 0 972 427 722 1966 0  
Growth Adj: 1.05 1.00 1.04 1.32 1.55 1.33 1.04 1.09 1.32 1.33 1.10 1.05  
Initial Bse: 0 0 365 0 0 0 0 1058 563 958 2172 0  
Added Vol: 0 0 34 0 0 0 0 171 36 0 283 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 399 0 0 0 0 1229 599 958 2455 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 408 0 0 0 0 1254 611 977 2505 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 408 0 0 0 0 1254 611 977 2505 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 0 408 0 0 0 0 1254 611 977 2505 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.85 0.85 0.90 0.93 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.02 0.98 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3250 1584 3432 3538 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.15 0.00 0.00 0.00 0.00 0.39 0.39 0.28 0.71 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.60 0.00 0.00 0.00 0.00 0.33 0.33 0.60 0.60 0.00  
Volume/Cap: 0.00 0.00 0.24 0.00 0.00 0.00 0.00 1.17 1.17 0.47 1.17 0.00  
Delay/Veh: 0.0 0.0 11.1 0.0 0.0 0.0 0.0 125 124.8 13.3 107 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 11.1 0.0 0.0 0.0 0.0 125 124.8 13.3 107 0.0  
LOS by Move: A A B A A A A F F B F A  
HCM2kAvgQ: 0 0 4 0 0 0 0 40 40 9 69 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.883  
Loss Time (sec): 10 Average Delay (sec/veh): 24.0  
Optimal Cycle: 99 Level Of Service: C

\*\*\*\*\*  
Street Name: 19th Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 66 66 66 66 66 66 23 23 23 23 23 23  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 1 0 1 0 0 1 0 1 0

Volume Module:

Base Vol: 0 2131 104 0 2591 31 3 331 84 22 336 51  
Growth Adj: 1.06 1.12 1.06 1.09 1.18 1.09 1.06 1.00 1.09 1.09 1.00 1.06  
Initial Bse: 0 2377 110 0 3053 34 3 331 91 24 336 54  
Added Vol: 0 201 2 0 202 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2578 112 0 3255 34 3 331 91 24 336 54  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2630 114 0 3322 34 3 338 93 24 343 55  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2630 114 0 3322 34 3 338 93 24 343 55  
PCE 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  
MLF 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  
FinalVolume: 0 2630 114 0 3322 34 3 338 93 24 343 55

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.86 0.86 0.86 0.83 0.83 0.83  
Lanes: 0.00 2.88 0.12 0.00 2.97 0.03 0.01 1.56 0.43 0.12 1.62 0.26  
Final Sat.: 0 4842 210 0 5026 52 24 2538 701 182 2562 411

Capacity Analysis Module:

Vol/Sat: 0.00 0.54 0.54 0.00 0.66 0.66 0.13 0.13 0.13 0.13 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.67 0.67 0.00 0.67 0.67 0.23 0.23 0.23 0.23 0.23 0.23  
Volume/Cap: 0.00 0.81 0.81 0.00 0.99 0.99 0.58 0.58 0.58 0.58 0.58 0.58  
Delay/Veh: 0.0 14.1 14.1 0.0 28.6 28.6 37.4 37.4 37.4 37.6 37.6 37.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 14.1 14.1 0.0 28.6 28.6 37.4 37.4 37.4 37.6 37.6 37.6  
LOS by Move: A B B A C C D D D D D D  
HCM2kAvgQ: 0 24 24 0 45 45 7 7 7 7 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.630  
Loss Time (sec): 9 Average Delay (sec/veh): 154.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Sloat  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:

Base Vol: 0 2446 66 235 2609 321 185 1440 74 0 870 497  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2728 73 266 3075 373 203 1560 84 0 998 562  
Added Vol: 0 164 2 16 170 18 22 13 0 0 13 47  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2892 75 282 3245 391 225 1573 84 0 1011 609  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2951 76 287 3311 399 230 1605 85 0 1031 622  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2951 76 287 3311 399 230 1605 85 0 1031 622  
PCE 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  
MLF 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  
FinalVolume: 0 2951 76 287 3311 399 230 1605 85 0 1031 622

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.88 0.41 0.88 0.88 1.00 0.89 0.83  
Lanes: 0.00 2.92 0.08 1.00 2.68 0.32 1.00 2.85 0.15 0.00 3.00 1.00  
Final Sat.: 0 4936 127 1769 4464 538 782 4764 253 0 5083 1583

Capacity Analysis Module:

Vol/Sat: 0.00 0.60 0.60 0.16 0.74 0.74 0.29 0.34 0.34 0.00 0.20 0.39  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.11 0.54 0.54 0.37 0.37 0.37 0.00 0.27 0.27  
Volume/Cap: 0.00 1.39 1.39 1.44 1.37 1.37 0.79 0.92 0.92 0.00 0.75 1.44  
Delay/Veh: 0.0 203 203.1 269.9 183 183.5 42.5 38.0 38.0 0.0 36.9 248.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 203 203.1 269.9 183 183.5 42.5 38.0 38.0 0.0 36.9 248.7  
LOS by Move: A F F F F F D D D A D F  
HCM2kAvgQ: 0 70 70 22 87 87 9 22 22 0 12 44

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.633  
Loss Time (sec): 9 Average Delay (sec/veh): 180.5  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Ocean  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 64 64 64 64 64 64 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0 0 0 1 0 0

Volume Module:

Base Vol: 0 2340 47 0 2579 164 64 293 25 25 271 127  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2610 52 0 3039 191 70 317 28 29 311 144  
Added Vol: 0 166 0 0 170 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2776 52 0 3209 191 70 317 28 29 311 144  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2832 53 0 3275 195 72 324 29 30 317 147  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2832 53 0 3275 195 72 324 29 30 317 147  
PCE 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  
MLF 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  
FinalVolume: 0 2832 53 0 3275 195 72 324 29 30 317 147

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.44 0.89 1.00 0.88 0.88 0.89 0.97 0.97 0.73 0.73 0.73  
Lanes: 0.00 2.97 0.03 0.00 2.83 0.17 1.00 0.92 0.08 0.06 0.64 0.30  
Final Sat.: 0 2511 47 0 4760 283 1687 1689 150 83 886 409

Capacity Analysis Module:

Vol/Sat: 0.00 1.13 1.13 0.00 0.69 0.69 0.04 0.19 0.19 0.36 0.36 0.36  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.64 0.64 0.64 0.64 0.64 0.64 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.00 1.76 1.76 0.00 1.08 1.08 0.16 0.72 0.72 1.35 1.35 1.35  
Delay/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8  
LOS by Move: A F F A D D C D D F F F  
HCM2kAvgQ: 0 86 172 0 48 48 2 11 11 33 33 33

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.180  
Loss Time (sec): 9 Average Delay (sec/veh): 86.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Eucalyptus  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 66 66 66 66 66 66 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 2277 26 0 2555 114 170 169 54 9 167 17  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2540 29 0 3011 133 187 183 61 10 192 19  
Added Vol: 0 121 18 0 137 33 45 84 0 13 62 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2661 47 0 3148 166 232 267 61 23 254 19  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2715 48 0 3212 169 237 273 62 24 259 20  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2715 48 0 3212 169 237 273 62 24 259 20  
PCE 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  
MLF 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  
FinalVolume: 0 2715 48 0 3212 169 237 273 62 24 259 20

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.53 0.89 1.00 0.89 0.89 0.64 0.64 0.64 0.93 0.93 0.93  
Lanes: 0.00 2.97 0.03 0.00 2.85 0.15 1.24 1.43 0.33 0.08 0.86 0.06  
Final Sat.: 0 3009 53 0 4795 252 1511 1741 398 139 1505 114

Capacity Analysis Module:  
Vol/Sat: 0.00 0.90 0.90 0.00 0.67 0.67 0.16 0.16 0.16 0.17 0.17 0.17  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.66 0.66 0.66 0.66 0.66 0.66 0.26 0.26 0.26 0.26 0.26 0.26  
Volume/Cap: 0.00 1.37 1.37 0.00 1.01 1.01 0.61 0.61 0.61 0.67 0.67 0.67  
Delay/Veh: 0.0 175 175.3 0.0 26.3 26.3 35.9 35.9 35.9 41.4 41.4 41.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 175 175.3 0.0 26.3 26.3 35.9 35.9 35.9 41.4 41.4 41.4  
LOS by Move: A F F A C C D D D D D D  
HCM2kAvgQ: 0 65 106 0 40 40 6 6 6 9 9 9

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.699  
Loss Time (sec): 13 Average Delay (sec/veh): 207.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Winston  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted  
Rights: Include Include AddLane Include  
Min. Green: 16 44 44 44 44 44 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 524 2162 50 0 2624 168 245 364 347 95 351 45  
Growth Adj: 1.03 1.12 1.05 1.09 1.18 1.06 1.05 1.00 1.09 1.06 1.00 1.03  
Initial Bse: 539 2411 53 0 3092 178 258 364 377 101 351 46  
Added Vol: 120 22 -34 0 81 102 116 374 133 36 325 1  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 659 2433 19 0 3173 280 374 738 510 137 676 47  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 672 2483 19 0 3238 286 382 753 520 139 690 48  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 672 2483 19 0 3238 286 382 753 520 139 690 48  
PCE 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  
MLF 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  
FinalVolume: 672 2483 19 0 3238 286 382 753 520 139 690 48

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.89 0.89 1.00 1.34 0.83 0.31 0.23 0.83 0.49 0.49 0.49  
Lanes: 2.00 2.98 0.02 0.00 3.00 1.00 1.00 2.00 1.00 0.32 1.57 0.11  
Final Sat.: 3432 5039 39 0 7625 1583 586 878 1583 296 1465 102

Capacity Analysis Module:  
Vol/Sat: 0.20 0.49 0.49 0.00 0.42 0.18 0.65 0.86 0.33 0.47 0.47 0.47  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.16 0.44 0.44 0.44 0.44 0.44 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 1.22 1.12 1.12 0.00 0.97 0.41 2.46 3.24 1.24 1.78 1.78 1.78  
Delay/Veh: 158.3 84.4 84.4 0.0 32.5 18.0 700.6 1050 163.6 394.4 394 394.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 158.3 84.4 84.4 0.0 32.5 18.0 700.6 1050 163.6 394.4 394 394.4  
LOS by Move: F F F A C B F F F F F F  
HCM2kAvgQ: 18 39 39 0 41 5 43 47 31 39 39 39

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.





19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.872  
Loss Time (sec): 10 Average Delay (sec/veh): 69.9  
Optimal Cycle: 95 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Crespi  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Ignore Include  
Min. Green: 59 59 0 0 64 64 21 0 21 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 0 0 0 2 1 0 1 0 1 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 2485 0 0 3081 99 147 0 97 0 0 0  
Growth Adj: 1.15 1.12 1.00 1.00 1.18 1.18 1.00 1.00 1.00 1.18 1.19 1.15  
Initial Bse: 0 2772 0 0 3631 117 147 0 97 0 0 0  
Added Vol: 0 99 0 0 219 74 -88 0 17 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2871 0 0 3850 191 59 0 114 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2929 0 0 3929 0 60 0 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2929 0 0 3929 0 60 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 0 2929 0 0 3929 0 60 0 0 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 0.91 0.89 0.95 0.95 1.00 1.00 1.00  
Lanes: 0.00 3.00 0.00 0.00 3.00 0.00 3.00 0.00 0.00 0.00 0.00 0.00  
Final Sat.: 0 5083 0 0 5083 0 5052 0 0 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.58 0.00 0.00 0.77 0.00 0.01 0.00 0.00 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.59 0.59 0.59 0.64 0.64 0.64 0.21 0.21 0.21 0.00 0.00 0.00  
Volume/Cap: 0.00 0.98 0.00 0.00 1.21 0.00 0.06 0.00 0.00 0.00 0.00 0.00  
Delay/Veh: 0.0 23.7 0.0 0.0 105 0.0 31.7 0.0 0.0 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 23.7 0.0 0.0 105 0.0 31.7 0.0 0.0 0.0 0.0 0.0  
LOS by Move: A C A A F A C A A A A A  
HCM2kAvgQ: 0 38 0 0 72 0 1 0 0 0 0 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumasero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.737  
Loss Time (sec): 12 Average Delay (sec/veh): 456.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Chumasero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 20 20 20 20 48 48 20 48 48  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 0 0 0 0 1 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module:  
Base Vol: 12 5 32 75 4 12 39 1460 11 33 1613 236  
Growth Adj: 1.28 1.00 1.08 1.27 1.38 1.47 1.08 1.16 1.27 1.47 1.57 1.28  
Initial Bse: 15 5 34 95 6 18 42 1698 14 49 2532 302  
Added Vol: 0 0 0 255 0 -11 -23 249 0 0 386 618  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 15 5 34 350 6 7 19 1947 14 49 2918 920  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 16 5 35 358 6 7 19 1986 14 50 2977 939  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 16 5 35 358 6 7 19 1986 14 50 2977 939  
PCE 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  
MLF 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  
FinalVolume: 16 5 35 358 6 7 19 1986 14 50 2977 939

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.71 0.71 0.89 0.53 0.53 0.53 0.93 0.93 0.93 0.93 0.90 0.90  
Lanes: 0.32 0.10 0.58 0.97 0.01 0.02 1.00 1.99 0.01 1.00 1.52 0.48  
Final Sat.: 434 141 974 968 15 19 1769 3509 25 1769 2593 817

Capacity Analysis Module:  
Vol/Sat: 0.04 0.04 0.04 0.37 0.37 0.37 0.01 0.57 0.57 0.03 1.15 1.15  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.48 0.48 0.20 0.48 0.48  
Volume/Cap: 0.18 0.18 0.18 1.85 1.85 1.85 0.05 1.18 1.18 0.14 2.39 2.39  
Delay/Veh: 34.5 34.5 34.5 439.3 439 439.3 32.6 108 107.8 33.8 649 649.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 34.5 34.5 34.5 439.3 439 439.3 32.6 108 107.8 33.8 649 649.0  
LOS by Move: C C C F F F C F F C F F  
HCM2kAvgQ: 1 1 2 33 33 33 0 54 54 1 209 209

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.960  
Loss Time (sec): 10 Average Delay (sec/veh): 125.6  
Optimal Cycle: 100 Level Of Service: F

\*\*\*\*\*  
Street Name: Sunset Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

Volume Module:  
Base Vol: 0 2129 96 0 1790 117 70 238 37 76 243 30  
Growth Adj: 1.14 1.20 1.12 1.15 1.26 1.17 1.12 1.04 1.15 1.17 1.08 1.14  
Initial Bse: 0 2553 108 0 2261 137 79 249 43 89 263 34  
Added Vol: 0 483 0 0 513 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 3036 108 0 2774 137 79 249 43 89 263 34  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 3098 110 0 2831 140 80 254 44 91 268 35  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 3098 110 0 2831 140 80 254 44 91 268 35  
PCE 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  
MLF 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  
FinalVolume: 0 3098 110 0 2831 140 80 254 44 91 268 35

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.48 0.96 0.96 0.49 0.96 0.96  
Lanes: 0.00 2.90 0.10 0.00 2.86 0.14 1.00 0.85 0.15 1.00 0.88 0.12  
Final Sat.: 0 4885 173 0 4810 238 916 1554 267 929 1619 211

Capacity Analysis Module:  
Vol/Sat: 0.00 0.63 0.63 0.00 0.59 0.59 0.09 0.16 0.16 0.10 0.17 0.17  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 1.31 1.31 0.00 1.22 1.22 0.25 0.47 0.47 0.28 0.47 0.47  
Delay/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7  
LOS by Move: A F F A F F B B B B B B  
HCM2kAvgQ: 0 58 58 0 47 47 1 5 5 1 5 5

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.827  
Loss Time (sec): 9 Average Delay (sec/veh): 30.5  
Optimal Cycle: 63 Level Of Service: C

\*\*\*\*\*  
Street Name: Sunset Ocean  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 1 1 1 0 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1682 14 1 1588 60 30 61 18 37 47 226  
Growth Adj: 1.11 1.24 1.10 1.00 1.00 1.00 1.10 1.00 1.00 1.00 1.00 1.11  
Initial Bse: 0 2085 15 1 1589 60 33 61 18 37 47 252  
Added Vol: 0 590 0 0 670 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2675 15 1 2259 60 33 61 18 37 47 252  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2729 16 1 2305 61 34 62 18 38 48 257  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2729 16 1 2305 61 34 62 18 38 48 257  
PCE 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  
MLF 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  
FinalVolume: 0 2729 16 1 2305 61 34 62 18 38 48 257

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.79 0.79 0.79 0.88 0.88 0.88 0.76 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.01 2.92 0.07 0.30 0.54 0.16 1.00 1.00 1.00  
Final Sat.: 0 5049 29 2 4407 117 493 909 268 1450 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.54 0.54 0.52 0.52 0.52 0.07 0.07 0.07 0.03 0.03 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.53 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 1.01 1.01 0.98 0.98 0.98 0.22 0.22 0.22 0.08 0.08 0.51  
Delay/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
LOS by Move: A C C C C C B B B B B C  
HCM2kAvgQ: 0 21 21 24 24 24 2 2 2 0 1 4

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1210 Skyline / Sloat / 39th
Cycle (sec): 100 Critical Vol./Cap.(X): 0.925
Loss Time (sec): 0 Average Delay (sec/veh): 29.4
Optimal Cycle: 0 Level Of Service: D
Street Name: Skyline / 39th Sloat
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Ignore Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 0
Volume Module:
Base Vol: 327 0 565 0 21 7 2 350 163 450 435 64
Growth Adj: 1.13 1.23 1.24 1.16 1.08 1.05 1.24 1.25 1.16 1.05 1.03 1.13
Initial Bse: 371 0 701 0 23 7 2 437 189 475 450 73
Added Vol: 0 0 3 0 0 0 0 43 0 2 35 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 371 0 704 0 23 7 2 480 189 477 485 73
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98
PHF Volume: 378 0 0 0 23 8 3 489 0 486 495 74
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 378 0 0 0 23 8 3 489 0 486 495 74
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 378 0 0 0 23 8 3 489 0 486 495 74
Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 2.00 0.00 0.75 0.25 0.01 1.99 1.00 2.00 1.74 0.26
Final Sat.: 409 0 912 0 286 93 4 771 406 839 785 119
Capacity Analysis Module:
Vol/Sat: 0.92 xxxx 0.00 xxxx 0.08 0.08 0.63 0.63 0.00 0.58 0.63 0.62
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
Delay/Veh: 56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9
Delay 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
AdjDel/Veh: 56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9
LOS by Move: F \* \* \* B B D D \* C C C
ApproachDel: 56.1 12.8 25.3 22.1
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 56.1 12.8 25.3 22.1
LOS by Appr: F B D C
AllWayAvgQ: 5.1 5.1 0.0 0.1 0.1 1.5 1.5 0.0 1.2 1.5 1.5
Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1221 Skyline / Lake Merced (WBR)
Average Delay (sec/veh): 2.5 Worst Case Level Of Service: C[ 17.5]
Street Name: Skyline Lake Merced (WBR)
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 2 0 0 1 0 2 0 0 0 0 0 0 0 1
Volume Module:
Base Vol: 0 853 0 100 489 0 0 0 0 0 0 0 133
Growth Adj: 1.51 1.22 1.12 1.07 1.12 1.46 1.12 1.02 1.07 1.46 1.81 1.51
Initial Bse: 0 1041 0 107 548 0 0 0 0 0 0 0 201
Added Vol: 0 3 0 0 2 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1044 0 107 550 0 0 0 0 0 0 0 201
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 1065 0 109 561 0 0 0 0 0 0 0 205
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 1065 0 109 561 0 0 0 0 0 0 0 205
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 6.9
FollowUpTim:xxxxx xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 3.3
Capacity Module:
Cnflct Vol: xxxxx xxxx xxxxx 1065 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 532
Potent Cap.: xxxxx xxxx xxxxx 650 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 492
Move Cap.: xxxxx xxxx xxxxx 650 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 492
Volume/Cap: xxxxx xxxx xxxxx 0.17 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 0.42
Level of Service Module:
2Way95thQ: xxxxx xxxx xxxxx 0.6 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 2.0
Control Del:xxxxx xxxx xxxxx 11.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 17.5
LOS by Move: \* \* \* B \* \* \* \* \* C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \*
ApproachDel: xxxxxx xxxxxx xxxxxx 17.5
ApproachLOS: \* \* \* C
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)  
\*\*\*\*\*

Average Delay (sec/veh): 7.4 Worst Case Level Of Service: F[118.6]  
\*\*\*\*\*

Street Name: Skyline Lake Merced (WBLT)  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 1 0 1 1 0 0 0 2 0 1 0 0 0 0 0 1 0 1 0 0

Volume Module:  
Base Vol: 8 853 118 0 468 21 0 0 0 75 3 0  
Growth Adj: 1.51 1.22 1.12 1.07 1.12 1.46 1.12 1.02 1.07 1.46 1.81 1.51  
Initial Bse: 12 1044 133 0 524 31 0 0 0 110 5 0  
Added Vol: 0 3 0 0 2 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 12 1047 133 0 526 31 0 0 0 110 5 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 12 1069 135 0 537 31 0 0 0 112 6 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 12 1069 135 0 537 31 0 0 0 112 6 0

Critical Gap Module:  
Critical Gp: 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.8 6.5 xxxxx  
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 4.0 xxxxx

Capacity Module:  
Cnflct Vol: 568 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1429 1729 xxxxx  
Potent Cap.: 1000 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 126 87 xxxxx  
Move Cap.: 1000 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 124 86 xxxxx  
Volume/Cap: 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.90 0.06 xxxxx

Level Of Service Module:  
2Way95thQ: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 5.7 0.2 xxxxx  
Control Del: 8.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 122.0 49.5 xxxxx  
LOS by Move: A \* \* \* \* \* \* \* \* \* \* F E \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx 118.6  
ApproachLOS: \* \* \* \* \* F

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1230 Sunset / Lake Merced  
\*\*\*\*\*

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]  
\*\*\*\*\*

Street Name: Sunset Lake Merced  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Ignore Ignore Ignore Ignore  
Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 1! 0 0

Volume Module:  
Base Vol: 197 1777 0 0 1550 52 19 0 195 0 0 0  
Growth Adj: 1.48 1.29 1.19 1.26 1.43 1.55 1.19 1.09 1.26 1.55 1.68 1.48  
Initial Bse: 292 2284 0 0 2209 81 23 0 245 0 0 0  
Added Vol: 0 590 0 0 670 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 292 2874 0 0 2879 81 23 0 245 0 0 0  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.00  
PHF Volume: 298 2932 0 0 2938 0 23 0 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 298 2932 0 0 2938 0 23 0 0 0 0 0

Critical Gap Module:  
Critical Gp: 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx 2.8 xxxxx 6.9 7.5 2.5 6.9  
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx 3.3 3.5 4.0 3.3

Capacity Module:  
Cnflct Vol: 2938 xxxxx xxxxx xxxxx xxxxx xxxxx 5001 xxxxx 1469 4998 6467 1466  
Potent Cap.: 120 xxxxx xxxxx xxxxx xxxxx xxxxx 98 xxxxx 117 0 68 117  
Move Cap.: 120 xxxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx 117 0 0 117  
Volume/Cap: 2.49 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx 0.00

Level Of Service Module:  
2Way95thQ: 26.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Control Del: 753.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
LOS by Move: F \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx  
SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: xxxxxxx xxxxxxx +Inf xxxxxxx  
ApproachLOS: \* \* \* \* \* F

Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1240 Lake Merced / Winston  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.372  
Loss Time (sec): 9 Average Delay (sec/veh): 188.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Winston  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: WideBypass Include Include Include  
Min. Green: 34 34 34 17 55 55 0 0 0 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 2 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1747 404 204 1229 0 0 0 0 180 0 284  
Growth Adj: 1.55 1.12 1.27 1.30 1.18 1.59 1.27 1.43 1.30 1.59 1.99 1.55  
Initial Bse: 0 1948 514 266 1448 0 0 0 0 285 0 441  
Added Vol: 0 315 251 210 460 0 0 0 0 352 0 275  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2263 765 476 1908 0 0 0 0 637 0 716  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2310 780 485 1947 0 0 0 0 650 0 731  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2310 780 485 1947 0 0 0 0 650 0 731  
PCE 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  
MLF 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  
FinalVolume: 0 2310 780 485 1947 0 0 0 0 650 0 731

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.86 0.86 0.90 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.83  
Lanes: 0.00 2.24 0.76 2.00 2.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
Final Sat.: 0 3655 1235 3432 3538 0 0 0 0 3432 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.63 0.63 0.14 0.55 0.00 0.00 0.00 0.00 0.19 0.00 0.46  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.38 0.38 0.38 0.19 0.62 0.62 0.00 0.00 0.00 0.28 0.28 0.28  
Volume/Cap: 0.00 1.65 1.65 0.73 0.89 0.00 0.00 0.00 0.00 0.68 0.00 1.66  
Delay/Veh: 0.0 320 319.5 40.8 13.9 0.0 0.0 0.0 0.0 32.9 0.0 340.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 320 319.5 40.8 13.9 0.0 0.0 0.0 0.0 32.9 0.0 340.5  
LOS by Move: A F F D B A A A A C A F  
HCM2kAvgQ: 0 86 86 6 18 0 0 0 0 9 0 57

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.643  
Loss Time (sec): 7 Average Delay (sec/veh): 209.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Font  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1683 17 176 1644 0 0 0 0 104 0 331  
Growth Adj: 1.08 1.12 1.10 1.13 1.18 1.11 1.10 1.08 1.13 1.11 1.04 1.08  
Initial Bse: 0 1877 19 198 1937 0 0 0 0 115 0 357  
Added Vol: 0 292 39 531 413 0 0 0 0 16 0 371  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2169 58 729 2350 0 0 0 0 131 0 728  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2213 0 744 2398 0 0 0 0 134 0 743  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2213 0 744 2398 0 0 0 0 134 0 743  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2213 0 744 2398 0 0 0 0 134 0 743

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.63 0.00 0.42 0.68 0.00 0.00 0.00 0.00 0.08 0.00 0.47  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.31 0.00 2.52 1.00 0.00 0.00 0.00 0.00 0.31 0.00 1.92  
Delay/Veh: 0.0 162 0.0 733.2 23.4 0.0 0.0 0.0 0.0 29.7 0.0 457.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 162 0.0 733.2 23.4 0.0 0.0 0.0 0.0 29.7 0.0 457.5  
LOS by Move: A F A F C A A A A C A F  
HCM2kAvgQ: 0 68 0 76 44 0 0 0 0 3 0 65

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.566  
Loss Time (sec): 11 Average Delay (sec/veh): 226.5  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 0 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1675 127 59 1717 0 0 0 102 0 57  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 1868 147 70 2023 0 0 0 195 0 107  
Added Vol: 0 101 552 335 94 0 0 0 395 0 231  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1969 699 405 2117 0 0 0 590 0 338  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2009 713 413 2161 0 0 0 602 0 345  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2009 713 413 2161 0 0 0 602 0 345  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2009 713 413 2161 0 0 0 602 0 345

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 1.48 0.52 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 2509 891 1769 3538 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.80 0.80 0.23 0.61 0.00 0.00 0.00 0.00 0.34 0.00 0.22  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.46 0.46 0.46 0.12 0.66 0.66 0.00 0.00 0.00 0.22 0.22 0.22  
Volume/Cap: 0.00 1.76 1.76 1.91 0.93 0.00 0.00 0.00 0.00 1.53 0.00 0.98  
Delay/Veh: 0.0 364 364.0 467.1 14.1 0.0 0.0 0.0 0.0 286.4 0.0 78.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 364 364.0 467.1 14.1 0.0 0.0 0.0 0.0 286.4 0.0 78.2  
LOS by Move: A F F F B A A A A F A E  
HCM2kAvgQ: 0 115 115 36 29 0 0 0 0 44 0 15

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 2.861  
Loss Time (sec): 15 Average Delay (sec/veh): 213.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: WideBypass Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0  
Lanes: 0 0 2 0 1 2 0 1 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 504 195 1342 517 0 0 0 267 0 1323  
Growth Adj: 1.71 1.12 1.14 1.17 1.18 1.74 1.14 1.16 1.17 1.74 2.31 1.71  
Initial Bse: 0 562 222 1572 609 0 0 0 465 0 2264  
Added Vol: 0 339 -26 239 250 0 0 0 0 -13 0 313  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 901 196 1811 859 0 0 0 452 0 2577  
User Adj: 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 920 200 1848 0 0 0 0 462 0 2629  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 920 200 1848 0 0 0 0 462 0 2629  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 920 200 1848 0 0 0 0 462 0 2629

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.90 1.00 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 3432 1900 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.26 0.13 0.54 0.00 0.00 0.00 0.00 0.00 0.26 0.00 1.66  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.21 0.21 0.21 0.43 0.68 0.68 0.00 0.00 0.00 0.22 0.22 1.00  
Volume/Cap: 0.00 1.26 0.62 1.25 0.00 0.00 0.00 0.00 0.00 1.16 0.00 1.66  
Delay/Veh: 0.0 172 47.1 145.5 0.0 0.0 0.0 0.0 0.0 139.2 0.0 300.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 172 47.1 145.5 0.0 0.0 0.0 0.0 0.0 139.2 0.0 300.4  
LOS by Move: A F D F A A A A A F A F  
HCM2kAvgQ: 0 31 7 57 0 0 0 0 0 26 0 133

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.





Tier 2 Conditions  
Weekend Midday Peak Hour



19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.183  
Loss Time (sec): 16 Average Delay (sec/veh): 172.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 50 50 29 29 29 18 18 18 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 1575 1246 23 0 787 272 895 346 371 14 293 26  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 1781 1390 25 0 927 316 984 375 420 16 336 29  
Added Vol: 92 212 0 0 261 0 2 0 88 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1873 1602 25 0 1188 316 986 375 508 16 336 29  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1912 1634 26 0 1213 323 1006 382 0 17 343 30  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.87 0.87 0.89 0.97 1.00 0.92 0.92 0.92  
Lanes: 3.00 1.97 0.03 0.00 2.37 0.63 3.00 1.00 1.00 0.09 1.76 0.15  
Final Sat.: 5096 3441 54 0 3929 1046 5096 1843 1900 149 3071 269

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.38 0.47 0.47 0.00 0.31 0.31 0.20 0.21 0.00 0.11 0.11 0.11  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.21 0.49 0.49 0.00 0.28 0.28 0.17 0.17 0.00 0.19 0.19 0.19  
Volume/Cap: 1.79 0.98 0.98 0.00 1.12 1.12 1.15 1.21 0.00 0.59 0.59 0.59  
Delay/Veh: 401.1 38.0 38.0 0.0 101 101.3 124.9 164 0.0 42.5 42.5 42.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 401.1 38.0 38.0 0.0 101 101.3 124.9 164 0.0 42.5 42.5 42.5  
LOS by Move: F D D A F F F A D D D  
HCM2kAvgQ: 56 29 29 0 29 29 20 23 0 7 7 7

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.855  
Loss Time (sec): 17 Average Delay (sec/veh): 273.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Ignore Ignore Ovl Include  
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 2245 1828 70 0 1917 12 0 85 4216 28 48 36  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09  
Initial Bse: 2442 2039 74 0 2259 13 0 86 4610 31 51 39  
Added Vol: 135 137 1 0 31 0 0 41 282 0 0 30  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2577 2176 75 0 2290 13 0 127 4892 31 51 69  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2629 2220 0 0 2337 0 0 129 4992 32 52 71  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2629 2220 0 0 2337 0 0 129 4992 32 52 71  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2629 2220 0 0 2337 0 0 129 4992 32 52 71

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 0.91 0.95 0.91 0.89 0.91 1.00 0.98 0.73 0.56 0.90 0.90  
Lanes: 2.20 1.80 0.00 0.00 4.00 0.00 0.00 1.00 3.00 1.00 0.42 0.58  
Final Sat.: 3675 3103 0 0 6778 0 0 1862 4178 1065 721 980

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.72 0.72 0.00 0.00 0.34 0.00 0.00 0.07 1.19 0.03 0.07 0.07  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.54 0.54 0.54 0.20 0.20 0.20 0.09 0.09 0.68 0.09 0.09 0.09  
Volume/Cap: 1.32 1.32 0.00 0.00 1.72 0.00 0.00 0.77 1.76 0.33 0.80 0.80  
Delay/Veh: 164.3 164 0.0 0.0 369 0.0 0.0 72.9 347.4 51.8 78.7 78.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 164.3 164 0.0 0.0 369 0.0 0.0 72.9 347.4 51.8 78.7 78.7  
LOS by Move: F F A A F A A E F D E E  
HCM2kAvgQ: 78 78 0 0 52 0 0 6 157 1 6 6

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.579  
Loss Time (sec): 9 Average Delay (sec/veh): 118.7  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2032 83 275 2702 314 266 1157 123 0 1123 426  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2266 91 311 3184 365 292 1253 139 0 1288 482  
Added Vol: 0 242 2 27 234 8 9 60 0 0 62 37  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2508 93 338 3418 373 301 1313 139 0 1350 519  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2559 95 345 3488 381 308 1340 142 0 1377 529  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2559 95 345 3488 381 308 1340 142 0 1377 529  
PCE 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  
MLF 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  
FinalVolume: 0 2559 95 345 3488 381 308 1340 142 0 1377 529

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.88 0.62 0.87 0.87 1.00 0.89 0.83  
Lanes: 0.00 2.89 0.11 1.00 2.70 0.30 1.00 2.71 0.29 0.00 3.00 1.00  
Final Sat.: 0 4877 181 1769 4514 493 1169 4500 477 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.52 0.52 0.19 0.77 0.77 0.26 0.30 0.30 0.00 0.27 0.33  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.18 0.61 0.61 0.30 0.30 0.30 0.00 0.24 0.24  
Volume/Cap: 0.00 1.22 1.22 1.06 1.26 1.26 1.12 1.00 1.00 0.00 1.13 1.39  
Delay/Veh: 0.0 128 128.2 108.1 130 129.9 63.0 57.6 57.6 0.0 107 230.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 128 128.2 108.1 130 129.9 63.0 57.6 57.6 0.0 107 230.6  
LOS by Move: A F F F F F E E E A F F  
HCM2kAvgQ: 0 49 49 18 80 80 19 23 23 0 26 36

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.714  
Loss Time (sec): 13 Average Delay (sec/veh): 182.6  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Winston  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Permitted Permitted Permitted  
Rights: Include Include AddLane Include  
Min. Green: 16 45 45 45 45 45 24 24 24 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 424 1667 58 0 2144 200 155 253 325 17 319 25  
Growth Adj: 1.03 1.12 1.05 1.09 1.18 1.06 1.05 1.00 1.09 1.06 1.00 1.03  
Initial Bse: 436 1859 61 0 2527 212 163 253 353 18 319 26  
Added Vol: 164 71 0 0 130 118 131 444 170 25 419 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 600 1930 61 0 2657 330 294 697 523 43 738 26  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 612 1970 62 0 2711 337 300 711 533 44 753 26  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 612 1970 62 0 2711 337 300 711 533 44 753 26  
PCE 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  
MLF 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  
FinalVolume: 612 1970 62 0 2711 337 300 711 533 44 753 26

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.89 0.89 1.00 1.34 0.83 0.26 0.20 0.83 0.67 0.67 0.67  
Lanes: 2.00 2.91 0.09 0.00 3.00 1.00 1.00 2.00 1.00 0.11 1.83 0.06  
Final Sat.: 3432 4903 155 0 7625 1583 495 743 1583 136 2328 81

Capacity Analysis Module:  
Vol/Sat: 0.18 0.40 0.40 0.00 0.36 0.21 0.61 0.96 0.34 0.32 0.32 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.16 0.44 0.44 0.44 0.44 0.44 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 1.11 0.91 0.91 0.00 0.81 0.48 2.29 3.61 1.27 1.22 1.22 1.22  
Delay/Veh: 115.9 29.4 29.4 0.0 22.9 19.3 623.6 1221 176.6 149.0 149 149.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 115.9 29.4 29.4 0.0 22.9 19.3 623.6 1221 176.6 149.0 149 149.0  
LOS by Move: F C C A C B F F F F F F  
HCM2kAvgQ: 14 21 21 0 25 6 33 46 33 24 24 24

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1150 19th / Buckingham
Average Delay (sec/veh): 3.1 Worst Case Level Of Service: F[ 95.3]
Street Name: 19th Buckingham
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 3 0 0 0 0 3 0 1 0 0 0 0 1 0 0 0 0 0
Volume Module:
Base Vol: 0 2149 0 0 2446 40 0 0 154 0 0 0
Growth Adj: 1.04 1.12 1.07 1.10 1.18 1.07 1.07 1.02 1.10 1.07 1.00 1.04
Initial Bse: 0 2397 0 0 2883 43 0 0 169 0 0 0
Added Vol: 0 235 0 0 299 26 0 0 28 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 2632 0 0 3182 69 0 0 197 0 0 0
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 2685 0 0 3247 70 0 0 201 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 2685 0 0 3247 70 0 0 201 0 0 0
Critical Gap Module:
Critical Gap: 6.9
FollowUpTim: 3.3
Capacity Module:
Conflict Vol: 1082
Potent Cap.: 213
Move Cap.: 213
Volume/Cap: 0.95
Level of Service Module:
2Way95thQ: 8.0
Control Del: 95.3
LOS by Move: F
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel:
ApproachLOS:
Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 2

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1160 19th / Holloway
Cycle (sec): 100 Critical Vol./Cap.(X): 0.961
Loss Time (sec): 9 Average Delay (sec/veh): 41.8
Optimal Cycle: 148 Level Of Service: D
Street Name: 19th Holloway
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 59 59 0 59 59 32 32 32 32 32 32
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0 0 1 0 1 0
Volume Module:
Base Vol: 0 2096 105 0 2538 96 61 96 64 36 148 34
Growth Adj: 1.23 1.12 1.15 1.18 1.18 1.27 1.15 1.19 1.18 1.27 1.35 1.23
Initial Bse: 0 2338 121 0 2991 122 70 114 76 46 200 42
Added Vol: 0 183 31 0 267 60 51 50 29 104 118 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 2521 152 0 3258 182 121 164 105 150 318 42
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 2572 155 0 3325 185 124 168 107 153 325 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 2572 155 0 3325 185 124 168 107 153 325 43
PCE 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
MLF 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
FinalVolume: 0 2572 155 0 3325 185 124 168 107 153 325 43
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.88 0.88 1.00 0.89 0.83 0.55 0.55 0.55 0.62 0.62 0.62
Lanes: 0.00 2.83 0.17 0.00 3.00 1.00 0.62 0.84 0.54 0.59 1.25 0.16
Final Sat.: 0 4751 287 0 5083 1583 648 877 560 692 1473 194
Capacity Analysis Module:
Vol/Sat: 0.00 0.54 0.54 0.00 0.65 0.12 0.19 0.19 0.19 0.22 0.22 0.22
Crit Moves:
Green/Cycle: 0.00 0.59 0.59 0.00 0.59 0.59 0.32 0.32 0.32 0.32 0.32 0.32
Volume/Cap: 0.00 0.92 0.92 0.00 1.11 0.20 0.60 0.60 0.60 0.69 0.69 0.69
Delay/Veh: 0.0 16.8 16.8 0.0 66.6 6.2 32.5 32.5 32.5 34.8 34.8 34.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 16.8 16.8 0.0 66.6 6.2 32.5 32.5 32.5 34.8 34.8 34.8
LOS by Move: A B B A E A C C C C C C
HCM2kAvgQ: 0 22 22 0 54 1 6 6 6 9 9 9
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 2

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 2.443  
Loss Time (sec): 15 Average Delay (sec/veh): 132.2  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Split Phase		Split Phase								
Rights:	WideBypass		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	535	223	1076	498	0	0	0	0	216	0	1034
Growth Adj:	1.71	1.12	1.14	1.17	1.18	1.74	1.14	1.16	1.17	1.74	2.31	1.71
Initial Bse:	0	597	254	1260	587	0	0	0	0	376	0	1769
Added Vol:	0	322	0	269	236	0	0	0	0	0	0	373
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	919	254	1529	823	0	0	0	0	376	0	2142
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	937	259	1560	0	0	0	0	0	384	0	2186
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	937	259	1560	0	0	0	0	0	384	0	2186
PCE 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
MLF 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
FinalVolume:	0	937	259	1560	0	0	0	0	0	384	0	2186

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.26	0.16	0.45	0.00	0.00	0.00	0.00	0.00	0.22	0.00	1.38
Crit Moves:	****			****								****
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	1.29	0.80	1.06	0.00	0.00	0.00	0.00	0.00	0.97	0.00	1.38
Delay/Veh:	0.0	183	58.5	66.5	0.0	0.0	0.0	0.0	0.0	79.0	0.0	175.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	183	58.5	66.5	0.0	0.0	0.0	0.0	0.0	79.0	0.0	175.5
LOS by Move:	A	F	E	E	A	A	A	A	A	E	A	F
HCM2kAvgQ:	0	32	10	37	0	0	0	0	0	17	0	79

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

Tier 3 Conditions  
Weekday AM Peak Hour





-----  
 19th Ave CS  
 Tier 3  
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## Scenario Report

Scenario: Tier 3 AM  
 Command: Default Command  
 Volume: Tier 2 AM  
 Geometry: Tier 3 AM  
 Impact Fee: Default Impact Fee  
 Trip Generation: Projects AM  
 Trip Distribution: AM  
 Paths: Tier 2/3  
 Routes: Tier 2/3  
 Configuration: Existing

-----  
 19th Ave CS  
 Tier 3  
 -----

Impact Analysis Report  
Level Of Service

Intersection	LOS	Base		LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
#1010 Claremont / Taraval / Dewey /	A	6.8	0.650	A	7.0	0.665	+ 0.015 V/C
#1020 Santa Clara / Portola / Vicent	C	29.7	0.837	D	40.2	0.960	+10.494 D/V
#1030 Junipero Serra / Sloat / West	F	90.5	1.076	F	96.9	1.094	+ 6.429 D/V
#1040 Junipero Serra / Ocean / Eucal	D	40.4	0.758	D	46.9	0.802	+ 6.482 D/V
#1050 Junipero Serra / Winston / Mer	C	34.6	0.632	D	38.3	0.772	+ 3.680 D/V
#1060 Junipero Serra / Holloway	C	32.7	0.675	D	36.9	0.716	+ 4.265 D/V
#1070 Junipero Serra / 19th	F	91.7	0.942	F	108.3	0.968	+16.664 D/V
#1075 Junipero Serra / Chumasero	A	2.3	0.715	B	10.3	0.862	+ 8.047 D/V
#1080 Junipero Serra / I-280 NB On-R	D	40.2	0.788	D	40.5	0.800	+ 0.271 D/V
#1090 Junipero Serra / I-280 SB On-R	C	20.4	0.568	C	20.4	0.620	-0.007 D/V
#1100 19th / Taraval	C	25.5	0.815	C	28.9	0.829	+ 3.420 D/V
#1110 19th / Sloat	F	107.3	1.464	F	119.3	1.508	+11.977 D/V
#1120 19th / Ocean	D	41.4	1.084	D	46.1	1.093	+ 4.780 D/V
#1130 19th / Eucalyptus	C	21.0	0.831	C	23.1	0.865	+ 2.060 D/V
#1140 19th / Winston	D	50.0	0.977	F	84.1	1.322	+34.127 D/V
#1150 19th / Buckingham	F	57.6	0.679	F	77.7	0.826	+20.071 D/V
#1160 19th / Holloway	E	61.9	0.850	E	59.7	0.930	-2.282 D/V
#1170 19th / Crespi	D	54.5	0.762	E	64.7	0.752	+10.187 D/V
#1181 Chumasero / Brotherhood	F	95.4	0.961	F	241.8	1.481	+146.420 D/
#1190 Sunset / Taraval	C	21.0	0.717	D	43.0	0.799	+21.964 D/V
#1200 Sunset / Ocean	B	12.0	0.605	B	13.7	0.664	+ 1.687 D/V
#1210 Skyline / Sloat / 39th	C	17.0	0.684	C	17.5	0.692	+ 0.009 V/C
#1221 Skyline / Lake Merced (WBR)	C	15.1	0.209	C	15.1	0.209	+ 0.010 D/V
#1222 Skyline / Lake Merced (WBLT)	F	52.5	0.379	F	52.8	0.381	+ 0.284 D/V

19th Ave CS  
Tier 3

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
#1230 Sunset / Lake Merced	F 154.0	0.594	F 425.0	1.103	+270.952 D/
#1240 Lake Merced / Winston	C 28.8	0.691	F 96.8	0.805	+68.066 D/V
#1250 Lake Merced / Font	E 61.6	0.746	F 171.6	1.471	+109.946 D/
#1263 Lake Merced / Higuera	F 95.7	0.778	F 140.7	1.202	+45.089 D/V
#1270 Lake Merced / Brotherhood	F 96.2	2.103	F 140.2	2.246	+43.951 D/V

19th Ave CS  
Tier 3

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 7.0      Level Of Service: A  
\*\*\*\*\*

Street Name:	Claremont			Taraval / Dewey		
	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign
Lanes:	1	1	1	1	1	1

Volume Module:

Base Vol:	3	7	221	10	60	37	1	231	27	313	337	84
Growth Adj:	1.03	1.02	1.02	1.02	1.02	1.03	1.02	1.01	1.02	1.03	1.04	1.03
Initial Bse:	3	7	224	10	61	38	1	233	27	323	351	87
Added Vol:	1	0	5	0	0	0	0	0	0	17	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	7	229	10	61	38	1	233	27	340	351	87
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	4	7	234	10	63	39	1	238	28	347	358	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	7	234	10	63	39	1	238	28	347	358	88
PCE 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
MLF 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
FinalVolume:	4	7	234	10	63	39	1	238	28	347	358	88

PCE Module:

AutoPCE:	4	7	234	10	63	39	1	238	28	347	358	88
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	4	7	234	10	63	39	1	238	28	347	358	88

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	250	709	420	13
MaxVolume:	1065	817	973	1193
PedVolume:	0	0	0	0
AdjMaxVol:	1065	817	973	1193
ApproachVol:	246	112	267	793
ApproachV/C:	0.23	0.14	0.27	0.66
ApproachDel:	4.4	5.1	5.1	8.8
ApproachLOS:	A	A	A	A
Queue:	0.9	0.5	1.1	5.4

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.960  
Loss Time (sec): 11 Average Delay (sec/veh): 40.2  
Optimal Cycle: 124 Level Of Service: D

\*\*\*\*\*  
Street Name: Santa Clara / Vicente Portola  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 23 23 23 23 23 23 9 36 36 9 36 36  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 18 264 86 82 202 30 24 1057 17 120 859 81  
Growth Adj: 1.05 1.04 1.09 1.12 1.10 1.08 1.09 1.13 1.12 1.08 1.05 1.05  
Initial Bse: 19 276 94 92 223 32 26 1197 19 129 903 85  
Added Vol: 0 0 0 26 0 4 0 131 0 0 79 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 19 276 94 118 223 36 26 1328 19 129 982 85  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 19 281 96 120 227 37 27 1355 19 132 1002 87  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 19 281 96 120 227 37 27 1355 19 132 1002 87  
PCE 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  
MLF 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  
FinalVolume: 19 281 96 120 227 37 27 1355 19 132 1002 87

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.92 0.92 0.56 0.56 0.56 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.05 0.71 0.24 0.31 0.59 0.10 1.00 1.97 0.03 1.00 1.84 0.16  
Final Sat.: 85 1248 424 330 625 102 1769 3481 50 1769 3217 278

Capacity Analysis Module:

Vol/Sat: 0.23 0.23 0.23 0.36 0.36 0.36 0.02 0.39 0.39 0.07 0.31 0.31  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.30 0.30 0.30 0.30 0.30 0.30 0.11 0.45 0.45 0.11 0.45 0.45  
Volume/Cap: 0.75 0.75 0.75 1.21 1.21 1.21 0.13 0.87 0.87 0.66 0.69 0.69  
Delay/Veh: 34.8 34.8 34.8 149.4 149 149.4 33.4 26.4 26.4 50.1 20.1 20.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 34.8 34.8 34.8 149.4 149 149.4 33.4 26.4 26.4 50.1 20.1 20.1  
LOS by Move: C C C F F F C C C D C C  
HCM2kAvgQ: 11 11 11 21 21 21 1 19 19 4 12 12

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.094  
Loss Time (sec): 16 Average Delay (sec/veh): 96.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 48 48 27 27 27 20 20 20 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 972 1137 20 0 1092 176 646 416 322 23 347 8  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 1129 1292 23 0 1192 200 750 494 367 26 412 9  
Added Vol: 22 110 0 0 53 0 2 0 7 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1151 1402 23 0 1245 200 752 494 374 26 412 9  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1174 1431 24 0 1271 205 768 504 0 27 420 9

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3.00 1.97 0.03 0.00 2.58 0.42 3.00 1.00 1.00 0.12 1.84 0.04  
Final Sat.: 5096 3438 57 0 4329 697 5096 1843 1900 206 3237 73

Capacity Analysis Module:

Vol/Sat: 0.23 0.42 0.42 0.00 0.29 0.29 0.15 0.27 0.00 0.13 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.18 0.44 0.44 0.00 0.26 0.26 0.22 0.22 0.00 0.19 0.19 0.19  
Volume/Cap: 1.26 0.95 0.95 0.00 1.14 1.14 0.69 1.26 0.00 0.68 0.68 0.68  
Delay/Veh: 168.3 41.4 41.4 0.0 113 112.5 41.5 177 0.0 45.1 45.1 45.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 168.3 41.4 41.4 0.0 113 112.5 41.5 177 0.0 45.1 45.1 45.1  
LOS by Move: F D D A F F D F A D D D  
HCM2kAvgQ: 23 23 23 0 29 29 9 31 0 8 8 8

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 0.802  
Loss Time (sec): 14 Average Delay (sec/veh): 46.9  
Optimal Cycle: 100 Level Of Service: D  
\*\*\*\*\*

Street Name: Junipero Serra Ocean / Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1  
-----|-----|-----|-----|

Volume Module:  
Base Vol: 189 1678 46 326 1061 90 85 384 45 54 368 324  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 220 1907 53 371 1159 103 99 456 51 62 437 376  
Added Vol: 0 107 4 14 42 4 2 16 0 1 33 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 220 2014 57 385 1201 107 101 472 51 63 470 399  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 224 2055 59 393 1225 109 103 481 52 64 479 407  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 224 2055 59 393 1225 109 103 481 52 64 479 407  
PCE 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  
MLF 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  
FinalVolume: 224 2055 59 393 1225 109 103 481 52 64 479 407  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.88 0.88 0.91 0.89 0.89 0.60 0.60 0.83 0.96 0.96 0.83  
Lanes: 1.00 2.92 0.08 2.00 2.76 0.24 0.35 1.65 1.00 0.12 0.88 1.00  
Final Sat.: 1751 4873 139 3466 4659 413 403 1889 1583 214 1605 1583  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.13 0.42 0.42 0.11 0.26 0.26 0.25 0.25 0.03 0.30 0.30 0.26  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 1.16 0.98 0.98 0.71 0.55 0.55 0.94 0.94 0.09 1.11 1.11 0.60  
Delay/Veh: 160.1 39.5 39.5 47.3 15.5 15.5 60.4 60.4 20.2 109.2 109 25.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 160.1 39.5 39.5 47.3 15.5 15.5 60.4 60.4 20.2 109.2 109 25.7  
LOS by Move: F D D D B B E E C F F C  
HCM2kAvgQ: 10 23 23 5 8 8 14 14 1 27 27 10  
\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 0.772  
Loss Time (sec): 14 Average Delay (sec/veh): 38.3  
Optimal Cycle: 100 Level Of Service: D  
\*\*\*\*\*

Street Name: Junipero Serra Winston / Mercedes  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1 0 1 0 1  
-----|-----|-----|-----|

Volume Module:  
Base Vol: 186 1681 29 103 1024 72 80 63 73 64 147 62  
Growth Adj: 1.07 1.14 1.16 1.14 1.09 1.05 1.16 1.19 1.14 1.05 1.00 1.07  
Initial Bse: 199 1911 34 117 1118 75 93 75 83 67 147 66  
Added Vol: 56 38 4 1 -24 65 73 48 29 -6 82 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 255 1949 38 118 1094 140 166 123 112 61 229 66  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 260 1988 38 121 1117 143 169 125 115 62 234 68  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 260 1988 38 121 1117 143 169 125 115 62 234 68  
PCE 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  
MLF 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  
FinalVolume: 260 1988 38 121 1117 143 169 125 115 62 234 68  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.46 0.98 0.83 0.64 0.98 0.83  
Lanes: 1.00 2.94 0.06 1.00 2.66 0.34 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4972 96 1769 4429 568 868 1862 1583 1216 1862 1583  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.15 0.40 0.40 0.07 0.25 0.25 0.20 0.07 0.07 0.05 0.13 0.04  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.77 1.00 1.00 0.36 0.63 0.63 0.72 0.25 0.27 0.19 0.46 0.16  
Delay/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6  
LOS by Move: D D D D C C D C C C C C  
HCM2kAvgQ: 7 25 25 3 10 10 4 3 3 2 6 2  
\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.716  
Loss Time (sec): 14 Average Delay (sec/veh): 36.9  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 234 1520 60 114 956 84 163 106 16 162 129 118  
Growth Adj: 1.08 1.14 1.07 1.05 1.09 1.06 1.07 1.01 1.05 1.06 1.02 1.08  
Initial Bse: 253 1728 64 120 1044 89 175 107 17 171 132 128  
Added Vol: 63 59 2 12 5 -18 25 -12 0 -6 -12 14  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 316 1787 66 132 1049 71 200 95 17 165 120 142  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 322 1823 68 135 1070 72 204 97 17 169 123 144  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 322 1823 68 135 1070 72 204 97 17 169 123 144  
PCE 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  
MLF 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  
FinalVolume: 322 1823 68 135 1070 72 204 97 17 169 123 144

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.65 0.98 0.83 0.68 0.98 0.83  
Lanes: 1.00 2.89 0.11 1.00 2.81 0.19 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4877 181 1769 4719 319 1227 1862 1583 1289 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.18 0.37 0.37 0.08 0.23 0.23 0.17 0.05 0.01 0.13 0.07 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.96 0.96 0.96 0.40 0.58 0.58 0.59 0.19 0.04 0.47 0.24 0.33  
Delay/Veh: 79.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 79.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5  
LOS by Move: E D D D C C D C C C C C  
HCM2kAvgQ: 10 20 20 3 9 9 6 2 0 5 3 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.968  
Loss Time (sec): 0 Average Delay (sec/veh): 108.3  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Ignore Ovl Include  
Min. Green: 46 46 46 18 18 18 9 9 9 9 9 9  
Y+R: 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0  
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 2208 1679 8 0 1210 4 0 71 3047 32 56 62  
Growth Adj: 1.13 1.14 1.12 1.10 1.09 1.11 1.12 1.10 1.10 1.11 1.12 1.13  
Initial Bse: 2494 1908 9 0 1321 4 0 78 3345 35 63 70  
Added Vol: 61 108 3 0 -1 0 0 0 21 119 0 0 15  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2555 2016 12 0 1320 4 0 99 3464 35 63 85  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2607 2058 12 0 1347 0 0 101 3535 36 64 87  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2607 2058 12 0 1347 0 0 101 3535 36 64 87  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2607 2058 12 0 1347 0 0 101 3535 36 64 87

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.97 0.91 0.91 0.91 0.89 0.91 1.00 0.98 0.81 0.44 0.90 0.90  
Lanes: 2.17 1.82 0.01 0.00 4.00 0.00 0.00 1.00 3.00 1.00 0.43 0.57  
Final Sat.: 3977 3139 19 0 6778 0 0 1862 4596 827 723 979

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.66 0.66 0.66 0.00 0.20 0.00 0.00 0.05 0.77 0.04 0.09 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.51 0.51 0.51 0.20 0.20 0.20 0.10 0.10 0.67 0.10 0.10 0.10  
Volume/Cap: 1.29 1.29 1.29 0.00 0.99 0.00 0.00 0.54 1.15 0.44 0.89 0.89  
Delay/Veh: 147.1 147 147.1 0.0 59.0 0.0 0.0 49.5 79.0 54.0 84.3 84.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 147.1 147 147.1 0.0 59.0 0.0 0.0 49.5 79.0 54.0 84.3 84.3  
LOS by Move: F F F A E A A D E D F F  
HCM2kAvgQ: 71 65 65 0 14 0 0 3 62 2 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 0.800  
Loss Time (sec): 12 Average Delay (sec/veh): 40.5  
Optimal Cycle: 82 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Ovl Include Ovl  
Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

Volume Module:  
Base Vol: 337 335 364 104 169 262 665 779 99 59 746 303  
Growth Adj: 1.05 1.12 1.14 1.00 1.00 1.00 1.14 1.16 1.00 1.00 1.00 1.05  
Initial Bse: 354 374 414 104 169 262 756 902 99 59 746 318  
Added Vol: 73 21 0 0 0 0 1 11 201 0 0 7  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 427 395 414 104 169 262 757 913 300 59 746 325  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 435 403 422 106 172 267 773 931 306 60 761 332  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 435 403 422 106 172 267 773 931 306 60 761 332  
PCE 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  
MLF 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  
FinalVolume: 435 403 422 106 172 267 773 931 306 60 761 332

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.86 0.86 0.93 0.89 0.89 0.87 0.89 0.89 0.89 0.89 0.83  
Lanes: 2.00 1.47 1.53 1.00 0.78 1.22 2.00 2.00 1.00 1.00 3.00 1.00  
Final Sat.: 3432 2392 2506 1769 1327 2058 3289 3391 1695 1688 5063 1583

Capacity Analysis Module:  
Vol/Sat: 0.13 0.17 0.17 0.06 0.13 0.13 0.23 0.27 0.18 0.04 0.15 0.21  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.21 0.21 0.40 0.16 0.16 0.51 0.34 0.34 0.34 0.19 0.19 0.35  
Volume/Cap: 0.60 0.80 0.42 0.37 0.80 0.26 0.68 0.80 0.53 0.19 0.80 0.60  
Delay/Veh: 46.0 51.4 27.3 47.5 58.6 17.6 35.9 39.1 33.0 42.8 53.1 35.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 46.0 51.4 27.3 47.5 58.6 17.6 35.9 39.1 33.0 42.8 53.1 35.2  
LOS by Move: D D C D E B D D C D D D  
HCM2kAvgQ: 8 13 8 4 10 5 13 17 9 2 12 11

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.620  
Loss Time (sec): 8 Average Delay (sec/veh): 20.4  
Optimal Cycle: 41 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 2 0 0 0 0 0 0 0 2 1 0 2 0 2 0 0

Volume Module:  
Base Vol: 0 0 316 0 0 0 0 1227 419 499 1001 0  
Growth Adj: 1.02 1.00 1.01 1.13 1.23 1.13 1.01 1.03 1.13 1.13 1.03 1.02  
Initial Bse: 0 0 320 0 0 0 0 1261 472 564 1035 0  
Added Vol: 0 0 23 0 0 0 0 190 47 0 73 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 343 0 0 0 0 1451 519 564 1108 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 350 0 0 0 0 1480 530 575 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 350 0 0 0 0 1480 530 575 0 0  
PCE 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  
MLF 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  
FinalVolume: 0 0 350 0 0 0 0 1480 530 575 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.86 0.86 0.90 0.95 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.21 0.79 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3598 1287 3432 3610 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.13 0.00 0.00 0.00 0.00 0.41 0.41 0.17 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.27 0.00 0.00 0.00 0.00 0.66 0.66 0.27 0.00 0.00  
Volume/Cap: 0.00 0.00 0.47 0.00 0.00 0.00 0.00 0.62 0.62 0.62 0.00 0.00  
Delay/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0  
LOS by Move: A A D A A A A B B D A A  
HCM2kAvgQ: 0 0 6 0 0 0 0 16 16 9 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.829  
Loss Time (sec): 10 Average Delay (sec/veh): 28.9  
Optimal Cycle: 89 Level Of Service: C

\*\*\*\*\*  
Street Name: 19th Taraval  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.508  
Loss Time (sec): 9 Average Delay (sec/veh): 119.3  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Sloat  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.093  
Loss Time (sec): 9 Average Delay (sec/veh): 46.1  
Optimal Cycle: 180 Level Of Service: D

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: WideBypass WideBypass Include Include  
Min. Green: 54 54 54 54 54 54 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 1 0 0 0 2 1 0 1 0 0 1 0 0

Volume Module:  
Base Vol: 2 1809 45 0 2766 187 83 274 47 21 230 157  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 2 2056 52 0 3020 213 96 325 54 24 273 182  
Added Vol: 0 112 0 0 35 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2 2168 52 0 3055 213 96 325 54 24 273 182  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2 2212 53 0 3118 217 98 332 55 24 278 186  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2 2212 53 0 3118 217 98 332 55 24 278 186  
PCE 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  
MLF 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  
FinalVolume: 2 2212 53 0 3118 217 98 332 55 24 278 186

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.78 0.78 0.78 1.00 0.88 0.88 0.83 0.96 0.96 0.80 0.80 0.80  
Lanes: 0.01 2.92 0.07 0.00 2.80 0.20 1.00 0.86 0.14 0.05 0.57 0.38  
Final Sat.: 5 4336 105 0 4704 328 1570 1565 258 76 867 580

Capacity Analysis Module:  
Vol/Sat: 0.51 0.51 0.51 0.00 0.66 0.66 0.06 0.21 0.21 0.32 0.32 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.60 0.60 0.60 0.60 0.60 0.60 0.29 0.29 0.29 0.29 0.29 0.29  
Volume/Cap: 0.85 0.85 0.85 0.00 1.10 1.10 0.21 0.72 0.72 1.09 1.09 1.09  
Delay/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
LOS by Move: B B B A E E C D D F F F  
HCM2kAvgQ: 16 16 16 0 46 46 2 10 10 23 23 23

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.865  
Loss Time (sec): 9 Average Delay (sec/veh): 23.1  
Optimal Cycle: 90 Level Of Service: C

Street Name: 19th Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 56 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 1848 21 0 2818 58 74 125 90 10 148 14  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 0 2100 24 0 3077 66 86 148 103 11 176 16  
Added Vol: 0 105 3 0 19 16 8 14 0 7 30 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2205 27 0 3096 82 94 162 103 18 206 16  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2250 28 0 3159 84 96 166 105 19 210 17  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2250 28 0 3159 84 96 166 105 19 210 17  
PCE 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  
MLF 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  
FinalVolume: 0 2250 28 0 3159 84 96 166 105 19 210 17

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.66 0.66 0.66 0.94 0.94 0.94  
Lanes: 0.00 2.96 0.04 0.00 2.92 0.08 1.00 1.23 0.77 0.08 0.85 0.07  
Final Sat.: 0 5011 62 0 4932 131 1251 1533 969 136 1522 120

Capacity Analysis Module:  
Vol/Sat: 0.00 0.45 0.45 0.00 0.64 0.64 0.08 0.11 0.11 0.14 0.14 0.14  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.62 0.62 0.62 0.62 0.62 0.62 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.00 0.72 0.72 0.00 1.03 1.03 0.27 0.38 0.38 0.49 0.49 0.49  
Delay/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
LOS by Move: A A A A C C C C C C C  
HCM2kAvgQ: 0 11 11 0 36 36 2 3 3 6 6 6

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*  
Cycle (sec): 90 Critical Vol./Cap.(X): 1.322  
Loss Time (sec): 13 Average Delay (sec/veh): 84.1  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name:		19th			Winston		
Approach:	North Bound	South Bound	East Bound	West Bound			
Movement:	L - T - R	L - T - R	L - T - R	L - T - R			

Control: Protected Permitted Permitted Permitted  
Rights: Include Include AddLane Include  
Min. Green: 15 43 43 43 43 43 18 18 18 18 18 18  
Y+R: 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0  
Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol:	386	1920	59	0	2985	60	56	164	171	51	291	28
Growth Adj:	1.06	1.14	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.04	1.00	1.06
Initial Bse:	409	2182	59	0	3260	62	56	164	171	53	291	30
Added Vol:	83	43	-30	0	-34	65	64	181	29	36	168	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	492	2225	29	0	3226	127	120	345	200	89	459	30
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	502	2271	30	0	3291	130	122	352	204	91	468	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	502	2271	30	0	3291	130	122	352	204	91	468	30
PCE 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
MLF 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
FinalVolume:	502	2271	30	0	3291	130	122	352	204	91	468	30

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	1.00	1.11	0.83	0.26	0.20	0.83	0.68	0.68	0.68
Lanes:	2.00	2.96	0.04	0.00	3.00	1.00	1.00	2.00	1.00	0.31	1.59	0.10
Final Sat.:	3432	5008	65	0	6354	1583	502	754	1583	395	2039	132

Capacity Analysis Module:

Vol/Sat:	0.15	0.45	0.45	0.00	0.52	0.08	0.24	0.47	0.13	0.23	0.23	0.23
Crit Moves:	****				****			****				
Green/Cycle:	0.17	0.48	0.48	0.48	0.48	0.48	0.20	0.20	0.20	0.20	0.20	0.20
Volume/Cap:	0.88	0.95	0.95	0.00	1.08	0.17	1.22	2.34	0.64	1.15	1.15	1.15
Delay/Veh:	53.7	27.7	27.7	0.0	63.2	11.2	155.6	652	42.8	123.5	124	123.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.7	27.7	27.7	0.0	63.2	11.2	155.6	652	42.8	123.5	124	123.5
LOS by Move:	D	C	C	A	E	B	F	F	D	F	F	F
HCM2kAvGQ:	7	21	21	0	50	2	9	19	6	15	15	15

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1150 19th / Buckingham  
\*\*\*\*\*  
Average Delay (sec/veh): 1.8 Worst Case Level Of Service: F[ 77.7]  
\*\*\*\*\*

Street Name:		19th			Buckingham		
Approach:	North Bound	South Bound	East Bound	West Bound			
Movement:	L - T - R	L - T - R	L - T - R	L - T - R			

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 0 0 3 0 0 0 0 3 0 1 0 0 0 0 1 0 0 0 0 0

Volume Module:

Base Vol:	0	2365	0	0	3145	61	0	0	122	0	0	0
Growth Adj:	1.00	1.14	1.04	1.02	1.09	1.00	1.04	1.00	1.02	1.00	1.00	1.00
Initial Bse:	0	2688	0	0	3434	61	0	0	124	0	0	0
Added Vol:	0	96	0	0	-28	59	0	0	29	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2784	0	0	3406	120	0	0	153	0	0	0
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	2841	0	0	3476	122	0	0	156	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	2841	0	0	3476	122	0	0	156	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1159	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	189	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	189	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.83	xxxx	xxxx	xxxxx

Level of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	5.9	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	77.7	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	F	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT		LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxxx		xxxxxxx		xxxxxxx		77.7		xxxxxxx		xxxxxxx	
ApproachLOS:	*		*		*		F		*		*	

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.930  
Loss Time (sec): 9 Average Delay (sec/veh): 59.7  
Optimal Cycle: 114 Level Of Service: E

Street Name: 19th Holloway  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 48 48 48 48 48 48 33 33 33 33 33 33  
Y+R: 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0  
Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 0 2288 130 0 3078 138 56 143 55 37 370 50  
Growth Adj: 1.07 1.14 1.18 1.16 1.09 1.05 1.18 1.23 1.16 1.05 1.00 1.07  
Initial Bse: 0 2601 154 0 3361 144 66 176 64 39 370 53  
Added Vol: 0 29 -21 0 -22 22 66 34 85 -4 37 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2630 133 0 3339 166 132 210 149 35 407 53  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2683 135 0 3407 170 135 214 152 35 415 54  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2683 135 0 3407 170 135 214 152 35 415 54  
PCE 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  
MLF 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  
FinalVolume: 0 2683 135 0 3407 170 135 214 152 35 415 54

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.98 0.83 0.58 0.58 0.58 0.81 0.81 0.81  
Lanes: 0.00 2.86 0.14 0.00 3.00 1.00 0.54 0.85 0.61 0.14 1.64 0.22  
Final Sat.: 0 4805 242 0 5592 1583 593 940 667 216 2533 332

Capacity Analysis Module:  
Vol/Sat: 0.00 0.56 0.56 0.00 0.61 0.11 0.23 0.23 0.23 0.16 0.16 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.37 0.37 0.37 0.37 0.37 0.37  
Volume/Cap: 0.00 1.05 1.05 0.00 1.14 0.20 0.62 0.62 0.62 0.45 0.45 0.45  
Delay/Veh: 0.0 46.2 46.2 0.0 83.6 8.3 26.9 26.9 26.9 22.9 22.9 22.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 46.2 46.2 0.0 83.6 8.3 26.9 26.9 26.9 22.9 22.9 22.9  
LOS by Move: A D D A F A C C C C C C  
HCM2kAvgQ: 0 34 34 0 52 1 7 7 7 6 6 6

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.752  
Loss Time (sec): 0 Average Delay (sec/veh): 64.7  
Optimal Cycle: 75 Level Of Service: E

Street Name: 19th Crespi  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Include Include  
Min. Green: 48 48 48 53 53 53 22 22 22 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 3 0 0 0 0 3 0 1 1 0 0 0 0 0

Volume Module:  
Base Vol: 0 2266 0 0 3060 110 152 0 68 0 0 0  
Growth Adj: 1.14 1.14 1.05 1.02 1.09 1.12 1.05 1.00 1.02 1.12 1.14 1.14  
Initial Bse: 0 2576 0 0 3342 123 159 0 70 0 0 0  
Added Vol: 0 61 0 0 102 -43 -53 0 38 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2637 0 0 3444 80 106 0 108 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2690 0 0 3514 0 108 0 110 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2690 0 0 3514 0 108 0 110 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2690 0 0 3514 0 108 0 110 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 1.00 0.93 1.00 0.83 1.00 1.00 1.00  
Lanes: 1.00 3.00 0.00 0.00 3.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 1900 5083 0 0 5083 1900 1769 0 1583 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.53 0.00 0.00 0.69 0.00 0.06 0.00 0.07 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.53 0.53 0.53 0.59 0.59 0.59 0.24 0.24 0.24 0.00 0.00 0.00  
Volume/Cap: 0.00 0.99 0.00 0.00 1.17 0.00 0.25 0.00 0.28 0.00 0.00 0.00  
Delay/Veh: 0.0 30.4 0.0 0.0 93.2 0.0 28.7 0.0 29.4 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 30.4 0.0 0.0 93.2 0.0 28.7 0.0 29.4 0.0 0.0 0.0  
LOS by Move: A C A A F A C A C A A A  
HCM2kAvgQ: 0 35 0 0 57 0 3 0 3 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumaseero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.481  
Loss Time (sec): 12 Average Delay (sec/veh): 241.8  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Chumaseero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 20 20 20 21 47 47 21 47 47  
Y+R: 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0  
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 28 16 99 119 26 54 26 1494 44 175 1656 168  
Growth Adj: 1.08 1.06 1.07 1.01 1.00 1.02 1.07 1.08 1.01 1.02 1.09 1.08  
Initial Bse: 30 17 106 121 26 55 28 1609 45 179 1812 181  
Added Vol: 0 0 0 283 0 -14 -18 341 0 0 63 155  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 30 17 106 404 26 41 10 1950 45 179 1875 336  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 31 17 108 412 27 42 10 1990 46 183 1913 343  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 31 17 108 412 27 42 10 1990 46 183 1913 343  
PCE 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  
MLF 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  
FinalVolume: 31 17 108 412 27 42 10 1990 46 183 1913 343

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.69 0.69 0.86 0.39 0.39 0.39 0.93 0.93 0.93 0.93 0.91 0.91  
Lanes: 0.23 0.13 0.64 0.86 0.05 0.09 1.00 1.96 0.04 1.00 1.70 0.30  
Final Sat.: 300 169 1053 639 41 65 1769 3448 79 1769 2931 525

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.10 0.10 0.10 0.65 0.65 0.65 0.01 0.58 0.58 0.10 0.65 0.65  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.20 0.20 0.20 0.20 0.20 0.21 0.47 0.47 0.21 0.47 0.47  
Volume/Cap: 0.51 0.51 0.51 3.23 3.23 3.23 0.03 1.23 1.23 0.49 1.39 1.39  
Delay/Veh: 41.7 41.7 41.7 1059 1059 1059 31.5 130 129.6 39.4 200 200.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 41.7 41.7 41.7 1059 1059 1059 31.5 130 129.6 39.4 200 200.2  
LOS by Move: D D D F F F C F F D F F  
HCM2kAvgQ: 4 4 5 56 56 56 0 59 59 5 78 78

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.799  
Loss Time (sec): 10 Average Delay (sec/veh): 43.0  
Optimal Cycle: 60 Level Of Service: D

\*\*\*\*\*  
Street Name: Sunset Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 0 2021 17 0 1965 11 79 190 53 83 169 38  
Growth Adj: 1.10 1.12 1.06 1.05 1.08 1.08 1.06 1.01 1.05 1.08 1.08 1.10  
Initial Bse: 0 2254 18 0 2130 12 84 193 56 90 183 42  
Added Vol: 0 342 0 0 212 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2596 18 0 2342 12 84 193 56 90 183 42  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2649 18 0 2390 12 86 197 57 92 186 43  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2649 18 0 2390 12 86 197 57 92 186 43  
PCE 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  
MLF 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  
FinalVolume: 0 2649 18 0 2390 12 86 197 57 92 186 43

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.58 0.95 0.95 0.54 0.95 0.95  
Lanes: 0.00 2.98 0.02 0.00 2.98 0.02 1.00 0.78 0.22 1.00 0.81 0.19  
Final Sat.: 0 5043 35 0 5053 26 1097 1396 403 1035 1473 337

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.00 0.53 0.53 0.00 0.47 0.47 0.08 0.14 0.14 0.09 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 1.09 1.09 0.00 0.98 0.98 0.22 0.40 0.40 0.25 0.36 0.36  
Delay/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1  
LOS by Move: A E E A C C B B B B B B  
HCM2kAvgQ: 0 33 33 0 24 24 1 4 4 1 3 3

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 0.664  
Loss Time (sec): 9 Average Delay (sec/veh): 13.7  
Optimal Cycle: 59 Level Of Service: B  
\*\*\*\*\*

Street Name: Sunset Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 0 1 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1318 12 0 1735 81 54 83 18 47 23 192  
Growth Adj: 1.00 1.00 1.07 1.11 1.07 1.01 1.07 1.15 1.11 1.01 1.00 1.00  
Initial Bse: 0 1318 13 0 1853 82 58 95 20 48 23 192  
Added Vol: 0 468 0 0 247 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1786 13 0 2100 82 58 95 20 48 23 192  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 1822 13 0 2143 84 59 97 20 49 23 196  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1822 13 0 2143 84 59 97 20 49 23 196  
PCE 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  
MLF 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  
FinalVolume: 0 1822 13 0 2143 84 59 97 20 49 23 196

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.87 0.87 0.87 0.71 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.00 2.89 0.11 0.33 0.55 0.12 1.00 1.00 1.00  
Final Sat.: 0 5042 36 0 4863 190 550 908 190 1354 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.36 0.36 0.00 0.44 0.44 0.11 0.11 0.11 0.04 0.01 0.12  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 0.68 0.68 0.00 0.83 0.83 0.34 0.34 0.34 0.11 0.04 0.39  
Delay/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3  
LOS by Move: A B B A B B B B B B B  
HCM2kAvgQ: 0 8 8 0 15 15 3 3 3 1 0 3

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1210 Skyline / Sloat / 39th  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 0.692  
Loss Time (sec): 0 Average Delay (sec/veh): 17.5  
Optimal Cycle: 0 Level Of Service: C  
\*\*\*\*\*

Street Name: Skyline / 39th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Ignore Include Ignore Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 0 1 0

Volume Module:  
Base Vol: 251 0 646 0 14 7 1 331 194 341 280 60  
Growth Adj: 1.19 1.41 1.35 1.15 1.00 1.00 1.35 1.29 1.15 1.00 1.00 1.19  
Initial Bse: 299 0 872 0 14 7 1 427 222 341 280 72  
Added Vol: 0 0 1 0 0 0 0 16 0 3 34 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 299 0 873 0 14 7 1 443 222 344 314 72  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 306 0 0 0 14 7 1 452 0 351 320 73  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 306 0 0 0 14 7 1 452 0 351 320 73  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 306 0 0 0 14 7 1 452 0 351 320 73

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 1.00 0.00 2.00 0.00 0.67 0.33 0.01 1.99 1.00 2.00 1.63 0.37  
Final Sat.: 442 0 1009 0 274 137 3 912 493 919 810 189

Capacity Analysis Module:  
Vol/Sat: 0.69 xxxxx 0.00 xxxxx 0.05 0.05 0.50 0.50 0.00 0.38 0.40 0.39  
Crit Moves: \*\*\*\*  
Delay/Veh: 25.8 0.0 0.0 0.0 11.4 11.4 17.3 17.3 0.0 14.9 14.1 13.7  
Delay 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  
AdjDel/Veh: 25.8 0.0 0.0 0.0 11.4 11.4 17.3 17.3 0.0 14.9 14.1 13.7  
LOS by Move: D \* \* \* B B C C \* B B B  
ApproachDel: 25.8 11.4 17.3 14.4  
Delay Adj: 1.00 1.00 1.00 1.00  
ApprAdjDel: 25.8 11.4 17.3 14.4  
LOS by Appr: D B C B  
AllWayAvgQ: 1.9 1.9 0.0 0.0 0.0 0.9 0.9 0.0 0.6 0.6 0.6

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1221 Skyline / Lake Merced (WBR)  
\*\*\*\*\*

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C [ 15.1 ]

Street Name: Skyline		Lake Merced (WBR)			
Approach:	North Bound	South Bound	East Bound	West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign	
Rights:	Include	Include	Include	Include	
Lanes:	0 0 2 0 0	1 0 2 0 0	0 0 0 0 0	0 0 0 0 1	

Volume Module:

Base Vol:	0 814	0 90 456	0 0 0 0	0 0 0 0	75
Growth Adj:	1.23 1.42 1.30	1.09 1.00 1.02	1.30 1.18 1.09	1.02 1.04 1.23	
Initial Bse:	0 1156	0 98 456	0 0 0 0	0 0 0 0	92
Added Vol:	0 1	0 0 3	0 0 0 0	0 0 0 0	0
PasserByVol:	0 0	0 0 0	0 0 0 0	0 0 0 0	0
Initial Fut:	0 1157	0 98 459	0 0 0 0	0 0 0 0	92
User 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	
PHF Adj:	0.98 0.98 0.98	0.98 0.98 0.98	0.98 0.98 0.98	0.98 0.98 0.98	
PHF Volume:	0 1180	0 100 468	0 0 0 0	0 0 0 0	94
Reduct Vol:	0 0	0 0 0	0 0 0 0	0 0 0 0	0
FinalVolume:	0 1180	0 100 468	0 0 0 0	0 0 0 0	94

Critical Gap Module:

Critical Gp:	xxxxx xxxxx xxxxx	4.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	6.9
FollowUpTim:	xxxxx xxxxx xxxxx	2.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	3.3

Capacity Module:

Cnflct Vol:	xxxxx xxxxx xxxxx	1180 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	590
Potent Cap.:	xxxxx xxxxx xxxxx	587 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	451
Move Cap.:	xxxxx xxxxx xxxxx	587 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	451
Volume/Cap:	xxxxx xxxxx xxxxx	0.17 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	0.21

Level of Service Module:

2Way95thQ:	xxxxx xxxxx xxxxx	0.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	0.8	
Control Del:	xxxxx xxxxx xxxxx	12.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	15.1	
LOS by Move:	* * * B * * * * * * * * * * * * * * * C			
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
SharedQueue:	xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx			
Shrd ConDel:	xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx			
Shared LOS:	* *			
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	15.1
ApproachLOS:	*	*	*	C

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)  
\*\*\*\*\*

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: F [ 52.8 ]

Street Name: Skyline		Lake Merced (WBLT)			
Approach:	North Bound	South Bound	East Bound	West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign	
Rights:	Include	Include	Include	Include	
Lanes:	1 0 1 1 0	0 0 2 0 1	0 0 0 0 0	1 0 1 0 0	

Volume Module:

Base Vol:	5 814	90 0 423 33	0 0 0 0	43 5 0
Growth Adj:	1.23 1.42 1.30	1.09 1.00 1.02	1.30 1.18 1.09	1.02 1.04 1.23
Initial Bse:	6 1155	117 0 424 34	0 0 0 0	44 5 0
Added Vol:	0 1	0 0 3 0	0 0 0 0	0 0 0 0
PasserByVol:	0 0	0 0 0 0	0 0 0 0	0 0 0 0
Initial Fut:	6 1156	117 0 427 34	0 0 0 0	44 5 0
User 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
PHF Adj:	0.98 0.98 0.98	0.98 0.98 0.98	0.98 0.98 0.98	0.98 0.98 0.98
PHF Volume:	6 1179	119 0 436 34	0 0 0 0	45 5 0
Reduct Vol:	0 0	0 0 0 0	0 0 0 0	0 0 0 0
FinalVolume:	6 1179	119 0 436 34	0 0 0 0	45 5 0

Critical Gap Module:

Critical Gp:	4.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	6.8 6.5 xxxxx
FollowUpTim:	2.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	3.5 4.0 xxxxx

Capacity Module:

Cnflct Vol:	470 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	1470 1722 xxxxx
Potent Cap.:	1088 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	118 88 xxxxx
Move Cap.:	1088 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	118 88 xxxxx
Volume/Cap:	0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	0.38 0.06 xxxxx

Level of Service Module:

2Way95thQ:	0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	1.6 0.2 xxxxx	
Control Del:	8.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	53.3 48.6 xxxxx	
LOS by Move:	A * * * * * * * * * * * * * * * F E *		
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
SharedQueue:	xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx		
Shrd ConDel:	xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx		
Shared LOS:	* *		
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx
ApproachLOS:	*	*	F

Note: Queue reported is the number of cars per lane.

19th Ave CS
Tier 3

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #1230 Sunset / Lake Merced
\*\*\*\*\*

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: F[425.0]

Street Name: Sunset Lake Merced

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Rights: Ignore Ignore Ignore Ignore

Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 1 0 0

Volume Module:

Base Vol: 87 1279 0 0 1822 29 28 0 146 0 0 0
Growth Adj: 1.01 1.00 1.02 1.07 1.09 1.06 1.02 1.06 1.07 1.06 1.04 1.01
Initial Bse: 88 1279 0 0 1981 31 29 0 157 0 0 0
Added Vol: 0 468 0 0 247 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 88 1747 0 0 2228 31 29 0 157 0 0 0
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.00
PHF Volume: 90 1783 0 0 2273 0 29 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 90 1783 0 0 2273 0 29 0 0 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxx xxxxxx xxxxxx xxxxxx 4.8 xxx 6.9 7.5 2.5 6.9
FollowUpTim: 2.2 xxx xxxxxx xxxxxx xxxxxx 3.5 xxx 3.3 3.5 4.0 3.3

Capacity Module:

Cnflct Vol: 2273 xxx xxxxxx xxx xxx xxxxxx 3344 xxx 1137 3099 4235 891
Potent Cap.: 221 xxx xxxxxx xxx xxx xxxxxx 39 xxx 196 5 215 285
Move Cap.: 221 xxx xxxxxx xxx xxx xxxxxx 26 xxx 196 3 128 285
Volume/Cap: 0.41 xxx xxx xxx xxx xxx 1.10 xxx 0.00 0.00 0.00 0.00

Level of Service Module:

2Way95thQ: 1.8 xxx xxxxxx xxx xxx xxxxxx 3.5 xxx xxxxxx xxx xxx xxxxxx
Control Del: 32.0 xxx xxxxxx xxx xxx xxxxxx 425.0 xxx xxxxxx xxx xxx xxxxxx
LOS by Move: D \* \* \* \* \* F \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxx xxx xxx xxx xxx xxx xxx xxx xxx 0 xxx

SharedQueue: xxxxxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx

Shrd ConDel: xxxxxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx

Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: xxxxxx xxxxxx 425.0 xxxxxx

ApproachLOS: \* \* \* \* \*

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

19th Ave CS
Tier 3

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #1240 Lake Merced / Winston
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.805

Loss Time (sec): 9 Average Delay (sec/veh): 96.8

Optimal Cycle: 89 Level Of Service: F

Street Name: Lake Merced Winston

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase

Rights: WideBypass Include Include Include

Min. Green: 34 34 34 17 55 55 0 0 0 25 25 25

Y+R: 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0

Lanes: 0 0 2 1 0 2 0 2 0 0 0 0 0 0 2 0 0 0 1

Volume Module:

Base Vol: 0 1384 215 218 1789 0 0 0 0 196 0 181
Growth Adj: 1.00 1.14 1.18 1.16 1.09 1.00 1.18 1.22 1.16 1.00 1.00 1.00
Initial Bse: 0 1573 254 252 1954 0 0 0 0 196 0 181
Added Vol: 0 393 266 116 131 0 0 0 0 139 0 74
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1966 520 368 2085 0 0 0 0 335 0 255
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 2006 530 376 2127 0 0 0 0 342 0 260
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 2006 530 376 2127 0 0 0 0 342 0 260
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 2006 530 376 2127 0 0 0 0 342 0 260

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.86 0.86 0.90 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.83
Lanes: 0.00 2.37 0.63 2.00 2.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00
Final Sat.: 0 3896 1030 3432 3538 0 0 0 0 3432 0 1583

Capacity Analysis Module:

Vol/Sat: 0.00 0.51 0.51 0.11 0.60 0.00 0.00 0.00 0.00 0.10 0.00 0.16
Crit Moves: \*\*\*\*
Green/Cycle: 0.38 0.38 0.38 0.19 0.62 0.62 0.00 0.00 0.00 0.28 0.28 0.28
Volume/Cap: 0.00 1.34 1.34 0.56 0.97 0.00 0.00 0.00 0.00 0.36 0.00 0.59
Delay/Veh: 0.0 184 183.5 36.2 23.0 0.0 0.0 0.0 0.0 27.1 0.0 33.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 184 183.5 36.2 23.0 0.0 0.0 0.0 0.0 27.1 0.0 33.8
LOS by Move: A F F D C A A A A C A C
HCM2kAvgQ: 0 56 56 5 32 0 0 0 0 4 0 7

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.471  
Loss Time (sec): 7 Average Delay (sec/veh): 171.6  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Font  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1746 48 147 1549 0 0 0 0 43 0 304  
Growth Adj: 1.09 1.14 1.07 1.05 1.09 1.07 1.07 1.01 1.05 1.07 1.04 1.09  
Initial Bse: 0 1985 51 154 1692 0 0 0 0 46 0 331  
Added Vol: 0 342 21 193 109 0 0 0 0 20 0 422  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2327 72 347 1801 0 0 0 0 66 0 753  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2374 0 354 1837 0 0 0 0 67 0 768  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2374 0 354 1837 0 0 0 0 67 0 768  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2374 0 354 1837 0 0 0 0 67 0 768

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.67 0.00 0.20 0.52 0.00 0.00 0.00 0.00 0.04 0.00 0.49  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.40 0.00 1.20 0.77 0.00 0.00 0.00 0.00 0.16 0.00 1.99  
Delay/Veh: 0.0 204 0.0 156.1 5.7 0.0 0.0 0.0 0.0 27.5 0.0 486.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 204 0.0 156.1 5.7 0.0 0.0 0.0 0.0 27.5 0.0 486.6  
LOS by Move: A F A F A A A A A C A F  
HCM2kAvgQ: 0 80 0 20 11 0 0 0 0 2 0 69

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.202  
Loss Time (sec): 11 Average Delay (sec/veh): 140.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1694 144 41 1601 0 0 0 0 77 0 58  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.10 1.12  
Initial Bse: 0 1925 160 45 1748 0 0 0 0 84 0 65  
Added Vol: 0 96 97 69 60 0 0 0 0 473 0 268  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2021 257 114 1808 0 0 0 0 557 0 333  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2063 262 116 1845 0 0 0 0 569 0 340  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2063 262 116 1845 0 0 0 0 569 0 340  
PCE 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  
MLF 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  
FinalVolume: 0 2063 262 116 1845 0 0 0 0 569 0 340

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.92 0.92 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 1.77 0.23 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3086 392 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.67 0.67 0.07 0.52 0.00 0.00 0.00 0.00 0.32 0.00 0.21  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.46 0.46 0.46 0.12 0.66 0.66 0.00 0.00 0.00 0.22 0.22 0.22  
Volume/Cap: 0.00 1.47 1.47 0.54 0.80 0.00 0.00 0.00 0.00 1.45 0.00 0.97  
Delay/Veh: 0.0 234 234.0 46.3 7.6 0.0 0.0 0.0 0.0 250.0 0.0 74.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 234 234.0 46.3 7.6 0.0 0.0 0.0 0.0 250.0 0.0 74.7  
LOS by Move: A F F D A A A A A F A E  
HCM2kAvgQ: 0 82 82 3 15 0 0 0 0 39 0 14

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 2.246  
Loss Time (sec): 15 Average Delay (sec/veh): 140.2  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Split Phase		Split Phase								
Rights:	WideBypass		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	416	209	1478	225	0	0	0	0	139	0	1483
Growth Adj:	1.13	1.14	1.29	1.26	1.09	1.11	1.29	1.44	1.26	1.11	1.12	1.13
Initial Bse:	0	473	269	1868	246	0	0	0	0	154	0	1674
Added Vol:	0	117	-18	259	274	0	0	0	0	-16	0	76
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	590	251	2127	520	0	0	0	0	138	0	1750
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	602	256	2171	0	0	0	0	0	141	0	1785
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	602	256	2171	0	0	0	0	0	141	0	1785
PCE 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
MLF 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
FinalVolume:	0	602	256	2171	0	0	0	0	0	141	0	1785

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.17	0.16	0.63	0.00	0.00	0.00	0.00	0.00	0.08	0.00	1.13
Crit Moves:	****			****								****
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	0.83	0.79	1.47	0.00	0.00	0.00	0.00	0.00	0.35	0.00	1.13
Delay/Veh:	0.0	51.1	57.6	242.0	0.0	0.0	0.0	0.0	0.0	37.4	0.0	66.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	51.1	57.6	242.0	0.0	0.0	0.0	0.0	0.0	37.4	0.0	66.3
LOS by Move:	A	D	E	F	A	A	A	A	A	D	A	E
HCM2kAvgQ:	0	12	10	81	0	0	0	0	0	4	0	32

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.



Tier 3 Conditions  
Weekday PM Peak Hour



19th Ave CS  
 Tier 3

 Impact Analysis Report  
 Level Of Service

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
#1010 Claremont / Taraval / Dewey /	A	7.1	0.653	7.4	0.672	+ 0.020	V/C
#1020 Santa Clara / Portola / Vicent	C	30.5	0.841	39.0	0.936	+ 8.525	D/V
#1030 Junipero Serra / Sloat / West	F	101.4	1.113	117.2	1.170	+15.817	D/V
#1040 Junipero Serra / Ocean / Eucal	D	39.7	0.820	70.2	1.063	+30.533	D/V
#1050 Junipero Serra / Winston / Mer	C	30.4	0.678	49.3	1.062	+18.865	D/V
#1060 Junipero Serra / Holloway	C	30.4	0.692	37.4	0.724	+ 7.049	D/V
#1070 Junipero Serra / 19th	F	110.5	1.236	163.1	1.302	+52.549	D/V
#1075 Junipero Serra / Chumasero	A	2.8	0.723	8.2	0.842	+ 5.362	D/V
#1080 Junipero Serra / I-280 NB On-R	F	129.3	1.294	151.9	1.400	+22.632	D/V
#1090 Junipero Serra / I-280 SB On-R	D	49.9	1.054	89.9	1.172	+40.016	D/V
#1100 19th / Taraval	B	19.4	0.839	24.0	0.883	+ 4.578	D/V
#1110 19th / Sloat	F	127.7	1.550	154.7	1.630	+26.999	D/V
#1120 19th / Ocean	F	146.9	1.568	180.5	1.633	+33.636	D/V
#1130 19th / Eucalyptus	E	69.7	1.079	86.4	1.180	+16.707	D/V
#1140 19th / Winston	F	97.7	1.325	207.7	1.699	+109.967	D/
#1150 19th / Buckingham	F	408.9	1.759	604.0	2.196	+195.131	D/
#1160 19th / Holloway	B	16.9	0.866	120.8	1.027	+103.936	D/
#1170 19th / Crespi	D	50.4	0.759	69.9	0.785	+19.468	D/V
#1181 Chumasero / Brotherhood	F	227.7	1.105	456.6	1.738	+228.905	D/
#1190 Sunset / Taraval	D	49.8	0.843	125.6	0.960	+75.784	D/V
#1200 Sunset / Ocean	B	13.3	0.687	30.5	0.827	+17.163	D/V
#1210 Skyline / Sloat / 39th	D	27.0	0.908	29.4	0.925	+ 0.017	V/C
#1221 Skyline / Lake Merced (WBR)	C	17.4	0.416	17.5	0.417	+ 0.048	D/V
#1222 Skyline / Lake Merced (WBLT)	F	116.8	0.894	118.6	0.900	+ 1.760	D/V

 19th Ave CS  
 Tier 3

## Intersection

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
#1230 Sunset / Lake Merced	F	OVRFL	1.328	F	OVRFL	2.491	Nan D/V
#1240 Lake Merced / Winston	E	66.6	0.971	F	188.9	1.372	+122.395 D/
#1250 Lake Merced / Font	D	46.9	0.783	F	209.4	1.643	+162.431 D/
#1263 Lake Merced / Higuera	E	79.1	0.844	F	226.5	1.566	+147.310 D/
#1270 Lake Merced / Brotherhood	F	139.0	2.430	F	213.0	2.861	+74.026 D/V

19th Ave CS  
Tier 3

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 7.4 Level of Service: A  
\*\*\*\*\*

Street Name: Claremont Taraval / Dewey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			1		

Volume Module:

Base Vol:	17	24	239	50	63	5	10	259	55	324	338	31
Growth Adj:	1.09	1.10	1.07	1.06	1.09	1.08	1.07	1.04	1.06	1.08	1.08	1.09
Initial Bse:	18	26	255	53	69	5	11	269	59	351	364	34
Added Vol:	1	0	16	0	0	0	0	0	0	22	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	26	271	53	69	5	11	269	59	373	364	34
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	20	27	277	54	70	6	11	275	60	381	371	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	27	277	54	70	6	11	275	60	381	371	34
PCE 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
MLF 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
FinalVolume:	20	27	277	54	70	6	11	275	60	381	371	34

PCE Module:

AutoPCE:	20	27	277	54	70	6	11	275	60	381	371	34
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	20	27	277	54	70	6	11	275	60	381	371	34

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	340	771	505	58
MaxVolume:	1016	783	927	1169
PedVolume:	0	0	0	0
AdjMaxVol:	1016	783	927	1169
ApproachVol:	324	130	345	786
ApproachV/C:	0.32	0.17	0.37	0.67
ApproachDel:	5.2	5.5	6.2	9.2
ApproachLOS:	A	A	A	A
Queue:	1.4	0.6	1.7	5.5

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.936  
Loss Time (sec): 11 Average Delay (sec/veh): 39.0  
Optimal Cycle: 111 Level of Service: D  
\*\*\*\*\*

Street Name: Santa Clara / Vicente Portola

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	23	23	23	23	23	23	9	36	36	9	36	36
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1! 0	1	0	1 1 0	1	0	1 1 0

Volume Module:

Base Vol:	22	273	85	86	191	48	48	1051	33	147	987	108
Growth Adj:	1.03	1.00	1.03	1.07	1.03	1.07	1.03	1.10	1.07	1.07	1.10	1.03
Initial Bse:	23	273	88	92	198	51	50	1155	35	157	1087	112
Added Vol:	0	0	0	15	0	4	0	147	0	0	246	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	273	88	107	198	55	50	1302	35	157	1333	112
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	23	279	90	109	202	56	51	1329	36	160	1360	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	279	90	109	202	56	51	1329	36	160	1360	114
PCE 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
MLF 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
FinalVolume:	23	279	90	109	202	56	51	1329	36	160	1360	114

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.59	0.59	0.59	0.93	0.93	0.93	0.93	0.92	0.92
Lanes:	0.06	0.71	0.23	0.30	0.55	0.15	1.00	1.95	0.05	1.00	1.85	0.15
Final Sat.:	104	1246	401	331	612	171	1769	3431	93	1769	3225	270

Capacity Analysis Module:

Vol/Sat:	0.22	0.22	0.22	0.33	0.33	0.33	0.03	0.39	0.39	0.09	0.42	0.42
Crit Moves:				****				****				
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.11	0.45	0.45	0.11	0.45	0.45
Volume/Cap:	0.75	0.75	0.75	1.10	1.10	1.10	0.25	0.86	0.86	0.80	0.94	0.94
Delay/Veh:	34.5	34.5	34.5	106.1	106	106.1	35.5	26.1	26.1	62.9	32.9	32.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.5	34.5	34.5	106.1	106	106.1	35.5	26.1	26.1	62.9	32.9	32.9
LOS by Move:	C	C	C	F	F	F	D	C	C	E	C	C
HCM2kAvgQ:	10	10	10	17	17	17	1	19	19	6	24	24

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.170  
Loss Time (sec): 16 Average Delay (sec/veh): 117.2  
Optimal Cycle: 180 Level Of Service: F

Street Name: Junipero Serra / West Portal Sloat / St. Francis  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Permitted			Split Phase			Split Phase											
Rights:	Include			Include			Ignore			Include											
Min. Green:	16	53	53	32	32	32	15	15	15	20	20	20									
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0									
Lanes:	3	0	1	1	0	0	0	0	2	1	0	3	0	1	0	1	0	1	0	1	0

Volume Module:

Base Vol:	1027	1005	60	0	1045	261	852	420	471	20	405	10
Growth Adj:	1.13	1.12	1.10	1.13	1.18	1.16	1.10	1.08	1.13	1.16	1.15	1.13
Initial Bse:	1162	1121	66	0	1232	303	937	455	533	23	464	11
Added Vol:	33	120	0	0	209	0	2	0	29	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1195	1241	66	0	1441	303	939	455	562	23	464	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	1219	1266	67	0	1470	310	958	464	0	24	474	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1219	1266	67	0	1470	310	958	464	0	24	474	12
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	1219	1266	67	0	1470	310	958	464	0	24	474	12

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.92	0.92	1.00	0.88	0.88	0.89	0.97	1.00	0.93	0.93	0.93
Lanes:	3.00	1.90	0.10	0.00	2.48	0.52	3.00	1.00	1.00	0.09	1.86	0.05
Final Sat.:	5096	3302	176	0	4130	870	5096	1843	1900	164	3276	80

Capacity Analysis Module:

Vol/Sat:	0.24	0.38	0.38	0.00	0.36	0.36	0.19	0.25	0.00	0.14	0.14	0.14
Crit Moves:	****			****			****			****		
Green/Cycle:	0.17	0.48	0.48	0.00	0.30	0.30	0.18	0.18	0.00	0.19	0.19	0.19
Volume/Cap:	1.39	0.80	0.80	0.00	1.17	1.17	1.04	1.39	0.00	0.76	0.76	0.76
Delay/Veh:	227.4	23.0	23.0	0.0	119	118.7	83.6	238	0.0	48.1	48.1	48.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	227.4	23.0	23.0	0.0	119	118.7	83.6	238	0.0	48.1	48.1	48.1
LOS by Move:	F	C	C	A	F	F	F	F	A	D	D	D
HCM2kAvgQ:	28	17	17	0	36	36	17	33	0	10	10	10

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.063  
Loss Time (sec): 14 Average Delay (sec/veh): 70.2  
Optimal Cycle: 180 Level Of Service: E

Street Name: Junipero Serra Ocean / Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Permitted											
Rights:	Include			Include			Ovl			Ovl											
Min. Green:	11	43	43	16	48	48	27	27	27	27	27	27									
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0									
Lanes:	1	0	2	1	0	2	0	2	2	1	0	0	1	1	0	1	0	1	0	0	1

Volume Module:

Base Vol:	176	1567	35	356	1065	96	140	356	58	77	332	333
Growth Adj:	1.13	1.12	1.10	1.13	1.18	1.16	1.10	1.08	1.13	1.16	1.15	1.13
Initial Bse:	199	1748	38	403	1255	112	154	386	66	90	381	377
Added Vol:	0	107	43	35	194	9	12	91	0	25	66	34
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	199	1855	81	438	1449	121	166	477	66	115	447	411
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	203	1893	83	446	1479	123	169	486	67	117	456	419
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	1893	83	446	1479	123	169	486	67	117	456	419
PCE 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
MLF 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
FinalVolume:	203	1893	83	446	1479	123	169	486	67	117	456	419

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.88	0.90	0.88	0.88	0.63	0.63	0.83	0.63	0.63	0.83
Lanes:	1.00	2.86	0.14	2.00	2.77	0.23	0.52	1.48	1.00	0.20	0.80	1.00
Final Sat.:	1751	5249	231	3432	4636	386	616	1770	1583	244	951	1583

Capacity Analysis Module:

Vol/Sat:	0.12	0.36	0.36	0.13	0.32	0.32	0.27	0.27	0.04	0.48	0.48	0.26
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.43	0.43	0.16	0.48	0.48	0.27	0.27	0.38	0.27	0.27	0.43
Volume/Cap:	1.05	0.84	0.84	0.81	0.66	0.66	1.02	1.02	0.11	1.77	1.77	0.62
Delay/Veh:	124.5	25.6	25.6	53.0	17.3	17.3	76.5	76.5	20.4	397.3	397	26.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	124.5	25.6	25.6	53.0	17.3	17.3	76.5	76.5	20.4	397.3	397	26.2
LOS by Move:	F	C	C	D	B	B	E	E	C	F	F	C
HCM2kAvgQ:	8	18	17	6	10	10	17	17	1	49	49	11

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.062  
Loss Time (sec): 14 Average Delay (sec/veh): 49.3  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Winston / Mercedes  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 224 1516 52 85 1130 117 169 152 81 74 103 36  
Growth Adj: 1.05 1.12 1.11 1.15 1.18 1.08 1.11 1.11 1.15 1.08 1.00 1.05  
Initial Bse: 236 1691 58 97 1332 127 188 169 93 80 103 38  
Added Vol: 73 15 2 1 62 156 135 157 48 1 133 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 309 1706 60 98 1394 283 323 326 141 81 236 38  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 315 1741 61 100 1422 289 330 333 144 83 241 39  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 315 1741 61 100 1422 289 330 333 144 83 241 39  
PCE 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  
MLF 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  
FinalVolume: 315 1741 61 100 1422 289 330 333 144 83 241 39

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.87 0.87 0.44 0.98 0.83 0.30 0.98 0.83  
Lanes: 1.00 2.90 0.10 1.00 2.49 0.51 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4886 172 1769 4120 836 845 1862 1583 579 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.18 0.36 0.36 0.06 0.35 0.35 0.39 0.18 0.09 0.14 0.13 0.02  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.94 0.89 0.89 0.30 0.86 0.86 1.45 0.66 0.34 0.53 0.48 0.09  
Delay/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7  
LOS by Move: E C C D C C F D C D C C  
HCM2kAvgQ: 10 18 18 2 18 18 22 8 3 3 7 1

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724  
Loss Time (sec): 14 Average Delay (sec/veh): 37.4  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 183 1398 101 176 1001 104 117 140 23 143 96 107  
Growth Adj: 1.11 1.12 1.08 1.11 1.18 1.14 1.08 1.04 1.11 1.14 1.10 1.11  
Initial Bse: 202 1559 109 195 1180 118 126 145 25 163 105 118  
Added Vol: 151 60 1 31 39 41 7 -21 0 1 0 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 353 1619 110 226 1219 159 133 124 25 164 105 141  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 360 1652 112 230 1244 162 136 126 26 167 107 144  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 360 1652 112 230 1244 162 136 126 26 167 107 144  
PCE 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  
MLF 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  
FinalVolume: 360 1652 112 230 1244 162 136 126 26 167 107 144

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.88 0.88 0.93 0.88 0.88 0.67 0.98 0.83 0.64 0.98 0.83  
Lanes: 1.00 2.81 0.19 1.00 2.65 0.35 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4718 319 1769 4419 577 1275 1862 1583 1218 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.20 0.35 0.35 0.13 0.28 0.28 0.11 0.07 0.02 0.14 0.06 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 1.07 0.90 0.90 0.69 0.72 0.72 0.38 0.24 0.06 0.49 0.21 0.33  
Delay/Veh: 110.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 110.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5  
LOS by Move: F C C D C C C C C C C C  
HCM2kAvgQ: 14 17 17 6 12 12 4 3 1 5 3 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.302  
Loss Time (sec): 17 Average Delay (sec/veh): 163.1  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 1.400  
Loss Time (sec): 12 Average Delay (sec/veh): 151.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 1.172  
Loss Time (sec): 8 Average Delay (sec/veh): 89.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control (Split Phase), Rights (Ovl, Include), Min. Green, Y+R, and Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.883  
Loss Time (sec): 10 Average Delay (sec/veh): 24.0  
Optimal Cycle: 99 Level Of Service: C

\*\*\*\*\*  
Street Name: 19th Taraval  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control (Permitted), Rights (Include), Min. Green, Y+R, and Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 1.630  
Loss Time (sec): 9 Average Delay (sec/veh): 154.7  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2446 66 235 2609 321 185 1440 74 0 870 497  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2728 73 266 3075 373 203 1560 84 0 998 562  
Added Vol: 0 164 2 16 170 18 22 13 0 0 13 47  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2892 75 282 3245 391 225 1573 84 0 1011 609  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2951 76 287 3311 399 230 1605 85 0 1031 622  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2951 76 287 3311 399 230 1605 85 0 1031 622  
PCE 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  
MLF 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  
FinalVolume: 0 2951 76 287 3311 399 230 1605 85 0 1031 622

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.88 0.41 0.88 0.88 1.00 0.89 0.83  
Lanes: 0.00 2.92 0.08 1.00 2.68 0.32 1.00 2.85 0.15 0.00 3.00 1.00  
Final Sat.: 0 4936 127 1769 4464 538 782 4764 253 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.60 0.60 0.16 0.74 0.74 0.29 0.34 0.34 0.00 0.20 0.39  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.11 0.54 0.54 0.37 0.37 0.37 0.00 0.27 0.27  
Volume/Cap: 0.00 1.39 1.39 1.44 1.37 1.37 0.79 0.92 0.92 0.00 0.75 1.44  
Delay/Veh: 0.0 203 203.1 269.9 183 183.5 42.5 38.0 38.0 0.0 36.9 248.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 203 203.1 269.9 183 183.5 42.5 38.0 38.0 0.0 36.9 248.7  
LOS by Move: A F F F F F D D D A D F  
HCM2kAvgQ: 0 70 70 22 87 87 9 22 22 0 12 44

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 1.633  
Loss Time (sec): 9 Average Delay (sec/veh): 180.5  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 64 64 64 64 64 64 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 2340 47 0 2579 164 64 293 25 25 271 127  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2610 52 0 3039 191 70 317 28 29 311 144  
Added Vol: 0 166 0 0 170 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2776 52 0 3209 191 70 317 28 29 311 144  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2832 53 0 3275 195 72 324 29 30 317 147  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2832 53 0 3275 195 72 324 29 30 317 147  
PCE 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  
MLF 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  
FinalVolume: 0 2832 53 0 3275 195 72 324 29 30 317 147

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.44 0.89 1.00 0.88 0.88 0.89 0.97 0.97 0.73 0.73 0.73  
Lanes: 0.00 2.97 0.03 0.00 2.83 0.17 1.00 0.92 0.08 0.06 0.64 0.30  
Final Sat.: 0 2511 47 0 4760 283 1687 1689 150 83 886 409

Capacity Analysis Module:  
Vol/Sat: 0.00 1.13 1.13 0.00 0.69 0.69 0.04 0.19 0.19 0.36 0.36 0.36  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.64 0.64 0.64 0.64 0.64 0.64 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.00 1.76 1.76 0.00 1.08 1.08 0.16 0.72 0.72 1.35 1.35 1.35  
Delay/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8  
LOS by Move: A F F A D D C D D F F F  
HCM2kAvgQ: 0 86 172 0 48 48 2 11 11 33 33 33

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.180  
Loss Time (sec): 9 Average Delay (sec/veh): 86.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Eucalyptus  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.699  
Loss Time (sec): 13 Average Delay (sec/veh): 207.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Winston  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.785  
Loss Time (sec): 0 Average Delay (sec/veh): 69.9  
Optimal Cycle: 86 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Crespi  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Ignore Include  
Min. Green: 59 59 0 0 64 64 21 0 21 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 0 0 0 2 1 0 1 0 1! 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 2485 0 0 3081 99 147 0 97 0 0 0  
Growth Adj: 1.15 1.12 1.00 1.00 1.18 1.18 1.00 1.00 1.00 1.18 1.19 1.15  
Initial Bse: 0 2772 0 0 3631 117 147 0 97 0 0 0  
Added Vol: 0 99 0 0 219 74 -88 0 17 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2871 0 0 3850 191 59 0 114 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2929 0 0 3929 0 60 0 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2929 0 0 3929 0 60 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 0 2929 0 0 3929 0 60 0 0 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 0.91 0.89 0.95 0.95 1.00 1.00 1.00  
Lanes: 0.00 3.00 0.00 0.00 3.00 0.00 3.00 0.00 0.00 0.00 0.00 0.00  
Final Sat.: 0 5083 0 0 5083 0 5052 0 0 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.58 0.00 0.00 0.77 0.00 0.01 0.00 0.00 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.59 0.59 0.59 0.64 0.64 0.64 0.21 0.21 0.21 0.00 0.00 0.00  
Volume/Cap: 0.00 0.98 0.00 0.00 1.21 0.00 0.06 0.00 0.00 0.00 0.00 0.00  
Delay/Veh: 0.0 23.7 0.0 0.0 105 0.0 31.7 0.0 0.0 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 23.7 0.0 0.0 105 0.0 31.7 0.0 0.0 0.0 0.0 0.0  
LOS by Move: A C A A F A C A A A A A  
HCM2kAvgQ: 0 38 0 0 72 0 1 0 0 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumasero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.738  
Loss Time (sec): 12 Average Delay (sec/veh): 456.6  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Chumasero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 20 20 20 20 48 48 20 48 48  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module:  
Base Vol: 12 5 32 75 4 12 39 1460 11 33 1613 236  
Growth Adj: 1.28 1.00 1.08 1.27 1.38 1.47 1.08 1.16 1.27 1.47 1.57 1.28  
Initial Bse: 15 5 34 95 6 18 42 1698 14 49 2532 302  
Added Vol: 0 0 0 255 0 -11 -23 249 0 0 386 618  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 15 5 34 350 6 7 19 1947 14 49 2918 920  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 16 5 35 358 6 7 19 1986 14 50 2977 939  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 16 5 35 358 6 7 19 1986 14 50 2977 939  
PCE 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  
MLF 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  
FinalVolume: 16 5 35 358 6 7 19 1986 14 50 2977 939

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.72 0.72 0.90 0.53 0.53 0.53 0.93 0.93 0.93 0.93 0.90 0.90  
Lanes: 0.32 0.10 0.58 0.97 0.01 0.02 1.00 1.99 0.01 1.00 1.52 0.48  
Final Sat.: 439 143 984 966 15 18 1769 3509 25 1769 2593 817

Capacity Analysis Module:  
Vol/Sat: 0.04 0.04 0.04 0.37 0.37 0.37 0.01 0.57 0.57 0.03 1.15 1.15  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.48 0.48 0.20 0.48 0.48  
Volume/Cap: 0.18 0.18 0.18 1.85 1.85 1.85 0.05 1.18 1.18 0.14 2.39 2.39  
Delay/Veh: 40.0 40.0 40.0 448.3 448 448.3 32.6 108 107.8 33.8 649 649.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 40.0 40.0 40.0 448.3 448 448.3 32.6 108 107.8 33.8 649 649.0  
LOS by Move: D D D F F F C F F C F F  
HCM2kAvgQ: 1 1 2 34 34 34 0 54 54 1 209 209

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.960  
Loss Time (sec): 10 Average Delay (sec/veh): 125.6  
Optimal Cycle: 100 Level Of Service: F

Street Name: Sunset Taraval  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

Volume Module:  
Base Vol: 0 2129 96 0 1790 117 70 238 37 76 243 30  
Growth Adj: 1.14 1.20 1.12 1.15 1.26 1.17 1.12 1.04 1.15 1.17 1.08 1.14  
Initial Bse: 0 2553 108 0 2261 137 79 249 43 89 263 34  
Added Vol: 0 483 0 0 513 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 3036 108 0 2774 137 79 249 43 89 263 34  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 3098 110 0 2831 140 80 254 44 91 268 35  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 3098 110 0 2831 140 80 254 44 91 268 35  
PCE 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  
MLF 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  
FinalVolume: 0 3098 110 0 2831 140 80 254 44 91 268 35

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.48 0.96 0.96 0.49 0.96 0.96  
Lanes: 0.00 2.90 0.10 0.00 2.86 0.14 1.00 0.85 0.15 1.00 0.88 0.12  
Final Sat.: 0 4885 173 0 4810 238 916 1554 267 929 1619 211

Capacity Analysis Module:  
Vol/Sat: 0.00 0.63 0.63 0.00 0.59 0.59 0.09 0.16 0.16 0.10 0.17 0.17  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 1.31 1.31 0.00 1.22 1.22 0.25 0.47 0.47 0.28 0.47 0.47  
Delay/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7  
LOS by Move: A F F A F F B B B B B B  
HCM2kAvgQ: 0 58 58 0 47 47 1 5 5 1 5 5

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.827  
Loss Time (sec): 9 Average Delay (sec/veh): 30.5  
Optimal Cycle: 63 Level Of Service: C

Street Name: Sunset Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 1 1 1 0 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1682 14 1 1588 60 30 61 18 37 47 226  
Growth Adj: 1.11 1.24 1.10 1.00 1.00 1.00 1.10 1.00 1.00 1.00 1.00 1.11  
Initial Bse: 0 2085 15 1 1589 60 33 61 18 37 47 252  
Added Vol: 0 590 0 0 670 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2675 15 1 2259 60 33 61 18 37 47 252  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2729 16 1 2305 61 34 62 18 38 48 257  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2729 16 1 2305 61 34 62 18 38 48 257  
PCE 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  
MLF 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  
FinalVolume: 0 2729 16 1 2305 61 34 62 18 38 48 257

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.79 0.79 0.79 0.88 0.88 0.88 0.76 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.01 2.92 0.07 0.30 0.54 0.16 1.00 1.00 1.00  
Final Sat.: 0 5049 29 2 4407 117 493 909 268 1450 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.54 0.54 0.52 0.52 0.52 0.07 0.07 0.07 0.03 0.03 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.53 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 1.01 1.01 0.98 0.98 0.98 0.22 0.22 0.22 0.08 0.08 0.51  
Delay/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
LOS by Move: A C C C C C B B B B B C  
HCM2kAvgQ: 0 21 21 24 24 24 2 2 2 0 1 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 3

Level of Service Computation Report 2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1210 Skyline / Sloat / 39th
Cycle (sec): 100 Critical Vol./Cap.(X): 0.925
Loss Time (sec): 0 Average Delay (sec/veh): 29.4
Optimal Cycle: 0 Level Of Service: D
Street Name: Skyline / 39th Sloat
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Ignore Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 0 1 0
Volume Module:
Base Vol: 327 0 565 0 21 7 2 350 163 450 435 64
Growth Adj: 1.13 1.23 1.24 1.16 1.08 1.05 1.24 1.25 1.16 1.05 1.03 1.13
Initial Bse: 371 0 701 0 23 7 2 437 189 475 450 73
Added Vol: 0 0 3 0 0 0 0 43 0 2 35 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 371 0 704 0 23 7 2 480 189 477 485 73
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98
PHF Volume: 378 0 0 0 23 8 3 489 0 486 495 74
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 378 0 0 0 23 8 3 489 0 486 495 74
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 378 0 0 0 23 8 3 489 0 486 495 74
Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 2.00 0.00 0.75 0.25 0.01 1.99 1.00 2.00 1.74 0.26
Final Sat.: 409 0 912 0 286 93 4 771 406 839 785 119
Capacity Analysis Module:
Vol/Sat: 0.92 xxxx 0.00 xxxx 0.08 0.08 0.63 0.63 0.00 0.58 0.63 0.62
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
Delay/Veh: 56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9
Delay 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
AdjDel/Veh: 56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9
LOS by Move: F \* \* \* B B D D \* C C C
ApproachDel: 56.1 12.8 25.3 22.1
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 56.1 12.8 25.3 22.1
LOS by Appr: F B D C
AllWayAvgQ: 5.1 5.1 0.0 0.1 0.1 0.1 1.5 1.5 0.0 1.2 1.5 1.5
Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 3

Level of Service Computation Report 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1221 Skyline / Lake Merced (WBR)
Average Delay (sec/veh): 2.5 Worst Case Level Of Service: C[ 17.5]
Street Name: Skyline Lake Merced (WBR)
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 2 0 0 1 0 2 0 0 0 0 0 0 0 1
Volume Module:
Base Vol: 0 853 0 100 489 0 0 0 0 0 0 0 133
Growth Adj: 1.51 1.22 1.12 1.07 1.12 1.46 1.12 1.02 1.07 1.46 1.81 1.51
Initial Bse: 0 1041 0 107 548 0 0 0 0 0 0 0 201
Added Vol: 0 3 0 0 2 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1044 0 107 550 0 0 0 0 0 0 0 201
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 1065 0 109 561 0 0 0 0 0 0 0 205
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 1065 0 109 561 0 0 0 0 0 0 0 205
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 6.9
FollowUpTim:xxxxx xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 3.3
Capacity Module:
Cnflct Vol: xxxxx xxxx xxxxx 1065 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 532
Potent Cap.: xxxxx xxxx xxxxx 650 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 492
Move Cap.: xxxxx xxxx xxxxx 650 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 492
Volume/Cap: xxxxx xxxx xxxxx 0.17 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 0.42
Level of Service Module:
2Way95thQ: xxxxx xxxx xxxxx 0.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 2.0
Control Del:xxxxx xxxx xxxxx 11.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 17.5
LOS by Move: \* \* \* B \* \* \* \* \* C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \*
ApproachDel: xxxxxx xxxxxx xxxxxx 17.5
ApproachLOS: \* \* \* C
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)

Average Delay (sec/veh): 7.4 Worst Case Level Of Service: F[118.6]

Street Name: Skyline Lake Merced (WBLT)

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Rights: Include Include Include Include

Lanes: 1 0 1 1 0 0 0 2 0 1 0 0 0 0 0 1 0 0 0 0

Volume Module:

Table with 12 columns for traffic volume and delay metrics across four approaches.

Critical Gap Module:

Table with 12 columns for critical gap and follow-up time metrics.

Capacity Module:

Table with 12 columns for capacity and volume/capacity metrics.

Level of Service Module:

Table with 12 columns for level of service and delay metrics.

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: \*

ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx 118.6

ApproachLOS: \*

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

19th Ave CS  
Tier 3

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1230 Sunset / Lake Merced

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name: Sunset Lake Merced

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Rights: Ignore Ignore Ignore Ignore

Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 0 0 0

Volume Module:

Table with 12 columns for traffic volume and delay metrics across four approaches.

Critical Gap Module:

Table with 12 columns for critical gap and follow-up time metrics.

Capacity Module:

Table with 12 columns for capacity and volume/capacity metrics.

Level of Service Module:

Table with 12 columns for level of service and delay metrics.

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: \*

ApproachDel: xxxxxxx xxxxxxx +Inf xxxxxxx

ApproachLOS: \*

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1240 Lake Merced / Winston  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.372  
Loss Time (sec): 9 Average Delay (sec/veh): 188.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Winston  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: WideBypass Include Include Include  
Min. Green: 34 34 34 17 55 55 0 0 0 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 2 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1747 404 204 1229 0 0 0 0 180 0 284  
Growth Adj: 1.55 1.12 1.27 1.30 1.18 1.59 1.27 1.43 1.30 1.59 1.99 1.55  
Initial Bse: 0 1948 514 266 1448 0 0 0 0 285 0 441  
Added Vol: 0 315 251 210 460 0 0 0 0 352 0 275  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2263 765 476 1908 0 0 0 0 637 0 716  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2310 780 485 1947 0 0 0 0 650 0 731  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2310 780 485 1947 0 0 0 0 650 0 731  
PCE 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  
MLF 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  
FinalVolume: 0 2310 780 485 1947 0 0 0 0 650 0 731

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.86 0.86 0.90 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.83  
Lanes: 0.00 2.24 0.76 2.00 2.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
Final Sat.: 0 3655 1235 3432 3538 0 0 0 0 3432 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.63 0.63 0.14 0.55 0.00 0.00 0.00 0.00 0.19 0.00 0.46  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.38 0.38 0.38 0.19 0.62 0.62 0.00 0.00 0.00 0.28 0.28 0.28  
Volume/Cap: 0.00 1.65 1.65 0.73 0.89 0.00 0.00 0.00 0.00 0.68 0.00 1.66  
Delay/Veh: 0.0 320 319.5 40.8 13.9 0.0 0.0 0.0 0.0 32.9 0.0 340.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 320 319.5 40.8 13.9 0.0 0.0 0.0 0.0 32.9 0.0 340.5  
LOS by Move: A F F D B A A A A C A F  
HCM2kAvgQ: 0 86 86 6 18 0 0 0 0 9 0 57

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.643  
Loss Time (sec): 7 Average Delay (sec/veh): 209.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Font  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1683 17 176 1644 0 0 0 0 104 0 331  
Growth Adj: 1.08 1.12 1.10 1.13 1.18 1.11 1.10 1.08 1.13 1.11 1.04 1.08  
Initial Bse: 0 1877 19 198 1937 0 0 0 0 115 0 357  
Added Vol: 0 292 39 531 413 0 0 0 0 16 0 371  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2169 58 729 2350 0 0 0 0 131 0 728  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2213 0 744 2398 0 0 0 0 134 0 743  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2213 0 744 2398 0 0 0 0 134 0 743  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2213 0 744 2398 0 0 0 0 134 0 743

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.63 0.00 0.42 0.68 0.00 0.00 0.00 0.00 0.08 0.00 0.47  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.31 0.00 2.52 1.00 0.00 0.00 0.00 0.00 0.31 0.00 1.92  
Delay/Veh: 0.0 162 0.0 733.2 23.4 0.0 0.0 0.0 0.0 29.7 0.0 457.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 162 0.0 733.2 23.4 0.0 0.0 0.0 0.0 29.7 0.0 457.5  
LOS by Move: A F A F C A A A A C A F  
HCM2kAvgQ: 0 68 0 76 44 0 0 0 0 3 0 65

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.566  
Loss Time (sec): 11 Average Delay (sec/veh): 226.5  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 0 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1675 127 59 1717 0 0 0 102 0 57  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 1868 147 70 2023 0 0 0 195 0 107  
Added Vol: 0 101 552 335 94 0 0 0 395 0 231  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1969 699 405 2117 0 0 0 590 0 338  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2009 713 413 2161 0 0 0 602 0 345  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2009 713 413 2161 0 0 0 602 0 345  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2009 713 413 2161 0 0 0 602 0 345

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 1.48 0.52 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 2509 891 1769 3538 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.80 0.80 0.23 0.61 0.00 0.00 0.00 0.00 0.34 0.00 0.22  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.46 0.46 0.46 0.12 0.66 0.66 0.00 0.00 0.00 0.22 0.22 0.22  
Volume/Cap: 0.00 1.76 1.76 1.91 0.93 0.00 0.00 0.00 0.00 1.53 0.00 0.98  
Delay/Veh: 0.0 364 364.0 467.1 14.1 0.0 0.0 0.0 0.0 286.4 0.0 78.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 364 364.0 467.1 14.1 0.0 0.0 0.0 0.0 286.4 0.0 78.2  
LOS by Move: A F F F B A A A A F A E  
HCM2kAvgQ: 0 115 115 36 29 0 0 0 0 44 0 15

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 107 Critical Vol./Cap.(X): 2.861  
Loss Time (sec): 15 Average Delay (sec/veh): 213.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: WideBypass Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0  
Lanes: 0 0 2 0 1 2 0 1 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 504 195 1342 517 0 0 0 267 0 1323  
Growth Adj: 1.71 1.12 1.14 1.17 1.18 1.74 1.14 1.16 1.17 1.74 2.31 1.71  
Initial Bse: 0 562 222 1572 609 0 0 0 465 0 2264  
Added Vol: 0 339 -26 239 250 0 0 0 0 -13 0 313  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 901 196 1811 859 0 0 0 452 0 2577  
User Adj: 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 920 200 1848 0 0 0 0 462 0 2629  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 920 200 1848 0 0 0 0 462 0 2629  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 920 200 1848 0 0 0 0 462 0 2629

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.90 1.00 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 3432 1900 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.26 0.13 0.54 0.00 0.00 0.00 0.00 0.00 0.26 0.00 1.66  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.21 0.21 0.21 0.43 0.68 0.68 0.00 0.00 0.00 0.22 0.22 1.00  
Volume/Cap: 0.00 1.26 0.62 1.25 0.00 0.00 0.00 0.00 0.00 1.16 0.00 1.66  
Delay/Veh: 0.0 172 47.1 145.5 0.0 0.0 0.0 0.0 0.0 139.2 0.0 300.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 172 47.1 145.5 0.0 0.0 0.0 0.0 0.0 139.2 0.0 300.4  
LOS by Move: A F D F A A A A A F A F  
HCM2kAvgQ: 0 31 7 57 0 0 0 0 26 0 133

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.



Tier 3 Conditions  
Weekday Midday Peak Hour



19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.183  
Loss Time (sec): 16 Average Delay (sec/veh): 181.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 53 53 32 32 32 15 15 15 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 1575 1246 23 0 787 272 895 346 371 14 293 26  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 1781 1390 25 0 927 316 984 375 420 16 336 29  
Added Vol: 92 212 0 0 261 0 2 0 88 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1873 1602 25 0 1188 316 986 375 508 16 336 29  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1912 1634 26 0 1213 323 1006 382 0 17 343 30  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.87 0.87 0.89 0.97 1.00 0.92 0.92 0.92  
Lanes: 3 0 1 1 0 0 0 2 3 0 6 3 3 0 0 0 1 0 0 1 5  
Final Sat.: 5096 3441 54 0 3929 1046 5096 1843 1900 149 3071 269

Capacity Analysis Module:  
Vol/Sat: 0.38 0.47 0.47 0.00 0.31 0.31 0.20 0.21 0.00 0.11 0.11 0.11  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.21 0.51 0.51 0.00 0.30 0.30 0.14 0.14 0.00 0.19 0.19 0.19  
Volume/Cap: 1.79 0.92 0.92 0.00 1.01 1.01 1.38 1.45 0.00 0.59 0.59 0.59  
Delay/Veh: 401.1 27.0 27.0 0.0 62.1 62.1 225.1 268 0.0 42.5 42.5 42.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 401.1 27.0 27.0 0.0 62.1 62.1 225.1 268 0.0 42.5 42.5 42.5  
LOS by Move: F C C A E E F F A D D D  
HCM2kAvgQ: 56 25 25 0 25 25 25 29 0 7 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.855  
Loss Time (sec): 17 Average Delay (sec/veh): 273.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Ignore Ignore Ovl Include  
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 1 0 1 0 0 1 2 1 0 0 0 1 0 3 1 0 0 1 0

Volume Module:  
Base Vol: 2245 1828 70 0 1917 12 0 85 4216 28 48 36  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09  
Initial Bse: 2442 2039 74 0 2259 13 0 86 4610 31 51 39  
Added Vol: 135 137 1 0 31 0 0 41 282 0 0 30  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2577 2176 75 0 2290 13 0 127 4892 31 51 69  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2629 2220 0 0 2337 0 0 129 4992 32 52 71  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2629 2220 0 0 2337 0 0 129 4992 32 52 71  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2629 2220 0 0 2337 0 0 129 4992 32 52 71

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 0.91 0.95 0.91 0.89 0.91 1.00 0.98 0.73 0.56 0.90 0.90  
Lanes: 2 2 0 1 0 0 0 0 4 0 0 0 0 0 0 3 0 0 1 0 0 5  
Final Sat.: 3675 3103 0 0 6778 0 0 1862 4178 1065 721 980

Capacity Analysis Module:  
Vol/Sat: 0.72 0.72 0.00 0.00 0.34 0.00 0.00 0.07 1.19 0.03 0.07 0.07  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.54 0.54 0.54 0.20 0.20 0.20 0.09 0.09 0.68 0.09 0.09 0.09  
Volume/Cap: 1.32 1.32 0.00 0.00 1.72 0.00 0.00 0.77 1.76 0.33 0.80 0.80  
Delay/Veh: 164.3 164 0.0 0.0 369 0.0 0.0 72.9 347.4 51.8 78.7 78.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 164.3 164 0.0 0.0 369 0.0 0.0 72.9 347.4 51.8 78.7 78.7  
LOS by Move: F F A A F A A E F D E E  
HCM2kAvgQ: 78 78 0 0 52 0 0 6 157 1 6 6

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.579  
Loss Time (sec): 9 Average Delay (sec/veh): 118.7  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2032 83 275 2702 314 266 1157 123 0 1123 426  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2266 91 311 3184 365 292 1253 139 0 1288 482  
Added Vol: 0 242 2 27 234 8 9 60 0 0 62 37  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2508 93 338 3418 373 301 1313 139 0 1350 519  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2559 95 345 3488 381 308 1340 142 0 1377 529  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2559 95 345 3488 381 308 1340 142 0 1377 529  
PCE 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  
MLF 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  
FinalVolume: 0 2559 95 345 3488 381 308 1340 142 0 1377 529

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.88 0.62 0.87 0.87 1.00 0.89 0.83  
Lanes: 0.00 2.89 0.11 1.00 2.70 0.30 1.00 2.71 0.29 0.00 3.00 1.00  
Final Sat.: 0 4877 181 1769 4514 493 1169 4500 477 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.52 0.52 0.19 0.77 0.77 0.26 0.30 0.30 0.00 0.27 0.33  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.18 0.61 0.61 0.30 0.30 0.30 0.00 0.24 0.24  
Volume/Cap: 0.00 1.22 1.22 1.06 1.26 1.26 1.12 1.00 1.00 0.00 1.13 1.39  
Delay/Veh: 0.0 128 128.2 108.1 130 129.9 63.0 57.6 57.6 0.0 107 230.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 128 128.2 108.1 130 129.9 63.0 57.6 57.6 0.0 107 230.6  
LOS by Move: A F F F F F E E E A F F  
HCM2kAvgQ: 0 49 49 18 80 80 19 23 23 0 26 36

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 3

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.714  
Loss Time (sec): 13 Average Delay (sec/veh): 182.6  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Winston  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Permitted Permitted Permitted  
Rights: Include Include AddLane Include  
Min. Green: 16 44 44 44 44 44 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 424 1667 58 0 2144 200 155 253 325 17 319 25  
Growth Adj: 1.03 1.12 1.05 1.09 1.18 1.06 1.05 1.00 1.09 1.06 1.00 1.03  
Initial Bse: 436 1859 61 0 2527 212 163 253 353 18 319 26  
Added Vol: 164 71 0 0 130 118 131 444 170 25 419 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 600 1930 61 0 2657 330 294 697 523 43 738 26  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 612 1970 62 0 2711 337 300 711 533 44 753 26  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 612 1970 62 0 2711 337 300 711 533 44 753 26  
PCE 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  
MLF 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  
FinalVolume: 612 1970 62 0 2711 337 300 711 533 44 753 26

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.89 0.89 1.00 1.34 0.83 0.26 0.20 0.83 0.67 0.67 0.67  
Lanes: 2.00 2.91 0.09 0.00 3.00 1.00 1.00 2.00 1.00 0.11 1.83 0.06  
Final Sat.: 3432 4903 155 0 7625 1583 495 743 1583 136 2328 81

Capacity Analysis Module:  
Vol/Sat: 0.18 0.40 0.40 0.00 0.36 0.21 0.61 0.96 0.34 0.32 0.32 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.16 0.44 0.44 0.44 0.44 0.44 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 1.11 0.91 0.91 0.00 0.81 0.48 2.29 3.61 1.27 1.22 1.22 1.22  
Delay/Veh: 115.9 29.4 29.4 0.0 22.9 19.3 623.6 1221 176.6 149.0 149 149.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 115.9 29.4 29.4 0.0 22.9 19.3 623.6 1221 176.6 149.0 149 149.0  
LOS by Move: F C C A C B F F F F F F  
HCM2kAvgQ: 14 21 21 0 25 6 33 46 33 24 24 24

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 3

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1270 Lake Merced / Brotherhood

Cycle (sec): 107 Critical Vol./Cap.(X): 2.443  
Loss Time (sec): 15 Average Delay (sec/veh): 132.2  
Optimal Cycle: 180 Level Of Service: F

Street Name:	Lake Merced					Brotherhood									
	North Bound		South Bound			East Bound		West Bound							
Approach:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted			Protected			Split Phase			Split Phase					
Rights:	WideBypass			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	1

Volume Module:												
Base Vol:	0	535	223	1076	498	0	0	0	0	216	0	1034
Growth Adj:	1.71	1.12	1.14	1.17	1.18	1.74	1.14	1.16	1.17	1.74	2.31	1.71
Initial Bse:	0	597	254	1260	587	0	0	0	0	376	0	1769
Added Vol:	0	322	0	269	236	0	0	0	0	0	0	373
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	919	254	1529	823	0	0	0	0	376	0	2142
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	937	259	1560	0	0	0	0	0	384	0	2186
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	937	259	1560	0	0	0	0	0	384	0	2186
PCE 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
MLF 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
FinalVolume:	0	937	259	1560	0	0	0	0	0	384	0	2186

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	1583

Capacity Analysis Module:												
Vol/Sat:	0.00	0.26	0.16	0.45	0.00	0.00	0.00	0.00	0.00	0.22	0.00	1.38
Crit Moves:	****			****			****			****		
Green/Cycle:	0.21	0.21	0.21	0.43	0.68	0.68	0.00	0.00	0.00	0.22	0.22	1.00
Volume/Cap:	0.00	1.29	0.80	1.06	0.00	0.00	0.00	0.00	0.00	0.97	0.00	1.38
Delay/Veh:	0.0	183	58.5	66.5	0.0	0.0	0.0	0.0	0.0	79.0	0.0	175.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	183	58.5	66.5	0.0	0.0	0.0	0.0	0.0	79.0	0.0	175.5
LOS by Move:	A	F	E	E	A	A	A	A	A	E	A	F
HCM2kAvgQ:	0	32	10	37	0	0	0	0	0	17	0	79

Note: Queue reported is the number of cars per lane.



Tier 4A Conditions  
Weekday AM Peak Hour



19th Ave CS  
Tier 4a

Impact Analysis Report  
Level Of Service

Intersection	Base LOS	Base		Future LOS	Future		Change in
		Veh	V/ C		Veh	V/ C	
#1010 Claremont / Taraval / Dewey /	A	6.8	0.650	A	7.0	0.665	+ 0.015 V/C
#1020 Santa Clara / Portola / Vicent	C	29.7	0.837	D	40.2	0.960	+10.494 D/V
#1030 Junipero Serra / Sloat / West	F	89.5	1.076	F	95.9	1.094	+ 6.319 D/V
#1040 Junipero Serra / Ocean / Eucal	D	40.4	0.758	D	46.9	0.802	+ 6.482 D/V
#1050 Junipero Serra / Winston / Mer	C	34.6	0.632	D	38.3	0.772	+ 3.680 D/V
#1060 Junipero Serra / Holloway	C	32.7	0.675	D	36.9	0.716	+ 4.265 D/V
#1070 Junipero Serra / 19th	D	54.2	0.942	E	68.8	0.968	+14.655 D/V
#1075 Junipero Serra / Chumasero	A	5.8	0.757	B	19.4	0.997	+13.632 D/V
#1080 Junipero Serra / I-280 NB On-R	D	40.2	0.788	D	40.5	0.801	+ 0.279 D/V
#1090 Junipero Serra / I-280 SB On-R	C	20.4	0.568	C	20.4	0.620	-0.007 D/V
#1100 19th / Taraval	C	25.5	0.815	C	28.9	0.829	+ 3.420 D/V
#1110 19th / Sloat	F	107.3	1.464	F	119.3	1.508	+11.977 D/V
#1120 19th / Ocean	D	41.4	1.084	D	46.1	1.093	+ 4.780 D/V
#1130 19th / Eucalyptus	C	21.0	0.831	C	23.1	0.865	+ 2.060 D/V
#1140 19th / Winston	D	50.0	0.977	F	84.1	1.322	+34.127 D/V
#1150 19th / Buckingham	F	57.6	0.679	F	77.7	0.826	+20.071 D/V
#1160 19th / Holloway	E	61.9	0.850	E	59.7	0.930	-2.282 D/V
#1170 19th / Crespi	E	57.5	0.762	E	75.7	0.752	+18.286 D/V
#1181 Chumasero / Brotherhood	B	13.8	0.640	B	19.7	0.703	+ 5.962 D/V
#1182 Thomas More / brotherhood	B	15.7	0.611	C	23.0	0.747	+ 7.334 D/V
#1190 Sunset / Taraval	C	21.0	0.717	D	43.0	0.799	+21.964 D/V
#1200 Sunset / Ocean	B	12.0	0.605	B	13.7	0.664	+ 1.687 D/V
#1210 Skyline / Sloat / 39th	C	17.0	0.684	C	17.5	0.692	+ 0.009 V/C
#1221 Skyline / Lake Merced (WBR)	C	15.1	0.209	C	15.1	0.209	+ 0.010 D/V

19th Ave CS  
Tier 4a

Intersection	Base LOS	Base		Future LOS	Future		Change in
		Veh	V/ C		Veh	V/ C	
#1222 Skyline / Lake Merced (WBLT)	F	52.5	0.379	F	52.8	0.381	+ 0.284 D/V
#1230 Sunset / Lake Merced	F	154.0	0.594	F	425.0	1.103	+270.952 D/V
#1240 Lake Merced / Winston	C	28.8	0.691	F	96.8	0.805	+68.066 D/V
#1250 Lake Merced / Font	E	61.6	0.746	F	160.6	1.400	+98.995 D/V
#1261 Lake Merced / Vidal	D	45.6	0.728	D	45.2	0.925	-0.430 D/V
#1262 Lake Merced / Acevedo	D	47.6	0.738	D	43.3	0.962	-4.329 D/V
#1263 Lake Merced / Higuera	E	69.0	0.670	D	37.9	0.994	-31.032 D/V
#1264 Lake Merced / Gonzalez	F	112.1	0.742	D	47.1	1.036	-64.994 D/V
#1270 Lake Merced / Brotherhood	D	54.5	1.511	F	122.0	1.784	+67.580 D/V

19th Ave CS  
Tier 4a

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 7.0 Level Of Service: A  
\*\*\*\*\*

Street Name: Claremont Taraval / Dewey  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			1		

Volume Module:

Base Vol:	3	7	221	10	60	37	1	231	27	313	337	84
Growth Adj:	1.03	1.02	1.02	1.02	1.02	1.03	1.02	1.01	1.02	1.03	1.04	1.03
Initial Bse:	3	7	224	10	61	38	1	233	27	323	351	87
Added Vol:	1	0	5	0	0	0	0	0	0	17	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	7	229	10	61	38	1	233	27	340	351	87
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	4	7	234	10	63	39	1	238	28	347	358	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	7	234	10	63	39	1	238	28	347	358	88
PCE 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
MLF 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
FinalVolume:	4	7	234	10	63	39	1	238	28	347	358	88

PCE Module:

AutoPCE:	4	7	234	10	63	39	1	238	28	347	358	88
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	4	7	234	10	63	39	1	238	28	347	358	88

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	250	709	420	13
MaxVolume:	1065	817	973	1193
PedVolume:	0	0	0	0
AdjMaxVol:	1065	817	973	1193
ApproachVol:	246	112	267	793
ApproachV/C:	0.23	0.14	0.27	0.66
ApproachDel:	4.4	5.1	5.1	8.8
ApproachLOS:	A	A	A	A
Queue:	0.9	0.5	1.1	5.4

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.960  
Loss Time (sec): 11 Average Delay (sec/veh): 40.2  
Optimal Cycle: 124 Level Of Service: D  
\*\*\*\*\*

Street Name: Santa Clara / Vicente Portola  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	23	23	23	23	23	23	9	36	36	9	36	36
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1! 0	1	0	1 1 0	1	0	1 1 0

Volume Module:

Base Vol:	18	264	86	82	202	30	24	1057	17	120	859	81
Growth Adj:	1.05	1.04	1.09	1.12	1.10	1.08	1.09	1.13	1.12	1.08	1.05	1.05
Initial Bse:	19	276	94	92	223	32	26	1197	19	129	903	85
Added Vol:	0	0	0	26	0	4	0	131	0	0	79	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	276	94	118	223	36	26	1328	19	129	982	85
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	19	281	96	120	227	37	27	1355	19	132	1002	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	281	96	120	227	37	27	1355	19	132	1002	87
PCE 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
MLF 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
FinalVolume:	19	281	96	120	227	37	27	1355	19	132	1002	87

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.56	0.56	0.56	0.93	0.93	0.93	0.93	0.92	0.92
Lanes:	0.05	0.71	0.24	0.31	0.59	0.10	1.00	1.97	0.03	1.00	1.84	0.16
Final Sat.:	85	1248	424	330	625	102	1769	3481	50	1769	3217	278

Capacity Analysis Module:

Vol/Sat:	0.23	0.23	0.23	0.36	0.36	0.36	0.02	0.39	0.39	0.07	0.31	0.31
Crit Moves:				****				****				****
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.11	0.45	0.45	0.11	0.45	0.45
Volume/Cap:	0.75	0.75	0.75	1.21	1.21	1.21	0.13	0.87	0.87	0.66	0.69	0.69
Delay/Veh:	34.8	34.8	34.8	149.4	149	149.4	33.4	26.4	26.4	50.1	20.1	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.8	34.8	34.8	149.4	149	149.4	33.4	26.4	26.4	50.1	20.1	20.1
LOS by Move:	C	C	C	F	F	F	C	C	C	D	C	C
HCM2kAvgQ:	11	11	11	21	21	21	1	19	19	4	12	12

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.094  
Loss Time (sec): 16 Average Delay (sec/veh): 95.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 48 48 27 27 27 20 20 20 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 972 1137 20 0 1092 176 646 416 322 23 347 8  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 1129 1292 23 0 1192 200 750 494 367 26 412 9  
Added Vol: 22 110 0 0 53 0 2 0 7 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1151 1402 23 0 1245 200 752 494 374 26 412 9  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1174 1431 24 0 1271 205 768 504 0 27 420 9

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3 0 1 1 0 0 0 2 58 0 42 3 0 1 0 1 0 1 0 1 0  
Final Sat.: 5096 3438 57 0 4329 697 5096 1843 1900 206 3237 73

Capacity Analysis Module:

Vol/Sat: 0.23 0.42 0.42 0.00 0.29 0.29 0.15 0.27 0.00 0.13 0.13 0.13  
Crit Moves: \*\*\*\* \*\*

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.802  
Loss Time (sec): 14 Average Delay (sec/veh): 46.9  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Ocean / Eucalyptus  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:

Base Vol: 189 1678 46 326 1061 90 85 384 45 54 368 324  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 220 1907 53 371 1159 103 99 456 51 62 437 376  
Added Vol: 0 107 4 14 42 4 2 16 0 1 33 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 220 2014 57 385 1201 107 101 472 51 63 470 399  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 224 2055 59 393 1225 109 103 481 52 64 479 407  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 224 2055 59 393 1225 109 103 481 52 64 479 407  
PCE 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  
MLF 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  
FinalVolume: 224 2055 59 393 1225 109 103 481 52 64 479 407

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.88 0.88 0.91 0.89 0.89 0.60 0.60 0.83 0.96 0.96 0.83  
Lanes: 1 00 2.92 0.08 2.00 2.76 0.24 0.35 1.65 1.00 0.12 0.88 1.00  
Final Sat.: 1751 4873 139 3466 4659 413 403 1889 1583 214 1605 1583

Capacity Analysis Module:

Vol/Sat: 0.13 0.42 0.42 0.11 0.26 0.26 0.25 0.25 0.03 0.30 0.30 0.26  
Crit Moves: \*\*\*\* \*\*

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1050 Junipero Serra / Winston / Mercedes

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.772  
Loss Time (sec): 14 Average Delay (sec/veh): 38.3  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*

Street Name: Junipero Serra Winston / Mercedes

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Protected Protected Permitted Permitted

Rights: WideBypass Include Include Include

Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

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Volume Module:

Base Vol: 186 1681 29 103 1024 72 80 63 73 64 147 62

Growth Adj: 1.07 1.14 1.16 1.14 1.09 1.05 1.16 1.19 1.14 1.05 1.00 1.07

Initial Bse: 199 1911 34 117 1118 75 93 75 83 67 147 66

Added Vol: 56 38 4 1 -24 65 73 48 29 -6 82 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 255 1949 38 118 1094 140 166 123 112 61 229 66

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 260 1988 38 121 1117 143 169 125 115 62 234 68

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 260 1988 38 121 1117 143 169 125 115 62 234 68

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 260 1988 38 121 1117 143 169 125 115 62 234 68

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.46 0.98 0.83 0.64 0.98 0.83

Lanes: 1.00 2.94 0.06 1.00 2.66 0.34 1.00 1.00 1.00 1.00 1.00 1.00

Final Sat.: 1769 4972 96 1769 4429 568 868 1862 1583 1216 1862 1583

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Capacity Analysis Module:

Vol/Sat: 0.15 0.40 0.40 0.07 0.25 0.25 0.20 0.07 0.07 0.05 0.13 0.04

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27

Volume/Cap: 0.77 1.00 1.00 0.36 0.63 0.63 0.72 0.25 0.27 0.19 0.46 0.16

Delay/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6

LOS by Move: D D D D C C D C C C C C

HCM2kAvgQ: 7 25 25 3 10 10 4 3 3 2 6 2

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1060 Junipero Serra / Holloway

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.716  
Loss Time (sec): 14 Average Delay (sec/veh): 36.9  
Optimal Cycle: 100 Level Of Service: D

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Street Name: Junipero Serra Holloway

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0 1 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 234 1520 60 114 956 84 163 106 16 162 129 118

Growth Adj: 1.08 1.14 1.07 1.05 1.09 1.06 1.07 1.01 1.05 1.06 1.02 1.08

Initial Bse: 253 1728 64 120 1044 89 175 107 17 171 132 128

Added Vol: 63 59 2 12 5 -18 25 -12 0 -6 -12 14

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 316 1787 66 132 1049 71 200 95 17 165 120 142

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 322 1823 68 135 1070 72 204 97 17 169 123 144

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 322 1823 68 135 1070 72 204 97 17 169 123 144

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 322 1823 68 135 1070 72 204 97 17 169 123 144

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.65 0.98 0.83 0.68 0.98 0.83

Lanes: 1.00 2.89 0.11 1.00 2.81 0.19 1.00 1.00 1.00 1.00 1.00 1.00

Final Sat.: 1769 4877 181 1769 4719 319 1227 1862 1583 1289 1862 1583

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Capacity Analysis Module:

Vol/Sat: 0.18 0.37 0.37 0.08 0.23 0.23 0.17 0.05 0.01 0.13 0.07 0.09

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28

Volume/Cap: 0.96 0.96 0.96 0.40 0.58 0.58 0.59 0.19 0.04 0.47 0.24 0.33

Delay/Veh: 79.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 79.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5

LOS by Move: E D D D C C D C C C C C

HCM2kAvgQ: 10 20 20 3 9 9 6 2 0 5 3 4

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Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 0.968  
Loss Time (sec): 0 Average Delay (sec/veh): 68.8  
Optimal Cycle: 180 Level Of Service: E

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Ignore Ovl Include  
Min. Green: 46 46 46 18 18 18 9 9 9 9 9 9  
Y+R: 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0  
Lanes: 3 0 1 1 0 0 0 4 0 1 0 0 1 0 3 0 0 0 1 0

Volume Module:  
Base Vol: 2208 1679 8 0 1210 4 0 71 3047 0 56 62  
Growth Adj: 1.13 1.14 1.12 1.10 1.09 1.11 1.12 1.10 1.10 1.11 1.12 1.13  
Initial Bse: 2494 1908 9 0 1321 4 0 78 3345 0 63 70  
Added Vol: 61 108 3 0 -1 0 0 21 119 0 0 15  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2555 2016 12 0 1320 4 0 99 3464 0 63 85  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2607 2058 12 0 1347 0 0 101 3535 0 64 87  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2607 2058 12 0 1347 0 0 101 3535 0 64 87  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2607 2058 12 0 1347 0 0 101 3535 0 64 87

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.99 0.93 0.93 1.00 0.89 1.00 1.00 0.98 0.81 1.00 0.90 0.90  
Lanes: 3.00 1.99 0.01 0.00 4.00 1.00 0.00 1.00 3.00 0.00 0.43 0.57  
Final Sat.: 5662 3513 21 0 6778 1900 0 1862 4596 0 730 987

Capacity Analysis Module:  
Vol/Sat: 0.46 0.59 0.59 0.00 0.20 0.00 0.00 0.05 0.77 0.00 0.09 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.50 0.50 0.50 0.21 0.21 0.21 0.12 0.12 0.67 0.12 0.12 0.12  
Volume/Cap: 0.93 1.18 1.18 0.00 0.96 0.00 0.00 0.44 1.15 0.00 0.71 0.71  
Delay/Veh: 26.8 109 109.0 0.0 58.6 0.0 0.0 50.6 80.9 0.0 64.4 64.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 26.8 109 109.0 0.0 58.6 0.0 0.0 50.6 80.9 0.0 64.4 64.4  
LOS by Move: C F F A E A A D F A E E  
HCM2kAvgQ: 28 57 57 0 15 0 0 4 69 0 6 6

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1075 Junipero Serra / Chumasero  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.997  
Loss Time (sec): 10 Average Delay (sec/veh): 19.4  
Optimal Cycle: 176 Level Of Service: B

\*\*\*\*\*  
Street Name: Junipero Serra Chumasero  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Ovl Include  
Min. Green: 10 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 4 0 0 0 0 3 1 0 0 0 0 0 1 0 0 0 0 0

Volume Module:  
Base Vol: 8 3895 0 0 4214 75 0 0 107 0 0 0  
Growth Adj: 1.13 1.14 1.12 1.10 1.09 1.11 1.12 1.10 1.10 1.11 1.12 1.13  
Initial Bse: 9 4440 0 0 4340 83 0 0 112 0 0 0  
Added Vol: 66 172 0 0 180 -62 0 0 206 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 75 4612 0 0 4520 21 0 0 318 0 0 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 77 4706 0 0 4613 22 0 0 325 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 77 4706 0 0 4613 22 0 0 325 0 0 0  
PCE 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  
MLF 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  
FinalVolume: 77 4706 0 0 4613 22 0 0 325 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 1.00 1.00 0.89 0.89 1.00 1.00 0.85 1.00 1.00 1.00  
Lanes: 1.00 4.00 0.00 0.00 3.98 0.02 0.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 1769 6778 0 0 6739 32 0 0 1611 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.04 0.69 0.00 0.00 0.68 0.68 0.00 0.00 0.20 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.11 0.80 0.00 0.00 0.69 0.69 0.00 0.00 0.20 0.00 0.00 0.00  
Volume/Cap: 0.39 0.87 0.00 0.00 1.00 1.00 0.00 0.00 1.00 0.00 0.00 0.00  
Delay/Veh: 38.4 7.7 0.0 0.0 26.3 26.3 0.0 0.0 85.3 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 38.4 7.7 0.0 0.0 26.3 26.3 0.0 0.0 85.3 0.0 0.0 0.0  
LOS by Move: D A A A C C A A F A A A  
HCM2kAvgQ: 2 27 0 0 36 36 0 0 14 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly

\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 0.801  
Loss Time (sec): 12 Average Delay (sec/veh): 40.5  
Optimal Cycle: 83 Level Of Service: D

\*\*\*\*\*

Street Name: Junipero Serra / I-280 NB On-Ramp John Daly

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Ovl Ovl Include Ovl

Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 337 335 364 104 169 262 665 779 99 59 746 303

Growth Adj: 1.05 1.12 1.14 1.00 1.00 1.00 1.14 1.16 1.00 1.00 1.00 1.05

Initial Bse: 354 374 414 104 169 262 756 902 99 59 746 318

Added Vol: 73 22 0 0 0 0 1 11 201 0 0 7

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 427 396 414 104 169 262 757 913 300 59 746 325

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 435 404 422 106 172 267 773 931 306 60 761 332

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 435 404 422 106 172 267 773 931 306 60 761 332

PCE 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

MLF 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

FinalVolume: 435 404 422 106 172 267 773 931 306 60 761 332

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.90 0.86 0.86 0.93 0.89 0.89 0.87 0.89 0.89 0.89 0.89 0.83

Lanes: 2.00 1.47 1.53 1.00 0.78 1.22 2.00 2.00 1.00 1.00 3.00 1.00

Final Sat.: 3432 2395 2503 1769 1327 2058 3289 3391 1695 1688 5063 1583

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Capacity Analysis Module:

Vol/Sat: 0.13 0.17 0.17 0.06 0.13 0.13 0.23 0.27 0.18 0.04 0.15 0.21

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.21 0.21 0.40 0.16 0.16 0.51 0.34 0.34 0.34 0.19 0.19 0.35

Volume/Cap: 0.60 0.80 0.42 0.37 0.80 0.26 0.68 0.80 0.53 0.19 0.80 0.60

Delay/Veh: 46.0 51.4 27.3 47.5 58.6 17.7 35.9 39.1 33.0 42.8 53.1 35.2

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 46.0 51.4 27.3 47.5 58.6 17.7 35.9 39.1 33.0 42.8 53.1 35.2

LOS by Move: D D C D E B D D C D D D

HCM2kAvgQ: 8 13 8 4 10 5 13 17 9 2 12 11

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.620  
Loss Time (sec): 8 Average Delay (sec/veh): 20.4  
Optimal Cycle: 41 Level Of Service: C

\*\*\*\*\*

Street Name: Junipero Serra / I-280 SB On-Ramp John Daly

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Ovl Ovl Include Ovl

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 0 0 2 0 0 0 0 0 0 0 2 1 0 2 0 2 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 0 316 0 0 0 0 1227 419 499 1001 0

Growth Adj: 1.02 1.00 1.01 1.13 1.23 1.13 1.01 1.03 1.13 1.13 1.03 1.02

Initial Bse: 0 0 320 0 0 0 0 1261 472 564 1035 0

Added Vol: 0 0 23 0 0 0 0 190 47 0 73 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 343 0 0 0 0 1451 519 564 1108 0

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 0 350 0 0 0 0 1480 530 575 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 350 0 0 0 0 1480 530 575 0 0

PCE 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

MLF 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

FinalVolume: 0 0 350 0 0 0 0 1480 530 575 0 0

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.86 0.86 0.90 0.95 1.00

Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.21 0.79 2.00 2.00 0.00

Final Sat.: 0 0 2786 0 0 0 0 3598 1287 3432 3610 0

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.13 0.00 0.00 0.00 0.00 0.41 0.41 0.17 0.00 0.00

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.00 0.00 0.27 0.00 0.00 0.00 0.00 0.66 0.66 0.27 0.00 0.00

Volume/Cap: 0.00 0.00 0.47 0.00 0.00 0.00 0.00 0.62 0.62 0.62 0.00 0.00

Delay/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0

LOS by Move: A A D A A A A A B B D A A

HCM2kAvgQ: 0 0 6 0 0 0 0 16 16 9 0 0

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.829  
Loss Time (sec): 10 Average Delay (sec/veh): 28.9  
Optimal Cycle: 89 Level Of Service: C

\*\*\*\*\*  
Street Name: 19th Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 23 23 23 23 23 23 23  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 1 1 1 0 0 1 0 1 0 0 1 0 1 0

Volume Module:

Base Vol: 0 2276 57 2 2656 58 2 201 50 0 228 50  
Growth Adj: 1.10 1.14 1.06 1.04 1.09 1.08 1.06 1.00 1.04 1.08 1.07 1.10  
Initial Bse: 0 2587 61 2 2900 63 2 201 52 0 244 55  
Added Vol: 0 146 3 0 60 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2733 64 2 2960 63 2 201 52 0 244 55  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2789 65 2 3021 64 2 205 53 0 249 56  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2789 65 2 3021 64 2 205 53 0 249 56  
PCE 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  
MLF 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  
FinalVolume: 0 2789 65 2 3021 64 2 205 53 0 249 56

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.84 0.84 0.84 0.86 0.86 0.86 0.95 0.90 0.90  
Lanes: 0.00 2.93 0.07 0.01 2.93 0.06 0.02 1.57 0.41 0.00 1.63 0.37  
Final Sat.: 0 4953 115 3 4662 99 27 2571 665 0 2805 634

Capacity Analysis Module:

Vol/Sat: 0.00 0.56 0.56 0.65 0.65 0.65 0.08 0.08 0.08 0.00 0.09 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.63 0.63 0.63 0.63 0.63 0.26 0.26 0.26 0.00 0.26 0.26  
Volume/Cap: 0.00 0.89 0.89 1.02 1.02 1.02 0.31 0.31 0.31 0.00 0.35 0.35  
Delay/Veh: 0.0 18.0 18.0 39.1 39.1 39.1 28.1 28.1 28.1 0.0 28.5 28.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 18.0 18.0 39.1 39.1 39.1 28.1 28.1 28.1 0.0 28.5 28.5  
LOS by Move: A B B D D D C C C A C C  
HCM2kAvgQ: 0 28 28 42 42 42 3 3 3 0 4 4

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.508  
Loss Time (sec): 9 Average Delay (sec/veh): 119.3  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Sloat  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 33 33 33 12 49 49 4 32 32 23 23 23  
Y+R: 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:

Base Vol: 0 1964 25 312 2778 127 247 1029 62 0 873 403  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 0 2232 29 355 3034 145 287 1221 71 0 1036 468  
Added Vol: 0 110 2 4 35 5 7 3 0 0 13 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2342 31 359 3069 150 294 1224 71 0 1049 491  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2390 32 367 3131 153 300 1249 72 0 1070 501  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2390 32 367 3131 153 300 1249 72 0 1070 501  
PCE 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  
MLF 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  
FinalVolume: 0 2390 32 367 3131 153 300 1249 72 0 1070 501

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.89 0.89 0.58 0.88 0.88 1.00 0.89 0.83  
Lanes: 0.00 2.96 0.04 1.00 2.86 0.14 1.00 2.84 0.16 0.00 3.00 1.00  
Final Sat.: 0 5007 66 1769 4813 235 1106 4729 273 0 5083 1583

Capacity Analysis Module:

Vol/Sat: 0.00 0.48 0.48 0.21 0.65 0.65 0.27 0.26 0.26 0.00 0.21 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.37 0.37 0.15 0.52 0.52 0.38 0.38 0.38 0.00 0.26 0.26  
Volume/Cap: 0.00 1.30 1.30 1.39 1.26 1.26 0.75 0.69 0.69 0.00 0.82 1.24  
Delay/Veh: 0.0 166 166.3 237.4 137 137.5 36.1 24.8 24.8 0.0 37.6 160.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 166 166.3 237.4 137 137.5 36.1 24.8 24.8 0.0 37.6 160.4  
LOS by Move: A F F F F F D C C A D F  
HCM2kAvgQ: 0 49 49 25 66 66 10 12 12 0 13 29

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.093  
Loss Time (sec): 9 Average Delay (sec/veh): 46.1  
Optimal Cycle: 180 Level Of Service: D

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: WideBypass WideBypass Include Include  
Min. Green: 54 54 54 54 54 54 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 1 0 0 0 2 1 0 1 0 0 1 0 0

Volume Module:  
Base Vol: 2 1809 45 0 2766 187 83 274 47 21 230 157  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 2 2056 52 0 3020 213 96 325 54 24 273 182  
Added Vol: 0 112 0 0 35 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2 2168 52 0 3055 213 96 325 54 24 273 182  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2 2212 53 0 3118 217 98 332 55 24 278 186  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2 2212 53 0 3118 217 98 332 55 24 278 186  
PCE 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  
MLF 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  
FinalVolume: 2 2212 53 0 3118 217 98 332 55 24 278 186

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.78 0.78 0.78 1.00 0.88 0.88 0.83 0.96 0.96 0.80 0.80 0.80  
Lanes: 0.01 2.92 0.07 0.00 2.80 0.20 1.00 0.86 0.14 0.05 0.57 0.38  
Final Sat.: 5 4336 105 0 4704 328 1570 1565 258 76 867 580

Capacity Analysis Module:  
Vol/Sat: 0.51 0.51 0.51 0.00 0.66 0.66 0.06 0.21 0.21 0.32 0.32 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.60 0.60 0.60 0.60 0.60 0.60 0.29 0.29 0.29 0.29 0.29 0.29  
Volume/Cap: 0.85 0.85 0.85 0.00 1.10 1.10 0.21 0.72 0.72 1.09 1.09 1.09  
Delay/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
LOS by Move: B B B A E E C D D F F F  
HCM2kAvgQ: 16 16 16 0 46 46 2 10 10 23 23 23

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.865  
Loss Time (sec): 9 Average Delay (sec/veh): 23.1  
Optimal Cycle: 90 Level Of Service: C

Street Name: 19th Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 56 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 1848 21 0 2818 58 74 125 90 10 148 14  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 0 2100 24 0 3077 66 86 148 103 11 176 16  
Added Vol: 0 105 3 0 19 16 8 14 0 7 30 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2205 27 0 3096 82 94 162 103 18 206 16  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2250 28 0 3159 84 96 166 105 19 210 17  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2250 28 0 3159 84 96 166 105 19 210 17  
PCE 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  
MLF 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  
FinalVolume: 0 2250 28 0 3159 84 96 166 105 19 210 17

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.66 0.66 0.66 0.94 0.94 0.94  
Lanes: 0.00 2.96 0.04 0.00 2.92 0.08 1.00 1.23 0.77 0.08 0.85 0.07  
Final Sat.: 0 5011 62 0 4932 131 1251 1533 969 136 1522 120

Capacity Analysis Module:  
Vol/Sat: 0.00 0.45 0.45 0.00 0.64 0.64 0.08 0.11 0.11 0.14 0.14 0.14  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.62 0.62 0.62 0.62 0.62 0.62 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.00 0.72 0.72 0.00 1.03 1.03 0.27 0.38 0.38 0.49 0.49 0.49  
Delay/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
LOS by Move: A A A A C C C C C C C  
HCM2kAvgQ: 0 11 11 0 36 36 2 3 3 6 6 6

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.930  
Loss Time (sec): 9 Average Delay (sec/veh): 59.7  
Optimal Cycle: 114 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 48 48 48 48 48 48 33 33 33 33 33 33  
Y+R: 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0  
Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 0 2288 130 0 3078 138 56 143 55 37 370 50  
Growth Adj: 1.07 1.14 1.18 1.16 1.09 1.05 1.18 1.23 1.16 1.05 1.00 1.07  
Initial Bse: 0 2601 154 0 3361 144 66 176 64 39 370 53  
Added Vol: 0 29 -21 0 -22 22 66 34 85 -4 37 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2630 133 0 3339 166 132 210 149 35 407 53  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2683 135 0 3407 170 135 214 152 35 415 54  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2683 135 0 3407 170 135 214 152 35 415 54  
PCE 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  
MLF 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  
FinalVolume: 0 2683 135 0 3407 170 135 214 152 35 415 54

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.98 0.83 0.58 0.58 0.58 0.81 0.81 0.81  
Lanes: 0.00 2.86 0.14 0.00 3.00 1.00 0.54 0.85 0.61 0.14 1.64 0.22  
Final Sat.: 0 4805 242 0 5592 1583 593 940 667 216 2533 332

Capacity Analysis Module:

Vol/Sat: 0.00 0.56 0.56 0.00 0.61 0.11 0.23 0.23 0.23 0.16 0.16 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.37 0.37 0.37 0.37 0.37 0.37  
Volume/Cap: 0.00 1.05 1.05 0.00 1.14 0.20 0.62 0.62 0.62 0.45 0.45 0.45  
Delay/Veh: 0.0 46.2 46.2 0.0 83.6 8.3 26.9 26.9 26.9 22.9 22.9 22.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 46.2 46.2 0.0 83.6 8.3 26.9 26.9 26.9 22.9 22.9 22.9  
LOS by Move: A D D A F A C C C C C C  
HCM2kAvgQ: 0 33 33 0 52 1 7 7 7 6 6 6

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 0.752  
Loss Time (sec): 0 Average Delay (sec/veh): 75.7  
Optimal Cycle: 75 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Crespi  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Include Include  
Min. Green: 48 48 48 53 53 53 22 22 22 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 0 0 0 2 1 0 1 0 0 0 0 0

Volume Module:

Base Vol: 0 2266 0 0 3060 110 152 0 68 0 0 0  
Growth Adj: 1.14 1.14 1.05 1.02 1.09 1.12 1.05 1.00 1.02 1.12 1.14 1.14  
Initial Bse: 0 2576 0 0 3342 123 159 0 70 0 0 0  
Added Vol: 0 61 0 0 102 -43 -53 0 38 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2637 0 0 3444 80 106 0 108 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2690 0 0 3514 0 108 0 110 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2690 0 0 3514 0 108 0 110 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2690 0 0 3514 0 108 0 110 0 0 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 0.91 0.93 1.00 0.83 1.00 1.00 1.00  
Lanes: 0.00 3.00 0.00 0.00 3.00 0.00 1.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 0 5083 0 0 5083 0 1769 0 1583 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.53 0.00 0.00 0.69 0.00 0.06 0.00 0.07 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.47 0.47 0.47 0.61 0.61 0.61 0.29 0.29 0.29 0.00 0.00 0.00  
Volume/Cap: 0.00 1.12 0.00 0.00 1.13 0.00 0.21 0.00 0.24 0.00 0.00 0.00  
Delay/Veh: 0.0 83.2 0.0 0.0 72.8 0.0 30.3 0.0 30.8 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 83.2 0.0 0.0 72.8 0.0 30.3 0.0 30.8 0.0 0.0 0.0  
LOS by Move: A F A A E A C A C A A A  
HCM2kAvgQ: 0 50 0 0 58 0 3 0 3 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumaseero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.703  
Loss Time (sec): 8 Average Delay (sec/veh): 19.7  
Optimal Cycle: 91 Level Of Service: B

Street Name: Chumaseero Brotherhood  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Permitted  
Rights: Include Include Include Include  
Min. Green: 20 20 20 15 15 15 21 47 47 21 47 47  
Y+R: 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 0 0 0 2 1 0

Volume Module:  
Base Vol: 0 0 0 145 0 54 26 1538 0 0 1684 176  
Growth Adj: 1.08 1.06 1.07 1.01 1.00 1.02 1.07 1.08 1.01 1.02 1.09 1.08  
Initial Bse: 0 0 0 147 0 55 28 1657 0 0 1842 190  
Added Vol: 0 0 0 65 0 -14 -18 559 0 0 151 1  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 212 0 41 10 2216 0 0 1993 191  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 216 0 42 10 2261 0 0 2034 194  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 216 0 42 10 2261 0 0 2034 194  
PCE 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  
MLF 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  
FinalVolume: 0 0 0 216 0 42 10 2261 0 0 2034 194

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.80 0.80 1.00 0.69 0.75 0.69 0.93 0.93 1.00 1.00 0.88 0.88  
Lanes: 0.00 1.00 0.00 0.84 0.00 0.16 1.00 2.00 0.00 0.00 2.74 0.26  
Final Sat.: 0 1520 0 1098 0 213 1769 3538 0 0 4579 438

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.20 0.00 0.20 0.01 0.64 0.00 0.00 0.44 0.44  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.00 0.00 0.00 0.22 0.00 0.22 0.21 0.70 0.00 0.00 0.49 0.49  
Volume/Cap: 0.00 0.00 0.00 0.90 0.00 0.90 0.03 0.91 0.00 0.00 0.90 0.90  
Delay/Veh: 0.0 0.0 0.0 71.4 0.0 71.4 31.5 9.4 0.0 0.0 24.1 24.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 71.4 0.0 71.4 31.5 9.4 0.0 0.0 24.1 24.1  
LOS by Move: A A A E A E C A A A C C  
HCM2kAvgQ: 0 0 0 11 0 11 0 21 0 0 25 25

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1182 Thomas More / brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.747  
Loss Time (sec): 8 Average Delay (sec/veh): 23.0  
Optimal Cycle: 96 Level Of Service: C

Street Name: Thomas More Brotherhood  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 15 15 15 21 47 47 21 47 47  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 2 1 0 1 0 3 0 0

Volume Module:  
Base Vol: 44 0 99 0 0 0 0 1613 70 175 1808 0  
Growth Adj: 1.08 1.06 1.07 1.01 1.00 1.02 1.07 1.08 1.01 1.02 1.09 1.08  
Initial Bse: 47 0 106 0 0 0 0 1737 71 179 1978 0  
Added Vol: 0 0 0 0 0 0 0 624 0 0 151 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 47 0 106 0 0 0 0 2361 71 179 2129 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 48 0 108 0 0 0 0 2410 72 183 2172 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 48 0 108 0 0 0 0 2410 72 183 2172 0  
PCE 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  
MLF 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  
FinalVolume: 48 0 108 0 0 0 0 2410 72 183 2172 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 1.00 0.88 1.00 1.00 1.00 1.00 0.89 0.89 0.93 0.89 1.00  
Lanes: 0.31 0.00 0.69 0.00 0.00 0.00 0.00 2.91 0.09 1.00 3.00 0.00  
Final Sat.: 515 0 1149 0 0 0 0 4915 148 1769 5083 0

Capacity Analysis Module:  
Vol/Sat: 0.09 0.00 0.09 0.00 0.00 0.00 0.00 0.49 0.49 0.10 0.43 0.00  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.20 0.00 0.20 0.00 0.00 0.00 0.00 0.51 0.51 0.21 0.72 0.00  
Volume/Cap: 0.47 0.00 0.47 0.00 0.00 0.00 0.00 0.96 0.96 0.49 0.59 0.00  
Delay/Veh: 40.0 0.0 40.0 0.0 0.0 0.0 0.0 34.3 34.3 39.4 7.6 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 40.0 0.0 40.0 0.0 0.0 0.0 0.0 34.3 34.3 39.4 7.6 0.0  
LOS by Move: D A D A A A A C C D A A  
HCM2kAvgQ: 5 0 5 0 0 0 0 29 29 5 12 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1190 Sunset / Taraval

\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.799  
Loss Time (sec): 10 Average Delay (sec/veh): 43.0  
Optimal Cycle: 60 Level Of Service: D

\*\*\*\*\*

Street Name: Sunset Taraval

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 2021 17 0 1965 11 79 190 53 83 169 38

Growth Adj: 1.10 1.12 1.06 1.05 1.08 1.08 1.06 1.01 1.05 1.08 1.08 1.10

Initial Bse: 0 2254 18 0 2130 12 84 193 56 90 183 42

Added Vol: 0 342 0 0 212 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 2596 18 0 2342 12 84 193 56 90 183 42

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2649 18 0 2390 12 86 197 57 92 186 43

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2649 18 0 2390 12 86 197 57 92 186 43

PCE 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

MLF 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

FinalVolume: 0 2649 18 0 2390 12 86 197 57 92 186 43

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.58 0.95 0.95 0.54 0.95 0.95

Lanes: 0.00 2.98 0.02 0.00 2.98 0.02 1.00 0.78 0.22 1.00 0.81 0.19

Final Sat.: 0 5043 35 0 5053 26 1097 1396 403 1035 1473 337

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Capacity Analysis Module:

Vol/Sat: 0.00 0.53 0.53 0.00 0.47 0.47 0.08 0.14 0.14 0.09 0.13 0.13

Crit Moves: \*\*\*\*

Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35

Volume/Cap: 0.00 1.09 1.09 0.00 0.98 0.98 0.22 0.40 0.40 0.25 0.36 0.36

Delay/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1

LOS by Move: A E E A C C B B B B B B

HCM2kAvgQ: 0 33 33 0 24 24 1 4 4 1 3 3

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1200 Sunset / Ocean

\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.664  
Loss Time (sec): 9 Average Delay (sec/veh): 13.7  
Optimal Cycle: 59 Level Of Service: B

\*\*\*\*\*

Street Name: Sunset Ocean

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Permitted Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 1 0 0 0 2 1 0 0 0 1 0 1 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 1318 12 0 1735 81 54 83 18 47 23 192

Growth Adj: 1.00 1.00 1.07 1.11 1.07 1.01 1.07 1.15 1.11 1.01 1.00 1.00

Initial Bse: 0 1318 13 0 1853 82 58 95 20 48 23 192

Added Vol: 0 468 0 0 247 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 1786 13 0 2100 82 58 95 20 48 23 192

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 1822 13 0 2143 84 59 97 20 49 23 196

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 1822 13 0 2143 84 59 97 20 49 23 196

PCE 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

MLF 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

FinalVolume: 0 1822 13 0 2143 84 59 97 20 49 23 196

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.87 0.87 0.87 0.71 0.98 0.83

Lanes: 0.00 2.98 0.02 0.00 2.89 0.11 0.33 0.55 0.12 1.00 1.00 1.00

Final Sat.: 0 5042 36 0 4863 190 550 908 190 1354 1862 1583

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Capacity Analysis Module:

Vol/Sat: 0.00 0.36 0.36 0.00 0.44 0.44 0.11 0.11 0.11 0.04 0.01 0.12

Crit Moves: \*\*\*\*

Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32

Volume/Cap: 0.00 0.68 0.68 0.00 0.83 0.83 0.34 0.34 0.34 0.11 0.04 0.39

Delay/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3

LOS by Move: A B B A B B B B B B B B

HCM2kAvgQ: 0 8 8 0 15 15 3 3 3 1 0 3

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Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 4a

Level of Service Computation Report 2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1210 Skyline / Sloat / 39th

Cycle (sec): 100 Critical Vol./Cap.(X): 0.692
Loss Time (sec): 0 Average Delay (sec/veh): 17.5
Optimal Cycle: 0 Level Of Service: C

Street Name: Skyline / 39th Sloat

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Ignore Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 0

Volume Module:

Base Vol: 251 0 646 0 14 7 1 331 194 341 280 60
Growth Adj: 1.19 1.41 1.35 1.15 1.00 1.00 1.35 1.29 1.15 1.00 1.00 1.19
Initial Bse: 299 0 872 0 14 7 1 427 222 341 280 72
Added Vol: 0 0 1 0 0 0 0 16 0 3 34 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 299 0 873 0 14 7 1 443 222 344 314 72
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98
PHF Volume: 306 0 0 0 14 7 1 452 0 351 320 73
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 306 0 0 0 14 7 1 452 0 351 320 73
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 306 0 0 0 14 7 1 452 0 351 320 73

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 2.00 0.00 0.67 0.33 0.01 1.99 1.00 2.00 1.63 0.37
Final Sat.: 442 0 1009 0 274 137 3 912 493 919 810 189

Capacity Analysis Module:

Vol/Sat: 0.69 xxxx 0.00 xxxx 0.05 0.05 0.50 0.50 0.00 0.38 0.40 0.39
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
Delay/Veh: 25.8 0.0 0.0 0.0 11.4 11.4 17.3 17.3 0.0 14.9 14.1 13.7
Delay 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
AdjDel/Veh: 25.8 0.0 0.0 0.0 11.4 11.4 17.3 17.3 0.0 14.9 14.1 13.7
LOS by Move: D \* \* \* B C C \* B B B
ApproachDel: 25.8 11.4 17.3 14.4
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 25.8 11.4 17.3 14.4
LOS by Appr: D B C B
AllWayAvgQ: 1.9 1.9 0.0 0.0 0.0 0.0 0.9 0.9 0.0 0.6 0.6 0.6

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 4a

Level of Service Computation Report 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1221 Skyline / Lake Merced (WBR)

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C[ 15.1]

Street Name: Skyline Lake Merced (WBR)

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 2 0 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module:

Base Vol: 0 814 0 90 456 0 0 0 0 0 0 0 75
Growth Adj: 1.23 1.42 1.30 1.09 1.00 1.02 1.30 1.18 1.09 1.02 1.04 1.23
Initial Bse: 0 1156 0 98 456 0 0 0 0 0 0 0 92
Added Vol: 0 1 0 0 3 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1157 0 98 459 0 0 0 0 0 0 0 92
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 1180 0 100 468 0 0 0 0 0 0 0 94
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 1180 0 100 468 0 0 0 0 0 0 0 94

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 6.9
FollowUpTim:xxxxx xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 3.3

Capacity Module:

Cnflct Vol:xxxxx xxxx xxxxx 1180 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 590
Potent Cap.:xxxxx xxxx xxxxx 587 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 451
Move Cap.:xxxxx xxxx xxxxx 587 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 451
Volume/Cap:xxxxx xxxx xxxxx 0.17 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 0.21

Level of Service Module:

2Way95thQ:xxxxx xxxx xxxxx 0.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 0.8
Control Del:xxxxx xxxx xxxxx 12.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 15.1
LOS by Move: \* \* \* B \* \* \* \* \* C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \*
ApproachDel:xxxxxxx xxxxxxx xxxxxxx xxxxxxx 15.1
ApproachLOS: \* \* \* \* C

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)  
\*\*\*\*\*

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: F[ 52.8]

Street Name: Skyline Lake Merced (WBLT)
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 1 0 1 1 0 0 0 2 0 1 0 0 0 0 0 1 0 1 0 0

Volume Module:
Base Vol: 5 814 90 0 423 33 0 0 0 43 5 0
Growth Adj: 1.23 1.42 1.30 1.09 1.00 1.02 1.30 1.18 1.09 1.02 1.04 1.23
Initial Bse: 6 1155 117 0 424 34 0 0 0 44 5 0
Added Vol: 0 1 0 0 3 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 6 1156 117 0 427 34 0 0 0 44 5 0
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 6 1179 119 0 436 34 0 0 0 45 5 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 6 1179 119 0 436 34 0 0 0 45 5 0

Critical Gap Module:
Critical Gap: 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.8 6.5 xxxxx
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 4.0 xxxxx

Capacity Module:
Conflict Vol: 470 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1470 1722 xxxxx
Potent Cap.: 1088 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 118 88 xxxxx
Move Cap.: 1088 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 118 88 xxxxx
Volume/Cap: 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.38 0.06 xxxxx

Level of Service Module:
2Way95thQ: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1.6 0.2 xxxxx
Control Del: 8.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 53.3 48.6 xxxxx
LOS by Move: A \* \* \* \* \* \* \* \* \* \* F E \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx 52.8
ApproachLOS: \* \* \* \* F

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1230 Sunset / Lake Merced  
\*\*\*\*\*

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: F[425.0]

Street Name: Sunset Lake Merced
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Ignore Ignore Ignore Ignore
Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 1 0 0

Volume Module:
Base Vol: 87 1279 0 0 1822 29 28 0 146 0 0 0
Growth Adj: 1.01 1.00 1.02 1.07 1.09 1.06 1.02 1.06 1.07 1.06 1.04 1.01
Initial Bse: 88 1279 0 0 1981 31 29 0 157 0 0 0
Added Vol: 0 468 0 0 247 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 88 1747 0 0 2228 31 29 0 157 0 0 0
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.00
PHF Volume: 90 1783 0 0 2273 0 29 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 90 1783 0 0 2273 0 29 0 0 0 0 0

Critical Gap Module:
Critical Gap: 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx 4.8 xxxxx 6.9 7.5 2.5 6.9
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx 3.3 3.5 4.0 3.3

Capacity Module:
Conflict Vol: 2273 xxxxx xxxxx xxxxx xxxxx xxxxx 3344 xxxxx 1137 3099 4235 891
Potent Cap.: 221 xxxxx xxxxx xxxxx xxxxx xxxxx 39 xxxxx 196 5 215 285
Move Cap.: 221 xxxxx xxxxx xxxxx xxxxx xxxxx 26 xxxxx 196 3 128 285
Volume/Cap: 0.41 xxxxx xxxxx xxxxx xxxxx xxxxx 1.10 xxxxx 0.00 0.00 0.00 0.00

Level of Service Module:
2Way95thQ: 1.8 xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: 32.0 xxxxx xxxxx xxxxx xxxxx xxxxx 425.0 xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: D \* \* \* \* \* \* \* \* \* \* F \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx
SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*
ApproachDel: xxxxxx xxxxxx 425.0 xxxxxx
ApproachLOS: \* \* \* \* F

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1240 Lake Merced / Winston

\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.805  
Loss Time (sec): 9 Average Delay (sec/veh): 96.8  
Optimal Cycle: 89 Level Of Service: F

\*\*\*\*\*

Street Name: Lake Merced Winston

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Protected Split Phase Split Phase

Rights: WideBypass Include Include Include

Min. Green: 34 34 34 17 55 55 0 0 0 25 25 25

Y+R: 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0

Lanes: 0 0 2 1 0 2 0 2 0 0 0 0 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 1384 215 218 1789 0 0 0 0 196 0 181

Growth Adj: 1.00 1.14 1.18 1.16 1.09 1.00 1.18 1.22 1.16 1.00 1.00 1.00

Initial Bse: 0 1573 254 252 1954 0 0 0 0 196 0 181

Added Vol: 0 393 266 116 131 0 0 0 0 139 0 74

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 1966 520 368 2085 0 0 0 0 335 0 255

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2006 530 376 2127 0 0 0 0 342 0 260

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2006 530 376 2127 0 0 0 0 342 0 260

PCE 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

MLF 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

FinalVolume: 0 2006 530 376 2127 0 0 0 0 342 0 260

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.86 0.86 0.90 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.83

Lanes: 0.00 2.37 0.63 2.00 2.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00

Final Sat.: 0 3896 1030 3432 3538 0 0 0 0 3432 0 1583

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Capacity Analysis Module:

Vol/Sat: 0.00 0.51 0.51 0.11 0.60 0.00 0.00 0.00 0.00 0.10 0.00 0.16

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.38 0.38 0.38 0.19 0.62 0.62 0.00 0.00 0.00 0.28 0.28 0.28

Volume/Cap: 0.00 1.34 1.34 0.56 0.97 0.00 0.00 0.00 0.00 0.36 0.00 0.59

Delay/Veh: 0.0 184 183.5 36.2 23.0 0.0 0.0 0.0 0.0 27.1 0.0 33.8

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 184 183.5 36.2 23.0 0.0 0.0 0.0 0.0 27.1 0.0 33.8

LOS by Move: A F F D C A A A A C A C

HCM2kAvgQ: 0 56 56 5 32 0 0 0 0 4 0 7

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1250 Lake Merced / Font

\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.400  
Loss Time (sec): 7 Average Delay (sec/veh): 160.6  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Lake Merced Font

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Protected Split Phase Split Phase

Rights: Ignore Include Include Include

Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22

Y+R: 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0

Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 1746 48 147 1549 0 0 0 0 43 0 304

Growth Adj: 1.09 1.14 1.07 1.05 1.09 1.07 1.07 1.01 1.05 1.07 1.04 1.09

Initial Bse: 0 1985 51 154 1692 0 0 0 0 46 0 331

Added Vol: 0 414 -9 124 178 0 0 0 0 -8 0 350

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 2399 42 278 1870 0 0 0 0 38 0 681

User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2447 0 284 1908 0 0 0 0 39 0 695

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2447 0 284 1908 0 0 0 0 39 0 695

PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 2447 0 284 1908 0 0 0 0 39 0 695

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83

Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

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Capacity Analysis Module:

Vol/Sat: 0.00 0.69 0.00 0.16 0.54 0.00 0.00 0.00 0.00 0.02 0.00 0.44

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24

Volume/Cap: 0.00 1.45 0.00 0.96 0.80 0.00 0.00 0.00 0.00 0.09 0.00 1.80

Delay/Veh: 0.0 224 0.0 81.0 6.3 0.0 0.0 0.0 0.0 26.7 0.0 402.2

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 224 0.0 81.0 6.3 0.0 0.0 0.0 0.0 26.7 0.0 402.2

LOS by Move: A F A F A A A A A C A F

HCM2kAvgQ: 0 82 0 12 12 0 0 0 0 1 0 58

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1261 Lake Merced / Vidal  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.925  
Loss Time (sec): 12 Average Delay (sec/veh): 45.2  
Optimal Cycle: 122 Level Of Service: D

Street Name: Lake Merced Vidal  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1899 29 19 1592 0 0 0 0 7 0 11  
Growth Adj: 1.00 1.14 1.11 1.09 1.09 1.00 1.00 1.00 1.00 1.10 1.00 1.12  
Initial Bse: 0 2165 32 21 1735 0 0 0 0 8 0 12  
Added Vol: 0 342 43 65 104 0 0 0 0 64 0 63  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2507 75 86 1839 0 0 0 0 72 0 75  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2558 77 87 1877 0 0 0 0 73 0 77  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2558 77 87 1877 0 0 0 0 73 0 77  
PCE 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  
MLF 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  
FinalVolume: 0 2558 77 87 1877 0 0 0 0 73 0 77

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.72 0.05 0.05 0.53 0.00 0.00 0.00 0.00 0.04 0.00 0.05  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.65 0.65 0.65 0.10 0.79 0.79 0.00 0.00 0.00 0.13 0.13 0.13  
Volume/Cap: 0.00 1.11 0.07 0.49 0.67 0.00 0.00 0.00 0.00 0.32 0.00 0.37  
Delay/Veh: 0.0 74.9 6.6 52.2 6.0 0.0 0.0 0.0 0.0 43.1 0.0 44.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 74.9 6.6 52.2 6.0 0.0 0.0 0.0 0.0 43.1 0.0 44.9  
LOS by Move: A E A D A A A A A D A D  
HCM2kAvgQ: 0 56 1 2 14 0 0 0 0 2 0 3

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1262 Lake Merced / Acevedo  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.962  
Loss Time (sec): 12 Average Delay (sec/veh): 43.3  
Optimal Cycle: 149 Level Of Service: D

Street Name: Lake Merced Acevedo  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 1913 17 10 1588 0 0 0 0 7 0 15  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.12 1.00  
Initial Bse: 0 2181 19 11 1731 0 0 0 0 8 0 15  
Added Vol: 0 299 25 35 133 0 0 0 0 63 0 87  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2480 44 46 1864 0 0 0 0 71 0 102  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2530 45 47 1902 0 0 0 0 72 0 104  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2530 45 47 1902 0 0 0 0 72 0 104  
PCE 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  
MLF 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  
FinalVolume: 0 2530 45 47 1902 0 0 0 0 72 0 104

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.88 1.00 0.88  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.41 0.00 0.59  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 687 0 992

Capacity Analysis Module:  
Vol/Sat: 0.00 0.72 0.03 0.03 0.54 0.00 0.00 0.00 0.00 0.10 0.00 0.10  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.65 0.65 0.65 0.10 0.79 0.79 0.00 0.00 0.00 0.13 0.13 0.13  
Volume/Cap: 0.00 1.10 0.04 0.26 0.68 0.00 0.00 0.00 0.00 0.81 0.00 0.81  
Delay/Veh: 0.0 70.1 6.4 45.2 6.1 0.0 0.0 0.0 0.0 68.8 0.0 68.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 70.1 6.4 45.2 6.1 0.0 0.0 0.0 0.0 68.8 0.0 68.8  
LOS by Move: A E A D A A A A A E A E  
HCM2kAvgQ: 0 55 0 1 15 0 0 0 0 8 0 8

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1263 Lake Merced / Higuera

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.994  
Loss Time (sec): 12 Average Delay (sec/veh): 37.9  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*

Street Name: Lake Merced Higuera

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Permitted Protected Split Phase Split Phase

Rights: Include Include Include Include

Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 1690 1 5 1590 0 0 0 0 25 0 24

Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.10 1.12

Initial Bse: 0 1921 1 5 1736 0 0 0 0 27 0 27

Added Vol: 0 184 2 17 179 0 0 0 0 233 0 140

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 2105 3 22 1915 0 0 0 0 260 0 167

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2148 3 23 1954 0 0 0 0 266 0 170

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2148 3 23 1954 0 0 0 0 266 0 170

PCE 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

MLF 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

FinalVolume: 0 2148 3 23 1954 0 0 0 0 266 0 170

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.90

Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.61 0.00 0.39

Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1042 0 668

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Capacity Analysis Module:

Vol/Sat: 0.00 0.61 0.00 0.01 0.55 0.00 0.00 0.00 0.00 0.25 0.00 0.25

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.63 0.63 0.63 0.10 0.75 0.75 0.00 0.00 0.00 0.17 0.17 0.17

Volume/Cap: 0.00 0.96 0.00 0.13 0.74 0.00 0.00 0.00 0.00 1.50 0.00 1.50

Delay/Veh: 0.0 20.9 3.4 42.5 1.9 0.0 0.0 0.0 0.0 283.4 0.0 283.4

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 20.9 3.4 42.5 1.9 0.0 0.0 0.0 0.0 283.4 0.0 283.4

LOS by Move: A C A D A A A A A F A F

HCM2kAvgQ: 0 29 0 1 3 0 0 0 0 33 0 33

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1264 Lake Merced / Gonzalez

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.036  
Loss Time (sec): 12 Average Delay (sec/veh): 47.1  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*

Street Name: Lake Merced Gonzalez

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Include Include

Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 1899 97 6 1609 0 0 0 0 39 0 9

Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.10 1.12

Initial Bse: 0 2165 108 7 1754 0 0 0 0 43 0 10

Added Vol: 0 136 145 21 391 0 0 0 0 360 0 51

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 2301 253 28 2145 0 0 0 0 403 0 61

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2348 258 28 2189 0 0 0 0 411 0 62

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2348 258 28 2189 0 0 0 0 411 0 62

PCE 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

MLF 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

FinalVolume: 0 2348 258 28 2189 0 0 0 0 411 0 62

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83

Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1769 0 1583

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Capacity Analysis Module:

Vol/Sat: 0.00 0.66 0.16 0.02 0.62 0.00 0.00 0.00 0.00 0.23 0.00 0.04

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.63 0.63 0.63 0.10 0.75 0.75 0.00 0.00 0.00 0.17 0.17 0.17

Volume/Cap: 0.00 1.05 0.26 0.16 0.82 0.00 0.00 0.00 0.00 1.37 0.00 0.23

Delay/Veh: 0.0 53.5 8.8 43.1 11.3 0.0 0.0 0.0 0.0 226.6 0.0 37.9

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 53.5 8.8 43.1 11.3 0.0 0.0 0.0 0.0 226.6 0.0 37.9

LOS by Move: A D A D B A A A A F A D

HCM2kAvgQ: 0 44 3 1 25 0 0 0 0 28 0 2

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 1.784  
Loss Time (sec): 15 Average Delay (sec/veh): 122.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
	North Bound		South Bound		East Bound		West Bound								
Approach:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Protected		Protected								
Rights:	Ovl		Include		Include		Ovl								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	2

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Volume Module:

Base Vol:	0	416	209	1478	225	0	0	0	0	139	0	1483
Growth Adj:	1.13	1.14	1.29	1.26	1.09	1.11	1.29	1.44	1.26	1.11	1.12	1.13
Initial Bse:	0	473	269	1868	246	0	0	0	0	154	0	1674
Added Vol:	0	117	-18	477	274	0	0	0	0	-16	0	164
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	590	251	2345	520	0	0	0	0	138	0	1838
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	602	256	2393	0	0	0	0	0	141	0	1875
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	602	256	2393	0	0	0	0	0	141	0	1875
PCE 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
MLF 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
FinalVolume:	0	602	256	2393	0	0	0	0	0	141	0	1875

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Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	2786

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Capacity Analysis Module:

Vol/Sat:	0.00	0.17	0.16	0.70	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.67
Crit Moves:	****			****								****
Green/Cycle:	0.16	0.16	0.43	0.48	0.69	0.69	0.00	0.00	0.00	0.22	0.22	0.75
Volume/Cap:	0.00	1.04	0.38	1.45	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.90
Delay/Veh:	0.0	94.2	18.9	227.4	0.0	0.0	0.0	0.0	0.0	37.1	0.0	16.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	94.2	18.9	227.4	0.0	0.0	0.0	0.0	0.0	37.1	0.0	16.9
LOS by Move:	A	F	B	F	A	A	A	A	A	D	A	B
HCM2kAvgQ:	0	17	5	86	0	0	0	0	0	4	0	32

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

Tier 4A Conditions  
Weekday PM Peak Hour



19th Ave CS  
 Tier 4a

 Impact Analysis Report  
 Level Of Service

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
#1010 Claremont / Taraval / Dewey /	A	7.1	0.653	7.4	0.672	+ 0.020	V/C
#1020 Santa Clara / Portola / Vicent	C	30.5	0.841	39.0	0.936	+ 8.525	D/V
#1030 Junipero Serra / Sloat / West	F	101.4	1.113	117.2	1.170	+15.817	D/V
#1040 Junipero Serra / Ocean / Eucal	D	39.7	0.820	70.2	1.063	+30.533	D/V
#1050 Junipero Serra / Winston / Mer	C	30.4	0.678	49.3	1.062	+18.865	D/V
#1060 Junipero Serra / Holloway	C	30.4	0.692	37.4	0.724	+ 7.049	D/V
#1070 Junipero Serra / 19th	E	65.4	1.026	102.0	1.081	+36.576	D/V
#1075 Junipero Serra / Chumasero	A	9.4	0.926	32.0	1.073	+22.659	D/V
#1080 Junipero Serra / I-280 NB On-R	F	129.3	1.294	151.8	1.400	+22.595	D/V
#1090 Junipero Serra / I-280 SB On-R	D	49.9	1.054	89.9	1.172	+40.016	D/V
#1100 19th / Taraval	B	19.4	0.839	24.0	0.883	+ 4.578	D/V
#1110 19th / Sloat	F	127.7	1.550	154.7	1.630	+26.999	D/V
#1120 19th / Ocean	F	146.9	1.568	180.5	1.633	+33.636	D/V
#1130 19th / Eucalyptus	E	69.7	1.079	86.4	1.180	+16.707	D/V
#1140 19th / Winston	F	97.7	1.325	207.7	1.699	+109.967	D/
#1150 19th / Buckingham	F	408.9	1.759	604.0	2.196	+195.131	D/
#1160 19th / Holloway	B	16.9	0.866	120.8	1.027	+103.936	D/
#1170 19th / Crespi	D	52.6	0.814	74.7	0.807	+22.076	D/V
#1181 Chumasero / Brotherhood	B	15.8	0.720	85.3	0.934	+69.466	D/V
#1182 Thomas More / brotherhood	D	44.8	0.462	21.9	0.572	-22.940	D/
#1190 Sunset / Taraval	D	49.8	0.843	125.6	0.960	+75.784	D/V
#1200 Sunset / Ocean	B	13.3	0.687	30.5	0.827	+17.163	D/V
#1210 Skyline / Sloat / 39th	D	27.0	0.908	29.4	0.925	+ 0.017	V/C
#1221 Skyline / Lake Merced (WBR)	C	17.4	0.416	17.5	0.417	+ 0.048	D/V

 19th Ave CS  
 Tier 4a

Intersection		Base		Future		Change in	
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C		
#1222 Skyline / Lake Merced (WBLT)	F	116.8	0.894	118.6	0.900	+ 1.760	D/V
#1230 Sunset / Lake Merced	F	OVRFL	1.328	OVRFL	2.491	Nan	D/V
#1240 Lake Merced / Winston	E	66.6	0.971	188.9	1.372	+122.395	D/
#1250 Lake Merced / Font	D	46.9	0.783	179.5	1.546	+132.611	D/
#1261 Lake Merced / Vidal	C	32.9	0.687	36.0	0.887	+ 3.143	D/V
#1262 Lake Merced / Acevedo	C	32.4	0.705	34.6	0.959	+ 2.213	D/V
#1263 Lake Merced / Higuera	E	77.3	0.741	45.4	1.135	-31.909	D/
#1264 Lake Merced / Gonzalez	D	42.2	0.715	52.4	1.032	+10.190	D/V
#1270 Lake Merced / Brotherhood	E	68.7	1.689	186.0	2.199	+117.295	D/

19th Ave CS  
Tier 4a

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 7.4 Level Of Service: A  
\*\*\*\*\*

Street Name: Claremont Taraval / Dewey  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Yield Sign Yield Sign Yield Sign Yield Sign  
Lanes: 1 1 1 1

Volume Module:  
Base Vol: 17 24 239 50 63 5 10 259 55 324 338 31  
Growth Adj: 1.09 1.10 1.07 1.06 1.09 1.08 1.07 1.04 1.06 1.08 1.08 1.09  
Initial Bse: 18 26 255 53 69 5 11 269 59 351 364 34  
Added Vol: 1 0 16 0 0 0 0 0 0 22 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 19 26 271 53 69 5 11 269 59 373 364 34  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 20 27 277 54 70 6 11 275 60 381 371 34  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 20 27 277 54 70 6 11 275 60 381 371 34  
PCE 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  
MLF 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  
FinalVolume: 20 27 277 54 70 6 11 275 60 381 371 34

PCE Module:  
AutoPCE: 20 27 277 54 70 6 11 275 60 381 371 34  
TruckPCE: 0 0 0 0 0 0 0 0 0 0 0 0  
ComboPCE: 0 0 0 0 0 0 0 0 0 0 0 0  
BicyclePCE: 0 0 0 0 0 0 0 0 0 0 0 0  
AdjVolume: 20 27 277 54 70 6 11 275 60 381 371 34

Delay Module: >> Time Period: 0.25 hours <<  
CircVolume: 340 771 505 58  
MaxVolume: 1016 783 927 1169  
PedVolume: 0 0 0 0  
AdjMaxVol: 1016 783 927 1169  
ApproachVol: 324 130 345 786  
ApproachV/C: 0.32 0.17 0.37 0.67  
ApproachDel: 5.2 5.5 6.2 9.2  
ApproachLOS: A A A A  
Queue: 1.4 0.6 1.7 5.5

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.936  
Loss Time (sec): 11 Average Delay (sec/veh): 39.0  
Optimal Cycle: 111 Level Of Service: D  
\*\*\*\*\*

Street Name: Santa Clara / Vicente Portola  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 23 23 23 23 23 23 9 36 36 9 36 36  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module:  
Base Vol: 22 273 85 86 191 48 48 1051 33 147 987 108  
Growth Adj: 1.03 1.00 1.03 1.07 1.03 1.07 1.03 1.10 1.07 1.07 1.10 1.03  
Initial Bse: 23 273 88 92 198 51 50 1155 35 157 1087 112  
Added Vol: 0 0 0 15 0 4 0 147 0 0 246 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 23 273 88 107 198 55 50 1302 35 157 1333 112  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 23 279 90 109 202 56 51 1329 36 160 1360 114  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 23 279 90 109 202 56 51 1329 36 160 1360 114  
PCE 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  
MLF 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  
FinalVolume: 23 279 90 109 202 56 51 1329 36 160 1360 114

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.92 0.92 0.59 0.59 0.59 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.06 0.71 0.23 0.30 0.55 0.15 1.00 1.95 0.05 1.00 1.85 0.15  
Final Sat.: 104 1246 401 331 612 171 1769 3431 93 1769 3225 270

Capacity Analysis Module:  
Vol/Sat: 0.22 0.22 0.22 0.33 0.33 0.33 0.03 0.39 0.39 0.09 0.42 0.42  
Crit Moves: \*\*\*\* \*\*

Green/Cycle: 0.30 0.30 0.30 0.30 0.30 0.30 0.11 0.45 0.45 0.11 0.45 0.45  
Volume/Cap: 0.75 0.75 0.75 1.10 1.10 1.10 0.25 0.86 0.86 0.80 0.94 0.94  
Delay/Veh: 34.5 34.5 34.5 106.1 106 106.1 35.5 26.1 26.1 62.9 32.9 32.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 34.5 34.5 34.5 106.1 106 106.1 35.5 26.1 26.1 62.9 32.9 32.9  
LOS by Move: C C C F F F D C C E C C  
HCM2kAvgQ: 10 10 10 17 17 17 1 19 19 6 24 24

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*



19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.170  
Loss Time (sec): 16 Average Delay (sec/veh): 117.2  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 53 53 32 32 32 15 15 15 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 1027 1005 60 0 1045 261 852 420 471 20 405 10  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 1162 1121 66 0 1232 303 937 455 533 23 464 11  
Added Vol: 33 120 0 0 209 0 2 0 29 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1195 1241 66 0 1441 303 939 455 562 23 464 11  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1219 1266 67 0 1470 310 958 464 0 24 474 12  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1219 1266 67 0 1470 310 958 464 0 24 474 12  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1219 1266 67 0 1470 310 958 464 0 24 474 12

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3 0 1 1 0 0 0 2 4 8 0 5 2 3 0 0 1 0 0 0 0 5  
Final Sat.: 5096 3302 176 0 4130 870 5096 1843 1900 164 3276 80

Capacity Analysis Module:

Vol/Sat: 0.24 0.38 0.38 0.00 0.36 0.36 0.19 0.25 0.00 0.14 0.14 0.14  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.17 0.48 0.48 0.00 0.30 0.30 0.18 0.18 0.00 0.19 0.19 0.19  
Volume/Cap: 1.39 0.80 0.80 0.00 1.17 1.17 1.04 1.39 0.00 0.76 0.76 0.76  
Delay/Veh: 227.4 23.0 23.0 0.0 119 118.7 83.6 238 0.0 48.1 48.1 48.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 227.4 23.0 23.0 0.0 119 118.7 83.6 238 0.0 48.1 48.1 48.1  
LOS by Move: F C C A F F F F A D D D  
HCM2kAvgQ: 28 17 17 0 36 36 17 33 0 10 10 10

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.063  
Loss Time (sec): 14 Average Delay (sec/veh): 70.2  
Optimal Cycle: 180 Level Of Service: E

\*\*\*\*\*  
Street Name: Junipero Serra Ocean / Eucalyptus  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:

Base Vol: 176 1567 35 356 1065 96 140 356 58 77 332 333  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 199 1748 38 403 1255 112 154 386 66 90 381 377  
Added Vol: 0 107 43 35 194 9 12 91 0 25 66 34  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 199 1855 81 438 1449 121 166 477 66 115 447 411  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 203 1893 83 446 1479 123 169 486 67 117 456 419  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 203 1893 83 446 1479 123 169 486 67 117 456 419  
PCE 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  
MLF 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  
FinalVolume: 203 1893 83 446 1479 123 169 486 67 117 456 419

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.97 0.88 0.90 0.88 0.88 0.63 0.63 0.83 0.63 0.63 0.83  
Lanes: 1 0 2 8 6 0 2 3 0 5 2 1 4 8 1 0 0 2 0 8 0 1 0 0  
Final Sat.: 1751 5249 231 3432 4636 386 616 1770 1583 244 951 1583

Capacity Analysis Module:

Vol/Sat: 0.12 0.36 0.36 0.13 0.32 0.32 0.27 0.27 0.04 0.48 0.48 0.26  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 1.05 0.84 0.84 0.81 0.66 0.66 1.02 1.02 0.11 1.77 1.77 0.62  
Delay/Veh: 124.5 25.6 25.6 53.0 17.3 17.3 76.5 76.5 20.4 397.3 397 26.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 124.5 25.6 25.6 53.0 17.3 17.3 76.5 76.5 20.4 397.3 397 26.2  
LOS by Move: F C C D B B E E C F F C  
HCM2kAvgQ: 8 18 17 6 10 10 17 17 1 49 49 11

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.062  
Loss Time (sec): 14 Average Delay (sec/veh): 49.3  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Winston / Mercedes  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 224 1516 52 85 1130 117 169 152 81 74 103 36  
Growth Adj: 1.05 1.12 1.11 1.15 1.18 1.08 1.11 1.11 1.15 1.08 1.00 1.05  
Initial Bse: 236 1691 58 97 1332 127 188 169 93 80 103 38  
Added Vol: 73 15 2 1 62 156 135 157 48 1 133 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 309 1706 60 98 1394 283 323 326 141 81 236 38  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 315 1741 61 100 1422 289 330 333 144 83 241 39  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 315 1741 61 100 1422 289 330 333 144 83 241 39  
PCE 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  
MLF 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  
FinalVolume: 315 1741 61 100 1422 289 330 333 144 83 241 39

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.87 0.87 0.44 0.98 0.83 0.30 0.98 0.83  
Lanes: 1.00 2.90 0.10 1.00 2.49 0.51 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4886 172 1769 4120 836 845 1862 1583 579 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.18 0.36 0.36 0.06 0.35 0.35 0.39 0.18 0.09 0.14 0.13 0.02  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.94 0.89 0.89 0.30 0.86 0.86 1.45 0.66 0.34 0.53 0.48 0.09  
Delay/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7  
LOS by Move: E C C D C C F D C D C C  
HCM2kAvgQ: 10 18 18 2 18 18 22 8 3 3 7 1

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724  
Loss Time (sec): 14 Average Delay (sec/veh): 37.4  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 183 1398 101 176 1001 104 117 140 23 143 96 107  
Growth Adj: 1.11 1.12 1.08 1.11 1.18 1.14 1.08 1.04 1.11 1.14 1.10 1.11  
Initial Bse: 202 1559 109 195 1180 118 126 145 25 163 105 118  
Added Vol: 151 60 1 31 39 41 7 -21 0 1 0 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 353 1619 110 226 1219 159 133 124 25 164 105 141  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 360 1652 112 230 1244 162 136 126 26 167 107 144  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 360 1652 112 230 1244 162 136 126 26 167 107 144  
PCE 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  
MLF 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  
FinalVolume: 360 1652 112 230 1244 162 136 126 26 167 107 144

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.88 0.88 0.93 0.88 0.88 0.67 0.98 0.83 0.64 0.98 0.83  
Lanes: 1.00 2.81 0.19 1.00 2.65 0.35 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4718 319 1769 4419 577 1275 1862 1583 1218 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.20 0.35 0.35 0.13 0.28 0.28 0.11 0.07 0.02 0.14 0.06 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 1.07 0.90 0.90 0.69 0.72 0.72 0.38 0.24 0.06 0.49 0.21 0.33  
Delay/Veh: 110.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 110.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5  
LOS by Move: F C C D C C C C C C C C  
HCM2kAvgQ: 14 17 17 6 12 12 4 3 1 5 3 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1070 Junipero Serra / 19th

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 1.081  
Loss Time (sec): 0 Average Delay (sec/veh): 102.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Junipero Serra 19th

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Split Phase Split Phase Permitted Permitted

Rights: Ignore Ignore Ovl Include

Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 3 0 1 1 0 0 0 4 0 1 0 0 1 0 3 0 0 0 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 2410 1660 25 0 1178 17 0 123 3060 0 47 50

Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09

Initial Bse: 2621 1851 27 0 1388 19 0 124 3346 0 50 54

Added Vol: 98 186 2 0 41 0 0 37 199 0 1 26

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 2719 2037 29 0 1429 19 0 161 3545 0 51 80

User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 2775 2079 0 0 1458 0 0 164 3617 0 52 82

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 2775 2079 0 0 1458 0 0 164 3617 0 52 82

PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 2775 2079 0 0 1458 0 0 164 3617 0 52 82

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.90 0.93 0.95 1.00 0.89 1.00 1.00 0.98 0.73 1.00 0.90 0.90

Lanes: 3.00 2.00 0.00 0.00 4.00 1.00 0.00 1.00 3.00 0.00 0.39 0.61

Final Sat.: 5147 3538 0 0 6778 1900 0 1862 4178 0 661 1046

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Capacity Analysis Module:

Vol/Sat: 0.54 0.59 0.00 0.00 0.22 0.00 0.00 0.09 0.87 0.00 0.08 0.08

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.50 0.50 0.50 0.20 0.20 0.20 0.14 0.14 0.68 0.14 0.14 0.14

Volume/Cap: 1.08 1.18 0.00 0.00 1.08 0.00 0.00 0.63 1.27 0.00 0.56 0.56

Delay/Veh: 66.0 108 0.0 0.0 95.7 0.0 0.0 59.7 132.2 0.0 57.3 57.3

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 66.0 108 0.0 0.0 95.7 0.0 0.0 59.7 132.2 0.0 57.3 57.3

LOS by Move: E F A A F A A E F A E E

HCM2kAvgQ: 46 61 0 0 20 0 0 7 87 0 5 5

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1075 Junipero Serra / Chumasero

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.073  
Loss Time (sec): 10 Average Delay (sec/veh): 32.0  
Optimal Cycle: 180 Level Of Service: C

\*\*\*\*\*

Street Name: Junipero Serra Chumasero

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Ovl Include

Min. Green: 10 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 4 0 0 0 0 3 1 0 0 0 0 0 1 0 0 0 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 120 4095 0 0 4238 31 0 0 125 0 0 0

Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.00 1.00 1.05 1.00 1.00 1.00

Initial Bse: 131 4567 0 0 4994 35 0 0 131 0 0 0

Added Vol: 167 286 0 0 234 5 0 0 131 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 298 4853 0 0 5228 40 0 0 262 0 0 0

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 304 4952 0 0 5335 41 0 0 268 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 304 4952 0 0 5335 41 0 0 268 0 0 0

PCE 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

MLF 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

FinalVolume: 304 4952 0 0 5335 41 0 0 268 0 0 0

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.93 0.89 1.00 1.00 0.89 0.89 1.00 1.00 0.85 1.00 1.00 1.00

Lanes: 1.00 4.00 0.00 0.00 3.97 0.03 0.00 0.00 1.00 0.00 0.00 0.00

Final Sat.: 1769 6778 0 0 6720 51 0 0 1611 0 0 0

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.17 0.73 0.00 0.00 0.79 0.79 0.00 0.00 0.17 0.00 0.00 0.00

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.16 0.90 0.00 0.00 0.74 0.74 0.00 0.00 0.16 0.00 0.00 0.00

Volume/Cap: 1.07 0.81 0.00 0.00 1.07 1.07 0.00 0.00 1.04 0.00 0.00 0.00

Delay/Veh: 116.2 2.7 0.0 0.0 50.4 50.4 0.0 0.0 108.5 0.0 0.0 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 116.2 2.7 0.0 0.0 50.4 50.4 0.0 0.0 108.5 0.0 0.0 0.0

LOS by Move: F A A A D D A A F A A A

HCM2kAvgQ: 16 18 0 0 55 55 0 0 14 0 0 0

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*  
Cycle (sec): 125 Critical Vol./Cap.(X): 1.400  
Loss Time (sec): 12 Average Delay (sec/veh): 151.8  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Ovl Include Ovl  
Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

Volume Module:  
Base Vol: 621 381 328 210 383 857 667 495 160 122 895 232  
Growth Adj: 1.19 1.13 1.11 1.28 1.47 1.36 1.11 1.09 1.28 1.36 1.25 1.19  
Initial Bse: 739 429 363 268 562 1167 738 537 204 166 1122 276  
Added Vol: 283 55 0 0 0 0 -1 18 187 0 0 16  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1022 484 363 268 562 1167 737 555 391 166 1122 292  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 1043 494 370 274 574 1190 752 567 399 169 1145 298  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1043 494 370 274 574 1190 752 567 399 169 1145 298  
PCE 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  
MLF 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  
Final Volume: 1043 494 370 274 574 1190 752 567 399 169 1145 298

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.87 0.87 0.93 0.88 0.88 0.85 0.88 0.88 0.89 0.89 0.83  
Lanes: 2.00 1.71 1.29 1.00 0.65 1.35 2.22 1.63 1.15 1.00 3.00 1.00  
Final Sat.: 3432 2840 2128 1769 1089 2259 3608 2720 1916 1684 5053 1583

Capacity Analysis Module:  
Vol/Sat: 0.30 0.17 0.17 0.15 0.53 0.53 0.21 0.21 0.21 0.10 0.23 0.19  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.19 0.19 0.33 0.33 0.33 0.57 0.25 0.25 0.25 0.14 0.14 0.47  
Volume/Cap: 1.61 0.92 0.53 0.47 1.61 0.92 0.84 0.84 0.84 0.72 1.61 0.40  
Delay/Veh: 333.3 64.1 34.4 34.1 322 31.3 47.9 47.9 47.9 52.7 335 22.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 333.3 64.1 34.4 34.1 322 31.3 47.9 47.9 47.9 52.7 335 22.2  
LOS by Move: F E C C F C D D D D F C  
HCM2kAvgQ: 47 15 10 8 75 34 12 12 12 8 37 7

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*  
Cycle (sec): 120 Critical Vol./Cap.(X): 1.172  
Loss Time (sec): 8 Average Delay (sec/veh): 89.9  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 2 0 0 0 0 0 0 0 2 1 0 2 0 2 0 0

Volume Module:  
Base Vol: 0 0 350 0 0 0 0 972 427 722 1966 0  
Growth Adj: 1.05 1.00 1.04 1.32 1.55 1.33 1.04 1.09 1.32 1.33 1.10 1.05  
Initial Bse: 0 0 365 0 0 0 0 1058 563 958 2172 0  
Added Vol: 0 0 34 0 0 0 0 171 36 0 283 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 399 0 0 0 0 1229 599 958 2455 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 408 0 0 0 0 1254 611 977 2505 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 408 0 0 0 0 1254 611 977 2505 0  
PCE 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  
MLF 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  
Final Volume: 0 0 408 0 0 0 0 1254 611 977 2505 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.85 0.85 0.90 0.93 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.02 0.98 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3250 1584 3432 3538 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.15 0.00 0.00 0.00 0.00 0.39 0.39 0.28 0.71 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.00 0.60 0.00 0.00 0.00 0.00 0.33 0.33 0.60 0.60 0.00  
Volume/Cap: 0.00 0.00 0.24 0.00 0.00 0.00 0.00 1.17 1.17 0.47 1.17 0.00  
Delay/Veh: 0.0 0.0 11.1 0.0 0.0 0.0 0.0 125 124.8 13.3 107 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 11.1 0.0 0.0 0.0 0.0 125 124.8 13.3 107 0.0  
LOS by Move: A A B A A A A F F B F A  
HCM2kAvgQ: 0 0 4 0 0 0 0 40 40 9 69 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.883  
Loss Time (sec): 10 Average Delay (sec/veh): 24.0  
Optimal Cycle: 99 Level Of Service: C

\*\*\*\*\*  
Street Name: 19th Taraval  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.630  
Loss Time (sec): 9 Average Delay (sec/veh): 154.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Sloat  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1120 19th / Ocean

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.633  
Loss Time (sec): 9 Average Delay (sec/veh): 180.5  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: 19th Ocean

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 64 64 64 64 64 64 26 26 26 26 26 26

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 2340 47 0 2579 164 64 293 25 25 271 127

Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13

Initial Bse: 0 2610 52 0 3039 191 70 317 28 29 311 144

Added Vol: 0 166 0 0 170 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 2776 52 0 3209 191 70 317 28 29 311 144

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2832 53 0 3275 195 72 324 29 30 317 147

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2832 53 0 3275 195 72 324 29 30 317 147

PCE 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

MLF 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

FinalVolume: 0 2832 53 0 3275 195 72 324 29 30 317 147

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.44 0.89 1.00 0.88 0.88 0.89 0.97 0.97 0.73 0.73 0.73

Lanes: 0.00 2.97 0.03 0.00 2.83 0.17 1.00 0.92 0.08 0.06 0.64 0.30

Final Sat.: 0 2511 47 0 4760 283 1687 1689 150 83 886 409

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.00 1.13 1.13 0.00 0.69 0.69 0.04 0.19 0.19 0.36 0.36 0.36

Crit Moves: \*\*\*\*

Green/Cycle: 0.64 0.64 0.64 0.64 0.64 0.64 0.27 0.27 0.27 0.27 0.27 0.27

Volume/Cap: 0.00 1.76 1.76 0.00 1.08 1.08 0.16 0.72 0.72 1.35 1.35 1.35

Delay/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8

LOS by Move: A F F A D D C D D F F F

HCM2kAvgQ: 0 86 172 0 48 48 2 11 11 33 33 33

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1130 19th / Eucalyptus

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.180  
Loss Time (sec): 9 Average Delay (sec/veh): 86.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: 19th Eucalyptus

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 66 66 66 66 66 66 25 25 25 25 25 25

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 0 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 2277 26 0 2555 114 170 169 54 9 167 17

Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13

Initial Bse: 0 2540 29 0 3011 133 187 183 61 10 192 19

Added Vol: 0 121 18 0 137 33 45 84 0 13 62 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 2661 47 0 3148 166 232 267 61 23 254 19

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2715 48 0 3212 169 237 273 62 24 259 20

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2715 48 0 3212 169 237 273 62 24 259 20

PCE 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

MLF 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

FinalVolume: 0 2715 48 0 3212 169 237 273 62 24 259 20

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.53 0.89 1.00 0.89 0.89 0.64 0.64 0.64 0.93 0.93 0.93

Lanes: 0.00 2.97 0.03 0.00 2.85 0.15 1.24 1.43 0.33 0.08 0.86 0.06

Final Sat.: 0 3009 53 0 4795 252 1511 1741 398 139 1505 114

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.00 0.90 0.90 0.00 0.67 0.67 0.16 0.16 0.16 0.17 0.17 0.17

Crit Moves: \*\*\*\*

Green/Cycle: 0.66 0.66 0.66 0.66 0.66 0.66 0.26 0.26 0.26 0.26 0.26 0.26

Volume/Cap: 0.00 1.37 1.37 0.00 1.01 1.01 0.61 0.61 0.61 0.67 0.67 0.67

Delay/Veh: 0.0 175 175.3 0.0 26.3 26.3 35.9 35.9 35.9 41.4 41.4 41.4

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 175 175.3 0.0 26.3 26.3 35.9 35.9 35.9 41.4 41.4 41.4

LOS by Move: A F F A C C D D D D D D

HCM2kAvgQ: 0 65 106 0 40 40 6 6 6 9 9 9

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.027  
Loss Time (sec): 0 Average Delay (sec/veh): 120.8  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 59 59 0 59 59 32 32 32 32 32 32  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0

Volume Module:

Base Vol: 0 2489 143 0 3047 145 88 167 88 45 296 41  
Growth Adj: 1.23 1.12 1.15 1.18 1.18 1.27 1.15 1.19 1.18 1.27 1.35 1.23  
Initial Bse: 0 2776 165 0 3591 184 101 199 104 57 401 51  
Added Vol: 0 47 -35 0 165 66 60 22 54 73 117 1  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2823 130 0 3756 250 161 221 158 130 518 52  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2881 132 0 3833 255 165 225 161 133 528 53  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2881 132 0 3833 255 165 225 161 133 528 53  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2881 132 0 3833 255 165 225 161 133 528 53

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.89 1.00 0.94 0.83 0.49 0.49 0.49 0.61 0.61 0.61  
Lanes: 0.00 2.86 0.14 0.00 3.00 1.00 0.60 0.82 0.58 0.37 1.48 0.15  
Final Sat.: 0 5056 233 0 5337 1583 560 765 549 429 1710 170

Capacity Analysis Module:

Vol/Sat: 0.00 0.57 0.57 0.00 0.72 0.16 0.29 0.29 0.29 0.31 0.31 0.31  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.52 0.52 0.52 0.52 0.52 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 1.10 1.10 0.00 1.38 0.31 0.92 0.92 0.92 0.97 0.97  
Delay/Veh: 0.0 67.2 67.2 0.0 191 11.1 54.3 54.3 54.3 59.2 59.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 67.2 67.2 0.0 191 11.1 54.3 54.3 54.3 59.2 59.2  
LOS by Move: A E E A F B D D D E E E  
HCM2kAvgQ: 0 44 42 0 88 3 12 12 12 16 16 16

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.807  
Loss Time (sec): 0 Average Delay (sec/veh): 74.7  
Optimal Cycle: 96 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Crespi  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Ignore Include  
Min. Green: 59 59 0 0 64 64 21 0 21 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 0 0 0 2 1 0 1 0 0 0 0 0

Volume Module:

Base Vol: 0 2485 0 0 3081 99 147 0 97 0 0 0  
Growth Adj: 1.15 1.12 1.00 1.00 1.18 1.18 1.00 1.00 1.00 1.18 1.19 1.15  
Initial Bse: 0 2772 0 0 3631 117 147 0 97 0 0 0  
Added Vol: 0 99 0 0 219 74 -88 0 17 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2871 0 0 3850 191 59 0 114 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 0 2929 0 0 3929 0 60 0 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2929 0 0 3929 0 60 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 0 2929 0 0 3929 0 60 0 0 0 0 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 0.91 0.93 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.00 3.00 0.00 0.00 3.00 0.00 1.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 0 5083 0 0 5083 0 1769 0 1900 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.58 0.00 0.00 0.77 0.00 0.03 0.00 0.00 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.51 0.51 0.51 0.69 0.69 0.69 0.28 0.28 0.28 0.00 0.00 0.00  
Volume/Cap: 0.00 1.13 0.00 0.00 1.13 0.00 0.12 0.00 0.00 0.00 0.00 0.00  
Delay/Veh: 0.0 85.1 0.0 0.0 67.5 0.0 33.1 0.0 0.0 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 85.1 0.0 0.0 67.5 0.0 33.1 0.0 0.0 0.0 0.0 0.0  
LOS by Move: A F A A E A C A A A A A  
HCM2kAvgQ: 0 57 0 0 70 0 2 0 0 0 0 0

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumaseo / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.934  
Loss Time (sec): 8 Average Delay (sec/veh): 85.3  
Optimal Cycle: 123 Level Of Service: F

Street Name: Chumaseo Brotherhood  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Protected Protected  
Rights: Include Include Include Include  
Min. Green: 0 0 0 15 15 15 20 48 48 20 48 48  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 0 1 0 2 1 0

Volume Module:  
Base Vol: 0 0 0 79 0 12 39 1471 0 0 1625 121  
Growth Adj: 1.28 1.00 1.08 1.27 1.38 1.47 1.08 1.16 1.27 1.47 1.57 1.28  
Initial Bse: 0 0 0 100 0 18 42 1710 0 0 2550 155  
Added Vol: 0 0 0 62 0 -11 -23 442 0 0 657 180  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 162 0 7 19 2152 0 0 3207 335  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 166 0 7 19 2196 0 0 3273 342  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 166 0 7 19 2196 0 0 3273 342  
PCE 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  
MLF 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  
FinalVolume: 0 0 0 166 0 7 19 2196 0 0 3273 342

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.80 0.80 1.00 0.71 0.75 0.71 0.93 0.93 1.00 1.00 0.88 0.88  
Lanes: 0.00 1.00 0.00 0.96 0.00 0.04 1.00 2.00 0.00 1.00 2.72 0.28  
Final Sat.: 0 1520 0 1299 0 54 1769 3538 0 1900 4538 474

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.13 0.00 0.13 0.01 0.62 0.00 0.00 0.72 0.72  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.15 0.00 0.15 0.20 0.77 0.00 0.00 0.57 0.57  
Volume/Cap: 0.00 0.00 0.00 0.85 0.00 0.85 0.05 0.81 0.00 0.00 1.27 1.27  
Delay/Veh: 0.0 0.0 0.0 80.0 0.0 80.0 32.6 2.7 0.0 0.0 136 136.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 80.0 0.0 80.0 32.6 2.7 0.0 0.0 136 136.1  
LOS by Move: A A A F A F C A A A F F  
HCM2kAvgQ: 0 0 0 8 0 8 0 4 0 0 73 73

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1182 Thomas More / brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.572  
Loss Time (sec): 8 Average Delay (sec/veh): 21.9  
Optimal Cycle: 97 Level Of Service: C

Street Name: Thomas More Brotherhood  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 0 0 0 21 48 48 21 48 48  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 2 1 0 1 0 3 0 0

Volume Module:  
Base Vol: 17 0 32 0 0 0 0 1535 15 33 1609 0  
Growth Adj: 1.28 1.00 1.08 1.27 1.38 1.47 1.08 1.16 1.27 1.47 1.57 1.28  
Initial Bse: 22 0 34 0 0 0 0 1785 19 49 2525 0  
Added Vol: 0 0 0 0 0 0 0 504 0 0 837 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 22 0 34 0 0 0 0 2289 19 49 3362 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 22 0 35 0 0 0 0 2335 19 50 3431 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 22 0 35 0 0 0 0 2335 19 50 3431 0  
PCE 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  
MLF 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  
FinalVolume: 22 0 35 0 0 0 0 2335 19 50 3431 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 1.00 0.88 1.00 1.00 1.00 1.00 0.89 0.89 0.93 0.89 1.00  
Lanes: 0.39 0.00 0.61 0.00 0.00 0.00 0.00 2.98 0.02 1.00 3.00 0.00  
Final Sat.: 648 0 1027 0 0 0 0 5036 42 1769 5083 0

Capacity Analysis Module:  
Vol/Sat: 0.03 0.00 0.03 0.00 0.00 0.00 0.00 0.46 0.46 0.03 0.67 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.20 0.00 0.20 0.00 0.00 0.00 0.00 0.51 0.51 0.21 0.72 0.00  
Volume/Cap: 0.17 0.00 0.17 0.00 0.00 0.00 0.00 0.91 0.91 0.13 0.94 0.00  
Delay/Veh: 33.4 0.0 33.4 0.0 0.0 0.0 0.0 27.7 27.7 32.3 17.6 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 33.4 0.0 33.4 0.0 0.0 0.0 0.0 27.7 27.7 32.3 17.6 0.0  
LOS by Move: C A C A A A A C C C B A  
HCM2kAvgQ: 2 0 2 0 0 0 0 25 25 1 38 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.960  
Loss Time (sec): 10 Average Delay (sec/veh): 125.6  
Optimal Cycle: 100 Level Of Service: F

\*\*\*\*\*  
Street Name: Sunset Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

Volume Module:  
Base Vol: 0 2129 96 0 1790 117 70 238 37 76 243 30  
Growth Adj: 1.14 1.20 1.12 1.15 1.26 1.17 1.12 1.04 1.15 1.17 1.08 1.14  
Initial Bse: 0 2553 108 0 2261 137 79 249 43 89 263 34  
Added Vol: 0 483 0 0 513 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 3036 108 0 2774 137 79 249 43 89 263 34  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 3098 110 0 2831 140 80 254 44 91 268 35  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 3098 110 0 2831 140 80 254 44 91 268 35  
PCE 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  
MLF 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  
FinalVolume: 0 3098 110 0 2831 140 80 254 44 91 268 35

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.48 0.96 0.96 0.49 0.96 0.96  
Lanes: 0.00 2.90 0.10 0.00 2.86 0.14 1.00 0.85 0.15 1.00 0.88 0.12  
Final Sat.: 0 4885 173 0 4810 238 916 1554 267 929 1619 211

Capacity Analysis Module:  
Vol/Sat: 0.00 0.63 0.63 0.00 0.59 0.59 0.09 0.16 0.16 0.10 0.17 0.17  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 1.31 1.31 0.00 1.22 1.22 0.25 0.47 0.47 0.28 0.47 0.47  
Delay/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7  
LOS by Move: A F F A F F B B B B B B  
HCM2kAvgQ: 0 58 58 0 47 47 1 5 5 1 5 5

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.827  
Loss Time (sec): 9 Average Delay (sec/veh): 30.5  
Optimal Cycle: 63 Level Of Service: C

\*\*\*\*\*  
Street Name: Sunset Ocean  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 1 1 1 0 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1682 14 1 1588 60 30 61 18 37 47 226  
Growth Adj: 1.11 1.24 1.10 1.00 1.00 1.00 1.10 1.00 1.00 1.00 1.00 1.11  
Initial Bse: 0 2085 15 1 1589 60 33 61 18 37 47 252  
Added Vol: 0 590 0 0 670 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2675 15 1 2259 60 33 61 18 37 47 252  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2729 16 1 2305 61 34 62 18 38 48 257  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2729 16 1 2305 61 34 62 18 38 48 257  
PCE 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  
MLF 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  
FinalVolume: 0 2729 16 1 2305 61 34 62 18 38 48 257

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.79 0.79 0.79 0.88 0.88 0.88 0.76 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.01 2.92 0.07 0.30 0.54 0.16 1.00 1.00 1.00  
Final Sat.: 0 5049 29 2 4407 117 493 909 268 1450 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.54 0.54 0.52 0.52 0.52 0.07 0.07 0.07 0.03 0.03 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.53 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 1.01 1.01 0.98 0.98 0.98 0.22 0.22 0.22 0.08 0.08 0.51  
Delay/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
LOS by Move: A C C C C C B B B B B C  
HCM2kAvgQ: 0 21 21 24 24 24 2 2 2 0 1 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

```

*****
Intersection #1210 Skyline / Sloat / 39th
*****
Cycle (sec):          100          Critical Vol./Cap.(X):          0.925
Loss Time (sec):      0            Average Delay (sec/veh):          29.4
Optimal Cycle:        0            Level Of Service:                D
*****
Street Name:          Skyline / 39th          Sloat
Approach:             North Bound          South Bound          East Bound          West Bound
Movement:             L - T - R          L - T - R          L - T - R          L - T - R
-----|-----|-----|-----|
Control:              Stop Sign          Stop Sign          Stop Sign          Stop Sign
Rights:               Ignore            Include            Ignore            Include
Min. Green:           0 0 0 0          0 0 0 1 0          0 0 1 1 0 1          0 0 1 1 0 0
Lanes:                0 1 0 0 2          0 0 0 1 0          0 1 1 0 1          2 0 1 1 0
-----|-----|-----|-----|
Volume Module:
Base Vol:             327 0 565          0 21 7          2 350 163 450 435 64
Growth Adj:           1.13 1.23 1.24 1.16 1.08 1.05 1.24 1.25 1.16 1.05 1.03 1.13
Initial Bse:           371 0 701          0 23 7          2 437 189 475 450 73
Added Vol:            0 0 3          0 0 0          0 43 0          2 35 0
PasserByVol:          0 0 0          0 0 0          0 0 0          0 0 0
Initial Fut:           371 0 704          0 23 7          2 480 189 477 485 73
User Adj:              1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj:               0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98
PHF Volume:           378 0 0          0 23 8          3 489 0          486 495 74
Reduct Vol:           0 0 0          0 0 0          0 0 0          0 0 0
Reduced Vol:          378 0 0          0 23 8          3 489 0          486 495 74
PCE Adj:              1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj:              1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume:          378 0 0          0 23 8          3 489 0          486 495 74
-----|-----|-----|-----|
Saturation Flow Module:
Adjustment:           1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:                1.00 0.00 2.00 0.00 0.75 0.25 0.01 1.99 1.00 2.00 1.74 0.26
Final Sat.:           409 0 912          0 286 93          4 771 406 839 785 119
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:              0.92 xxxx 0.00 xxxx 0.08 0.08 0.63 0.63 0.00 0.58 0.63 0.62
Crit Moves:          ****          ****          ****          ****
Delay/Veh:            56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9
Delay 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
AdjDel/Veh:           56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9
LOS by Move:          F *          * B          D D          * C C C
ApproachDel:          56.1          12.8          25.3          22.1
Delay Adj:            1.00          1.00          1.00          1.00
ApprAdjDel:           56.1          12.8          25.3          22.1
LOS by Appr:          F          B          D          C
AllWayAvgQ:           5.1 5.1 0.0 0.1 0.1 0.1 1.5 1.5 0.0 1.2 1.5 1.5
*****
Note: Queue reported is the number of cars per lane.

```

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

```

*****
Intersection #1221 Skyline / Lake Merced (WBR)
*****
Average Delay (sec/veh):          2.5          Worst Case Level Of Service: C[ 17.5]
*****
Street Name:          Skyline          Lake Merced (WBR)
Approach:             North Bound          South Bound          East Bound          West Bound
Movement:             L - T - R          L - T - R          L - T - R          L - T - R
-----|-----|-----|-----|
Control:              Uncontrolled          Uncontrolled          Stop Sign          Stop Sign
Rights:               Include            Include            Include            Include
Lanes:                0 0 2 0 0          1 0 2 0 0          0 0 0 0 0          0 0 0 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:             0 853 0          100 489 0          0 0 0 0          0 0 0 133
Growth Adj:           1.51 1.22 1.12 1.07 1.12 1.46 1.12 1.02 1.07 1.46 1.81 1.51
Initial Bse:           0 1041 0          107 548 0          0 0 0 0          0 0 0 201
Added Vol:            0 3 0          0 2 0          0 0 0 0          0 0 0 0
PasserByVol:          0 0 0          0 0 0          0 0 0 0          0 0 0 0
Initial Fut:           0 1044 0          107 550 0          0 0 0 0          0 0 0 201
User 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
PHF Adj:               0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume:           0 1065 0          109 561 0          0 0 0 0          0 0 0 205
Reduct Vol:           0 0 0          0 0 0          0 0 0 0          0 0 0 0
FinalVolume:          0 1065 0          109 561 0          0 0 0 0          0 0 0 205
-----|-----|-----|-----|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 6.9
FollowUpTim:xxxxx xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 3.3
-----|-----|-----|-----|
Capacity Module:
Cnflct Vol:          xxxx xxxx xxxxx 1065 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 532
Potent Cap.:         xxxx xxxx xxxxx 650 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 492
Move Cap.:           xxxx xxxx xxxxx 650 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 492
Volume/Cap:          xxxx xxxx xxxxx 0.17 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 0.42
-----|-----|-----|-----|
Level of Service Module:
2Way95thQ:          xxxx xxxx xxxxx 0.6 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx 2.0
Control Del:xxxxx xxxx xxxxx 11.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx 17.5
LOS by Move:         * * * B * * * * * * * * * * * C
Movement:            LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:         xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:          * * * * * * * * * * * * * * * * * * *
ApproachDel:         xxxxxx          xxxxxx          xxxxxx          17.5
ApproachLOS:         *          *          *          C
*****
Note: Queue reported is the number of cars per lane.
*****

```

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)

Average Delay (sec/veh): 7.4 Worst Case Level Of Service: F[118.6]

Street Name: Skyline Lake Merced (WBLT)

Table with columns: Approach, Movement, Control, Rights, Lanes. Rows for North Bound, South Bound, East Bound, West Bound.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Critical Gap Module: Critical Gap, FollowUpTim.

Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1230 Sunset / Lake Merced

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name: Sunset Lake Merced

Table with columns: Approach, Movement, Control, Rights, Lanes. Rows for North Bound, South Bound, East Bound, West Bound.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Critical Gap Module: Critical Gap, FollowUpTim.

Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1240 Lake Merced / Winston

\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.372  
Loss Time (sec): 9 Average Delay (sec/veh): 188.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Lake Merced Winston

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Protected Split Phase Split Phase

Rights: WideBypass Include Include Include

Min. Green: 34 34 34 17 55 55 0 0 0 25 25 25

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 1 0 2 0 2 0 0 0 0 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 1747 404 204 1229 0 0 0 0 180 0 284

Growth Adj: 1.55 1.12 1.27 1.30 1.18 1.59 1.27 1.43 1.30 1.59 1.99 1.55

Initial Bse: 0 1948 514 266 1448 0 0 0 0 285 0 441

Added Vol: 0 315 251 210 460 0 0 0 0 352 0 275

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 2263 765 476 1908 0 0 0 0 637 0 716

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2310 780 485 1947 0 0 0 0 650 0 731

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2310 780 485 1947 0 0 0 0 650 0 731

PCE 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

MLF 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

FinalVolume: 0 2310 780 485 1947 0 0 0 0 650 0 731

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.86 0.86 0.90 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.83

Lanes: 0.00 2.24 0.76 2.00 2.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00

Final Sat.: 0 3655 1235 3432 3538 0 0 0 0 3432 0 1583

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.00 0.63 0.63 0.14 0.55 0.00 0.00 0.00 0.00 0.19 0.00 0.46

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.38 0.38 0.38 0.19 0.62 0.62 0.00 0.00 0.00 0.28 0.28 0.28

Volume/Cap: 0.00 1.65 1.65 0.73 0.89 0.00 0.00 0.00 0.00 0.68 0.00 1.66

Delay/Veh: 0.0 320 319.5 40.8 13.9 0.0 0.0 0.0 0.0 32.9 0.0 340.5

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 320 319.5 40.8 13.9 0.0 0.0 0.0 0.0 32.9 0.0 340.5

LOS by Move: A F F D B A A A A C A F

HCM2kAvgQ: 0 86 86 6 18 0 0 0 0 9 0 57

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1250 Lake Merced / Font

\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.546  
Loss Time (sec): 7 Average Delay (sec/veh): 179.5  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Lake Merced Font

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Protected Split Phase Split Phase

Rights: Ignore Include Include Include

Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 1683 17 176 1644 0 0 0 0 104 0 331

Growth Adj: 1.08 1.12 1.10 1.13 1.18 1.11 1.10 1.08 1.13 1.11 1.04 1.08

Initial Bse: 0 1877 19 198 1937 0 0 0 0 115 0 357

Added Vol: 0 359 -10 417 527 0 0 0 0 -9 0 304

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 2236 9 615 2464 0 0 0 0 106 0 661

User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2282 0 628 2515 0 0 0 0 109 0 674

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2282 0 628 2515 0 0 0 0 109 0 674

PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 2282 0 628 2515 0 0 0 0 109 0 674

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83

Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.00 0.64 0.00 0.35 0.71 0.00 0.00 0.00 0.00 0.06 0.00 0.43

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24

Volume/Cap: 0.00 1.35 0.00 2.13 1.05 0.00 0.00 0.00 0.00 0.25 0.00 1.74

Delay/Veh: 0.0 180 0.0 556.9 37.7 0.0 0.0 0.0 0.0 28.8 0.0 379.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 180 0.0 556.9 37.7 0.0 0.0 0.0 0.0 28.8 0.0 379.0

LOS by Move: A F A F D A A A A C A F

HCM2kAvgQ: 0 69 0 59 50 0 0 0 0 3 0 55

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1261 Lake Merced / Vidal  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.887  
Loss Time (sec): 12 Average Delay (sec/veh): 36.0  
Optimal Cycle: 104 Level Of Service: D

Street Name: Lake Merced Vidal  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1811 9 13 1748 0 0 0 0 10 0 11  
Growth Adj: 1.00 1.12 1.16 1.19 1.18 1.00 1.00 1.00 1.00 1.91 1.00 1.88  
Initial Bse: 0 2028 10 15 2063 0 0 0 0 19 0 21  
Added Vol: 0 290 65 102 415 0 0 0 0 58 0 59  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2318 75 117 2478 0 0 0 0 77 0 80  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2366 77 120 2528 0 0 0 0 79 0 81  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2366 77 120 2528 0 0 0 0 79 0 81  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2366 77 120 2528 0 0 0 0 79 0 81

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.67 0.05 0.07 0.71 0.00 0.00 0.00 0.00 0.04 0.00 0.05  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.06 0.08 0.68 0.93 0.00 0.00 0.00 0.00 0.30 0.00 0.34  
Delay/Veh: 0.0 56.3 7.3 62.4 16.3 0.0 0.0 0.0 0.0 40.6 0.0 42.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 56.3 7.3 62.4 16.3 0.0 0.0 0.0 0.0 40.6 0.0 42.0  
LOS by Move: A E A E B A A A A D A D  
HCM2kAvgQ: 0 45 1 3 31 0 0 0 0 2 0 3

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1262 Lake Merced / Acevedo  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.959  
Loss Time (sec): 12 Average Delay (sec/veh): 34.6  
Optimal Cycle: 146 Level Of Service: C

Street Name: Lake Merced Acevedo  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 1806 11 14 1743 0 0 0 0 9 0 15  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 2023 13 17 2057 0 0 0 0 17 0 28  
Added Vol: 0 278 79 108 365 0 0 0 0 56 0 77  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2301 92 125 2422 0 0 0 0 73 0 105  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2348 94 127 2471 0 0 0 0 75 0 107  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2348 94 127 2471 0 0 0 0 75 0 107  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2348 94 127 2471 0 0 0 0 75 0 107

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.88 1.00 0.88  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.41 0.00 0.59  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 689 0 990

Capacity Analysis Module:  
Vol/Sat: 0.00 0.66 0.06 0.07 0.70 0.00 0.00 0.00 0.00 0.11 0.00 0.11  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.05 0.09 0.72 0.91 0.00 0.00 0.00 0.00 0.72 0.00 0.72  
Delay/Veh: 0.0 53.5 7.5 65.8 14.5 0.0 0.0 0.0 0.0 57.0 0.0 57.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 53.5 7.5 65.8 14.5 0.0 0.0 0.0 0.0 57.0 0.0 57.0  
LOS by Move: A D A E B A A A A E A E  
HCM2kAvgQ: 0 44 1 4 31 0 0 0 0 7 0 7

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.135  
Loss Time (sec): 12 Average Delay (sec/veh): 45.4  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 0 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 0 0 1 0 0

Volume Module:

Base Vol: 0 1795 41 23 1730 0 0 0 0 30 0 22  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 2002 47 27 2039 0 0 0 0 57 0 41  
Added Vol: 0 241 280 174 247 0 0 0 0 180 0 116  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2243 327 201 2286 0 0 0 0 237 0 157  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2289 334 205 2332 0 0 0 0 242 0 160  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2289 334 205 2332 0 0 0 0 242 0 160  
PCE 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  
MLF 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  
FinalVolume: 0 2289 334 205 2332 0 0 0 0 242 0 160

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.90  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.60 0.00 0.40  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1029 0 682

Capacity Analysis Module:

Vol/Sat: 0.00 0.65 0.21 0.12 0.66 0.00 0.00 0.00 0.00 0.24 0.00 0.24  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.03 0.34 1.16 0.86 0.00 0.00 0.00 0.00 1.57 0.00 1.57  
Delay/Veh: 0.0 35.5 5.2 162.9 3.7 0.0 0.0 0.0 0.0 316.7 0.0 316.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 35.5 5.2 162.9 3.7 0.0 0.0 0.0 0.0 316.7 0.0 316.7  
LOS by Move: A D A F A A A A A F A F  
HCM2kAvgQ: 0 40 2 10 3 0 0 0 0 32 0 32

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1264 Lake Merced / Gonzalez  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.032  
Loss Time (sec): 12 Average Delay (sec/veh): 52.4  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Lake Merced Gonzalez  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Protected Protected  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 22 22 22  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 1 0 0

Volume Module:

Base Vol: 0 1827 65 8 1751 0 0 0 0 53 0 9  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 2046 75 10 2066 0 0 0 0 101 0 17  
Added Vol: 0 475 449 64 362 0 0 0 0 320 0 46  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2521 524 74 2428 0 0 0 0 421 0 63  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2573 535 75 2478 0 0 0 0 430 0 64  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2573 535 75 2478 0 0 0 0 430 0 64  
PCE 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  
MLF 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  
FinalVolume: 0 2573 535 75 2478 0 0 0 0 430 0 64

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.92 1.00 0.92  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.77 0.00 0.23  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 3097 0 403

Capacity Analysis Module:

Vol/Sat: 0.00 0.73 0.34 0.04 0.70 0.00 0.00 0.00 0.00 0.14 0.00 0.16  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.15 0.54 0.42 0.91 0.00 0.00 0.00 0.00 0.93 0.00 1.06  
Delay/Veh: 0.0 93.5 12.4 49.6 14.6 0.0 0.0 0.0 0.0 66.2 0.0 102.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 93.5 12.4 49.6 14.6 0.0 0.0 0.0 0.0 66.2 0.0 102.1  
LOS by Move: A F B D B A A A A E A F  
HCM2kAvgQ: 0 61 8 2 33 0 0 0 0 11 0 15

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 2.199  
Loss Time (sec): 15 Average Delay (sec/veh): 186.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Lake Merced Brotherhood  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Ovl Include Include Ovl  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0  
Lanes: 0 0 2 0 1 2 0 1 0 0 0 0 0 0 0 1 0 0 0 2

Volume Module:  
Base Vol: 0 504 195 1342 517 0 0 0 0 267 0 1323  
Growth Adj: 1.71 1.12 1.14 1.17 1.18 1.74 1.14 1.16 1.17 1.74 2.31 1.71  
Initial Bse: 0 562 222 1572 609 0 0 0 0 465 0 2264  
Added Vol: 0 339 -26 432 250 0 0 0 0 -13 0 585  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 901 196 2004 859 0 0 0 0 452 0 2849  
User Adj: 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 920 200 2045 0 0 0 0 0 462 0 2907  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 920 200 2045 0 0 0 0 0 462 0 2907  
PCE 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  
MLF 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  
FinalVolume: 0 920 200 2045 0 0 0 0 0 462 0 2907

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.90 1.00 1.00 1.00 1.00 1.00 0.93 1.00 0.73  
Lanes: 0.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 2.00  
Final Sat.: 0 3538 1583 3432 1900 0 0 0 0 1769 0 2786

Capacity Analysis Module:  
Vol/Sat: 0.00 0.26 0.13 0.60 0.00 0.00 0.00 0.00 0.00 0.26 0.00 1.04  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.16 0.16 0.43 0.48 0.69 0.69 0.00 0.00 0.00 0.22 0.22 0.75  
Volume/Cap: 0.00 1.59 0.30 1.24 0.00 0.00 0.00 0.00 0.00 1.20 0.00 1.40  
Delay/Veh: 0.0 319 18.1 134.5 0.0 0.0 0.0 0.0 0.0 153.7 0.0 196.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 319 18.1 134.5 0.0 0.0 0.0 0.0 0.0 153.7 0.0 196.9  
LOS by Move: A F B F A A A A A F A F  
HCM2kAvgQ: 0 40 4 58 0 0 0 0 0 28 0 113

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.



Tier 4A Conditions  
Weekend Midday Peak Hour



19th Ave CS Tier 4a

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis

Cycle (sec): 105 Critical Vol./Cap.(X): 1.183
Loss Time (sec): 16 Average Delay (sec/veh): 181.9
Optimal Cycle: 180 Level Of Service: F

Street Name: Junipero Serra / West Portal Sloat / St. Francis

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase
Rights: Include Include Ignore Include
Min. Green: 16 53 53 32 32 32 15 15 15 20 20 20
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 1575 1246 23 0 787 272 895 346 371 14 293 26
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13
Initial Bse: 1781 1390 25 0 927 316 984 375 420 16 336 29
Added Vol: 92 212 0 0 261 0 2 0 88 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1873 1602 25 0 1188 316 986 375 508 16 336 29
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98
PHF Volume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1912 1634 26 0 1213 323 1006 382 0 17 343 30
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.89 0.92 0.92 1.00 0.87 0.87 0.89 0.97 1.00 0.92 0.92 0.92
Lanes: 3.00 1.97 0.03 0.00 2.37 0.63 3.00 1.00 1.00 0.09 1.76 0.15
Final Sat.: 5096 3441 54 0 3929 1046 5096 1843 1900 149 3071 269

Capacity Analysis Module:
Vol/Sat: 0.38 0.47 0.47 0.00 0.31 0.31 0.20 0.21 0.00 0.11 0.11 0.11
Crit Moves: \*\*\*\*
Green/Cycle: 0.21 0.51 0.51 0.00 0.30 0.30 0.14 0.14 0.00 0.19 0.19 0.19
Volume/Cap: 1.79 0.92 0.92 0.00 1.01 1.01 1.38 1.45 0.00 0.59 0.59 0.59
Delay/Veh: 401.1 27.0 27.0 0.0 62.1 62.1 225.1 268 0.0 42.5 42.5 42.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 401.1 27.0 27.0 0.0 62.1 62.1 225.1 268 0.0 42.5 42.5 42.5
LOS by Move: F C C A E E F F A D D D
HCM2kAvgQ: 56 25 25 0 25 25 25 29 0 7 7 7

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 4a

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

Intersection #1070 Junipero Serra / 19th

Cycle (sec): 100 Critical Vol./Cap.(X): 1.855
Loss Time (sec): 17 Average Delay (sec/veh): 232.4
Optimal Cycle: 180 Level Of Service: F

Street Name: Junipero Serra 19th

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted
Rights: Ignore Ignore Ovl Include
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 3 0 1 1 0 0 0 3 1 0 0 0 1 0 3 0 0 0 1 0

Volume Module:
Base Vol: 2245 1828 70 0 1917 12 0 85 4216 0 76 36
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09
Initial Bse: 2442 2039 74 0 2259 13 0 86 4610 0 81 39
Added Vol: 135 137 1 0 31 0 0 41 282 0 0 30
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 2577 2176 75 0 2290 13 0 127 4892 0 81 69
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 2629 2220 0 0 2337 0 0 129 4992 0 82 71
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 2629 2220 0 0 2337 0 0 129 4992 0 82 71
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 2629 2220 0 0 2337 0 0 129 4992 0 82 71

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.93 0.95 1.00 0.89 0.91 1.00 0.98 0.73 1.00 0.92 0.92
Lanes: 3.00 2.00 0.00 0.00 4.00 0.00 0.00 1.00 3.00 0.00 0.54 0.46
Final Sat.: 5147 3538 0 0 6778 0 0 1862 4178 0 940 807

Capacity Analysis Module:
Vol/Sat: 0.51 0.63 0.00 0.00 0.34 0.00 0.00 0.07 1.19 0.00 0.09 0.09
Crit Moves: \*\*\*\*
Green/Cycle: 0.54 0.54 0.54 0.20 0.20 0.20 0.09 0.09 0.68 0.09 0.09 0.09
Volume/Cap: 0.95 1.16 0.00 0.00 1.72 0.00 0.00 0.77 1.76 0.00 0.97 0.97
Delay/Veh: 23.6 95.3 0.0 0.0 369 0.0 0.0 72.9 347.4 0.0 110 110.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 23.6 95.3 0.0 0.0 369 0.0 0.0 72.9 347.4 0.0 110 110.1
LOS by Move: C F A A F A A E F A F F
HCM2kAvgQ: 28 57 0 0 52 0 0 6 157 0 8 8

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1110 19th / Sloat

Cycle (sec):	100	Critical Vol./Cap.(X):	1.579
Loss Time (sec):	9	Average Delay (sec/veh):	118.7
Optimal Cycle:	180	Level of Service:	F

Street Name: 19th Sloat

Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Permitted			Protected			Permit+Prot			Permitted							
Rights:	Include			Include			Include			Include							
Min. Green:	0	43	43	11	58	58	4	33	33	24	24	24					
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Lanes:	0	0	2	1	0	2	1	0	1	1	1	1	0	0	3	0	1

Volume Module:

Base Vol:	0	2032	83	275	2702	314	266	1157	123	0	1123	426
Growth Adj:	1.13	1.12	1.10	1.13	1.18	1.16	1.10	1.08	1.13	1.16	1.15	1.13
Initial Bse:	0	2266	91	311	3184	365	292	1253	139	0	1288	482
Added Vol:	0	242	2	27	234	8	9	60	0	0	62	37
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2508	93	338	3418	373	301	1313	139	0	1350	519
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	2559	95	345	3488	381	308	1340	142	0	1377	529
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2559	95	345	3488	381	308	1340	142	0	1377	529
PCE 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
MLF 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
FinalVolume:	0	2559	95	345	3488	381	308	1340	142	0	1377	529

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.89	0.89	0.93	0.88	0.88	0.62	0.87	0.87	1.00	0.89	0.83
Lanes:	0.00	2.89	0.11	1.00	2.70	0.30	1.00	2.71	0.29	0.00	3.00	1.00
Final Sat.:	0	4877	181	1769	4514	493	1169	4500	477	0	5083	1583

Capacity Analysis Module:

Vol/Sat:	0.00	0.52	0.52	0.19	0.77	0.77	0.26	0.30	0.30	0.00	0.27	0.33
Crit Moves:	****			****			****			****		
Green/Cycle:	0.00	0.43	0.43	0.18	0.61	0.61	0.30	0.30	0.30	0.00	0.24	0.24
Volume/Cap:	0.00	1.22	1.22	1.06	1.26	1.26	1.12	1.00	1.00	0.00	1.13	1.39
Delay/Veh:	0.0	128	128.2	108.1	130	129.9	63.0	57.6	57.6	0.0	107	230.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	128	128.2	108.1	130	129.9	63.0	57.6	57.6	0.0	107	230.6
LOS by Move:	A	F	F	F	F	F	E	E	E	A	F	F
HCM2kAvgQ:	0	49	49	18	80	80	19	23	23	0	26	36

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1140 19th / Winston

Cycle (sec):	100	Critical Vol./Cap.(X):	1.714
Loss Time (sec):	13	Average Delay (sec/veh):	182.6
Optimal Cycle:	180	Level of Service:	F

Street Name: 19th Winston

Approach:	North Bound			South Bound			East Bound			West Bound											
Movement:	L	T	R	L	T	R	L	T	R	L	T	R									
Control:	Protected			Permitted			Permitted			Permitted											
Rights:	Include			Include			AddLane			Include											
Min. Green:	16	44	44	44	44	44	26	26	26	26	26	26									
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0									
Lanes:	2	0	2	1	0	0	0	0	3	0	1	1	1	1	0	1	0	1	0	1	0

Volume Module:

Base Vol:	424	1667	58	0	2144	200	155	253	325	17	319	25
Growth Adj:	1.03	1.12	1.05	1.09	1.18	1.06	1.05	1.00	1.09	1.06	1.00	1.03
Initial Bse:	436	1859	61	0	2527	212	163	253	353	18	319	26
Added Vol:	164	71	0	0	130	118	131	444	170	25	419	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	600	1930	61	0	2657	330	294	697	523	43	738	26
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	612	1970	62	0	2711	337	300	711	533	44	753	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	612	1970	62	0	2711	337	300	711	533	44	753	26
PCE 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
MLF 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
FinalVolume:	612	1970	62	0	2711	337	300	711	533	44	753	26

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	1.00	1.34	0.83	0.26	0.20	0.83	0.67	0.67	0.67
Lanes:	2.00	2.91	0.09	0.00	3.00	1.00	1.00	2.00	1.00	0.11	1.83	0.06
Final Sat.:	3432	4903	155	0	7625	1583	495	743	1583	136	2328	81

Capacity Analysis Module:

Vol/Sat:	0.18	0.40	0.40	0.00	0.36	0.21	0.61	0.96	0.34	0.32	0.32	0.32
Crit Moves:	****			****			****			****		
Green/Cycle:	0.16	0.44	0.44	0.44	0.44	0.44	0.27	0.27	0.27	0.27	0.27	0.27
Volume/Cap:	1.11	0.91	0.91	0.00	0.81	0.48	2.29	3.61	1.27	1.22	1.22	1.22
Delay/Veh:	115.9	29.4	29.4	0.0	22.9	19.3	623.6	1221	176.6	149.0	149	149.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	115.9	29.4	29.4	0.0	22.9	19.3	623.6	1221	176.6	149.0	149	149.0
LOS by Move:	F	C	C	A	C	B	F	F	F	F	F	F
HCM2kAvgQ:	14	21	21	0	25	6	33	46	33	24	24	24

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #1150 19th / Buckingham  
 \*\*\*\*\*  
 Average Delay (sec/veh): 3.1 Worst Case Level Of Service: F[ 95.3]  
 \*\*\*\*\*  
 Street Name: 19th Buckingham  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
 Rights: Include Include Include Include  
 Lanes: 0 0 3 0 0 0 0 3 0 1 0 0 0 0 1 0 0 0 0 0  
 Volume Module:  
 Base Vol: 0 2149 0 0 2446 40 0 0 154 0 0 0  
 Growth Adj: 1.04 1.12 1.07 1.10 1.18 1.07 1.07 1.02 1.10 1.07 1.00 1.04  
 Initial Bse: 0 2397 0 0 2883 43 0 0 169 0 0 0  
 Added Vol: 0 235 0 0 299 26 0 0 28 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 0 2632 0 0 3182 69 0 0 197 0 0 0  
 User 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  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 2685 0 0 3247 70 0 0 201 0 0 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 FinalVolume: 0 2685 0 0 3247 70 0 0 201 0 0 0  
 Critical Gap Module:  
 Critical Gap:xxxxx xxxx xxxxx xxxxx xxxx xxxxxx xxxxx xxxx 6.9 xxxxx xxxx xxxxxx  
 FollowUpTim:xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxxx 3.3 xxxxxx xxxx xxxxxx  
 Capacity Module:  
 Cnflct Vol: xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx 1082 xxxxx xxxx xxxxxx  
 Potent Cap.: xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx 213 xxxxx xxxx xxxxxx  
 Move Cap.: xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx 213 xxxxx xxxx xxxxxx  
 Volume/Cap: xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx 0.95 xxxxx xxxx xxxxxx  
 Level of Service Module:  
 2Way95thQ: xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx 8.0 xxxxx xxxx xxxxxx  
 Control Del:xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxxx 95.3 xxxxxx xxxx xxxxxx  
 LOS by Move: \* \* \* \* \* \* \* \* \* \* F \* \* \* \* \*  
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
 Shared Cap.: xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx  
 SharedQueue:xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx  
 Shrd ConDel:xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx  
 Shared LOS: \*  
 ApproachDel: xxxxxx xxxxxx 95.3 xxxxxx  
 ApproachLOS: \* \* \* \* \* F \* \* \* \* \*  
 \*\*\*\*\*  
 Note: Queue reported is the number of cars per lane.  
 \*\*\*\*\*

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #1160 19th / Holloway  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.987  
 Loss Time (sec): 12 Average Delay (sec/veh): 40.2  
 Optimal Cycle: 179 Level Of Service: D  
 \*\*\*\*\*  
 Street Name: 19th Holloway  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 59 59 0 59 59 33 33 33 30 30 30  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 2 1 0 0 0 3 0 1 0 1 0 1 0 0 1 0 1 0  
 Volume Module:  
 Base Vol: 0 2096 105 0 2538 96 61 96 64 36 148 34  
 Growth Adj: 1.23 1.12 1.15 1.18 1.18 1.27 1.15 1.19 1.18 1.27 1.35 1.23  
 Initial Bse: 0 2338 121 0 2991 122 70 114 76 46 200 42  
 Added Vol: 0 183 31 0 267 60 51 50 29 104 118 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 0 2521 152 0 3258 182 121 164 105 150 318 42  
 User 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  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 2572 155 0 3325 185 124 168 107 153 325 43  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 2572 155 0 3325 185 124 168 107 153 325 43  
 PCE 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  
 MLF 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  
 FinalVolume: 0 2572 155 0 3325 185 124 168 107 153 325 43  
 Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 1.00 0.88 0.88 1.00 0.89 0.83 0.55 0.55 0.55 0.63 0.63 0.63  
 Lanes: 0.00 2.83 0.17 0.00 3.00 1.00 0.62 0.84 0.54 0.59 1.25 0.16  
 Final Sat.: 0 4751 287 0 5083 1583 648 877 560 697 1484 196  
 Capacity Analysis Module:  
 Vol/Sat: 0.00 0.54 0.54 0.00 0.65 0.12 0.19 0.19 0.19 0.22 0.22 0.22  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.00 0.60 0.60 0.00 0.60 0.60 0.29 0.29 0.29 0.29 0.29 0.29  
 Volume/Cap: 0.00 0.91 0.91 0.00 1.10 0.20 0.66 0.66 0.66 0.76 0.76 0.76  
 Delay/Veh: 0.0 16.1 16.1 0.0 61.9 6.1 38.2 38.2 38.2 41.4 41.4 41.4  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 0.0 16.1 16.1 0.0 61.9 6.1 38.2 38.2 38.2 41.4 41.4 41.4  
 LOS by Move: A B B A E A D D D D D D  
 HCM2kAvgQ: 0 23 23 0 54 1 7 7 7 10 10 10  
 \*\*\*\*\*  
 Note: Queue reported is the number of cars per lane.  
 \*\*\*\*\*

19th Ave CS  
Tier 4a

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 1.906  
Loss Time (sec): 15 Average Delay (sec/veh): 119.1  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name:	Lake Merced					Brotherhood									
	North Bound		South Bound			East Bound		West Bound							
Approach:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted			Protected			Split Phase			Split Phase					
Rights:	Ovl			Include			Include			Ovl					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	2

Volume Module:

Base Vol:	0	535	223	1076	498	0	0	0	0	216	0	1034
Growth Adj:	1.71	1.12	1.14	1.17	1.18	1.74	1.14	1.16	1.17	1.74	2.31	1.71
Initial Bse:	0	597	254	1260	587	0	0	0	0	376	0	1769
Added Vol:	0	322	0	441	236	0	0	0	0	0	0	621
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	919	254	1701	823	0	0	0	0	376	0	2390
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	937	259	1736	0	0	0	0	0	384	0	2439
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	937	259	1736	0	0	0	0	0	384	0	2439
PCE 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
MLF 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
FinalVolume:	0	937	259	1736	0	0	0	0	0	384	0	2439

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	2786

Capacity Analysis Module:

Vol/Sat:	0.00	0.26	0.16	0.51	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.88
Crit Moves:	****			****						****		
Green/Cycle:	0.18	0.18	0.45	0.46	0.69	0.69	0.00	0.00	0.00	0.22	0.22	0.73
Volume/Cap:	0.00	1.46	0.37	1.09	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.20
Delay/Veh:	0.0	259	17.4	75.9	0.0	0.0	0.0	0.0	0.0	87.4	0.0	111.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	259	17.4	75.9	0.0	0.0	0.0	0.0	0.0	87.4	0.0	111.7
LOS by Move:	A	F	B	E	A	A	A	A	A	F	A	F
HCM2kAvgQ:	0	37	5	42	0	0	0	0	0	19	0	77

Note: Queue reported is the number of cars per lane.

Tier 4B Conditions  
Weekday AM Peak Hour





19th Ave CS  
 Tier 4a

 Impact Analysis Report  
 Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in	
#1010 Claremont / Taraval / Dewey /	A	6.8	0.650	A	7.0	0.665	+ 0.015	V/C
#1020 Santa Clara / Portola / Vicent	C	29.7	0.837	D	40.2	0.960	+10.494	D/V
#1030 Junipero Serra / Sloat / West	F	89.5	1.076	F	95.9	1.094	+ 6.319	D/V
#1040 Junipero Serra / Ocean / Eucal	D	40.4	0.758	D	46.9	0.802	+ 6.482	D/V
#1050 Junipero Serra / Winston / Mer	C	34.6	0.632	D	38.3	0.772	+ 3.680	D/V
#1060 Junipero Serra / Holloway	C	32.7	0.675	D	36.9	0.716	+ 4.265	D/V
#1070 Junipero Serra / 19th	E	72.7	0.942	E	68.6	0.968	-4.059	D/V
#1075 Junipero Serra / Chumasero	A	5.8	0.757	B	19.4	0.997	+13.632	D/V
#1080 Junipero Serra / I-280 NB On-R	D	40.2	0.788	D	40.5	0.801	+ 0.279	D/V
#1090 Junipero Serra / I-280 SB On-R	C	20.4	0.568	C	20.4	0.620	-0.007	D/V
#1100 19th / Taraval	C	25.5	0.815	C	28.9	0.829	+ 3.420	D/V
#1110 19th / Sloat	F	107.3	1.464	F	119.3	1.508	+11.977	D/V
#1120 19th / Ocean	D	41.4	1.084	D	46.1	1.093	+ 4.780	D/V
#1130 19th / Eucalyptus	C	21.0	0.831	C	23.1	0.865	+ 2.060	D/V
#1140 19th / Winston	D	50.0	0.977	F	84.1	1.322	+34.127	D/V
#1150 19th / Buckingham	F	57.6	0.679	F	77.7	0.826	+20.071	D/V
#1160 19th / Holloway	A	6.2	0.696	E	62.2	0.786	+55.967	D/V
#1170 19th / Crespi	E	57.5	0.762	E	75.7	0.752	+18.286	D/V
#1181 Chumasero / Brotherhood	B	13.8	0.640	B	19.7	0.703	+ 5.962	D/V
#1182 Thomas More / brotherhood	B	15.7	0.611	C	23.0	0.747	+ 7.334	D/V
#1190 Sunset / Taraval	C	21.0	0.717	D	43.0	0.799	+21.964	D/V
#1200 Sunset / Ocean	B	12.0	0.605	B	13.7	0.664	+ 1.687	D/V
#1210 Skyline / Sloat / 39th	C	17.0	0.684	C	17.5	0.692	+ 0.009	V/C
#1221 Skyline / Lake Merced (WBR)	C	15.1	0.209	C	15.1	0.209	+ 0.010	D/V

 19th Ave CS  
 Tier 4a

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in	
#1222 Skyline / Lake Merced (WBLT)	F	52.5	0.379	F	52.8	0.381	+ 0.284	D/V
#1230 Sunset / Lake Merced	F	154.0	0.594	F	425.0	1.103	+270.952	D/
#1240 Lake Merced / Winston	C	28.8	0.691	F	96.8	0.805	+68.066	D/V
#1250 Lake Merced / Font	E	61.6	0.746	F	160.6	1.400	+98.995	D/V
#1261 Lake Merced / Vidal	D	45.6	0.728	D	45.2	0.925	-0.430	D/V
#1262 Lake Merced / Acevedo	D	47.6	0.738	D	43.3	0.962	-4.329	D/V
#1263 Lake Merced / Higuera	E	69.0	0.670	D	37.9	0.994	-31.032	D/
#1264 Lake Merced / Gonzalez	D	44.8	0.742	D	47.1	1.036	+ 2.252	D/V
#1270 Lake Merced / Brotherhood	D	54.5	1.511	F	122.0	1.784	+67.580	D/V

19th Ave CS  
Tier 4a

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 7.0 Level of Service: A  
\*\*\*\*\*

Street Name: Claremont Taraval / Dewey

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Yield Sign Yield Sign Yield Sign Yield Sign

Lanes: 1 1 1 1

Volume Module:

Table with 12 columns for traffic metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume) and 4 rows for North, South, East, and West bound movements.

PCE Module:

Table with 12 columns for traffic metrics and 4 rows for North, South, East, and West bound movements.

Delay Module: >> Time Period: 0.25 hours <<

Table with 4 columns for traffic metrics (CircVolume, MaxVolume, PedVolume, AdjMaxVol, ApproachVol, ApproachV/C, ApproachDel, ApproachLOS, Queue) and 4 rows for North, South, East, and West bound movements.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.960  
Loss Time (sec): 11 Average Delay (sec/veh): 40.2  
Optimal Cycle: 124 Level of Service: D  
\*\*\*\*\*

Street Name: Santa Clara / Vicente Portola

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected

Rights: Include Include Include Include

Min. Green: 23 23 23 23 23 23 9 36 36 9 36 36

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module:

Table with 12 columns for traffic metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume) and 4 rows for North, South, East, and West bound movements.

Saturation Flow Module:

Table with 12 columns for traffic metrics (Sat/Lane, Adjustment, Lanes, Final Sat) and 4 rows for North, South, East, and West bound movements.

Capacity Analysis Module:

Table with 12 columns for traffic metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ) and 4 rows for North, South, East, and West bound movements.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis

\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.094  
Loss Time (sec): 16 Average Delay (sec/veh): 95.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Junipero Serra / West Portal Sloat / St. Francis  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 48 48 27 27 27 20 20 20 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

-----

Volume Module:

Base Vol: 972 1137 20 0 1092 176 646 416 322 23 347 8  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 1129 1292 23 0 1192 200 750 494 367 26 412 9  
Added Vol: 22 110 0 0 53 0 2 0 7 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1151 1402 23 0 1245 200 752 494 374 26 412 9  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1174 1431 24 0 1271 205 768 504 0 27 420 9

-----

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3 0 1 1 0 0 0 2 58 0 42 3 0 1 1 0 0 0 0 0  
Final Sat.: 5096 3438 57 0 4329 697 5096 1843 1900 206 3237 73

-----

Capacity Analysis Module:

Vol/Sat: 0.23 0.42 0.42 0.00 0.29 0.29 0.15 0.27 0.00 0.13 0.13 0.13  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.18 0.44 0.44 0.00 0.26 0.26 0.22 0.22 0.00 0.19 0.19 0.19  
Volume/Cap: 1.26 0.95 0.95 0.00 1.14 1.14 0.69 1.26 0.00 0.68 0.68 0.68  
Delay/Veh: 168.3 37.1 37.1 0.0 113 112.5 41.5 177 0.0 45.1 45.1 45.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 168.3 37.1 37.1 0.0 113 112.5 41.5 177 0.0 45.1 45.1 45.1  
LOS by Move: F D D A F F D F A D D D  
HCM2kAvgQ: 23 23 23 0 29 29 9 31 0 8 8 8

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1040 Junipero Serra / Ocean / Eucalyptus

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.802  
Loss Time (sec): 14 Average Delay (sec/veh): 46.9  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*

Street Name: Junipero Serra Ocean / Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

-----

Volume Module:

Base Vol: 189 1678 46 326 1061 90 85 384 45 54 368 324  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 220 1907 53 371 1159 103 99 456 51 62 437 376  
Added Vol: 0 107 4 14 42 4 2 16 0 1 33 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 220 2014 57 385 1201 107 101 472 51 63 470 399  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 224 2055 59 393 1225 109 103 481 52 64 479 407  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 224 2055 59 393 1225 109 103 481 52 64 479 407  
PCE 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  
MLF 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  
FinalVolume: 224 2055 59 393 1225 109 103 481 52 64 479 407

-----

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.88 0.88 0.91 0.89 0.89 0.60 0.60 0.83 0.96 0.96 0.83  
Lanes: 1 00 2.92 0.08 2.00 2.76 0.24 0.35 1.65 1.00 0.12 0.88 1.00  
Final Sat.: 1751 4873 139 3466 4659 413 403 1889 1583 214 1605 1583

-----

Capacity Analysis Module:

Vol/Sat: 0.13 0.42 0.42 0.11 0.26 0.26 0.25 0.25 0.03 0.30 0.30 0.26  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 1.16 0.98 0.98 0.71 0.55 0.55 0.94 0.94 0.09 1.11 1.11 0.60  
Delay/Veh: 160.1 39.5 39.5 47.3 15.5 15.5 60.4 60.4 20.2 109.2 109 25.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 160.1 39.5 39.5 47.3 15.5 15.5 60.4 60.4 20.2 109.2 109 25.7  
LOS by Move: F D D D B B E E C F F C  
HCM2kAvgQ: 10 23 23 5 8 8 14 14 1 27 27 10

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.772  
Loss Time (sec): 14 Average Delay (sec/veh): 38.3  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Winston / Mercedes  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 186 1681 29 103 1024 72 80 63 73 64 147 62  
Growth Adj: 1.07 1.14 1.16 1.14 1.09 1.05 1.16 1.19 1.14 1.05 1.00 1.07  
Initial Bse: 199 1911 34 117 1118 75 93 75 83 67 147 66  
Added Vol: 56 38 4 1 -24 65 73 48 29 -6 82 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 255 1949 38 118 1094 140 166 123 112 61 229 66  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 260 1988 38 121 1117 143 169 125 115 62 234 68  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 260 1988 38 121 1117 143 169 125 115 62 234 68  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 260 1988 38 121 1117 143 169 125 115 62 234 68

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.46 0.98 0.83 0.64 0.98 0.83  
Lanes: 1.00 2.94 0.06 1.00 2.66 0.34 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4972 96 1769 4429 568 868 1862 1583 1216 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.15 0.40 0.40 0.07 0.25 0.25 0.20 0.07 0.07 0.05 0.13 0.04  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.77 1.00 1.00 0.36 0.63 0.63 0.72 0.25 0.27 0.19 0.46 0.16  
Delay/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6  
LOS by Move: D D D D C C D C C C C C  
HCM2kAvgQ: 7 25 25 3 10 10 4 3 3 2 6 2

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.716  
Loss Time (sec): 14 Average Delay (sec/veh): 36.9  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 234 1520 60 114 956 84 163 106 16 162 129 118  
Growth Adj: 1.08 1.14 1.07 1.05 1.09 1.06 1.07 1.01 1.05 1.06 1.02 1.08  
Initial Bse: 253 1728 64 120 1044 89 175 107 17 171 132 128  
Added Vol: 63 59 2 12 5 -18 25 -12 0 -6 -12 14  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 316 1787 66 132 1049 71 200 95 17 165 120 142  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 322 1823 68 135 1070 72 204 97 17 169 123 144  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 322 1823 68 135 1070 72 204 97 17 169 123 144  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 322 1823 68 135 1070 72 204 97 17 169 123 144

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.65 0.98 0.83 0.68 0.98 0.83  
Lanes: 1.00 2.89 0.11 1.00 2.81 0.19 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4877 181 1769 4719 319 1227 1862 1583 1289 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.18 0.37 0.37 0.08 0.23 0.23 0.17 0.05 0.01 0.13 0.07 0.09  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.96 0.96 0.96 0.40 0.58 0.58 0.59 0.19 0.04 0.47 0.24 0.33  
Delay/Veh: 79.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 79.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5  
LOS by Move: E D D D C C D C C C C C  
HCM2kAvgQ: 10 20 20 3 9 9 6 2 0 5 3 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1070 Junipero Serra / 19th

\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 0.968  
Loss Time (sec): 0 Average Delay (sec/veh): 68.6  
Optimal Cycle: 180 Level Of Service: E

\*\*\*\*\*

Street Name: Junipero Serra 19th

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Split Phase Split Phase Permitted Permitted

Rights: Include Ignore Ovl Include

Min. Green: 46 46 46 18 18 18 9 9 9 9 9 9

Y+R: 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0

Lanes: 3 0 1 1 0 0 0 4 0 1 0 0 1 0 3 0 0 0 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 2208 1679 8 0 1210 4 0 71 3047 0 56 62

Growth Adj: 1.13 1.14 1.12 1.10 1.09 1.11 1.12 1.10 1.10 1.11 1.12 1.13

Initial Bse: 2494 1908 9 0 1321 4 0 78 3345 0 63 70

Added Vol: 61 108 3 0 -1 0 0 0 21 119 0 0 15

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 2555 2016 12 0 1320 4 0 99 3464 0 63 85

User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 2607 2058 12 0 1347 0 0 101 3535 0 64 87

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 2607 2058 12 0 1347 0 0 101 3535 0 64 87

PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 2607 2058 12 0 1347 0 0 101 3535 0 64 87

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.99 0.93 0.93 1.00 0.89 1.00 1.00 0.98 0.81 1.00 0.90 0.90

Lanes: 3.00 1.99 0.01 0.00 4.00 1.00 0.00 1.00 3.00 0.00 0.43 0.57

Final Sat.: 5662 3513 21 0 6778 1900 0 1862 4596 0 730 987

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Capacity Analysis Module:

Vol/Sat: 0.46 0.59 0.59 0.00 0.20 0.00 0.00 0.05 0.77 0.00 0.09 0.09

Crit Moves: \*\*\*\*

Green/Cycle: 0.50 0.50 0.50 0.21 0.21 0.21 0.12 0.12 0.67 0.12 0.12 0.12

Volume/Cap: 0.93 1.18 1.18 0.00 0.96 0.00 0.00 0.44 1.15 0.00 0.71 0.71

Delay/Veh: 26.7 109 108.5 0.0 58.7 0.0 0.0 50.7 80.6 0.0 64.6 64.6

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 26.7 109 108.5 0.0 58.7 0.0 0.0 50.7 80.6 0.0 64.6 64.6

LOS by Move: C F F A E A A D F A E E

HCM2kAvgQ: 28 57 57 0 15 0 0 4 69 0 6 6

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1075 Junipero Serra / Chumasero

\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.997  
Loss Time (sec): 10 Average Delay (sec/veh): 19.4  
Optimal Cycle: 176 Level Of Service: B

\*\*\*\*\*

Street Name: Junipero Serra Chumasero

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Protected Protected Split Phase Split Phase

Rights: Include Include Ovl Include

Min. Green: 10 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 4 0 0 0 0 3 1 0 0 0 0 0 1 0 0 0 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 8 3895 0 0 4214 75 0 0 107 0 0 0

Growth Adj: 1.13 1.14 1.12 1.10 1.09 1.11 1.12 1.10 1.10 1.11 1.12 1.13

Initial Bse: 9 4440 0 0 4340 83 0 0 112 0 0 0

Added Vol: 66 172 0 0 180 -62 0 0 206 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 75 4612 0 0 4520 21 0 0 318 0 0 0

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 77 4706 0 0 4613 22 0 0 325 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 77 4706 0 0 4613 22 0 0 325 0 0 0

PCE 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

MLF 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

FinalVolume: 77 4706 0 0 4613 22 0 0 325 0 0 0

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.93 0.89 1.00 1.00 0.89 0.89 1.00 1.00 0.85 1.00 1.00 1.00

Lanes: 1.00 4.00 0.00 0.00 3.98 0.02 0.00 0.00 1.00 0.00 0.00 0.00

Final Sat.: 1769 6778 0 0 6739 32 0 0 1611 0 0 0

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Capacity Analysis Module:

Vol/Sat: 0.04 0.69 0.00 0.00 0.68 0.68 0.00 0.00 0.20 0.00 0.00 0.00

Crit Moves: \*\*\*\*

Green/Cycle: 0.11 0.80 0.00 0.00 0.69 0.69 0.00 0.00 0.20 0.00 0.00 0.00

Volume/Cap: 0.39 0.87 0.00 0.00 1.00 1.00 0.00 0.00 1.00 0.00 0.00 0.00

Delay/Veh: 38.4 7.7 0.0 0.0 26.3 26.3 0.0 0.0 85.3 0.0 0.0 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 38.4 7.7 0.0 0.0 26.3 26.3 0.0 0.0 85.3 0.0 0.0 0.0

LOS by Move: D A A A C C A A F A A A

HCM2kAvgQ: 2 27 0 0 36 36 0 0 14 0 0 0

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly

\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 0.801  
Loss Time (sec): 12 Average Delay (sec/veh): 40.5  
Optimal Cycle: 83 Level Of Service: D

\*\*\*\*\*

Street Name: Junipero Serra / I-280 NB On-Ramp John Daly

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Split Phase Split Phase Split Phase Split Phase

Rights: Ovl Ovl Include Ovl

Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

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Volume Module:

Base Vol: 337 335 364 104 169 262 665 779 99 59 746 303  
Growth Adj: 1.05 1.12 1.14 1.00 1.00 1.00 1.14 1.16 1.00 1.00 1.00 1.05  
Initial Bse: 354 374 414 104 169 262 756 902 99 59 746 318  
Added Vol: 73 22 0 0 0 0 1 11 201 0 0 7  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 427 396 414 104 169 262 757 913 300 59 746 325  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 435 404 422 106 172 267 773 931 306 60 761 332  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 435 404 422 106 172 267 773 931 306 60 761 332  
PCE 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  
MLF 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  
FinalVolume: 435 404 422 106 172 267 773 931 306 60 761 332

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.86 0.86 0.93 0.89 0.89 0.87 0.89 0.89 0.89 0.89 0.83  
Lanes: 2.00 1.47 1.53 1.00 0.78 1.22 2.00 2.00 1.00 1.00 3.00 1.00  
Final Sat.: 3432 2395 2503 1769 1327 2058 3289 3391 1695 1688 5063 1583

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Capacity Analysis Module:

Vol/Sat: 0.13 0.17 0.17 0.06 0.13 0.13 0.23 0.27 0.18 0.04 0.15 0.21  
Crit Moves: \*\*\*\* \*\*

Green/Cycle: 0.21 0.21 0.40 0.16 0.16 0.51 0.34 0.34 0.34 0.19 0.19 0.35  
Volume/Cap: 0.60 0.80 0.42 0.37 0.80 0.26 0.68 0.80 0.53 0.19 0.80 0.60  
Delay/Veh: 46.0 51.4 27.3 47.5 58.6 17.7 35.9 39.1 33.0 42.8 53.1 35.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 46.0 51.4 27.3 47.5 58.6 17.7 35.9 39.1 33.0 42.8 53.1 35.2  
LOS by Move: D D C D E B D D C D D D  
HCM2kAvgQ: 8 13 8 4 10 5 13 17 9 2 12 11

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly

\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.620  
Loss Time (sec): 8 Average Delay (sec/veh): 20.4  
Optimal Cycle: 41 Level Of Service: C

\*\*\*\*\*

Street Name: Junipero Serra / I-280 SB On-Ramp John Daly

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Split Phase Split Phase Split Phase Split Phase

Rights: Ovl Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 0 0 2 0 0 0 0 0 0 0 2 1 0 2 0 2 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 0 316 0 0 0 0 1227 419 499 1001 0  
Growth Adj: 1.02 1.00 1.01 1.13 1.23 1.13 1.01 1.03 1.13 1.13 1.03 1.02  
Initial Bse: 0 0 320 0 0 0 0 1261 472 564 1035 0  
Added Vol: 0 0 23 0 0 0 0 190 47 0 73 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 343 0 0 0 0 1451 519 564 1108 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 350 0 0 0 0 1480 530 575 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 350 0 0 0 0 1480 530 575 0 0  
PCE 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  
MLF 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  
FinalVolume: 0 0 350 0 0 0 0 1480 530 575 0 0

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.86 0.86 0.90 0.95 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.21 0.79 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3598 1287 3432 3610 0

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.13 0.00 0.00 0.00 0.00 0.41 0.41 0.17 0.00 0.00  
Crit Moves: \*\*\*\* \*\*

Green/Cycle: 0.00 0.00 0.27 0.00 0.00 0.00 0.00 0.66 0.66 0.27 0.00 0.00  
Volume/Cap: 0.00 0.00 0.47 0.00 0.00 0.00 0.00 0.62 0.62 0.62 0.00 0.00  
Delay/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0  
LOS by Move: A A D A A A A B B D A A  
HCM2kAvgQ: 0 0 6 0 0 0 0 16 16 9 0 0

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.829  
Loss Time (sec): 10 Average Delay (sec/veh): 28.9  
Optimal Cycle: 89 Level Of Service: C

\*\*\*\*\*  
Street Name: 19th Taraval  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.508  
Loss Time (sec): 9 Average Delay (sec/veh): 119.3  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Sloat  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.093  
Loss Time (sec): 9 Average Delay (sec/veh): 46.1  
Optimal Cycle: 180 Level Of Service: D

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: WideBypass WideBypass Include Include  
Min. Green: 54 54 54 54 54 54 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 1 0 0 0 2 1 0 1 0 0 1 0 0

Volume Module:  
Base Vol: 2 1809 45 0 2766 187 83 274 47 21 230 157  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 2 2056 52 0 3020 213 96 325 54 24 273 182  
Added Vol: 0 112 0 0 35 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2 2168 52 0 3055 213 96 325 54 24 273 182  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2 2212 53 0 3118 217 98 332 55 24 278 186  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2 2212 53 0 3118 217 98 332 55 24 278 186  
PCE 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  
MLF 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  
FinalVolume: 2 2212 53 0 3118 217 98 332 55 24 278 186

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.78 0.78 0.78 1.00 0.88 0.88 0.83 0.96 0.96 0.80 0.80 0.80  
Lanes: 0.01 2.92 0.07 0.00 2.80 0.20 1.00 0.86 0.14 0.05 0.57 0.38  
Final Sat.: 5 4336 105 0 4704 328 1570 1565 258 76 867 580

Capacity Analysis Module:  
Vol/Sat: 0.51 0.51 0.51 0.00 0.66 0.66 0.06 0.21 0.21 0.32 0.32 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.60 0.60 0.60 0.60 0.60 0.60 0.29 0.29 0.29 0.29 0.29 0.29  
Volume/Cap: 0.85 0.85 0.85 0.00 1.10 1.10 0.21 0.72 0.72 1.09 1.09 1.09  
Delay/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
LOS by Move: B B B A E E C D D F F F  
HCM2kAvgQ: 16 16 16 0 46 46 2 10 10 23 23 23

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.865  
Loss Time (sec): 9 Average Delay (sec/veh): 23.1  
Optimal Cycle: 90 Level Of Service: C

Street Name: 19th Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 56 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 1848 21 0 2818 58 74 125 90 10 148 14  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 0 2100 24 0 3077 66 86 148 103 11 176 16  
Added Vol: 0 105 3 0 19 16 8 14 0 7 30 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2205 27 0 3096 82 94 162 103 18 206 16  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2250 28 0 3159 84 96 166 105 19 210 17  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2250 28 0 3159 84 96 166 105 19 210 17  
PCE 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  
MLF 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  
FinalVolume: 0 2250 28 0 3159 84 96 166 105 19 210 17

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.66 0.66 0.66 0.94 0.94 0.94  
Lanes: 0.00 2.96 0.04 0.00 2.92 0.08 1.00 1.23 0.77 0.08 0.85 0.07  
Final Sat.: 0 5011 62 0 4932 131 1251 1533 969 136 1522 120

Capacity Analysis Module:  
Vol/Sat: 0.00 0.45 0.45 0.00 0.64 0.64 0.08 0.11 0.11 0.14 0.14 0.14  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.62 0.62 0.62 0.62 0.62 0.62 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.00 0.72 0.72 0.00 1.03 1.03 0.27 0.38 0.38 0.49 0.49 0.49  
Delay/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
LOS by Move: A A A A C C C C C C C  
HCM2kAvgQ: 0 11 11 0 36 36 2 3 3 6 6 6

Note: Queue reported is the number of cars per lane.





19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1160 19th / Holloway  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 0.786  
Loss Time (sec): 0 Average Delay (sec/veh): 62.2  
Optimal Cycle: 79 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 48 48 48 48 48 48 31 31 31 31 31 31  
Y+R: 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0  
Lanes: 0 0 2 1 0 0 0 4 0 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 0 2288 130 0 3078 138 56 143 55 37 370 50  
Growth Adj: 1.07 1.14 1.18 1.16 1.09 1.05 1.18 1.23 1.16 1.05 1.00 1.07  
Initial Bse: 0 2601 154 0 3361 144 66 176 64 39 370 53  
Added Vol: 0 29 -21 0 -22 22 66 34 85 -4 37 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2630 133 0 3339 166 132 210 149 35 407 53  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2683 135 0 3407 170 135 214 152 35 415 54  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2683 135 0 3407 170 135 214 152 35 415 54  
PCE 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  
MLF 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  
FinalVolume: 0 2683 135 0 3407 170 135 214 152 35 415 54

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.89 1.00 0.94 0.83 0.52 0.52 0.52 0.67 0.67 0.67  
Lanes: 0.00 2.85 0.15 0.00 4.00 1.00 0.54 0.85 0.61 0.14 1.64 0.22  
Final Sat.: 0 5033 254 0 7117 1583 533 844 599 177 2084 273

Capacity Analysis Module:  
Vol/Sat: 0.00 0.53 0.53 0.00 0.48 0.11 0.25 0.25 0.25 0.20 0.20 0.20  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.47 0.47 0.47 0.47 0.47 0.47 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.00 1.13 1.13 0.00 1.02 0.23 0.94 0.94 0.94 0.74 0.74 0.74  
Delay/Veh: 0.0 89.6 89.6 0.0 44.1 14.7 65.5 65.5 65.5 43.6 43.6 43.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 89.6 89.6 0.0 44.1 14.7 65.5 65.5 65.5 43.6 43.6 43.6  
LOS by Move: A F F A D B E E E D D D  
HCM2kAvgQ: 0 48 46 0 33 2 13 13 13 10 10 10

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 0.752  
Loss Time (sec): 0 Average Delay (sec/veh): 75.7  
Optimal Cycle: 75 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Crespi  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Include Include  
Min. Green: 48 48 48 53 53 53 22 22 22 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 0 0 0 3 0 1 1 0 0 0 1 0 0 0 0 0

Volume Module:  
Base Vol: 0 2266 0 0 3060 110 152 0 68 0 0 0  
Growth Adj: 1.14 1.14 1.05 1.02 1.09 1.12 1.05 1.00 1.02 1.12 1.14 1.14  
Initial Bse: 0 2576 0 0 3342 123 159 0 70 0 0 0  
Added Vol: 0 61 0 0 102 -43 -53 0 38 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2637 0 0 3444 80 106 0 108 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2690 0 0 3514 0 108 0 110 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2690 0 0 3514 0 108 0 110 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2690 0 0 3514 0 108 0 110 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 1.00 0.93 1.00 0.83 1.00 1.00 1.00  
Lanes: 0.00 3.00 0.00 0.00 3.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 0 5083 0 0 5083 1900 1769 0 1583 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.53 0.00 0.00 0.69 0.00 0.06 0.00 0.07 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.47 0.47 0.47 0.61 0.61 0.61 0.29 0.29 0.29 0.00 0.00 0.00  
Volume/Cap: 0.00 1.12 0.00 0.00 1.13 0.00 0.21 0.00 0.24 0.00 0.00 0.00  
Delay/Veh: 0.0 83.2 0.0 0.0 72.8 0.0 30.3 0.0 30.8 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 83.2 0.0 0.0 72.8 0.0 30.3 0.0 30.8 0.0 0.0 0.0  
LOS by Move: A F A A E A C A C A A A  
HCM2kAvgQ: 0 50 0 0 58 0 3 0 3 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumaseero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.703  
Loss Time (sec): 8 Average Delay (sec/veh): 19.7  
Optimal Cycle: 91 Level Of Service: B

\*\*\*\*\*  
Street Name: Chumaseero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 15 15 15 21 47 47 21 47 47  
Y+R: 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 0 0 0 0 2 1 0

Volume Module:  
Base Vol: 0 0 0 145 0 54 26 1538 0 0 1684 176  
Growth Adj: 1.08 1.06 1.07 1.01 1.00 1.02 1.07 1.08 1.01 1.02 1.09 1.08  
Initial Bse: 0 0 0 147 0 55 28 1657 0 0 1842 190  
Added Vol: 0 0 0 65 0 -14 -18 559 0 0 151 1  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 212 0 41 10 2216 0 0 1993 191  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 216 0 42 10 2261 0 0 2034 194  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 216 0 42 10 2261 0 0 2034 194  
PCE 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  
MLF 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  
FinalVolume: 0 0 0 216 0 42 10 2261 0 0 2034 194

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.80 0.80 1.00 0.69 0.75 0.69 0.93 0.93 1.00 1.00 0.88 0.88  
Lanes: 0.00 1.00 0.00 0.84 0.00 0.16 1.00 2.00 0.00 0.00 2.74 0.26  
Final Sat.: 0 1520 0 1098 0 213 1769 3538 0 0 4579 438

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.20 0.00 0.20 0.01 0.64 0.00 0.00 0.44 0.44  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.00 0.00 0.00 0.22 0.00 0.22 0.21 0.70 0.00 0.00 0.49 0.49  
Volume/Cap: 0.00 0.00 0.00 0.90 0.00 0.90 0.03 0.91 0.00 0.00 0.90 0.90  
Delay/Veh: 0.0 0.0 0.0 71.4 0.0 71.4 31.5 9.4 0.0 0.0 24.1 24.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 71.4 0.0 71.4 31.5 9.4 0.0 0.0 24.1 24.1  
LOS by Move: A A A E A E C A A A C C  
HCM2kAvgQ: 0 0 0 11 0 11 0 21 0 0 25 25

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1182 Thomas More / brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.747  
Loss Time (sec): 8 Average Delay (sec/veh): 23.0  
Optimal Cycle: 96 Level Of Service: C

\*\*\*\*\*  
Street Name: Thomas More Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 0 0 0 21 47 47 21 47 47  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 2 1 0 1 0 3 0 0

Volume Module:  
Base Vol: 44 0 99 0 0 0 0 1613 70 175 1808 0  
Growth Adj: 1.08 1.06 1.07 1.01 1.00 1.02 1.07 1.08 1.01 1.02 1.09 1.08  
Initial Bse: 47 0 106 0 0 0 0 1737 71 179 1978 0  
Added Vol: 0 0 0 0 0 0 0 624 0 0 151 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 47 0 106 0 0 0 0 2361 71 179 2129 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 48 0 108 0 0 0 0 2410 72 183 2172 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 48 0 108 0 0 0 0 2410 72 183 2172 0  
PCE 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  
MLF 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  
FinalVolume: 48 0 108 0 0 0 0 2410 72 183 2172 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 1.00 0.88 1.00 1.00 1.00 1.00 0.89 0.89 0.93 0.89 1.00  
Lanes: 0.31 0.00 0.69 0.00 0.00 0.00 0.00 2.91 0.09 1.00 3.00 0.00  
Final Sat.: 515 0 1149 0 0 0 0 4915 148 1769 5083 0

Capacity Analysis Module:  
Vol/Sat: 0.09 0.00 0.09 0.00 0.00 0.00 0.00 0.49 0.49 0.10 0.43 0.00  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.20 0.00 0.20 0.00 0.00 0.00 0.00 0.51 0.51 0.21 0.72 0.00  
Volume/Cap: 0.47 0.00 0.47 0.00 0.00 0.00 0.00 0.96 0.96 0.49 0.59 0.00  
Delay/Veh: 40.0 0.0 40.0 0.0 0.0 0.0 0.0 34.3 34.3 39.4 7.6 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 40.0 0.0 40.0 0.0 0.0 0.0 0.0 34.3 34.3 39.4 7.6 0.0  
LOS by Move: D A D A A A A C C D A A  
HCM2kAvgQ: 5 0 5 0 0 0 0 29 29 5 12 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.799  
Loss Time (sec): 10 Average Delay (sec/veh): 43.0  
Optimal Cycle: 60 Level Of Service: D

Street Name: Sunset Taraval  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

Volume Module:  
Base Vol: 0 2021 17 0 1965 11 79 190 53 83 169 38  
Growth Adj: 1.10 1.12 1.06 1.05 1.08 1.08 1.06 1.01 1.05 1.08 1.08 1.10  
Initial Bse: 0 2254 18 0 2130 12 84 193 56 90 183 42  
Added Vol: 0 342 0 0 212 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2596 18 0 2342 12 84 193 56 90 183 42  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2649 18 0 2390 12 86 197 57 92 186 43  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2649 18 0 2390 12 86 197 57 92 186 43  
PCE 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  
MLF 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  
FinalVolume: 0 2649 18 0 2390 12 86 197 57 92 186 43

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.58 0.95 0.95 0.54 0.95 0.95  
Lanes: 0.00 2.98 0.02 0.00 2.98 0.02 1.00 0.78 0.22 1.00 0.81 0.19  
Final Sat.: 0 5043 35 0 5053 26 1097 1396 403 1035 1473 337

Capacity Analysis Module:  
Vol/Sat: 0.00 0.53 0.53 0.00 0.47 0.47 0.08 0.14 0.14 0.09 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 1.09 1.09 0.00 0.98 0.98 0.22 0.40 0.40 0.25 0.36 0.36  
Delay/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1  
LOS by Move: A E E A C C B B B B B B  
HCM2kAvgQ: 0 33 33 0 24 24 1 4 4 1 3 3

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.664  
Loss Time (sec): 9 Average Delay (sec/veh): 13.7  
Optimal Cycle: 59 Level Of Service: B

Street Name: Sunset Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1318 12 0 1735 81 54 83 18 47 23 192  
Growth Adj: 1.00 1.00 1.07 1.11 1.07 1.01 1.07 1.15 1.11 1.01 1.00 1.00  
Initial Bse: 0 1318 13 0 1853 82 58 95 20 48 23 192  
Added Vol: 0 468 0 0 247 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1786 13 0 2100 82 58 95 20 48 23 192  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 1822 13 0 2143 84 59 97 20 49 23 196  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1822 13 0 2143 84 59 97 20 49 23 196  
PCE 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  
MLF 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  
FinalVolume: 0 1822 13 0 2143 84 59 97 20 49 23 196

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.87 0.87 0.87 0.71 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.00 2.89 0.11 0.33 0.55 0.12 1.00 1.00 1.00  
Final Sat.: 0 5042 36 0 4863 190 550 908 190 1354 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.36 0.36 0.00 0.44 0.44 0.11 0.11 0.11 0.04 0.01 0.12  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 0.68 0.68 0.00 0.83 0.83 0.34 0.34 0.34 0.11 0.04 0.39  
Delay/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3  
LOS by Move: A B B A B B B B B B B B  
HCM2kAvgQ: 0 8 8 0 15 15 3 3 3 1 0 3

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1210 Skyline / Sloat / 39th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.692  
Loss Time (sec): 0 Average Delay (sec/veh): 17.5  
Optimal Cycle: 0 Level Of Service: C

\*\*\*\*\*  
Street Name: Skyline / 39th Sloat  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control (Stop Sign, Ignore), Rights (Include, Ignore), Min. Green, and Lanes.

Volume Module:

Table showing traffic volume data: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table showing saturation flow data: Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table showing capacity analysis data: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1221 Skyline / Lake Merced (WBR)  
\*\*\*\*\*

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: C[ 15.1]

\*\*\*\*\*  
Street Name: Skyline Lake Merced (WBR)  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control (Uncontrolled, Stop Sign), Rights (Include), Lanes.

Volume Module:

Table showing traffic volume data: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module:

Table showing critical gap data: Critical Gp, FollowUpTim.

Capacity Module:

Table showing capacity data: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level of Service Module:

Table showing level of service data: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: F[ 52.8]

Street Name: Skyline Lake Merced (WBLT)

Table with columns: Approach, Movement, Control, Rights, Lanes. Rows for North Bound, South Bound, East Bound, West Bound.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Critical Gap Module: Critical Gap, FollowUpTim.

Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1230 Sunset / Lake Merced

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: F[425.0]

Street Name: Sunset Lake Merced

Table with columns: Approach, Movement, Control, Rights, Lanes. Rows for North Bound, South Bound, East Bound, West Bound.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Critical Gap Module: Critical Gap, FollowUpTim.

Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1240 Lake Merced / Winston  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.805  
Loss Time (sec): 9 Average Delay (sec/veh): 96.8  
Optimal Cycle: 89 Level Of Service: F

Street Name: Lake Merced Winston  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: WideBypass Include Include Include  
Min. Green: 34 34 34 17 55 55 0 0 0 25 25 25  
Y+R: 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0  
Lanes: 0 0 2 1 0 2 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1384 215 218 1789 0 0 0 0 196 0 181  
Growth Adj: 1.00 1.14 1.18 1.16 1.09 1.00 1.18 1.22 1.16 1.00 1.00 1.00  
Initial Bse: 0 1573 254 252 1954 0 0 0 0 196 0 181  
Added Vol: 0 393 266 116 131 0 0 0 0 139 0 74  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1966 520 368 2085 0 0 0 0 335 0 255  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2006 530 376 2127 0 0 0 0 342 0 260  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2006 530 376 2127 0 0 0 0 342 0 260  
PCE 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  
MLF 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  
FinalVolume: 0 2006 530 376 2127 0 0 0 0 342 0 260

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.86 0.86 0.90 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.83  
Lanes: 0.00 2.37 0.63 2.00 2.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00  
Final Sat.: 0 3896 1030 3432 3538 0 0 0 0 3432 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.51 0.51 0.11 0.60 0.00 0.00 0.00 0.00 0.10 0.00 0.16  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.38 0.38 0.38 0.19 0.62 0.62 0.00 0.00 0.00 0.28 0.28 0.28  
Volume/Cap: 0.00 1.34 1.34 0.56 0.97 0.00 0.00 0.00 0.00 0.36 0.00 0.59  
Delay/Veh: 0.0 184 183.5 36.2 23.0 0.0 0.0 0.0 0.0 27.1 0.0 33.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 184 183.5 36.2 23.0 0.0 0.0 0.0 0.0 27.1 0.0 33.8  
LOS by Move: A F F D C A A A A C A C  
HCM2kAvgQ: 0 56 56 5 32 0 0 0 0 4 0 7

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.400  
Loss Time (sec): 7 Average Delay (sec/veh): 160.6  
Optimal Cycle: 180 Level Of Service: F

Street Name: Lake Merced Font  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1746 48 147 1549 0 0 0 0 43 0 304  
Growth Adj: 1.09 1.14 1.07 1.05 1.09 1.07 1.07 1.01 1.05 1.07 1.04 1.09  
Initial Bse: 0 1985 51 154 1692 0 0 0 0 46 0 331  
Added Vol: 0 414 -9 124 178 0 0 0 0 -8 0 350  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2399 42 278 1870 0 0 0 0 38 0 681  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2447 0 284 1908 0 0 0 0 39 0 695  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2447 0 284 1908 0 0 0 0 39 0 695  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2447 0 284 1908 0 0 0 0 39 0 695

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.69 0.00 0.16 0.54 0.00 0.00 0.00 0.00 0.02 0.00 0.44  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.45 0.00 0.96 0.80 0.00 0.00 0.00 0.00 0.09 0.00 1.80  
Delay/Veh: 0.0 224 0.0 81.0 6.3 0.0 0.0 0.0 0.0 26.7 0.0 402.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 224 0.0 81.0 6.3 0.0 0.0 0.0 0.0 26.7 0.0 402.2  
LOS by Move: A F A F A A A A A C A F  
HCM2kAvgQ: 0 82 0 12 12 0 0 0 0 1 0 58

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1261 Lake Merced / Vidal  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.925  
Loss Time (sec): 12 Average Delay (sec/veh): 45.2  
Optimal Cycle: 122 Level Of Service: D

Street Name: Lake Merced Vidal  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1899 29 19 1592 0 0 0 0 7 0 11  
Growth Adj: 1.00 1.14 1.11 1.09 1.09 1.00 1.00 1.00 1.00 1.10 1.00 1.12  
Initial Bse: 0 2165 32 21 1735 0 0 0 0 8 0 12  
Added Vol: 0 342 43 65 104 0 0 0 0 64 0 63  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2507 75 86 1839 0 0 0 0 72 0 75  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2558 77 87 1877 0 0 0 0 73 0 77  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2558 77 87 1877 0 0 0 0 73 0 77  
PCE 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  
MLF 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  
FinalVolume: 0 2558 77 87 1877 0 0 0 0 73 0 77

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.72 0.05 0.05 0.53 0.00 0.00 0.00 0.00 0.04 0.00 0.05  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.65 0.65 0.65 0.10 0.79 0.79 0.00 0.00 0.00 0.13 0.13 0.13  
Volume/Cap: 0.00 1.11 0.07 0.49 0.67 0.00 0.00 0.00 0.00 0.32 0.00 0.37  
Delay/Veh: 0.0 74.9 6.6 52.2 6.0 0.0 0.0 0.0 0.0 43.1 0.0 44.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 74.9 6.6 52.2 6.0 0.0 0.0 0.0 0.0 43.1 0.0 44.9  
LOS by Move: A E A D A A A A A D A D  
HCM2kAvgQ: 0 56 1 2 14 0 0 0 0 2 0 3

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1262 Lake Merced / Acevedo  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.962  
Loss Time (sec): 12 Average Delay (sec/veh): 43.3  
Optimal Cycle: 149 Level Of Service: D

Street Name: Lake Merced Acevedo  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0

Volume Module:  
Base Vol: 0 1913 17 10 1588 0 0 0 0 7 0 15  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.12 1.00  
Initial Bse: 0 2181 19 11 1731 0 0 0 0 8 0 15  
Added Vol: 0 299 25 35 133 0 0 0 0 63 0 87  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2480 44 46 1864 0 0 0 0 71 0 102  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2530 45 47 1902 0 0 0 0 72 0 104  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2530 45 47 1902 0 0 0 0 72 0 104  
PCE 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  
MLF 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  
FinalVolume: 0 2530 45 47 1902 0 0 0 0 72 0 104

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.88 1.00 0.88  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.41 0.00 0.59  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 687 0 992

Capacity Analysis Module:  
Vol/Sat: 0.00 0.72 0.03 0.03 0.54 0.00 0.00 0.00 0.00 0.10 0.00 0.10  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.65 0.65 0.65 0.10 0.79 0.79 0.00 0.00 0.00 0.13 0.13 0.13  
Volume/Cap: 0.00 1.10 0.04 0.26 0.68 0.00 0.00 0.00 0.00 0.81 0.00 0.81  
Delay/Veh: 0.0 70.1 6.4 45.2 6.1 0.0 0.0 0.0 0.0 68.8 0.0 68.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 70.1 6.4 45.2 6.1 0.0 0.0 0.0 0.0 68.8 0.0 68.8  
LOS by Move: A E A D A A A A A E A E  
HCM2kAvgQ: 0 55 0 1 15 0 0 0 0 8 0 8

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.994  
Loss Time (sec): 12 Average Delay (sec/veh): 37.9  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 1690 1 5 1590 0 0 0 25 0 24  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.10 1.12  
Initial Bse: 0 1921 1 5 1736 0 0 0 27 0 27  
Added Vol: 0 184 2 17 179 0 0 0 233 0 140  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2105 3 22 1915 0 0 0 260 0 167  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2148 3 23 1954 0 0 0 266 0 170  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2148 3 23 1954 0 0 0 266 0 170  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2148 3 23 1954 0 0 0 266 0 170

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.90  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.61 0.00 0.39  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 1042 0 668

Capacity Analysis Module:  
Vol/Sat: 0.00 0.61 0.00 0.01 0.55 0.00 0.00 0.00 0.00 0.25 0.00 0.25  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.75 0.75 0.00 0.00 0.00 0.17 0.17 0.17  
Volume/Cap: 0.00 0.96 0.00 0.13 0.74 0.00 0.00 0.00 0.00 1.50 0.00 1.50  
Delay/Veh: 0.0 20.9 3.4 42.5 1.9 0.0 0.0 0.0 0.0 283.4 0.0 283.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 20.9 3.4 42.5 1.9 0.0 0.0 0.0 0.0 283.4 0.0 283.4  
LOS by Move: A C A D A A A A A F A F  
HCM2kAvgQ: 0 29 0 1 3 0 0 0 0 33 0 33

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1264 Lake Merced / Gonzalez  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.036  
Loss Time (sec): 12 Average Delay (sec/veh): 47.1  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Lake Merced Gonzalez  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 0 0 1

Volume Module:  
Base Vol: 0 1899 97 6 1609 0 0 0 39 0 9  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.10 1.12  
Initial Bse: 0 2165 108 7 1754 0 0 0 43 0 10  
Added Vol: 0 136 145 21 391 0 0 0 360 0 51  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2301 253 28 2145 0 0 0 403 0 61  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2348 258 28 2189 0 0 0 411 0 62  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2348 258 28 2189 0 0 0 411 0 62  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2348 258 28 2189 0 0 0 411 0 62

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.66 0.16 0.02 0.62 0.00 0.00 0.00 0.00 0.23 0.00 0.04  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.75 0.75 0.00 0.00 0.00 0.17 0.17 0.17  
Volume/Cap: 0.00 1.05 0.26 0.16 0.82 0.00 0.00 0.00 0.00 1.37 0.00 0.23  
Delay/Veh: 0.0 53.5 8.8 43.1 11.3 0.0 0.0 0.0 0.0 226.6 0.0 37.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 53.5 8.8 43.1 11.3 0.0 0.0 0.0 0.0 226.6 0.0 37.9  
LOS by Move: A D A D B A A A A F A D  
HCM2kAvgQ: 0 44 3 1 25 0 0 0 28 0 2

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4a

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 1.784  
Loss Time (sec): 15 Average Delay (sec/veh): 122.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood										
	North Bound		South Bound		East Bound		West Bound								
Approach:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted		Protected		Protected		Protected								
Rights:	Ovl		Include		Include		Ovl								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	2

Volume Module:

Base Vol:	0	416	209	1478	225	0	0	0	0	139	0	1483
Growth Adj:	1.13	1.14	1.29	1.26	1.09	1.11	1.29	1.44	1.26	1.11	1.12	1.13
Initial Bse:	0	473	269	1868	246	0	0	0	0	154	0	1674
Added Vol:	0	117	-18	477	274	0	0	0	0	-16	0	164
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	590	251	2345	520	0	0	0	0	138	0	1838
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	602	256	2393	0	0	0	0	0	141	0	1875
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	602	256	2393	0	0	0	0	0	141	0	1875
PCE 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
MLF 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
FinalVolume:	0	602	256	2393	0	0	0	0	0	141	0	1875

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	2786

Capacity Analysis Module:

Vol/Sat:	0.00	0.17	0.16	0.70	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.67
Crit Moves:	****			****								****
Green/Cycle:	0.16	0.16	0.43	0.48	0.69	0.69	0.00	0.00	0.00	0.22	0.22	0.75
Volume/Cap:	0.00	1.04	0.38	1.45	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.90
Delay/Veh:	0.0	94.2	18.9	227.4	0.0	0.0	0.0	0.0	0.0	37.1	0.0	16.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	94.2	18.9	227.4	0.0	0.0	0.0	0.0	0.0	37.1	0.0	16.9
LOS by Move:	A	F	B	F	A	A	A	A	A	D	A	B
HCM2kAvgQ:	0	17	5	86	0	0	0	0	0	4	0	32

Note: Queue reported is the number of cars per lane.

Tier 4B Conditions  
Weekday PM Peak Hour



19th Ave CS  
Tier 4b

## Scenario Report

Scenario: Tier 4b PM  
 Command: Default Command  
 Volume: Tier 4b PM  
 Geometry: Tier 4b PM  
 Impact Fee: Default Impact Fee  
 Trip Generation: Projects PM  
 Trip Distribution: PM  
 Paths: Tier 4a/b  
 Routes: Tier 4  
 Configuration: Tier 4

19th Ave CS  
Tier 4b

Impact Analysis Report  
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
#1010 Claremont / Taraval / Dewey /	A	7.1	0.653	A	7.4	0.672	+ 0.020 V/C
#1020 Santa Clara / Portola / Vicent	C	30.7	0.841	D	40.5	0.936	+ 9.801 D/V
#1030 Junipero Serra / Sloat / West	F	101.4	1.113	F	117.2	1.170	+15.817 D/V
#1040 Junipero Serra / Ocean / Eucal	D	39.7	0.820	E	70.2	1.063	+30.533 D/V
#1050 Junipero Serra / Winston / Mer	C	30.4	0.678	D	49.3	1.062	+18.865 D/V
#1060 Junipero Serra / Holloway	C	30.4	0.692	D	37.4	0.724	+ 7.049 D/V
#1070 Junipero Serra / 19th	F	80.5	1.026	F	102.0	1.081	+21.551 D/V
#1075 Junipero Serra / Chumasero	A	8.6	0.914	C	27.4	1.051	+18.850 D/V
#1080 Junipero Serra / I-280 NB On-R	F	129.3	1.294	F	151.8	1.400	+22.595 D/V
#1090 Junipero Serra / I-280 SB On-R	D	49.9	1.054	F	89.9	1.172	+40.016 D/V
#1100 19th / Taraval	B	18.4	0.822	C	21.6	0.865	+ 3.186 D/V
#1110 19th / Sloat	F	127.7	1.550	F	154.7	1.630	+26.999 D/V
#1120 19th / Ocean	F	146.9	1.568	F	180.5	1.633	+33.636 D/V
#1130 19th / Eucalyptus	E	69.7	1.079	F	86.4	1.180	+16.707 D/V
#1140 19th / Winston	F	97.7	1.325	F	207.7	1.699	+109.967 D/
#1150 19th / Buckingham	F	408.9	1.759	F	604.0	2.196	+195.131 D/
#1160 19th / Holloway	A	8.1	0.801	F	90.8	0.929	+82.773 D/V
#1170 19th / Crespi	D	52.6	0.814	E	74.7	0.807	+22.076 D/V
#1181 Chumasero / Brotherhood	B	15.8	0.720	F	85.3	0.934	+69.466 D/V
#1182 Thomas More / brotherhood	B	13.7	0.462	C	21.9	0.572	+ 8.181 D/V
#1190 Sunset / Taraval	D	49.8	0.843	F	125.6	0.960	+75.784 D/V
#1200 Sunset / Ocean	B	13.3	0.687	C	30.5	0.827	+17.163 D/V
#1210 Skyline / Sloat / 39th	D	27.0	0.908	D	29.4	0.925	+ 0.017 V/C
#1221 Skyline / Lake Merced (WBR)	C	17.4	0.416	C	17.5	0.417	+ 0.048 D/V

19th Ave CS  
Tier 4b

Intersection	Base		Future		Change in	
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C		
#1222 Skyline / Lake Merced (WBLT)	F 116.8	0.894	F 118.6	0.900	+ 1.760	D/V
#1230 Sunset / Lake Merced	F OVRFL	1.328	F OVRFL	2.491	Nan	D/V
#1240 Lake Merced / Winston	E 66.6	0.971	F 188.9	1.372	+122.395	D/
#1250 Lake Merced / Font	D 46.9	0.783	F 179.5	1.546	+132.611	D/
#1261 Lake Merced / Vidal	C 32.9	0.687	D 36.0	0.887	+ 3.143	D/V
#1262 Lake Merced / Acevedo	C 32.4	0.705	C 34.6	0.959	+ 2.213	D/V
#1263 Lake Merced / Higuera	E 77.3	0.741	D 45.4	1.135	-31.909	D/
#1264 Lake Merced / Gonzalez	C 33.9	0.715	D 52.4	1.032	+18.414	D/V
#1270 Lake Merced / Brotherhood	E 68.7	1.689	F 186.0	2.199	+117.295	D/

19th Ave CS  
Tier 4b

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*  
Average Delay (sec/veh): 7.4      Level Of Service: A  
\*\*\*\*\*

Street Name:	Claremont				Taraval / Dewey				
	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Yield Sign		Yield Sign		Yield Sign		Yield Sign		
Lanes:	1		1		1		1		

Volume Module:

Base Vol:	17	24	239	50	63	5	10	259	55	324	338	31
Growth Adj:	1.09	1.10	1.07	1.06	1.09	1.08	1.07	1.04	1.06	1.08	1.08	1.09
Initial Bse:	18	26	255	53	69	5	11	269	59	351	364	34
Added Vol:	1	0	16	0	0	0	0	0	0	22	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	26	271	53	69	5	11	269	59	373	364	34
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	20	27	277	54	70	6	11	275	60	381	371	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	27	277	54	70	6	11	275	60	381	371	34
PCE 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
MLF 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
FinalVolume:	20	27	277	54	70	6	11	275	60	381	371	34

PCE Module:

AutoPCE:	20	27	277	54	70	6	11	275	60	381	371	34
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	20	27	277	54	70	6	11	275	60	381	371	34

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	340	771	505	58
MaxVolume:	1016	783	927	1169
PedVolume:	0	0	0	0
AdjMaxVol:	1016	783	927	1169
ApproachVol:	324	130	345	786
ApproachV/C:	0.32	0.17	0.37	0.67
ApproachDel:	5.2	5.5	6.2	9.2
ApproachLOS:	A	A	A	A
Queue:	1.4	0.6	1.7	5.5

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1020 Santa Clara / Portola / Vicente

\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.936  
Loss Time (sec): 11 Average Delay (sec/veh): 40.5  
Optimal Cycle: 111 Level Of Service: D

\*\*\*\*\*

Street Name: Santa Clara / Vicente Portola

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Permitted Permitted Protected Protected

Rights: Include Include Include Include

Min. Green: 23 23 23 23 23 23 9 36 36 9 36 36

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol: 22 273 85 86 191 48 48 1051 33 147 987 108

Growth Adj: 1.03 1.00 1.03 1.07 1.03 1.07 1.03 1.10 1.07 1.07 1.10 1.03

Initial Bse: 23 273 88 92 198 51 50 1155 35 157 1087 112

Added Vol: 0 0 0 15 0 4 0 147 0 0 246 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 23 273 88 107 198 55 50 1302 35 157 1333 112

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.95 0.98

PHF Volume: 23 279 90 109 202 56 51 1329 36 160 1403 114

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 23 279 90 109 202 56 51 1329 36 160 1403 114

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 23 279 90 109 202 56 51 1329 36 160 1403 114

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.92 0.92 0.92 0.59 0.59 0.59 0.93 0.93 0.93 0.93 0.92 0.92

Lanes: 0.06 0.71 0.23 0.30 0.55 0.15 1.00 1.95 0.05 1.00 1.85 0.15

Final Sat.: 104 1246 401 331 612 171 1769 3431 93 1769 3236 263

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Capacity Analysis Module:

Vol/Sat: 0.22 0.22 0.22 0.33 0.33 0.33 0.03 0.39 0.39 0.09 0.43 0.43

Crit Moves: \*\*\*\*

Green/Cycle: 0.30 0.30 0.30 0.30 0.30 0.30 0.11 0.45 0.45 0.11 0.45 0.45

Volume/Cap: 0.75 0.75 0.75 1.10 1.10 1.10 0.25 0.86 0.86 0.80 0.96 0.96

Delay/Veh: 34.5 34.5 34.5 106.1 106 106.1 35.5 26.1 26.1 62.9 36.9 36.9

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 34.5 34.5 34.5 106.1 106 106.1 35.5 26.1 26.1 62.9 36.9 36.9

LOS by Move: C C C F F F D C C E D D

HCM2kAvgQ: 10 10 10 17 17 17 1 19 19 6 25 25

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis

\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.170  
Loss Time (sec): 16 Average Delay (sec/veh): 117.2  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Junipero Serra / West Portal Sloat / St. Francis

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Permitted Split Phase Split Phase

Rights: Include Include Ignore Include

Min. Green: 16 53 53 32 32 32 15 15 15 20 20 20

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 1027 1005 60 0 1045 261 852 420 471 20 405 10

Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13

Initial Bse: 1162 1121 66 0 1232 303 937 455 533 23 464 11

Added Vol: 33 120 0 0 209 0 2 0 29 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 1195 1241 66 0 1441 303 939 455 562 23 464 11

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98

PHF Volume: 1219 1266 67 0 1470 310 958 464 0 24 474 12

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 1219 1266 67 0 1470 310 958 464 0 24 474 12

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

FinalVolume: 1219 1266 67 0 1470 310 958 464 0 24 474 12

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93

Lanes: 3.00 1.90 0.10 0.00 2.48 0.52 3.00 1.00 1.00 0.09 1.86 0.05

Final Sat.: 5096 3302 176 0 4130 870 5096 1843 1900 164 3276 80

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.24 0.38 0.38 0.00 0.36 0.36 0.19 0.25 0.00 0.14 0.14 0.14

Crit Moves: \*\*\*\*

Green/Cycle: 0.17 0.48 0.48 0.00 0.30 0.30 0.18 0.18 0.00 0.19 0.19 0.19

Volume/Cap: 1.39 0.80 0.80 0.00 1.17 1.17 1.04 1.39 0.00 0.76 0.76 0.76

Delay/Veh: 227.4 23.0 23.0 0.0 119 118.7 83.6 238 0.0 48.1 48.1 48.1

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 227.4 23.0 23.0 0.0 119 118.7 83.6 238 0.0 48.1 48.1 48.1

LOS by Move: F C C A F F F F A D D D

HCM2kAvgQ: 28 17 17 0 36 36 17 33 0 10 10 10

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 1.063  
Loss Time (sec): 14 Average Delay (sec/veh): 70.2  
Optimal Cycle: 180 Level Of Service: E  
\*\*\*\*\*

Street Name: Junipero Serra Ocean / Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:  
Base Vol: 176 1567 35 356 1065 96 140 356 58 77 332 333  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 199 1748 38 403 1255 112 154 386 66 90 381 377  
Added Vol: 0 107 43 35 194 9 12 91 0 25 66 34  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 199 1855 81 438 1449 121 166 477 66 115 447 411  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 203 1893 83 446 1479 123 169 486 67 117 456 419  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 203 1893 83 446 1479 123 169 486 67 117 456 419  
PCE 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  
MLF 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  
FinalVolume: 203 1893 83 446 1479 123 169 486 67 117 456 419

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.97 0.88 0.90 0.88 0.88 0.63 0.63 0.83 0.63 0.63 0.83  
Lanes: 1.00 2.86 0.14 2.00 2.77 0.23 0.52 1.48 1.00 0.20 0.80 1.00  
Final Sat.: 1751 5249 231 3432 4636 386 616 1770 1583 244 951 1583

Capacity Analysis Module:  
Vol/Sat: 0.12 0.36 0.36 0.13 0.32 0.32 0.27 0.27 0.04 0.48 0.48 0.26  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 1.05 0.84 0.84 0.81 0.66 0.66 1.02 1.02 0.11 1.77 1.77 0.62  
Delay/Veh: 124.5 25.6 25.6 53.0 17.3 17.3 76.5 76.5 20.4 397.3 397 26.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 124.5 25.6 25.6 53.0 17.3 17.3 76.5 76.5 20.4 397.3 397 26.2  
LOS by Move: F C C D B B E E C F F C  
HCM2kAvgQ: 8 18 17 6 10 10 17 17 1 49 49 11

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 1.062  
Loss Time (sec): 14 Average Delay (sec/veh): 49.3  
Optimal Cycle: 180 Level Of Service: D  
\*\*\*\*\*

Street Name: Junipero Serra Winston / Mercedes  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1 0 1 0 1

Volume Module:  
Base Vol: 224 1516 52 85 1130 117 169 152 81 74 103 36  
Growth Adj: 1.05 1.12 1.11 1.15 1.18 1.08 1.11 1.11 1.15 1.08 1.00 1.05  
Initial Bse: 236 1691 58 97 1332 127 188 169 93 80 103 38  
Added Vol: 73 15 2 1 62 156 135 157 48 1 133 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 309 1706 60 98 1394 283 323 326 141 81 236 38  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 315 1741 61 100 1422 289 330 333 144 83 241 39  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 315 1741 61 100 1422 289 330 333 144 83 241 39  
PCE 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  
MLF 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  
FinalVolume: 315 1741 61 100 1422 289 330 333 144 83 241 39

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.87 0.87 0.44 0.98 0.83 0.30 0.98 0.83  
Lanes: 1.00 2.90 0.10 1.00 2.49 0.51 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4886 172 1769 4120 836 845 1862 1583 579 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.18 0.36 0.36 0.06 0.35 0.35 0.39 0.18 0.09 0.14 0.13 0.02  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.94 0.89 0.89 0.30 0.86 0.86 1.45 0.66 0.34 0.53 0.48 0.09  
Delay/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7  
LOS by Move: E C C D C C F D C D C C  
HCM2kAvgQ: 10 18 18 2 18 18 22 8 3 3 7 1

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724  
Loss Time (sec): 14 Average Delay (sec/veh): 37.4  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1

Volume Module:

Base Vol: 183 1398 101 176 1001 104 117 140 23 143 96 107  
Growth Adj: 1.11 1.12 1.08 1.11 1.18 1.14 1.08 1.04 1.11 1.14 1.10 1.11  
Initial Bse: 202 1559 109 195 1180 118 126 145 25 163 105 118  
Added Vol: 151 60 1 31 39 41 7 -21 0 1 0 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 353 1619 110 226 1219 159 133 124 25 164 105 141  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 360 1652 112 230 1244 162 136 126 26 167 107 144  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 360 1652 112 230 1244 162 136 126 26 167 107 144  
PCE 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  
MLF 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  
FinalVolume: 360 1652 112 230 1244 162 136 126 26 167 107 144

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.88 0.88 0.93 0.88 0.88 0.67 0.98 0.83 0.64 0.98 0.83  
Lanes: 1.00 2.81 0.19 1.00 2.65 0.35 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4718 319 1769 4419 577 1275 1862 1583 1218 1862 1583

Capacity Analysis Module:

Vol/Sat: 0.20 0.35 0.35 0.13 0.28 0.28 0.11 0.07 0.02 0.14 0.06 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 1.07 0.90 0.90 0.69 0.72 0.72 0.38 0.24 0.06 0.49 0.21 0.33  
Delay/Veh: 110.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 110.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5  
LOS by Move: F C C D C C C C C C C C  
HCM2kAvgQ: 14 17 17 6 12 12 4 3 1 5 3 4

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 1.081  
Loss Time (sec): 0 Average Delay (sec/veh): 102.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Ignore Ignore Ovl Include  
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9  
Y+R: 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0  
Lanes: 3 0 1 1 0 0 0 4 0 1 0 0 1 0 3 0 0 0 1 0

Volume Module:

Base Vol: 2410 1660 25 0 1178 17 0 123 3060 0 47 50  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09  
Initial Bse: 2621 1851 27 0 1388 19 0 124 3346 0 50 54  
Added Vol: 98 186 2 0 41 0 0 37 199 0 1 26  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2719 2037 29 0 1429 19 0 161 3545 0 51 80  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2775 2079 0 0 1458 0 0 164 3617 0 52 82  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2775 2079 0 0 1458 0 0 164 3617 0 52 82  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2775 2079 0 0 1458 0 0 164 3617 0 52 82

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.93 0.95 1.00 0.89 1.00 1.00 0.98 0.73 1.00 0.90 0.90  
Lanes: 3.00 2.00 0.00 0.00 4.00 1.00 0.00 1.00 3.00 0.00 0.39 0.61  
Final Sat.: 5147 3538 0 0 6778 1900 0 1862 4178 0 661 1046

Capacity Analysis Module:

Vol/Sat: 0.54 0.59 0.00 0.00 0.22 0.00 0.00 0.09 0.87 0.00 0.08 0.08  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.50 0.50 0.50 0.20 0.20 0.20 0.14 0.14 0.68 0.14 0.14 0.14  
Volume/Cap: 1.08 1.18 0.00 0.00 1.08 0.00 0.00 0.63 1.27 0.00 0.56 0.56  
Delay/Veh: 66.0 108 0.0 0.0 95.7 0.0 0.0 59.7 132.2 0.0 57.3 57.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 66.0 108 0.0 0.0 95.7 0.0 0.0 59.7 132.2 0.0 57.3 57.3  
LOS by Move: E F A A F A A E F A E E  
HCM2kAvgQ: 46 61 0 0 20 0 0 7 87 0 5 5

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1075 Junipero Serra / Chumasero  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.051  
Loss Time (sec): 10 Average Delay (sec/veh): 27.4  
Optimal Cycle: 180 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Chumasero  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Ovl Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 4 0 0 0 0 3 1 0 0 0 0 0 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 120 4095 0 0 4238 31 0 0 125 0 0 0  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.00 1.00 1.05 1.00 1.00 1.00  
Initial Bse: 131 4567 0 0 4994 35 0 0 131 0 0 0  
Added Vol: 167 286 0 0 234 5 0 0 131 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 298 4853 0 0 5228 40 0 0 262 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 304 4952 0 0 5335 41 0 0 268 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 304 4952 0 0 5335 41 0 0 268 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 304 4952 0 0 5335 41 0 0 268 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.91 1.00 1.00 0.91 0.89 1.00 1.00 0.85 1.00 1.00 1.00  
Lanes: 1.00 4.00 0.00 0.00 3.97 0.03 0.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 1769 6947 0 0 6887 52 0 0 1611 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.17 0.71 0.00 0.00 0.77 0.77 0.00 0.00 0.17 0.00 0.00 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.16 0.90 0.00 0.00 0.74 0.74 0.00 0.00 0.16 0.00 0.00 0.00  
Volume/Cap: 1.05 0.79 0.00 0.00 1.05 1.05 0.00 0.00 1.02 0.00 0.00 0.00  
Delay/Veh: 109.0 2.5 0.0 0.0 42.1 42.1 0.0 0.0 102.0 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 109.0 2.5 0.0 0.0 42.1 42.1 0.0 0.0 102.0 0.0 0.0 0.0  
LOS by Move: F A A A D D A A F A A A  
HCM2kAvgQ: 16 17 0 0 52 50 0 0 14 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 1.400  
Loss Time (sec): 12 Average Delay (sec/veh): 151.8  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Ovl Include Ovl  
Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

Volume Module:  
Base Vol: 621 381 328 210 383 857 667 495 160 122 895 232  
Growth Adj: 1.19 1.13 1.11 1.28 1.47 1.36 1.11 1.09 1.28 1.36 1.25 1.19  
Initial Bse: 739 429 363 268 562 1167 738 537 204 166 1122 276  
Added Vol: 283 55 0 0 0 0 -1 18 187 0 0 16  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1022 484 363 268 562 1167 737 555 391 166 1122 292  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 1043 494 370 274 574 1190 752 567 399 169 1145 298  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1043 494 370 274 574 1190 752 567 399 169 1145 298  
PCE 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  
MLF 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  
FinalVolume: 1043 494 370 274 574 1190 752 567 399 169 1145 298

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.87 0.87 0.93 0.88 0.88 0.85 0.88 0.88 0.89 0.89 0.83  
Lanes: 2.00 1.71 1.29 1.00 0.65 1.35 2.22 1.63 1.15 1.00 3.00 1.00  
Final Sat.: 3432 2840 2128 1769 1089 2259 3608 2720 1916 1684 5053 1583

Capacity Analysis Module:  
Vol/Sat: 0.30 0.17 0.17 0.15 0.53 0.53 0.21 0.21 0.21 0.10 0.23 0.19  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.19 0.19 0.33 0.33 0.33 0.57 0.25 0.25 0.25 0.14 0.14 0.47  
Volume/Cap: 1.61 0.92 0.53 0.47 1.61 0.92 0.84 0.84 0.84 0.72 1.61 0.40  
Delay/Veh: 333.3 64.1 34.4 34.1 322 31.3 47.9 47.9 47.9 52.7 335 22.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 333.3 64.1 34.4 34.1 322 31.3 47.9 47.9 47.9 52.7 335 22.2  
LOS by Move: F E C C F C D D D D F C  
HCM2kAvgQ: 47 15 10 8 75 34 12 12 12 8 37 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*  
Cycle (sec): 120 Critical Vol./Cap.(X): 1.172  
Loss Time (sec): 8 Average Delay (sec/veh): 89.9  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 2 0 0 0 0 0 0 0  
-----|-----|-----|-----|

Volume Module:  
Base Vol: 0 0 350 0 0 0 0 972 427 722 1966 0  
Growth Adj: 1.05 1.00 1.04 1.32 1.55 1.33 1.04 1.09 1.32 1.33 1.10 1.05  
Initial Bse: 0 0 365 0 0 0 0 1058 563 958 2172 0  
Added Vol: 0 0 34 0 0 0 0 171 36 0 283 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 399 0 0 0 0 1229 599 958 2455 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 408 0 0 0 0 1254 611 977 2505 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 408 0 0 0 0 1254 611 977 2505 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 0 408 0 0 0 0 1254 611 977 2505 0  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.85 0.85 0.90 0.93 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.02 0.98 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3250 1584 3432 3538 0  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.15 0.00 0.00 0.00 0.00 0.39 0.39 0.28 0.71 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.60 0.00 0.00 0.00 0.00 0.33 0.33 0.60 0.60 0.00  
Volume/Cap: 0.00 0.00 0.24 0.00 0.00 0.00 0.00 1.17 1.17 0.47 1.17 0.00  
Delay/Veh: 0.0 0.0 11.1 0.0 0.0 0.0 0.0 125 124.8 13.3 107 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 11.1 0.0 0.0 0.0 0.0 125 124.8 13.3 107 0.0  
LOS by Move: A A B A A A A F F B F A  
HCM2kAvgQ: 0 0 4 0 0 0 0 40 40 9 69 0  
\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 0.865  
Loss Time (sec): 10 Average Delay (sec/veh): 21.6  
Optimal Cycle: 99 Level Of Service: C  
\*\*\*\*\*

Street Name: 19th Taraval  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 66 66 66 66 66 66 23 23 23 23 23 23  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 1 0 1 0 0 1 0 1 0  
-----|-----|-----|-----|

Volume Module:  
Base Vol: 0 2131 104 0 2591 31 3 331 84 22 336 51  
Growth Adj: 1.06 1.12 1.06 1.09 1.18 1.09 1.06 1.00 1.09 1.09 1.00 1.06  
Initial Bse: 0 2377 110 0 3053 34 3 331 91 24 336 54  
Added Vol: 0 201 2 0 202 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2578 112 0 3255 34 3 331 91 24 336 54  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2630 114 0 3322 34 3 338 93 24 343 55  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2630 114 0 3322 34 3 338 93 24 343 55  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2630 114 0 3322 34 3 338 93 24 343 55  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.91 0.89 1.00 0.91 0.89 0.86 0.86 0.86 0.83 0.83 0.83  
Lanes: 0.00 2.87 0.13 0.00 2.97 0.03 0.01 1.56 0.43 0.12 1.62 0.26  
Final Sat.: 0 4958 215 0 5150 53 24 2538 701 182 2562 411  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.00 0.53 0.53 0.00 0.64 0.64 0.13 0.13 0.13 0.13 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.67 0.67 0.00 0.67 0.67 0.23 0.23 0.23 0.23 0.23 0.23  
Volume/Cap: 0.00 0.79 0.79 0.00 0.96 0.96 0.58 0.58 0.58 0.58 0.58 0.58  
Delay/Veh: 0.0 13.5 13.5 0.0 24.1 24.1 37.4 37.4 37.4 37.6 37.6 37.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 13.5 13.5 0.0 24.1 24.1 37.4 37.4 37.4 37.6 37.6 37.6  
LOS by Move: A B B A C C D D D D D D  
HCM2kAvgQ: 0 23 23 0 42 41 7 7 7 7 7 7  
\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.630  
Loss Time (sec): 9 Average Delay (sec/veh): 154.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Sloat  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2446 66 235 2609 321 185 1440 74 0 870 497  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2728 73 266 3075 373 203 1560 84 0 998 562  
Added Vol: 0 164 2 16 170 18 22 13 0 0 13 47  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2892 75 282 3245 391 225 1573 84 0 1011 609  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2951 76 287 3311 399 230 1605 85 0 1031 622  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2951 76 287 3311 399 230 1605 85 0 1031 622  
PCE 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  
MLF 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  
FinalVolume: 0 2951 76 287 3311 399 230 1605 85 0 1031 622

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.88 0.41 0.88 0.88 1.00 0.89 0.83  
Lanes: 0.00 2.92 0.08 1.00 2.68 0.32 1.00 2.85 0.15 0.00 3.00 1.00  
Final Sat.: 0 4936 127 1769 4464 538 782 4764 253 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.60 0.60 0.16 0.74 0.74 0.29 0.34 0.34 0.00 0.20 0.39  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.00 0.43 0.43 0.11 0.54 0.54 0.37 0.37 0.37 0.00 0.27 0.27  
Volume/Cap: 0.00 1.39 1.39 1.44 1.37 1.37 0.79 0.92 0.92 0.00 0.75 1.44  
Delay/Veh: 0.0 203 203.1 269.9 183 183.5 42.5 38.0 38.0 0.0 36.9 248.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 203 203.1 269.9 183 183.5 42.5 38.0 38.0 0.0 36.9 248.7  
LOS by Move: A F F F F F D D D A D F  
HCM2kAvgQ: 0 70 70 22 87 87 9 22 22 0 12 44

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.633  
Loss Time (sec): 9 Average Delay (sec/veh): 180.5  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Ocean  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 64 64 64 64 64 64 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 2340 47 0 2579 164 64 293 25 25 271 127  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2610 52 0 3039 191 70 317 28 29 311 144  
Added Vol: 0 166 0 0 170 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2776 52 0 3209 191 70 317 28 29 311 144  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2832 53 0 3275 195 72 324 29 30 317 147  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2832 53 0 3275 195 72 324 29 30 317 147  
PCE 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  
MLF 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  
FinalVolume: 0 2832 53 0 3275 195 72 324 29 30 317 147

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.44 0.89 1.00 0.88 0.88 0.89 0.97 0.97 0.73 0.73 0.73  
Lanes: 0.00 2.97 0.03 0.00 2.83 0.17 1.00 0.92 0.08 0.06 0.64 0.30  
Final Sat.: 0 2511 47 0 4760 283 1687 1689 150 83 886 409

Capacity Analysis Module:  
Vol/Sat: 0.00 1.13 1.13 0.00 0.69 0.69 0.04 0.19 0.19 0.36 0.36 0.36  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.64 0.64 0.64 0.64 0.64 0.64 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.00 1.76 1.76 0.00 1.08 1.08 0.16 0.72 0.72 1.35 1.35 1.35  
Delay/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8  
LOS by Move: A F F A D D C D D F F F  
HCM2kAvgQ: 0 86 172 0 48 48 2 11 11 33 33 33

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.180  
Loss Time (sec): 9 Average Delay (sec/veh): 86.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Eucalyptus  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.699  
Loss Time (sec): 13 Average Delay (sec/veh): 207.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: 19th Winston  
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1150 19th / Buckingham

Average Delay (sec/veh): 28.3 Worst Case Level Of Service: F[604.0]

Street Name: 19th Buckingham

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L-T-R). Rows include Control, Rights, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module table with columns for Critical Gap and FollowUpTim.

Capacity Module table with columns for Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Level of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move.

Table with columns for Movement (LT-LTR, RT, LT-LTR-RT, LT-LTR-RT) and Shared Cap.

Table with columns for ApproachDel and ApproachLOS.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1160 19th / Holloway

Cycle (sec): 120 Critical Vol./Cap.(X): 0.929  
Loss Time (sec): 0 Average Delay (sec/veh): 90.8  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Holloway

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L-T-R). Rows include Control, Rights, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.807  
Loss Time (sec): 0 Average Delay (sec/veh): 74.7  
Optimal Cycle: 96 Level Of Service: E

\*\*\*\*\*  
Street Name: 19th Crespi  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Ignore Ignore Include  
Min. Green: 59 59 0 0 64 64 21 0 21 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 3 0 0 0 0 3 0 1 1 0 0 0 1 0 0 0 0 0

Volume Module:  
Base Vol: 0 2485 0 0 3081 99 147 0 97 0 0 0  
Growth Adj: 1.15 1.12 1.00 1.00 1.18 1.18 1.00 1.00 1.00 1.18 1.19 1.15  
Initial Bse: 0 2772 0 0 3631 117 147 0 97 0 0 0  
Added Vol: 0 99 0 0 219 74 -88 0 17 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2871 0 0 3850 191 59 0 114 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2929 0 0 3929 0 60 0 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2929 0 0 3929 0 60 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 0 2929 0 0 3929 0 60 0 0 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 1.00 1.00 0.89 1.00 0.93 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.00 3.00 0.00 0.00 3.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 0 5083 0 0 5083 1900 1769 0 1900 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.00 0.58 0.00 0.00 0.77 0.00 0.03 0.00 0.00 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.51 0.51 0.51 0.69 0.69 0.69 0.28 0.28 0.28 0.00 0.00 0.00  
Volume/Cap: 0.00 1.13 0.00 0.00 1.13 0.00 0.12 0.00 0.00 0.00 0.00 0.00  
Delay/Veh: 0.0 85.1 0.0 0.0 67.5 0.0 33.1 0.0 0.0 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 85.1 0.0 0.0 67.5 0.0 33.1 0.0 0.0 0.0 0.0 0.0  
LOS by Move: A F A A E A C A A A A A  
HCM2kAvgQ: 0 57 0 0 70 0 2 0 0 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumasero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.934  
Loss Time (sec): 8 Average Delay (sec/veh): 85.3  
Optimal Cycle: 123 Level Of Service: F

\*\*\*\*\*  
Street Name: Chumasero Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 15 15 15 20 48 48 20 48 48  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 0 1 0 2 1 0

Volume Module:  
Base Vol: 0 0 0 0 79 0 12 39 1471 0 0 1625 121  
Growth Adj: 1.28 1.00 1.08 1.27 1.38 1.47 1.08 1.16 1.27 1.47 1.57 1.28  
Initial Bse: 0 0 0 100 0 18 42 1710 0 0 2550 155  
Added Vol: 0 0 0 62 0 -11 -23 442 0 0 657 180  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 162 0 7 19 2152 0 0 3207 335  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 166 0 7 19 2196 0 0 3273 342  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 166 0 7 19 2196 0 0 3273 342  
PCE 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  
MLF 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  
FinalVolume: 0 0 0 166 0 7 19 2196 0 0 3273 342

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.80 0.80 1.00 0.71 0.75 0.71 0.93 0.93 1.00 1.00 0.88 0.88  
Lanes: 0.00 1.00 0.00 0.96 0.00 0.04 1.00 2.00 0.00 1.00 2.72 0.28  
Final Sat.: 0 1520 0 1299 0 54 1769 3538 0 1900 4538 474

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.13 0.00 0.13 0.01 0.62 0.00 0.00 0.72 0.72  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.15 0.00 0.15 0.20 0.77 0.00 0.00 0.57 0.57  
Volume/Cap: 0.00 0.00 0.00 0.85 0.00 0.85 0.05 0.81 0.00 0.00 1.27 1.27  
Delay/Veh: 0.0 0.0 0.0 80.0 0.0 80.0 32.6 2.7 0.0 0.0 136 136.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 80.0 0.0 80.0 32.6 2.7 0.0 0.0 136 136.1  
LOS by Move: A A A F A F C A A A F F  
HCM2kAvgQ: 0 0 0 8 0 8 0 4 0 0 73 73

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1182 Thomas More / brotherhood

\*\*\*\*\*

Cycle (sec):	100	Critical Vol./Cap.(X):	0.572
Loss Time (sec):	8	Average Delay (sec/veh):	21.9
Optimal Cycle:	97	Level Of Service:	C

\*\*\*\*\*

Street Name: Thomas More Brotherhood

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Split Phase Split Phase Protected Protected

Rights: Include Include Include Include

Min. Green: 20 0 20 0 0 0 21 48 48 21 48 48

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 1 0 0 0 0 0 2 1 0 1 0 3 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 17 0 32 0 0 0 0 1535 15 33 1609 0

Growth Adj: 1.28 1.00 1.08 1.27 1.38 1.47 1.08 1.16 1.27 1.47 1.57 1.28

Initial Bse: 22 0 34 0 0 0 0 1785 19 49 2525 0

Added Vol: 0 0 0 0 0 0 0 504 0 0 837 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 22 0 34 0 0 0 0 2289 19 49 3362 0

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 22 0 35 0 0 0 0 2335 19 50 3431 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 22 0 35 0 0 0 0 2335 19 50 3431 0

PCE 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

MLF 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

FinalVolume: 22 0 35 0 0 0 0 2335 19 50 3431 0

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.88 1.00 0.88 1.00 1.00 1.00 1.00 0.89 0.89 0.93 0.89 1.00

Lanes: 0.39 0.00 0.61 0.00 0.00 0.00 0.00 2.98 0.02 1.00 3.00 0.00

Final Sat.: 648 0 1027 0 0 0 0 5036 42 1769 5083 0

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Capacity Analysis Module:

Vol/Sat: 0.03 0.00 0.03 0.00 0.00 0.00 0.00 0.46 0.46 0.03 0.67 0.00

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.20 0.00 0.20 0.00 0.00 0.00 0.00 0.51 0.51 0.21 0.72 0.00

Volume/Cap: 0.17 0.00 0.17 0.00 0.00 0.00 0.00 0.91 0.91 0.13 0.94 0.00

Delay/Veh: 33.4 0.0 33.4 0.0 0.0 0.0 0.0 27.7 27.7 32.3 17.6 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 33.4 0.0 33.4 0.0 0.0 0.0 0.0 27.7 27.7 32.3 17.6 0.0

LOS by Move: C A C A A A A C C C B A

HCM2kAvgQ: 2 0 2 0 0 0 0 25 25 1 38 0

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Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

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Intersection #1190 Sunset / Taraval

\*\*\*\*\*

Cycle (sec):	60	Critical Vol./Cap.(X):	0.960
Loss Time (sec):	10	Average Delay (sec/veh):	125.6
Optimal Cycle:	100	Level Of Service:	F

\*\*\*\*\*

Street Name: Sunset Taraval

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 2129 96 0 1790 117 70 238 37 76 243 30

Growth Adj: 1.14 1.20 1.12 1.15 1.26 1.17 1.12 1.04 1.15 1.17 1.08 1.14

Initial Bse: 0 2553 108 0 2261 137 79 249 43 89 263 34

Added Vol: 0 483 0 0 513 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 3036 108 0 2774 137 79 249 43 89 263 34

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 3098 110 0 2831 140 80 254 44 91 268 35

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 3098 110 0 2831 140 80 254 44 91 268 35

PCE 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

MLF 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

FinalVolume: 0 3098 110 0 2831 140 80 254 44 91 268 35

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.48 0.96 0.96 0.49 0.96 0.96

Lanes: 0.00 2.90 0.10 0.00 2.86 0.14 1.00 0.85 0.15 1.00 0.88 0.12

Final Sat.: 0 4885 173 0 4810 238 916 1554 267 929 1619 211

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.00 0.63 0.63 0.00 0.59 0.59 0.09 0.16 0.16 0.10 0.17 0.17

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35

Volume/Cap: 0.00 1.31 1.31 0.00 1.22 1.22 0.25 0.47 0.47 0.28 0.47 0.47

Delay/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7

LOS by Move: A F F A F F B B B B B B

HCM2kAvgQ: 0 58 58 0 47 47 1 5 5 1 5 5

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Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.827  
Loss Time (sec): 9 Average Delay (sec/veh): 30.5  
Optimal Cycle: 63 Level Of Service: C

Street Name: Sunset Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 1 1 1 0 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1682 14 1 1588 60 30 61 18 37 47 226  
Growth Adj: 1.11 1.24 1.10 1.00 1.00 1.00 1.10 1.00 1.00 1.00 1.00 1.11  
Initial Bse: 0 2085 15 1 1589 60 33 61 18 37 47 252  
Added Vol: 0 590 0 0 670 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2675 15 1 2259 60 33 61 18 37 47 252  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2729 16 1 2305 61 34 62 18 38 48 257  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2729 16 1 2305 61 34 62 18 38 48 257  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2729 16 1 2305 61 34 62 18 38 48 257

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.79 0.79 0.79 0.88 0.88 0.88 0.76 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.01 2.92 0.07 0.30 0.54 0.16 1.00 1.00 1.00  
Final Sat.: 0 5049 29 2 4407 117 493 909 268 1450 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.54 0.54 0.52 0.52 0.52 0.07 0.07 0.07 0.03 0.03 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.53 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 1.01 1.01 0.98 0.98 0.98 0.22 0.22 0.22 0.08 0.08 0.51  
Delay/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
LOS by Move: A C C C C C B B B B B C  
HCM2kAvgQ: 0 21 21 24 24 24 2 2 2 0 1 4

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1210 Skyline / Sloat / 39th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.925  
Loss Time (sec): 0 Average Delay (sec/veh): 29.4  
Optimal Cycle: 0 Level Of Service: D

Street Name: Skyline / 39th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Ignore Include Ignore Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 0

Volume Module:  
Base Vol: 327 0 565 0 21 7 2 350 163 450 435 64  
Growth Adj: 1.13 1.23 1.24 1.16 1.08 1.05 1.24 1.25 1.16 1.05 1.03 1.13  
Initial Bse: 371 0 701 0 23 7 2 437 189 475 450 73  
Added Vol: 0 0 3 0 0 0 0 43 0 2 35 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 371 0 704 0 23 7 2 480 189 477 485 73  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 378 0 0 0 23 8 3 489 0 486 495 74  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 378 0 0 0 23 8 3 489 0 486 495 74  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 378 0 0 0 23 8 3 489 0 486 495 74

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 1.00 0.00 2.00 0.00 0.75 0.25 0.01 1.99 1.00 2.00 1.74 0.26  
Final Sat.: 409 0 912 0 286 93 4 771 406 839 785 119

Capacity Analysis Module:  
Vol/Sat: 0.92 xxxxx 0.00 xxxxx 0.08 0.08 0.63 0.63 0.00 0.58 0.63 0.62  
Crit Moves: \*\*\*\*  
Delay/Veh: 56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9  
Delay 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  
AdjDel/Veh: 56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9  
LOS by Move: F \* \* \* B B D D \* C C C  
ApproachDel: 56.1 12.8 25.3 22.1  
Delay Adj: 1.00 1.00 1.00  
ApprAdjDel: 56.1 12.8 25.3 22.1  
LOS by Appr: F B D C  
AllWayAvgQ: 5.1 5.1 0.0 0.1 0.1 1.5 1.5 0.0 1.2 1.5 1.5

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1221 Skyline / Lake Merced (WBR)

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: C[ 17.5]

Street Name: Skyline Lake Merced (WBR)
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 2 0 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module:
Base Vol: 0 853 0 100 489 0 0 0 0 0 0 0 133
Growth Adj: 1.51 1.22 1.12 1.07 1.12 1.46 1.12 1.02 1.07 1.46 1.81 1.51
Initial Bse: 0 1041 0 107 548 0 0 0 0 0 0 0 201
Added Vol: 0 3 0 0 2 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1044 0 107 550 0 0 0 0 0 0 0 201
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 1065 0 109 561 0 0 0 0 0 0 0 205
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 1065 0 109 561 0 0 0 0 0 0 0 205

Critical Gap Module:
Critical Gp: 4.1 6.9
FollowUpTim: 2.2 3.3

Capacity Module:
Cnflct Vol: 532
Potent Cap.: 492
Move Cap.: 492
Volume/Cap: 0.42

Level of Service Module:
2Way95thQ: 2.0
Control Del: 17.5
LOS by Move: C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel: 17.5
ApproachLOS: C

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)

Average Delay (sec/veh): 7.4 Worst Case Level Of Service: F[118.6]

Street Name: Skyline Lake Merced (WBLT)
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 1 0 1 1 0 0 0 2 0 1 0 0 0 0 0 1 0 0 0

Volume Module:
Base Vol: 8 853 118 0 468 21 0 0 0 75 3 0
Growth Adj: 1.51 1.22 1.12 1.07 1.12 1.46 1.12 1.02 1.07 1.46 1.81 1.51
Initial Bse: 12 1044 133 0 524 31 0 0 0 110 5 0
Added Vol: 0 3 0 0 2 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 12 1047 133 0 526 31 0 0 0 110 5 0
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 12 1069 135 0 537 31 0 0 0 112 6 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 12 1069 135 0 537 31 0 0 0 112 6 0

Critical Gap Module:
Critical Gp: 4.1 6.8 6.5
FollowUpTim: 2.2 3.5 4.0

Capacity Module:
Cnflct Vol: 1429 1729
Potent Cap.: 126 87
Move Cap.: 124 86
Volume/Cap: 0.90 0.06

Level of Service Module:
2Way95thQ: 5.7 0.2
Control Del: 122.0 49.5
LOS by Move: F E
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel: 118.6
ApproachLOS: F

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.546  
Loss Time (sec): 7 Average Delay (sec/veh): 179.5  
Optimal Cycle: 180 Level Of Service: F

Street Name: Lake Merced Font  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1683 17 176 1644 0 0 0 0 104 0 331  
Growth Adj: 1.08 1.12 1.10 1.13 1.18 1.11 1.10 1.08 1.13 1.11 1.04 1.08  
Initial Bse: 0 1877 19 198 1937 0 0 0 0 115 0 357  
Added Vol: 0 359 -10 417 527 0 0 0 0 -9 0 304  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2236 9 615 2464 0 0 0 0 106 0 661  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2282 0 628 2515 0 0 0 0 109 0 674  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2282 0 628 2515 0 0 0 0 109 0 674  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2282 0 628 2515 0 0 0 0 109 0 674

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.64 0.00 0.35 0.71 0.00 0.00 0.00 0.00 0.06 0.00 0.43  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.35 0.00 2.13 1.05 0.00 0.00 0.00 0.00 0.25 0.00 1.74  
Delay/Veh: 0.0 180 0.0 556.9 37.7 0.0 0.0 0.0 0.0 28.8 0.0 379.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 180 0.0 556.9 37.7 0.0 0.0 0.0 0.0 28.8 0.0 379.0  
LOS by Move: A F A F D A A A A C A F  
HCM2kAvgQ: 0 69 0 59 50 0 0 0 0 3 0 55

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1261 Lake Merced / Vidal  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.887  
Loss Time (sec): 12 Average Delay (sec/veh): 36.0  
Optimal Cycle: 104 Level Of Service: D

Street Name: Lake Merced Vidal  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1811 9 13 1748 0 0 0 0 10 0 11  
Growth Adj: 1.00 1.12 1.16 1.19 1.18 1.00 1.00 1.00 1.00 1.91 1.00 1.88  
Initial Bse: 0 2028 10 15 2063 0 0 0 0 19 0 21  
Added Vol: 0 290 65 102 415 0 0 0 0 58 0 59  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2318 75 117 2478 0 0 0 0 77 0 80  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2366 77 120 2528 0 0 0 0 79 0 81  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2366 77 120 2528 0 0 0 0 79 0 81  
PCE 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  
MLF 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  
FinalVolume: 0 2366 77 120 2528 0 0 0 0 79 0 81

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.67 0.05 0.07 0.71 0.00 0.00 0.00 0.00 0.04 0.00 0.05  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.06 0.08 0.68 0.93 0.00 0.00 0.00 0.00 0.30 0.00 0.34  
Delay/Veh: 0.0 56.3 7.3 62.4 16.3 0.0 0.0 0.0 0.0 40.6 0.0 42.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 56.3 7.3 62.4 16.3 0.0 0.0 0.0 0.0 40.6 0.0 42.0  
LOS by Move: A E A E B A A A A D A D  
HCM2kAvgQ: 0 45 1 3 31 0 0 0 0 2 0 3

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1262 Lake Merced / Acevedo  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.959  
Loss Time (sec): 12 Average Delay (sec/veh): 34.6  
Optimal Cycle: 146 Level Of Service: C

\*\*\*\*\*  
Street Name: Lake Merced Acevedo  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 0 0 1! 0 0

Volume Module:  
Base Vol: 0 1806 11 14 1743 0 0 0 0 9 0 15  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 2023 13 17 2057 0 0 0 0 17 0 28  
Added Vol: 0 278 79 108 365 0 0 0 0 56 0 77  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2301 92 125 2422 0 0 0 0 73 0 105  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2348 94 127 2471 0 0 0 0 75 0 107  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2348 94 127 2471 0 0 0 0 75 0 107  
PCE 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  
MLF 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  
FinalVolume: 0 2348 94 127 2471 0 0 0 0 75 0 107

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.88 1.00 0.88  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.41 0.00 0.59  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 689 0 990

Capacity Analysis Module:  
Vol/Sat: 0.00 0.66 0.06 0.07 0.70 0.00 0.00 0.00 0.00 0.11 0.00 0.11  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.05 0.09 0.72 0.91 0.00 0.00 0.00 0.00 0.72 0.00 0.72  
Delay/Veh: 0.0 53.5 7.5 65.8 14.5 0.0 0.0 0.0 0.0 57.0 0.0 57.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 53.5 7.5 65.8 14.5 0.0 0.0 0.0 0.0 57.0 0.0 57.0  
LOS by Move: A D A E B A A A A E A E  
HCM2kAvgQ: 0 44 1 4 31 0 0 0 0 7 0 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.135  
Loss Time (sec): 12 Average Delay (sec/veh): 45.4  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 0 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 0 1! 0 0

Volume Module:  
Base Vol: 0 1795 41 23 1730 0 0 0 0 30 0 22  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 2002 47 27 2039 0 0 0 0 57 0 41  
Added Vol: 0 241 280 174 247 0 0 0 0 180 0 116  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2243 327 201 2286 0 0 0 0 237 0 157  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2289 334 205 2332 0 0 0 0 242 0 160  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2289 334 205 2332 0 0 0 0 242 0 160  
PCE 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  
MLF 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  
FinalVolume: 0 2289 334 205 2332 0 0 0 0 242 0 160

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.90  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.60 0.00 0.40  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1029 0 682

Capacity Analysis Module:  
Vol/Sat: 0.00 0.65 0.21 0.12 0.66 0.00 0.00 0.00 0.00 0.24 0.00 0.24  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.03 0.34 1.16 0.86 0.00 0.00 0.00 0.00 1.57 0.00 1.57  
Delay/Veh: 0.0 35.5 5.2 162.9 3.7 0.0 0.0 0.0 0.0 316.7 0.0 316.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 35.5 5.2 162.9 3.7 0.0 0.0 0.0 0.0 316.7 0.0 316.7  
LOS by Move: A D A F A A A A A F A F  
HCM2kAvgQ: 0 40 2 10 3 0 0 0 0 32 0 32

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1264 Lake Merced / Gonzalez  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.032  
Loss Time (sec): 12 Average Delay (sec/veh): 52.4  
Optimal Cycle: 180 Level Of Service: D

Street Name: Lake Merced Gonzalez  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 1 0 0

Volume Module:  
Base Vol: 0 1827 65 8 1751 0 0 0 0 53 0 9  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 2046 75 10 2066 0 0 0 0 101 0 17  
Added Vol: 0 475 449 64 362 0 0 0 0 320 0 46  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2521 524 74 2428 0 0 0 0 421 0 63  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2573 535 75 2478 0 0 0 0 430 0 64  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2573 535 75 2478 0 0 0 0 430 0 64  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2573 535 75 2478 0 0 0 0 430 0 64

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.92 1.00 0.92  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.77 0.00 0.23  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 3097 0 403

Capacity Analysis Module:  
Vol/Sat: 0.00 0.73 0.34 0.04 0.70 0.00 0.00 0.00 0.00 0.14 0.00 0.16  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.15 0.54 0.42 0.91 0.00 0.00 0.00 0.00 0.93 0.00 1.06  
Delay/Veh: 0.0 93.5 12.4 49.6 14.6 0.0 0.0 0.0 0.0 66.2 0.0 102.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 93.5 12.4 49.6 14.6 0.0 0.0 0.0 0.0 66.2 0.0 102.1  
LOS by Move: A F B D B A A A A E A F  
HCM2kAvgQ: 0 61 8 2 33 0 0 0 0 11 0 15

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 2.199  
Loss Time (sec): 15 Average Delay (sec/veh): 186.0  
Optimal Cycle: 180 Level Of Service: F

Street Name: Lake Merced Brotherhood  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Protected Protected  
Rights: Ovl Include Include Ovl  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0  
Lanes: 0 0 2 0 1 2 0 1 0 0 0 0 0 0 0 1 0 0 0 2

Volume Module:  
Base Vol: 0 504 195 1342 517 0 0 0 0 267 0 1323  
Growth Adj: 1.71 1.12 1.14 1.17 1.18 1.74 1.14 1.16 1.17 1.74 2.31 1.71  
Initial Bse: 0 562 222 1572 609 0 0 0 0 465 0 2264  
Added Vol: 0 339 -26 432 250 0 0 0 0 -13 0 585  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 901 196 2004 859 0 0 0 0 452 0 2849  
User Adj: 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 920 200 2045 0 0 0 0 0 462 0 2907  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 920 200 2045 0 0 0 0 0 462 0 2907  
PCE 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  
MLF 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  
FinalVolume: 0 920 200 2045 0 0 0 0 0 462 0 2907

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.90 1.00 1.00 1.00 1.00 1.00 0.93 1.00 0.73  
Lanes: 0.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 2.00  
Final Sat.: 0 3538 1583 3432 1900 0 0 0 0 1769 0 2786

Capacity Analysis Module:  
Vol/Sat: 0.00 0.26 0.13 0.60 0.00 0.00 0.00 0.00 0.00 0.26 0.00 1.04  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.16 0.16 0.43 0.48 0.69 0.69 0.00 0.00 0.00 0.22 0.22 0.75  
Volume/Cap: 0.00 1.59 0.30 1.24 0.00 0.00 0.00 0.00 0.00 1.20 0.00 1.40  
Delay/Veh: 0.0 319 18.1 134.5 0.0 0.0 0.0 0.0 0.0 153.7 0.0 196.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 319 18.1 134.5 0.0 0.0 0.0 0.0 0.0 153.7 0.0 196.9  
LOS by Move: A F B F A A A A A F A F  
HCM2kAvgQ: 0 40 4 58 0 0 0 0 0 28 0 113

Note: Queue reported is the number of cars per lane.

Tier 4B Conditions  
Weekend Midday Peak Hour





19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.183  
Loss Time (sec): 16 Average Delay (sec/veh): 181.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 53 53 32 32 32 15 15 15 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 1575 1246 23 0 787 272 895 346 371 14 293 26  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 1781 1390 25 0 927 316 984 375 420 16 336 29  
Added Vol: 92 212 0 0 261 0 2 0 88 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1873 1602 25 0 1188 316 986 375 508 16 336 29  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1912 1634 26 0 1213 323 1006 382 0 17 343 30  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.87 0.87 0.89 0.97 1.00 0.92 0.92 0.92  
Lanes: 3.00 1.97 0.03 0.00 2.37 0.63 3.00 1.00 1.00 0.09 1.76 0.15  
Final Sat.: 5096 3441 54 0 3929 1046 5096 1843 1900 149 3071 269

Capacity Analysis Module:

Vol/Sat: 0.38 0.47 0.47 0.00 0.31 0.31 0.20 0.21 0.00 0.11 0.11 0.11  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.21 0.51 0.51 0.00 0.30 0.30 0.14 0.14 0.00 0.19 0.19 0.19  
Volume/Cap: 1.79 0.92 0.92 0.00 1.01 1.01 1.38 1.45 0.00 0.59 0.59 0.59  
Delay/Veh: 401.1 27.0 27.0 0.0 62.1 62.1 225.1 268 0.0 42.5 42.5 42.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 401.1 27.0 27.0 0.0 62.1 62.1 225.1 268 0.0 42.5 42.5 42.5  
LOS by Move: F C C A E E F F A D D D  
HCM2kAvgQ: 56 25 25 0 25 25 25 29 0 7 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4b

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 2.226  
Loss Time (sec): 37 Average Delay (sec/veh): 253.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Ignore Ignore Ovl Include  
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 3 1 0 0 0 1 0 3 0 0 0 1 0

Volume Module:

Base Vol: 2245 1828 70 0 1917 12 0 85 4216 0 76 36  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09  
Initial Bse: 2442 2039 74 0 2259 13 0 86 4610 0 81 39  
Added Vol: 135 137 1 0 31 0 0 41 282 0 0 30  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2577 2176 75 0 2290 13 0 127 4892 0 81 69  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2629 2220 0 0 2337 0 0 129 4992 0 82 71  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2629 2220 0 0 2337 0 0 129 4992 0 82 71  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2629 2220 0 0 2337 0 0 129 4992 0 82 71

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.93 0.95 1.00 0.89 0.91 1.00 0.98 0.73 1.00 0.92 0.92  
Lanes: 3.00 2.00 0.00 0.00 4.00 0.00 0.00 1.00 3.00 0.00 0.54 0.46  
Final Sat.: 5147 3538 0 0 6778 0 0 1862 4178 0 940 807

Capacity Analysis Module:

Vol/Sat: 0.51 0.63 0.00 0.00 0.34 0.00 0.00 0.07 1.19 0.00 0.09 0.09  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.52 0.52 0.52 0.18 0.18 0.18 0.09 0.09 0.68 0.09 0.09 0.09  
Volume/Cap: 0.98 1.20 0.00 0.00 1.88 0.00 0.00 0.77 1.76 0.00 0.97 0.97  
Delay/Veh: 32.9 116 0.0 0.0 449 0.0 0.0 81.8 348.5 0.0 119 119.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 32.9 116 0.0 0.0 449 0.0 0.0 81.8 348.5 0.0 119 119.2  
LOS by Move: C F A A F A A F F A F F  
HCM2kAvgQ: 36 67 0 0 60 0 0 6 167 0 9 9

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 4b

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\* Intersection #1110 19th / Sloat \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.579
Loss Time (sec): 9 Average Delay (sec/veh): 118.7
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (19th, Sloat), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, and various performance metrics like Min. Green, Y+R, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume for each approach.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

19th Ave CS Tier 4b

Level of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\* Intersection #1140 19th / Winston \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.714
Loss Time (sec): 13 Average Delay (sec/veh): 182.6
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (19th, Winston), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, and various performance metrics like Min. Green, Y+R, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume for each approach.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4b

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 1.906  
Loss Time (sec): 15 Average Delay (sec/veh): 119.1  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name:	Lake Merced					Brotherhood									
	North Bound		South Bound			East Bound		West Bound							
Approach:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted			Protected			Split Phase			Split Phase					
Rights:	Ovl			Include			Include			Ovl					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	2

Volume Module:

Base Vol:	0	535	223	1076	498	0	0	0	0	216	0	1034
Growth Adj:	1.71	1.12	1.14	1.17	1.18	1.74	1.14	1.16	1.17	1.74	2.31	1.71
Initial Bse:	0	597	254	1260	587	0	0	0	0	376	0	1769
Added Vol:	0	322	0	441	236	0	0	0	0	0	0	621
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	919	254	1701	823	0	0	0	0	376	0	2390
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	937	259	1736	0	0	0	0	0	384	0	2439
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	937	259	1736	0	0	0	0	0	384	0	2439
PCE 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
MLF 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
FinalVolume:	0	937	259	1736	0	0	0	0	0	384	0	2439

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	2786

Capacity Analysis Module:

Vol/Sat:	0.00	0.26	0.16	0.51	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.88
Crit Moves:	****			****						****		
Green/Cycle:	0.18	0.18	0.45	0.46	0.69	0.69	0.00	0.00	0.00	0.22	0.22	0.73
Volume/Cap:	0.00	1.46	0.37	1.09	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.20
Delay/Veh:	0.0	259	17.4	75.9	0.0	0.0	0.0	0.0	0.0	87.4	0.0	111.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	259	17.4	75.9	0.0	0.0	0.0	0.0	0.0	87.4	0.0	111.7
LOS by Move:	A	F	B	E	A	A	A	A	A	F	A	F
HCM2kAvgQ:	0	37	5	42	0	0	0	0	0	19	0	77

Note: Queue reported is the number of cars per lane.

Tier 4C Conditions  
Weekday AM Peak Hour



-----  
 19th Ave CS  
 Tier 4c  
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## Scenario Report

Scenario: Tier 4c AM  
 Command: Default Command  
 Volume: Tier 4c AM  
 Geometry: Tier 4c AM  
 Impact Fee: Default Impact Fee  
 Trip Generation: Projects AM  
 Trip Distribution: AM  
 Paths: Tier 4c  
 Routes: Tier 4  
 Configuration: Tier 4

-----  
 19th Ave CS  
 Tier 4c  
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Impact Analysis Report  
Level Of Service

Intersection	LOS	Base		LOS	Future		Change in
		Del/ Veh	V/ C		Del/ Veh	V/ C	
#1010 Claremont / Taraval / Dewey /	A	6.8	0.650	A	7.0	0.665	+ 0.015 V/C
#1020 Santa Clara / Portola / Vicent	C	29.7	0.837	D	40.2	0.960	+10.494 D/V
#1030 Junipero Serra / Sloat / West	F	89.5	1.076	F	95.9	1.094	+ 6.319 D/V
#1040 Junipero Serra / Ocean / Eucal	D	40.4	0.758	D	46.9	0.802	+ 6.482 D/V
#1050 Junipero Serra / Winston / Mer	C	34.6	0.632	D	38.3	0.772	+ 3.680 D/V
#1060 Junipero Serra / Holloway	C	32.7	0.675	C	34.8	0.716	+ 2.163 D/V
#1070 Junipero Serra / 19th	C	34.0	0.756	E	57.4	0.776	+23.467 D/V
#1075 Junipero Serra / Chumasero	A	7.3	0.832	C	24.5	0.997	+17.226 D/V
#1080 Junipero Serra / I-280 NB On-R	D	40.2	0.788	D	40.4	0.799	+ 0.208 D/V
#1090 Junipero Serra / I-280 SB On-R	C	20.4	0.568	C	20.4	0.620	-0.007 D/V
#1100 19th / Taraval	C	25.5	0.815	C	28.9	0.829	+ 3.420 D/V
#1110 19th / Sloat	F	107.3	1.464	F	119.3	1.508	+11.977 D/V
#1120 19th / Ocean	D	41.4	1.084	D	46.1	1.093	+ 4.780 D/V
#1130 19th / Eucalyptus	C	21.0	0.831	C	23.1	0.865	+ 2.060 D/V
#1140 19th / Winston	D	50.0	0.977	F	84.1	1.322	+34.127 D/V
#1150 19th / Buckingham	F	57.6	0.679	F	77.7	0.826	+20.071 D/V
#1160 19th / Holloway	A	6.2	0.696	E	61.5	0.776	+55.333 D/V
#1170 19th / Crespi	C	21.7	0.619	E	74.1	0.640	+52.433 D/V
#1181 Chumasero / Brotherhood	B	13.8	0.640	B	19.7	0.702	+ 5.926 D/V
#1182 Thomas More / brotherhood	B	15.7	0.611	C	23.0	0.747	+ 7.345 D/V
#1190 Sunset / Taraval	C	21.0	0.717	D	43.0	0.799	+21.964 D/V
#1200 Sunset / Ocean	B	12.0	0.605	B	13.7	0.664	+ 1.687 D/V
#1210 Skyline / Sloat / 39th	C	17.0	0.684	C	17.5	0.692	+ 0.009 V/C
#1221 Skyline / Lake Merced (WBR)	C	15.1	0.209	C	15.1	0.209	+ 0.010 D/V

19th Ave CS  
Tier 4c

Intersection		Base		Future		Change in
		Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
#1222 Skyline / Lake Merced (WBLT)	F	52.5	0.379	F 52.8	0.381	+ 0.284 D/V
#1230 Sunset / Lake Merced	F	154.0	0.594	F 425.0	1.103	+270.952 D/
#1240 Lake Merced / Winston	C	28.7	0.691	F 99.9	0.805	+71.143 D/V
#1250 Lake Merced / Font	E	61.6	0.746	F 160.6	1.400	+98.995 D/V
#1261 Lake Merced / Vidal	D	45.6	0.728	D 45.2	0.925	-0.430 D/V
#1262 Lake Merced / Acevedo	D	47.6	0.738	D 43.3	0.962	-4.329 D/V
#1263 Lake Merced / Higuera	E	69.0	0.670	D 37.9	0.994	-31.032 D/
#1264 Lake Merced / Gonzalez	D	44.8	0.731	C 33.6	0.923	-11.209 D/
#1270 Lake Merced / Brotherhood	D	54.5	1.511	F 122.0	1.784	+67.580 D/V

19th Ave CS  
Tier 4c

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 7.0      Level Of Service: A  
\*\*\*\*\*

Street Name:	Claremont			Taraval / Dewey		
	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Approach:						
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign
Lanes:	1	1	1	1	1	1

Volume Module:

Base Vol:	3	7	221	10	60	37	1	231	27	313	337	84
Growth Adj:	1.03	1.02	1.02	1.02	1.02	1.03	1.02	1.01	1.02	1.03	1.04	1.03
Initial Bse:	3	7	224	10	61	38	1	233	27	323	351	87
Added Vol:	1	0	5	0	0	0	0	0	0	17	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	7	229	10	61	38	1	233	27	340	351	87
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	4	7	234	10	63	39	1	238	28	347	358	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	7	234	10	63	39	1	238	28	347	358	88
PCE 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
MLF 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
FinalVolume:	4	7	234	10	63	39	1	238	28	347	358	88

PCE Module:

AutoPCE:	4	7	234	10	63	39	1	238	28	347	358	88
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	4	7	234	10	63	39	1	238	28	347	358	88

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	250	709	420	13
MaxVolume:	1065	817	973	1193
PedVolume:	0	0	0	0
AdjMaxVol:	1065	817	973	1193
ApproachVol:	246	112	267	793
ApproachV/C:	0.23	0.14	0.27	0.66
ApproachDel:	4.4	5.1	5.1	8.8
ApproachLOS:	A	A	A	A
Queue:	0.9	0.5	1.1	5.4



19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.960  
Loss Time (sec): 11 Average Delay (sec/veh): 40.2  
Optimal Cycle: 124 Level Of Service: D

\*\*\*\*\*  
Street Name: Santa Clara / Vicente Portola  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 23 23 23 23 23 23 9 36 36 9 36 36  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 18 264 86 82 202 30 24 1057 17 120 859 81  
Growth Adj: 1.05 1.04 1.09 1.12 1.10 1.08 1.09 1.13 1.12 1.08 1.05 1.05  
Initial Bse: 19 276 94 92 223 32 26 1197 19 129 903 85  
Added Vol: 0 0 0 26 0 4 0 131 0 0 79 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 19 276 94 118 223 36 26 1328 19 129 982 85  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 19 281 96 120 227 37 27 1355 19 132 1002 87  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 19 281 96 120 227 37 27 1355 19 132 1002 87  
PCE 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  
MLF 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  
FinalVolume: 19 281 96 120 227 37 27 1355 19 132 1002 87

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.92 0.92 0.56 0.56 0.56 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.05 0.71 0.24 0.31 0.59 0.10 1.00 1.97 0.03 1.00 1.84 0.16  
Final Sat.: 85 1248 424 330 625 102 1769 3481 50 1769 3217 278

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.23 0.23 0.23 0.36 0.36 0.36 0.02 0.39 0.39 0.07 0.31 0.31  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.30 0.30 0.30 0.30 0.30 0.30 0.11 0.45 0.45 0.11 0.45 0.45  
Volume/Cap: 0.75 0.75 0.75 1.21 1.21 1.21 0.13 0.87 0.87 0.66 0.69 0.69  
Delay/Veh: 34.8 34.8 34.8 149.4 149 149.4 33.4 26.4 26.4 50.1 20.1 20.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 34.8 34.8 34.8 149.4 149 149.4 33.4 26.4 26.4 50.1 20.1 20.1  
LOS by Move: C C C F F F C C C D C C  
HCM2kAvgQ: 11 11 11 21 21 21 1 19 19 4 12 12

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.094  
Loss Time (sec): 16 Average Delay (sec/veh): 95.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 48 48 27 27 27 20 20 20 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 972 1137 20 0 1092 176 646 416 322 23 347 8  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 1129 1292 23 0 1192 200 750 494 367 26 412 9  
Added Vol: 22 110 0 0 53 0 2 0 7 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1151 1402 23 0 1245 200 752 494 374 26 412 9  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1174 1431 24 0 1271 205 768 504 0 27 420 9  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1174 1431 24 0 1271 205 768 504 0 27 420 9

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3.00 1.97 0.03 0.00 2.58 0.42 3.00 1.00 1.00 0.12 1.84 0.04  
Final Sat.: 5096 3438 57 0 4329 697 5096 1843 1900 206 3237 73

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.23 0.42 0.42 0.00 0.29 0.29 0.15 0.27 0.00 0.13 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.18 0.44 0.44 0.00 0.26 0.26 0.22 0.22 0.00 0.19 0.19 0.19  
Volume/Cap: 1.26 0.95 0.95 0.00 1.14 1.14 0.69 1.26 0.00 0.68 0.68 0.68  
Delay/Veh: 168.3 37.1 37.1 0.0 113 112.5 41.5 177 0.0 45.1 45.1 45.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 168.3 37.1 37.1 0.0 113 112.5 41.5 177 0.0 45.1 45.1 45.1  
LOS by Move: F D D A F F D F A D D D  
HCM2kAvgQ: 23 23 23 0 29 29 9 31 0 8 8 8

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1040 Junipero Serra / Ocean / Eucalyptus

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.802  
Loss Time (sec): 14 Average Delay (sec/veh): 46.9  
Optimal Cycle: 100 Level Of Service: D

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Street Name: Junipero Serra Ocean / Eucalyptus

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Protected Protected Permitted Permitted

Rights: Include Include Ovl Ovl

Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 189 1678 46 326 1061 90 85 384 45 54 368 324

Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16

Initial Bse: 220 1907 53 371 1159 103 99 456 51 62 437 376

Added Vol: 0 107 4 14 42 4 2 16 0 1 33 23

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 220 2014 57 385 1201 107 101 472 51 63 470 399

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 224 2055 59 393 1225 109 103 481 52 64 479 407

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 224 2055 59 393 1225 109 103 481 52 64 479 407

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 224 2055 59 393 1225 109 103 481 52 64 479 407

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.92 0.88 0.88 0.91 0.89 0.89 0.60 0.60 0.83 0.96 0.96 0.83

Lanes: 1.00 2.92 0.08 2.00 2.76 0.24 0.35 1.65 1.00 0.12 0.88 1.00

Final Sat.: 1751 4873 139 3466 4659 413 403 1889 1583 214 1605 1583

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Capacity Analysis Module:

Vol/Sat: 0.13 0.42 0.42 0.11 0.26 0.26 0.25 0.25 0.03 0.30 0.30 0.26

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43

Volume/Cap: 1.16 0.98 0.98 0.71 0.55 0.55 0.94 0.94 0.09 1.11 1.11 0.60

Delay/Veh: 160.1 39.5 39.5 47.3 15.5 15.5 60.4 60.4 20.2 109.2 109 25.7

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 160.1 39.5 39.5 47.3 15.5 15.5 60.4 60.4 20.2 109.2 109 25.7

LOS by Move: F D D D B B E E C F F C

HCM2kAvgQ: 10 23 23 5 8 8 14 14 1 27 27 10

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1050 Junipero Serra / Winston / Mercedes

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.772  
Loss Time (sec): 14 Average Delay (sec/veh): 38.3  
Optimal Cycle: 100 Level Of Service: D

\*\*\*\*\*

Street Name: Junipero Serra Winston / Mercedes

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Protected Protected Permitted Permitted

Rights: WideBypass Include Include

Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1 0 1 0 1

-----|-----|-----|-----|

Volume Module:

Base Vol: 186 1681 29 103 1024 72 80 63 73 64 147 62

Growth Adj: 1.07 1.14 1.16 1.14 1.09 1.05 1.16 1.19 1.14 1.05 1.00 1.07

Initial Bse: 199 1911 34 117 1118 75 93 75 83 67 147 66

Added Vol: 56 38 4 1 -24 65 73 48 29 -6 82 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 255 1949 38 118 1094 140 166 123 112 61 229 66

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 260 1988 38 121 1117 143 169 125 115 62 234 68

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 260 1988 38 121 1117 143 169 125 115 62 234 68

PCE 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

MLF 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

FinalVolume: 260 1988 38 121 1117 143 169 125 115 62 234 68

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Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.46 0.98 0.83 0.64 0.98 0.83

Lanes: 1.00 2.94 0.06 1.00 2.66 0.34 1.00 1.00 1.00 1.00 1.00 1.00

Final Sat.: 1769 4972 96 1769 4429 568 868 1862 1583 1216 1862 1583

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Capacity Analysis Module:

Vol/Sat: 0.15 0.40 0.40 0.07 0.25 0.25 0.20 0.07 0.07 0.05 0.13 0.04

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27

Volume/Cap: 0.77 1.00 1.00 0.36 0.63 0.63 0.72 0.25 0.27 0.19 0.46 0.16

Delay/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 54.3 46.8 46.8 38.2 23.0 23.0 50.7 29.8 30.3 29.4 33.5 28.6

LOS by Move: D D D D C C D C C C C C

HCM2kAvgQ: 7 25 25 3 10 10 4 3 3 2 6 2

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.716  
Loss Time (sec): 14 Average Delay (sec/veh): 34.8  
Optimal Cycle: 100 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1

Volume Module:

Base Vol: 234 1520 60 114 956 84 163 106 16 162 129 118  
Growth Adj: 1.08 1.14 1.07 1.05 1.09 1.06 1.07 1.01 1.05 1.06 1.02 1.08  
Initial Bse: 253 1728 64 120 1044 89 175 107 17 171 132 128  
Added Vol: 8 59 2 12 5 -18 25 -12 0 -6 -12 14  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 261 1787 66 132 1049 71 200 95 17 165 120 142  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 266 1823 68 135 1070 72 204 97 17 169 123 144  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 266 1823 68 135 1070 72 204 97 17 169 123 144  
PCE 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  
MLF 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  
FinalVolume: 266 1823 68 135 1070 72 204 97 17 169 123 144

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.88 0.88 0.65 0.98 0.83 0.68 0.98 0.83  
Lanes: 1.00 2.89 0.11 1.00 2.81 0.19 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4877 181 1769 4719 319 1227 1862 1583 1289 1862 1583

Capacity Analysis Module:

Vol/Sat: 0.15 0.37 0.37 0.08 0.23 0.23 0.17 0.05 0.01 0.13 0.07 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.79 0.96 0.96 0.40 0.58 0.58 0.59 0.19 0.04 0.47 0.24 0.33  
Delay/Veh: 55.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 55.9 39.5 39.5 39.0 23.0 23.0 38.5 28.1 26.4 34.1 28.8 30.5  
LOS by Move: E D D D C C D C C C C C  
HCM2kAvgQ: 7 20 20 3 9 9 6 2 0 5 3 4

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 0.776  
Loss Time (sec): 0 Average Delay (sec/veh): 57.4  
Optimal Cycle: 83 Level Of Service: E

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Ignore Ovl Include  
Min. Green: 46 46 46 18 18 18 9 9 9 9 9 9  
Y+R: 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0  
Lanes: 3 0 1 1 0 0 0 4 0 1 0 0 1 0 4 0 0 0 1 0

Volume Module:

Base Vol: 2208 1679 8 0 1210 4 0 71 3047 0 56 62  
Growth Adj: 1.13 1.14 1.12 1.10 1.09 1.11 1.12 1.10 1.10 1.11 1.12 1.13  
Initial Bse: 2494 1908 9 0 1321 4 0 78 3345 0 63 70  
Added Vol: 117 54 3 0 -1 0 0 21 119 0 6 14  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2611 1962 12 0 1320 4 0 99 3464 0 69 84  
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2664 2002 12 0 1347 0 0 101 3535 0 70 86  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2664 2002 12 0 1347 0 0 101 3535 0 70 86  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2664 2002 12 0 1347 0 0 101 3535 0 70 86

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.99 0.93 0.93 1.00 0.89 1.00 1.00 0.98 0.81 1.00 0.91 0.91  
Lanes: 3.00 1.99 0.01 0.00 4.00 1.00 0.00 1.00 4.00 0.00 0.45 0.55  
Final Sat.: 5662 3513 21 0 6778 1900 0 1862 6128 0 776 948

Capacity Analysis Module:

Vol/Sat: 0.47 0.57 0.57 0.00 0.20 0.00 0.00 0.05 0.58 0.00 0.09 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.46 0.46 0.46 0.24 0.24 0.24 0.13 0.13 0.59 0.13 0.13 0.13  
Volume/Cap: 1.02 1.24 1.24 0.00 0.83 0.00 0.00 0.42 0.98 0.00 0.70 0.70  
Delay/Veh: 48.1 138 137.5 0.0 44.7 0.0 0.0 49.3 23.7 0.0 62.2 62.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 48.1 138 137.5 0.0 44.7 0.0 0.0 49.3 23.7 0.0 62.2 62.2  
LOS by Move: D F F A D A A D C A E E  
HCM2kAvgQ: 35 59 59 0 13 0 0 3 38 0 7 7

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1075 Junipero Serra / Chumasero  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.997  
Loss Time (sec): 10 Average Delay (sec/veh): 24.5  
Optimal Cycle: 176 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Chumasero  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Ovl Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 4 0 0 0 0 3 1 0 0 0 0 0 1 0 0 0 0 0 0

Volume Module:  
Base Vol: 4 3895 0 0 4214 75 0 0 107 0 0 0  
Growth Adj: 1.13 1.14 1.12 1.10 1.03 1.11 1.00 1.00 1.05 1.00 1.00 1.00  
Initial Bse: 5 4440 0 0 4340 83 0 0 112 0 0 0  
Added Vol: 66 174 0 0 180 -62 0 0 206 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 71 4614 0 0 4520 21 0 0 318 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 72 4708 0 0 4613 22 0 0 325 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 72 4708 0 0 4613 22 0 0 325 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 72 4708 0 0 4613 22 0 0 325 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 1.00 1.00 0.89 0.89 1.00 1.00 0.85 1.00 1.00 1.00  
Lanes: 1.00 4.00 0.00 0.00 3.98 0.02 0.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 1769 6778 0 0 6739 32 0 0 1611 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.04 0.69 0.00 0.00 0.68 0.68 0.00 0.00 0.20 0.00 0.00 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.04 0.73 0.00 0.00 0.69 0.69 0.00 0.00 0.20 0.00 0.00 0.00  
Volume/Cap: 1.00 0.96 0.00 0.00 1.00 1.00 0.00 0.00 1.00 0.00 0.00 0.00  
Delay/Veh: 148.0 16.6 0.0 0.0 26.5 26.5 0.0 0.0 84.8 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 148.0 16.6 0.0 0.0 26.5 26.5 0.0 0.0 84.8 0.0 0.0 0.0  
LOS by Move: F B A A C C A A F A A A  
HCM2kAvgQ: 5 38 0 0 39 39 0 0 14 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 0.799  
Loss Time (sec): 12 Average Delay (sec/veh): 40.4  
Optimal Cycle: 82 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Ovl Include Ovl  
Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

Volume Module:  
Base Vol: 337 335 364 104 169 262 665 779 99 59 746 303  
Growth Adj: 1.05 1.12 1.14 1.00 1.00 1.00 1.14 1.16 1.00 1.00 1.00 1.05  
Initial Bse: 354 374 414 104 169 262 756 902 99 59 746 318  
Added Vol: 73 13 0 0 0 0 1 11 201 0 0 7  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 427 387 414 104 169 262 757 913 300 59 746 325  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 435 395 422 106 172 267 773 931 306 60 761 332  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 435 395 422 106 172 267 773 931 306 60 761 332  
PCE 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  
MLF 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  
FinalVolume: 435 395 422 106 172 267 773 931 306 60 761 332

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.86 0.86 0.93 0.89 0.89 0.87 0.89 0.89 0.89 0.89 0.83  
Lanes: 2.00 1.45 1.55 1.00 0.78 1.22 2.00 2.00 1.00 1.00 3.00 1.00  
Final Sat.: 3432 2365 2528 1769 1327 2058 3289 3391 1695 1688 5063 1583

Capacity Analysis Module:  
Vol/Sat: 0.13 0.17 0.17 0.06 0.13 0.13 0.23 0.27 0.18 0.04 0.15 0.21  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.21 0.21 0.40 0.16 0.16 0.51 0.34 0.34 0.34 0.19 0.19 0.35  
Volume/Cap: 0.61 0.80 0.42 0.37 0.80 0.26 0.68 0.80 0.53 0.19 0.80 0.60  
Delay/Veh: 46.3 51.4 27.4 47.4 58.4 17.6 35.8 39.0 33.0 42.7 53.0 35.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 46.3 51.4 27.4 47.4 58.4 17.6 35.8 39.0 33.0 42.7 53.0 35.1  
LOS by Move: D D C D E B D D C D D D  
HCM2kAvgQ: 8 12 8 4 10 5 13 17 9 2 12 11

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.620  
Loss Time (sec): 8 Average Delay (sec/veh): 20.4  
Optimal Cycle: 41 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 2 0 0 0 0 0 0 0

Volume Module:

Base Vol: 0 0 316 0 0 0 0 1227 419 499 1001 0  
Growth Adj: 1.02 1.00 1.01 1.13 1.23 1.13 1.01 1.03 1.13 1.13 1.03 1.02  
Initial Bse: 0 0 320 0 0 0 0 1261 472 564 1035 0  
Added Vol: 0 0 23 0 0 0 0 190 47 0 73 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 343 0 0 0 0 1451 519 564 1108 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 350 0 0 0 0 1480 530 575 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 350 0 0 0 0 1480 530 575 0 0  
PCE 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  
MLF 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  
FinalVolume: 0 0 350 0 0 0 0 1480 530 575 0 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.86 0.86 0.90 0.95 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.21 0.79 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3598 1287 3432 3610 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.13 0.00 0.00 0.00 0.00 0.41 0.41 0.17 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.27 0.00 0.00 0.00 0.00 0.66 0.66 0.27 0.00 0.00  
Volume/Cap: 0.00 0.00 0.47 0.00 0.00 0.00 0.00 0.62 0.62 0.62 0.00 0.00  
Delay/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 37.0 0.0 0.0 0.0 0.0 11.9 11.9 39.7 0.0 0.0  
LOS by Move: A A D A A A A B B D A A  
HCM2kAvgQ: 0 0 6 0 0 0 0 16 16 9 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.829  
Loss Time (sec): 10 Average Delay (sec/veh): 28.9  
Optimal Cycle: 89 Level Of Service: C

\*\*\*\*\*  
Street Name: 19th Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 56 23 23 23 23 23 23  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 1 1 1 0 0 1 0 1 0 0 1 0 1 0

Volume Module:

Base Vol: 0 2276 57 2 2656 58 2 201 50 0 228 50  
Growth Adj: 1.10 1.14 1.06 1.04 1.09 1.08 1.06 1.00 1.04 1.08 1.07 1.10  
Initial Bse: 0 2587 61 2 2900 63 2 201 52 0 244 55  
Added Vol: 0 146 3 0 60 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2733 64 2 2960 63 2 201 52 0 244 55  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2789 65 2 3021 64 2 205 53 0 249 56  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2789 65 2 3021 64 2 205 53 0 249 56  
PCE 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  
MLF 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  
FinalVolume: 0 2789 65 2 3021 64 2 205 53 0 249 56

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.84 0.84 0.84 0.86 0.86 0.86 0.95 0.90 0.90  
Lanes: 0.00 2.93 0.07 0.01 2.93 0.06 0.02 1.57 0.41 0.00 1.63 0.37  
Final Sat.: 0 4953 115 3 4662 99 27 2571 665 0 2805 634

Capacity Analysis Module:

Vol/Sat: 0.00 0.56 0.56 0.65 0.65 0.65 0.08 0.08 0.08 0.00 0.09 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.63 0.63 0.63 0.63 0.63 0.26 0.26 0.26 0.00 0.26 0.26  
Volume/Cap: 0.00 0.89 0.89 1.02 1.02 1.02 0.31 0.31 0.31 0.00 0.35 0.35  
Delay/Veh: 0.0 18.0 18.0 39.1 39.1 39.1 28.1 28.1 28.1 0.0 28.5 28.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 18.0 18.0 39.1 39.1 39.1 28.1 28.1 28.1 0.0 28.5 28.5  
LOS by Move: A B B D D D C C C A C C  
HCM2kAvgQ: 0 28 28 42 42 42 3 3 3 0 4 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*  
Cycle (sec): 90 Critical Vol./Cap.(X): 1.508  
Loss Time (sec): 9 Average Delay (sec/veh): 119.3  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 33 33 33 12 49 49 4 32 32 23 23 23  
Y+R: 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 1964 25 312 2778 127 247 1029 62 0 873 403  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 0 2232 29 355 3034 145 287 1221 71 0 1036 468  
Added Vol: 0 110 2 4 35 5 7 3 0 0 13 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2342 31 359 3069 150 294 1224 71 0 1049 491  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2390 32 367 3131 153 300 1249 72 0 1070 501  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2390 32 367 3131 153 300 1249 72 0 1070 501  
PCE 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  
MLF 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  
FinalVolume: 0 2390 32 367 3131 153 300 1249 72 0 1070 501

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.89 0.89 0.58 0.88 0.88 1.00 0.89 0.83  
Lanes: 0.00 2.96 0.04 1.00 2.86 0.14 1.00 2.84 0.16 0.00 3.00 1.00  
Final Sat.: 0 5007 66 1769 4813 235 1106 4729 273 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.48 0.48 0.21 0.65 0.65 0.27 0.26 0.26 0.00 0.21 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.37 0.37 0.15 0.52 0.52 0.38 0.38 0.38 0.00 0.26 0.26  
Volume/Cap: 0.00 1.30 1.30 1.39 1.26 1.26 0.75 0.69 0.69 0.00 0.82 1.24  
Delay/Veh: 0.0 166 166.3 237.4 137 137.5 36.1 24.8 24.8 0.0 37.6 160.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 166 166.3 237.4 137 137.5 36.1 24.8 24.8 0.0 37.6 160.4  
LOS by Move: A F F F F F D C C A D F  
HCM2kAvgQ: 0 49 49 25 66 66 10 12 12 0 13 29

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*  
Cycle (sec): 90 Critical Vol./Cap.(X): 1.093  
Loss Time (sec): 9 Average Delay (sec/veh): 46.1  
Optimal Cycle: 180 Level Of Service: D  
\*\*\*\*\*

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: WideBypass WideBypass Include Include  
Min. Green: 54 54 54 54 54 26 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 1 0 0 0 2 1 0 1 0 0 1 0 0 0 1! 0 0

Volume Module:  
Base Vol: 2 1809 45 0 2766 187 83 274 47 21 230 157  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 2 2056 52 0 3020 213 96 325 54 24 273 182  
Added Vol: 0 112 0 0 35 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2 2168 52 0 3055 213 96 325 54 24 273 182  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2 2212 53 0 3118 217 98 332 55 24 278 186  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2 2212 53 0 3118 217 98 332 55 24 278 186  
PCE 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  
MLF 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  
FinalVolume: 2 2212 53 0 3118 217 98 332 55 24 278 186

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.78 0.78 0.78 1.00 0.88 0.88 0.83 0.96 0.96 0.80 0.80 0.80  
Lanes: 0.01 2.92 0.07 0.00 2.80 0.20 1.00 0.86 0.14 0.05 0.57 0.38  
Final Sat.: 5 4336 105 0 4704 328 1570 1565 258 76 867 580

Capacity Analysis Module:  
Vol/Sat: 0.51 0.51 0.51 0.00 0.66 0.66 0.06 0.21 0.21 0.32 0.32 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.60 0.60 0.60 0.60 0.60 0.60 0.29 0.29 0.29 0.29 0.29 0.29  
Volume/Cap: 0.85 0.85 0.85 0.00 1.10 1.10 0.21 0.72 0.72 1.09 1.09 1.09  
Delay/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 12.1 12.1 12.1 0.0 63.0 63.0 25.0 36.5 36.5 100.8 101 100.8  
LOS by Move: B B B A E E C D D F F F  
HCM2kAvgQ: 16 16 16 0 46 46 2 10 10 23 23 23

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1130 19th / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.865  
Loss Time (sec): 9 Average Delay (sec/veh): 23.1  
Optimal Cycle: 90 Level Of Service: C

Street Name: 19th Eucalyptus  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 56 56 56 56 56 56 25 25 25 25 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 1848 21 0 2818 58 74 125 90 10 148 14  
Growth Adj: 1.16 1.14 1.16 1.14 1.09 1.14 1.16 1.19 1.14 1.14 1.19 1.16  
Initial Bse: 0 2100 24 0 3077 66 86 148 103 11 176 16  
Added Vol: 0 105 3 0 19 16 8 14 0 7 30 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2205 27 0 3096 82 94 162 103 18 206 16  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2250 28 0 3159 84 96 166 105 19 210 17  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2250 28 0 3159 84 96 166 105 19 210 17  
PCE 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  
MLF 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  
FinalVolume: 0 2250 28 0 3159 84 96 166 105 19 210 17

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.66 0.66 0.66 0.94 0.94 0.94  
Lanes: 0.00 2.96 0.04 0.00 2.92 0.08 1.00 1.23 0.77 0.08 0.85 0.07  
Final Sat.: 0 5011 62 0 4932 131 1251 1533 969 136 1522 120

Capacity Analysis Module:  
Vol/Sat: 0.00 0.45 0.45 0.00 0.64 0.64 0.08 0.11 0.11 0.14 0.14 0.14  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.62 0.62 0.62 0.62 0.62 0.62 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.00 0.72 0.72 0.00 1.03 1.03 0.27 0.38 0.38 0.49 0.49 0.49  
Delay/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 7.5 7.5 0.0 33.0 33.0 25.5 27.1 27.1 30.1 30.1 30.1  
LOS by Move: A A A A C C C C C C C C  
HCM2kAvgQ: 0 11 11 0 36 36 2 3 3 6 6 6

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.322  
Loss Time (sec): 13 Average Delay (sec/veh): 84.1  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Winston  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Permitted Permitted Permitted  
Rights: Include Include AddLane Include  
Min. Green: 15 43 43 43 43 43 18 18 18 18 18 18  
Y+R: 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0  
Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 386 1920 59 0 2985 60 56 164 171 51 291 28  
Growth Adj: 1.06 1.14 1.00 1.00 1.09 1.04 1.00 1.00 1.00 1.04 1.00 1.06  
Initial Bse: 409 2182 59 0 3260 62 56 164 171 53 291 30  
Added Vol: 83 43 -30 0 -34 65 64 181 29 36 168 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 492 2225 29 0 3226 127 120 345 200 89 459 30  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 502 2271 30 0 3291 130 122 352 204 91 468 30  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 502 2271 30 0 3291 130 122 352 204 91 468 30  
PCE 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  
MLF 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  
FinalVolume: 502 2271 30 0 3291 130 122 352 204 91 468 30

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.89 0.89 1.00 1.11 0.83 0.26 0.20 0.83 0.68 0.68 0.68  
Lanes: 2.00 2.96 0.04 0.00 3.00 1.00 1.00 2.00 1.00 0.31 1.59 0.10  
Final Sat.: 3432 5008 65 0 6354 1583 502 754 1583 395 2039 132

Capacity Analysis Module:  
Vol/Sat: 0.15 0.45 0.45 0.00 0.52 0.08 0.24 0.47 0.13 0.23 0.23 0.23  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.17 0.48 0.48 0.48 0.48 0.48 0.20 0.20 0.20 0.20 0.20 0.20  
Volume/Cap: 0.88 0.95 0.95 0.00 1.08 0.17 1.22 2.34 0.64 1.15 1.15 1.15  
Delay/Veh: 53.7 27.7 27.7 0.0 63.2 11.2 155.6 652 42.8 123.5 124 123.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 53.7 27.7 27.7 0.0 63.2 11.2 155.6 652 42.8 123.5 124 123.5  
LOS by Move: D C C A E B F F D F F F  
HCM2kAvgQ: 7 21 21 0 50 2 9 19 6 15 15 15

Note: Queue reported is the number of cars per lane.





19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 0.640  
Loss Time (sec): 0 Average Delay (sec/veh): 74.1  
Optimal Cycle: 95 Level Of Service: E

Street Name: 19th Crespi  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 20 48 48 53 53 53 22 22 22 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 3 0 0 0 0 3 1 0 1 0 0 0 0 0

Volume Module:  
Base Vol: 4 2266 0 0 3060 110 152 0 68 0 0 0  
Growth Adj: 1.14 1.14 1.05 1.02 1.09 1.12 1.05 1.00 1.02 1.12 1.14 1.14  
Initial Bse: 5 2576 0 0 3342 123 159 0 70 0 0 0  
Added Vol: 62 61 0 0 102 -68 -53 0 38 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 67 2637 0 0 3444 55 106 0 108 0 0 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 68 2690 0 0 3514 56 108 0 110 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 68 2690 0 0 3514 56 108 0 110 0 0 0  
PCE 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  
MLF 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  
FinalVolume: 68 2690 0 0 3514 56 108 0 110 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.70 0.89 1.00 1.00 0.89 0.89 0.93 1.00 0.83 1.00 1.00 1.00  
Lanes: 1.00 3.00 0.00 0.00 3.94 0.06 1.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 1327 5083 0 0 6658 106 1769 0 1583 0 0 0

Capacity Analysis Module:  
Vol/Sat: 0.05 0.53 0.00 0.00 0.53 0.53 0.06 0.00 0.07 0.00 0.00 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.42 0.42 0.42 0.57 0.57 0.57 0.25 0.25 0.25 0.00 0.00 0.00  
Volume/Cap: 0.12 1.27 0.00 0.00 0.93 0.93 0.25 0.00 0.28 0.00 0.00 0.00  
Delay/Veh: 17.6 152 0.0 0.0 19.1 19.1 34.6 0.0 35.3 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 17.6 152 0.0 0.0 19.1 19.1 34.6 0.0 35.3 0.0 0.0 0.0  
LOS by Move: B F A A B B C A D A A A  
HCM2kAvgQ: 1 60 0 0 26 26 3 0 3 0 0 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumasero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.702  
Loss Time (sec): 8 Average Delay (sec/veh): 19.7  
Optimal Cycle: 91 Level Of Service: B

Street Name: Chumasero Brotherhood  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Protected Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 15 15 15 21 47 47 21 47 47  
Y+R: 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 0 0 0 2 1 0

Volume Module:  
Base Vol: 0 0 0 145 0 54 26 1538 0 0 1684 176  
Growth Adj: 1.08 1.06 1.07 1.01 1.00 1.02 1.07 1.08 1.01 1.02 1.09 1.08  
Initial Bse: 0 0 0 147 0 55 28 1657 0 0 1842 190  
Added Vol: 0 0 0 65 0 -14 -18 559 0 0 151 -6  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 212 0 41 10 2216 0 0 1993 184  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 216 0 42 10 2261 0 0 2034 187  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 216 0 42 10 2261 0 0 2034 187  
PCE 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  
MLF 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  
FinalVolume: 0 0 0 216 0 42 10 2261 0 0 2034 187

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.80 0.80 1.00 0.69 0.75 0.69 0.93 0.93 1.00 1.00 0.88 0.88  
Lanes: 0.00 1.00 0.00 0.84 0.00 0.16 1.00 2.00 0.00 0.00 2.75 0.25  
Final Sat.: 0 1520 0 1098 0 213 1769 3538 0 0 4594 423

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.20 0.00 0.20 0.01 0.64 0.00 0.00 0.44 0.44  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.22 0.00 0.22 0.21 0.70 0.00 0.00 0.49 0.49  
Volume/Cap: 0.00 0.00 0.00 0.90 0.00 0.90 0.03 0.91 0.00 0.00 0.90 0.90  
Delay/Veh: 0.0 0.0 0.0 70.9 0.0 70.9 31.5 9.5 0.0 0.0 24.0 24.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 70.9 0.0 70.9 31.5 9.5 0.0 0.0 24.0 24.0  
LOS by Move: A A A E A E C A A A C C  
HCM2kAvgQ: 0 0 0 11 0 11 0 22 0 0 24 24

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1182 Thomas More / brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.747  
Loss Time (sec): 8 Average Delay (sec/veh): 23.0  
Optimal Cycle: 96 Level Of Service: C

\*\*\*\*\*  
Street Name: Thomas More Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 0 0 0 21 47 47 21 47 47  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 0 0 0 0 0 0 1 0 3 0 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 44 0 99 0 0 0 0 1613 70 175 1808 0  
Growth Adj: 1.08 1.06 1.07 1.01 1.00 1.02 1.07 1.08 1.01 1.02 1.09 1.08  
Initial Bse: 47 0 106 0 0 0 0 1737 71 179 1978 0  
Added Vol: 0 0 0 0 0 0 0 624 0 0 145 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 47 0 106 0 0 0 0 2361 71 179 2123 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 48 0 108 0 0 0 0 2410 72 183 2166 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 48 0 108 0 0 0 0 2410 72 183 2166 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 48 0 108 0 0 0 0 2410 72 183 2166 0

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 1.00 0.88 1.00 1.00 1.00 1.00 0.89 0.89 0.93 0.89 1.00  
Lanes: 0.31 0.00 0.69 0.00 0.00 0.00 0.00 2.91 0.09 1.00 3.00 0.00  
Final Sat.: 515 0 1149 0 0 0 0 4915 148 1769 5083 0

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.09 0.00 0.09 0.00 0.00 0.00 0.00 0.49 0.49 0.10 0.43 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.00 0.20 0.00 0.00 0.00 0.00 0.51 0.51 0.21 0.72 0.00  
Volume/Cap: 0.47 0.00 0.47 0.00 0.00 0.00 0.00 0.96 0.96 0.49 0.59 0.00  
Delay/Veh: 40.0 0.0 40.0 0.0 0.0 0.0 0.0 34.3 34.3 39.4 7.5 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 40.0 0.0 40.0 0.0 0.0 0.0 0.0 34.3 34.3 39.4 7.5 0.0  
LOS by Move: D A D A A A A C C D A A  
HCM2kAvgQ: 5 0 5 0 0 0 0 29 29 5 12 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.799  
Loss Time (sec): 10 Average Delay (sec/veh): 43.0  
Optimal Cycle: 60 Level Of Service: D

\*\*\*\*\*  
Street Name: Sunset Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 0 2021 17 0 1965 11 79 190 53 83 169 38  
Growth Adj: 1.10 1.12 1.06 1.05 1.08 1.08 1.06 1.01 1.05 1.08 1.08 1.10  
Initial Bse: 0 2254 18 0 2130 12 84 193 56 90 183 42  
Added Vol: 0 342 0 0 212 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2596 18 0 2342 12 84 193 56 90 183 42  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2649 18 0 2390 12 86 197 57 92 186 43  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2649 18 0 2390 12 86 197 57 92 186 43  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2649 18 0 2390 12 86 197 57 92 186 43

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.58 0.95 0.95 0.54 0.95 0.95  
Lanes: 0.00 2.98 0.02 0.00 2.98 0.02 1.00 0.78 0.22 1.00 0.81 0.19  
Final Sat.: 0 5043 35 0 5053 26 1097 1396 403 1035 1473 337

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.00 0.53 0.53 0.00 0.47 0.47 0.08 0.14 0.14 0.09 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 1.09 1.09 0.00 0.98 0.98 0.22 0.40 0.40 0.25 0.36 0.36  
Delay/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 62.2 62.2 0.0 29.0 29.0 15.1 16.7 16.7 15.6 16.1 16.1  
LOS by Move: A E E A C C B B B B B B  
HCM2kAvgQ: 0 33 33 0 24 24 1 4 4 1 3 3

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1200 Sunset / Ocean

Cycle (sec): 60 Critical Vol./Cap.(X): 0.664  
Loss Time (sec): 9 Average Delay (sec/veh): 13.7  
Optimal Cycle: 59 Level Of Service: B

Street Name: Sunset Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 0 1 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1318 12 0 1735 81 54 83 18 47 23 192  
Growth Adj: 1.00 1.00 1.07 1.11 1.07 1.01 1.07 1.15 1.11 1.01 1.00 1.00  
Initial Bse: 0 1318 13 0 1853 82 58 95 20 48 23 192  
Added Vol: 0 468 0 0 247 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 1786 13 0 2100 82 58 95 20 48 23 192  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 1822 13 0 2143 84 59 97 20 49 23 196  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1822 13 0 2143 84 59 97 20 49 23 196  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 1822 13 0 2143 84 59 97 20 49 23 196

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.87 0.87 0.87 0.71 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.00 2.89 0.11 0.33 0.55 0.12 1.00 1.00 1.00  
Final Sat.: 0 5042 36 0 4863 190 550 908 190 1354 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.36 0.36 0.00 0.44 0.44 0.11 0.11 0.11 0.04 0.01 0.12  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.00 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 0.68 0.68 0.00 0.83 0.83 0.34 0.34 0.34 0.11 0.04 0.39  
Delay/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 11.6 11.6 0.0 14.7 14.7 17.4 17.4 17.4 15.1 14.3 18.3  
LOS by Move: A B B A B B B B B B B  
HCM2kAvgQ: 0 8 8 0 15 15 3 3 3 1 0 3

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1210 Skyline / Sloat / 39th

Cycle (sec): 100 Critical Vol./Cap.(X): 0.692  
Loss Time (sec): 0 Average Delay (sec/veh): 17.5  
Optimal Cycle: 0 Level Of Service: C

Street Name: Skyline / 39th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Ignore Include Ignore Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 2 0 1 1 0

Volume Module:  
Base Vol: 251 0 646 0 14 7 1 331 194 341 280 60  
Growth Adj: 1.19 1.41 1.35 1.15 1.00 1.00 1.35 1.29 1.15 1.00 1.00 1.19  
Initial Bse: 299 0 872 0 14 7 1 427 222 341 280 72  
Added Vol: 0 0 1 0 0 0 0 16 0 3 34 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 299 0 873 0 14 7 1 443 222 344 314 72  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 306 0 0 0 14 7 1 452 0 351 320 73  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 306 0 0 0 14 7 1 452 0 351 320 73  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 306 0 0 0 14 7 1 452 0 351 320 73

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 1.00 0.00 2.00 0.00 0.67 0.33 0.01 1.99 1.00 2.00 1.63 0.37  
Final Sat.: 442 0 1009 0 274 137 3 912 493 919 810 189

Capacity Analysis Module:  
Vol/Sat: 0.69 xxxxx 0.00 xxxxx 0.05 0.05 0.50 0.50 0.00 0.38 0.40 0.39  
Crit Moves: \*\*\*\*  
Delay/Veh: 25.8 0.0 0.0 0.0 11.4 11.4 17.3 17.3 0.0 14.9 14.1 13.7  
Delay 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  
AdjDel/Veh: 25.8 0.0 0.0 0.0 11.4 11.4 17.3 17.3 0.0 14.9 14.1 13.7  
LOS by Move: D \* \* \* B B C C \* B B B  
ApproachDel: 25.8 11.4 17.3 14.4  
Delay Adj: 1.00 1.00 1.00 1.00  
ApprAdjDel: 25.8 11.4 17.3 14.4  
LOS by Appr: D B C B  
AllWayAvgQ: 1.9 1.9 0.0 0.0 0.0 0.9 0.9 0.0 0.6 0.6 0.6

Note: Queue reported is the number of cars per lane.





19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.400  
Loss Time (sec): 7 Average Delay (sec/veh): 160.6  
Optimal Cycle: 180 Level Of Service: F

Street Name: Lake Merced Font  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Ignore Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1746 48 147 1549 0 0 0 0 43 0 304  
Growth Adj: 1.09 1.14 1.07 1.05 1.09 1.07 1.07 1.01 1.05 1.07 1.04 1.09  
Initial Bse: 0 1985 51 154 1692 0 0 0 0 46 0 331  
Added Vol: 0 414 -9 124 178 0 0 0 0 -8 0 350  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2399 42 278 1870 0 0 0 0 38 0 681  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2447 0 284 1908 0 0 0 0 39 0 695  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2447 0 284 1908 0 0 0 0 39 0 695  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2447 0 284 1908 0 0 0 0 39 0 695

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 1.00 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1900 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.69 0.00 0.16 0.54 0.00 0.00 0.00 0.00 0.02 0.00 0.44  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.45 0.00 0.96 0.80 0.00 0.00 0.00 0.00 0.09 0.00 1.80  
Delay/Veh: 0.0 224 0.0 81.0 6.3 0.0 0.0 0.0 0.0 26.7 0.0 402.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 224 0.0 81.0 6.3 0.0 0.0 0.0 0.0 26.7 0.0 402.2  
LOS by Move: A F A F A A A A A C A F  
HCM2kAvgQ: 0 82 0 12 12 0 0 0 0 1 0 58

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1261 Lake Merced / Vidal  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.925  
Loss Time (sec): 12 Average Delay (sec/veh): 45.2  
Optimal Cycle: 122 Level Of Service: D

Street Name: Lake Merced Vidal  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1899 29 19 1592 0 0 0 0 7 0 11  
Growth Adj: 1.00 1.14 1.11 1.09 1.09 1.00 1.00 1.00 1.00 1.10 1.00 1.12  
Initial Bse: 0 2165 32 21 1735 0 0 0 0 8 0 12  
Added Vol: 0 342 43 65 104 0 0 0 0 64 0 63  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2507 75 86 1839 0 0 0 0 72 0 75  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2558 77 87 1877 0 0 0 0 73 0 77  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2558 77 87 1877 0 0 0 0 73 0 77  
PCE 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  
MLF 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  
FinalVolume: 0 2558 77 87 1877 0 0 0 0 73 0 77

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.72 0.05 0.05 0.53 0.00 0.00 0.00 0.00 0.04 0.00 0.05  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.65 0.65 0.65 0.10 0.79 0.79 0.00 0.00 0.00 0.13 0.13 0.13  
Volume/Cap: 0.00 1.11 0.07 0.49 0.67 0.00 0.00 0.00 0.00 0.32 0.00 0.37  
Delay/Veh: 0.0 74.9 6.6 52.2 6.0 0.0 0.0 0.0 0.0 43.1 0.0 44.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 74.9 6.6 52.2 6.0 0.0 0.0 0.0 0.0 43.1 0.0 44.9  
LOS by Move: A E A D A A A A A D A D  
HCM2kAvgQ: 0 56 1 2 14 0 0 0 0 2 0 3

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1262 Lake Merced / Acevedo  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.962  
Loss Time (sec): 12 Average Delay (sec/veh): 43.3  
Optimal Cycle: 149 Level Of Service: D

\*\*\*\*\*  
Street Name: Lake Merced Acevedo  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 1913 17 10 1588 0 0 0 0 7 0 15  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.12 1.00  
Initial Bse: 0 2181 19 11 1731 0 0 0 0 8 0 15  
Added Vol: 0 299 25 35 133 0 0 0 0 63 0 87  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2480 44 46 1864 0 0 0 0 71 0 102  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2530 45 47 1902 0 0 0 0 72 0 104  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2530 45 47 1902 0 0 0 0 72 0 104  
PCE 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  
MLF 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  
FinalVolume: 0 2530 45 47 1902 0 0 0 0 72 0 104

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.88 1.00 0.88  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.41 0.00 0.59  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 687 0 992

Capacity Analysis Module:  
Vol/Sat: 0.00 0.72 0.03 0.03 0.54 0.00 0.00 0.00 0.00 0.10 0.00 0.10  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.65 0.65 0.65 0.10 0.79 0.79 0.00 0.00 0.00 0.13 0.13 0.13  
Volume/Cap: 0.00 1.10 0.04 0.26 0.68 0.00 0.00 0.00 0.00 0.81 0.00 0.81  
Delay/Veh: 0.0 70.1 6.4 45.2 6.1 0.0 0.0 0.0 0.0 68.8 0.0 68.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 70.1 6.4 45.2 6.1 0.0 0.0 0.0 0.0 68.8 0.0 68.8  
LOS by Move: A E A D A A A A A E A E  
HCM2kAvgQ: 0 55 0 1 15 0 0 0 0 8 0 8

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.994  
Loss Time (sec): 12 Average Delay (sec/veh): 37.9  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Lake Merced Higuera  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 1690 1 5 1590 0 0 0 0 25 0 24  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.10 1.12  
Initial Bse: 0 1921 1 5 1736 0 0 0 0 27 0 27  
Added Vol: 0 184 2 17 179 0 0 0 0 233 0 140  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2105 3 22 1915 0 0 0 0 260 0 167  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2148 3 23 1954 0 0 0 0 266 0 170  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2148 3 23 1954 0 0 0 0 266 0 170  
PCE 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  
MLF 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  
FinalVolume: 0 2148 3 23 1954 0 0 0 0 266 0 170

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.90  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.61 0.00 0.39  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1042 0 668

Capacity Analysis Module:  
Vol/Sat: 0.00 0.61 0.00 0.01 0.55 0.00 0.00 0.00 0.00 0.25 0.00 0.25  
Crit Moves: \*\*\*\* \*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.75 0.75 0.00 0.00 0.00 0.17 0.17 0.17  
Volume/Cap: 0.00 0.96 0.00 0.13 0.74 0.00 0.00 0.00 0.00 1.50 0.00 1.50  
Delay/Veh: 0.0 20.9 3.4 42.5 1.9 0.0 0.0 0.0 0.0 283.4 0.0 283.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 20.9 3.4 42.5 1.9 0.0 0.0 0.0 0.0 283.4 0.0 283.4  
LOS by Move: A C A D A A A A A F A F  
HCM2kAvgQ: 0 29 0 1 3 0 0 0 0 33 0 33

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1264 Lake Merced / Gonzalez  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.923  
Loss Time (sec): 12 Average Delay (sec/veh): 33.6  
Optimal Cycle: 122 Level Of Service: C

\*\*\*\*\*  
Street Name: Lake Merced Gonzalez  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 1 0 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 0 1899 97 6 1609 0 0 0 0 39 0 9  
Growth Adj: 1.12 1.14 1.11 1.09 1.09 1.10 1.11 1.08 1.09 1.10 1.10 1.12  
Initial Bse: 0 2165 108 7 1754 0 0 0 0 43 0 10  
Added Vol: 0 136 145 21 391 0 0 0 0 360 0 51  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2301 253 28 2145 0 0 0 0 403 0 61  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2348 258 28 2189 0 0 0 0 411 0 62  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2348 258 28 2189 0 0 0 0 411 0 62  
PCE 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  
MLF 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  
FinalVolume: 0 2348 258 28 2189 0 0 0 0 411 0 62

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.92 1.00 0.92  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.77 0.00 0.23  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 3090 0 407

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.00 0.66 0.16 0.02 0.62 0.00 0.00 0.00 0.00 0.13 0.00 0.15  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.75 0.75 0.00 0.00 0.00 0.17 0.17 0.17  
Volume/Cap: 0.00 1.05 0.26 0.16 0.82 0.00 0.00 0.00 0.00 0.78 0.00 0.90  
Delay/Veh: 0.0 53.5 8.8 43.1 11.3 0.0 0.0 0.0 0.0 49.5 0.0 61.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 53.5 8.8 43.1 11.3 0.0 0.0 0.0 0.0 49.5 0.0 61.9  
LOS by Move: A D A D B A A A A D A E  
HCM2kAvgQ: 0 44 3 1 25 0 0 0 0 9 0 12

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 1.784  
Loss Time (sec): 15 Average Delay (sec/veh): 122.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ovl Include Include Ovl  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 5.0 5.0 5.0 5.0 5.0 5.0 10.0 10.0 10.0 5.0 5.0 5.0  
Lanes: 0 0 2 0 1 2 0 1 0 0 0 0 0 0 0 1 0 0 0 2

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 0 416 209 1478 225 0 0 0 0 139 0 1483  
Growth Adj: 1.13 1.14 1.29 1.26 1.09 1.11 1.29 1.44 1.26 1.11 1.12 1.13  
Initial Bse: 0 473 269 1868 246 0 0 0 0 154 0 1674  
Added Vol: 0 117 -18 477 274 0 0 0 0 -16 0 164  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 590 251 2345 520 0 0 0 0 138 0 1838  
User Adj: 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 602 256 2393 0 0 0 0 0 141 0 1875  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 602 256 2393 0 0 0 0 0 141 0 1875  
PCE 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  
MLF 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  
FinalVolume: 0 602 256 2393 0 0 0 0 0 141 0 1875

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.90 1.00 1.00 1.00 1.00 1.00 0.93 1.00 0.73  
Lanes: 0.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 2.00  
Final Sat.: 0 3538 1583 3432 1900 0 0 0 0 1769 0 2786

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.00 0.17 0.16 0.70 0.00 0.00 0.00 0.00 0.00 0.08 0.00 0.67  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.16 0.16 0.43 0.48 0.69 0.69 0.00 0.00 0.00 0.22 0.22 0.75  
Volume/Cap: 0.00 1.04 0.38 1.45 0.00 0.00 0.00 0.00 0.00 0.36 0.00 0.90  
Delay/Veh: 0.0 94.2 18.9 227.4 0.0 0.0 0.0 0.0 0.0 37.1 0.0 16.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 94.2 18.9 227.4 0.0 0.0 0.0 0.0 0.0 37.1 0.0 16.9  
LOS by Move: A F B F A A A A A D A B  
HCM2kAvgQ: 0 17 5 86 0 0 0 0 0 4 0 32

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.



Tier 4C Conditions  
Weekday PM Peak Hour



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 19th Ave CS  
 Tier 4c  
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## Scenario Report

Scenario: Tier 4c PM  
 Command: Default Command  
 Volume: Tier 4c PM  
 Geometry: Tier 4c PM  
 Impact Fee: Default Impact Fee  
 Trip Generation: Projects PM  
 Trip Distribution: PM  
 Paths: Tier 4c  
 Routes: Tier 4  
 Configuration: Tier 4

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 19th Ave CS  
 Tier 4c  
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Impact Analysis Report  
Level Of Service

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
#1010 Claremont / Taraval / Dewey /	A	7.1	0.653	A	7.4 0.672	+ 0.020 V/C
#1020 Santa Clara / Portola / Vicent	C	30.5	0.841	D	39.0 0.936	+ 8.525 D/V
#1030 Junipero Serra / Sloat / West	F	101.4	1.113	F	117.2 1.170	+15.817 D/V
#1040 Junipero Serra / Ocean / Eucal	D	39.7	0.820	E	70.2 1.063	+30.533 D/V
#1050 Junipero Serra / Winston / Mer	C	30.4	0.678	D	49.3 1.062	+18.865 D/V
#1060 Junipero Serra / Holloway	C	30.4	0.692	C	31.8 0.718	+ 1.408 D/V
#1070 Junipero Serra / 19th	C	33.0	0.822	F	90.6 0.872	+57.575 D/V
#1075 Junipero Serra / Chumasero	A	10.0	0.935	C	31.3 1.067	+21.260 D/V
#1080 Junipero Serra / I-280 NB On-R	F	129.3	1.294	F	152.0 1.400	+22.707 D/V
#1090 Junipero Serra / I-280 SB On-R	D	49.9	1.054	F	89.9 1.172	+40.016 D/V
#1100 19th / Taraval	B	19.4	0.839	C	24.0 0.883	+ 4.578 D/V
#1110 19th / Sloat	F	127.7	1.550	F	154.7 1.630	+26.999 D/V
#1120 19th / Ocean	F	146.9	1.568	F	180.5 1.633	+33.636 D/V
#1130 19th / Eucalyptus	E	69.7	1.079	F	86.4 1.180	+16.707 D/V
#1140 19th / Winston	F	97.7	1.325	F	207.7 1.699	+109.967 D/
#1150 19th / Buckingham	F	408.9	1.759	F	604.0 2.196	+195.131 D/
#1160 19th / Holloway	A	8.1	0.801	F	85.1 0.884	+77.052 D/V
#1170 19th / Crespi	B	18.4	0.692	F	87.1 0.764	+68.683 D/V
#1181 Chumasero / Brotherhood	B	15.8	0.720	F	84.0 0.932	+68.121 D/V
#1182 Thomas More / brotherhood	B	14.3	0.462	C	22.3 0.572	+ 7.999 D/V
#1190 Sunset / Taraval	D	49.8	0.843	F	125.6 0.960	+75.784 D/V
#1200 Sunset / Ocean	B	13.3	0.687	C	30.5 0.827	+17.163 D/V
#1210 Skyline / Sloat / 39th	D	27.0	0.908	D	29.4 0.925	+ 0.017 V/C
#1221 Skyline / Lake Merced (WBR)	C	17.4	0.416	C	17.5 0.417	+ 0.048 D/V

19th Ave CS  
Tier 4c

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
#1222 Skyline / Lake Merced (WBLT)	F 116.8	0.894	F 118.6	0.900	+ 1.760 D/V
#1230 Sunset / Lake Merced	F OVRFL	1.328	F OVRFL	2.491	Nan D/V
#1240 Lake Merced / Winston	E 55.7	0.971	F 188.9	1.372	+133.281 D/
#1250 Lake Merced / Font	D 46.8	0.783	F 179.3	1.546	+132.523 D/
#1261 Lake Merced / Vidal	C 32.9	0.687	D 36.0	0.887	+ 3.143 D/V
#1262 Lake Merced / Acevedo	C 32.4	0.705	C 34.6	0.959	+ 2.213 D/V
#1263 Lake Merced / Higuera	E 77.3	0.741	D 45.4	1.135	-31.909 D/
#1264 Lake Merced / Gonzalez	C 33.9	0.715	D 52.4	1.032	+18.414 D/V
#1270 Lake Merced / Brotherhood	E 68.7	1.689	F 186.0	2.199	+117.295 D/

19th Ave CS  
Tier 4c

Level of Service Computation Report  
FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1010 Claremont / Taraval / Dewey / Kensington  
\*\*\*\*\*

Average Delay (sec/veh): 7.4      Level Of Service: A  
\*\*\*\*\*

Street Name:	Claremont			Taraval / Dewey		
	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Approach:	North Bound	South Bound	East Bound	West Bound	West Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign	Yield Sign
Lanes:	1	1	1	1	1	1

Volume Module:

Base Vol:	17	24	239	50	63	5	10	259	55	324	338	31
Growth Adj:	1.09	1.10	1.07	1.06	1.09	1.08	1.07	1.04	1.06	1.08	1.08	1.09
Initial Bse:	18	26	255	53	69	5	11	269	59	351	364	34
Added Vol:	1	0	16	0	0	0	0	0	0	22	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	26	271	53	69	5	11	269	59	373	364	34
User 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
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	20	27	277	54	70	6	11	275	60	381	371	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	27	277	54	70	6	11	275	60	381	371	34
PCE 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
MLF 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
FinalVolume:	20	27	277	54	70	6	11	275	60	381	371	34

PCE Module:

AutoPCE:	20	27	277	54	70	6	11	275	60	381	371	34
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	20	27	277	54	70	6	11	275	60	381	371	34

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	340	771	505	58
MaxVolume:	1016	783	927	1169
PedVolume:	0	0	0	0
AdjMaxVol:	1016	783	927	1169
ApproachVol:	324	130	345	786
ApproachV/C:	0.32	0.17	0.37	0.67
ApproachDel:	5.2	5.5	6.2	9.2
ApproachLOS:	A	A	A	A
Queue:	1.4	0.6	1.7	5.5

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1020 Santa Clara / Portola / Vicente  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.936  
Loss Time (sec): 11 Average Delay (sec/veh): 39.0  
Optimal Cycle: 111 Level Of Service: D

\*\*\*\*\*  
Street Name: Santa Clara / Vicente Portola  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
Rights: Include Include Include Include  
Min. Green: 23 23 23 23 23 23 9 36 36 9 36 36  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 22 273 85 86 191 48 48 1051 33 147 987 108  
Growth Adj: 1.03 1.00 1.03 1.07 1.03 1.07 1.03 1.10 1.07 1.07 1.10 1.03  
Initial Bse: 23 273 88 92 198 51 50 1155 35 157 1087 112  
Added Vol: 0 0 0 15 0 4 0 147 0 0 246 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 23 273 88 107 198 55 50 1302 35 157 1333 112  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 23 279 90 109 202 56 51 1329 36 160 1360 114  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 23 279 90 109 202 56 51 1329 36 160 1360 114  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 23 279 90 109 202 56 51 1329 36 160 1360 114

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.92 0.92 0.59 0.59 0.59 0.93 0.93 0.93 0.93 0.92 0.92  
Lanes: 0.06 0.71 0.23 0.30 0.55 0.15 1.00 1.95 0.05 1.00 1.85 0.15  
Final Sat.: 104 1246 401 331 612 171 1769 3431 93 1769 3225 270

Capacity Analysis Module:

Vol/Sat: 0.22 0.22 0.22 0.33 0.33 0.33 0.03 0.39 0.39 0.09 0.42 0.42  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.30 0.30 0.30 0.30 0.30 0.30 0.11 0.45 0.45 0.11 0.45 0.45  
Volume/Cap: 0.75 0.75 0.75 1.10 1.10 1.10 0.25 0.86 0.86 0.80 0.94 0.94  
Delay/Veh: 34.5 34.5 34.5 106.1 106 106.1 35.5 26.1 26.1 62.9 32.9 32.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 34.5 34.5 34.5 106.1 106 106.1 35.5 26.1 26.1 62.9 32.9 32.9  
LOS by Move: C C C F F F D C C E C C  
HCM2kAvgQ: 10 10 10 17 17 17 1 19 19 6 24 24

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.170  
Loss Time (sec): 16 Average Delay (sec/veh): 117.2  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 53 53 32 32 32 15 15 15 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 1027 1005 60 0 1045 261 852 420 471 20 405 10  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 1162 1121 66 0 1232 303 937 455 533 23 464 11  
Added Vol: 33 120 0 0 209 0 2 0 29 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1195 1241 66 0 1441 303 939 455 562 23 464 11  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1219 1266 67 0 1470 310 958 464 0 24 474 12  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1219 1266 67 0 1470 310 958 464 0 24 474 12  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1219 1266 67 0 1470 310 958 464 0 24 474 12

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.88 0.88 0.89 0.97 1.00 0.93 0.93 0.93  
Lanes: 3.00 1.90 0.10 0.00 2.48 0.52 3.00 1.00 1.00 0.09 1.86 0.05  
Final Sat.: 5096 3302 176 0 4130 870 5096 1843 1900 164 3276 80

Capacity Analysis Module:

Vol/Sat: 0.24 0.38 0.38 0.00 0.36 0.36 0.19 0.25 0.00 0.14 0.14 0.14  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.17 0.48 0.48 0.00 0.30 0.30 0.18 0.18 0.00 0.19 0.19 0.19  
Volume/Cap: 1.39 0.80 0.80 0.00 1.17 1.17 1.04 1.39 0.00 0.76 0.76 0.76  
Delay/Veh: 227.4 23.0 23.0 0.0 119 118.7 83.6 238 0.0 48.1 48.1 48.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 227.4 23.0 23.0 0.0 119 118.7 83.6 238 0.0 48.1 48.1 48.1  
LOS by Move: F C C A F F F F A D D D  
HCM2kAvgQ: 28 17 17 0 36 36 17 33 0 10 10 10

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1040 Junipero Serra / Ocean / Eucalyptus  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.063  
Loss Time (sec): 14 Average Delay (sec/veh): 70.2  
Optimal Cycle: 180 Level Of Service: E

\*\*\*\*\*  
Street Name: Junipero Serra Ocean / Eucalyptus  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Ovl Ovl  
Min. Green: 11 43 43 16 48 48 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 2 0 2 1 0 0 1 1 0 1 0 1 0 0 1

Volume Module:  
Base Vol: 176 1567 35 356 1065 96 140 356 58 77 332 333  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 199 1748 38 403 1255 112 154 386 66 90 381 377  
Added Vol: 0 107 43 35 194 9 12 91 0 25 66 34  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 199 1855 81 438 1449 121 166 477 66 115 447 411  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 203 1893 83 446 1479 123 169 486 67 117 456 419  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 203 1893 83 446 1479 123 169 486 67 117 456 419  
PCE 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  
MLF 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  
FinalVolume: 203 1893 83 446 1479 123 169 486 67 117 456 419

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.97 0.88 0.90 0.88 0.88 0.63 0.63 0.83 0.63 0.63 0.83  
Lanes: 1.00 2.86 0.14 2.00 2.77 0.23 0.52 1.48 1.00 0.20 0.80 1.00  
Final Sat.: 1751 5249 231 3432 4636 386 616 1770 1583 244 951 1583

Capacity Analysis Module:  
Vol/Sat: 0.12 0.36 0.36 0.13 0.32 0.32 0.27 0.27 0.04 0.48 0.48 0.26  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.11 0.43 0.43 0.16 0.48 0.48 0.27 0.27 0.38 0.27 0.27 0.43  
Volume/Cap: 1.05 0.84 0.84 0.81 0.66 0.66 1.02 1.02 0.11 1.77 1.77 0.62  
Delay/Veh: 124.5 25.6 25.6 53.0 17.3 17.3 76.5 76.5 20.4 397.3 397 26.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 124.5 25.6 25.6 53.0 17.3 17.3 76.5 76.5 20.4 397.3 397 26.2  
LOS by Move: F C C D B B E E C F F C  
HCM2kAvgQ: 8 18 17 6 10 10 17 17 1 49 49 11

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1050 Junipero Serra / Winston / Mercedes  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.062  
Loss Time (sec): 14 Average Delay (sec/veh): 49.3  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Junipero Serra Winston / Mercedes  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: WideBypass Include Include Include  
Min. Green: 19 40 40 19 40 40 27 27 27 27 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 1 0 1 0 1

Volume Module:  
Base Vol: 224 1516 52 85 1130 117 169 152 81 74 103 36  
Growth Adj: 1.05 1.12 1.11 1.15 1.18 1.08 1.11 1.11 1.15 1.08 1.00 1.05  
Initial Bse: 236 1691 58 97 1332 127 188 169 93 80 103 38  
Added Vol: 73 15 2 1 62 156 135 157 48 1 133 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 309 1706 60 98 1394 283 323 326 141 81 236 38  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 315 1741 61 100 1422 289 330 333 144 83 241 39  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 315 1741 61 100 1422 289 330 333 144 83 241 39  
PCE 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  
MLF 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  
FinalVolume: 315 1741 61 100 1422 289 330 333 144 83 241 39

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 0.89 0.93 0.87 0.87 0.44 0.98 0.83 0.30 0.98 0.83  
Lanes: 1.00 2.90 0.10 1.00 2.49 0.51 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4886 172 1769 4120 836 845 1862 1583 579 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.18 0.36 0.36 0.06 0.35 0.35 0.39 0.18 0.09 0.14 0.13 0.02  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.19 0.40 0.40 0.19 0.40 0.40 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.94 0.89 0.89 0.30 0.86 0.86 1.45 0.66 0.34 0.53 0.48 0.09  
Delay/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 75.4 31.4 31.4 37.0 29.9 29.9 259.9 39.2 31.4 43.4 33.8 27.7  
LOS by Move: E C C D C C F D C D C C  
HCM2kAvgQ: 10 18 18 2 18 18 22 8 3 3 7 1

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1060 Junipero Serra / Holloway  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.718  
Loss Time (sec): 14 Average Delay (sec/veh): 31.8  
Optimal Cycle: 100 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Holloway  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 19 39 39 19 39 39 28 28 28 28 28 28  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 183 1398 101 176 1001 104 117 140 23 143 96 107  
Growth Adj: 1.11 1.12 1.08 1.11 1.18 1.14 1.08 1.04 1.11 1.14 1.10 1.11  
Initial Bse: 202 1559 109 195 1180 118 126 145 25 163 105 118  
Added Vol: 7 60 1 31 39 41 7 -21 0 1 0 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 209 1619 110 226 1219 159 133 124 25 164 105 141  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 214 1652 112 230 1244 162 136 126 26 167 107 144  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 214 1652 112 230 1244 162 136 126 26 167 107 144  
PCE 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  
MLF 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  
FinalVolume: 214 1652 112 230 1244 162 136 126 26 167 107 144

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.88 0.88 0.93 0.88 0.88 0.67 0.98 0.83 0.64 0.98 0.83  
Lanes: 1.00 2.81 0.19 1.00 2.65 0.35 1.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 1769 4718 319 1769 4419 577 1275 1862 1583 1218 1862 1583

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.12 0.35 0.35 0.13 0.28 0.28 0.11 0.07 0.02 0.14 0.06 0.09  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.19 0.39 0.39 0.19 0.39 0.39 0.28 0.28 0.28 0.28 0.28 0.28  
Volume/Cap: 0.64 0.90 0.90 0.69 0.72 0.72 0.38 0.24 0.06 0.49 0.21 0.33  
Delay/Veh: 46.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 46.2 32.9 32.9 48.6 25.8 25.8 32.0 28.9 26.6 35.0 28.4 30.5  
LOS by Move: D C C D C C C C C C C C  
HCM2kAvgQ: 5 17 17 6 12 12 4 3 1 5 3 4

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.872  
Loss Time (sec): 0 Average Delay (sec/veh): 90.6  
Optimal Cycle: 145 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Ignore Ignore Ovl Include  
Min. Green: 54 54 54 20 20 20 9 9 68 9 9 9  
Y+R: 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0  
Lanes: 3 0 1 1 0 0 0 4 0 1 0 0 1 0 4 0 0 0 1 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 2410 1660 25 0 1178 17 0 123 3060 0 47 50  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09  
Initial Bse: 2621 1851 27 0 1388 19 0 124 3346 0 50 54  
Added Vol: 246 45 2 0 41 0 0 37 199 0 10 23  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2867 1896 29 0 1429 19 0 161 3545 0 60 77  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2926 1935 0 0 1458 0 0 164 3617 0 61 79  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2926 1935 0 0 1458 0 0 164 3617 0 61 79  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2926 1935 0 0 1458 0 0 164 3617 0 61 79

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.93 0.95 1.00 0.89 1.00 1.00 0.98 0.73 1.00 0.91 0.91  
Lanes: 3.00 2.00 0.00 0.00 4.00 1.00 0.00 1.00 4.00 0.00 0.44 0.56  
Final Sat.: 5147 3538 0 0 6778 1900 0 1862 5571 0 750 970

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.57 0.55 0.00 0.00 0.22 0.00 0.00 0.09 0.65 0.00 0.08 0.08  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.45 0.45 0.45 0.25 0.25 0.25 0.17 0.17 0.62 0.17 0.17 0.17  
Volume/Cap: 1.26 1.22 0.00 0.00 0.86 0.00 0.00 0.52 1.05 0.00 0.48 0.48  
Delay/Veh: 149.6 131 0.0 0.0 49.0 0.0 0.0 51.3 41.5 0.0 50.5 50.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 149.6 131 0.0 0.0 49.0 0.0 0.0 51.3 41.5 0.0 50.5 50.5  
LOS by Move: F F A A D A A D D A D D  
HCM2kAvgQ: 62 59 0 0 15 0 0 6 49 0 5 5

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1075 Junipero Serra / Chumasero  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.067  
Loss Time (sec): 10 Average Delay (sec/veh): 31.3  
Optimal Cycle: 180 Level Of Service: C

\*\*\*\*\*  
Street Name: Junipero Serra Chumasero  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Ovl Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 4 0 0 0 0 3 1 0 0 0 0 0 1 0 0 0 0 0 0

Volume Module:

Base Vol: 60 4095 0 0 4238 31 0 0 125 0 0 0  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.00 1.00 1.05 1.00 1.00 1.00  
Initial Bse: 65 4567 0 0 4994 35 0 0 131 0 0 0  
Added Vol: 167 293 0 0 234 5 0 0 131 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 232 4860 0 0 5228 40 0 0 262 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 237 4959 0 0 5335 41 0 0 268 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 237 4959 0 0 5335 41 0 0 268 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 237 4959 0 0 5335 41 0 0 268 0 0 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 1.00 1.00 0.89 0.89 1.00 1.00 0.85 1.00 1.00 1.00  
Lanes: 1.00 4.00 0.00 0.00 3.97 0.03 0.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 1769 6778 0 0 6720 51 0 0 1611 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.13 0.73 0.00 0.00 0.79 0.79 0.00 0.00 0.17 0.00 0.00 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.13 0.87 0.00 0.00 0.74 0.74 0.00 0.00 0.16 0.00 0.00 0.00  
Volume/Cap: 1.07 0.84 0.00 0.00 1.07 1.07 0.00 0.00 1.07 0.00 0.00 0.00  
Delay/Veh: 122.9 4.3 0.0 0.0 47.7 47.7 0.0 0.0 117.8 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 122.9 4.3 0.0 0.0 47.7 47.7 0.0 0.0 117.8 0.0 0.0 0.0  
LOS by Move: F A A A D D A A F A A A  
HCM2kAvgQ: 13 23 0 0 57 57 0 0 14 0 0 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1080 Junipero Serra / I-280 NB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 125 Critical Vol./Cap.(X): 1.400  
Loss Time (sec): 12 Average Delay (sec/veh): 152.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 NB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Ovl Include Ovl  
Min. Green: 6 6 6 6 6 6 31 31 31 6 6 6  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 1 1 1 1 0 0 1 1 2 1 0 1 1 1 1 2 0 1

Volume Module:

Base Vol: 621 381 328 210 383 857 667 495 160 122 895 232  
Growth Adj: 1.19 1.13 1.11 1.28 1.47 1.36 1.11 1.09 1.28 1.36 1.25 1.19  
Initial Bse: 739 429 363 268 562 1167 738 537 204 166 1122 276  
Added Vol: 283 26 0 0 0 0 -1 18 187 0 0 16  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1022 455 363 268 562 1167 737 555 391 166 1122 292  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 1043 464 370 274 574 1190 752 567 399 169 1145 298  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1043 464 370 274 574 1190 752 567 399 169 1145 298  
PCE 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  
MLF 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  
FinalVolume: 1043 464 370 274 574 1190 752 567 399 169 1145 298

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.87 0.87 0.93 0.88 0.88 0.85 0.88 0.88 0.89 0.89 0.83  
Lanes: 2.00 1.67 1.33 1.00 0.65 1.35 2.22 1.63 1.15 1.00 3.00 1.00  
Final Sat.: 3432 2755 2196 1769 1089 2259 3608 2720 1916 1684 5053 1583

Capacity Analysis Module:

Vol/Sat: 0.30 0.17 0.17 0.15 0.53 0.53 0.21 0.21 0.21 0.10 0.23 0.19  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.19 0.19 0.33 0.33 0.33 0.57 0.25 0.25 0.25 0.14 0.14 0.47  
Volume/Cap: 1.61 0.89 0.51 0.47 1.61 0.92 0.84 0.84 0.84 0.72 1.61 0.40  
Delay/Veh: 333.3 60.5 34.1 34.1 322 31.3 47.9 47.9 47.9 52.7 335 22.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 333.3 60.5 34.1 34.1 322 31.3 47.9 47.9 47.9 52.7 335 22.2  
LOS by Move: F E C C F C D D D D F C  
HCM2kAvgQ: 47 14 9 8 75 34 12 12 12 8 37 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1090 Junipero Serra / I-280 SB On-Ramp / John Daly  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 1.172  
Loss Time (sec): 8 Average Delay (sec/veh): 89.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / I-280 SB On-Ramp John Daly  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase  
Rights: Ovl Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 2 0 0 0 0 0 0 0

Volume Module:

Base Vol: 0 0 350 0 0 0 0 972 427 722 1966 0  
Growth Adj: 1.05 1.00 1.04 1.32 1.55 1.33 1.04 1.09 1.32 1.33 1.10 1.05  
Initial Bse: 0 0 365 0 0 0 0 1058 563 958 2172 0  
Added Vol: 0 0 34 0 0 0 0 171 36 0 283 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 399 0 0 0 0 1229 599 958 2455 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 408 0 0 0 0 1254 611 977 2505 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 408 0 0 0 0 1254 611 977 2505 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 0 408 0 0 0 0 1254 611 977 2505 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.73 1.00 1.00 1.00 1.00 0.85 0.85 0.90 0.93 1.00  
Lanes: 0.00 0.00 2.00 0.00 0.00 0.00 0.00 2.02 0.98 2.00 2.00 0.00  
Final Sat.: 0 0 2786 0 0 0 0 3250 1584 3432 3538 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.15 0.00 0.00 0.00 0.00 0.39 0.39 0.28 0.71 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.60 0.00 0.00 0.00 0.00 0.33 0.33 0.60 0.60 0.00  
Volume/Cap: 0.00 0.00 0.24 0.00 0.00 0.00 0.00 1.17 1.17 0.47 1.17 0.00  
Delay/Veh: 0.0 0.0 11.1 0.0 0.0 0.0 0.0 125 124.8 13.3 107 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 11.1 0.0 0.0 0.0 0.0 125 124.8 13.3 107 0.0  
LOS by Move: A A B A A A A F F B F A  
HCM2kAvgQ: 0 0 4 0 0 0 0 40 40 9 69 0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1100 19th / Taraval  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.883  
Loss Time (sec): 10 Average Delay (sec/veh): 24.0  
Optimal Cycle: 99 Level Of Service: C

\*\*\*\*\*  
Street Name: 19th Taraval  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 66 66 66 66 66 66 23 23 23 23 23 23  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 0 1 0 1 0 0 1 0 1 0

Volume Module:

Base Vol: 0 2131 104 0 2591 31 3 331 84 22 336 51  
Growth Adj: 1.06 1.12 1.06 1.09 1.18 1.09 1.06 1.00 1.09 1.09 1.00 1.06  
Initial Bse: 0 2377 110 0 3053 34 3 331 91 24 336 54  
Added Vol: 0 201 2 0 202 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2578 112 0 3255 34 3 331 91 24 336 54  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2630 114 0 3322 34 3 338 93 24 343 55  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2630 114 0 3322 34 3 338 93 24 343 55  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2630 114 0 3322 34 3 338 93 24 343 55

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.86 0.86 0.86 0.83 0.83 0.83  
Lanes: 0.00 2.88 0.12 0.00 2.97 0.03 0.01 1.56 0.43 0.12 1.62 0.26  
Final Sat.: 0 4842 210 0 5026 52 24 2538 701 182 2562 411

Capacity Analysis Module:

Vol/Sat: 0.00 0.54 0.54 0.00 0.66 0.66 0.13 0.13 0.13 0.13 0.13 0.13  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.67 0.67 0.00 0.67 0.67 0.23 0.23 0.23 0.23 0.23 0.23  
Volume/Cap: 0.00 0.81 0.81 0.00 0.99 0.99 0.58 0.58 0.58 0.58 0.58 0.58  
Delay/Veh: 0.0 14.1 14.1 0.0 28.6 28.6 37.4 37.4 37.4 37.6 37.6 37.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 14.1 14.1 0.0 28.6 28.6 37.4 37.4 37.4 37.6 37.6 37.6  
LOS by Move: A B B A C C D D D D D D  
HCM2kAvgQ: 0 24 24 0 45 45 7 7 7 7 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 1.630  
Loss Time (sec): 9 Average Delay (sec/veh): 154.7  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2446 66 235 2609 321 185 1440 74 0 870 497  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2728 73 266 3075 373 203 1560 84 0 998 562  
Added Vol: 0 164 2 16 170 18 22 13 0 0 13 47  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2892 75 282 3245 391 225 1573 84 0 1011 609  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2951 76 287 3311 399 230 1605 85 0 1031 622  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2951 76 287 3311 399 230 1605 85 0 1031 622  
PCE 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  
MLF 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  
FinalVolume: 0 2951 76 287 3311 399 230 1605 85 0 1031 622

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.88 0.41 0.88 0.88 1.00 0.89 0.83  
Lanes: 0.00 2.92 0.08 1.00 2.68 0.32 1.00 2.85 0.15 0.00 3.00 1.00  
Final Sat.: 0 4936 127 1769 4464 538 782 4764 253 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.60 0.60 0.16 0.74 0.74 0.29 0.34 0.34 0.00 0.20 0.39  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.11 0.54 0.54 0.37 0.37 0.37 0.00 0.27 0.27  
Volume/Cap: 0.00 1.39 1.39 1.44 1.37 1.37 0.79 0.92 0.92 0.00 0.75 1.44  
Delay/Veh: 0.0 203 203.1 269.9 183 183.5 42.5 38.0 38.0 0.0 36.9 248.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 203 203.1 269.9 183 183.5 42.5 38.0 38.0 0.0 36.9 248.7  
LOS by Move: A F F F F F D D D A D F  
HCM2kAvgQ: 0 70 70 22 87 87 9 22 22 0 12 44

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1120 19th / Ocean  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap.(X): 1.633  
Loss Time (sec): 9 Average Delay (sec/veh): 180.5  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*

Street Name: 19th Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 64 64 64 64 64 64 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 2340 47 0 2579 164 64 293 25 25 271 127  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2610 52 0 3039 191 70 317 28 29 311 144  
Added Vol: 0 166 0 0 170 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2776 52 0 3209 191 70 317 28 29 311 144  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2832 53 0 3275 195 72 324 29 30 317 147  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2832 53 0 3275 195 72 324 29 30 317 147  
PCE 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  
MLF 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  
FinalVolume: 0 2832 53 0 3275 195 72 324 29 30 317 147

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.44 0.89 1.00 0.88 0.88 0.89 0.97 0.97 0.73 0.73 0.73  
Lanes: 0.00 2.97 0.03 0.00 2.83 0.17 1.00 0.92 0.08 0.06 0.64 0.30  
Final Sat.: 0 2511 47 0 4760 283 1687 1689 150 83 886 409

Capacity Analysis Module:  
Vol/Sat: 0.00 1.13 1.13 0.00 0.69 0.69 0.04 0.19 0.19 0.36 0.36 0.36  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.64 0.64 0.64 0.64 0.64 0.64 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 0.00 1.76 1.76 0.00 1.08 1.08 0.16 0.72 0.72 1.35 1.35 1.35  
Delay/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 354 354.2 0.0 48.9 48.9 29.0 42.4 42.4 211.8 212 211.8  
LOS by Move: A F F A D D C D D F F F  
HCM2kAvgQ: 0 86 172 0 48 48 2 11 11 33 33 33

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1130 19th / Eucalyptus

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.180  
Loss Time (sec): 9 Average Delay (sec/veh): 86.4  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: 19th Eucalyptus

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Permitted Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 66 66 66 66 66 66 25 25 25 25 25 25

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 2 1 0 0 0 2 1 0 1 1 0 1 0 0 0 0 1 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 2277 26 0 2555 114 170 169 54 9 167 17

Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13

Initial Bse: 0 2540 29 0 3011 133 187 183 61 10 192 19

Added Vol: 0 121 18 0 137 33 45 84 0 13 62 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 2661 47 0 3148 166 232 267 61 23 254 19

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 2715 48 0 3212 169 237 273 62 24 259 20

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 2715 48 0 3212 169 237 273 62 24 259 20

PCE 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

MLF 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

FinalVolume: 0 2715 48 0 3212 169 237 273 62 24 259 20

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.53 0.89 1.00 0.89 0.89 0.64 0.64 0.64 0.93 0.93 0.93

Lanes: 0.00 2.97 0.03 0.00 2.85 0.15 1.24 1.43 0.33 0.08 0.86 0.06

Final Sat.: 0 3009 53 0 4795 252 1511 1741 398 139 1505 114

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Capacity Analysis Module:

Vol/Sat: 0.00 0.90 0.90 0.00 0.67 0.67 0.16 0.16 0.16 0.17 0.17 0.17

Crit Moves: \*\*\*\* \*\*\*\*

Green/Cycle: 0.66 0.66 0.66 0.66 0.66 0.66 0.26 0.26 0.26 0.26 0.26 0.26

Volume/Cap: 0.00 1.37 1.37 0.00 1.01 1.01 0.61 0.61 0.61 0.67 0.67 0.67

Delay/Veh: 0.0 175 175.3 0.0 26.3 26.3 35.9 35.9 35.9 41.4 41.4 41.4

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 175 175.3 0.0 26.3 26.3 35.9 35.9 35.9 41.4 41.4 41.4

LOS by Move: A F F A C C D D D D D D

HCM2kAvgQ: 0 65 106 0 40 40 6 6 6 9 9 9

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1140 19th / Winston

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.699  
Loss Time (sec): 13 Average Delay (sec/veh): 207.7  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: 19th Winston

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Permitted Permitted Permitted

Rights: Include Include AddLane Include

Min. Green: 16 44 44 44 44 44 26 26 26 26 26 26

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 524 2162 50 0 2624 168 245 364 347 95 351 45

Growth Adj: 1.03 1.12 1.05 1.09 1.18 1.06 1.05 1.00 1.09 1.06 1.00 1.03

Initial Bse: 539 2411 53 0 3092 178 258 364 377 101 351 46

Added Vol: 120 22 -34 0 81 102 116 374 133 36 325 1

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 659 2433 19 0 3173 280 374 738 510 137 676 47

User 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

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 672 2483 19 0 3238 286 382 753 520 139 690 48

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 672 2483 19 0 3238 286 382 753 520 139 690 48

PCE 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

MLF 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

FinalVolume: 672 2483 19 0 3238 286 382 753 520 139 690 48

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.90 0.89 0.89 1.00 1.34 0.83 0.31 0.23 0.83 0.49 0.49 0.49

Lanes: 2.00 2.98 0.02 0.00 3.00 1.00 1.00 2.00 1.00 0.32 1.57 0.11

Final Sat.: 3432 5039 39 0 7625 1583 586 878 1583 296 1465 102

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Capacity Analysis Module:

Vol/Sat: 0.20 0.49 0.49 0.00 0.42 0.18 0.65 0.86 0.33 0.47 0.47 0.47

Crit Moves: \*\*\*\* \*\*\*\*

Green/Cycle: 0.16 0.44 0.44 0.44 0.44 0.44 0.27 0.27 0.27 0.27 0.27 0.27

Volume/Cap: 1.22 1.12 1.12 0.00 0.97 0.41 2.46 3.24 1.24 1.78 1.78 1.78

Delay/Veh: 158.3 84.4 84.4 0.0 32.5 18.0 700.6 1050 163.6 394.4 394 394.4

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 158.3 84.4 84.4 0.0 32.5 18.0 700.6 1050 163.6 394.4 394 394.4

LOS by Move: F F F A C B F F F F F F

HCM2kAvgQ: 18 39 39 0 41 5 43 47 31 39 39 39

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.



19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1170 19th / Crespi  
\*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap.(X): 0.764  
Loss Time (sec): 0 Average Delay (sec/veh): 87.1  
Optimal Cycle: 144 Level Of Service: F  
\*\*\*\*\*

Street Name: 19th Crespi  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 59 59 0 0 64 64 21 0 21 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 3 0 0 0 0 3 1 0 1 0 0 0 1

Volume Module:  
Base Vol: 60 2485 0 0 3081 99 147 0 97 0 0 0  
Growth Adj: 1.15 1.12 1.00 1.00 1.18 1.18 1.00 1.00 1.00 1.18 1.19 1.15  
Initial Bse: 69 2772 0 0 3631 117 147 0 97 0 0 0  
Added Vol: 157 99 0 0 219 -2 -88 0 17 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 226 2871 0 0 3850 115 59 0 114 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 231 2929 0 0 3929 118 60 0 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 231 2929 0 0 3929 118 60 0 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 231 2929 0 0 3929 118 60 0 0 0 0 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.89 1.00 1.00 0.89 0.89 0.93 1.00 1.00 1.00 1.00 1.00  
Lanes: 1.00 3.00 0.00 0.00 3.88 0.12 1.00 0.00 1.00 1.00 0.00 1.00  
Final Sat.: 1769 5083 0 0 6554 196 1769 0 1900 1900 0 1900

Capacity Analysis Module:  
Vol/Sat: 0.13 0.58 0.00 0.00 0.60 0.60 0.03 0.00 0.00 0.00 0.00 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.44 0.44 0.44 0.61 0.61 0.61 0.20 0.20 0.20 0.00 0.00 0.00  
Volume/Cap: 0.30 1.31 0.00 0.00 0.98 0.98 0.17 0.00 0.00 0.00 0.00 0.00  
Delay/Veh: 23.2 179 0.0 0.0 24.4 24.4 48.4 0.0 0.0 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 23.2 179 0.0 0.0 24.4 24.4 48.4 0.0 0.0 0.0 0.0 0.0  
LOS by Move: C F A A C C D A A A A A  
HCM2kAvgQ: 5 79 0 0 44 44 2 0 0 0 0 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1181 Chumasero / Brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.932  
Loss Time (sec): 8 Average Delay (sec/veh): 84.0  
Optimal Cycle: 120 Level Of Service: F  
\*\*\*\*\*

Street Name: Chumasero Brotherhood  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Protected Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 15 15 15 20 48 48 20 48 48  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 0 0 0 2 1 0

Volume Module:  
Base Vol: 0 0 0 79 0 12 39 1471 0 0 1625 121  
Growth Adj: 1.28 1.00 1.08 1.27 1.38 1.47 1.08 1.16 1.27 1.47 1.57 1.28  
Initial Bse: 0 0 0 100 0 18 42 1710 0 0 2550 155  
Added Vol: 0 0 0 62 0 -11 -23 442 0 0 657 167  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 162 0 7 19 2152 0 0 3207 322  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 166 0 7 19 2196 0 0 3273 328  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 166 0 7 19 2196 0 0 3273 328  
PCE 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  
MLF 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  
FinalVolume: 0 0 0 166 0 7 19 2196 0 0 3273 328

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.80 0.80 1.00 0.71 0.75 0.71 0.93 0.93 1.00 1.00 0.88 0.88  
Lanes: 0.00 1.00 0.00 0.96 0.00 0.04 1.00 2.00 0.00 0.00 2.73 0.27  
Final Sat.: 0 1520 0 1299 0 54 1769 3538 0 0 4555 457

Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.13 0.00 0.13 0.01 0.62 0.00 0.00 0.72 0.72  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.15 0.00 0.15 0.20 0.77 0.00 0.00 0.57 0.57  
Volume/Cap: 0.00 0.00 0.00 0.85 0.00 0.85 0.05 0.81 0.00 0.00 1.26 1.26  
Delay/Veh: 0.0 0.0 0.0 80.0 0.0 80.0 32.6 2.7 0.0 0.0 134 134.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 80.0 0.0 80.0 32.6 2.7 0.0 0.0 134 134.0  
LOS by Move: A A A F A F C A A A F F  
HCM2kAvgQ: 0 0 0 8 0 8 0 4 0 0 72 72

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1182 Thomas More / brotherhood  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.572  
Loss Time (sec): 8 Average Delay (sec/veh): 22.3  
Optimal Cycle: 97 Level Of Service: C

Street Name: Thomas More Brotherhood  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Split Phase Split Phase Protected Protected  
Rights: Include Include Include Include  
Min. Green: 20 20 20 0 0 0 21 48 48 21 48 48  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 0 0 0 0 0 0 1 0 3 0 0

Volume Module:  
Base Vol: 17 0 32 0 0 0 0 1535 15 33 1609 0  
Growth Adj: 1.28 1.00 1.08 1.27 1.38 1.47 1.08 1.16 1.27 1.47 1.57 1.28  
Initial Bse: 22 0 34 0 0 0 0 1785 19 49 2525 0  
Added Vol: 0 0 0 0 0 0 0 504 0 0 824 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 22 0 34 0 0 0 0 2289 19 49 3349 0  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 22 0 35 0 0 0 0 2335 19 50 3418 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 22 0 35 0 0 0 0 2335 19 50 3418 0  
PCE 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  
MLF 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  
FinalVolume: 22 0 35 0 0 0 0 2335 19 50 3418 0

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.88 1.00 0.88 1.00 1.00 1.00 1.00 0.89 0.89 0.93 0.89 1.00  
Lanes: 0.39 0.00 0.61 0.00 0.00 0.00 0.00 2.98 0.02 1.00 3.00 0.00  
Final Sat.: 648 0 1027 0 0 0 0 5036 42 1769 5083 0

Capacity Analysis Module:  
Vol/Sat: 0.03 0.00 0.03 0.00 0.00 0.00 0.00 0.46 0.46 0.03 0.67 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.20 0.00 0.20 0.00 0.00 0.00 0.00 0.51 0.51 0.21 0.72 0.00  
Volume/Cap: 0.17 0.00 0.17 0.00 0.00 0.00 0.00 0.91 0.91 0.13 0.93 0.00  
Delay/Veh: 34.2 0.0 34.2 0.0 0.0 0.0 0.0 28.5 28.5 32.9 17.8 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 34.2 0.0 34.2 0.0 0.0 0.0 0.0 28.5 28.5 32.9 17.8 0.0  
LOS by Move: C A C A A A A C C B A  
HCM2kAvgQ: 2 0 2 0 0 0 0 26 26 1 38 0

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1190 Sunset / Taraval  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.960  
Loss Time (sec): 10 Average Delay (sec/veh): 125.6  
Optimal Cycle: 100 Level Of Service: F

Street Name: Sunset Taraval  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 0 2 1 0 1 0 0 1 0

Volume Module:  
Base Vol: 0 2129 96 0 1790 117 70 238 37 76 243 30  
Growth Adj: 1.14 1.20 1.12 1.15 1.26 1.17 1.12 1.04 1.15 1.17 1.08 1.14  
Initial Bse: 0 2553 108 0 2261 137 79 249 43 89 263 34  
Added Vol: 0 483 0 0 513 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 3036 108 0 2774 137 79 249 43 89 263 34  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 3098 110 0 2831 140 80 254 44 91 268 35  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 3098 110 0 2831 140 80 254 44 91 268 35  
PCE 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  
MLF 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  
FinalVolume: 0 3098 110 0 2831 140 80 254 44 91 268 35

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 1.00 0.89 0.89 0.48 0.96 0.96 0.49 0.96 0.96  
Lanes: 0.00 2.90 0.10 0.00 2.86 0.14 1.00 0.85 0.15 1.00 0.88 0.12  
Final Sat.: 0 4885 173 0 4810 238 916 1554 267 929 1619 211

Capacity Analysis Module:  
Vol/Sat: 0.00 0.63 0.63 0.00 0.59 0.59 0.09 0.16 0.16 0.10 0.17 0.17  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.48 0.48 0.00 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.00 1.31 1.31 0.00 1.22 1.22 0.25 0.47 0.47 0.28 0.47 0.47  
Delay/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 159 159.1 0.0 117 117.5 15.7 17.6 17.6 16.2 17.7 17.7  
LOS by Move: A F F A F F B B B B B B  
HCM2kAvgQ: 0 58 58 0 47 47 1 5 5 1 5 5

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1200 Sunset / Ocean  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.827  
Loss Time (sec): 9 Average Delay (sec/veh): 30.5  
Optimal Cycle: 63 Level Of Service: C

Street Name: Sunset Ocean  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 31 31 31 31 31 31 19 19 19 19 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 0 1 1 1 0 0 0 0 1 0 0 1 0 1 0 1

Volume Module:  
Base Vol: 0 1682 14 1 1588 60 30 61 18 37 47 226  
Growth Adj: 1.11 1.24 1.10 1.00 1.00 1.00 1.10 1.00 1.00 1.00 1.00 1.11  
Initial Bse: 0 2085 15 1 1589 60 33 61 18 37 47 252  
Added Vol: 0 590 0 0 670 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2675 15 1 2259 60 33 61 18 37 47 252  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2729 16 1 2305 61 34 62 18 38 48 257  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2729 16 1 2305 61 34 62 18 38 48 257  
PCE 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  
MLF 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  
FinalVolume: 0 2729 16 1 2305 61 34 62 18 38 48 257

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.79 0.79 0.79 0.88 0.88 0.88 0.76 0.98 0.83  
Lanes: 0.00 2.98 0.02 0.01 2.92 0.07 0.30 0.54 0.16 1.00 1.00 1.00  
Final Sat.: 0 5049 29 2 4407 117 493 909 268 1450 1862 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.54 0.54 0.52 0.52 0.52 0.07 0.07 0.07 0.03 0.03 0.16  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.53 0.53 0.53 0.53 0.53 0.32 0.32 0.32 0.32 0.32 0.32  
Volume/Cap: 0.00 1.01 1.01 0.98 0.98 0.98 0.22 0.22 0.22 0.08 0.08 0.51  
Delay/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 34.7 34.7 28.0 28.0 28.0 16.0 16.0 16.0 14.7 14.6 20.4  
LOS by Move: A C C C C C B B B B B C  
HCM2kAvgQ: 0 21 21 24 24 24 2 2 2 0 1 4

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1210 Skyline / Sloat / 39th  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.925  
Loss Time (sec): 0 Average Delay (sec/veh): 29.4  
Optimal Cycle: 0 Level Of Service: D

Street Name: Skyline / 39th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Ignore Include Ignore Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 1 0 0 2 0 0 0 1 0 0 1 1 0 1 2 0 1 1 0

Volume Module:  
Base Vol: 327 0 565 0 21 7 2 350 163 450 435 64  
Growth Adj: 1.13 1.23 1.24 1.16 1.08 1.05 1.24 1.25 1.16 1.05 1.03 1.13  
Initial Bse: 371 0 701 0 23 7 2 437 189 475 450 73  
Added Vol: 0 0 3 0 0 0 0 43 0 2 35 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 371 0 704 0 23 7 2 480 189 477 485 73  
User Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 378 0 0 0 23 8 3 489 0 486 495 74  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 378 0 0 0 23 8 3 489 0 486 495 74  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 378 0 0 0 23 8 3 489 0 486 495 74

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 1.00 0.00 2.00 0.00 0.75 0.25 0.01 1.99 1.00 2.00 1.74 0.26  
Final Sat.: 409 0 912 0 286 93 4 771 406 839 785 119

Capacity Analysis Module:  
Vol/Sat: 0.92 xxxxx 0.00 xxxxx 0.08 0.08 0.63 0.63 0.00 0.58 0.63 0.62  
Crit Moves: \*\*\*\*  
Delay/Veh: 56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9  
Delay 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  
AdjDel/Veh: 56.1 0.0 0.0 0.0 12.8 12.8 25.4 25.3 0.0 21.7 22.6 21.9  
LOS by Move: F \* \* \* B B D D \* C C C  
ApproachDel: 56.1 12.8 25.3 22.1  
Delay Adj: 1.00 1.00 1.00  
ApprAdjDel: 56.1 12.8 25.3 22.1  
LOS by Appr: F B D C  
AllWayAvgQ: 5.1 5.1 0.0 0.1 0.1 1.5 1.5 0.0 1.2 1.5 1.5

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1221 Skyline / Lake Merced (WBR)

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: C[ 17.5]

Street Name: Skyline Lake Merced (WBR)
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 2 0 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module:
Base Vol: 0 853 0 100 489 0 0 0 0 0 0 0 133
Growth Adj: 1.51 1.22 1.12 1.07 1.12 1.46 1.12 1.02 1.07 1.46 1.81 1.51
Initial Bse: 0 1041 0 107 548 0 0 0 0 0 0 0 201
Added Vol: 0 3 0 0 2 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1044 0 107 550 0 0 0 0 0 0 0 201
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 1065 0 109 561 0 0 0 0 0 0 0 205
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 1065 0 109 561 0 0 0 0 0 0 0 205

Critical Gap Module:
Critical Gp: 4.1 6.9
FollowUpTim: 2.2 3.3

Capacity Module:
Cnflict Vol: 532
Potent Cap.: 492
Move Cap.: 492
Volume/Cap: 0.42

Level of Service Module:
2Way95thQ: 2.0
Control Del: 17.5
LOS by Move: C
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel: 17.5
ApproachLOS: C

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1222 Skyline / Lake Merced (WBLT)

Average Delay (sec/veh): 7.4 Worst Case Level Of Service: F[118.6]

Street Name: Skyline Lake Merced (WBLT)
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 1 0 1 1 0 0 0 2 0 1 0 0 0 0 0 1 0 0 0

Volume Module:
Base Vol: 8 853 118 0 468 21 0 0 0 75 3 0
Growth Adj: 1.51 1.22 1.12 1.07 1.12 1.46 1.12 1.02 1.07 1.46 1.81 1.51
Initial Bse: 12 1044 133 0 524 31 0 0 0 110 5 0
Added Vol: 0 3 0 0 2 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 12 1047 133 0 526 31 0 0 0 110 5 0
User 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
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 12 1069 135 0 537 31 0 0 0 112 6 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 12 1069 135 0 537 31 0 0 0 112 6 0

Critical Gap Module:
Critical Gp: 4.1 6.8 6.5
FollowUpTim: 2.2 3.5 4.0

Capacity Module:
Cnflict Vol: 1429 1729
Potent Cap.: 126 87
Move Cap.: 124 86
Volume/Cap: 0.90 0.06

Level of Service Module:
2Way95thQ: 5.7 0.2
Control Del: 122.0 49.5
LOS by Move: F E
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel: 118.6
ApproachLOS: F

Note: Queue reported is the number of cars per lane.





19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1250 Lake Merced / Font  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 1.546  
Loss Time (sec): 7 Average Delay (sec/veh): 179.3  
Optimal Cycle: 180 Level Of Service: F

Street Name: Lake Merced Font  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 43 43 43 15 61 61 0 0 0 22 0 22  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1683 17 176 1644 0 0 0 0 104 0 331  
Growth Adj: 1.08 1.12 1.10 1.13 1.18 1.11 1.10 1.08 1.13 1.11 1.04 1.08  
Initial Bse: 0 1877 19 198 1937 0 0 0 0 115 0 357  
Added Vol: 0 359 -10 417 527 0 0 0 0 -9 0 304  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2236 9 615 2464 0 0 0 0 106 0 661  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2282 9 628 2515 0 0 0 0 109 0 674  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2282 9 628 2515 0 0 0 0 109 0 674  
PCE 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  
MLF 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  
FinalVolume: 0 2282 9 628 2515 0 0 0 0 109 0 674

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.64 0.01 0.35 0.71 0.00 0.00 0.00 0.00 0.06 0.00 0.43  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.17 0.68 0.68 0.00 0.00 0.00 0.24 0.24 0.24  
Volume/Cap: 0.00 1.35 0.01 2.13 1.05 0.00 0.00 0.00 0.00 0.25 0.00 1.74  
Delay/Veh: 0.0 180 9.9 556.9 37.7 0.0 0.0 0.0 0.0 28.8 0.0 379.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 180 9.9 556.9 37.7 0.0 0.0 0.0 0.0 28.8 0.0 379.0  
LOS by Move: A F A F D A A A A C A F  
HCM2kAvgQ: 0 69 0 59 50 0 0 0 0 3 0 55

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1261 Lake Merced / Vidal  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.887  
Loss Time (sec): 12 Average Delay (sec/veh): 36.0  
Optimal Cycle: 104 Level Of Service: D

Street Name: Lake Merced Vidal  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 1

Volume Module:  
Base Vol: 0 1811 9 13 1748 0 0 0 0 10 0 11  
Growth Adj: 1.00 1.12 1.16 1.19 1.18 1.00 1.00 1.00 1.00 1.91 1.00 1.88  
Initial Bse: 0 2028 10 15 2063 0 0 0 0 19 0 21  
Added Vol: 0 290 65 102 415 0 0 0 0 58 0 59  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2318 75 117 2478 0 0 0 0 77 0 80  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2366 77 120 2528 0 0 0 0 79 0 81  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2366 77 120 2528 0 0 0 0 79 0 81  
PCE 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  
MLF 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  
FinalVolume: 0 2366 77 120 2528 0 0 0 0 79 0 81

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.93 1.00 0.83  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1769 0 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.67 0.05 0.07 0.71 0.00 0.00 0.00 0.00 0.04 0.00 0.05  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.06 0.08 0.68 0.93 0.00 0.00 0.00 0.00 0.30 0.00 0.34  
Delay/Veh: 0.0 56.3 7.3 62.4 16.3 0.0 0.0 0.0 0.0 40.6 0.0 42.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 56.3 7.3 62.4 16.3 0.0 0.0 0.0 0.0 40.6 0.0 42.0  
LOS by Move: A E A E B A A A A D A D  
HCM2kAvgQ: 0 45 1 3 31 0 0 0 0 2 0 3

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1262 Lake Merced / Acevedo  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.959  
Loss Time (sec): 12 Average Delay (sec/veh): 34.6  
Optimal Cycle: 146 Level Of Service: C

Street Name: Lake Merced Acevedo  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 1806 11 14 1743 0 0 0 0 9 0 15  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 2023 13 17 2057 0 0 0 0 17 0 28  
Added Vol: 0 278 79 108 365 0 0 0 0 56 0 77  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2301 92 125 2422 0 0 0 0 73 0 105  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2348 94 127 2471 0 0 0 0 75 0 107  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2348 94 127 2471 0 0 0 0 75 0 107  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2348 94 127 2471 0 0 0 0 75 0 107

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.88 1.00 0.88  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.41 0.00 0.59  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 689 0 990

Capacity Analysis Module:  
Vol/Sat: 0.00 0.66 0.06 0.07 0.70 0.00 0.00 0.00 0.00 0.11 0.00 0.11  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.05 0.09 0.72 0.91 0.00 0.00 0.00 0.00 0.72 0.00 0.72  
Delay/Veh: 0.0 53.5 7.5 65.8 14.5 0.0 0.0 0.0 0.0 57.0 0.0 57.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 53.5 7.5 65.8 14.5 0.0 0.0 0.0 0.0 57.0 0.0 57.0  
LOS by Move: A D A E B A A A A E A E  
HCM2kAvgQ: 0 44 1 4 31 0 0 0 0 7 0 7

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1263 Lake Merced / Higuera  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.135  
Loss Time (sec): 12 Average Delay (sec/veh): 45.4  
Optimal Cycle: 180 Level Of Service: D

Street Name: Lake Merced Higuera  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 0 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 0 0 1 0 0

Volume Module:  
Base Vol: 0 1795 41 23 1730 0 0 0 0 30 0 22  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 2002 47 27 2039 0 0 0 0 57 0 41  
Added Vol: 0 241 280 174 247 0 0 0 0 180 0 116  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2243 327 201 2286 0 0 0 0 237 0 157  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2289 334 205 2332 0 0 0 0 242 0 160  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2289 334 205 2332 0 0 0 0 242 0 160  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 2289 334 205 2332 0 0 0 0 242 0 160

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.90 1.00 0.90  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 0.60 0.00 0.40  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 1029 0 682

Capacity Analysis Module:  
Vol/Sat: 0.00 0.65 0.21 0.12 0.66 0.00 0.00 0.00 0.00 0.24 0.00 0.24  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.03 0.34 1.16 0.86 0.00 0.00 0.00 0.00 1.57 0.00 1.57  
Delay/Veh: 0.0 35.5 5.2 162.9 3.7 0.0 0.0 0.0 0.0 316.7 0.0 316.7  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 35.5 5.2 162.9 3.7 0.0 0.0 0.0 0.0 316.7 0.0 316.7  
LOS by Move: A D A F A A A A A F A F  
HCM2kAvgQ: 0 40 2 10 3 0 0 0 0 32 0 32

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1264 Lake Merced / Gonzalez  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.032  
Loss Time (sec): 12 Average Delay (sec/veh): 52.4  
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*  
Street Name: Lake Merced Gonzalez  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 41 41 41 11 59 59 0 0 0 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 1 0 0

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 0 1827 65 8 1751 0 0 0 0 53 0 9  
Growth Adj: 1.88 1.12 1.16 1.19 1.18 1.91 1.16 1.20 1.19 1.91 2.64 1.88  
Initial Bse: 0 2046 75 10 2066 0 0 0 0 101 0 17  
Added Vol: 0 475 449 64 362 0 0 0 0 320 0 46  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2521 524 74 2428 0 0 0 0 421 0 63  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2573 535 75 2478 0 0 0 0 430 0 64  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2573 535 75 2478 0 0 0 0 430 0 64  
PCE 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  
MLF 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  
FinalVolume: 0 2573 535 75 2478 0 0 0 0 430 0 64

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.93 0.93 1.00 1.00 1.00 1.00 0.92 1.00 0.92  
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.77 0.00 0.23  
Final Sat.: 0 3538 1583 1769 3538 0 0 0 0 3097 0 403

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.00 0.73 0.34 0.04 0.70 0.00 0.00 0.00 0.00 0.14 0.00 0.16  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.63 0.63 0.63 0.10 0.77 0.77 0.00 0.00 0.00 0.15 0.15 0.15  
Volume/Cap: 0.00 1.15 0.54 0.42 0.91 0.00 0.00 0.00 0.00 0.93 0.00 1.06  
Delay/Veh: 0.0 93.5 12.4 49.6 14.6 0.0 0.0 0.0 0.0 66.2 0.0 102.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 93.5 12.4 49.6 14.6 0.0 0.0 0.0 0.0 66.2 0.0 102.1  
LOS by Move: A F B D B A A A A E A F  
HCM2kAvgQ: 0 61 8 2 33 0 0 0 0 11 0 15

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1270 Lake Merced / Brotherhood  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 2.199  
Loss Time (sec): 15 Average Delay (sec/veh): 186.0  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Lake Merced Brotherhood  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Split Phase Split Phase  
Rights: Ovl Include Include Ovl  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Y+R: 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0  
Lanes: 0 0 2 0 1 2 0 1 0 0 0 0 0 0 0 1 0 0 0 2

\*\*\*\*\*  
Volume Module:  
\*\*\*\*\*

Base Vol: 0 504 195 1342 517 0 0 0 0 267 0 1323  
Growth Adj: 1.71 1.12 1.14 1.17 1.18 1.74 1.14 1.16 1.17 1.74 2.31 1.71  
Initial Bse: 0 562 222 1572 609 0 0 0 0 465 0 2264  
Added Vol: 0 339 -26 432 250 0 0 0 0 -13 0 585  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 901 196 2004 859 0 0 0 0 452 0 2849  
User Adj: 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 920 200 2045 0 0 0 0 0 462 0 2907  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 920 200 2045 0 0 0 0 0 462 0 2907  
PCE 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  
MLF 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  
FinalVolume: 0 920 200 2045 0 0 0 0 0 462 0 2907

\*\*\*\*\*  
Saturation Flow Module:  
\*\*\*\*\*

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.83 0.90 1.00 1.00 1.00 1.00 1.00 0.93 1.00 0.73  
Lanes: 0.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 2.00  
Final Sat.: 0 3538 1583 3432 1900 0 0 0 0 1769 0 2786

\*\*\*\*\*  
Capacity Analysis Module:  
\*\*\*\*\*

Vol/Sat: 0.00 0.26 0.13 0.60 0.00 0.00 0.00 0.00 0.00 0.26 0.00 1.04  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.16 0.16 0.43 0.48 0.69 0.69 0.00 0.00 0.00 0.22 0.22 0.75  
Volume/Cap: 0.00 1.59 0.30 1.24 0.00 0.00 0.00 0.00 0.00 1.20 0.00 1.40  
Delay/Veh: 0.0 319 18.1 134.5 0.0 0.0 0.0 0.0 0.0 153.7 0.0 196.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 319 18.1 134.5 0.0 0.0 0.0 0.0 0.0 153.7 0.0 196.9  
LOS by Move: A F B F A A A A A F A F  
HCM2kAvgQ: 0 40 4 58 0 0 0 0 0 28 0 113

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

Tier 4C Conditions  
Weekend Midday Peak Hour



19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1030 Junipero Serra / Sloat / West Portal / St. Francis  
\*\*\*\*\*

Cycle (sec): 105 Critical Vol./Cap.(X): 1.183  
Loss Time (sec): 16 Average Delay (sec/veh): 181.9  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra / West Portal Sloat / St. Francis  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase  
Rights: Include Include Ignore Include  
Min. Green: 16 53 53 32 32 32 15 15 15 20 20 20  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 3 0 1 1 0 0 0 2 1 0 3 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 1575 1246 23 0 787 272 895 346 371 14 293 26  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 1781 1390 25 0 927 316 984 375 420 16 336 29  
Added Vol: 92 212 0 0 261 0 2 0 88 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1873 1602 25 0 1188 316 986 375 508 16 336 29  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.00 0.98 0.98 0.98  
PHF Volume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1912 1634 26 0 1213 323 1006 382 0 17 343 30  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00  
FinalVolume: 1912 1634 26 0 1213 323 1006 382 0 17 343 30

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.89 0.92 0.92 1.00 0.87 0.87 0.89 0.97 1.00 0.92 0.92 0.92  
Lanes: 3.00 1.97 0.03 0.00 2.37 0.63 3.00 1.00 1.00 0.09 1.76 0.15  
Final Sat.: 5096 3441 54 0 3929 1046 5096 1843 1900 149 3071 269

Capacity Analysis Module:

Vol/Sat: 0.38 0.47 0.47 0.00 0.31 0.31 0.20 0.21 0.00 0.11 0.11 0.11  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.21 0.51 0.51 0.00 0.30 0.30 0.14 0.14 0.00 0.19 0.19 0.19  
Volume/Cap: 1.79 0.92 0.92 0.00 1.01 1.01 1.38 1.45 0.00 0.59 0.59 0.59  
Delay/Veh: 401.1 27.0 27.0 0.0 62.1 62.1 225.1 268 0.0 42.5 42.5 42.5  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 401.1 27.0 27.0 0.0 62.1 62.1 225.1 268 0.0 42.5 42.5 42.5  
LOS by Move: F C C A E E F F A D D D  
HCM2kAvgQ: 56 25 25 0 25 25 25 29 0 7 7 7

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1070 Junipero Serra / 19th  
\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 1.468  
Loss Time (sec): 17 Average Delay (sec/veh): 170.2  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*  
Street Name: Junipero Serra 19th  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted  
Rights: Ignore Ignore Ovl Include  
Min. Green: 54 54 54 20 20 20 9 9 9 9 9 9  
Y+R: 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0  
Lanes: 3 0 1 1 0 0 0 3 1 0 0 0 1 0 4 0 0 0 1 0

Volume Module:

Base Vol: 2245 1828 70 0 1917 12 0 85 4216 0 76 36  
Growth Adj: 1.09 1.12 1.06 1.09 1.18 1.12 1.06 1.01 1.09 1.12 1.06 1.09  
Initial Bse: 2442 2039 74 0 2259 13 0 86 4610 0 81 39  
Added Vol: 255 25 1 0 31 0 0 41 282 0 8 28  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 2697 2064 75 0 2290 13 0 127 4892 0 89 67  
User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.00 0.98 0.98 0.00 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 2752 2106 0 0 2337 0 0 129 4992 0 90 69  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 2752 2106 0 0 2337 0 0 129 4992 0 90 69  
PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 2752 2106 0 0 2337 0 0 129 4992 0 90 69

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.93 0.95 1.00 0.89 0.91 1.00 0.98 0.73 1.00 0.92 0.92  
Lanes: 3.00 2.00 0.00 0.00 4.00 0.00 0.00 1.00 4.00 0.00 0.57 0.43  
Final Sat.: 5147 3538 0 0 6778 0 0 1862 5571 0 998 756

Capacity Analysis Module:

Vol/Sat: 0.53 0.60 0.00 0.00 0.34 0.00 0.00 0.07 0.90 0.00 0.09 0.09  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.52 0.52 0.52 0.18 0.18 0.18 0.09 0.09 0.68 0.09 0.09 0.09  
Volume/Cap: 1.02 1.14 0.00 0.00 1.88 0.00 0.00 0.77 1.32 0.00 1.01 1.01  
Delay/Veh: 42.1 88.2 0.0 0.0 444 0.0 0.0 77.4 150.8 0.0 123 123.4  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 42.1 88.2 0.0 0.0 444 0.0 0.0 77.4 150.8 0.0 123 123.4  
LOS by Move: D F A A F A A E F A F F  
HCM2kAvgQ: 38 55 0 0 58 0 0 6 90 0 9 9

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1110 19th / Sloat  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.579  
Loss Time (sec): 9 Average Delay (sec/veh): 118.7  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Sloat  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Permitted Protected Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 0 43 43 11 58 58 4 33 33 24 24 24  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 2 1 0 1 0 2 1 0 1 1 1 1 0 0 0 3 0 1

Volume Module:  
Base Vol: 0 2032 83 275 2702 314 266 1157 123 0 1123 426  
Growth Adj: 1.13 1.12 1.10 1.13 1.18 1.16 1.10 1.08 1.13 1.16 1.15 1.13  
Initial Bse: 0 2266 91 311 3184 365 292 1253 139 0 1288 482  
Added Vol: 0 242 2 27 234 8 9 60 0 0 62 37  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 2508 93 338 3418 373 301 1313 139 0 1350 519  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 2559 95 345 3488 381 308 1340 142 0 1377 529  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 2559 95 345 3488 381 308 1340 142 0 1377 529  
PCE 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  
MLF 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  
FinalVolume: 0 2559 95 345 3488 381 308 1340 142 0 1377 529

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.89 0.89 0.93 0.88 0.88 0.62 0.87 0.87 1.00 0.89 0.83  
Lanes: 0.00 2.89 0.11 1.00 2.70 0.30 1.00 2.71 0.29 0.00 3.00 1.00  
Final Sat.: 0 4877 181 1769 4514 493 1169 4500 477 0 5083 1583

Capacity Analysis Module:  
Vol/Sat: 0.00 0.52 0.52 0.19 0.77 0.77 0.26 0.30 0.30 0.00 0.27 0.33  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.18 0.61 0.61 0.30 0.30 0.30 0.00 0.24 0.24  
Volume/Cap: 0.00 1.22 1.22 1.06 1.26 1.26 1.12 1.00 1.00 0.00 1.13 1.39  
Delay/Veh: 0.0 128 128.2 108.1 130 129.9 63.0 57.6 57.6 0.0 107 230.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 128 128.2 108.1 130 129.9 63.0 57.6 57.6 0.0 107 230.6  
LOS by Move: A F F F F F E E E A F F  
HCM2kAvgQ: 0 49 49 18 80 80 19 23 23 0 26 36

Note: Queue reported is the number of cars per lane.

19th Ave CS  
Tier 4c

Level of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1140 19th / Winston  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.714  
Loss Time (sec): 13 Average Delay (sec/veh): 182.6  
Optimal Cycle: 180 Level Of Service: F

Street Name: 19th Winston  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Protected Permitted Permitted Permitted  
Rights: Include Include AddLane Include  
Min. Green: 16 44 44 44 44 44 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 2 0 2 1 0 0 0 3 0 1 1 1 1 0 1 0 1 0 1 0

Volume Module:  
Base Vol: 424 1667 58 0 2144 200 155 253 325 17 319 25  
Growth Adj: 1.03 1.12 1.05 1.09 1.18 1.06 1.05 1.00 1.09 1.06 1.00 1.03  
Initial Bse: 436 1859 61 0 2527 212 163 253 353 18 319 26  
Added Vol: 164 71 0 0 130 118 131 444 170 25 419 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 600 1930 61 0 2657 330 294 697 523 43 738 26  
User 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  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 612 1970 62 0 2711 337 300 711 533 44 753 26  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 612 1970 62 0 2711 337 300 711 533 44 753 26  
PCE 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  
MLF 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  
FinalVolume: 612 1970 62 0 2711 337 300 711 533 44 753 26

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.90 0.89 0.89 1.00 1.34 0.83 0.26 0.20 0.83 0.67 0.67 0.67  
Lanes: 2.00 2.91 0.09 0.00 3.00 1.00 1.00 2.00 1.00 0.11 1.83 0.06  
Final Sat.: 3432 4903 155 0 7625 1583 495 743 1583 136 2328 81

Capacity Analysis Module:  
Vol/Sat: 0.18 0.40 0.40 0.00 0.36 0.21 0.61 0.96 0.34 0.32 0.32 0.32  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.16 0.44 0.44 0.44 0.44 0.44 0.27 0.27 0.27 0.27 0.27 0.27  
Volume/Cap: 1.11 0.91 0.91 0.00 0.81 0.48 2.29 3.61 1.27 1.22 1.22 1.22  
Delay/Veh: 115.9 29.4 29.4 0.0 22.9 19.3 623.6 1221 176.6 149.0 149 149.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 115.9 29.4 29.4 0.0 22.9 19.3 623.6 1221 176.6 149.0 149 149.0  
LOS by Move: F C C A C B F F F F F F  
HCM2kAvgQ: 13 19 19 0 25 6 33 46 33 24 24 24

Note: Queue reported is the number of cars per lane.





19th Ave CS  
Tier 4c

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1270 Lake Merced / Brotherhood

\*\*\*\*\*

Cycle (sec): 110 Critical Vol./Cap.(X): 1.906  
Loss Time (sec): 15 Average Delay (sec/veh): 119.1  
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name:	Lake Merced				Brotherhood															
Approach:	North Bound		South Bound		East Bound		West Bound													
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Permitted		Protected		Split Phase		Split Phase													
Rights:	Ovl		Include		Include		Ovl													
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0								
Lanes:	0	0	2	0	1	2	0	1	0	0	0	0	0	0	0	1	0	0	0	2

Volume Module:

Base Vol:	0	535	223	1076	498	0	0	0	0	216	0	1034
Growth Adj:	1.71	1.12	1.14	1.17	1.18	1.74	1.14	1.16	1.17	1.74	2.31	1.71
Initial Bse:	0	597	254	1260	587	0	0	0	0	376	0	1769
Added Vol:	0	322	0	441	236	0	0	0	0	0	0	621
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	919	254	1701	823	0	0	0	0	376	0	2390
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	937	259	1736	0	0	0	0	0	384	0	2439
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	937	259	1736	0	0	0	0	0	384	0	2439
PCE 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
MLF 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
FinalVolume:	0	937	259	1736	0	0	0	0	0	384	0	2439

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3538	1583	3432	1900	0	0	0	0	1769	0	2786

Capacity Analysis Module:

Vol/Sat:	0.00	0.26	0.16	0.51	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.88
Crit Moves:	****			****								****
Green/Cycle:	0.18	0.18	0.45	0.46	0.69	0.69	0.00	0.00	0.00	0.22	0.22	0.73
Volume/Cap:	0.00	1.46	0.37	1.09	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.20
Delay/Veh:	0.0	259	17.4	75.9	0.0	0.0	0.0	0.0	0.0	87.4	0.0	111.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	259	17.4	75.9	0.0	0.0	0.0	0.0	0.0	87.4	0.0	111.7
LOS by Move:	A	F	B	E	A	A	A	A	A	F	A	F
HCM2kAvgQ:	0	37	5	42	0	0	0	0	0	19	0	77

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Note: Queue reported is the number of cars per lane.