

March 8, 2022

Mr. Brian Hardy  
Richland  
3161 Michelson Drive, Suite 425  
Irvine, CA 92612

**SUBJECT: STONERIDGE COMMERCE CENTER SPECIFIC PLAN (SP No. 239, A1) ALTERNATIVE TRUCK  
ACCESS ROUTE ASSESSMENT (SOUTHERN TRUCK ROUTE)**

Dear Mr. Brian Hardy:

The following assessment has been prepared for the proposed Stoneridge Commerce Center Specific Plan (SP No. 239, A1) (**Project**), which is located on a 582.6-acre site west of Lakeview Avenue between Ramona Expressway and Nuevo Road in the County of Riverside. Specifically, the following assessment has been prepared to evaluate the potential peak hour operational changes related to altering the I-215 Southbound truck travel patterns using Ramona Expressway to the I-215 Freeway/Placentia Avenue interchange to utilize Nuevo Road then to San Jacinto Avenue to the I-215 Freeway/Redlands Avenue interchange (see Exhibit 1).

## **PROJECT TRAFFIC**

The proposed Project trip generation is consistent with that evaluated in the Stoneridge Commerce Center Specific Plan (SP No. 239, A1) Traffic Impact Analysis (revised March 8, 2022, referred to as the 2022 Traffic Study). The Project trip distribution patterns have been modified to have I-215 Southbound trucks utilize an alternative route via Nuevo Road (to Dunlap Drive, San Jacinto Avenue, and Redlands Avenue to the I-215 Freeway). Exhibit 2 shows the proposed alternative truck trip distribution evaluated as part of this assessment (see dashed red line), which only effects the I-215 Southbound truck distribution (38%) and effectively removes this distribution from Ramona Expressway, Redlands Avenue, Morgan Street, Perris Boulevard, and Placentia Avenue. Exhibit 3 identifies the study area intersections: 14 study area intersections evaluated in the 2022 Traffic Study and 6 new study area intersections that would be affected by the alternative truck route. Other intersections that are not affected by the change in truck routes have not been evaluated as part of this assessment as the operations are not anticipated to change compared to the 2022 Traffic Study.

## **EAP (2030) CONDITIONS**

This scenario includes Existing (2020) traffic volumes plus an ambient growth factor of 21.9% and the addition of Project traffic. The weekday average daily traffic (ADT) volumes and peak hour volumes which can be expected for EAP (2030) traffic conditions are shown on Exhibit 4. Existing traffic counts for the 6 new study area intersections are included in Attachment A.

## **INTERSECTIONS**

As shown in Table 1, the study area intersections are anticipated to continue to operate at an acceptable level of service (LOS) during the peak hours for EAP (2030) traffic conditions in comparison to Existing traffic conditions, with the exception of the following intersections:

- Indian Av. & Placentia Av. (#15) – LOS F AM and PM peak hours
- Redlands Av. & Ramona Exwy. (#30) – LOS E AM peak hour only
- Evans Rd. & Ramona Exwy. (#39) – LOS E AM and PM peak hours
- Dunlap Dr. & San Jacinto Av. (#68) – LOS F PM peak hour only
- Redlands Av. & San Jacinto Av. (#71) – LOS E PM peak hour only

The deficient intersections identified above are consistent with the 2022 Traffic Study. Existing traffic conditions have also been evaluated for the 6 new study area intersections in order to compare analysis results for EAP (2030) traffic conditions (see Attachment B). Analysis worksheets for EAP (2030) traffic conditions are included in Attachment C.

## **TRAFFIC SIGNAL WARRANTS**

The following study area intersections are anticipated to meet peak hour or planning level traffic signal warrants, consistent with the 2022 Traffic Study with the exception of the new locations:

- I-215 Southbound Ramps & Placentia Av. (#6)
- I-215 Northbound Ramps & Placentia Av. (#7)
- Indian Av. & Placentia Av. (#15)
- Antelope Rd. & Ramona Exwy. (#48)
- Antelope Rd. & Nuevo Rd. (#51)
- Dunlap Dr. & San Jacinto Av. (#68)
- Murrieta Rd. & San Jacinto Av. (#70)

It should be noted, Dunlap Drive at San Jacinto Avenue and Murrieta Road at San Jacinto Avenue are anticipated to warrant a traffic signal under Existing (2020) traffic conditions (see Attachment D). The EAP (2030) conditions traffic signal warrant analysis sheets are provided in Attachment E. Although warranted for a traffic signal, the intersection of Murrieta Road at San Jacinto Avenue is currently operating at acceptable LOS and is anticipated to continue to operate at an acceptable LOS under EAP (2030) traffic conditions. As such, installation of a traffic signal has not been recommended at the intersection of Murrieta Road and San Jacinto Avenue for EAP (2030) traffic conditions.

## **OFF-RAMP QUEUES**

As shown in Table 2, there are no movements that are anticipated to experience queuing issues during the peak hours under EAP (2030) traffic conditions, consistent with Existing (2020) traffic conditions (see

Attachments F and G, respectively). It should be noted, the I-215 Freeway and Redlands Avenue interchange off-ramp queues were not evaluated in the 2022 Traffic Study.

### **FREEWAY FACILITIES**

As shown in Table 3, there are no freeway facilities that are anticipated to operate at an unacceptable LOS during the peak hours under EAP (2030) traffic conditions, consistent with Existing (2020) traffic conditions (see Attachments H and I, respectively). It should be noted, the freeway segments at the I-215 Freeway and Redlands Avenue interchange were not evaluated in the 2022 Traffic Study.

### **IMPROVEMENTS**

The effectiveness of the recommended improvement strategies to address EAP (2030) traffic deficiencies are presented in Table 4, which shows the improvement recommendations are consistent with the 2022 Traffic Study with the exception of the two new study area intersections. Improvements at Dunlap Drive and San Jacinto Avenue includes installation of a traffic signal and an eastbound left turn lane. Improvements at Redlands Avenue and San Jacinto Avenue include modification to the existing traffic signal to implement overlap phasing for the northbound right turn lane. Worksheets for EAP (2030) conditions, with improvements, HCM calculation worksheets are provided in Attachment J.

### **EAPC (2030) CONDITIONS**

This scenario includes Existing (2020) traffic volumes plus an ambient growth factor of 21.9%, the addition of traffic generated by cumulative development projects, and the addition of Project traffic. The weekday ADT volumes and peak hour volumes which can be expected for EAPC (2030) traffic conditions are shown on Exhibit 5.

### **INTERSECTIONS**

As shown in Table 5, the following study area intersections are anticipated to operate at an unacceptable LOS during one or both peak hours for EAPC (2030) traffic conditions:

- I-215 Southbound Ramps & Placentia Av. (#6) – LOS E PM peak hour only
- Indian Av. & Placentia Av. (#15) – LOS F AM and PM peak hours
- Redlands Av. & Ramona Exwy. (#30) – LOS F AM and PM peak hours
- Evans Rd. & Ramona Exwy. (#39) – LOS F AM and PM peak hours
- Dunlap Dr. & Nuevo Rd. (#46) – LOS F AM and PM peak hours
- Ramona Exwy. & Rider St. (#47) – LOS E AM peak hour; LOS F PM peak hour
- Antelope Rd. & Ramona Exwy. (#48) – LOS F PM peak hour only
- Antelope Rd. & Nuevo Rd. (#51) – LOS F AM and PM peak hours
- Dunlap Dr. & San Jacinto Av. (#68) – LOS F PM peak hour only

- Redlands Av. & San Jacinto Av. (#71) – LOS E AM peak hour; LOS F PM peak hour

In comparison to the 2022 Traffic Study, the intersection of Bradley Road and Ramona Expressway is not anticipated to operate at a deficient LOS under EAPC (2030) traffic conditions. Analysis worksheets for EAPC (2030) traffic conditions are included in Attachment K.

### **TRAFFIC SIGNAL WARRANTS**

There are no additional study area intersections anticipated to meet peak hour or planning level traffic signal warrants for EAPC (2030) traffic conditions (see Attachment L). Although previously warranted for a traffic signal under EAP (2030) traffic conditions, the intersection of Murrieta Road at San Jacinto Avenue is anticipated to continue to operate at an acceptable LOS under EAPC (2030) traffic conditions. As such, installation of a traffic signal has not been recommended at the intersection of Murrieta Road and San Jacinto Avenue for EAPC (2030) traffic conditions.

### **OFF-RAMP QUEUES**

As shown in Table 6, there are no movements that are anticipated to experience queuing issues during the peak hours under EAPC (2030) traffic conditions, consistent with Existing (2020) traffic conditions (see Attachment M). It should be noted, the I-215 Freeway and Redlands Avenue interchange off-ramp queues were not evaluated in the 2022 Traffic Study.

### **FREEWAY FACILITIES**

As shown in Table 7, the following freeway facilities are anticipated to operate at an unacceptable LOS during the peak hours under EAPC (2030) traffic conditions (see Attachment N):

- I-215 Freeway Southbound, North of Redlands Avenue (#1) – LOS E PM peak hour only
- I-215 Freeway Southbound, Off-Ramp at Redlands Avenue (#2) – LOS E PM peak hour only
- I-215 Freeway Northbound, Off-Ramp at Redlands Avenue (#6) – LOS E PM peak hour only

It should be noted, the freeway segments at the I-215 Freeway and Redlands Avenue interchange were not evaluated in the 2022 Traffic Study.

### **IMPROVEMENTS**

The effectiveness of the recommended improvement strategies to address EAPC (2030) traffic deficiencies are presented in Table 8, which shows the improvement recommendations are consistent with the 2022 Traffic Study with the exception of the two new study area intersections. Improvements at Dunlap Drive and San Jacinto Avenue and Redlands Avenue and San Jacinto Avenue are consistent with the improvements identified for EAP (2030) traffic conditions. Worksheets for EAPC (2030) conditions, with improvements, HCM calculation worksheets are provided in Attachment O.



## **HORIZON YEAR (2040) WITHOUT MCP WITH PROJECT**

This scenario includes the Horizon Year (2040) Without MCP traffic forecasts plus proposed Project volumes. Post processing worksheets for the new study area intersections are included in Attachment P. The weekday ADT volumes and peak hour volumes which can be expected for Horizon Year (2040) Without Mid-County Parkway (MCP) With Project traffic conditions are shown on Exhibit 6.

### **INTERSECTIONS**

As shown in Table 9, the following study area intersections are anticipated to operate at an unacceptable LOS during one or both peak hours for Horizon Year (2040) Without MCP With Project traffic conditions:

- I-215 Southbound Ramps & Placentia Av. (#6) – LOS F PM peak hour only
- Indian Av. & Placentia Av. (#15) – LOS F AM and PM peak hours
- Perris Bl. & Placentia Av. (#25) – LOS F PM peak hour only
- Redlands Av. & Ramona Exwy. (#30) – LOS F AM and PM peak hours
- Evans Rd. & Ramona Exwy. (#39) – LOS F AM and PM peak hours
- Bradley Rd. & Ramona Exwy. (#43) – LOS F AM and PM peak hours
- Dunlap Dr. & Nuevo Rd. (#46) – LOS F AM and PM peak hours
- Ramona Exwy. & Rider St. (#47) – LOS E AM peak hour; LOS F PM peak hour
- Antelope Rd. & Ramona Exwy. (#48) – LOS F PM peak hour only
- Antelope Rd. & Nuevo Rd. (#51) – LOS F AM and PM peak hours
- Dunlap Dr. & San Jacinto Av. (#68) – LOS F PM peak hour only
- Evans Rd. & San Jacinto Av. (#69) – LOS F AM and PM peak hours
- Murrieta Rd. & San Jacinto av. (#70) – LOS F PM peak hour only

In comparison to the 2022 Traffic Study, there are no changes to deficient locations under Horizon Year (2040) Without MCP With Project traffic conditions with the exception of the new study area intersections. Note that due to the proposed future I-215 interchange on Evans Road, the long-range forecasts are anticipated to decrease from EAP/EAPC traffic conditions. As such, the deficiency and improvements identified previously at Redlands Avenue and San Jacinto Avenue are not needed for Horizon Year (2040) traffic conditions. Analysis worksheets for Horizon Year (2040) Without MCP With Project traffic conditions are included in Attachment Q.

### **TRAFFIC SIGNAL WARRANTS**

The following study area intersection is anticipated to meet a planning level traffic signal warrant for Horizon Year (2040) Without MCP With Project traffic conditions (see Attachment R):

- Evans Rd. & San Jacinto Av. (#69)

### **OFF-RAMP QUEUES**

As shown in Table 10, there are no movements that are anticipated to experience queuing issues during the peak hours under Horizon Year (2040) Without MCP With Project traffic conditions, consistent with Existing (2020) traffic conditions (see Attachment S). It should be noted, the I-215 Freeway and Redlands Avenue interchange off-ramp queues were not evaluated in the 2022 Traffic Study.

### **FREEWAY FACILITIES**

As shown in Table 11, the following freeway facilities are anticipated to operate at an unacceptable LOS during the peak hours under EAP (2030) traffic conditions (see Attachment T):

- I-215 Freeway Southbound, North of Redlands Avenue (#1) – LOS F PM peak hour only
- I-215 Freeway Southbound, Off-Ramp at Redlands Avenue (#2) – LOS F PM peak hour only
- I-215 Freeway Northbound, North of Redlands Avenue (#5) – LOS E AM peak hour; LOS F PM peak hour
- I-215 Freeway Northbound, Off-Ramp at Redlands Avenue (#6) – LOS E AM peak hour; LOS F PM peak hour
- I-215 Freeway Northbound, North of Redlands Avenue (#8) – LOS E AM peak hour only

It should be noted, the freeway segments at the I-215 Freeway and Redlands Avenue interchange were not evaluated in the 2022 Traffic Study.

### **IMPROVEMENTS**

The effectiveness of the recommended improvement strategies to address Horizon Year (2040) Without MCP With Project traffic deficiencies are presented in Table 12, which shows the improvement recommendations are consistent with the 2022 Traffic Study with the exception of the following improvements list below at the denoted intersections:

- Dunlap Dr. & Nuevo Rd. (#46): northbound right turn lane with overlap phasing, 3<sup>rd</sup> eastbound through lane, 2<sup>nd</sup> westbound left turn lane, 3<sup>rd</sup> westbound through lane (2<sup>nd</sup> southbound left turn lane no longer recommended).
- Antelope Rd. & Nuevo Rd. (#51): 2<sup>nd</sup> southbound right turn lane with overlap phasing, 3<sup>rd</sup> eastbound through lane, and 3<sup>rd</sup> westbound through lane.
- Dunlap Dr. & San Jacinto Av. (#68) – Install a traffic signal and eastbound left turn lane (same as EAP traffic conditions).
- Evans Rd. & San Jacinto Av. (#69) – Install a traffic signal, southbound shared left-right turn lane, and eastbound left turn lane.
- Murrieta Rd. & San Jacinto Av. (#70) – Install a traffic signal and eastbound left turn lane.

Worksheets for Horizon Year (2040) Without MCP With Project conditions, with improvements, HCM calculation worksheets are provided in Attachment U.

## **OTHER RECOMMENDATIONS**

### **SITE ACCESS IMPROVEMENTS**

The following changes are recommended to the site access recommendations from the 2022 Traffic Study (see Attachment V for site adjacent queues):

- Antelope Rd. & Nuevo Rd. (#51): Dual southbound left turn lanes with 220-feet of storage, two southbound right turn lanes with overlap phasing, and 2 eastbound left turn lanes with 380-feet of storage.

### **OFF-SITE INTERSECTIONS**

The Project's updated fair share calculations for Without MCP traffic conditions has been provided on Table 13. The improvement needs for each of the study area intersections have been summarized on Table 14 with the applicable Project fair share percentage reflected (as calculated in Table 13).

### **OFF-SITE TRUCK ACCESS**

Truck turning maneuvers were evaluated at off-site study area intersections along the alternative truck access route in order to determine additional intersection improvements needed to accommodate the wide turning radius of heavy trucks. The following is a summary of the intersection improvements needed to address the turning radius of heavy trucks (see also Exhibit 7):

- Dunlap Dr. & Nuevo Rd. (#46): accommodate additional pavement along Nuevo Road and Dunlap Drive as shown and modify the southeast corner with a 40-foot curb radius. The additional pavement along Nuevo Road (on the north side east of Dunlap Drive) will also require the northeast corner to be modified to accommodate a 35-foot curb radius. There are existing poles/equipment that will have to be relocated with this modification.
- Dunlap Dr. & San Jacinto Av. (#68): additional pavement is needed along Dunlap Drive and San Jacinto Avenue as shown in conjunction with accommodating a 40-foot curb radius on the northwest and northeast corners.
- Redlands Av. & San Jacinto Av. (#71): No additional improvements needed.
- Redlands Av. & I-215 Northbound Ramps (#72): modifications needed to striped median nose and include a shoulder strip to follow the curve
- Redlands Av. & I-215 Southbound Ramps (#73): No additional improvements needed.

Mr. Brian Hardy  
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Page 8 of 8

If you have any questions, please contact me directly at 949-861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.



Charlene So, PE  
Principal



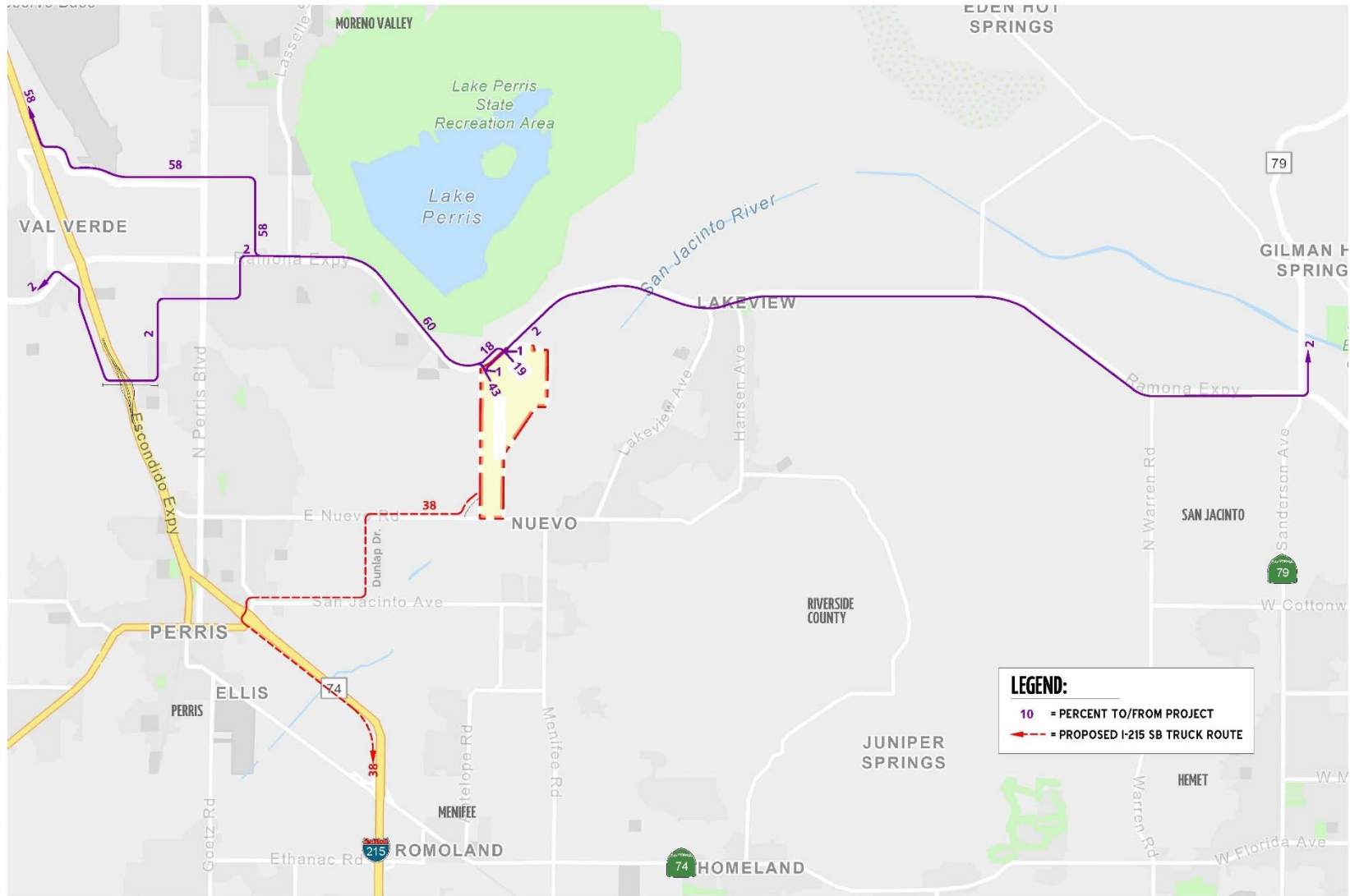
EXHIBIT 1: TRUCK ACCESS ALTERNATIVE ROUTE



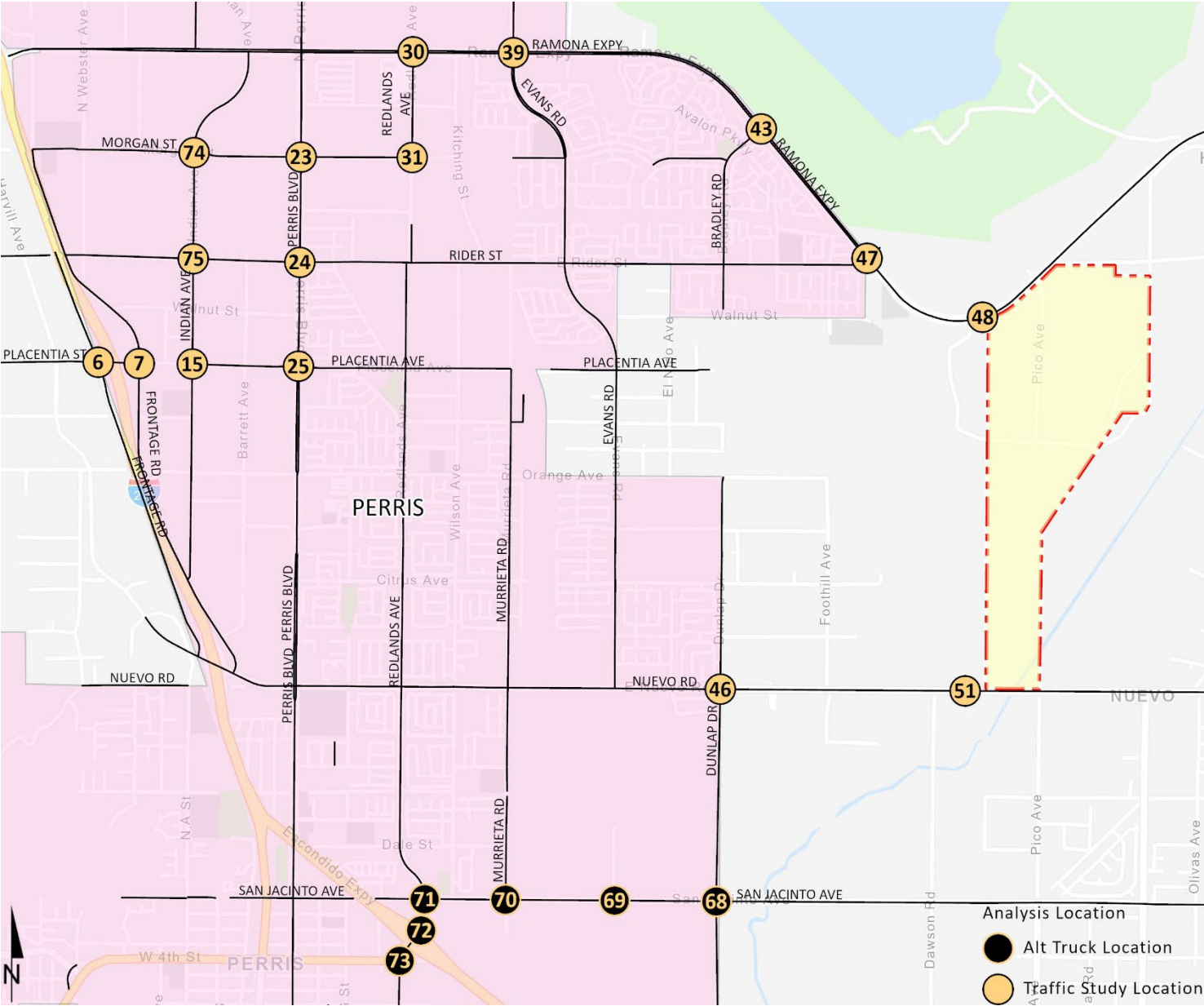
**—** = Proposed Alternative Truck Route



## EXHIBIT 2: PROJECT (TRUCK) TRIP DISTRIBUTION



**EXHIBIT 3: STUDY AREA**



### EXHIBIT 4: EAP (2030) TRAFFIC VOLUMES

<b>6</b>	<b>I-215 SB Ramps &amp; Placentia Av.</b>	<b>7</b>	<b>I-215 NB Ramps &amp; Placentia Av.</b>	<b>15</b>	<b>Indian Av. &amp; Placentia Av.</b>	<b>23</b>	<b>Perris Bl. &amp; Morgan St.</b>	<b>24</b>	<b>Perris Bl. &amp; Rider St.</b>
7,700	28,200	9,900	38,100	8,700	28,850	25,250	1,300	25,050	14,900
85(71) ↓ 312(490) → 146(166) ↓	← 526(677) ↑ 283(560)	68(82) ↓ 550(959) →	↑ 570(719) ← 641(1095) 168(141) → 291(302) ↑	43(178) ↓ 145(252) ↓ 116(57) ↓ 659(882) ↓ 146(98) ↓	↑ 45(40) ↑ 797(940) ↑ 169(33) 42(50) → 177(93) ↑ 98(20) ↑	69(32) ↓ 525(1102) ↓ 29(39) ↓ 13(26) → 29(27) ↓	↑ 2(11) ↑ 24(9) ↑ 21(35) 46(43) → 1295(848) ↑ 15(14) ↑	27(38) ↓ 413(979) ↓ 26(40) ↓ 152(280) ↓ 17(84) ↓	↑ 291(133) ↑ 341(104) ↑ 252(285) 43(34) → 1065(684) ↑ 133(253) ↑
17,400	9,000	28,200	5,500	32,550	6,350	2,250	25,550	7,200	28,550
<b>25</b>	<b>Perris Bl. &amp; Placentia Av.</b>	<b>30</b>	<b>Redlands Av. &amp; Ramona Exwy.</b>	<b>31</b>	<b>Redlands Av. &amp; Morgan St.</b>	<b>39</b>	<b>Evans Rd. &amp; Ramona Exwy.</b>	<b>43</b>	<b>Bradley Rd. &amp; Ramona Exwy.</b>
28,250	6,550	7,450	52,150	1,300	1,300	31,750	40,750	35,150	35,150
35(13) ↓ 591(1147) ↓ 37(165) ↓ 16(27) ↓ 73(69) ↓ 13(27) ↓	↑ 243(122) ← 137(30) ↑ 38(56) 41(10) → 906(814) → 32(85) ↑	16(20) ↓ 1(6) ↓ 168(300) ↓ 50(23) ↓ 1237(1983) ↓ 15(26) ↓	↑ 547(204) ↑ 1815(1664) ↑ 84(35) 9(12) → 7(0) ↑ 77(90) ↑	50(43) ↓ 25(61) ↓	25(61) ↓	416(412) ↓ 294(634) ↓ 229(344) ↓ 295(480) ↓ 991(1446) ↓ 182(512) ↓	↑ 361(332) ↑ 1501(1230) ↑ 17(20) 529(261) ↑ 489(389) ↑ 29(9) ↑	545(277) ↓ 638(1243) ↓ 40(235) ↓	↑ 1327(689) ↑ 17(30) 32(16) ↑
2,150	26,450	44,750	2,100	1,300	1,300	52,950	22,550	38,000	4,600
<b>46</b>	<b>Dunlap Dr. &amp; Nuevo Rd.</b>	<b>47</b>	<b>Ramona Exwy. &amp; Rider St.</b>	<b>48</b>	<b>Antelope Rd. &amp; Ramona Exwy.</b>	<b>51</b>	<b>Antelope Rd. &amp; Nuevo Rd.</b>	<b>68</b>	<b>Dunlap Dr. &amp; San Jacinto Av.</b>
5,050	19,450	34,550	Nominal	31,000	31,000	9,400	10,500	7,750	10,650
87(50) ↓ 22(26) ↓ 89(136) ↓ 34(65) ↓ 497(656) → 15(7) ↓	↑ 126(96) ↑ 478(654) ↑ 24(71) 9(7) → 21(40) → 77(26) ↑	184(112) ↓ 1030(1424) ↓ 236(43) ↓ 369(274) ↓	↑ 1(1) ↑ 1(1) 267(319) → 1268(1299) → 1(1) ↑	↑ 1387(995) ↑ 46(72) 895(1437) → 504(261) ↓ 149(624) → 14(60) ↑	↑ 1387(995) ↑ 46(72) 895(1437) → 504(261) ↓ 149(624) → 14(60) ↑	113(440) ↓ 40(161) ↓ 382(195) ↓ 232(334) →	↑ 134(73) ↑ 315(322)	162(186) ↓ 46(76) ↓ 135(270) ↓ 121(456) ↓	↑ 28(65) 203(263)
16,700	2,600	8,800	40,300	39,500	11,400	15,150	14,950	14,950	10,650
<b>46</b>	<b>Evans Rd. &amp; San Jacinto Av.</b>	<b>70</b>	<b>Murrieta Rd. &amp; San Jacinto Av.</b>	<b>71</b>	<b>Redlands Av. &amp; San Jacinto Av.</b>	<b>72</b>	<b>I-215 NB Ramps &amp; San Jacinto Av.</b>	<b>73</b>	<b>I-215 SB Ramps &amp; San Jacinto Av.</b>
14,950	14,950	4,900	15,150	15,700	20,250	33,900	15,300	32,900	13,050
256(726) →	← 365(449)	156(129) ↓ 13(14) ↓ 49(230) ↓ 238(717) →	↑ 2(22) ← 357(441)	50(35) ↓ 471(452) ↓ 32(68) ↓ 15(51) ↓ 11(33) ↓ 102(107) ↓	↑ 17(27) ↑ 50(37) ↑ 630(551) 72(129) ↓ 218(641) ↓ 367(891) ↓	217(135) ↓ 986(976) ↓ 15(51) ↓ 11(33) ↓ 102(107) ↓	↑ 279(692) ↑ 1(3) ↑ 344(505) 127(220) ↓ 378(968) ↓	806(991) ↓ 524(490) ↓ 104(216) ↓ 0(3) 185(234) ↓	402(972) ↓ 312(566) ↓
14,950	19,150	19,150	4,850	4,850	34,600	4,400	32,900	5,600	34,100
<b>74</b>	<b>Indian Av. &amp; Morgan St.</b>	<b>75</b>	<b>Indian Av. &amp; Rider St.</b>						
28,250	6,550	26,950	17,300						
26(24) ↓ 87(257) ↓ 7(17) ↓ 11(21) ↓ 71(93) ↓ 79(76) ↓	↑ 5(10) ← 123(34) ↑ 13(25) 123(100) → 187(151) → 9(19) ↑	6(5) ↓ 106(268) ↓ 29(71) ↓ 13(24) ↓ 66(161) ↓ 30(22) ↓	↑ 138(106) ← 55(26) ↑ 67(40) 9(6) → 143(90) → 35(30) ↑						
2,150	26,450	15,350	35,050						

##(##) AM(PM) Peak Hour Intersection Volumes

## Average Daily Trips



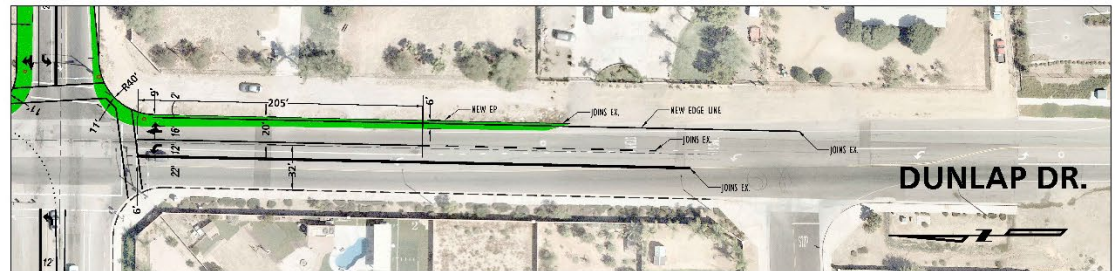
## EXHIBIT 5: EAPC (2030) TRAFFIC VOLUMES

<b>6</b>	<b>I-215 SB Ramps &amp; Placentia Av.</b>	<b>7</b>	<b>I-215 NB Ramps &amp; Placentia Av.</b>	<b>15</b>	<b>Indian Av. &amp; Placentia Av.</b>	<b>23</b>	<b>Perris Bl. &amp; Morgan St.</b>	<b>24</b>	<b>Perris Bl. &amp; Rider St.</b>
10,200	32,550	12,400	46,800	13,300	33,650	29,850	1,850	28,850	18,650
↓ 85(71) ↖ 463(747) ↑ 526(677) ↗ 333(744)		68(82) ↘ 707(1155) →	↑ 701(945) ↖ 691(1279) 168(141) ↖ 424(411) ↗	↓ 94(360) ↖ 148(264) ↗ 32(117) 290(127) ↘ 774(1115) ↓ 146(98) ↓	↑ 59(49) ↖ 927(1168) ↑ 169(33) 42(50) ↖ 187(98) ↑ 98(20) ↗	↓ 69(32) ↖ 659(1266) ↗ 36(20) 29(39) ↘ 13(27) → 29(27) ↓	↑ 9(43) ↖ 24(12) ↑ 21(32) 46(43) ↖ 1407(1055) ↑ 15(13) ↗	↓ 32(41) ↖ 462(1041) ↗ 142(251) 28(47) ↘ 156(292) 19(91) ↓	↑ 368(251) ↖ 351(110) ↑ 274(346) 48(37) ↖ 1099(765) ↑ 178(297) ↗
17,400	10,800	32,550	7,350	41,300	6,550	2,250	29,350	7,600	31,250
<b>25</b>	<b>Perris Bl. &amp; Placentia Av.</b>	<b>30</b>	<b>Redlands Av. &amp; Ramona Exwy.</b>	<b>31</b>	<b>Redlands Av. &amp; Morgan St.</b>	<b>39</b>	<b>Evans Rd. &amp; Ramona Exwy.</b>	<b>43</b>	<b>Bradley Rd. &amp; Ramona Exwy.</b>
30,850	9,100	12,300	102,950	5,600	650	43,650	92,150	94,950	94,950
↓ 38(24) ↖ 665(1280) ↗ 37(165) 27(31) ↘ 117(183) ↓ 78(156) ↓	↑ 243(122) ↖ 237(109) ↑ 54(88) 82(155) ↖ 990(944) ↑ 42(121) ↗	↓ 56(79) ↖ 88(38) ↗ 188(334) 97(69) ↘ 1531(3289) ↓ 52(56) ↓	↑ 575(227) ↖ 2945(2322) ↑ 114(51) 36(69) ↖ 32(78) ↑ 90(126) ↗	↓ 50(43) ↖ 134(70) ↗ 20(7) 25(61) ↘ 15(8) ↓ 10(5) ↓	↑ 2(7) ↖ 4(19) ↑ 1(4) 3(13) ↖ 63(151) ↑	↓ 416(412) ↖ 294(634) ↗ 25(1446) 295(480) ↘ 1318(2822) ↓ 182(512) ↓	↑ 451(387) ↖ 2689(1927) ↑ 61(47) 529(261) ↖ 489(389) ↑ 40(58) ↗	↓ 545(277) 883(2404) ↓ 40(235) ↓	↖ 2356(1311) ↑ 17(30) 32(16) ↗
6,950	32,200	95,600	6,400	1,850	4,250	102,450	54,450	89,400	4,600
<b>46</b>	<b>Dunlap Dr. &amp; Nuevo Rd.</b>	<b>47</b>	<b>Ramona Exwy. &amp; Rider St.</b>	<b>48</b>	<b>Antelope Rd. &amp; Ramona Exwy.</b>	<b>51</b>	<b>Antelope Rd. &amp; Nuevo Rd.</b>	<b>68</b>	<b>Dunlap Dr. &amp; San Jacinto Av.</b>
8,450	51,350	85,950	Nominal	93,200	24,300	56,100	7,750	11,500	11,500
↓ 87(50) ↖ 22(26) ↗ 100(187) 34(65) ↘ 713(1618) ↓ 15(7) ↓	↑ 170(124) ↖ 1316(1181) ↑ 24(71) 9(7) ↖ 21(40) ↑ 77(26) ↗	↓ 184(112) ↖ 1275(2585) 236(43) ↘ 391(374) ↓	↑ 1(1) 355(373) ↖ 2297(1921) ↑ 1(1) ↗	↖ 2504(1672) ↑ 180(155) 1162(2698) ↓ 504(261) ↓ 149(624) ↖ 46(213) ↗	↓ 113(440) ↖ 62(262) 382(195) ↘ 481(1448) ↓	↑ 222(128) ↖ 1285(931)	↓ 162(186) ↖ 46(76) 135(270) 146(492)	↑ 28(65) 234(298)	
50,100	2,600	18,800	101,800	101,000	21,600	65,050	15,800	15,800	15,800
<b>46</b>	<b>Evans Rd. &amp; San Jacinto Av.</b>	<b>70</b>	<b>Murrieta Rd. &amp; San Jacinto Av.</b>	<b>71</b>	<b>Redlands Av. &amp; San Jacinto Av.</b>	<b>72</b>	<b>I-215 NB Ramps &amp; San Jacinto Av.</b>	<b>73</b>	<b>I-215 SB Ramps &amp; San Jacinto Av.</b>
400	15,800	4,900	16,400	17,900	25,700	39,950	16,600	37,800	14,350
↓ 17(18) 13(17) ↘ 281(762) →	↖ 396(484)	↓ 156(129) ↖ 13(14) 49(230) ↘ 275(770) →	↑ 2(22) ↖ 404(494)	↓ 75(75) ↖ 478(458) ↗ 84(119) 36(92) ↘ 28(66) ↓ 148(198) ↓	↑ 56(71) ↖ 70(69) ↑ 773(711) 128(218) ↖ 224(649) ↑ 554(1075) ↗	↓ 278(220) ↖ 1122(1148) 168(277) ↖ 535(1147) ↑	↑ 370(794) ↖ 1(3) ↑ 358(516)	↓ 885(1079) ↖ 594(585) 182(306) 0(3) 233(274)	↑ 522(1118) 324(682)
16,200	20,400	8,900	40,700	6,100	37,800	7,300	37,850	37,850	37,850
<b>74</b>	<b>Indian Av. &amp; Morgan St.</b>	<b>75</b>	<b>Indian Av. &amp; Rider St.</b>	##(##) AM(PM) Peak Hour Intersection Volumes ## Average Daily Trips					
7,250	2,500	8,300	5,800						
↓ 26(24) ↖ 87(276) ↗ 7(17) 11(21) ↘ 71(93) ↓ 79(76) ↓	↑ 5(10) ↖ 123(34) ↑ 13(25) 123(100) ↖ 187(313) ↑ 9(19) ↗	↓ 6(5) ↖ 139(287) ↗ 29(71) 13(24) ↘ 74(187) ↓ 30(22) ↓	↑ 138(106) ↖ 75(38) ↑ 67(40) 9(6) ↖ 164(252) ↑ 35(30) ↗						
4,300	9,100	3,450	6,950						

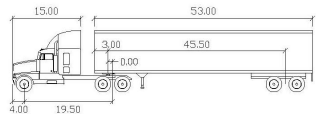
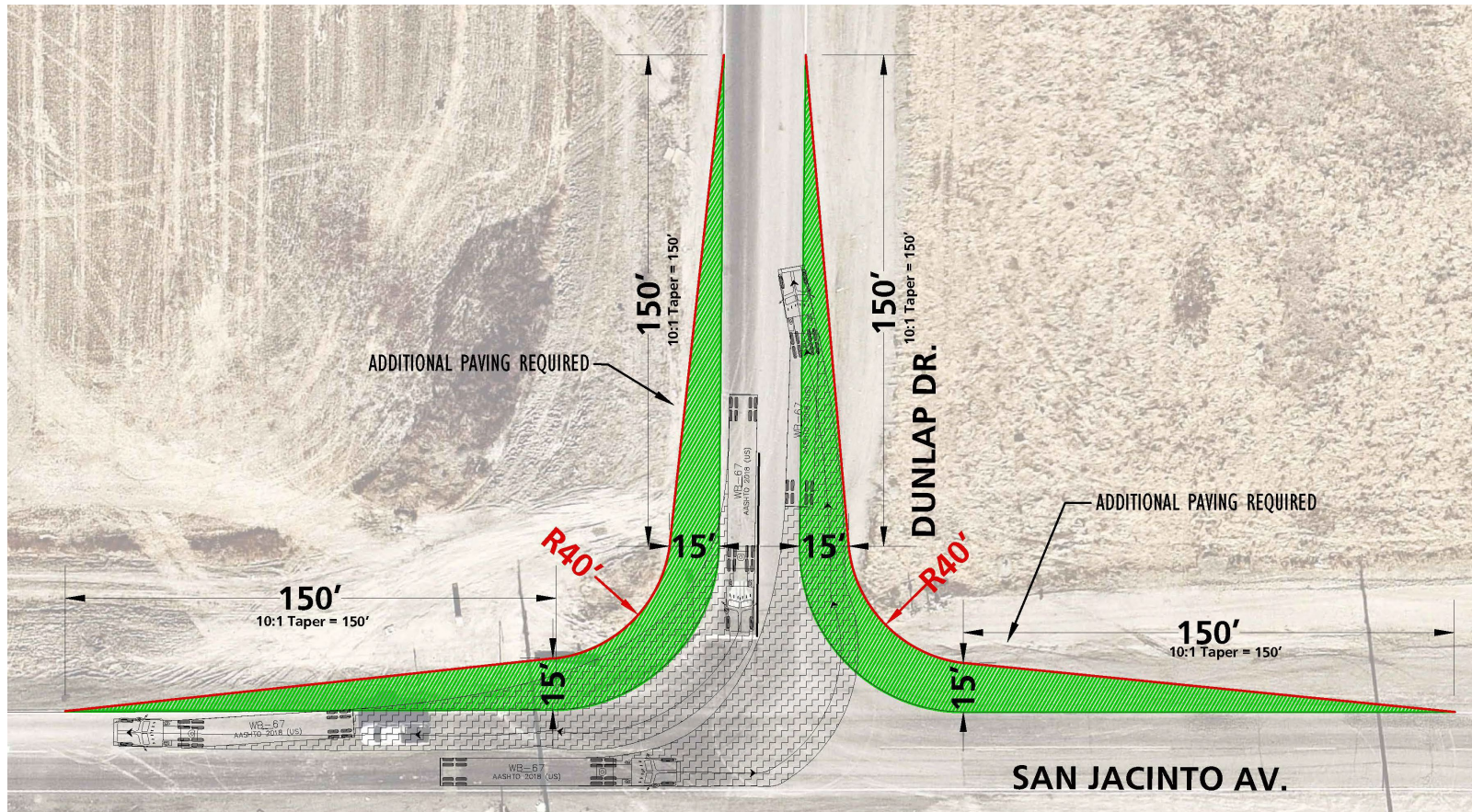
## EXHIBIT 6: HORIZON YEAR (2040) WITHOUT MCP WITH PROJECT TRAFFIC VOLUMES

<b>6</b>	<b>I-215 SB Ramps &amp; Placentia Av.</b>	<b>7</b>	<b>I-215 NB Ramps &amp; Placentia Av.</b>	<b>15</b>	<b>Indian Av. &amp; Placentia Av.</b>	<b>23</b>	<b>Perris Bl. &amp; Morgan St.</b>	<b>24</b>	<b>Perris Bl. &amp; Rider St.</b>
<b>33,600</b>	<b>40,400</b>	<b>16,300</b>	<b>58,850</b>	<b>15,950</b>	<b>43,050</b>	<b>35,700</b>	<b>2,250</b>	<b>34,500</b>	<b>22,300</b>
↓ 102(85) ↓ 714(979) ↑ 630(813) ↓ 398(889)	↓ 378(587) ↓ 175(198)	↓ 82(98) ↓ 1009(1468)	↓ 827(1532) ↓ 201(169) ↓ 507(492)	↓ 113(433) ↓ 177(316) ↓ 38(140)	↓ 351(153) ↓ 1085(1419) ↓ 175(117)	↓ 83(38) ↓ 798(1514) ↓ 43(24)	↓ 35(47) ↓ 19(33) ↓ 35(32)	↓ 38(49) ↓ 553(1245) ↓ 170(300)	↓ 33(56) ↓ 187(350) ↓ 23(109)
<b>20,900</b>	<b>12,950</b>	<b>40,350</b>	<b>6,750</b>	<b>52,200</b>	<b>7,850</b>	<b>2,750</b>	<b>35,100</b>	<b>9,100</b>	<b>37,350</b>
<b>25</b>	<b>Perris Bl. &amp; Placentia Av.</b>	<b>30</b>	<b>Redlands Av. &amp; Ramona Exwy.</b>	<b>31</b>	<b>Redlands Av. &amp; Morgan St.</b>	<b>39</b>	<b>Evans Rd. &amp; Ramona Exwy.</b>	<b>43</b>	<b>Bradley Rd. &amp; Ramona Exwy.</b>
<b>36,900</b>	<b>13,700</b>	<b>17,000</b>	<b>127,400</b>	<b>6,750</b>	<b>800</b>	<b>53,800</b>	<b>116,300</b>	<b>120,250</b>	<b>120,250</b>
↓ 46(28) ↓ 795(1530) ↓ 44(197)	↓ 32(37) ↓ 300(305) ↓ 94(186)	↓ 67(94) ↓ 105(46) ↓ 331(437)	↓ 717(370) ↓ 3555(2912) ↓ 137(64)	↓ 60(65) ↓ 160(84) ↓ 24(8)	↓ 34(74) ↓ 18(10) ↓ 12(6)	↓ 497(493) ↓ 351(758) ↓ 392(582)	↓ 566(571) ↓ 3280(2542) ↓ 76(70)	↓ 979(486)	↓ 2817(1567) ↓ 20(36)
<b>11,100</b>	<b>38,500</b>	<b>116,300</b>	<b>7,700</b>	<b>2,300</b>	<b>5,050</b>	<b>227,400</b>	<b>65,300</b>	<b>113,050</b>	<b>6,100</b>
<b>46</b>	<b>Dunlap Dr. &amp; Nuevo Rd.</b>	<b>47</b>	<b>Ramona Exwy. &amp; Rider St.</b>	<b>48</b>	<b>Antelope Rd. &amp; Ramona Exwy.</b>	<b>51</b>	<b>Antelope Rd. &amp; Nuevo Rd.</b>	<b>68</b>	<b>Dunlap Dr. &amp; San Jacinto Av.</b>
<b>10,100</b>	<b>66,700</b>	<b>109,500</b>	<i>Nominal</i>	<b>112,650</b>	<b>112,650</b>	<b>36,950</b>	<b>69,650</b>	<b>7,650</b>	<b>10,450</b>
↓ 103(60) ↓ 26(31) ↓ 120(224)	↓ 204(149) ↓ 1635(1657) ↓ 51(163)	↓ 220(134) ↓ 1887(3265)	↓ 1(1)	↓ 3006(2001) ↓ 240(245)	↓ 1432(3242) ↓ 923(470)	↓ 219(849) ↓ 118(490)	↓ 414(233) ↓ 1536(1113)	↓ 159(184) ↓ 89(207) ↓ 45(74)	↓ 28(63) ↓ 235(258) ↓ 37(49)
<b>63,450</b>	<b>4,800</b>	<b>22,450</b>	<b>128,450</b>	<b>127,500</b>	<b>33,450</b>	<b>83,050</b>	<b>14,650</b>	<b>7,900</b>	<b>7,900</b>
<b>46</b>	<b>Evans Rd. &amp; San Jacinto Av.</b>	<b>70</b>	<b>Murrieta Rd. &amp; San Jacinto Av.</b>	<b>71</b>	<b>Redlands Av. &amp; San Jacinto Av.</b>	<b>72</b>	<b>I-215 NB Ramps &amp; San Jacinto Av.</b>	<b>73</b>	<b>I-215 SB Ramps &amp; San Jacinto Av.</b>
<b>23,350</b>	<b>14,650</b>	<b>7,600</b>	<b>14,900</b>	<b>15,400</b>	<b>18,800</b>	<b>32,800</b>	<b>15,000</b>	<b>31,750</b>	<b>12,800</b>
↓ 59(32) ↓ 728(873) ↓ 163(226)	↓ 334(228) ↓ 358(442) ↓ 110(108)	↓ 191(220) ↓ 27(118)	↓ 76(50) ↓ 350(434)	↓ 49(41) ↓ 462(544) ↓ 40(125)	↓ 15(50) ↓ 23(94) ↓ 100(105)	↓ 213(132) ↓ 768(859)	↓ 275(580) ↓ 1(3) ↓ 338(495)	↓ 690(922) ↓ 415(632)	↓ 152(212) ↓ 0(3) ↓ 182(230)
<b>14,900</b>	<b>17,400</b>	<b>18,800</b>	<b>4,750</b>	<b>4,750</b>	<b>33,500</b>	<b>4,350</b>	<b>31,750</b>	<b>5,500</b>	<b>33,450</b>
<b>74</b>	<b>Indian Av. &amp; Morgan St.</b>	<b>75</b>	<b>Indian Av. &amp; Rider St.</b>	##(##) AM(PM) Peak Hour Intersection Volumes ## Average Daily Trips					
<b>8,650</b>	<b>3,050</b>	<b>10,000</b>	<b>6,950</b>						
↓ 31(29) ↓ 103(330) ↓ 9(20)	↓ 6(12) ↓ 147(41) ↓ 17(33)	↓ 7(6) ↓ 167(346) ↓ 35(85)	↓ 165(127) ↓ 89(45) ↓ 80(48)						
↓ 13(25) ↓ 85(111) ↓ 95(90)	↓ 147(120) ↓ 223(374) ↓ 15(24)	↓ 16(29) ↓ 88(223) ↓ 36(26)	↓ 10(7) ↓ 200(302) ↓ 42(36)						
<b>5,150</b>	<b>10,950</b>	<b>4,150</b>	<b>8,400</b>						

**EXHIBIT 7: TRUCK TURNS ALONG ALTERNATIVE TRUCK ACCESS ROUTE**

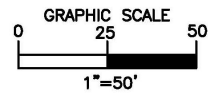




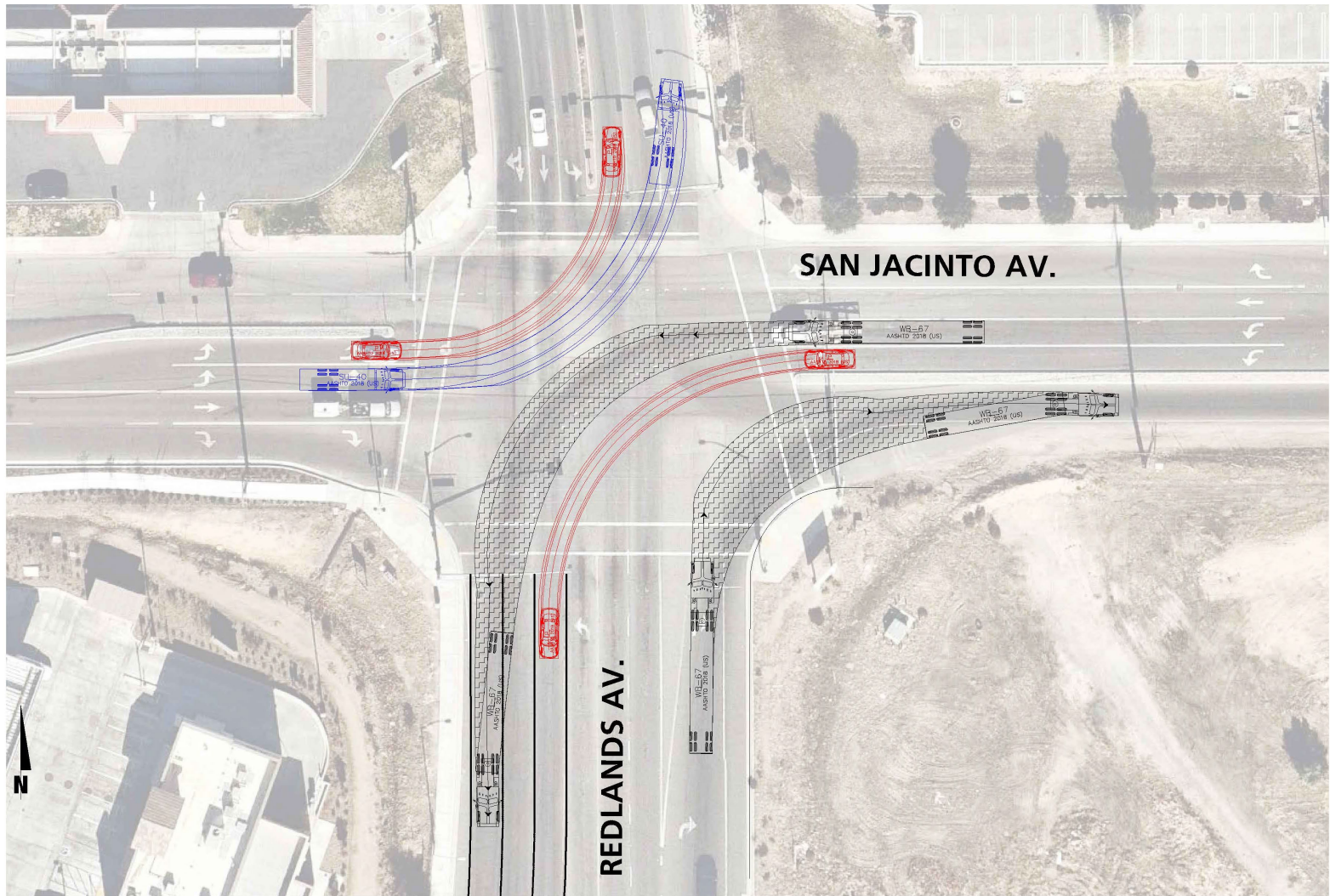


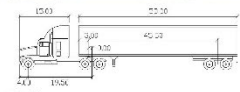
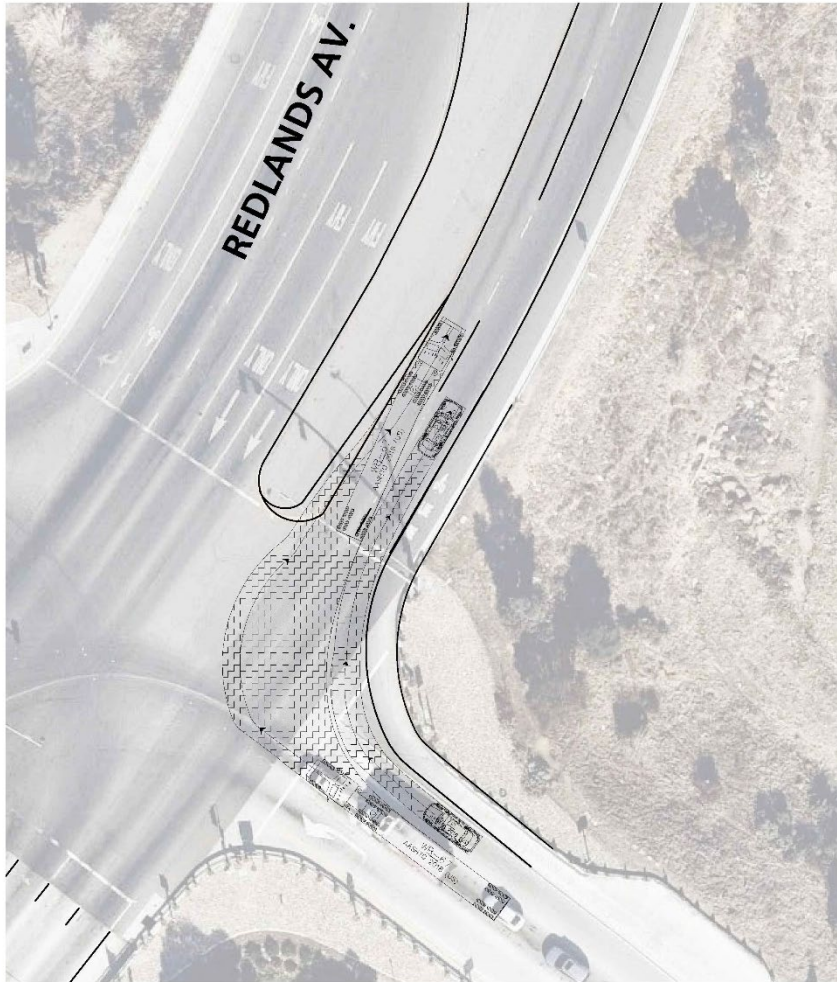
WB-67

feet	
Tractor Width	: 8.00
Trailer Width	: 8.50
Tractor Track	: 8.00
Trailer Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 28.4
Articulating angle	: 75.0

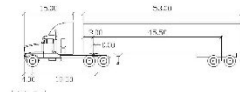
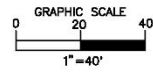








ITEM		VALUE
Truck Width	15.00	15.00
Truck Length	33.00	33.00
Truck Height	4.00	4.00
Truck Weight	10.00	10.00
Truck Angle	45.00	45.00



ITEM		VALUE
Truck Width	15.00	15.00
Truck Length	33.00	33.00
Truck Height	4.00	4.00
Truck Weight	10.00	10.00
Truck Angle	45.00	45.00

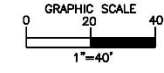




Table 1

Intersection Analysis for EAP (2030) Conditions

#	Intersection	Traffic Control <sup>2</sup>	Existing (2020)				EAP (2030) - From 2022 Traffic Study				EAP (2030) - Alternative Truck Route				Acceptable LOS <sup>4</sup>				
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service						
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM					
6	I-215 SB Ramps & Placentia Av.	<b>TS</b> <sup>3</sup>	Future Intersection				23.5	41.3	C	D	22.1	30.4	C	C	D				
7	I-215 NB Ramps & Placentia Av.	<b>TS</b> <sup>3</sup>	Future Intersection				27.4	27.6	C	C	17.5	21.6	B	C	D				
15	Indian Av. & Placentia Av.	AWS	10.9	9.7	B	A	>100.0	>100.0	F	F	>100.0	>100.0	F	F	D				
23	Perris Bl. & Morgan St.	TS	11.3	12.3	B	B	13.6	28.8	B	C	12.1	13.5	B	B	D				
24	Perris Bl. & Rider St.	TS	21.3	20.7	C	C	24.3	24.6	C	C	23.4	23.9	C	C	D				
25	Perris Bl. & Placentia Av.	TS	15.5	16.2	B	B	26.3	18.3	C	B	16.5	17.6	B	B	D				
30	Redlands Av. & Ramona Exwy.	TS	23.2	18.6	C	B	<b>85.4</b>	<b>65.8</b>	F	E	<b>79.2</b>	37.1	E	D	D				
31	Redlands Av. & Morgan St.	AWS	7.2	7.8	A	A	9.9	9.6	A	A	7.3	7.9	A	A	D				
39	Evans Rd. & Ramona Exwy.	TS	32.6	23.1	C	C	<b>78.1</b>	<b>69.3</b>	E	E	<b>73.8</b>	<b>60.9</b>	E	E	D				
43	Bradley Rd. & Ramona Exwy.	TS	8.5	6.6	A	A	10.2	7.0	B	A	10.2	7.0	B	A	D				
46	Dunlap Dr. & Nuevo Rd.	TS	16.1	20.0	B	C	18.3	44.3	B	D	22.2	50.5	C	D	D				
47	Ramona Exwy. & Rider St.	TS	11.3	10.6	B	B	22.4	16.9	C	B	19.6	16.1	B	B	D				
48	Antelope Rd. & Ramona Exwy.	<b>TS</b>	Future Intersection				10.7	32.0	B	C	12.6	44.5	B	D	D				
51	Antelope Rd. & Nuevo Rd.	<b>TS</b>	Future Intersection				27.0	35.8	C	D	31.8	39.7	C	D	D				
68	Dunlap Dr. & San Jacinto Av.	CSS	11.1	26.4	B	D	Not Evaluated in 2022 Traffic Study				16.6	>100.0	C	F	D				
69	Evans Rd. & San Jacinto Av.		Future Intersection												Future Intersection				D
70	Murrieta Rd. & San Jacinto Av.	AWS	11.5	12.7	B	B									13.9	18.5	B	C	D
71	Redlands Av. & San Jacinto Av.	TS	21.6	25.9	C	C					32.2	<b>64.7</b>	C	E	D				
72	Redlands Av. & I-215 NB Ramps	TS	11.7	12.6	B	B					14.2	18.1	B	B	D				
73	Redlands Av. & I-215 SB Ramps	TS	9.6	10.4	A	B					10.8	13.0	B	B	D				
74	Indian Av. & Morgan St.	TS													D				
75	Indian Av. & Rider St.	TS													D				

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> AWS = All-way Stop; CSS = Cross-street Stop; RA = Roundabout; TS = Traffic Signal; **TS** = Improvement

<sup>3</sup> A traffic signal is assumed as part of the I-215 Freeway/Placentia Avenue interchange project. The I-215 Freeway/Placentia Avenue interchange project is anticipated to be completed by 2022. As such, these improvements have been assumed to be in place for EAP (2030) conditions.

<sup>4</sup> Minimum acceptable LOS for each applicable jurisdiction.

**Table 2**

**Peak Hour Freeway Off-Ramp Queuing Summary for EAP (2030) Conditions**

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2020)				EAP (2030) - From 2022 Traffic Study				EAP (2030) - Alternative Truck Route			
			95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 Northbound Ramps & Redlands Av.	WBL	1,225	123	298 <sup>2</sup>	Yes	Yes	Not Evaluated in 2022 Traffic Study				237 <sup>2</sup>	404 <sup>2</sup>	Yes	Yes
	WBL/T/R	790	123	215 <sup>2</sup>	Yes	Yes					189 <sup>2</sup>	358 <sup>2</sup>	Yes	Yes
	WBR	415	43	187 <sup>2</sup>	Yes	Yes					53	308 <sup>2</sup>	Yes	Yes
I-215 Southbound Ramps & Redlands Av.	EBL	1,140	62	93	Yes	Yes	Not Evaluated in 2022 Traffic Study				75	412	Yes	Yes
	EBL/T/R	775	26	60	Yes	Yes					39	41	Yes	Yes
	EBR	185	24	37	Yes	Yes					36	472 <sup>3</sup>	Yes	Yes

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

<sup>2</sup> 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

<sup>3</sup> Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.



Table 3

Freeway Facility Analysis for EAP (2030) Conditions

Freeway	Direction	Mainline Segment	Lanes <sup>1</sup>	Existing (2020)				EAP (2030) - From 2022 Traffic Study				EAP (2030) - Alternative Truck Route			
				Density <sup>2</sup>		LOS <sup>3</sup>		Density <sup>2</sup>		LOS <sup>3</sup>		Density <sup>2</sup>		LOS <sup>3</sup>	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	Southbound	North of Redlands Av.	3	16.9	23.1	B	C	Not Evaluated in 2022 Traffic Study				21.4	33.0	C	D
		Off-Ramp at Redlands Av.	3	21.3	27.1	C	C					25.6	33.0	C	D
		On-Ramp at Redlands Av.	4	11.5	15.2	B	B					14.3	19.9	B	C
		South of Redlands Av.	4	14.5	18.7	B	C					18.2	25.6	C	C
I-215 Freeway	Northbound	South of Redlands Av.	3	17.5	23.1	B	C					24.4	31.2	C	D
		Off-Ramp at Redlands Av.	3	22.8	28.7	C	D					29.2	34.2	D	D
		On-Ramp at Redlands Av.	3	17.9	20.2	B	C					23.1	25.0	C	C
		North of Redlands Av.	3	16.6	19.0	B	C					22.2	24.7	C	C

**BOLD** = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).

<sup>1</sup> Number of lanes are in the specified direction and is based on existing conditions.

<sup>2</sup> Density is measured by passenger cars per mile per lane (pc/mi/ln).

<sup>3</sup> LOS = Level of Service

<sup>4</sup> Analysis with constrained flow results in acceptable LOS, however, field observations indicate congestion during the peak hour. As such, the freeway is considered at capacity.

Table 4

Intersection Analysis for EAP (2030) Conditions With Improvements

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay <sup>2</sup> (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
15	Indian Av. & Placentia Av.																	
	- Without Improvements	AWS	<u>1</u>	<u>1</u>	<u>0</u>	1	1	0	<u>1</u>	<u>1</u>	0	1	1	0	<b>&gt;100.0</b>	<b>&gt;100.0</b>	<b>F</b>	<b>F</b>
	- With Improvements (2022 Traffic Study)	<u>TS</u>	<u>1</u>	<u>1</u>	<u>0</u>	1	1	0	<u>1</u>	<u>2</u>	0	1	<u>2</u>	<u>0</u>	23.5	23.1	C	C
	- With Improvements (Alternative Truck Route)	<u>TS</u>	<u>1</u>	<u>1</u>	<u>0</u>	1	1	0	<u>1</u>	<u>2</u>	0	1	<u>2</u>	<u>0</u>	23.5	23.1	C	C
30	Redlands Av. & Ramona Exwy.																	
	- Without Improvements	TS	1	1	0	1	1	1	1	3	1	1	3	1	<b>79.2</b>	37.1	<b>E</b>	<b>D</b>
	- With Improvements (2022 Traffic Study)	TS	1	1	0	<u>2</u>	1	1	1	3	1	1	3	1	36.0	37.6	D	D
	- With Improvements (Alternative Truck Route)	TS	1	1	0	<u>2</u>	1	1	1	3	1	1	3	1	14.5	23.4	B	C
39	Evans Rd. & Ramona Exwy.																	
	- Without Improvements	TS	2	2	1	2	2	1	2	3	1	1	2	1	<b>73.8</b>	<b>60.9</b>	<b>E</b>	<b>E</b>
	- With Improvements (2022 Traffic Study)	TS	2	2	1	2	2	1	2	3	1	1	<u>3</u>	1	43.9	40.3	D	D
	- With Improvements (Alternative Truck Route) <sup>4</sup>	TS	2	2	1	2	2	1	2	3	1	1	<u>3</u>	1	43.4	37.9	D	D
68	Dunlap Dr. & San Jacinto Av.																	
	- Without Improvements	CSS	0	0	0	0	1	0	0	1	0	0	1	0	16.6	<b>&gt;100.0</b>	C	<b>F</b>
	- With Improvements (2022 Traffic Study)		Not Evaluated in 2020 Traffic Study															
	- With Improvements (Alternative Truck Route)	<u>TS</u>	0	0	0	0	1	0	<u>1</u>	1	0	0	1	0	18.0	31.5	B	C
71	Redlands Av. & San Jacinto Av.																	
	- Without Improvements	TS	1	2	1	1	2	0	2	1	1	2	1	1	32.2	<b>64.7</b>	C	<b>E</b>
	- With Improvements (2022 Traffic Study)		Not Evaluated in 2020 Traffic Study															
	- With Improvements (Alternative Truck Route)	TS	1	2	<u>1&gt;</u>	1	2	0	2	1	1	2	1	1	23.8	24.4	C	C

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; 1 = Improvement

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> CSS = Cross-street Stop; AWS = All-way Stop; TS = Traffic Signal; TS = Improvements

<sup>4</sup> Improvement includes modifying the traffic signal to protect the northbound and southbound left turns.

Table 5

Intersection Analysis for EAPC (2030) Conditions

#	Intersection	Traffic Control <sup>2</sup>	EAPC (2030) - From 2022 Traffic Study				EAPC (2030) - Alternative Truck Route				Acceptable LOS <sup>4</sup>
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
6	I-215 SB Ramps & Placentia Av.	<b>TS</b> <sup>3</sup>	25.4	<b>96.4</b>	C	F	21.1	<b>67.0</b>	C	E	D
7	I-215 NB Ramps & Placentia Av.	<b>TS</b> <sup>3</sup>	34.5	36.1	C	D	21.6	27.6	C	C	D
15	Indian Av. & Placentia Av.	AWS	<b>&gt;100.0</b>	<b>&gt;100.0</b>	F	F	<b>&gt;100.0</b>	<b>&gt;100.0</b>	F	F	D
23	Perris Bl. & Morgan St.	TS	14.6	31.8	B	C	13.0	14.6	B	B	D
24	Perris Bl. & Rider St.	TS	29.0	33.3	C	C	27.5	32.6	C	C	D
25	Perris Bl. & Placentia Av.	TS	34.4	49.3	C	D	19.7	49.6	B	D	D
30	Redlands Av. & Ramona Exwy.	TS	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>194.7</b>	<b>&gt;200.0</b>	F	F	D
31	Redlands Av. & Morgan St.	AWS	10.5	10.7	B	B	8.5	9.2	A	A	D
39	Evans Rd. & Ramona Exwy.	TS	<b>&gt;200.0</b>	<b>174.4</b>	F	F	<b>&gt;200.0</b>	<b>155.8</b>	F	F	D
43	Bradley Rd. & Ramona Exwy.	TS	<b>60.8</b>	52.1	E	D	36.4	21.3	D	C	D
46	Dunlap Dr. & Nuevo Rd.	TS	<b>141.8</b>	<b>&gt;200.0</b>	F	F	<b>161.3</b>	<b>&gt;200.0</b>	F	F	D
47	Ramona Exwy. & Rider St.	TS	<b>67.9</b>	<b>162.5</b>	E	F	<b>55.5</b>	<b>153.8</b>	E	F	D
48	Antelope Rd. & Ramona Exwy.	<b>TS</b>	35.6	<b>154.3</b>	D	F	39.5	<b>199.0</b>	D	F	D
51	Antelope Rd. & Nuevo Rd.	<b>TS</b>	<b>&gt;200.0</b>	<b>155.2</b>	F	F	<b>&gt;200.0</b>	<b>183.1</b>	F	F	D
68	Dunlap Dr. & San Jacinto Av.	CSS					18.1	<b>&gt;100.0</b>	C	F	D
69	Evans Rd. & San Jacinto Av.						Future Intersection				D
70	Murrieta Rd. & San Jacinto Av.	AWS	Not Evaluated in 2022 Traffic Study				14.9	20.2	B	C	D
71	Redlands Av. & San Jacinto Av.	TS					<b>78.3</b>	<b>137.7</b>	E	F	D
72	Redlands Av. & I-215 NB Ramps	TS					16.5	28.2	B	C	D
73	Redlands Av. & I-215 SB Ramps	TS					12.0	15.8	B	B	D

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> AWS = All-way Stop; CSS = Cross-street Stop; RA = Roundabout; TS = Traffic Signal; **TS** = Improvement

<sup>3</sup> A traffic signal is assumed as part of the I-215 Freeway/Placentia Avenue interchange project. The I-215 Freeway/Placentia Avenue interchange project is anticipated to be completed by 2022. As such, these improvements have been assumed to be in place for EAPC (2030) conditions.

<sup>4</sup> Minimum acceptable LOS for each applicable jurisdiction.

**Table 6**

**Peak Hour Freeway Off-Ramp Queuing Summary for EAPC (2030) Conditions**

Intersection	Movement	Available Stacking Distance (Feet)	EAPC (2030) - From 2022 Traffic Study				EAPC (2030) - Alternative Truck Route			
			95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>	
			AM Peak	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 Northbound Ramps & Redlands Av.	WBL	1,225					280 <sup>2</sup>	450 <sup>2</sup>	Yes	Yes
	WBL/T/R	790	Not Evaluated in 2022 Traffic Study				178 <sup>2</sup>	424 <sup>2</sup>	Yes	Yes
	WBR	415					73	343 <sup>2</sup>	Yes	Yes
I-215 Southbound Ramps & Redlands Av.	EBL	1,140					117	142	Yes	Yes
	EBL/T/R	775	Not Evaluated in 2022 Traffic Study				57	114	Yes	Yes
	EBR	185					53	73	Yes	Yes

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

<sup>2</sup> 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

<sup>3</sup> Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

Table 7

Freeway Facility Analysis for EAPC (2030) Conditions

Freeway	Direction	Mainline Segment	Lanes <sup>1</sup>	EAPC (2030) - From 2022 Traffic Study				EAPC (2030) - Alternative Truck Route			
				Density <sup>2</sup>		LOS <sup>3</sup>		Density <sup>2</sup>		LOS <sup>3</sup>	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	Southbound	North of Redlands Av.	3	Not Evaluated in 2022 Traffic Study				23.4	<b>43.2</b>	C	E
		Off-Ramp at Redlands Av.	3					27.5	<b>37.9</b>	C	E
		On-Ramp at Redlands Av.	4					15.2	23.3	B	C
		South of Redlands Av.	4					19.4	30.5	C	D
I-215 Freeway	Northbound	South of Redlands Av.	3					29.4	35.0	D	D
		Off-Ramp at Redlands Av.	3					32.4	<b>36.0</b>	D	E
		On-Ramp at Redlands Av.	3					26.8	27.6	C	C
		North of Redlands Av.	3					26.7	27.4	D	D

**BOLD** = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).

<sup>1</sup> Number of lanes are in the specified direction and is based on existing conditions.

<sup>2</sup> Density is measured by passenger cars per mile per lane (pc/mi/ln).

<sup>3</sup> LOS = Level of Service

<sup>4</sup> Analysis with constrained flow results in acceptable LOS, however, field observations indicate congestion during the peak hour. As such, the freeway is considered at capacity.

Table 8

Intersection Analysis for EAPC (2030) Conditions With Improvements

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay <sup>2</sup> (secs.)		Level of Service		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
6	I-215 SB Ramps & Placentia Av.																		
	- Without Improvements	TS	0	0	0	<u>1</u>	<u>1</u>	<u>1</u>	0	2	0	<u>1</u>	2	0	21.1	<b>67.0</b>	C	E	
	- With Improvements (2022 Traffic Study)	TS	0	0	0	<u>1</u>	<u>1</u>	<u>1</u>	0	2	0	<u>2</u>	2	0	30.3	32.0	C	C	
	- With Improvements (Alternative Truck Route)	TS	0	0	0	<u>1</u>	<u>1</u>	<u>1</u>	0	2	0	<u>2</u>	2	0	30.0	31.6	C	C	
15	Indian Av. & Placentia Av.																		
	- Without Improvements	AWS	<u>1</u>	<u>1</u>	<u>0</u>	1	1	0	<u>1</u>	<u>1</u>	0	1	1	0	>100.0	>100.0	F	F	
	- With Improvements (2022 Traffic Study)	TS	<u>1</u>	<u>1</u>	<u>0</u>	1	1	0	<u>1</u>	<u>2</u>	0	1	<u>2</u>	<u>0</u>	29.1	47.7	C	D	
	- With Improvements (Alternative Truck Route)	TS	<u>1</u>	<u>1</u>	<u>0</u>	1	1	0	<u>1</u>	<u>2</u>	0	1	<u>2</u>	<u>0</u>	29.1	47.7	C	D	
30	Redlands Av. & Ramona Exwy.																		
	- Without Improvements	TS	1	1	0	1	1	1	1	3	1	1	3	1	<b>194.7</b>	>200.0	F	F	
	- With Improvements (2022 Traffic Study)	TS	1	1	<u>1</u>	<u>2</u>	1	1	<u>2</u>	<u>4</u>	1	<u>2</u>	<u>4</u>	<u>1</u> >	63.6	70.8	E	E	
	- With Improvements (Alternative Truck Route) <sup>4</sup>	TS	1	1	<u>1</u>	<u>2</u>	1	1	<u>2</u>	<u>4</u>	1	<u>2</u>	<u>4</u>	<u>1</u> >	64.9	60.8	E	E	
39	Evans Rd. & Ramona Exwy.																		
	- Without Improvements	TS	2	2	1	2	2	1	2	3	1	1	2	1	>200.0	<b>155.8</b>	F	F	
	- With Improvements (2022 Traffic Study) <sup>4</sup>	TS	2	2	1	2	2	1	2	3	1	1	<u>3</u>	1	<b>62.4</b>	<b>61.6</b>	E	E	
	- With Improvements (Alternative Truck Route) <sup>4</sup>	TS	2	2	1	2	2	1	2	3	1	1	<u>3</u>	1	60.2	54.3	E	D	
46	Dunlap Dr. & Nuevo Rd.																		
	- Without Improvements	TS	1	1	0	1	1	0	1	1	1	1	1	0	<b>161.3</b>	>200.0	F	F	
	- With Improvements (2022 Traffic Study)	TS	1	1	0	1	1	0	1	<u>2</u>	<u>0</u>	1	<u>2</u>	0	23.8	46.5	C	D	
	- With Improvements (Alternative Truck Route)	TS	1	1	0	1	1	0	1	<u>2</u>	<u>0</u>	1	<u>2</u>	0	23.9	44.7	C	D	
47	Ramona Exwy. & Rider St.																		
	- Without Improvements	TS	2	2	0	1	2	1	0	1	1	0	1	0	<b>55.5</b>	<b>153.8</b>	E	F	
	- With Improvements (2022 Traffic Study)	TS	2	<u>3</u>	0	1	<u>3</u>	1	0	1	1	0	1	0	18.9	23.3	B	C	
	- With Improvements (Alternative Truck Route)	TS	2	<u>3</u>	0	1	<u>3</u>	1	0	1	1	0	1	0	18.2	22.6	B	C	
48	Antelope Rd. & Ramona Exwy.																		
	- Without Improvements	TS	<u>1</u>	0	<u>1</u>	0	0	0	0	2	0	0	2	0	39.5	<b>199.0</b>	D	F	
	- With Improvements (2022 Traffic Study)	TS	<u>2</u>	0	<u>1</u>	0	0	0	0	<u>3</u>	<u>1</u>	<u>1</u>	<u>3</u>	0	10.8	34.5	B	C	
	- With Improvements (Alternative Truck Route)	TS	<u>2</u>	0	<u>1</u>	0	0	0	0	<u>3</u>	<u>1</u>	<u>1</u>	<u>3</u>	0	10.6	31.0	B	C	
51	Antelope Rd. & Nuevo Rd.																		
	- Without Improvements	TS	0	0	0	<u>1</u>	0	<u>1</u> >	<u>1</u>	1	0	0	1	0	>200.0	<b>183.1</b>	F	F	
	- With Improvements (2022 Traffic Study)	TS	0	0	0	<u>1</u>	0	<u>1</u> >	<u>1</u>	<u>2</u>	0	0	<u>2</u>	0	30.2	21.2	C	C	
	- With Improvements (Alternative Truck Route)	TS	0	0	0	<u>1</u>	0	<u>1</u> >	<u>1</u>	<u>2</u>	0	0	<u>2</u>	0	40.5	24.5	D	C	
68	Dunlap Dr. & San Jacinto Av.																		
	- Without Improvements	CSS	0	0	0	0	1	0	0	1	0	0	1	0	18.1	>100.0	C	F	
	- With Improvements (2022 Traffic Study)		Not Evaluated in 2020 Traffic Study																
	- With Improvements (Alternative Truck Route)	TS	0	0	0	0	1	0	<u>1</u>	1	0	0	1	0	17.9	25.1	B	C	
71	Redlands Av. & San Jacinto Av.																		
	- Without Improvements	TS	1	2	1	1	2	0	2	1	1	2	1	1	<b>78.3</b>	<b>137.7</b>	E	F	
	- With Improvements (2022 Traffic Study) <sup>5</sup>		Not Evaluated in 2020 Traffic Study																
	- With Improvements (Alternative Truck Route) <sup>5</sup>	TS	1	2	<u>1</u> >	1	2	0	2	1	1	2	1	1	42.2	50.8	D	D	

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; 1 = Improvement

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> CSS = Cross-street Stop; RA = Roundabout; AWS = All-way Stop; TS = Traffic Signal; TS = Improvements

<sup>4</sup> Per the City of Perris General Plan, LOS E is permitted at intersections along the Ramona-Cajalco Expressway.

<sup>5</sup> Improvement includes modifying the traffic signal to implement a 130-second cycle in conjunction with other improvements shown.

Table 9

Intersection Analysis for Horizon Year (2040) Without Mid-County Parkway Conditions

#	Intersection	Traffic Control <sup>2</sup>	2040 Without Project				2040 With Project - From 2022 Traffic Study				2040 With Project - Alternative Truck Route				Acceptable LOS <sup>4</sup>
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
6	I-215 SB Ramps & Placentia Av.	<u>TS</u> <sup>3</sup>	31.3	135.5	C	F	33.0	180.8	C	F	32.3	124.5	C	F	D
7	I-215 NB Ramps & Placentia Av.	<u>TS</u> <sup>3</sup>	30.4	38.5	C	D	52.2	53.1	D	D	20.7	33.0	C	C	D
15	Indian Av. & Placentia Av.	AWS	<b>44.6</b>	<b>&gt;100.0</b>	E	F	<b>&gt;100.0</b>	<b>&gt;100.0</b>	F	F	<b>&gt;100.0</b>	<b>&gt;100.0</b>	F	F	D
23	Perris Bl. & Morgan St.	TS	17.2	48.5	B	D	23.6	52.6	C	D	14.2	18.5	B	B	D
24	Perris Bl. & Rider St.	TS	38.8	48.0	D	D	50.7	49.3	D	D	34.7	46.9	C	D	D
25	Perris Bl. & Placentia Av.	TS	53.3	<b>81.1</b>	D	F	<b>141.0</b>	<b>95.2</b>	F	F	31.7	<b>87.9</b>	C	F	D
30	Redlands Av. & Ramona Exwy.	TS	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	D
31	Redlands Av. & Morgan St.	AWS	11.2	10.7	B	B	21.3	14.8	C	B	8.8	9.4	A	A	D
39	Evans Rd. & Ramona Exwy.	TS	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	D
43	Bradley Rd. & Ramona Exwy.	TS	<b>121.1</b>	<b>112.5</b>	F	F	<b>193.9</b>	<b>188.2</b>	F	F	<b>90.1</b>	<b>83.4</b>	F	F	D
46	Dunlap Dr. & Nuevo Rd.	TS	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	D
47	Ramona Exwy. & Rider St.	TS	<b>151.3</b>	<b>&gt;200.0</b>	F	F	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>196.6</b>	<b>&gt;200.0</b>	F	F	D
48	Antelope Rd. & Ramona Exwy.	<u>TS</u>	<b>115.1</b>	<b>&gt;200.0</b>	F	F	<b>150.7</b>	<b>&gt;200.0</b>	F	F	<b>175.6</b>	<b>&gt;200.0</b>	F	F	D
51	Antelope Rd. & Nuevo Rd.	<u>TS</u>	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	<b>&gt;200.0</b>	<b>&gt;200.0</b>	F	F	D
68	Dunlap Dr. & San Jacinto Av.	CSS									17.2	<b>&gt;100.0</b>	C	F	D
69	Evans Rd. & San Jacinto Av.	<u>CSS</u>									<b>66.8</b>	<b>&gt;100.0</b>	F	F	D
70	Murrieta Rd. & San Jacinto Av.	AWS									17.8	<b>&gt;100.0</b>	C	F	D
71	Redlands Av. & San Jacinto Av.	TS									24.2	28.1	C	C	D
72	Redlands Av. & I-215 NB Ramps	TS									13.1	15.5	B	B	D
73	Redlands Av. & I-215 SB Ramps	TS									10.7	12.2	B	B	D

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> AWS = All-way Stop; CSS = Cross-street Stop; RA = Roundabout; TS = Traffic Signal; TS = Improvement

<sup>3</sup> A traffic signal is assumed as part of the I-215 Freeway/Placentia Avenue interchange project. The I-215 Freeway/Placentia Avenue interchange project is anticipated to be completed by 2022. As such, these improvements have been assumed to be in place for Horizon Year (2040) conditions.

<sup>4</sup> Minimum acceptable LOS for each applicable jurisdiction.

**Table 10**

**Peak Hour Freeway Off-Ramp Queuing Summary for Horizon Year (2040) Without Mid-County Parkway Conditions**

Intersection	Movement	Available Stacking Distance (Feet)	2040 Without Project				2040 With Project - From 2022 Traffic Study				2040 With Project - Alternative Truck Route			
			95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 Northbound Ramps & Redlands Av.	WBL	1,225								232 <sup>2</sup>	357 <sup>2</sup>	Yes	Yes	
	WBL/T/R	790	Not Evaluated in 2022 Traffic Study				Not Evaluated in 2022 Traffic Study				184 <sup>2</sup>	262 <sup>2</sup>	Yes	Yes
	WBR	415								53	237 <sup>2</sup>	Yes	Yes	
I-215 Southbound Ramps & Redlands Av.	EBL	1,140								95	112	Yes	Yes	
	EBL/T/R	775	Not Evaluated in 2022 Traffic Study				Not Evaluated in 2022 Traffic Study				41	68	Yes	Yes
	EBR	185								38	51	Yes	Yes	

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

<sup>2</sup> 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

<sup>3</sup> Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.



Table 11

Freeway Facility Analysis for Horizon Year (2040) Without Mid-County Parkway Conditions

Freeway	Direction	Mainline Segment	Lanes <sup>1</sup>	2040 Without Project				2040 With Project - From 2022 Traffic Study				2040 With Project - Alternative Truck Route											
				Density <sup>2</sup>		LOS <sup>3</sup>		Density <sup>2</sup>		LOS <sup>3</sup>		Density <sup>2</sup>		LOS <sup>3</sup>									
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM								
I-215 Freeway	Southbound	North of Redlands Av.	3	Not Evaluated in 2022 Traffic Study				Not Evaluated in 2022 Traffic Study				30.6	<b>45.0</b>	D	F								
		Off-Ramp at Redlands Av.	3									31.5	<b>39.0</b>	D	F								
		On-Ramp at Redlands Av.	4									19.2	32.2	C	D								
		South of Redlands Av.	4									23.0	31.1	C	D								
I-215 Freeway	Northbound	South of Redlands Av.	3									Not Evaluated in 2022 Traffic Study				Not Evaluated in 2022 Traffic Study				<b>43.0</b>	<b>45.0</b>	E	F
		Off-Ramp at Redlands Av.	3																	<b>38.2</b>	<b>39.5</b>	E	F
		On-Ramp at Redlands Av.	3																	32.4	31.5	D	D
		North of Redlands Av.	3																	<b>37.6</b>	34.8	E	D

**BOLD** = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).

<sup>1</sup> Number of lanes are in the specified direction and is based on existing conditions.

<sup>2</sup> Density is measured by passenger cars per mile per lane (pc/mi/ln).

<sup>3</sup> LOS = Level of Service

<sup>4</sup> Analysis with constrained flow results in acceptable LOS, however, field observations indicate congestion during the peak hour. As such, the freeway is considered at capacity.

Table 12

Intersection Analysis for Horizon Year (2040) Without Mid-County Parkway Conditions With Improvements

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay <sup>2</sup> (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
6	I-215 SB Ramps & Placentia Av.																	
	- Without Project	TS	0	0	0	<u>1</u>	<u>1</u>	<u>1</u>	0	2	0	<u>2</u>	<u>2</u>	0	30.2	35.7	C	D
	- With Improvements (2022 Traffic Study)	TS	0	0	0	<u>1</u>	<u>1</u>	<u>1</u>	0	<u>2</u>	0	<u>2</u>	<u>2</u>	0	31.0	45.8	C	D
	- With Improvements (Alternative Truck Route)	TS	0	0	0	<u>1</u>	<u>1</u>	<u>1</u>	0	<u>2</u>	0	<u>2</u>	<u>2</u>	0	30.4	42.2	C	D
15	Indian Av. & Placentia Av.																	
	- Without Project	TS	<u>1</u>	<u>2</u>	<u>0</u>	1	<u>2</u>	0	<u>1</u>	<u>2</u>	0	1	<u>2</u>	<u>0</u>	33.2	40.9	C	D
	- With Improvements (2022 Traffic Study)	TS	<u>1</u>	<u>2</u>	<u>0</u>	1	<u>2</u>	0	<u>1</u>	<u>2</u>	0	1	<u>2</u>	<u>0</u>	34.5	52.3	C	D
	- With Improvements (Alternative Truck Route)	TS	<u>1</u>	<u>2</u>	<u>0</u>	1	<u>2</u>	0	<u>1</u>	<u>2</u>	0	1	<u>2</u>	<u>0</u>	33.6	44.7	C	D
25	Perris Bl. & Placentia Av.																	
	- Without Project	TS	1	<u>3</u>	<u>1</u>	1	<u>3</u>	1	1	<u>2</u>	<u>1</u>	1	<u>2</u>	<u>0</u>	27.0	24.7	C	C
	- With Improvements (2022 Traffic Study)	TS	1	<u>3</u>	<u>1</u>	1	<u>3</u>	1	1	<u>2</u>	<u>1</u>	1	<u>2</u>	<u>0</u>	40.1	32.9	D	C
	- With Improvements (Alternative Truck Route)	TS	1	<u>3</u>	<u>1</u>	1	<u>3</u>	1	1	<u>2</u>	<u>1</u>	1	<u>2</u>	<u>0</u>	20.3	25.7	C	C
30	Redlands Av. & Ramona Exwy.																	
	- Without Project	TS	1	1	<u>1</u>	<u>2</u>	1	1	<u>2</u>	<u>5</u>	1	<u>2</u>	<u>5</u>	<u>1</u>	46.9	51.7	D	D
	- With Improvements (2022 Traffic Study) <sup>4</sup>	TS	1	1	<u>1</u>	<u>2</u>	1	1	<u>2</u>	<u>5</u>	1	<u>2</u>	<u>5</u>	<u>1</u>	79.0	74.5	E	E
	- With Improvements (Alternative Truck Route) <sup>4</sup>	TS	1	1	<u>1</u>	<u>2</u>	1	1	<u>2</u>	<u>5</u>	1	<u>2</u>	<u>5</u>	<u>1</u>	67.3	28.9	E	C
39	Evans Rd. & Ramona Exwy.																	
	- Without Project	TS	2	2	1	2	2	1	2	<u>4</u>	1	<u>2</u>	<u>4</u>	1	72.5	55.3	E	E
	- With Improvements (2022 Traffic Study) <sup>4</sup>	TS	2	2	1	2	2	1	2	<u>4</u>	1	<u>2</u>	<u>4</u>	1	79.8	78.1	E	E
	- With Improvements (Alternative Truck Route) <sup>4</sup>	TS	2	2	1	2	2	1	2	<u>4</u>	1	<u>2</u>	<u>4</u>	1	75.9	62.1	E	E
43	Bradley Rd. & Ramona Exwy.																	
	- Without Project	TS	1	0	1	0	0	0	0	<u>4</u>	1	1	<u>4</u>	0	13.4	7.3	B	A
	- With Improvements (2022 Traffic Study)	TS	1	0	1	0	0	0	0	<u>4</u>	1	1	<u>4</u>	0	15.4	9.6	B	A
	- With Improvements (Alternative Truck Route)	TS	1	0	1	0	0	0	0	<u>4</u>	1	1	<u>4</u>	0	12.7	8.4	B	A
46	Dunlap Dr. & Nuevo Rd.																	
	- Without Project	TS	1	1	0	<u>2</u>	1	0	1	<u>2</u>	<u>0</u>	1	<u>2</u>	0	20.4	43.9	C	D
	- With Improvements (2022 Traffic Study)	TS	1	1	0	<u>2</u>	1	0	1	<u>2</u>	<u>0</u>	1	<u>2</u>	0	21.2	54.3	C	D
	- With Improvements (Alternative Truck Route)	TS	1	1	<u>1</u>	<u>1</u>	1	0	1	<u>3</u>	<u>0</u>	<u>2</u>	<u>3</u>	0	30.7	39.2	C	D
47	Ramona Exwy. & Rider St.																	
	- Without Project	TS	2	<u>4</u>	0	1	<u>4</u>	1	0	1	1	0	1	0	25.2	29.0	C	C
	- With Improvements (2022 Traffic Study)	TS	2	<u>4</u>	0	1	<u>4</u>	1	0	1	1	0	1	0	31.2	30.8	C	C
	- With Improvements (Alternative Truck Route)	TS	2	<u>4</u>	0	1	<u>4</u>	1	0	1	1	0	1	0	27.6	29.6	C	C
48	Antelope Rd. & Ramona Exwy.																	
	- Without Project	TS	<u>2</u>	0	<u>1</u>	0	0	0	0	<u>4</u>	<u>1</u>	<u>1</u>	<u>4</u>	0	12.5	15.8	B	B
	- With Improvements (2022 Traffic Study)	TS	<u>2</u>	0	<u>1</u>	0	0	0	0	<u>4</u>	<u>1</u>	<u>1</u>	<u>4</u>	0	31.7	54.6	C	D
	- With Improvements (Alternative Truck Route)	TS	<u>2</u>	0	<u>1</u>	0	0	0	0	<u>4</u>	<u>1</u>	<u>1</u>	<u>4</u>	0	24.1	52.6	C	D
51	Antelope Rd. & Nuevo Rd.																	
	- Without Project	TS	0	0	0	<u>2</u>	0	<u>1</u>	<u>1</u>	<u>2</u>	0	0	<u>2</u>	0	23.3	22.0	C	C
	- With Improvements (2022 Traffic Study)	TS	0	0	0	<u>2</u>	0	<u>1</u>	<u>1</u>	<u>2</u>	0	0	<u>2</u>	0	45.6	52.4	D	D
	- With Improvements (Alternative Truck Route)	TS	0	0	0	<u>2</u>	0	<u>2</u>	<u>1</u>	<u>3</u>	0	0	<u>3</u>	0	35.5	27.2	D	C
68	Dunlap Dr. & San Jacinto Av.																	
	- Without Improvements	CSS	0	0	0	0	1	0	0	1	0	0	1	0	17.2	<b>&gt;100.0</b>	C	F
	- With Improvements (2022 Traffic Study)		Not Evaluated in 2020 Traffic Study															
	- With Improvements (Alternative Truck Route)	TS	0	0	0	0	1	0	<u>1</u>	1	0	0	1	0	18.2	21.7	B	C
69	Evans Rd. & San Jacinto Av.																	
	- Without Improvements	CSS	0	0	0	0	1	0	0	1	0	0	1	0	24.2	<b>28.1</b>	C	C
	- With Improvements (2022 Traffic Study)		Not Evaluated in 2020 Traffic Study															
	- With Improvements (Alternative Truck Route)	TS	0	0	0	0	<u>1</u>	0	<u>1</u>	1	0	0	1	0	16.5	22.2	B	C
70	Murrieta Rd. & San Jacinto Av.																	
	- Without Improvements	TS	1	2	1	1	2	0	2	1	1	2	1	1	<b>24.2</b>	<b>28.1</b>	C	C
	- With Improvements (2022 Traffic Study)		Not Evaluated in 2020 Traffic Study															
	- With Improvements (Alternative Truck Route)	TS	0	0	0	0	1	0	<u>1</u>	1	0	0	1	0	16.9	52.7	B	D

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; 1 = Improvement

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> CSS = Cross-street Stop; TS = Traffic Signal; TS = Improvements

<sup>4</sup> Per the City of Perris General Plan, LOS E is permitted at intersections along the Ramona-Cajalco Expressway.

Table 13

Project Fair Share Calculations - Without Mid-County Parkway

#	Intersection	Existing (2020)	Project (Long-Range Without MCP)	Horizon Year (2040) Without MCP With Project	Total New Traffic	Project Fair Share	
6	I-215 SB Ramps & Placentia Av. <sup>1</sup>	AM:	--	172	2,412	--	<b>7.1%</b>
		PM:	--	97	3,565	--	2.7%
15	Indian Av. & Placentia Av.	AM:	550	220	3,777	3,227	6.8%
		PM:	451	288	4,483	4,032	<b>7.1%</b>
25	Perris Bl. & Placentia Av.	AM:	1,808	208	3,379	1,571	<b>13.2%</b>
		PM:	2,122	277	4,346	2,224	12.5%
30	Redlands Av. & Ramona Exwy.	AM:	2,880	505	7,809	4,929	<b>10.2%</b>
		PM:	3,034	548	8,974	5,940	9.2%
39	Evans Rd. & Ramona Exwy.	AM:	3,860	639	9,379	5,519	<b>11.6%</b>
		PM:	4,306	727	11,089	6,783	10.7%
43	Bradley Rd. & Ramona Exwy.	AM:	1,933	684	6,127	4,194	<b>16.3%</b>
		PM:	1,967	785	7,112	5,145	15.3%
46	Dunlap Dr. & Nuevo Rd.	AM:	817	509	3,781	2,964	<b>17.2%</b>
		PM:	999	598	4,846	3,847	15.5%
47	Ramona Exwy. & Rider St.	AM:	2,100	684	6,693	4,593	<b>14.9%</b>
		PM:	2,023	786	7,634	5,611	14.0%
48	Antelope Rd. & Ramona Exwy.	AM:	1,753	720	6,498	4,745	<b>15.2%</b>
		PM:	1,895	883	7,840	5,945	14.9%
51	Antelope Rd. & Nuevo Rd.	AM:	456	702	3,920	3,464	<b>20.3%</b>
		PM:	546	855	5,095	4,549	18.8%
68	Dunlap Dr. & San Jacinto Av.	AM:	512	226	1,498	986	<b>22.9%</b>
		PM:	1,028	222	2,253	1,225	18.1%
69	Evans Rd. & San Jacinto Av.	AM:	451	226	2,657	2,206	<b>10.2%</b>
		PM:	912	222	3,763	2,851	7.8%
70	Murrieta Rd. & San Jacinto Av.	AM:	612	226	1,210	598	<b>37.8%</b>
		PM:	1,225	222	2,145	920	24.1%
71	Redlands Av. & San Jacinto Av.	AM:	1,626	256	2,193	567	45.1%
		PM:	2,413	261	2,925	512	<b>51.0%</b>

\* Highest fair share percentage represented in **BOLD** and shown on Table 8.

<sup>1</sup> Fair share based on new traffic since the intersection does not currently exist.

**Table 14**

Summary of Improvements by Analysis Scenario - Without Mid-County Parkway

#	Intersection Location	Jurisdiction	Existing (2020)	Recommended Improvements			Horizon Year (2040) Without Project	Horizon Year (2040) With Project	Improvements in County DIF or TUMF <sup>1,2</sup>	Project Responsibility	Project Fair Share <sup>4</sup>
				EAP (2030)	EAPC (2030)						
6	I-215 SB Ramps & Placentia Av.	County of Riverside, Caltrans	None	Install a Traffic Signal <sup>6</sup> Add SB left turn lane <sup>6</sup> Add SB shared left-through lane <sup>6</sup> Add SB right turn lane <sup>6</sup> Add WB left turn lane <sup>6</sup>	Same Same Same Same Same Add 2nd WB left turn lane	Same Same Same Same Same Same	Same Same Same Same Same Same	Yes (TUMF) Yes (TUMF) Yes (TUMF) Yes (TUMF) Yes (TUMF) No	Fees Fees Fees Fees Fees Fair Share	7.1%	
15	Indian Av. & Placentia Av.	Perris	None	Install a Traffic Signal Add NB left turn lane Restripe the NB right turn lane as a shared through-right turn lane  Add EB left turn lane Add EB through lane Add 2nd EB through lane Add 2nd WB through lane	Same Same Same  Same Same Same Same	Same Same Same  Same Same Same Add 2nd NB through lane Add 2nd SB through lane	Same Same Same  Same Same Same Same Same	No No No  No Yes (TUMF) Yes (TUMF) Yes (TUMF) No No	Fair Share Fair Share Fair Share  Fair Share Fees Fees Fees Fair Share Fair Share	7.1%	
25	Perris Bl. & Placentia Av.	Perris	None	None	None	Stripe the 3rd NB through lane Add NB right turn lane Stripe the 3rd SB through lane Add 2nd EB through lane Add EB right turn lane Restripe the WB approach to provide one left turn lane, one through lane, and one shared through-right turn lane Modify the traffic signal to implement overlap phasing for the EB right turn lane	Same Same Same Same Same Same Same	Yes (TUMF) No Yes (TUMF) Yes (TUMF) No Yes (TUMF)  No	Fees Fair Share Fees Fees Fair Share Fees  Fair Share	13.2%	
30	Redlands Av. & Ramona Exwy.	Perris	None	Add 2nd SB left turn lane	Same Add NB right turn lane Add 4th EB through lane Add 2nd WB left turn lane Add 4th WB through lane Modify the traffic signal to implement overlap phasing for the WB right turn lane	Same Same Same Same Same Same	Same Same Same Same Same Same	No No No No No No	Fair Share Fair Share Fair Share Fair Share Fair Share Fair Share	10.2%	
39	Evans Rd. & Ramona Exwy.	Perris	None	Add 3rd WB through lane	Same	Same Add 4th EB through lane Add 4th WB through lane	Same Same Same	No No No	Fair Share Fair Share Fair Share	11.6%	
43	Bradley Rd. & Ramona Exwy.	County of Riverside, Perris	None	None	None	Add 3rd and 4th EB through lane Add 3rd and 4th WB through lane	Same Same	No No	Fair Share Fair Share	16.3%	

**Table 14**  
Page 2 of 2

Summary of Improvements by Analysis Scenario - Without Mid-County Parkway

#	Intersection Location	Jurisdiction	Existing (2020)	EAP (2030)	Recommended Improvements		Horizon Year (2040) Without Project	Horizon Year (2040) With Project	Improvements in County DIF or TUMF <sup>1,2</sup>	Project Responsibility	Project Fair Share <sup>4</sup>
					EAPC (2030)	Horizon Year (2040) With Project					
46	Dunlap Dr. & Nuevo Rd.	County of Riverside, Perris	None	None	Restripe the EB approach to provide one left turn lane, one through lane, and one shared through-right turn lane  Add 2nd WB through lane	Same  Same Add 3rd EB through lane Add 2nd WB left turn lane Add 3rd WB through lane Modify the traffic signal to implement overlap phasing for the NB right turn lane	Same  Same Same Same	Yes (TUMF)  Yes (TUMF) No No No	Fees  Fees Fair Share Fair Share Fair Share	17.2%	
47	Ramona Exwy. & Rider St.	County of Riverside, Perris	None	None	Add 3rd NB through lane Add 3rd SB through lane	Same Same Add 4th NB through lane Add 4th SB through lane	Same Same Same Same	No No No No	Fair Share Fair Share Fair Share Fair Share	14.9%	
48	Antelope Rd. & Ramona Exwy.	County of Riverside	None	Install a Traffic Signal Add NB left turn lane Add 2nd NB left turn lane Add NB right turn lane Add EB right turn lane Add WB left turn lane	Same Same Same Same Same Same Add 3rd EB through lane Add 3rd WB through lane	Same Same Same Same Same Same Same Add 4th EB through lane Add 4th WB through lane	Same Same Same Same Same Same Same Same Same	Yes (DIF) No No No No No Yes (TUMF) Yes (TUMF) No No	Construct Construct Construct Construct Construct Fees Fees Fair Share Fair Share	15.2%	
51	Antelope Rd. & Nuevo Rd.	County of Riverside	None	Install a Traffic Signal Add SB left turn lane Add SB right turn lane Add EB left turn lane Implement overlap phasing for the SB right turn lane	Same Same Same Same Same Add 2nd EB through lane Add 2nd WB through lane	Same Same Same Same Same Same Add 2nd SB left turn lane Add 2nd SB right turn lane Add 3rd EB through lane Add 3rd WB through lane	Same Same Same Same Same Same Same Same Same	Yes (DIF) No No No No Yes (TUMF) Yes (TUMF) No No No	Construct Construct Construct Construct Construct Fees Fees Construct Construct Fair Share Fair Share	20.3%	
68	Dunlap Dr. & San Jacinto Av.	County of Riverside, Perris	None	Install a Traffic Signal Add EB left turn lane	Same Same	Same Same	Same Same	Yes (DIF) No	Fees Fair Share	22.9%	
69	Evans Rd. & San Jacinto Av.	Perris	None	None	None	Install a Traffic Signal Add SB shared left-right turn lane Add EB left turn lane	Same Same Same	No No No	Fair Share Fair Share Fair Share	10.2%	
70	Murrieta Rd. & San Jacinto Av.	Perris	None	None	None	Install a Traffic Signal Add EB left turn lane	Same Same	No No	Fair Share Fair Share	37.8%	
71	Redlands Av. & San Jacinto Av.	Perris	None	Modify the traffic signal to implement overlap phasing for the NB right turn lane	Same	Not Applicable	Not Applicable	No	Fair Share	51.0%	

<sup>1</sup> Improvements included in TUMF Nexus, or County of Riverside DIF fee programs.

<sup>2</sup> Program improvements constructed by project may be eligible for fee credit. In lieu fee payment is at discretion of County. Represents the fair share percentage for the Project during the most impacted peak hour.

<sup>3</sup> Although the interchange is identified as a TUMF interchange, the interchange is not currently identified on the Central Zone 5-Year Transportation Improvement Program Amendment (adopted June 30, 2016).

<sup>4</sup> Program improvements constructed by project may be eligible for fee credit, at discretion of County. See Table 8-1 for Fair Share Calculations.

<sup>5</sup> Improvement is consistent with the Nuevo Road widening project that is currently under construction.

<sup>6</sup> Improvement planned to be constructed as part of the I-215 Freeway/Placentia Avenue interchange project, which is anticipated to be completed in 2022.

**ATTACHMENT A**  
**EXISTING COUNT DATA**

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

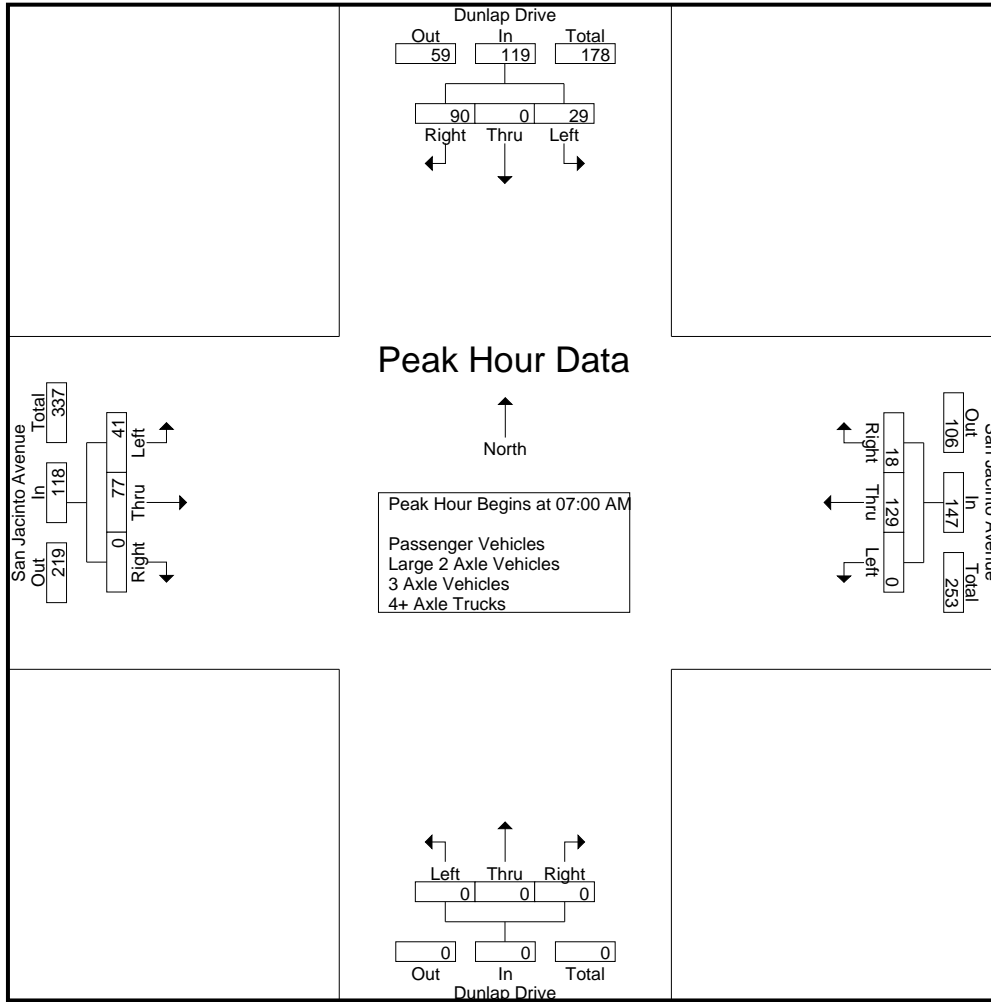
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	8	0	19	27	0	31	3	34	0	0	0	0	8	23	0	31	92
07:15 AM	9	0	23	32	0	37	5	42	0	0	0	0	8	10	0	18	92
07:30 AM	3	0	26	29	0	29	8	37	0	0	0	0	15	21	0	36	102
07:45 AM	9	0	22	31	0	32	2	34	0	0	0	0	10	23	0	33	98
<b>Total</b>	<b>29</b>	<b>0</b>	<b>90</b>	<b>119</b>	<b>0</b>	<b>129</b>	<b>18</b>	<b>147</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41</b>	<b>77</b>	<b>0</b>	<b>118</b>	<b>384</b>
08:00 AM	3	0	16	19	0	35	5	40	0	0	0	0	9	15	0	24	83
08:15 AM	10	0	16	26	0	36	3	39	0	0	0	0	5	24	0	29	94
08:30 AM	5	0	13	18	0	36	3	39	0	0	0	0	11	18	0	29	86
08:45 AM	3	0	15	18	0	34	7	41	0	0	0	0	4	21	0	25	84
<b>Total</b>	<b>21</b>	<b>0</b>	<b>60</b>	<b>81</b>	<b>0</b>	<b>141</b>	<b>18</b>	<b>159</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>78</b>	<b>0</b>	<b>107</b>	<b>347</b>
<b>Grand Total</b>	<b>50</b>	<b>0</b>	<b>150</b>	<b>200</b>	<b>0</b>	<b>270</b>	<b>36</b>	<b>306</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>155</b>	<b>0</b>	<b>225</b>	<b>731</b>
Apprch %	25	0	75		0	88.2	11.8		0	0	0		31.1	68.9	0		
Total %	6.8	0	20.5	27.4	0	36.9	4.9	41.9	0	0	0	0	9.6	21.2	0	30.8	
Passenger Vehicles	50	0	149	199	0	259	34	293	0	0	0	0	64	146	0	210	702
% Passenger Vehicles	100	0	99.3	99.5	0	95.9	94.4	95.8	0	0	0	0	91.4	94.2	0	93.3	96
Large 2 Axle Vehicles	0	0	0	0	0	4	2	6	0	0	0	0	4	6	0	10	16
% Large 2 Axle Vehicles	0	0	0	0	0	1.5	5.6	2	0	0	0	0	5.7	3.9	0	4.4	2.2
3 Axle Vehicles	0	0	1	1	0	4	0	4	0	0	0	0	1	2	0	3	8
% 3 Axle Vehicles	0	0	0.7	0.5	0	1.5	0	1.3	0	0	0	0	1.4	1.3	0	1.3	1.1
4+ Axle Trucks	0	0	0	0	0	3	0	3	0	0	0	0	1	1	0	2	5
% 4+ Axle Trucks	0	0	0	0	0	1.1	0	1	0	0	0	0	1.4	0.6	0	0.9	0.7

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	8	0	19	27	0	31	3	34	0	0	0	0	8	<b>23</b>	0	31	92
07:15 AM	<b>9</b>	0	23	<b>32</b>	0	<b>37</b>	5	<b>42</b>	0	0	0	0	8	10	0	18	92
07:30 AM	3	0	<b>26</b>	29	0	29	<b>8</b>	37	0	0	0	0	<b>15</b>	21	0	<b>36</b>	<b>102</b>
07:45 AM	9	0	22	31	0	32	2	34	0	0	0	0	10	23	0	33	98
Total Volume	29	0	90	119	0	129	18	147	0	0	0	0	41	77	0	118	384
% App. Total	24.4	0	75.6		0	87.8	12.2		0	0	0		34.7	65.3	0		
PHF	.806	.000	.865	.930	.000	.872	.563	.875	.000	.000	.000	.000	.683	.837	.000	.819	.941

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:00 AM				07:30 AM			
+0 mins.	8	0	19	27	0	35	5	40	0	0	0	0	15	21	0	36
+15 mins.	9	0	23	32	0	36	3	39	0	0	0	0	10	23	0	33
+30 mins.	3	0	26	29	0	36	3	39	0	0	0	0	9	15	0	24
+45 mins.	9	0	22	31	0	34	7	41	0	0	0	0	5	24	0	29
Total Volume	29	0	90	119	0	141	18	159	0	0	0	0	39	83	0	122
% App. Total	24.4	0	75.6		0	88.7	11.3		0	0	0		32	68	0	
PHF	.806	.000	.865	.930	.000	.979	.643	.970	.000	.000	.000	.000	.650	.865	.000	.847



City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles

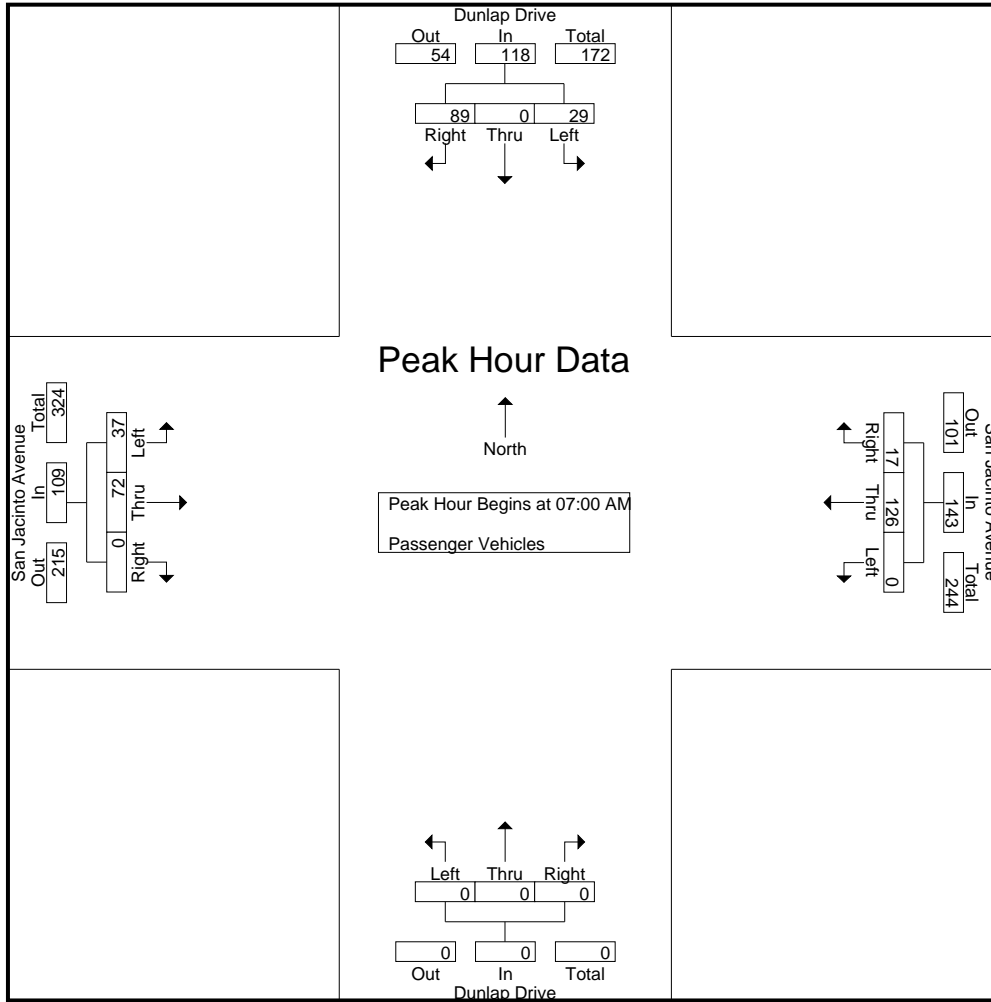
Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	8	0	18	26	0	30	3	33	0	0	0	0	7	22	0	29	88
07:15 AM	9	0	23	32	0	37	5	42	0	0	0	0	8	10	0	18	92
07:30 AM	3	0	26	29	0	28	7	35	0	0	0	0	12	18	0	30	94
07:45 AM	9	0	22	31	0	31	2	33	0	0	0	0	10	22	0	32	96
Total	29	0	89	118	0	126	17	143	0	0	0	0	37	72	0	109	370
08:00 AM	3	0	16	19	0	28	4	32	0	0	0	0	9	14	0	23	74
08:15 AM	10	0	16	26	0	36	3	39	0	0	0	0	3	22	0	25	90
08:30 AM	5	0	13	18	0	36	3	39	0	0	0	0	11	17	0	28	85
08:45 AM	3	0	15	18	0	33	7	40	0	0	0	0	4	21	0	25	83
Total	21	0	60	81	0	133	17	150	0	0	0	0	27	74	0	101	332
Grand Total	50	0	149	199	0	259	34	293	0	0	0	0	64	146	0	210	702
Apprch %	25.1	0	74.9		0	88.4	11.6		0	0	0		30.5	69.5	0		
Total %	7.1	0	21.2	28.3	0	36.9	4.8	41.7	0	0	0	0	9.1	20.8	0	29.9	

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	8	0	18	26	0	30	3	33	0	0	0	0	7	22	0	29	88
07:15 AM	9	0	23	32	0	37	5	42	0	0	0	0	8	10	0	18	92
07:30 AM	3	0	26	29	0	28	7	35	0	0	0	0	12	18	0	30	94
07:45 AM	9	0	22	31	0	31	2	33	0	0	0	0	10	22	0	32	96
Total Volume	29	0	89	118	0	126	17	143	0	0	0	0	37	72	0	109	370
% App. Total	24.6	0	75.4		0	88.1	11.9		0	0	0		33.9	66.1	0		
PHF	.806	.000	.856	.922	.000	.851	.607	.851	.000	.000	.000	.000	.771	.818	.000	.852	.964

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	8	0	18	26	0	30	3	33	0	0	0	0	7	<b>22</b>	0	29
+15 mins.	<b>9</b>	0	23	<b>32</b>	0	<b>37</b>	5	<b>42</b>	0	0	0	0	8	10	0	18
+30 mins.	3	0	<b>26</b>	29	0	28	<b>7</b>	35	0	0	0	0	<b>12</b>	18	0	30
+45 mins.	9	0	22	31	0	31	2	33	0	0	0	0	10	22	0	<b>32</b>
Total Volume	29	0	89	118	0	126	17	143	0	0	0	0	37	72	0	109
% App. Total	24.6	0	75.4		0	88.1	11.9		0	0	0		33.9	66.1	0	
PHF	.806	.000	.856	.922	.000	.851	.607	.851	.000	.000	.000	.000	.771	.818	.000	.852

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

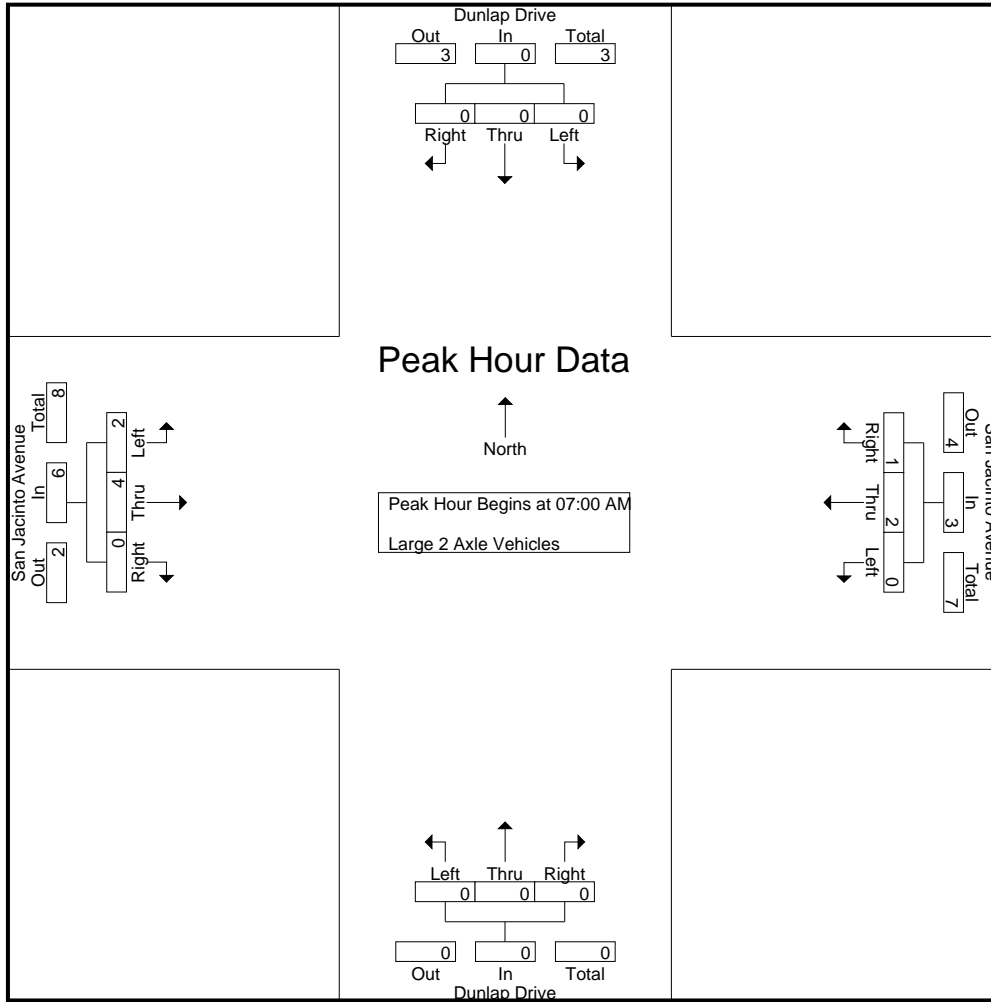
Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	3	4
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	2	1	3	0	0	0	0	2	4	0	6	9
08:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	1	3	0	0	0	0	2	2	0	4	7
Grand Total	0	0	0	0	0	4	2	6	0	0	0	0	4	6	0	10	16
Apprch %	0	0	0		0	66.7	33.3		0	0	0		40	60	0		
Total %	0	0	0		0	25	12.5	37.5	0	0	0		25	37.5	0	62.5	

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	3	4
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	2	1	3	0	0	0	0	2	4	0	6	9
% App. Total	0	0	0		0	66.7	33.3		0	0	0		33.3	66.7	0		
PHF	.000	.000	.000	.000	.000	.500	.250	.750	.000	.000	.000	.000	.500	.500	.000	.500	.563

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	3
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	2	1	3	0	0	0	0	2	4	0	6
% App. Total	0	0	0	0	0	66.7	33.3		0	0	0	0	33.3	66.7	0	
PHF	.000	.000	.000	.000	.000	.500	.250	.750	.000	.000	.000	.000	.500	.500	.000	.500

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
07:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	1	2
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	2	6
Grand Total	0	0	1	1	0	4	0	4	0	0	0	0	1	2	0	3	3	8
Apprch %	0	0	100		0	100	0		0	0	0		33.3	66.7	0			
Total %	0	0	12.5	12.5	0	50	0	50	0	0	0	0	12.5	25	0	37.5		

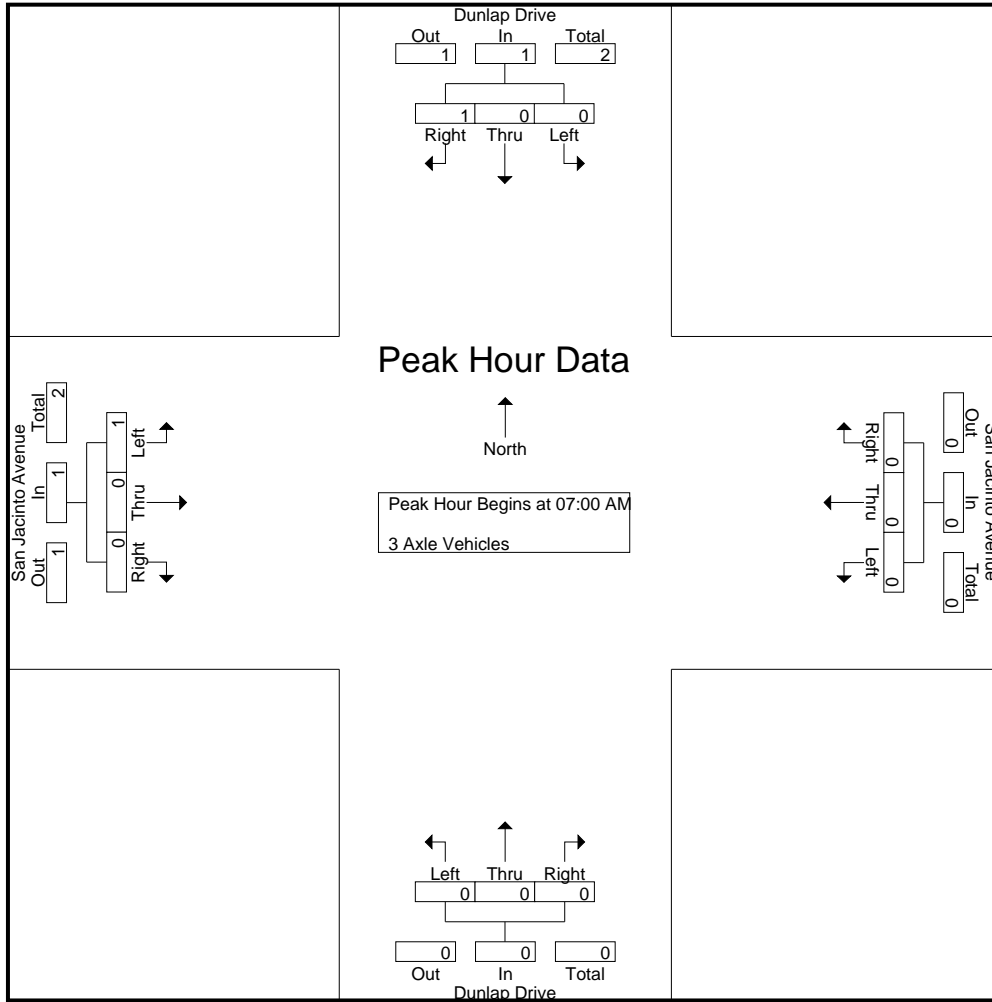
Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
07:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	1	2
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0			
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.500	.500

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	3	0	3	0	0	0	0	1	1	0	2	5
Apprch %	0	0	0		0	100	0		0	0	0		50	50	0		
Total %	0	0	0		0	60	0	60	0	0	0		20	20	0	40	

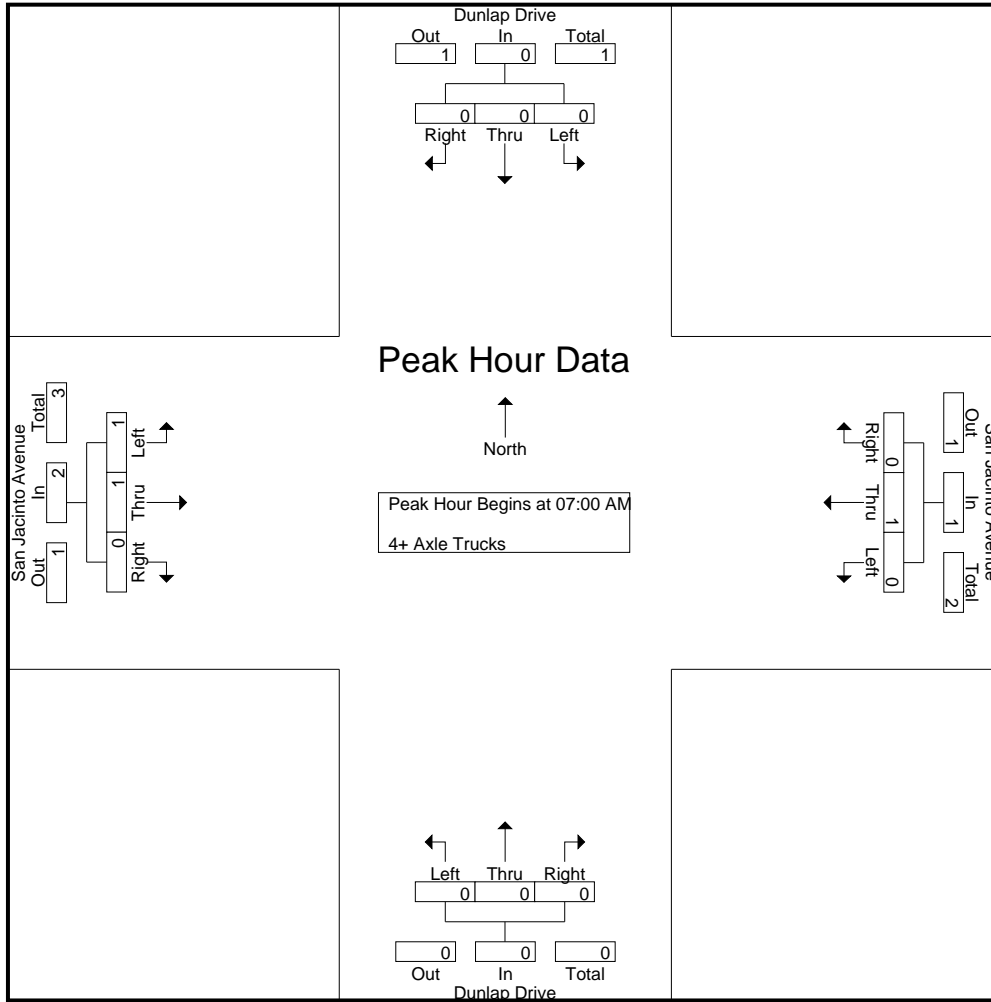
Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
% App. Total	0	0	0		0	100	0		0	0	0		50	50	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250	.250	.000	.250	.250

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	50	50	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250	.250	.000	.250



City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

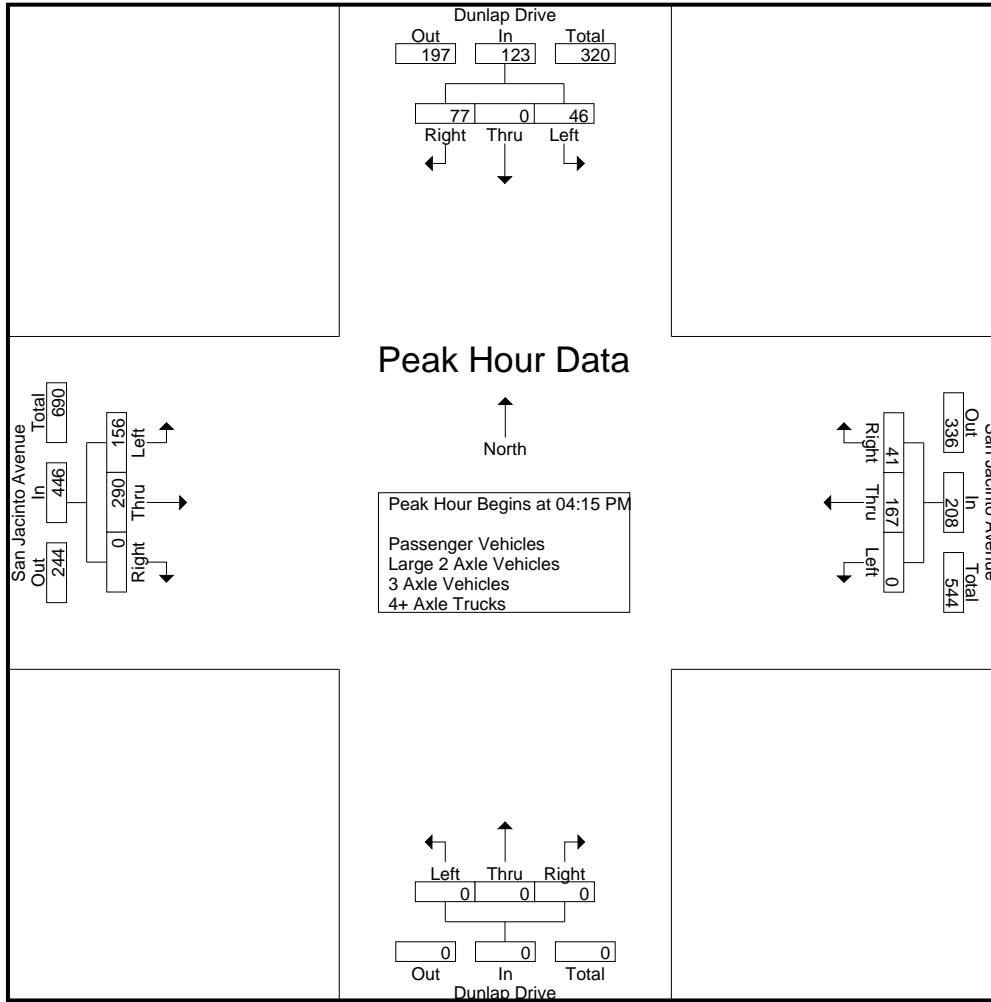
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	12	0	26	38	0	37	7	44	0	0	0	0	34	56	0	90	172
04:15 PM	12	0	18	30	0	55	10	65	0	0	0	0	39	75	0	114	209
04:30 PM	8	0	18	26	0	35	14	49	0	0	0	0	41	68	0	109	184
04:45 PM	12	0	28	40	0	37	9	46	0	0	0	0	36	67	0	103	189
<b>Total</b>	<b>44</b>	<b>0</b>	<b>90</b>	<b>134</b>	<b>0</b>	<b>164</b>	<b>40</b>	<b>204</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>150</b>	<b>266</b>	<b>0</b>	<b>416</b>	<b>754</b>
05:00 PM	14	0	13	27	0	40	8	48	0	0	0	0	40	80	0	120	195
05:15 PM	6	0	12	18	0	40	7	47	0	0	0	0	34	61	0	95	160
05:30 PM	2	0	25	27	0	37	10	47	0	0	0	0	25	71	0	96	170
05:45 PM	9	0	16	25	0	35	6	41	0	0	0	0	34	55	0	89	155
<b>Total</b>	<b>31</b>	<b>0</b>	<b>66</b>	<b>97</b>	<b>0</b>	<b>152</b>	<b>31</b>	<b>183</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>133</b>	<b>267</b>	<b>0</b>	<b>400</b>	<b>680</b>
<b>Grand Total</b>	<b>75</b>	<b>0</b>	<b>156</b>	<b>231</b>	<b>0</b>	<b>316</b>	<b>71</b>	<b>387</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>283</b>	<b>533</b>	<b>0</b>	<b>816</b>	<b>1434</b>
Apprch %	32.5	0	67.5		0	81.7	18.3		0	0	0		34.7	65.3	0		
Total %	5.2	0	10.9	16.1	0	22	5	27	0	0	0	0	19.7	37.2	0	56.9	
Passenger Vehicles	75	0	150	225	0	305	69	374	0	0	0	0	280	516	0	796	1395
% Passenger Vehicles	100	0	96.2	97.4	0	96.5	97.2	96.6	0	0	0	0	98.9	96.8	0	97.5	97.3
Large 2 Axle Vehicles	0	0	3	3	0	7	2	9	0	0	0	0	0	11	0	11	23
% Large 2 Axle Vehicles	0	0	1.9	1.3	0	2.2	2.8	2.3	0	0	0	0	0	2.1	0	1.3	1.6
3 Axle Vehicles	0	0	2	2	0	3	0	3	0	0	0	0	1	5	0	6	11
% 3 Axle Vehicles	0	0	1.3	0.9	0	0.9	0	0.8	0	0	0	0	0.4	0.9	0	0.7	0.8
4+ Axle Trucks	0	0	1	1	0	1	0	1	0	0	0	0	2	1	0	3	5
% 4+ Axle Trucks	0	0	0.6	0.4	0	0.3	0	0.3	0	0	0	0	0.7	0.2	0	0.4	0.3

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	12	0	18	30	0	<b>55</b>	10	<b>65</b>	0	0	0	0	39	75	0	114	<b>209</b>
04:30 PM	8	0	18	26	0	35	<b>14</b>	49	0	0	0	0	<b>41</b>	68	0	109	184
04:45 PM	12	0	<b>28</b>	<b>40</b>	0	37	9	46	0	0	0	0	36	67	0	103	189
05:00 PM	<b>14</b>	0	13	27	0	40	8	48	0	0	0	0	40	<b>80</b>	0	<b>120</b>	195
Total Volume	46	0	77	123	0	167	41	208	0	0	0	0	156	290	0	446	777
% App. Total	37.4	0	62.6		0	80.3	19.7		0	0	0		35	65	0		
PHF	.821	.000	.688	.769	.000	.759	.732	.800	.000	.000	.000	.000	.951	.906	.000	.929	.929

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:15 PM			
+0 mins.	12	0	26	38	0	55	10	65	0	0	0	0	39	75	0	114
+15 mins.	12	0	18	30	0	35	14	49	0	0	0	0	41	68	0	109
+30 mins.	8	0	18	26	0	37	9	46	0	0	0	0	36	67	0	103
+45 mins.	12	0	28	40	0	40	8	48	0	0	0	0	40	80	0	120
Total Volume	44	0	90	134	0	167	41	208	0	0	0	0	156	290	0	446
% App. Total	32.8	0	67.2		0	80.3	19.7		0	0	0		35	65	0	
PHF	.917	.000	.804	.838	.000	.759	.732	.800	.000	.000	.000	.000	.951	.906	.000	.929

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

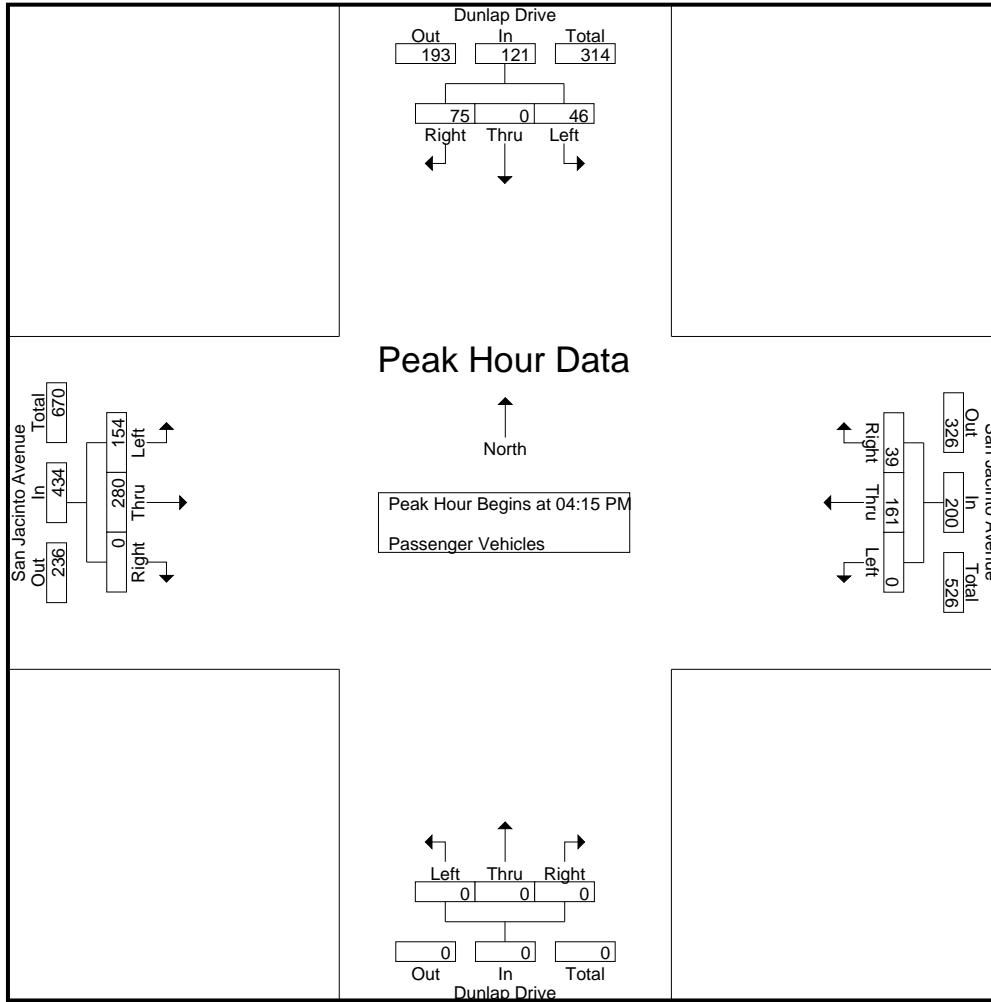
Groups Printed- Passenger Vehicles

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	12	0	25	37	0	36	7	43	0	0	0	0	34	54	0	88	168
04:15 PM	12	0	18	30	0	53	10	63	0	0	0	0	39	71	0	110	203
04:30 PM	8	0	17	25	0	34	13	47	0	0	0	0	40	68	0	108	180
04:45 PM	12	0	28	40	0	36	8	44	0	0	0	0	35	66	0	101	185
Total	44	0	88	132	0	159	38	197	0	0	0	0	148	259	0	407	736
05:00 PM	14	0	12	26	0	38	8	46	0	0	0	0	40	75	0	115	187
05:15 PM	6	0	11	17	0	39	7	46	0	0	0	0	34	58	0	92	155
05:30 PM	2	0	24	26	0	36	10	46	0	0	0	0	24	69	0	93	165
05:45 PM	9	0	15	24	0	33	6	39	0	0	0	0	34	55	0	89	152
Total	31	0	62	93	0	146	31	177	0	0	0	0	132	257	0	389	659
Grand Total	75	0	150	225	0	305	69	374	0	0	0	0	280	516	0	796	1395
Apprch %	33.3	0	66.7		0	81.6	18.4		0	0	0		35.2	64.8	0		
Total %	5.4	0	10.8	16.1	0	21.9	4.9	26.8	0	0	0	0	20.1	37	0	57.1	

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	12	0	18	30	0	<b>53</b>	10	<b>63</b>	0	0	0	0	39	71	0	110	<b>203</b>
04:30 PM	8	0	17	25	0	34	<b>13</b>	47	0	0	0	0	<b>40</b>	68	0	108	180
04:45 PM	12	0	<b>28</b>	<b>40</b>	0	36	8	44	0	0	0	0	35	66	0	101	185
05:00 PM	<b>14</b>	0	12	26	0	38	8	46	0	0	0	0	40	<b>75</b>	0	<b>115</b>	187
Total Volume	46	0	75	121	0	161	39	200	0	0	0	0	154	280	0	434	755
% App. Total	38	0	62		0	80.5	19.5		0	0	0		35.5	64.5	0		
PHF	.821	.000	.670	.756	.000	.759	.750	.794	.000	.000	.000	.000	.963	.933	.000	.943	.930

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	12	0	18	30	0	<b>53</b>	10	<b>63</b>	0	0	0	0	39	71	0	110
+15 mins.	8	0	17	25	0	34	<b>13</b>	47	0	0	0	0	<b>40</b>	68	0	108
+30 mins.	12	0	<b>28</b>	<b>40</b>	0	36	8	44	0	0	0	0	35	66	0	101
+45 mins.	<b>14</b>	0	12	26	0	38	8	46	0	0	0	0	40	<b>75</b>	0	<b>115</b>
Total Volume	46	0	75	121	0	161	39	200	0	0	0	0	154	280	0	434
% App. Total	38	0	62		0	80.5	19.5		0	0	0		35.5	64.5	0	
PHF	.821	.000	.670	.756	.000	.759	.750	.794	.000	.000	.000	.000	.963	.933	.000	.943

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	1	1	0	1	1	2	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
Total	0	0	1	1	0	4	2	6	0	0	0	0	0	3	0	3	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	0	2	4
05:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	0	0	2	2	0	3	0	3	0	0	0	0	0	8	0	8	13
Grand Total	0	0	3	3	0	7	2	9	0	0	0	0	0	11	0	11	23
Apprch %	0	0	100		0	77.8	22.2		0	0	0		0	100	0		
Total %	0	0	13	13	0	30.4	8.7	39.1	0	0	0	0	0	47.8	0	47.8	

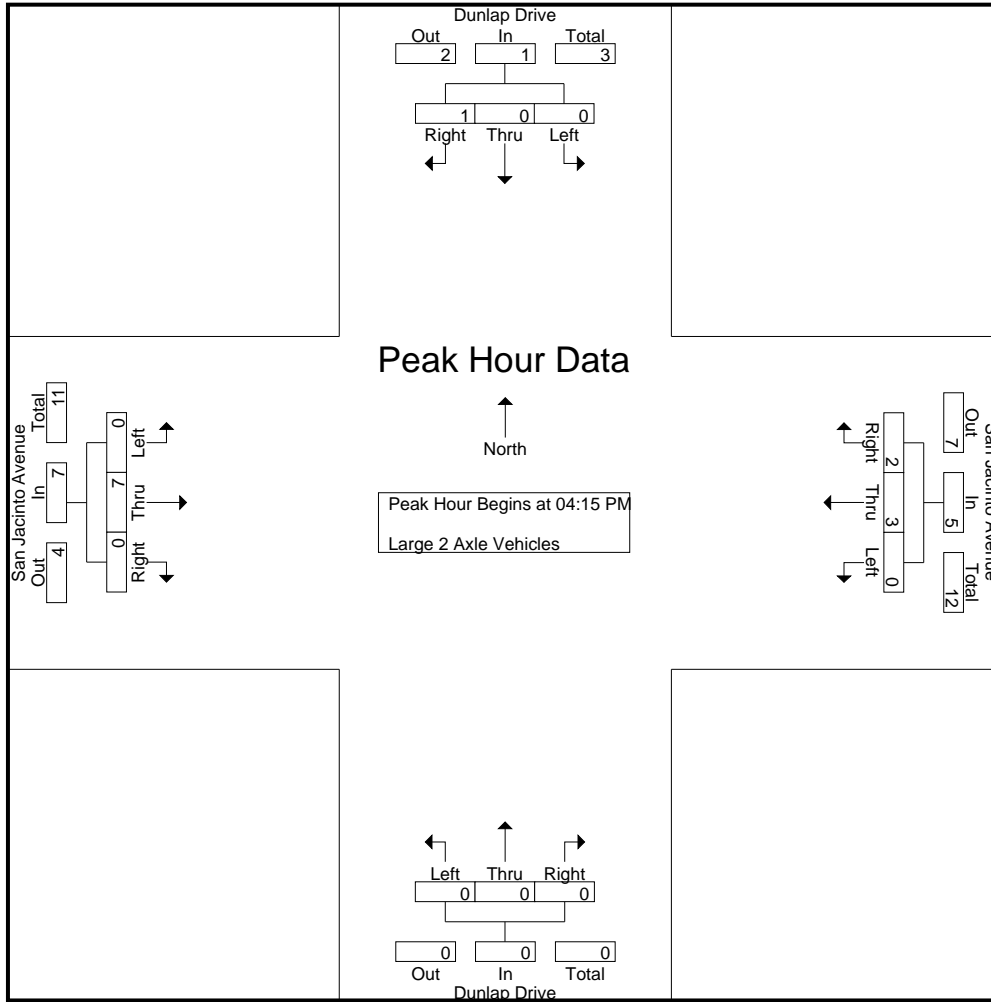
Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	1	1	0	1	1	2	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
Total Volume	0	0	1	1	0	3	2	5	0	0	0	0	0	7	0	7	13
% App. Total	0	0	100		0	60	40		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.750	.500	.625	.000	.000	.000	.000	.000	.350	.000	.350	.650

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	1	1	0	1	1	2	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
Total Volume	0	0	1	1	0	3	2	5	0	0	0	0	0	7	0	7
% App. Total	0	0	100		0	60	40		0	0	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.750	.500	.625	.000	.000	.000	.000	.000	.350	.000	.350

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	5	5	
05:00 PM	0	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	0	2	2	0	3	0	3	0	0	0	0	0	1	0	1	6	6
Grand Total	0	0	2	2	0	3	0	3	0	0	0	0	1	5	0	6	11	11
Apprch %	0	0	100		0	100	0		0	0	0		16.7	83.3	0			
Total %	0	0	18.2	18.2	0	27.3	0	27.3	0	0	0	0	9.1	45.5	0	54.5		

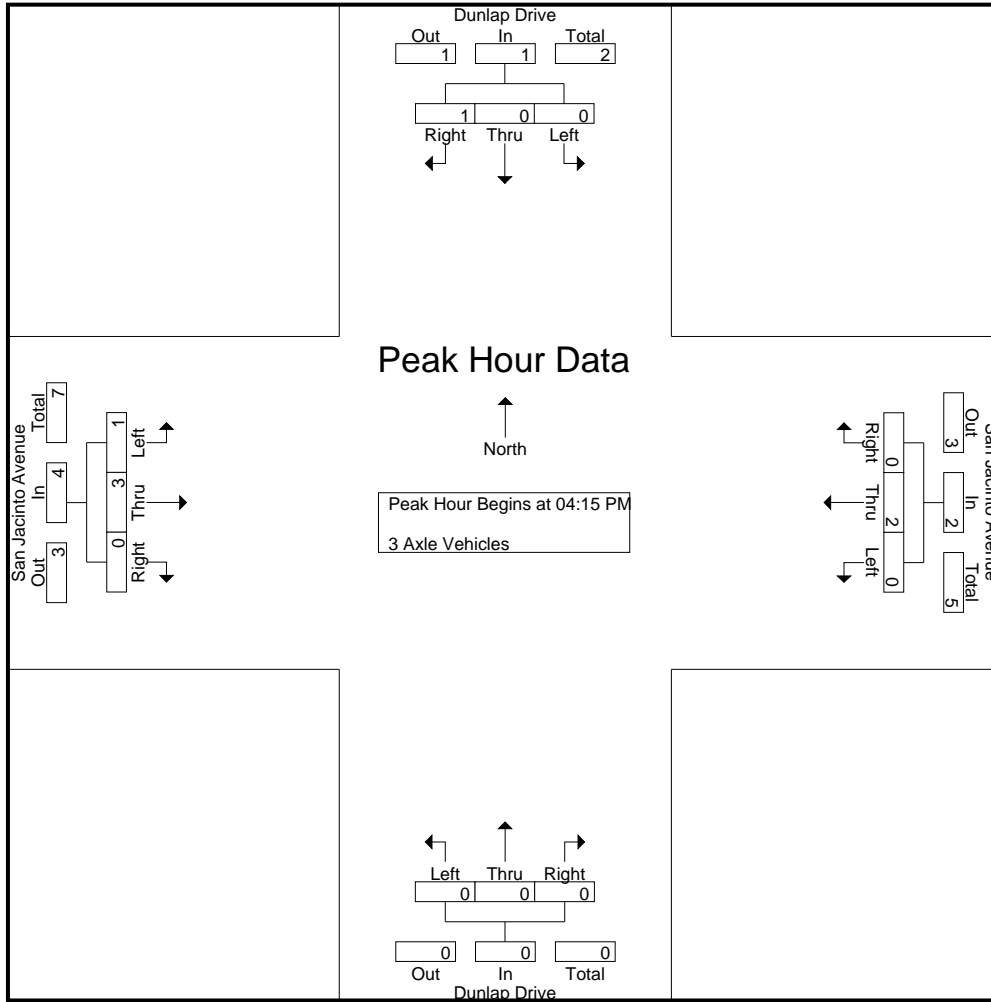
Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	3
Total Volume	0	0	1	1	0	2	0	2	0	0	0	0	1	3	0	4	7	7
% App. Total	0	0	100		0	100	0		0	0	0		25	75	0			
PHF	.000	.000	.250	.250	.000	.250	.000	.250	.000	.000	.000	.000	.250	.250	.000	.333	.583	.583

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	2	0	2	0	0	0	0	1	3	0	4
% App. Total	0	0	100		0	100	0		0	0	0		25	75	0	
PHF	.000	.000	.250	.250	.000	.250	.000	.250	.000	.000	.000	.000	.250	.250	.000	.333



City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
Total	0	0	1	1	0	1	0	1	0	0	0	0	1	0	0	1	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2
Grand Total	0	0	1	1	0	1	0	1	0	0	0	0	2	1	0	3	0	5
Apprch %	0	0	100		0	100	0		0	0	0		66.7	33.3	0			
Total %	0	0	20	20	0	20	0	20	0	0	0	0	40	20	0	60		

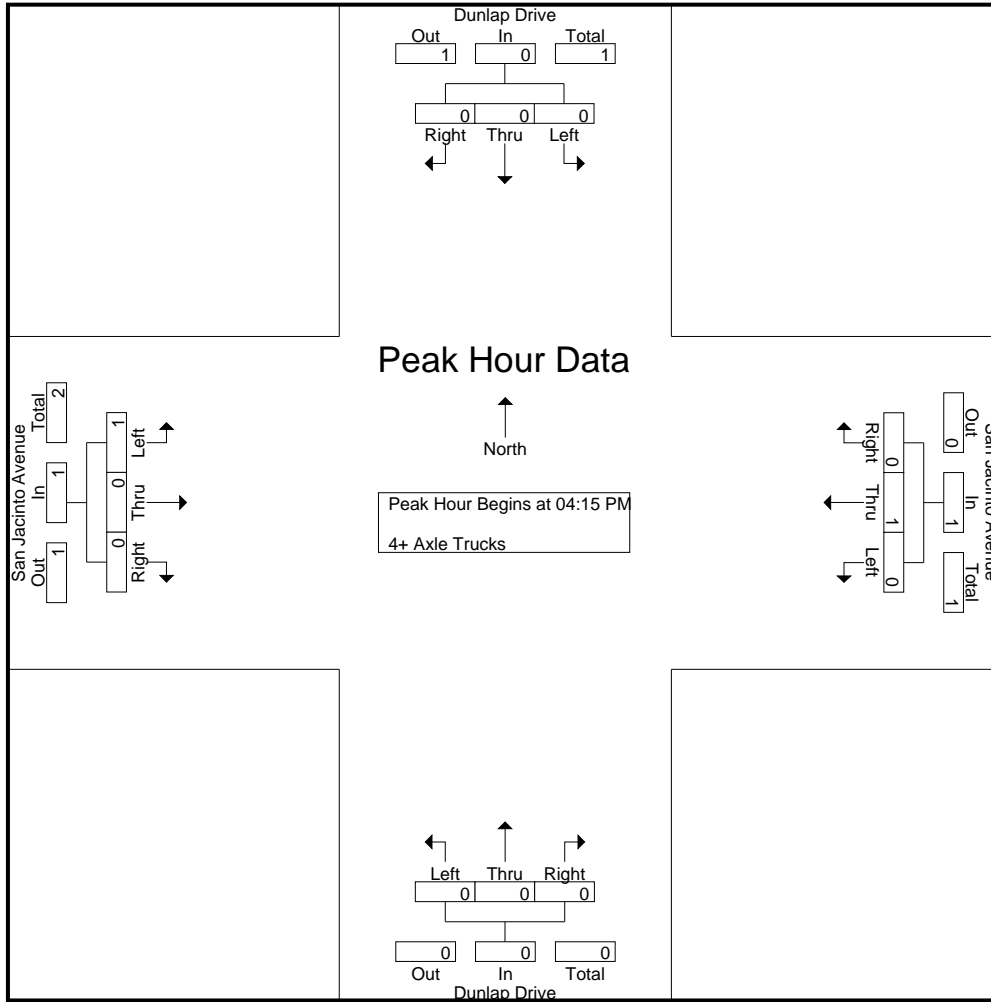
Start Time	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	2
% App. Total	0	0	0		0	100	0		0	0	0		100	0	0			
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250		.500

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 01\_PER\_Dunlap\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250

Location: Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue



Date: 1/12/2021  
 Day: Tuesday

**PEDESTRIANS**

	North Leg Dunlap Drive	East Leg San Jacinto Avenue	South Leg Dunlap Drive	West Leg San Jacinto Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

	North Leg Dunlap Drive	East Leg San Jacinto Avenue	South Leg Dunlap Drive	West Leg San Jacinto Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

Location: Perris  
 N/S: Dunlap Drive  
 E/W: San Jacinto Avenue



Date: 1/12/2021  
 Day: Tuesday

BICYCLES

	Southbound Dunlap Drive			Westbound San Jacinto Avenue			Northbound Dunlap Drive			Eastbound San Jacinto Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Dunlap Drive			Westbound San Jacinto Avenue			Northbound Dunlap Drive			Eastbound San Jacinto Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

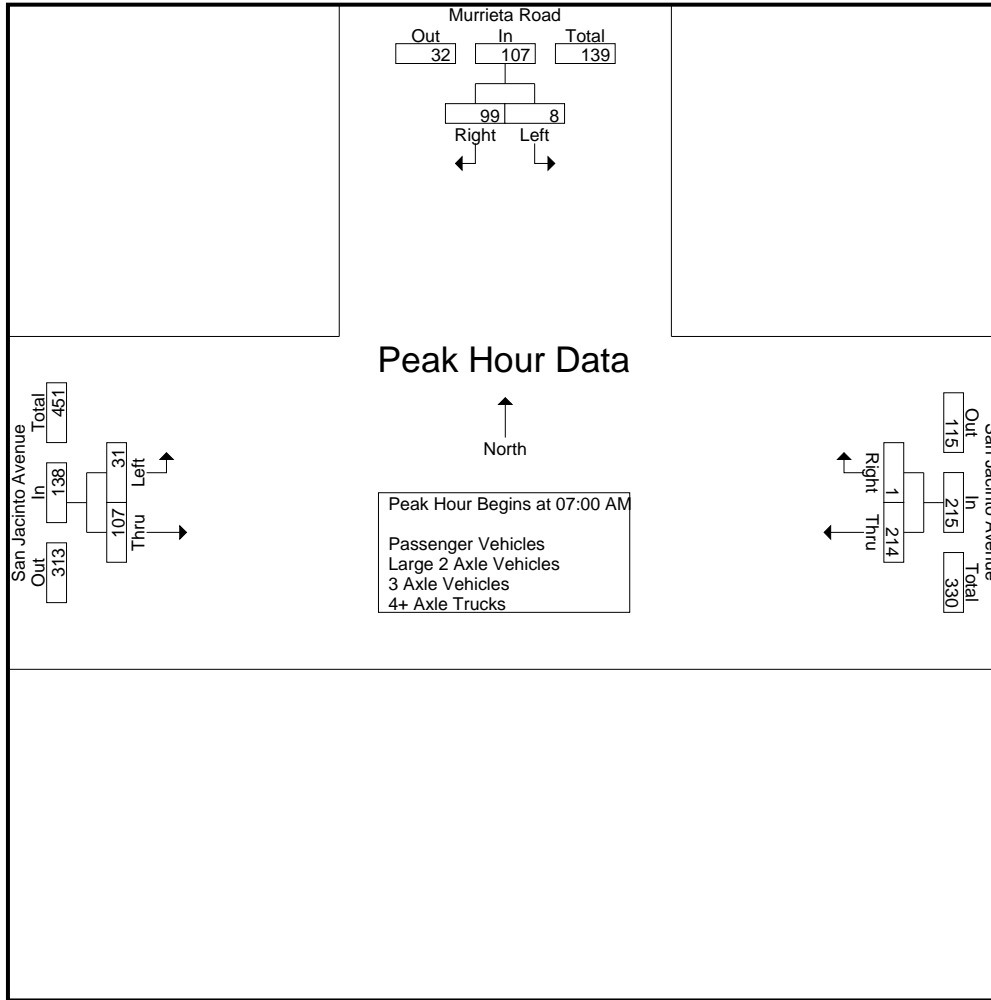
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	18	18	48	1	49	12	27	39	106
07:15 AM	1	21	22	53	0	53	6	23	29	104
07:30 AM	4	29	33	58	0	58	4	26	30	121
07:45 AM	3	31	34	55	0	55	9	31	40	129
Total	8	99	107	214	1	215	31	107	138	460
08:00 AM	0	16	16	43	4	47	9	25	34	97
08:15 AM	3	12	15	52	2	54	4	26	30	99
08:30 AM	2	18	20	45	1	46	9	27	36	102
08:45 AM	2	13	15	46	2	48	7	27	34	97
Total	7	59	66	186	9	195	29	105	134	395
Grand Total	15	158	173	400	10	410	60	212	272	855
Apprch %	8.7	91.3		97.6	2.4		22.1	77.9		
Total %	1.8	18.5	20.2	46.8	1.2	48	7	24.8	31.8	
Passenger Vehicles	14	156	170	391	7	398	58	200	258	826
% Passenger Vehicles	93.3	98.7	98.3	97.8	70	97.1	96.7	94.3	94.9	96.6
Large 2 Axle Vehicles	1	1	2	3	1	4	1	7	8	14
% Large 2 Axle Vehicles	6.7	0.6	1.2	0.8	10	1	1.7	3.3	2.9	1.6
3 Axle Vehicles	0	1	1	3	2	5	1	3	4	10
% 3 Axle Vehicles	0	0.6	0.6	0.8	20	1.2	1.7	1.4	1.5	1.2
4+ Axle Trucks	0	0	0	3	0	3	0	2	2	5
% 4+ Axle Trucks	0	0	0	0.8	0	0.7	0	0.9	0.7	0.6

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	18	18	48	1	49	12	27	39	106
07:15 AM	1	21	22	53	0	53	6	23	29	104
07:30 AM	4	29	33	58	0	58	4	26	30	121
07:45 AM	3	31	34	55	0	55	9	31	40	129
Total Volume	8	99	107	214	1	215	31	107	138	460
% App. Total	7.5	92.5		99.5	0.5		22.5	77.5		
PHF	.500	.798	.787	.922	.250	.927	.646	.863	.863	.891

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:45 AM		
+0 mins.	0	18	18	48	1	49	9	31	40
+15 mins.	1	21	22	53	0	53	9	25	34
+30 mins.	4	29	33	58	0	58	4	26	30
+45 mins.	3	31	34	55	0	55	9	27	36
Total Volume	8	99	107	214	1	215	31	109	140
% App. Total	7.5	92.5		99.5	0.5		22.1	77.9	
PHF	.500	.798	.787	.922	.250	.927	.861	.879	.875

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles

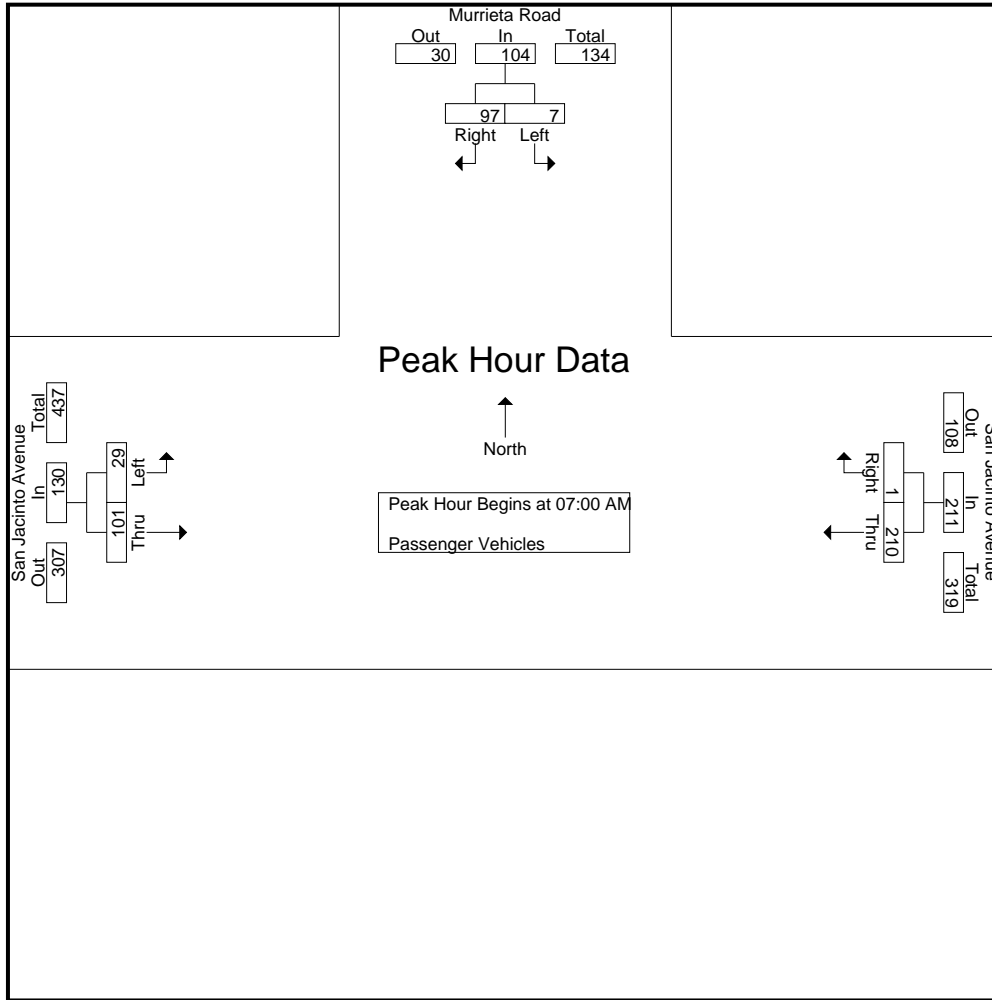
Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	17	17	46	1	47	12	26	38	102
07:15 AM	1	21	22	53	0	53	4	21	25	100
07:30 AM	3	28	31	57	0	57	4	24	28	116
07:45 AM	3	31	34	54	0	54	9	30	39	127
Total	7	97	104	210	1	211	29	101	130	445
08:00 AM	0	16	16	39	1	40	9	24	33	89
08:15 AM	3	12	15	52	2	54	4	22	26	95
08:30 AM	2	18	20	45	1	46	9	26	35	101
08:45 AM	2	13	15	45	2	47	7	27	34	96
Total	7	59	66	181	6	187	29	99	128	381
Grand Total	14	156	170	391	7	398	58	200	258	826
Apprch %	8.2	91.8		98.2	1.8		22.5	77.5		
Total %	1.7	18.9	20.6	47.3	0.8	48.2	7	24.2	31.2	

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	17	17	46	1	47	12	26	38	102
07:15 AM	1	21	22	53	0	53	4	21	25	100
07:30 AM	3	28	31	57	0	57	4	24	28	116
07:45 AM	3	31	34	54	0	54	9	30	39	127
Total Volume	7	97	104	210	1	211	29	101	130	445
% App. Total	6.7	93.3		99.5	0.5		22.3	77.7		
PHF	.583	.782	.765	.921	.250	.925	.604	.842	.833	.876

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	17	17	46	1	47	12	26	38
+15 mins.	1	21	22	53	0	53	4	21	25
+30 mins.	3	28	31	57	0	57	4	24	28
+45 mins.	3	31	34	54	0	54	9	30	39
Total Volume	7	97	104	210	1	211	29	101	130
% App. Total	6.7	93.3		99.5	0.5		22.3	77.7	
PHF	.583	.782	.765	.921	.250	.925	.604	.842	.833



City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	1	1	1	0	1	0	1	1	3
07:15 AM	0	0	0	0	0	0	1	1	2	2
07:30 AM	1	0	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	1	0	1	0	1	1	2
Total	1	1	2	2	0	2	1	3	4	8
08:00 AM	0	0	0	1	1	2	0	1	1	3
08:15 AM	0	0	0	0	0	0	0	3	3	3
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	2	0	4	4	6
Grand Total	1	1	2	3	1	4	1	7	8	14
Apprch %	50	50		75	25		12.5	87.5		
Total %	7.1	7.1	14.3	21.4	7.1	28.6	7.1	50	57.1	

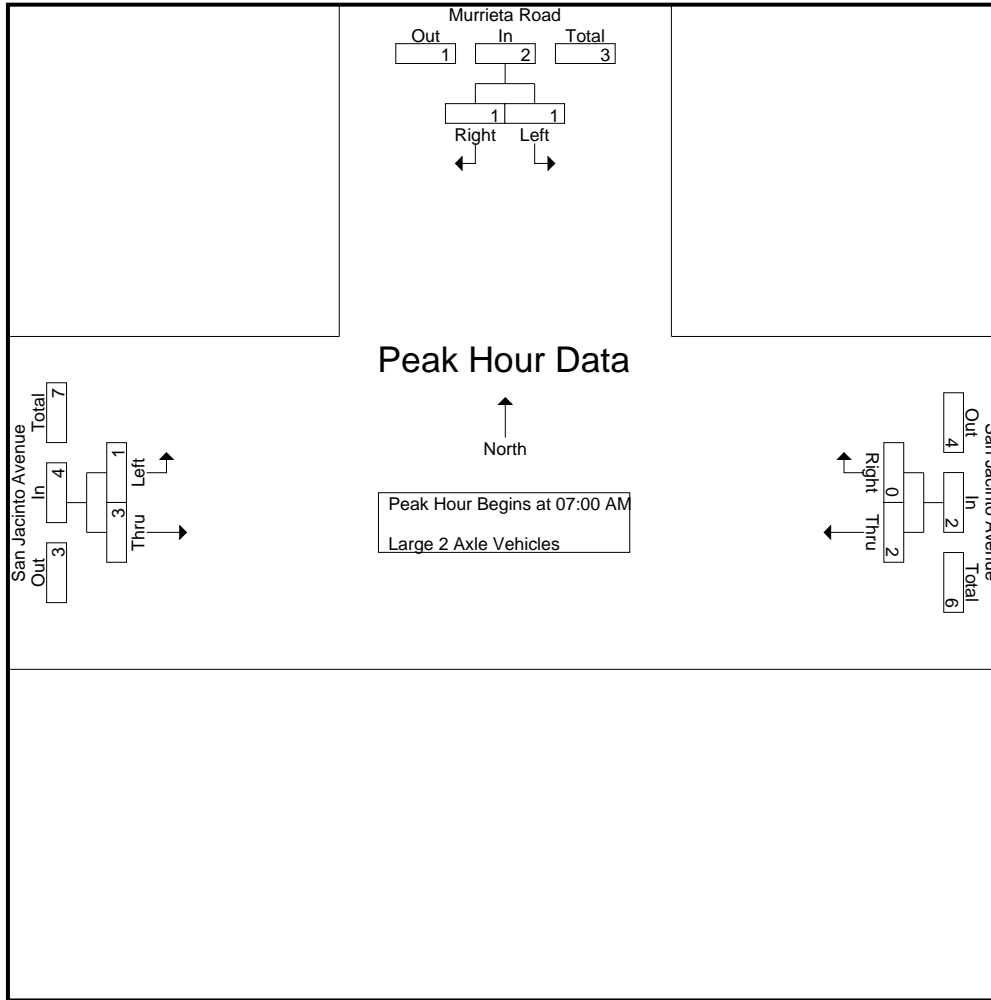
Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	1	1	1	0	1	0	1	1	3
07:15 AM	0	0	0	0	0	0	1	1	2	2
07:30 AM	1	0	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	1	0	1	0	1	1	2
Total Volume	1	1	2	2	0	2	1	3	4	8
% App. Total	50	50		100	0		25	75		
PHF	.250	.250	.500	.500	.000	.500	.250	.750	.500	.667

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	1	1	1	0	1	0	1	1
+15 mins.	0	0	0	0	0	0	1	1	2
+30 mins.	1	0	1	0	0	0	0	0	0
+45 mins.	0	0	0	1	0	1	0	1	1
Total Volume	1	1	2	2	0	2	1	3	4
% App. Total	50	50		100	0		25	75	
PHF	.250	.250	.500	.500	.000	.500	.250	.750	.500

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	1	0	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	1	1	0	0	0	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	1	0	1	1	1	2	4
08:00 AM	0	0	0	2	2	4	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	1	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	2	4	0	2	2	6
Grand Total	0	1	1	3	2	5	1	3	4	10
Apprch %	0	100		60	40		25	75		
Total %	0	10	10	30	20	50	10	30	40	

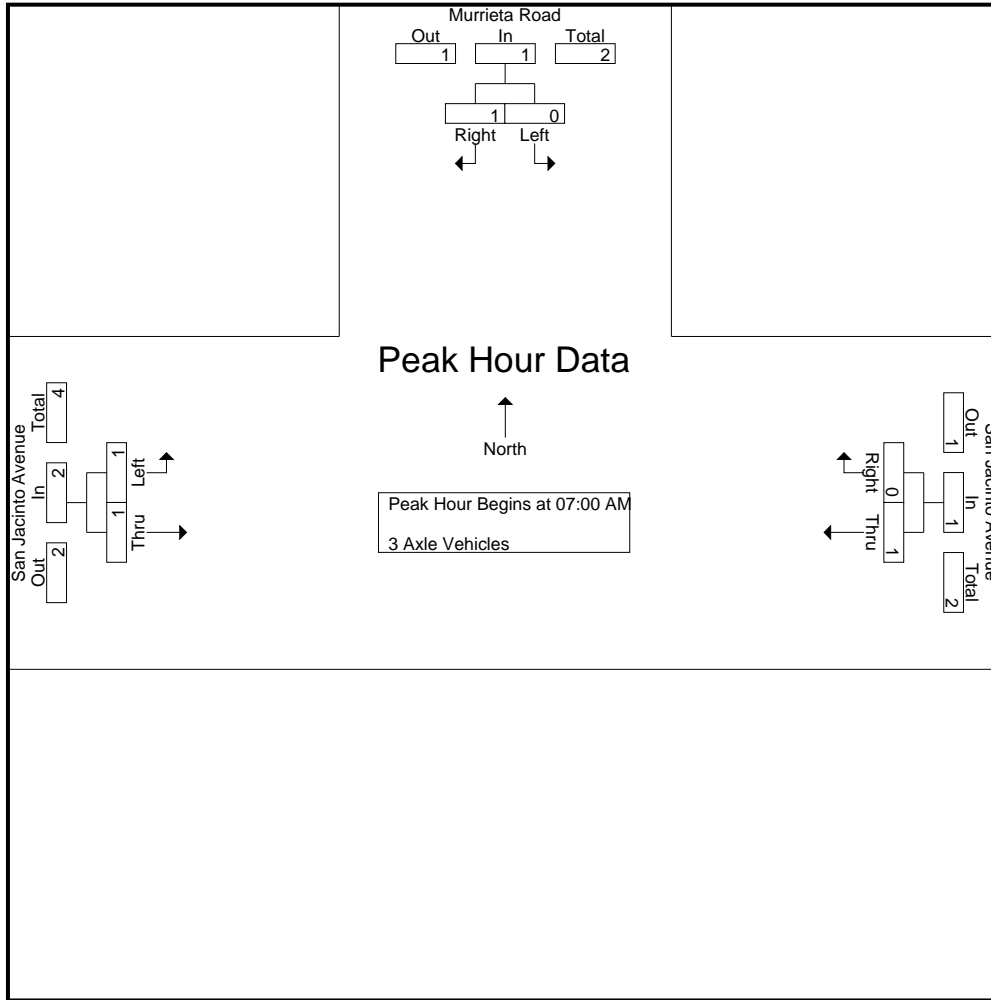
Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	1	0	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	1	1	0	0	0	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	1	0	1	1	1	2	4
% App. Total	0	100		100	0		50	50		
PHF	.000	.250	.250	.250	.000	.250	.250	.250	.500	.500

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	1	0	1	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	1	1	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	1	0	1	1	1	2
% App. Total	0	100		100	0		50	50	
PHF	.000	.250	.250	.250	.000	.250	.250	.250	.500

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

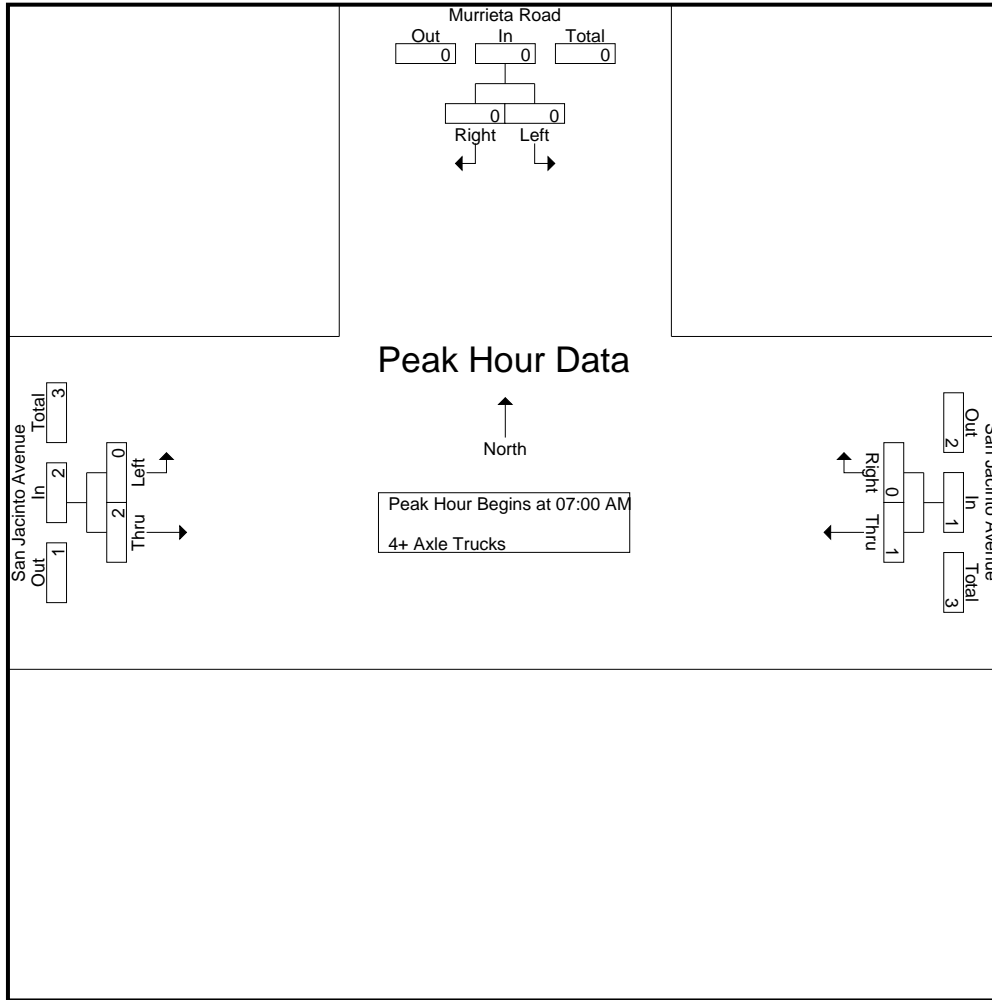
Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	1	0	1	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	2	2	3
08:00 AM	0	0	0	1	0	1	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	1	0	1	0	0	0	1
Total	0	0	0	2	0	2	0	0	0	2
Grand Total	0	0	0	3	0	3	0	2	2	5
Apprch %	0	0		100	0		0	100		
Total %	0	0		60	0	60	0	40	40	

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	1	0	1	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	0	2	2	3
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.250	.000	.250	.000	.500	.500	.375

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	1	0	1	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	0	2	2
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.250	.000	.250	.000	.500	.500

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

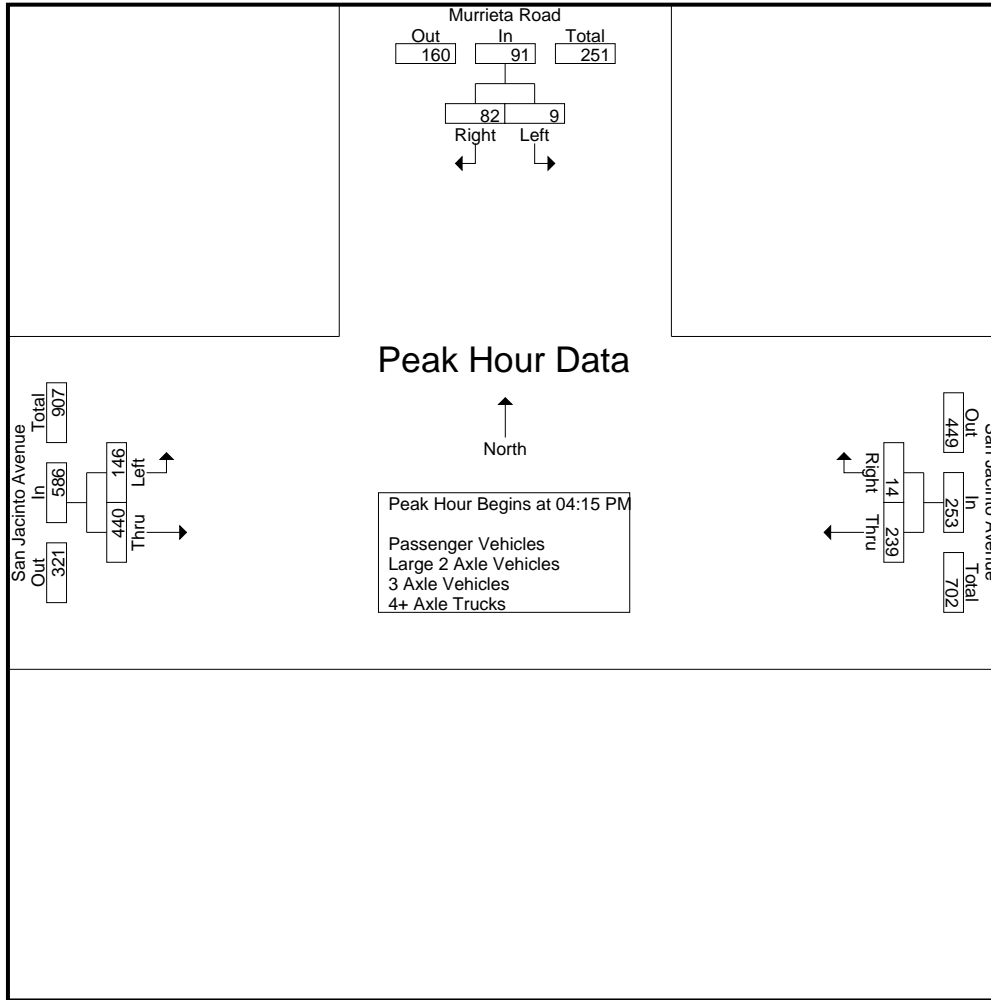
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	1	21	22	57	0	57	31	86	117	196
04:15 PM	5	16	21	68	5	73	32	110	142	236
04:30 PM	0	23	23	58	2	60	44	106	150	233
04:45 PM	3	24	27	53	1	54	27	104	131	212
Total	9	84	93	236	8	244	134	406	540	877
05:00 PM	1	19	20	60	6	66	43	120	163	249
05:15 PM	1	24	25	51	3	54	42	100	142	221
05:30 PM	2	13	15	54	1	55	36	86	122	192
05:45 PM	0	9	9	46	2	48	34	94	128	185
Total	4	65	69	211	12	223	155	400	555	847
Grand Total	13	149	162	447	20	467	289	806	1095	1724
Apprch %	8	92		95.7	4.3		26.4	73.6		
Total %	0.8	8.6	9.4	25.9	1.2	27.1	16.8	46.8	63.5	
Passenger Vehicles	13	149	162	429	20	449	285	784	1069	1680
% Passenger Vehicles	100	100	100	96	100	96.1	98.6	97.3	97.6	97.4
Large 2 Axle Vehicles	0	0	0	11	0	11	2	13	15	26
% Large 2 Axle Vehicles	0	0	0	2.5	0	2.4	0.7	1.6	1.4	1.5
3 Axle Vehicles	0	0	0	5	0	5	2	6	8	13
% 3 Axle Vehicles	0	0	0	1.1	0	1.1	0.7	0.7	0.7	0.8
4+ Axle Trucks	0	0	0	2	0	2	0	3	3	5
% 4+ Axle Trucks	0	0	0	0.4	0	0.4	0	0.4	0.3	0.3

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	<b>5</b>	16	21	<b>68</b>	5	<b>73</b>	32	110	142	236
04:30 PM	0	23	23	58	2	60	<b>44</b>	106	150	233
04:45 PM	3	<b>24</b>	<b>27</b>	53	1	54	27	104	131	212
05:00 PM	1	19	20	60	<b>6</b>	66	43	<b>120</b>	<b>163</b>	<b>249</b>
Total Volume	9	82	91	239	14	253	146	440	586	930
% App. Total	9.9	90.1		94.5	5.5		24.9	75.1		
PHF	.450	.854	.843	.879	.583	.866	.830	.917	.899	.934

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:15 PM			04:15 PM		
+0 mins.	0	23	23	<b>68</b>	5	<b>73</b>	32	110	142
+15 mins.	<b>3</b>	<b>24</b>	<b>27</b>	58	2	60	<b>44</b>	106	150
+30 mins.	1	19	20	53	1	54	27	104	131
+45 mins.	1	24	25	60	<b>6</b>	66	43	<b>120</b>	<b>163</b>
Total Volume	5	90	95	239	14	253	146	440	586
% App. Total	5.3	94.7		94.5	5.5		24.9	75.1	
PHF	.417	.938	.880	.879	.583	.866	.830	.917	.899



City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	1	21	22	55	0	55	30	84	114	191
04:15 PM	5	16	21	66	5	71	32	106	138	230
04:30 PM	0	23	23	55	2	57	43	105	148	228
04:45 PM	3	24	27	52	1	53	27	101	128	208
Total	9	84	93	228	8	236	132	396	528	857
05:00 PM	1	19	20	57	6	63	42	116	158	241
05:15 PM	1	24	25	49	3	52	42	97	139	216
05:30 PM	2	13	15	53	1	54	36	83	119	188
05:45 PM	0	9	9	42	2	44	33	92	125	178
Total	4	65	69	201	12	213	153	388	541	823
Grand Total	13	149	162	429	20	449	285	784	1069	1680
Apprch %	8	92		95.5	4.5		26.7	73.3		
Total %	0.8	8.9	9.6	25.5	1.2	26.7	17	46.7	63.6	

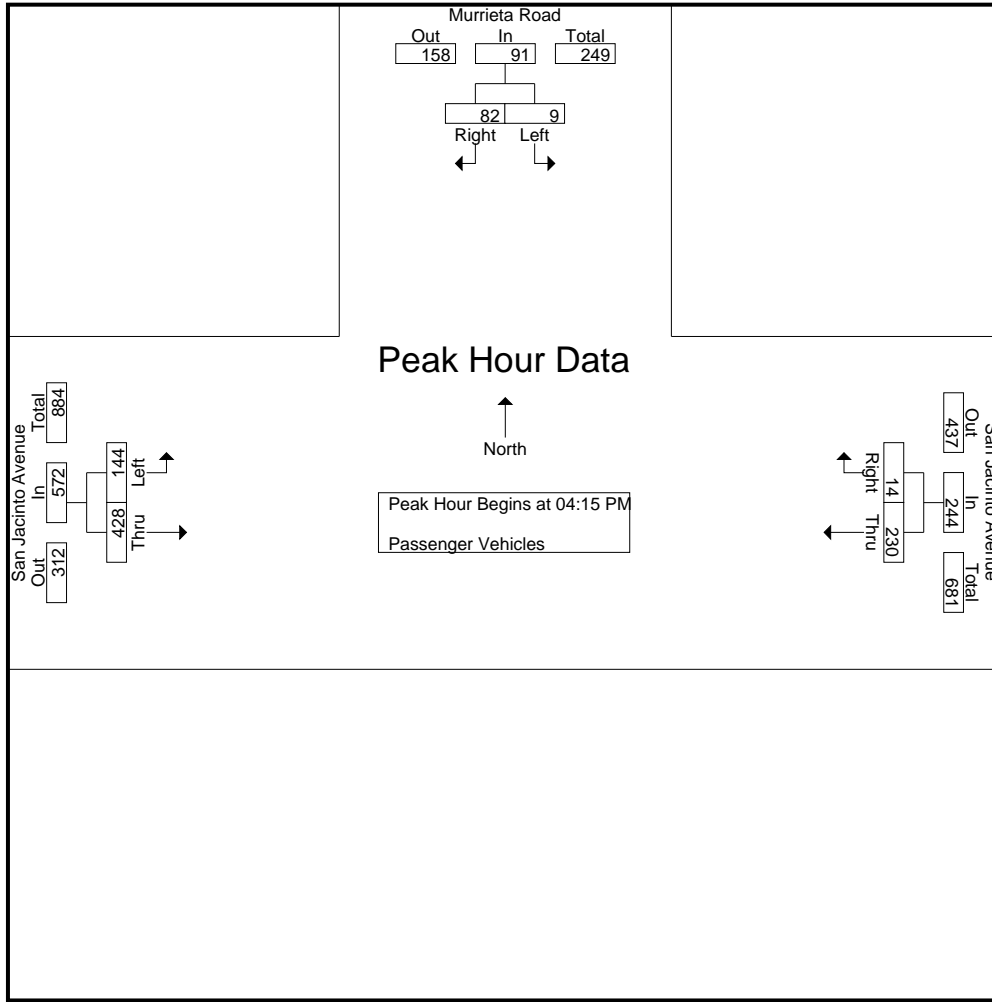
Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:15 PM	<b>5</b>	16	21	<b>66</b>	5	<b>71</b>	32	106	138	230
04:30 PM	0	23	23	55	2	57	<b>43</b>	105	148	228
04:45 PM	3	<b>24</b>	<b>27</b>	52	1	53	27	101	128	208
05:00 PM	1	19	20	57	<b>6</b>	63	42	<b>116</b>	<b>158</b>	<b>241</b>
Total Volume	9	82	91	230	14	244	144	428	572	907
% App. Total	9.9	90.1		94.3	5.7		25.2	74.8		
PHF	.450	.854	.843	.871	.583	.859	.837	.922	.905	.941

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	<b>5</b>	16	21	<b>66</b>	5	<b>71</b>	32	106	138
+15 mins.	0	23	23	55	2	57	<b>43</b>	105	148
+30 mins.	3	<b>24</b>	<b>27</b>	52	1	53	27	101	128
+45 mins.	1	19	20	57	<b>6</b>	63	42	<b>116</b>	<b>158</b>
Total Volume	9	82	91	230	14	244	144	428	572
% App. Total	9.9	90.1		94.3	5.7		25.2	74.8	
PHF	.450	.854	.843	.871	.583	.859	.837	.922	.905

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	1	0	1	0	1	1	2
04:15 PM	0	0	0	1	0	1	0	1	1	2
04:30 PM	0	0	0	3	0	3	0	0	0	3
04:45 PM	0	0	0	1	0	1	0	2	2	3
Total	0	0	0	6	0	6	0	4	4	10
05:00 PM	0	0	0	0	0	0	1	4	5	5
05:15 PM	0	0	0	1	0	1	0	1	1	2
05:30 PM	0	0	0	1	0	1	0	2	2	3
05:45 PM	0	0	0	3	0	3	1	2	3	6
Total	0	0	0	5	0	5	2	9	11	16
Grand Total	0	0	0	11	0	11	2	13	15	26
Apprch %	0	0		100	0		13.3	86.7		
Total %	0	0		42.3	0	42.3	7.7	50	57.7	

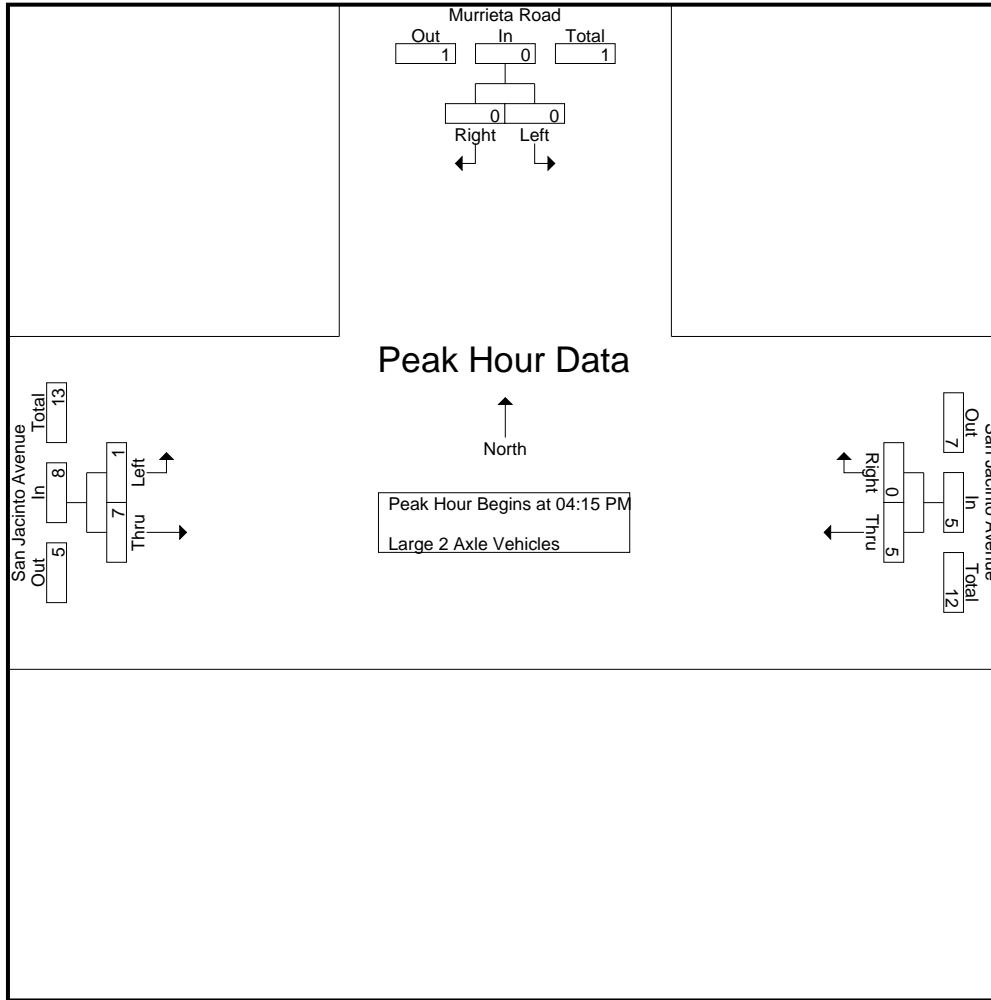
Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:15 PM	0	0	0	1	0	1	0	1	1	2
04:30 PM	0	0	0	3	0	3	0	0	0	3
04:45 PM	0	0	0	1	0	1	0	2	2	3
05:00 PM	0	0	0	0	0	0	1	4	5	5
Total Volume	0	0	0	5	0	5	1	7	8	13
% App. Total	0	0		100	0		12.5	87.5		
PHF	.000	.000	.000	.417	.000	.417	.250	.438	.400	.650

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	0	0	1	0	1	0	1	1
+15 mins.	0	0	0	3	0	3	0	0	0
+30 mins.	0	0	0	1	0	1	0	2	2
+45 mins.	0	0	0	0	0	0	1	4	5
Total Volume	0	0	0	5	0	5	1	7	8
% App. Total	0	0	0	100	0		12.5	87.5	
PHF	.000	.000	.000	.417	.000	.417	.250	.438	.400

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	0	0	1	1	2	2
04:15 PM	0	0	0	0	0	0	0	3	3	3
04:30 PM	0	0	0	0	0	0	1	1	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	5	7	7
05:00 PM	0	0	0	3	0	3	0	0	0	3
05:15 PM	0	0	0	1	0	1	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	1	0	1	0	0	0	1
Total	0	0	0	5	0	5	0	1	1	6
Grand Total	0	0	0	5	0	5	2	6	8	13
Apprch %	0	0		100	0		25	75		
Total %	0	0		38.5	0	38.5	15.4	46.2	61.5	

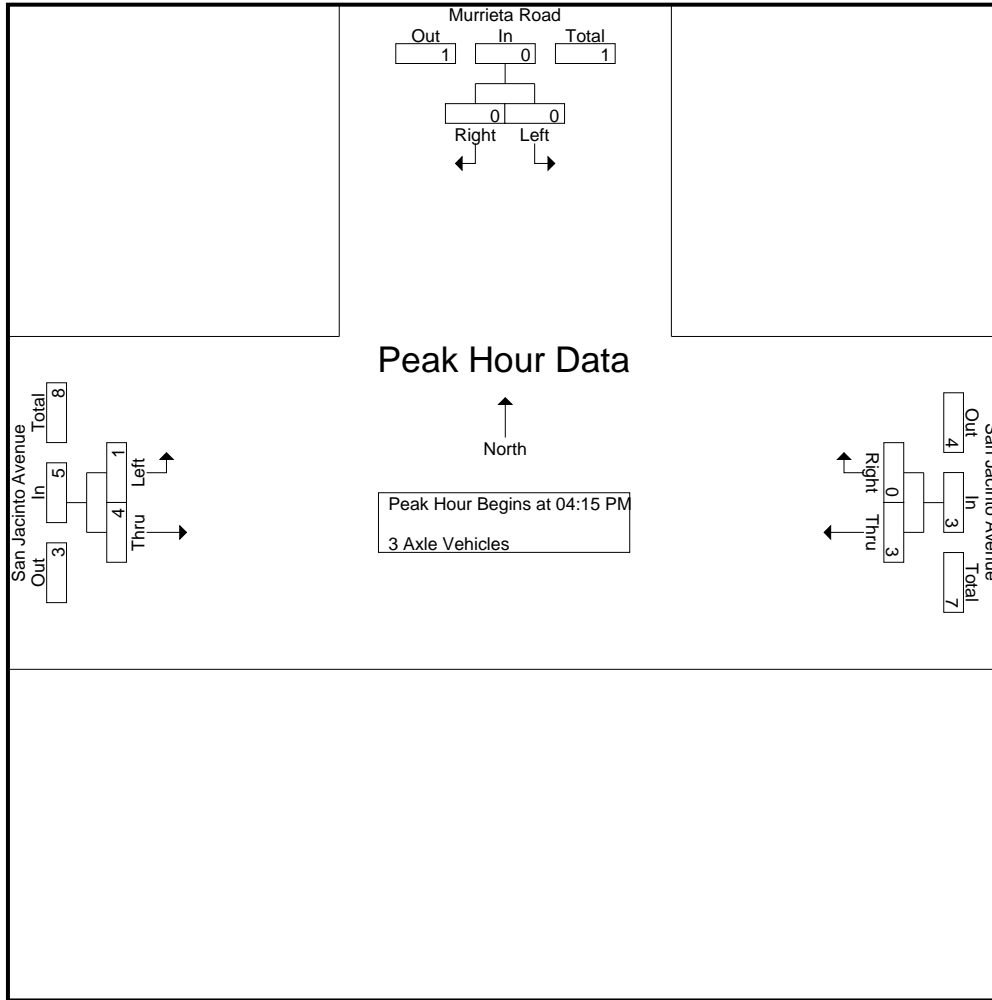
Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:15 PM	0	0	0	0	0	0	0	3	3	3
04:30 PM	0	0	0	0	0	0	1	1	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	3	0	3	0	0	0	3
Total Volume	0	0	0	3	0	3	1	4	5	8
% App. Total	0	0		100	0		20	80		
PHF	.000	.000	.000	.250	.000	.250	.250	.333	.417	.667

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	0	0	0	0	0	0	<b>3</b>	<b>3</b>
+15 mins.	0	0	0	0	0	0	<b>1</b>	<b>1</b>	<b>2</b>
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	<b>3</b>	0	<b>3</b>	0	0	0
Total Volume	0	0	0	3	0	3	1	4	5
% App. Total	0	0	0	100	0	20	80		
PHF	.000	.000	.000	.250	.000	.250	.250	.333	.417

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	1	0	1	0	0	0	1
04:15 PM	0	0	0	1	0	1	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	2	0	2	0	1	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	2	2	2
Grand Total	0	0	0	2	0	2	0	3	3	5
Apprch %	0	0		100	0		0	100		
Total %	0	0		40	0	40	0	60	60	

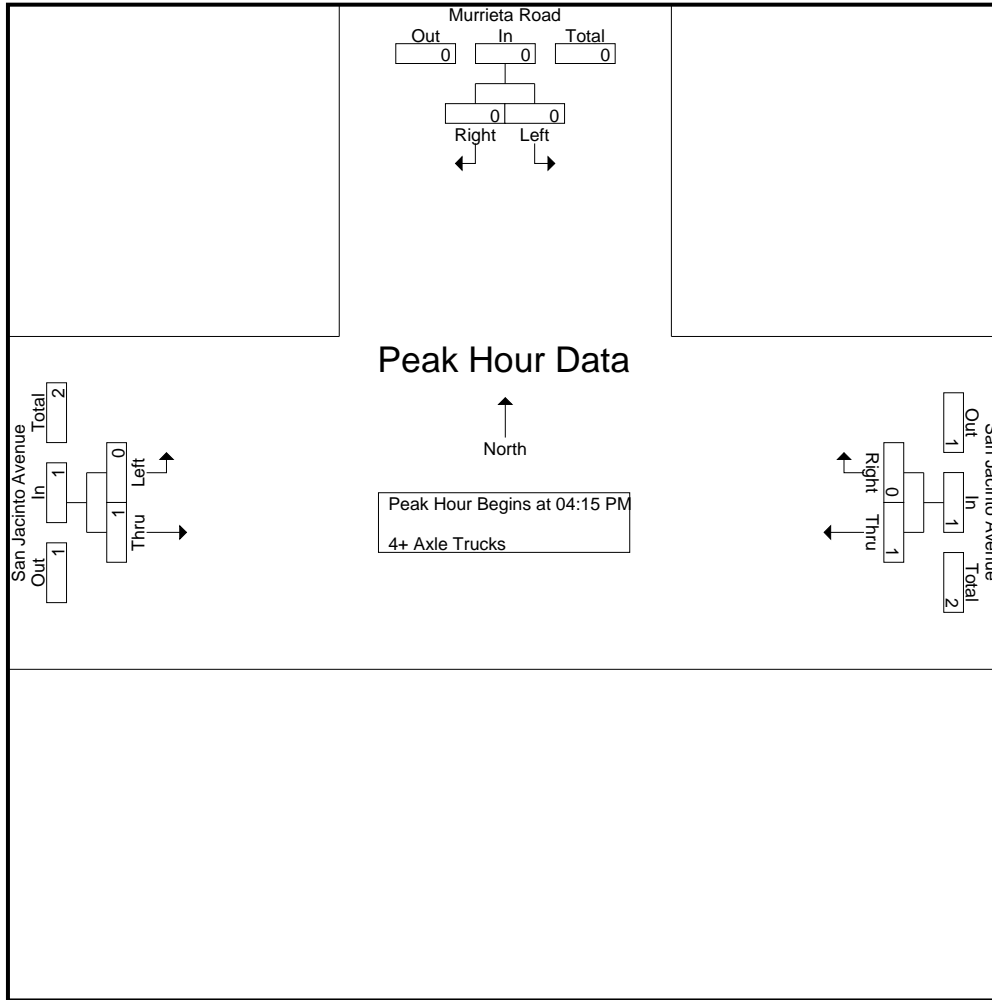
Start Time	Murrieta Road Southbound			San Jacinto Avenue Westbound			San Jacinto Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:15 PM	0	0	0	1	0	1	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	0	1	1	2
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.250	.000	.250	.000	.250	.250	.500

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 02\_PER\_Murr\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	0	0	1	0	1	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	0	1	1
% App. Total	0	0	0	100	0	100	0	100	0
PHF	.000	.000	.000	.250	.000	.250	.000	.250	.250



Location: Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue



Date: 1/12/2021  
 Day: Tuesday

PEDESTRIANS

	North Leg Murrieta Road	East Leg San Jacinto Avenue	South Leg Dead End	West Leg San Jacinto Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Murrieta Road	East Leg San Jacinto Avenue	South Leg Dead End	West Leg San Jacinto Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Perris  
 N/S: Murrieta Road  
 E/W: San Jacinto Avenue



Date: 1/12/2021  
 Day: Tuesday

BICYCLES

	Southbound Murrieta Road			Westbound San Jacinto Avenue			Northbound Dead End			Eastbound San Jacinto Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Murrieta Road			Westbound San Jacinto Avenue			Northbound Dead End			Eastbound San Jacinto Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

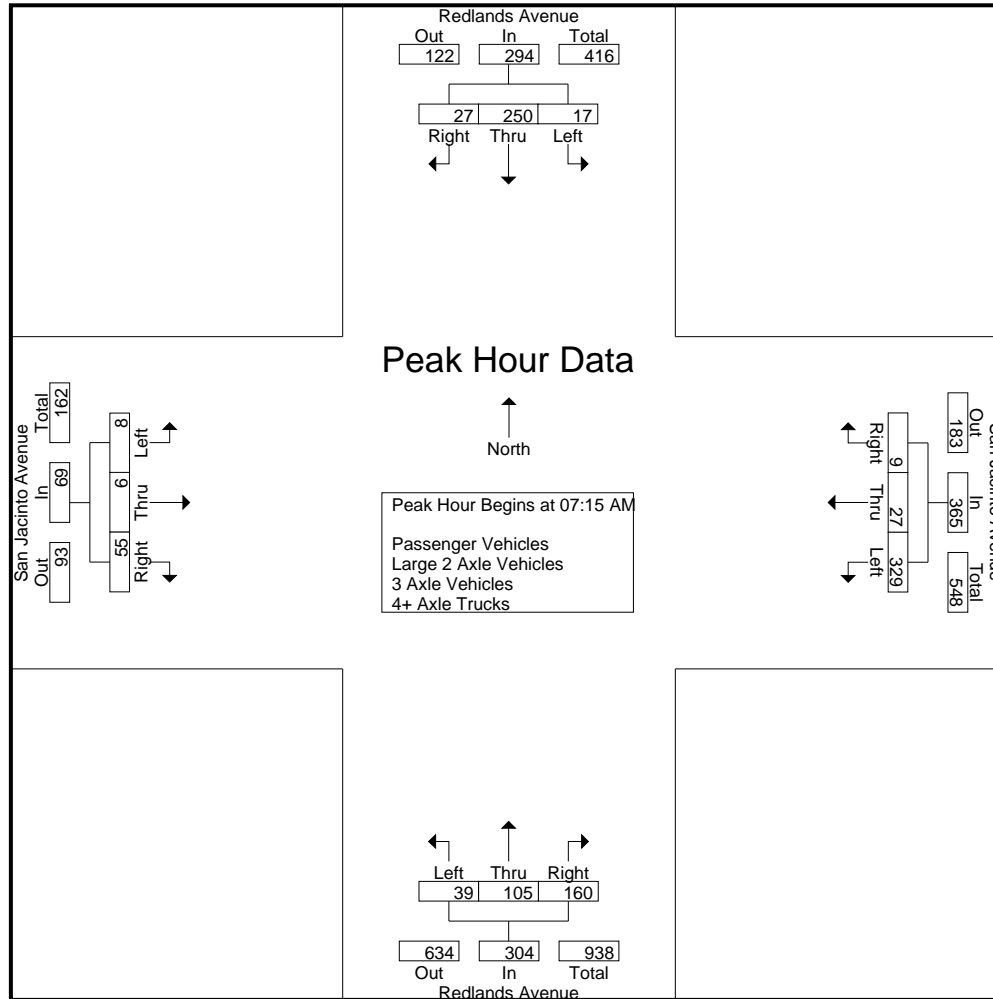
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	3	50	3	0	56	69	6	0	0	75	8	25	43	19	76	1	1	8	7	10	26	217	243
07:15 AM	4	52	4	2	60	92	3	2	2	97	6	19	31	17	56	1	1	13	13	15	34	228	262
07:30 AM	4	60	14	0	78	94	9	2	0	105	7	27	34	9	68	2	2	13	11	17	20	268	288
07:45 AM	7	76	8	1	91	84	8	2	2	94	18	35	54	17	107	2	1	15	12	18	32	310	342
Total	18	238	29	3	285	339	26	6	4	371	39	106	162	62	307	6	5	49	43	60	112	1023	1135
08:00 AM	2	62	1	0	65	59	7	3	2	69	8	24	41	9	73	3	2	14	10	19	21	226	247
08:15 AM	1	54	9	2	64	70	6	3	2	79	10	28	27	8	65	2	3	13	13	18	25	226	251
08:30 AM	1	55	3	2	59	64	5	2	1	71	6	31	35	17	72	6	1	11	7	18	27	220	247
08:45 AM	2	54	5	1	61	67	6	3	1	76	13	35	38	12	86	2	1	20	19	23	33	246	279
Total	6	225	18	5	249	260	24	11	6	295	37	118	141	46	296	13	7	58	49	78	106	918	1024
Grand Total	24	463	47	8	534	599	50	17	10	666	76	224	303	108	603	19	12	107	92	138	218	1941	2159
Apprch %	4.5	86.7	8.8			89.9	7.5	2.6			12.6	37.1	50.2			13.8	8.7	77.5					
Total %	1.2	23.9	2.4		27.5	30.9	2.6	0.9		34.3	3.9	11.5	15.6		31.1	1	0.6	5.5		7.1	10.1	89.9	
Passenger Vehicles	23	443	44		515	590	46	17		663	69	209	290		672	19	10	98		213	0	0	2063
% Passenger Vehicles	95.8	95.7	93.6	62.5	95	98.5	92	100	100	98.1	90.8	93.3	95.7	96.3	94.5	100	83.3	91.6	93.5	92.6	0	0	95.6
Large 2 Axle Vehicles	0	14	0		14	3	2	0		5	6	10	8		26	0	1	3		5	0	0	50
% Large 2 Axle Vehicles	0	3	0	0	2.6	0.5	4	0	0	0.7	7.9	4.5	2.6	1.9	3.7	0	8.3	2.8	1.1	2.2	0	0	2.3
3 Axle Vehicles	1	2	3		9	4	0	0		4	0	5	3		10	0	0	5		10	0	0	33
% 3 Axle Vehicles	4.2	0.4	6.4	37.5	1.7	0.7	0	0	0	0.6	0	2.2	1	1.9	1.4	0	0	4.7	5.4	4.3	0	0	1.5
4+ Axle Trucks	0	4	0		4	2	2	0		4	1	0	2		3	0	1	1		2	0	0	13
% 4+ Axle Trucks	0	0.9	0	0	0.7	0.3	4	0	0	0.6	1.3	0	0.7	0	0.4	0	8.3	0.9	0	0.9	0	0	0.6

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	52	4	60	92	3	2	97	6	19	31	56	1	1	13	15	228
07:30 AM	4	60	14	78	94	9	2	105	7	27	34	68	2	2	13	17	268
07:45 AM	7	76	8	91	84	8	2	94	18	35	54	107	2	1	15	18	310
08:00 AM	2	62	1	65	59	7	3	69	8	24	41	73	3	2	14	19	226
Total Volume	17	250	27	294	329	27	9	365	39	105	160	304	8	6	55	69	1032
% App. Total	5.8	85	9.2		90.1	7.4	2.5		12.8	34.5	52.6		11.6	8.7	79.7		
PHF	.607	.822	.482	.808	.875	.750	.750	.869	.542	.750	.741	.710	.667	.750	.917	.908	.832

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:00 AM				07:45 AM				08:00 AM				
+0 mins.	4	60	14	78	69	6	0	75	18	35	54	107	3	2	14	19	
+15 mins.	7	76	8	91	92	3	2	97	8	24	41	73	2	3	13	18	
+30 mins.	2	62	1	65	94	9	2	105	10	28	27	65	6	1	11	18	
+45 mins.	1	54	9	64	84	8	2	94	6	31	35	72	2	1	20	23	
Total Volume	14	252	32	298	339	26	6	371	42	118	157	317	13	7	58	78	
% App. Total	4.7	84.6	10.7		91.4	7	1.6		13.2	37.2	49.5		16.7	9	74.4		
PHF	.500	.829	.571	.819	.902	.722	.750	.883	.583	.843	.727	.741	.542	.583	.725	.848	

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

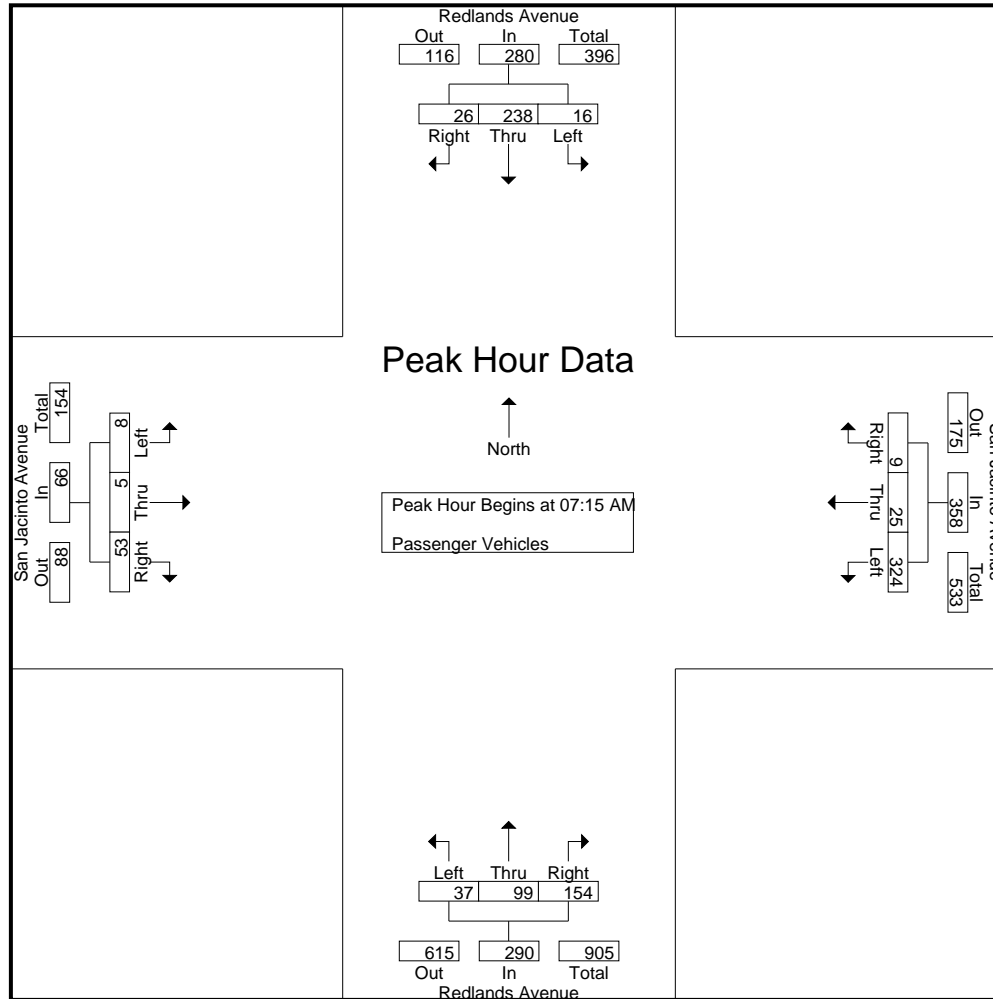
Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	3	47	3	0	53	66	5	0	0	71	7	22	41	18	70	1	1	7	7	9	25	203	228
07:15 AM	3	48	3	1	54	92	3	2	2	97	6	18	29	17	53	1	1	12	12	14	32	218	250
07:30 AM	4	57	14	0	75	92	9	2	0	103	7	23	31	8	61	2	2	13	11	17	19	256	275
07:45 AM	7	73	8	1	88	83	8	2	2	93	16	34	53	17	103	2	1	14	12	17	32	301	333
Total	17	225	28	2	270	333	25	6	4	364	36	97	154	60	287	6	5	46	42	57	108	978	1086
08:00 AM	2	60	1	0	63	57	5	3	2	65	8	24	41	9	73	3	1	14	10	18	21	219	240
08:15 AM	1	53	8	1	62	70	5	3	2	78	9	26	23	7	58	2	2	11	11	15	21	213	234
08:30 AM	1	54	3	2	58	64	5	2	1	71	6	29	34	16	69	6	1	11	7	18	26	216	242
08:45 AM	2	51	4	0	57	66	6	3	1	75	10	33	38	12	81	2	1	16	16	19	29	232	261
Total	6	218	16	3	240	257	21	11	6	289	33	112	136	44	281	13	5	52	44	70	97	880	977
Grand Total	23	443	44	5	510	590	46	17	10	653	69	209	290	104	568	19	10	98	86	127	205	1858	2063
Apprch %	4.5	86.9	8.6			90.4	7	2.6			12.1	36.8	51.1			15	7.9	77.2					
Total %	1.2	23.8	2.4		27.4	31.8	2.5	0.9		35.1	3.7	11.2	15.6		30.6	1	0.5	5.3		6.8	9.9	90.1	

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	48	3	54	<b>92</b>	3	2	97	6	18	29	53	1	1	12	14	218
07:30 AM	4	57	<b>14</b>	75	92	<b>9</b>	2	<b>103</b>	7	23	31	61	2	<b>2</b>	13	17	256
07:45 AM	<b>7</b>	<b>73</b>	8	<b>88</b>	83	8	2	93	<b>16</b>	<b>34</b>	<b>53</b>	<b>103</b>	2	1	<b>14</b>	17	<b>301</b>
08:00 AM	2	60	1	63	57	5	<b>3</b>	65	8	24	41	73	<b>3</b>	1	14	<b>18</b>	219
Total Volume	16	238	26	280	324	25	9	358	37	99	154	290	8	5	53	66	994
% App. Total	5.7	85	9.3		90.5	7	2.5		12.8	34.1	53.1		12.1	7.6	80.3		
PHF	.571	.815	.464	.795	.880	.694	.750	.869	.578	.728	.726	.704	.667	.625	.946	.917	.826

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	3	48	3	54	<b>92</b>	3	2	97	6	18	29	53	1	1	12	14	
+15 mins.	4	57	<b>14</b>	75	92	<b>9</b>	2	<b>103</b>	7	23	31	61	2	<b>2</b>	13	17	
+30 mins.	<b>7</b>	<b>73</b>	8	<b>88</b>	83	8	2	93	<b>16</b>	<b>34</b>	<b>53</b>	<b>103</b>	2	1	<b>14</b>	17	
+45 mins.	2	60	1	63	57	5	<b>3</b>	65	8	24	41	73	<b>3</b>	1	14	<b>18</b>	
Total Volume	16	238	26	280	324	25	9	358	37	99	154	290	8	5	53	66	
% App. Total	5.7	85	9.3		90.5	7	2.5		12.8	34.1	53.1		12.1	7.6	80.3		
PHF	.571	.815	.464	.795	.880	.694	.750	.869	.578	.728	.726	.704	.667	.625	.946	.917	



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

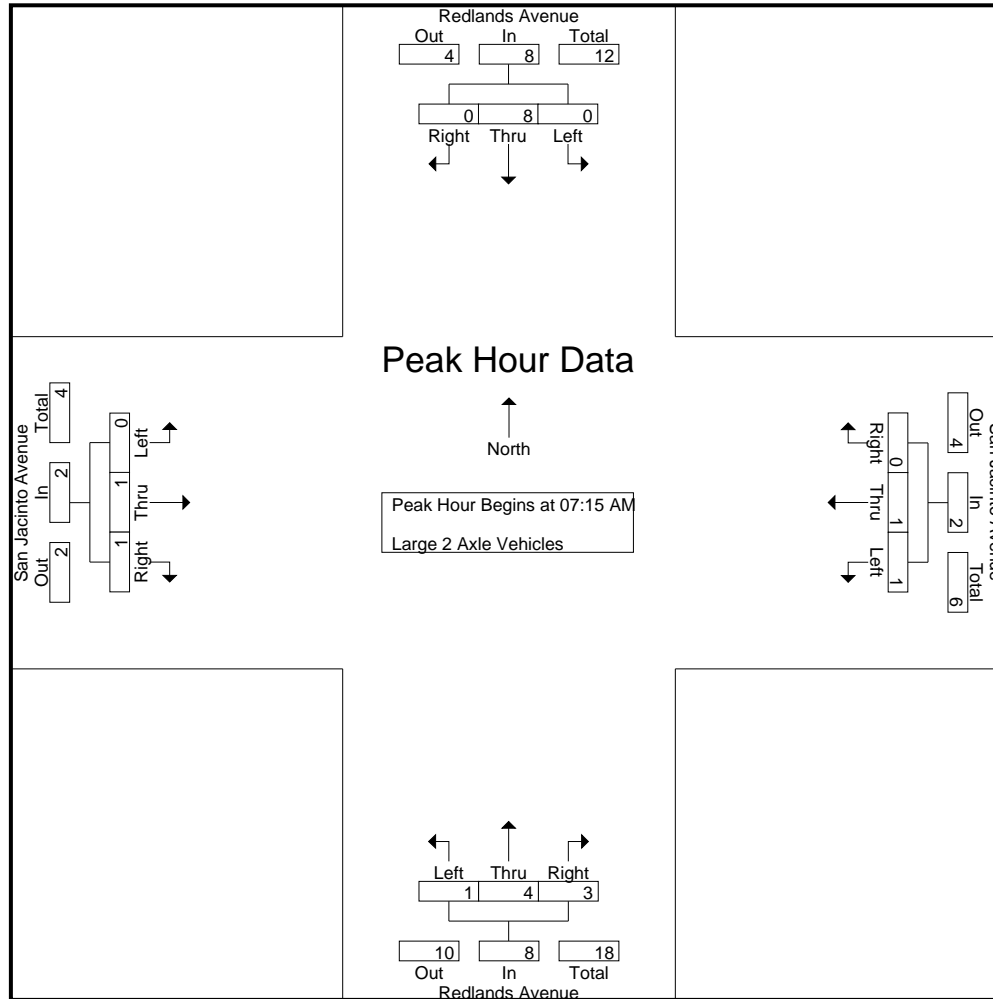
Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	2	0	0	2	2	1	0	0	3	1	1	2	1	4	0	0	1	0	1	1	10	11
07:15 AM	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	1	5	6
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	5	5
07:45 AM	0	2	0	0	2	1	0	0	0	1	1	1	1	0	3	0	0	0	0	0	0	6	6
Total	0	8	0	0	8	3	1	0	0	4	2	5	5	1	12	0	0	2	1	2	2	26	28
08:00 AM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	4	4
08:15 AM	0	1	0	0	1	0	0	0	0	0	1	2	3	1	6	0	0	0	0	0	1	7	8
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	2
08:45 AM	0	3	0	0	3	0	0	0	0	0	3	1	0	0	4	0	0	1	0	1	0	8	8
Total	0	6	0	0	6	0	1	0	0	1	4	5	3	1	12	0	1	1	0	2	1	21	22
Grand Total	0	14	0	0	14	3	2	0	0	5	6	10	8	2	24	0	1	3	1	4	3	47	50
Apprch %	0	100	0			60	40	0			25	41.7	33.3			0	25	75					
Total %	0	29.8	0		29.8	6.4	4.3	0		10.6	12.8	21.3	17		51.1	0	2.1	6.4		8.5	6	94	

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	3	0	3	0	0	0	0	0	0	1	1	0	0	1	1	5
07:30 AM	0	1	0	1	0	0	0	0	0	3	1	4	0	0	0	0	5
07:45 AM	0	2	0	2	1	0	0	1	1	1	1	3	0	0	0	0	6
08:00 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
Total Volume	0	8	0	8	1	1	0	2	1	4	3	8	0	1	1	2	20
% App. Total	0	100	0		50	50	0		12.5	50	37.5		0	50	50		
PHF	.000	.667	.000	.667	.250	.250	.000	.500	.250	.333	.750	.500	.000	.250	.250	.500	.833

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	3	0	3	0	0	0	0	0	0	1	1	0	0	1	1	
+15 mins.	0	1	0	1	0	0	0	0	0	3	1	4	0	0	0	0	
+30 mins.	0	2	0	2	1	0	0	1	1	1	1	3	0	0	0	0	
+45 mins.	0	2	0	2	0	1	0	1	0	0	0	0	0	1	0	1	
Total Volume	0	8	0	8	1	1	0	2	1	4	3	8	0	1	1	2	
% App. Total	0	100	0		50	50	0		12.5	50	37.5		0	50	50		
PHF	.000	.667	.000	.667	.250	.250	.000	.500	.250	.333	.750	.500	.000	.250	.250	.500	

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

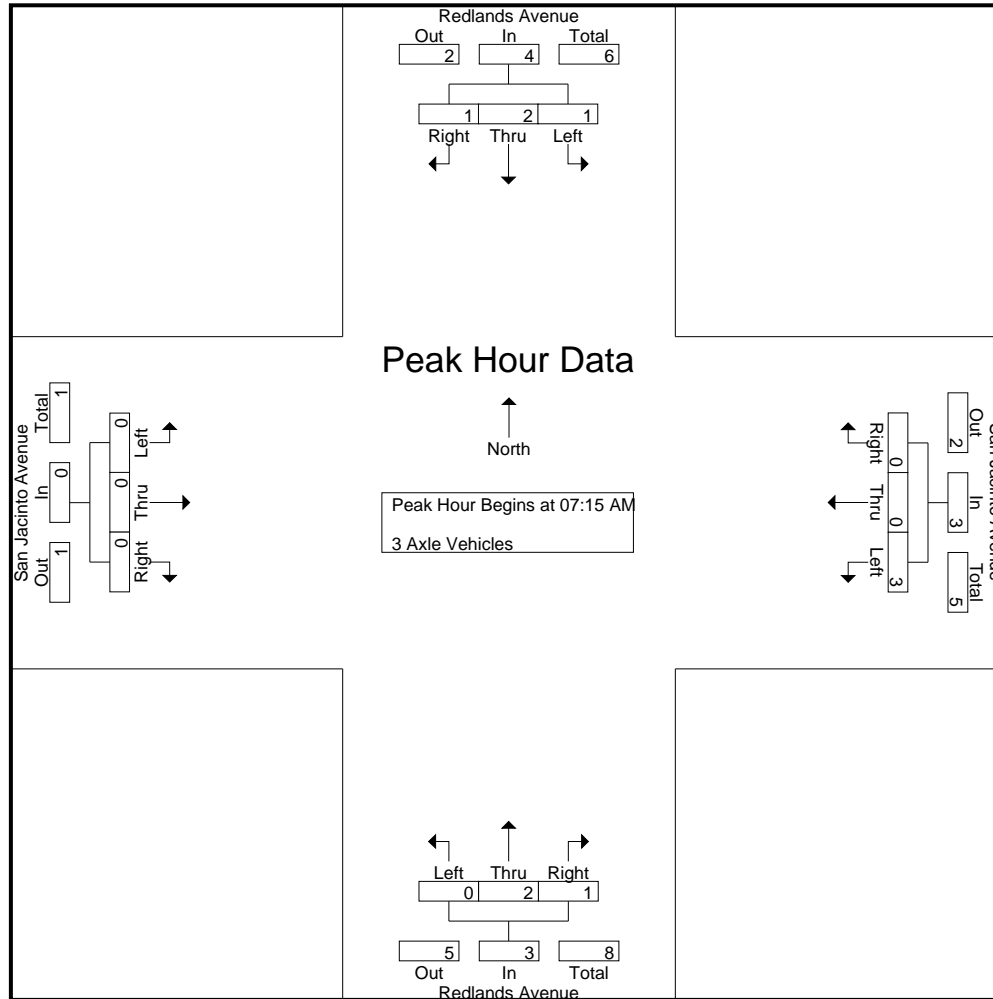
Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
07:00 AM	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	3
07:15 AM	1	0	1	1	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	4
07:30 AM	0	1	0	0	1	1	0	0	0	1	0	1	1	1	2	0	0	0	0	0	0	0	0	0	0	1	4	5
07:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	1	2	1	1	4	2	0	0	0	2	0	4	1	1	5	0	0	0	0	0	0	0	0	0	0	2	11	13
08:00 AM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
08:15 AM	0	0	1	1	1	0	0	0	0	0	0	0	1	0	1	0	0	2	2	2	2	3	4	7	3	4	7	
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	2	1	1	2	
08:45 AM	0	0	1	1	1	0	0	0	0	0	0	1	0	0	1	0	0	3	3	3	3	4	5	9	4	5	9	
Total	0	0	2	2	2	2	0	0	0	2	0	1	2	1	3	0	0	5	5	5	5	8	12	20	8	12	20	
Grand Total	1	2	3	3	6	4	0	0	0	4	0	5	3	2	8	0	0	5	5	5	5	10	23	33	10	23	33	
Apprch %	16.7	33.3	50			100	0	0			0	62.5	37.5			0	0	100										
Total %	4.3	8.7	13		26.1	17.4	0	0		17.4	0	21.7	13		34.8	0	0	21.7		21.7		30.3	69.7					

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	0	1	2	0	0	0	0	0	1	0	1	0	0	0	0	0
07:30 AM	0	1	0	1	1	0	0	1	0	1	1	2	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0
Total Volume	1	2	1	4	3	0	0	3	0	2	1	3	0	0	0	0	0
% App. Total	25	50	25		100	0	0		0	66.7	33.3		0	0	0		
PHF	.250	.500	.250	.500	.375	.000	.000	.375	.000	.500	.250	.375	.000	.000	.000	.000	.625

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	1	0	1	2	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	1	0	1	1	0	0	1	0	1	1	2	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0
Total Volume	1	2	1	4	3	0	0	3	0	2	1	3	0	0	0	0
% App. Total	25	50	25		100	0	0		0	66.7	33.3		0	0	0	
PHF	.250	.500	.250	.500	.375	.000	.000	.375	.000	.500	.250	.375	.000	.000	.000	.000

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

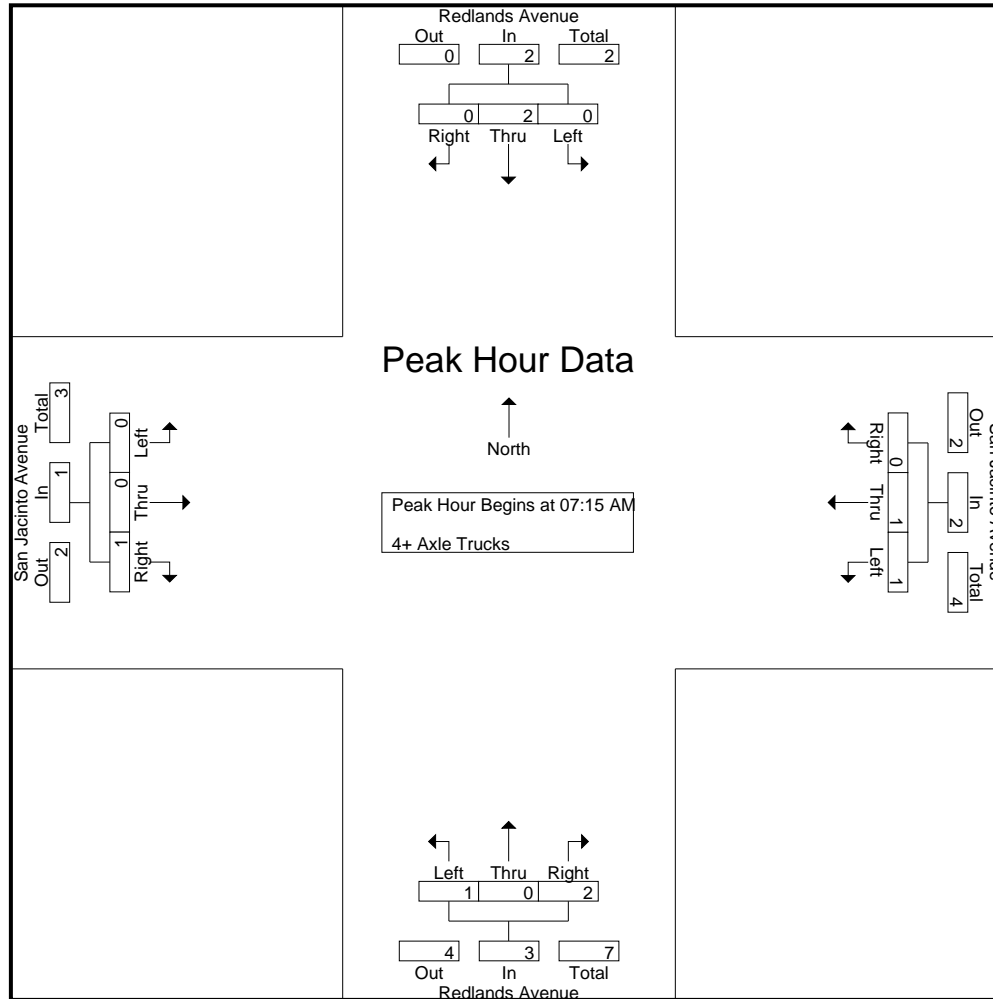
Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total									
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2
07:30 AM	0	1	0	0	1	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	0	2	2
Total	0	3	0	0	3	1	0	0	0	1	1	0	2	0	3	0	0	1	0	1	0	0	1	0	1	0	0	8	8
08:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	2	2
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	1	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	5	5
Grand Total	0	4	0	0	4	2	2	0	0	4	1	0	2	0	3	0	1	1	0	2	0	0	0	0	2	0	0	13	13
Apprch %	0	100	0			50	50	0			33.3	0	66.7			0	50	50			0	0	0	0	0	0	0	100	100
Total %	0	30.8	0		30.8	15.4	15.4	0		30.8	7.7	0	15.4		23.1	0	7.7	7.7		15.4	0	0	0	0	15.4	0	0	100	100

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0
07:30 AM	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	1	1	0	2	1	0	2	3	0	0	1	1	0
% App. Total	0	100	0		50	50	0		33.3	0	66.7		0	0	100		
PHF	.000	.500	.000	.500	.250	.250	.000	.500	.250	.000	.500	.750	.000	.000	.250	.250	.667

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2





City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	
+15 mins.	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	
Total Volume	0	2	0	2	1	1	0	2	1	0	2	3	0	0	1	1	
% App. Total	0	100	0		50	50	0		33.3	0	66.7		0	0	100		
PHF	.000	.500	.000	.500	.250	.250	.000	.500	.250	.000	.500	.750	.000	.000	.250	.250	

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

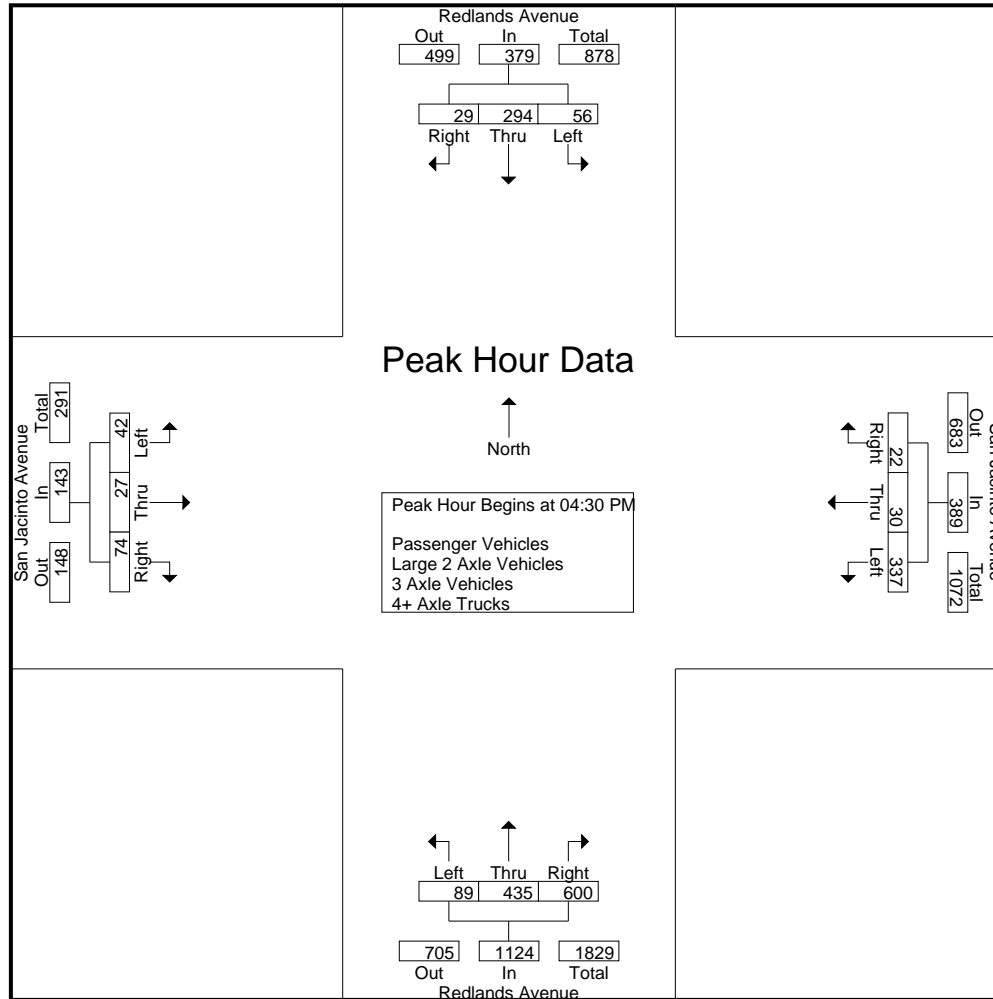
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	15	62	11	2	88	79	4	4	2	87	27	99	127	42	253	6	4	22	18	32	64	460	524	
04:15 PM	15	80	5	0	100	86	9	3	1	98	13	103	158	26	274	12	3	8	7	23	34	495	529	
04:30 PM	16	89	8	4	113	87	4	6	5	97	28	108	159	48	295	9	7	26	19	42	76	547	623	
04:45 PM	10	80	11	5	101	80	10	4	1	94	20	120	140	49	280	9	4	12	8	25	63	500	563	
Total	56	311	35	11	402	332	27	17	9	376	88	430	584	165	1102	36	18	68	52	122	237	2002	2239	
05:00 PM	10	60	7	2	77	95	7	4	3	106	22	101	146	51	269	8	9	17	13	34	69	486	555	
05:15 PM	20	65	3	1	88	75	9	8	3	92	19	106	155	51	280	16	7	19	16	42	71	502	573	
05:30 PM	14	75	9	3	98	76	9	7	4	92	14	95	138	38	247	12	3	13	9	28	54	465	519	
05:45 PM	14	54	6	1	74	55	6	4	3	65	16	105	134	37	255	4	6	21	16	31	57	425	482	
Total	58	254	25	7	337	301	31	23	13	355	71	407	573	177	1051	40	25	70	54	135	251	1878	2129	
Grand Total	114	565	60	18	739	633	58	40	22	731	159	837	1157	342	2153	76	43	138	106	257	488	3880	4368	
Apprch %	15.4	76.5	8.1			86.6	7.9	5.5			7.4	38.9	53.7			29.6	16.7	53.7						
Total %	2.9	14.6	1.5		19	16.3	1.5	1		18.8	4.1	21.6	29.8		55.5	2	1.1	3.6		6.6	11.2	88.8		
Passenger Vehicles	112	558	56		741	613	57	39		730	157	826	1126		2440	75	42	135		355	0	0	4266	
% Passenger Vehicles	98.2	98.8	93.3		97.9	96.8	98.3	97.5		96.9	98.7	98.7	97.3		97.8	98.7	97.7	97.8		97.2	97.8	0	0	97.7
Large 2 Axle Vehicles	0	5	1		6	12	0	0		12	1	10	19		35	1	1	2		6	0	0	59	
% Large 2 Axle Vehicles	0	0.9	1.7		0.8	1.9	0	0		1.6	0.6	1.2	1.6		1.4	1.3	2.3	1.4		1.9	1.7	0	0	1.4
3 Axle Vehicles	1	2	3		9	6	1	1		9	0	1	9		14	0	0	1		2	0	0	34	
% 3 Axle Vehicles	0.9	0.4	5		1.2	0.9	1.7	2.5		1.2	0	0.1	0.8		0.6	0	0	0.7		0.9	0.6	0	0	0.8
4+ Axle Trucks	1	0	0		1	2	0	0		2	1	0	3		6	0	0	0		0	0	0	9	
% 4+ Axle Trucks	0.9	0	0		0.1	0.3	0	0		0.3	0.6	0	0.3		0.2	0	0	0		0	0	0	0.2	

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	16	89	8	113	87	4	6	97	28	108	159	295	9	7	26	42	547
04:45 PM	10	80	11	101	80	10	4	94	20	120	140	280	9	4	12	25	500
05:00 PM	10	60	7	77	95	7	4	106	22	101	146	269	8	9	17	34	486
05:15 PM	20	65	3	88	75	9	8	92	19	106	155	280	16	7	19	42	502
Total Volume	56	294	29	379	337	30	22	389	89	435	600	1124	42	27	74	143	2035
% App. Total	14.8	77.6	7.7		86.6	7.7	5.7		7.9	38.7	53.4		29.4	18.9	51.7		
PHF	.700	.826	.659	.838	.887	.750	.688	.917	.795	.906	.943	.953	.656	.750	.712	.851	.930

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:15 PM				04:30 PM				04:30 PM				
+0 mins.	15	62	11	88	86	9	3	98	<b>28</b>	108	<b>159</b>	<b>295</b>	9	7	<b>26</b>	<b>42</b>	
+15 mins.	15	80	5	100	87	4	<b>6</b>	97	20	<b>120</b>	140	280	9	4	12	25	
+30 mins.	<b>16</b>	<b>89</b>	8	<b>113</b>	80	<b>10</b>	4	94	22	101	146	269	8	<b>9</b>	17	34	
+45 mins.	10	80	11	101	<b>95</b>	7	4	<b>106</b>	19	106	155	280	<b>16</b>	7	19	42	
Total Volume	56	311	35	402	348	30	17	395	89	435	600	1124	42	27	74	143	
% App. Total	13.9	77.4	8.7		88.1	7.6	4.3		7.9	38.7	53.4		29.4	18.9	51.7		
PHF	.875	.874	.795	.889	.916	.750	.708	.932	.795	.906	.943	.953	.656	.750	.712	.851	

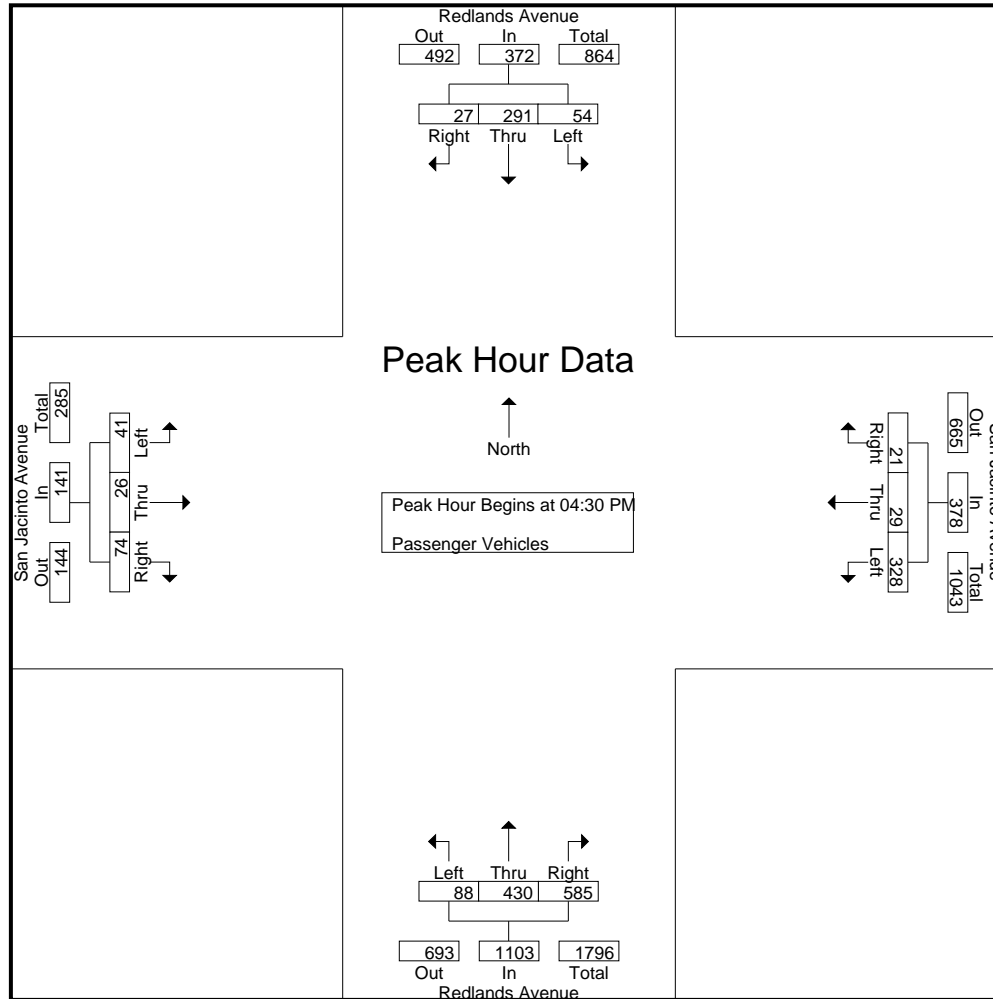
City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	15	61	9	0	85	75	4	4	2	83	27	98	123	41	248	6	4	20	16	30	59	446	505
04:15 PM	15	79	5	0	99	84	9	3	1	96	13	100	153	25	266	12	3	8	7	23	33	484	517
04:30 PM	16	89	6	3	111	84	4	6	5	94	28	105	154	46	287	9	6	26	19	41	73	533	606
04:45 PM	10	79	11	5	100	79	10	4	1	93	20	119	138	47	277	8	4	12	8	24	61	494	555
Total	56	308	31	8	395	322	27	17	9	366	88	422	568	159	1078	35	17	66	50	118	226	1957	2183
05:00 PM	10	59	7	2	76	92	6	3	2	101	21	101	140	49	262	8	9	17	13	34	66	473	539
05:15 PM	18	64	3	1	85	73	9	8	3	90	19	105	153	51	277	16	7	19	16	42	71	494	565
05:30 PM	14	74	9	3	97	75	9	7	4	91	13	93	135	36	241	12	3	13	9	28	52	457	509
05:45 PM	14	53	6	1	73	51	6	4	3	61	16	105	130	36	251	4	6	20	15	30	55	415	470
Total	56	250	25	7	331	291	30	22	12	343	69	404	558	172	1031	40	25	69	53	134	244	1839	2083
Grand Total	112	558	56	15	726	613	57	39	21	709	157	826	1126	331	2109	75	42	135	103	252	470	3796	4266
Apprch %	15.4	76.9	7.7			86.5	8	5.5			7.4	39.2	53.4			29.8	16.7	53.6					
Total %	3	14.7	1.5		19.1	16.1	1.5	1		18.7	4.1	21.8	29.7		55.6	2	1.1	3.6		6.6	11	89	

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	16	<b>89</b>	6	<b>111</b>	84	4	6	94	<b>28</b>	105	<b>154</b>	<b>287</b>	9	6	<b>26</b>	41	<b>533</b>
04:45 PM	10	79	<b>11</b>	100	79	<b>10</b>	4	93	20	<b>119</b>	138	277	8	4	12	24	494
05:00 PM	10	59	7	76	<b>92</b>	6	3	<b>101</b>	21	101	140	262	8	<b>9</b>	17	34	473
05:15 PM	<b>18</b>	64	3	85	73	9	<b>8</b>	90	19	105	153	277	<b>16</b>	7	19	<b>42</b>	494
Total Volume	54	291	27	372	328	29	21	378	88	430	585	1103	41	26	74	141	1994
% App. Total	14.5	78.2	7.3		86.8	7.7	5.6		8	39	53		29.1	18.4	52.5		
PHF	.750	.817	.614	.838	.891	.725	.656	.936	.786	.903	.950	.961	.641	.722	.712	.839	.935



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	16	<b>89</b>	6	<b>111</b>	84	4	6	94	<b>28</b>	105	<b>154</b>	<b>287</b>	9	6	<b>26</b>	41	
+15 mins.	10	79	<b>11</b>	100	79	<b>10</b>	4	93	20	<b>119</b>	138	277	8	4	12	24	
+30 mins.	10	59	7	76	<b>92</b>	6	3	<b>101</b>	21	101	140	262	8	<b>9</b>	17	34	
+45 mins.	<b>18</b>	64	3	85	73	9	<b>8</b>	90	19	105	153	277	<b>16</b>	7	19	<b>42</b>	
Total Volume	54	291	27	372	328	29	21	378	88	430	585	1103	41	26	74	141	
% App. Total	14.5	78.2	7.3		86.8	7.7	5.6		8	39	53		29.1	18.4	52.5		
PHF	.750	.817	.614	.838	.891	.725	.656	.936	.786	.903	.950	.961	.641	.722	.712	.839	

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

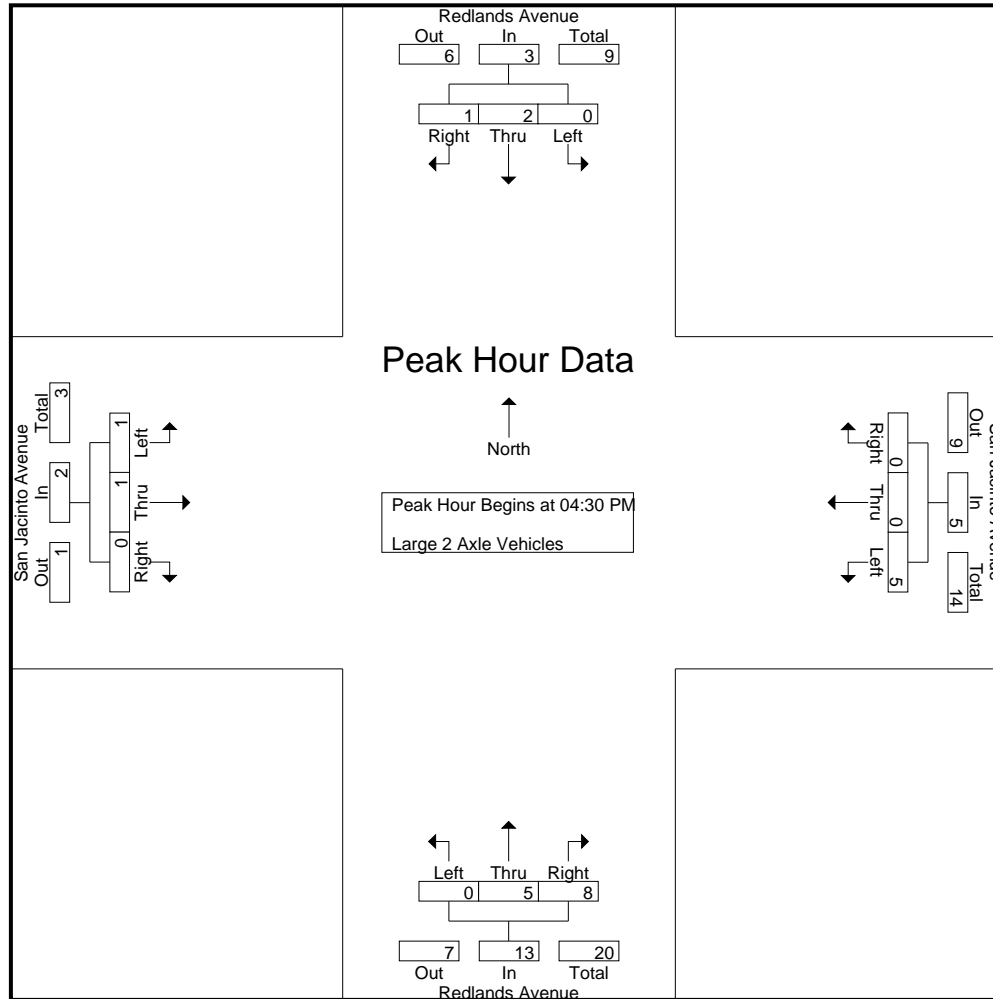
Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	1	0	0	1	2	0	0	0	2	0	1	2	1	3	0	0	1	1	1	2	7	9
04:15 PM	0	0	0	0	0	1	0	0	0	1	0	2	3	0	5	0	0	0	0	0	0	6	6
04:30 PM	0	0	1	0	1	3	0	0	0	3	0	3	0	0	3	0	1	0	0	1	0	8	8
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	1	1	1	2	1	0	0	0	1	1	4	5
Total	0	1	1	0	2	7	0	0	0	7	0	7	6	2	13	1	1	1	1	3	3	25	28
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	5	1	5	0	0	0	0	0	1	6	7
05:15 PM	0	1	0	0	1	1	0	0	0	1	0	1	2	0	3	0	0	0	0	0	0	5	5
05:30 PM	0	1	0	0	1	1	0	0	0	1	1	2	2	1	5	0	0	0	0	0	1	7	8
05:45 PM	0	1	0	0	1	3	0	0	0	3	0	0	4	1	4	0	0	1	1	1	2	9	11
Total	0	4	0	0	4	5	0	0	0	5	1	3	13	3	17	0	0	1	1	1	4	27	31
Grand Total	0	5	1	0	6	12	0	0	0	12	1	10	19	5	30	1	1	2	2	4	7	52	59
Apprch %	0	83.3	16.7			100	0	0			3.3	33.3	63.3			25	25	50					
Total %	0	9.6	1.9		11.5	23.1	0	0		23.1	1.9	19.2	36.5		57.7	1.9	1.9	3.8		7.7	11.9	88.1	

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	1	1	3	0	0	3	0	3	0	3	0	1	0	1	8
04:45 PM	0	0	0	0	1	0	0	1	0	1	1	2	1	0	0	1	4
05:00 PM	0	1	0	1	0	0	0	0	0	0	5	5	0	0	0	0	6
05:15 PM	0	1	0	1	1	0	0	1	0	1	2	3	0	0	0	0	5
Total Volume	0	2	1	3	5	0	0	5	0	5	8	13	1	1	0	2	23
% App. Total	0	66.7	33.3		100	0	0		0	38.5	61.5		50	50	0		
PHF	.000	.500	.250	.750	.417	.000	.000	.417	.000	.417	.400	.650	.250	.250	.000	.500	.719



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	0	1	1	3	0	0	3	0	3	0	3	0	1	0	1	
+15 mins.	0	0	0	0	1	0	0	1	0	1	1	2	1	0	0	1	
+30 mins.	0	1	0	1	0	0	0	0	0	0	5	5	0	0	0	0	
+45 mins.	0	1	0	1	1	0	0	1	0	1	2	3	0	0	0	0	
Total Volume	0	2	1	3	5	0	0	5	0	5	8	13	1	1	0	2	
% App. Total	0	66.7	33.3		100	0	0		0	38.5	61.5		50	50	0		
PHF	.000	.500	.250	.750	.417	.000	.000	.417	.000	.417	.400	.650	.250	.250	.000	.500	

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

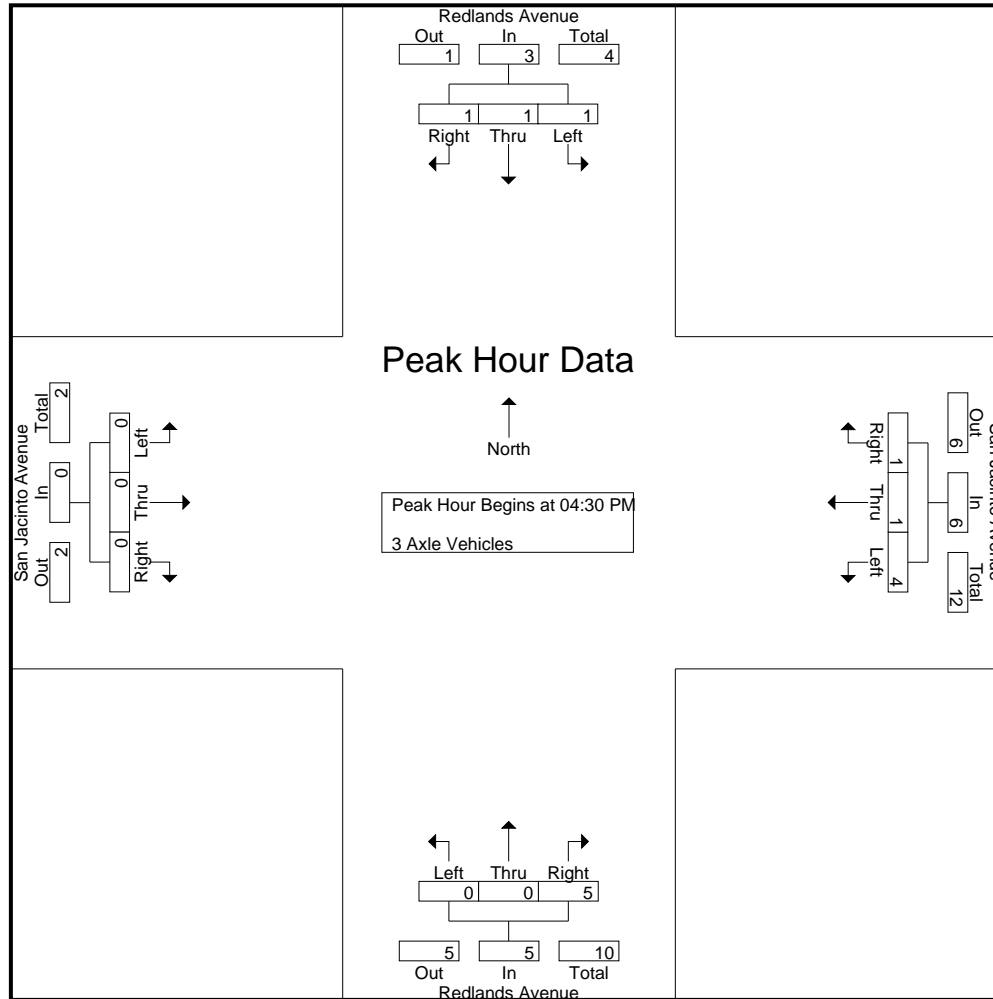
Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	2	2	2	1	0	0	0	1	0	0	2	0	2	0	0	1	1	1	3	6	9
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	2	1	3	0	0	0	0	0	1	4	5
04:30 PM	0	0	1	1	1	0	0	0	0	0	0	0	4	2	4	0	0	0	0	0	3	5	8
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	2	3	3	5	1	0	0	0	1	0	1	8	3	9	0	0	1	1	1	7	16	23
05:00 PM	0	0	0	0	0	3	1	1	1	5	0	0	1	1	1	0	0	0	0	0	2	6	8
05:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	1	0	0	0	1	5	1	1	1	7	0	0	1	1	1	0	0	0	0	0	2	9	11
Grand Total	1	2	3	3	6	6	1	1	1	8	0	1	9	4	10	0	0	1	1	1	9	25	34
Apprch %	16.7	33.3	50			75	12.5	12.5			0	10	90			0	0	100					
Total %	4	8	12		24	24	4	4		32	0	4	36		40	0	0	4		4	26.5	73.5	

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	1	1	0	0	0	0	0	0	4	4	0	0	0	0	5
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	3	1	1	5	0	0	1	1	0	0	0	0	6
05:15 PM	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Total Volume	1	1	1	3	4	1	1	6	0	0	5	5	0	0	0	0	14
% App. Total	33.3	33.3	33.3		66.7	16.7	16.7		0	0	100		0	0	0		
PHF	.250	.250	.250	.750	.333	.250	.250	.300	.000	.000	.313	.313	.000	.000	.000	.000	.583

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	0	1	1	0	0	0	0	0	0	4	4	0	0	0	0	
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	3	1	1	5	0	0	1	1	0	0	0	0	
+45 mins.	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	
Total Volume	1	1	1	3	4	1	1	6	0	0	5	5	0	0	0	0	
% App. Total	33.3	33.3	33.3		66.7	16.7	16.7		0	0	100		0	0	0		
PHF	.250	.250	.250	.750	.333	.250	.250	.300	.000	.000	.313	.313	.000	.000	.000	.000	

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

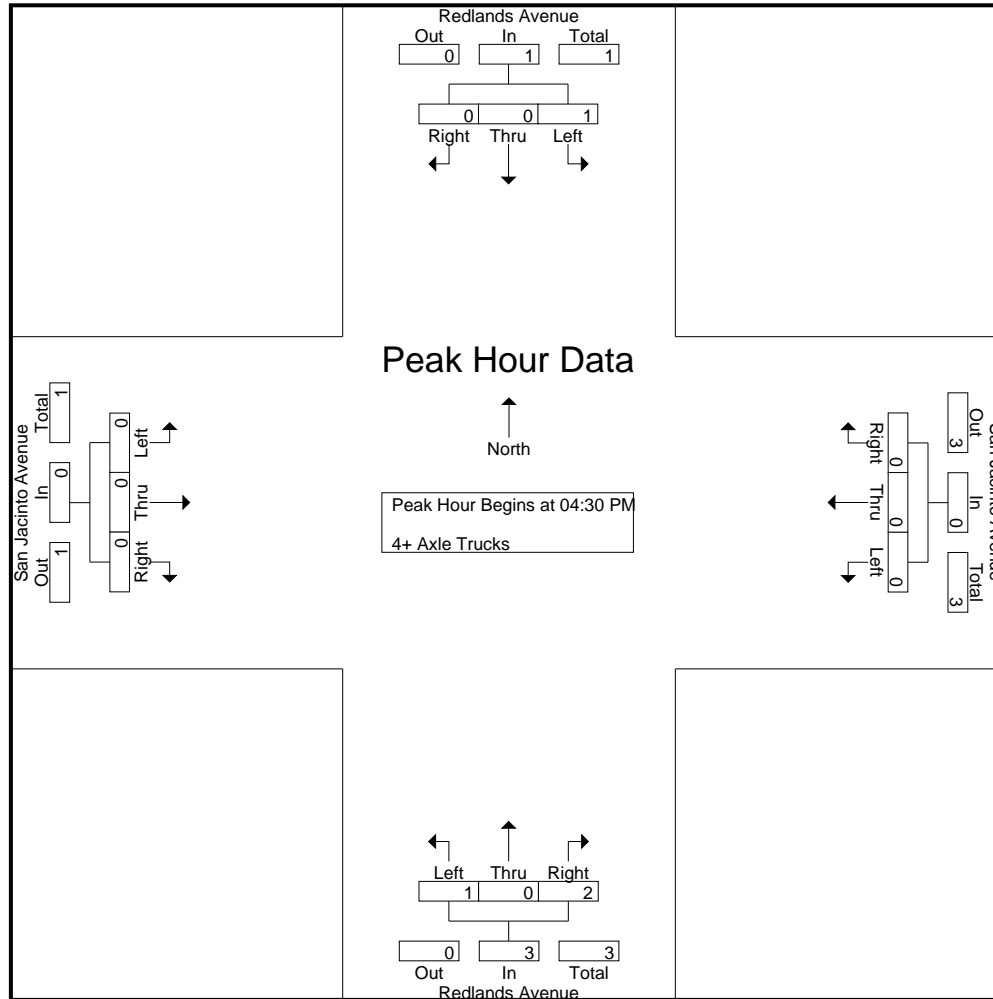
Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					San Jacinto Avenue Westbound					Redlands Avenue Northbound					San Jacinto Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	2	0	0	0	2	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	1	4	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
05:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	1	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	3	4
Grand Total	1	0	0	0	1	2	0	0	0	2	1	0	3	2	4	0	0	0	0	0	0	0	0	0	0	2	7	9
Apprch %	100	0	0			100	0	0			25	0	75			0	0	0										
Total %	14.3	0	0		14.3	28.6	0	0		28.6	14.3	0	42.9		57.1	0	0	0		0						22.2	77.8	

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	1	0	0	0	0	1	0	2	3	0	0	0	0	4
% App. Total	100	0	0		0	0	0		33.3	0	66.7		0	0	0		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.250	.000	.500	.750	.000	.000	.000	.000	1.00

City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue  
 Weather: Clear

File Name : 03\_PER\_Red\_San J PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+45 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	0	0	1	0	2	3	0	0	0	0	0
% App. Total	100	0	0		0	0	0		33.3	0	66.7		0	0	0		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.250	.000	.500	.750	.000	.000	.000	.000	.000



Location: Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue



Date: 1/12/2021  
 Day: Tuesday

**PEDESTRIANS**

	North Leg Redlands Avenue	East Leg San Jacinto Avenue	South Leg Redlands Avenue	West Leg San Jacinto Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

	North Leg Redlands Avenue	East Leg San Jacinto Avenue	South Leg Redlands Avenue	West Leg San Jacinto Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

Location: Perris  
 N/S: Redlands Avenue  
 E/W: San Jacinto Avenue



Date: 1/12/2021  
 Day: Tuesday

BICYCLES

	Southbound Redlands Avenue			Westbound San Jacinto Avenue			Northbound Redlands Avenue			Eastbound San Jacinto Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Redlands Avenue			Westbound San Jacinto Avenue			Northbound Redlands Avenue			Eastbound San Jacinto Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	1	0	1	0	0	0	0	3

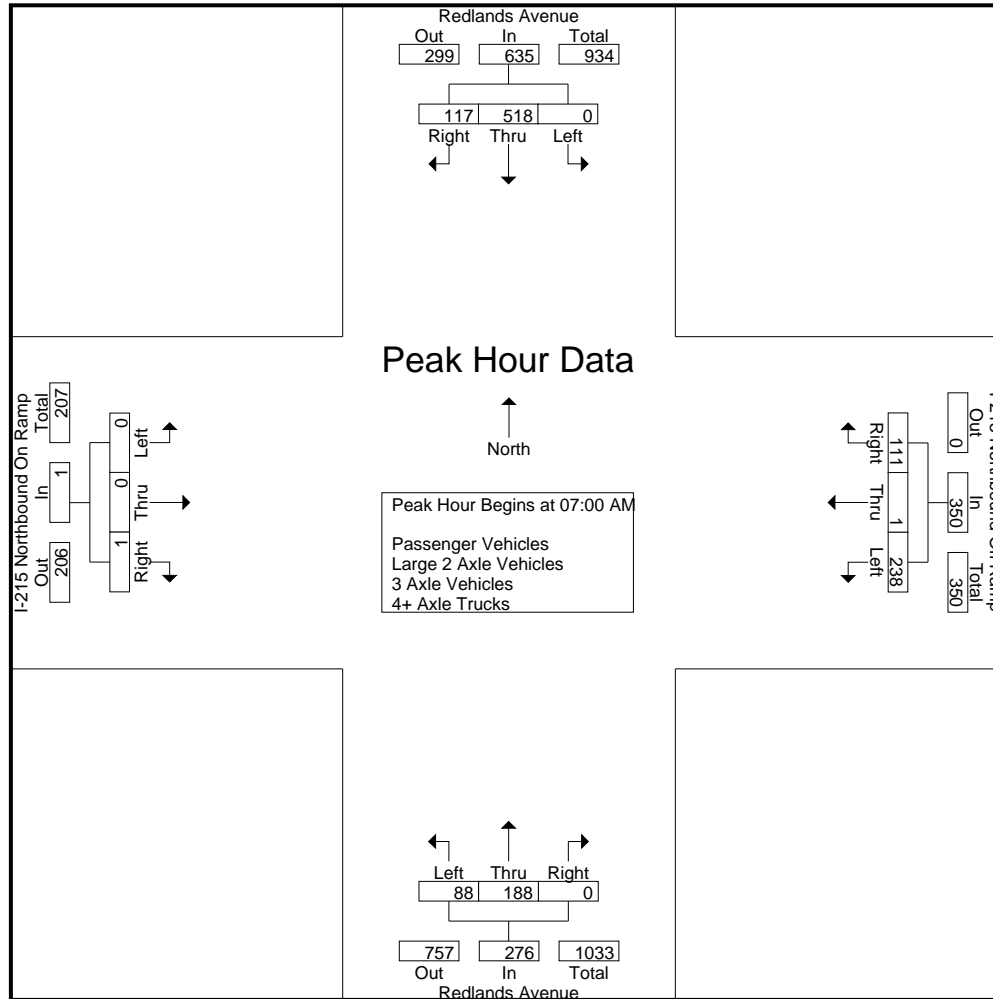
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	115	32	15	147	54	0	23	17	77	22	43	0	0	65	0	0	0	0	0	32	289	321
07:15 AM	0	118	35	22	153	61	0	25	19	86	22	39	0	0	61	0	0	0	0	0	41	300	341
07:30 AM	0	143	28	13	171	53	1	30	20	84	23	38	0	0	61	0	0	1	1	1	34	317	351
07:45 AM	0	142	22	8	164	70	0	33	24	103	21	68	0	0	89	0	0	0	0	0	32	356	388
Total	0	518	117	58	635	238	1	111	80	350	88	188	0	0	276	0	0	1	1	1	139	1262	1401
08:00 AM	0	94	23	8	117	60	0	32	26	92	28	48	0	0	76	0	0	0	0	0	34	285	319
08:15 AM	0	105	28	6	133	47	1	14	7	62	28	42	1	0	71	0	0	1	1	1	14	267	281
08:30 AM	0	111	23	9	134	54	0	31	25	85	28	54	0	0	82	0	0	2	2	2	36	303	339
08:45 AM	0	110	16	4	126	58	0	25	17	83	25	52	0	0	77	0	0	2	2	2	23	288	311
Total	0	420	90	27	510	219	1	102	75	322	109	196	1	0	306	0	0	5	5	5	107	1143	1250
Grand Total	0	938	207	85	1145	457	2	213	155	672	197	384	1	0	582	0	0	6	6	6	246	2405	2651
Apprch %	0	81.9	18.1			68	0.3	31.7			33.8	66	0.2			0	0	100					
Total %	0	39	8.6		47.6	19	0.1	8.9		27.9	8.2	16	0		24.2	0	0	0.2		0.2	9.3	90.7	
Passenger Vehicles	0	908	205		1198	399	2	210		765	155	351	0		506	0	0	0		0	0	0	2469
% Passenger Vehicles	0	96.8	99	100	97.4	87.3	100	98.6	99.4	92.5	78.7	91.4	0	0	86.9	0	0	0	0	0	0	0	93.1
Large 2 Axle Vehicles	0	16	1		17	44	0	2		47	19	22	1		42	0	0	0		0	0	0	106
% Large 2 Axle Vehicles	0	1.7	0.5	0	1.4	9.6	0	0.9	0.6	5.7	9.6	5.7	100	0	7.2	0	0	0	0	0	0	0	4
3 Axle Vehicles	0	7	0		7	7	0	1		8	2	6	0		8	0	0	6		12	0	0	35
% 3 Axle Vehicles	0	0.7	0	0	0.6	1.5	0	0.5	0	1	1	1.6	0	0	1.4	0	0	100	100	100	0	0	1.3
4+ Axle Trucks	0	7	1		8	7	0	0		7	21	5	0		26	0	0	0		0	0	0	41
% 4+ Axle Trucks	0	0.7	0.5	0	0.7	1.5	0	0	0	0.8	10.7	1.3	0	0	4.5	0	0	0	0	0	0	0	1.5

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	115	32	147	54	0	23	77	22	43	0	65	0	0	0	0	289
07:15 AM	0	118	35	153	61	0	25	86	22	39	0	61	0	0	0	0	300
07:30 AM	0	143	28	171	53	1	30	84	23	38	0	61	0	0	1	1	317
07:45 AM	0	142	22	164	70	0	33	103	21	68	0	89	0	0	0	0	356
Total Volume	0	518	117	635	238	1	111	350	88	188	0	276	0	0	1	1	1262
% App. Total	0	81.6	18.4		68	0.3	31.7		31.9	68.1	0		0	0	100		
PHF	.000	.906	.836	.928	.850	.250	.841	.850	.957	.691	.000	.775	.000	.000	.250	.250	.886



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:15 AM				07:45 AM				08:00 AM				
+0 mins.	0	115	32	147	61	0	25	86	21	<b>68</b>	0	<b>89</b>	0	0	0	0	
+15 mins.	0	118	<b>35</b>	153	53	<b>1</b>	30	84	<b>28</b>	48	0	76	0	0	1	1	
+30 mins.	0	<b>143</b>	28	<b>171</b>	<b>70</b>	0	<b>33</b>	<b>103</b>	28	42	<b>1</b>	71	0	0	<b>2</b>	<b>2</b>	
+45 mins.	0	142	22	164	60	0	32	92	28	54	0	82	0	0	2	2	
Total Volume	0	518	117	635	244	1	120	365	105	212	1	318	0	0	5	5	
% App. Total	0	81.6	18.4		66.8	0.3	32.9		33	66.7	0.3		0	0	100		
PHF	.000	.906	.836	.928	.871	.250	.909	.886	.938	.779	.250	.893	.000	.000	.625	.625	

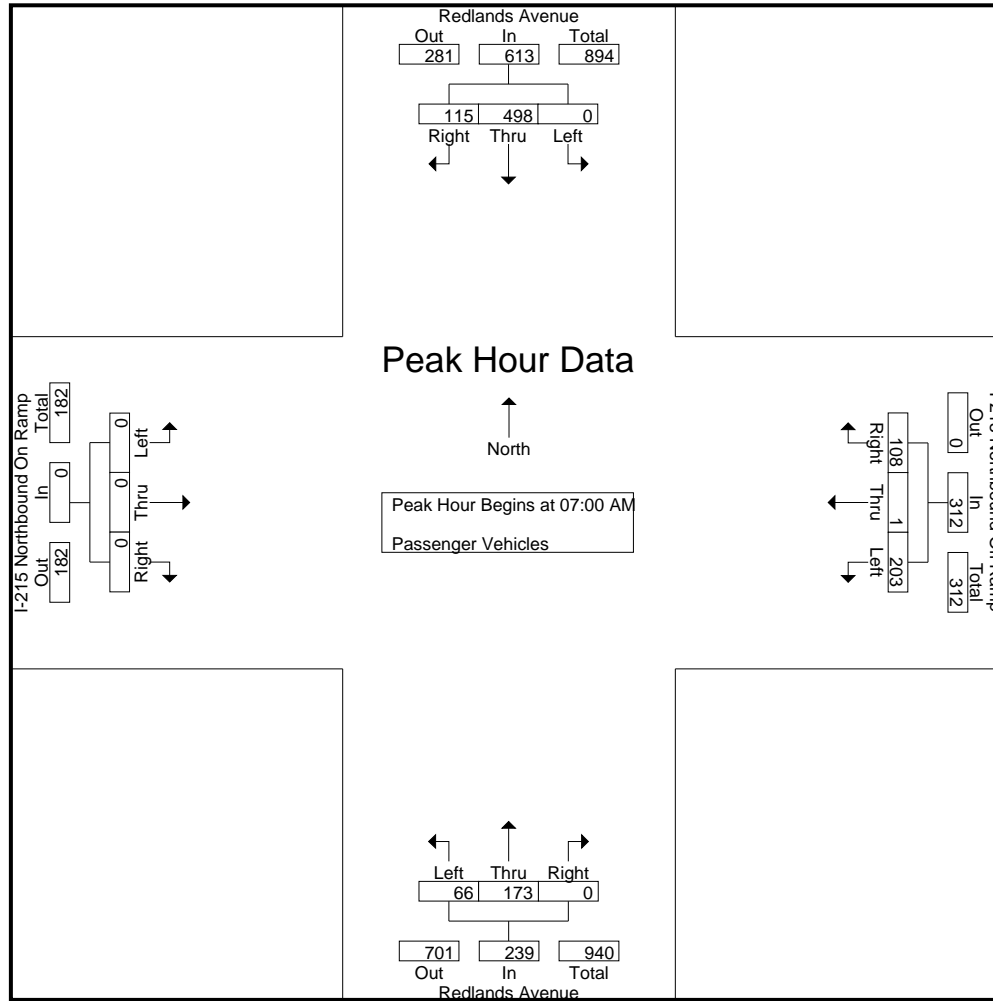
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	108	31	15	139	43	0	22	16	65	16	38	0	0	54	0	0	0	0	0	31	258	289
07:15 AM	0	114	35	22	149	55	0	25	19	80	17	37	0	0	54	0	0	0	0	0	41	283	324
07:30 AM	0	139	27	13	166	45	1	28	20	74	17	35	0	0	52	0	0	0	0	0	33	292	325
07:45 AM	0	137	22	8	159	60	0	33	24	93	16	63	0	0	79	0	0	0	0	0	32	331	363
Total	0	498	115	58	613	203	1	108	79	312	66	173	0	0	239	0	0	0	0	0	137	1164	1301
08:00 AM	0	92	23	8	115	51	0	32	26	83	20	45	0	0	65	0	0	0	0	0	34	263	297
08:15 AM	0	103	28	6	131	45	1	14	7	60	24	34	0	0	58	0	0	0	0	0	13	249	262
08:30 AM	0	110	23	9	133	46	0	31	25	77	23	49	0	0	72	0	0	0	0	0	34	282	316
08:45 AM	0	105	16	4	121	54	0	25	17	79	22	50	0	0	72	0	0	0	0	0	21	272	293
Total	0	410	90	27	500	196	1	102	75	299	89	178	0	0	267	0	0	0	0	0	102	1066	1168
Grand Total	0	908	205	85	1113	399	2	210	154	611	155	351	0	0	506	0	0	0	0	0	239	2230	2469
Apprch %	0	81.6	18.4			65.3	0.3	34.4			30.6	69.4	0	0		0	0	0					
Total %	0	40.7	9.2		49.9	17.9	0.1	9.4		27.4	7	15.7	0	0	22.7	0	0	0		0	9.7	90.3	

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	108	31	139	43	0	22	65	16	38	0	54	0	0	0	0	258
07:15 AM	0	114	35	149	55	0	25	80	17	37	0	54	0	0	0	0	283
07:30 AM	0	139	27	166	45	1	28	74	17	35	0	52	0	0	0	0	292
07:45 AM	0	137	22	159	60	0	33	93	16	63	0	79	0	0	0	0	331
Total Volume	0	498	115	613	203	1	108	312	66	173	0	239	0	0	0	0	1164
% App. Total	0	81.2	18.8		65.1	0.3	34.6		27.6	72.4	0		0	0	0		
PHF	.000	.896	.821	.923	.846	.250	.818	.839	.971	.687	.000	.756	.000	.000	.000	.000	.879



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	108	31	139	43	0	22	65	16	38	0	54	0	0	0	0	
+15 mins.	0	114	35	149	55	0	25	80	17	37	0	54	0	0	0	0	
+30 mins.	0	139	27	166	45	1	28	74	17	35	0	52	0	0	0	0	
+45 mins.	0	137	22	159	60	0	33	93	16	63	0	79	0	0	0	0	
Total Volume	0	498	115	613	203	1	108	312	66	173	0	239	0	0	0	0	
% App. Total	0	81.2	18.8		65.1	0.3	34.6		27.6	72.4	0		0	0	0		
PHF	.000	.896	.821	.923	.846	.250	.818	.839	.971	.687	.000	.756	.000	.000	.000	.000	



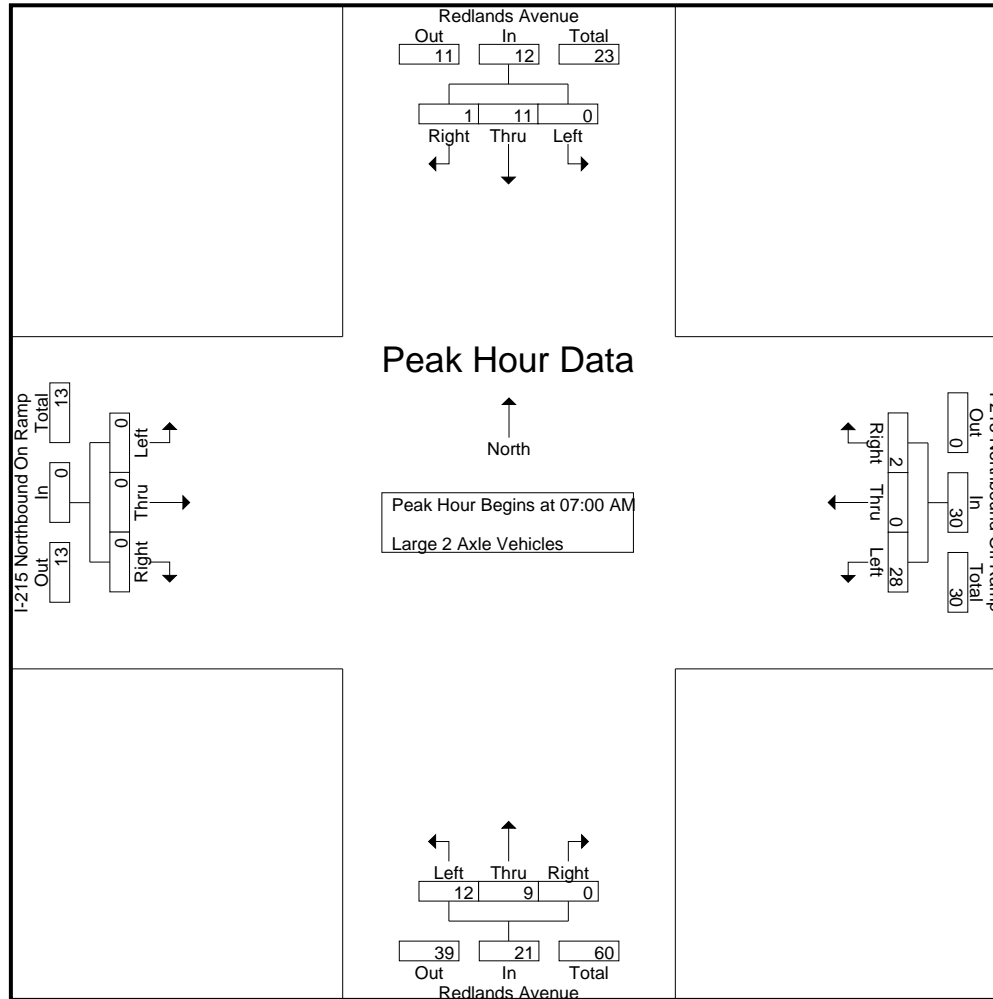
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	4	1	0	5	8	0	1	1	9	4	3	0	0	7	0	0	0	0	0	1	21	22
07:15 AM	0	3	0	0	3	5	0	0	0	5	4	1	0	0	5	0	0	0	0	0	0	13	13
07:30 AM	0	1	0	0	1	5	0	1	0	6	3	1	0	0	4	0	0	0	0	0	0	11	11
07:45 AM	0	3	0	0	3	10	0	0	0	10	1	4	0	0	5	0	0	0	0	0	0	18	18
Total	0	11	1	0	12	28	0	2	1	30	12	9	0	0	21	0	0	0	0	0	1	63	64
08:00 AM	0	0	0	0	0	7	0	0	0	7	4	2	0	0	6	0	0	0	0	0	0	13	13
08:15 AM	0	2	0	0	2	1	0	0	0	1	0	6	1	0	7	0	0	0	0	0	0	10	10
08:30 AM	0	0	0	0	0	5	0	0	0	5	3	4	0	0	7	0	0	0	0	0	0	12	12
08:45 AM	0	3	0	0	3	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	0	7	7
Total	0	5	0	0	5	16	0	0	0	16	7	13	1	0	21	0	0	0	0	0	0	42	42
Grand Total	0	16	1	0	17	44	0	2	1	46	19	22	1	0	42	0	0	0	0	0	1	105	106
Apprch %	0	94.1	5.9			95.7	0	4.3			45.2	52.4	2.4			0	0	0					
Total %	0	15.2	1		16.2	41.9	0	1.9		43.8	18.1	21	1		40	0	0	0		0	0.9	99.1	

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	4	1	5	8	0	1	9	4	3	0	7	0	0	0	0	21
07:15 AM	0	3	0	3	5	0	0	5	4	1	0	5	0	0	0	0	13
07:30 AM	0	1	0	1	5	0	1	6	3	1	0	4	0	0	0	0	11
07:45 AM	0	3	0	3	10	0	0	10	1	4	0	5	0	0	0	0	18
Total Volume	0	11	1	12	28	0	2	30	12	9	0	21	0	0	0	0	63
% App. Total	0	91.7	8.3		93.3	0	6.7		57.1	42.9	0		0	0	0		
PHF	.000	.688	.250	.600	.700	.000	.500	.750	.750	.563	.000	.750	.000	.000	.000	.000	.750



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	4	1	5	8	0	1	9	4	3	0	7	0	0	0	0	
+15 mins.	0	3	0	3	5	0	0	5	4	1	0	5	0	0	0	0	
+30 mins.	0	1	0	1	5	0	1	6	3	1	0	4	0	0	0	0	
+45 mins.	0	3	0	3	10	0	0	10	1	4	0	5	0	0	0	0	
Total Volume	0	11	1	12	28	0	2	30	12	9	0	21	0	0	0	0	
% App. Total	0	91.7	8.3		93.3	0	6.7		57.1	42.9	0		0	0	0		
PHF	.000	.688	.250	.600	.700	.000	.500	.750	.750	.563	.000	.750	.000	.000	.000	.000	

City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

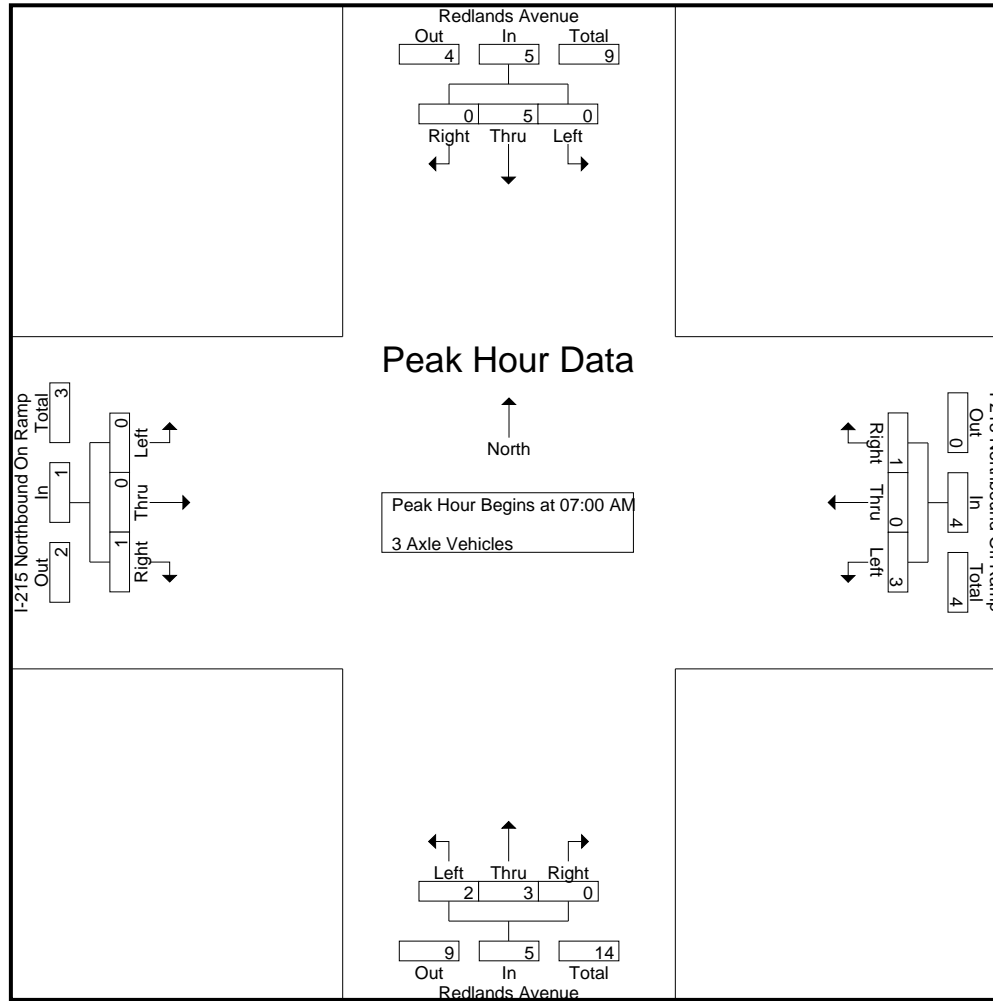
Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
07:00 AM	0	2	0	0	2	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	6	6
07:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	2	0	0	2	0	0	1	0	1	1	1	0	0	2	0	0	1	1	1	1	1	1	1	1	1	6	7
07:45 AM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	5	0	0	5	3	0	1	0	4	2	3	0	0	5	0	0	1	1	1	1	1	1	1	1	1	15	16
08:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	1	1	1	1	1	1	1	1	1	3	4
08:30 AM	0	0	0	0	0	3	0	0	0	3	0	1	0	0	1	0	0	2	2	2	2	2	2	2	2	2	6	8
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	2	2	2	2	2	2	2	2	3	5
Total	0	2	0	0	2	4	0	0	0	4	0	3	0	0	3	0	0	5	5	5	5	5	5	5	5	5	14	19
Grand Total	0	7	0	0	7	7	0	1	0	8	2	6	0	0	8	0	0	6	6	6	6	6	6	6	6	6	29	35
Apprch %	0	100	0			87.5	0	12.5			25	75	0			0	0	100										
Total %	0	24.1	0		24.1	24.1	0	3.4		27.6	6.9	20.7	0		27.6	0	0	20.7		20.7						17.1	82.9	

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	2	0	2	2	0	0	2	0	2	0	2	0	0	0	0	6
07:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	2	0	2	0	0	1	1	1	1	0	2	0	0	1	1	6
07:45 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
Total Volume	0	5	0	5	3	0	1	4	2	3	0	5	0	0	1	1	15
% App. Total	0	100	0		75	0	25		40	60	0		0	0	100		
PHF	.000	.625	.000	.625	.375	.000	.250	.500	.500	.375	.000	.625	.000	.000	.250	.250	.625

City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	2	0	2	2	0	0	2	0	2	0	2	0	0	0	0	
+15 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	
+30 mins.	0	2	0	2	0	0	1	1	1	1	0	2	0	0	1	1	
+45 mins.	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	
Total Volume	0	5	0	5	3	0	1	4	2	3	0	5	0	0	1	1	
% App. Total	0	100	0		75	0	25		40	60	0		0	0	100		
PHF	.000	.625	.000	.625	.375	.000	.250	.500	.500	.375	.000	.625	.000	.000	.250	.250	

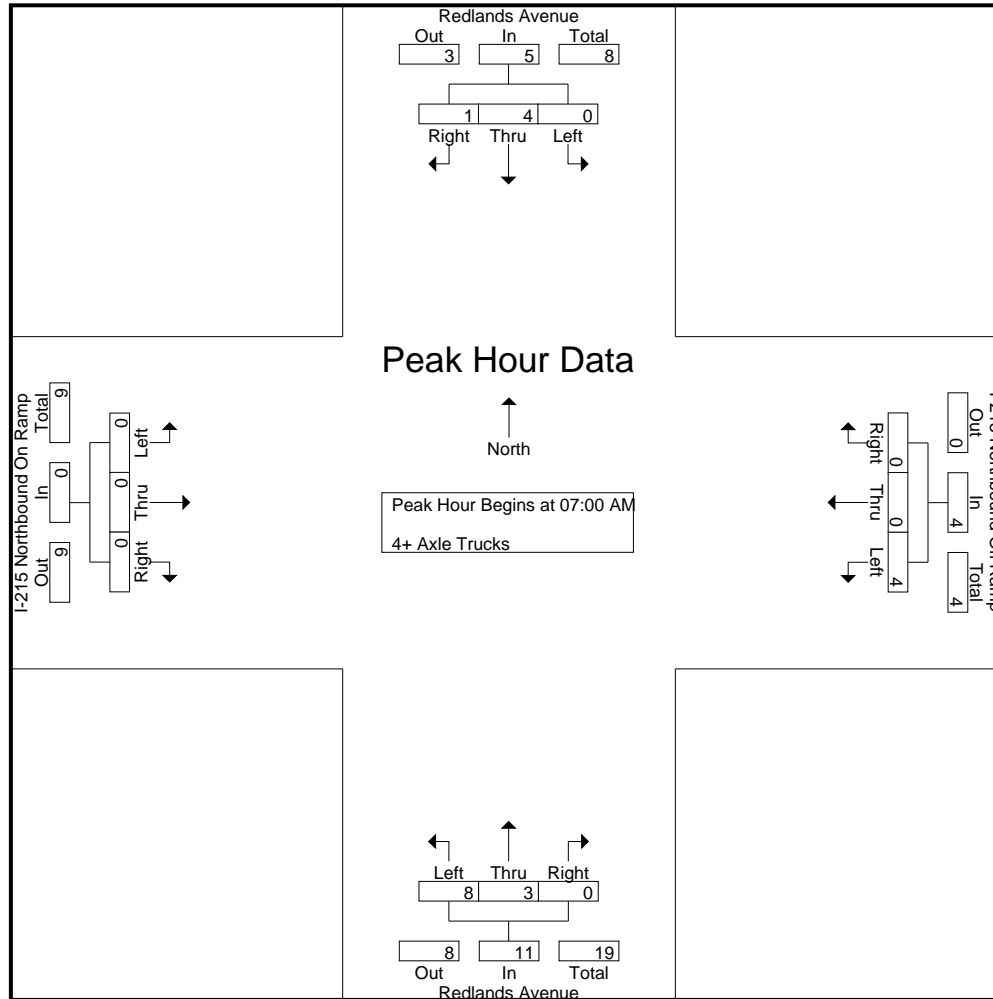
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	1	0	0	1	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	4	4
07:15 AM	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	3	3
07:30 AM	0	1	1	0	2	3	0	0	0	3	2	1	0	0	3	0	0	0	0	0	0	0	8	8
07:45 AM	0	1	0	0	1	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5	5
Total	0	4	1	0	5	4	0	0	0	4	8	3	0	0	11	0	0	0	0	0	0	0	20	20
08:00 AM	0	0	0	0	0	2	0	0	0	2	4	1	0	0	5	0	0	0	0	0	0	0	7	7
08:15 AM	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	0	0	0	0	0	0	0	5	5
08:30 AM	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	3	3
08:45 AM	0	2	0	0	2	1	0	0	0	1	3	0	0	0	3	0	0	0	0	0	0	0	6	6
Total	0	3	0	0	3	3	0	0	0	3	13	2	0	0	15	0	0	0	0	0	0	0	21	21
Grand Total	0	7	1	0	8	7	0	0	0	7	21	5	0	0	26	0	0	0	0	0	0	0	41	41
Apprch %	0	87.5	12.5			100	0	0			80.8	19.2	0			0	0	0			0	0		
Total %	0	17.1	2.4		19.5	17.1	0	0		17.1	51.2	12.2	0		63.4	0	0	0		0	0	0	100	

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	1	0	0	1	2	0	0	2	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	0
07:30 AM	0	1	1	2	3	0	0	3	2	1	0	3	0	0	0	0	8
07:45 AM	0	1	0	1	0	0	0	0	3	1	0	4	0	0	0	0	5
Total Volume	0	4	1	5	4	0	0	4	8	3	0	11	0	0	0	0	20
% App. Total	0	80	20		100	0	0		72.7	27.3	0		0	0	0		
PHF	.000	1.00	.250	.625	.333	.000	.000	.333	.667	.750	.000	.688	.000	.000	.000	.000	.625





City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	0	1	1	0	0	1	2	0	0	2	0	0	0	0	
+15 mins.	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	
+30 mins.	0	1	1	2	3	0	0	3	2	1	0	3	0	0	0	0	
+45 mins.	0	1	0	1	0	0	0	0	3	1	0	4	0	0	0	0	
Total Volume	0	4	1	5	4	0	0	4	8	3	0	11	0	0	0	0	
% App. Total	0	80	20		100	0	0		72.7	27.3	0		0	0	0		
PHF	.000	1.000	.250	.625	.333	.000	.000	.333	.667	.750	.000	.688	.000	.000	.000	.000	

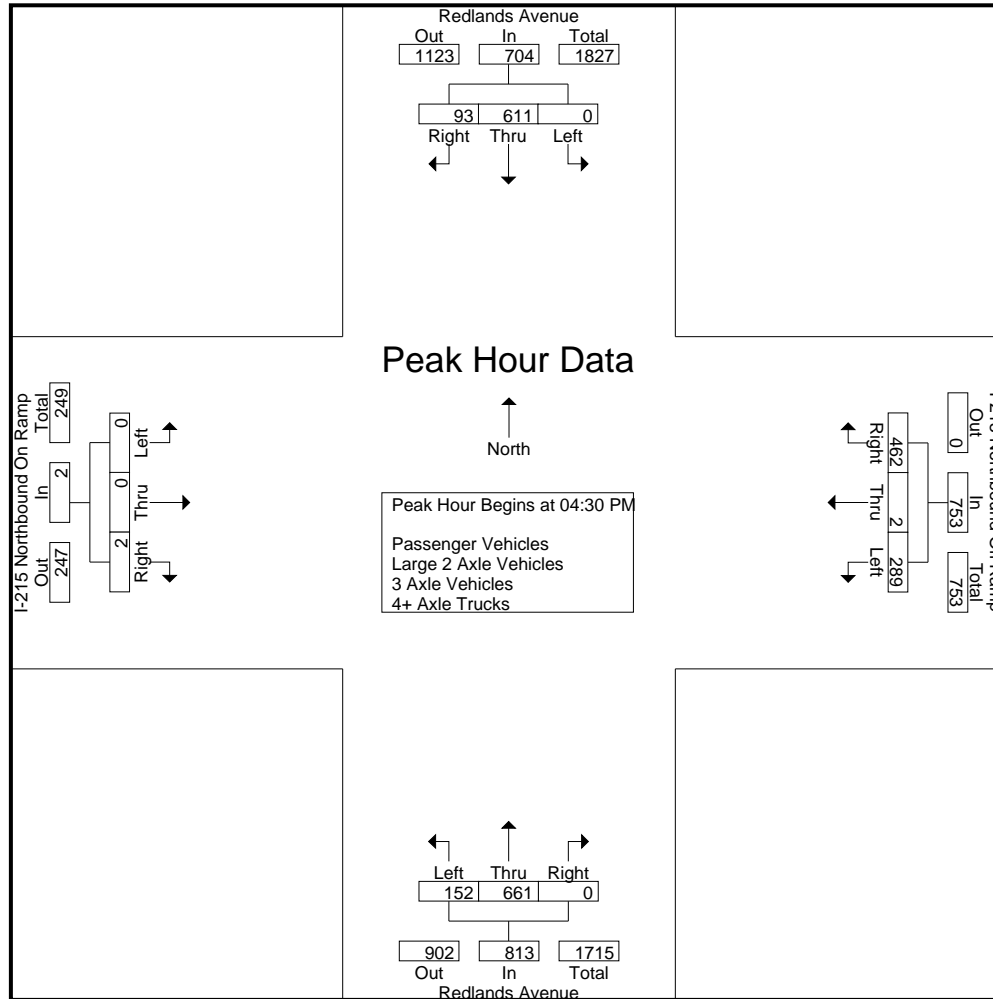
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	143	11	5	154	92	0	110	54	202	27	139	0	0	166	0	0	1	1	1	60	523	583
04:15 PM	0	144	16	3	160	73	0	113	47	186	30	152	0	0	182	0	0	0	0	0	50	528	578
04:30 PM	0	175	20	7	195	80	0	124	49	204	39	179	0	0	218	0	0	0	0	0	56	617	673
04:45 PM	0	154	17	2	171	80	1	116	50	197	38	164	0	0	202	0	0	0	0	0	52	570	622
Total	0	616	64	17	680	325	1	463	200	789	134	634	0	0	768	0	0	1	1	1	218	2238	2456
05:00 PM	0	144	31	10	175	50	0	95	52	145	42	175	0	0	217	0	0	2	2	2	64	539	603
05:15 PM	0	138	25	6	163	79	1	127	58	207	33	143	0	0	176	0	0	0	0	0	64	546	610
05:30 PM	0	137	20	5	157	85	1	103	46	189	33	145	0	0	178	0	0	0	0	0	51	524	575
05:45 PM	0	102	25	8	127	78	0	110	61	188	34	149	0	0	183	0	0	0	0	0	69	498	567
Total	0	521	101	29	622	292	2	435	217	729	142	612	0	0	754	0	0	2	2	2	248	2107	2355
Grand Total	0	1137	165	46	1302	617	3	898	417	1518	276	1246	0	0	1522	0	0	3	3	3	466	4345	4811
Apprch %	0	87.3	12.7			40.6	0.2	59.2			18.1	81.9	0			0	0	100					
Total %	0	26.2	3.8		30	14.2	0.1	20.7		34.9	6.4	28.7	0		35	0	0	0.1		0.1	9.7	90.3	
Passenger Vehicles	0	1110	164		1320	591	3	887		1895	258	1222	0		1480	0	0	0		0	0	0	4695
% Passenger Vehicles	0	97.6	99.4	100	97.9	95.8	100	98.8	99.3	97.9	93.5	98.1	0	0	97.2	0	0	0	0	0	0	0	97.6
Large 2 Axle Vehicles	0	17	0		17	21	0	9		32	15	15	0		30	0	0	0		0	0	0	79
% Large 2 Axle Vehicles	0	1.5	0	0	1.3	3.4	0	1	0.5	1.7	5.4	1.2	0	0	2	0	0	0	0	0	0	0	1.6
3 Axle Vehicles	0	8	0		8	4	0	0		4	0	6	0		6	0	0	3		6	0	0	24
% 3 Axle Vehicles	0	0.7	0	0	0.6	0.6	0	0	0	0.2	0	0.5	0	0	0.4	0	0	100	100	100	0	0	0.5
4+ Axle Trucks	0	2	1		3	1	0	2		4	3	3	0		6	0	0	0		0	0	0	13
% 4+ Axle Trucks	0	0.2	0.6	0	0.2	0.2	0	0.2	0.2	0.2	1.1	0.2	0	0	0.4	0	0	0	0	0	0	0	0.3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	175	20	195	80	0	124	204	39	179	0	218	0	0	0	0	617
04:45 PM	0	154	17	171	80	1	116	197	38	164	0	202	0	0	0	0	570
05:00 PM	0	144	31	175	50	0	95	145	42	175	0	217	0	0	2	2	539
05:15 PM	0	138	25	163	79	1	127	207	33	143	0	176	0	0	0	0	546
Total Volume	0	611	93	704	289	2	462	753	152	661	0	813	0	0	2	2	2272
% App. Total	0	86.8	13.2		38.4	0.3	61.4		18.7	81.3	0		0	0	100		
PHF	.000	.873	.750	.903	.903	.500	.909	.909	.905	.923	.000	.932	.000	.000	.250	.250	.921



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:00 PM				04:15 PM				04:15 PM				
+0 mins.	0	175	20	195	92	0	110	202	30	152	0	182	0	0	0	0	
+15 mins.	0	154	17	171	73	0	113	186	39	179	0	218	0	0	0	0	
+30 mins.	0	144	31	175	80	0	124	204	38	164	0	202	0	0	0	0	
+45 mins.	0	138	25	163	80	1	116	197	42	175	0	217	0	0	2	2	
Total Volume	0	611	93	704	325	1	463	789	149	670	0	819	0	0	2	2	
% App. Total	0	86.8	13.2		41.2	0.1	58.7		18.2	81.8	0		0	0	100		
PHF	.000	.873	.750	.903	.883	.250	.933	.967	.887	.936	.000	.939	.000	.000	.250	.250	

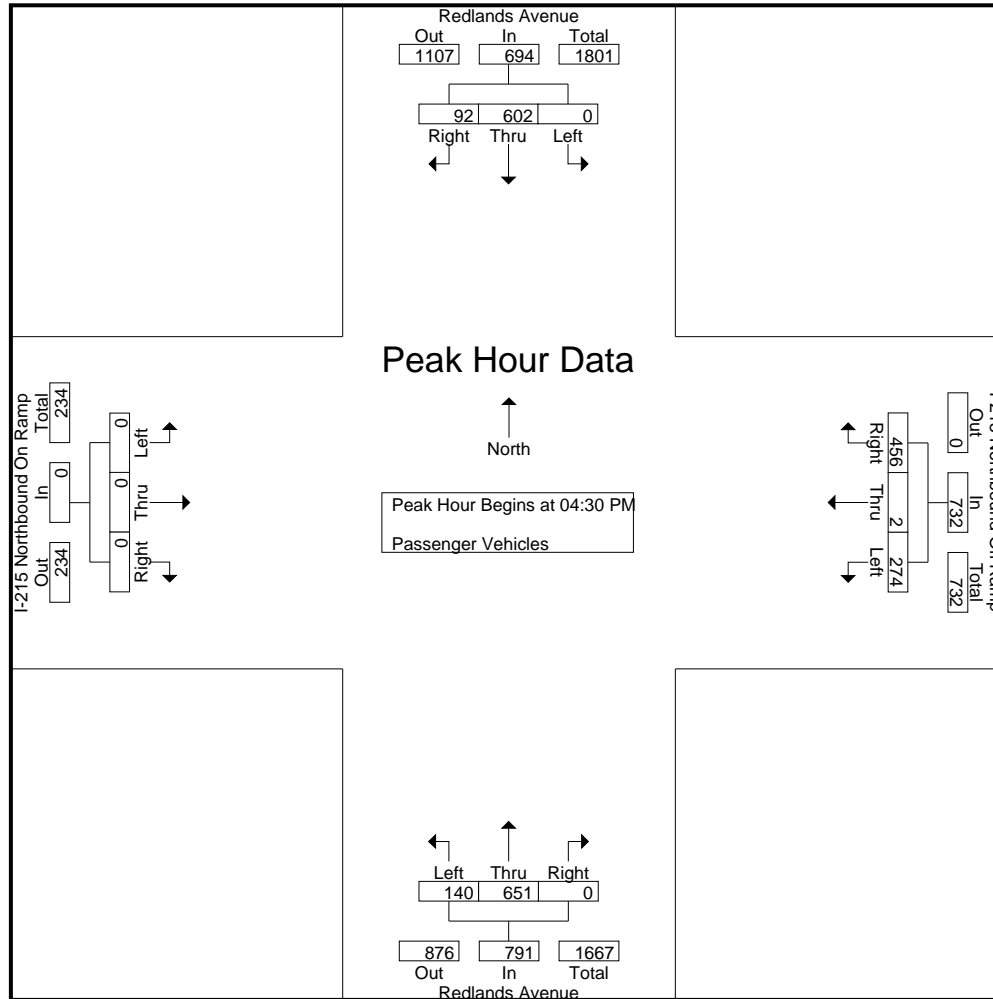
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	137	11	5	148	90	0	110	54	200	25	136	0	0	161	0	0	0	0	0	59	509	568
04:15 PM	0	142	16	3	158	71	0	110	46	181	29	149	0	0	178	0	0	0	0	0	49	517	566
04:30 PM	0	173	20	7	193	73	0	122	49	195	36	174	0	0	210	0	0	0	0	0	56	598	654
04:45 PM	0	153	16	2	169	76	1	114	49	191	36	163	0	0	199	0	0	0	0	0	51	559	610
Total	0	605	63	17	668	310	1	456	198	767	126	622	0	0	748	0	0	0	0	0	215	2183	2398
05:00 PM	0	142	31	10	173	48	0	94	51	142	38	171	0	0	209	0	0	0	0	0	61	524	585
05:15 PM	0	134	25	6	159	77	1	126	58	204	30	143	0	0	173	0	0	0	0	0	64	536	600
05:30 PM	0	133	20	5	153	83	1	101	46	185	32	141	0	0	173	0	0	0	0	0	51	511	562
05:45 PM	0	96	25	8	121	73	0	110	61	183	32	145	0	0	177	0	0	0	0	0	69	481	550
Total	0	505	101	29	606	281	2	431	216	714	132	600	0	0	732	0	0	0	0	0	245	2052	2297
Grand Total	0	1110	164	46	1274	591	3	887	414	1481	258	1222	0	0	1480	0	0	0	0	0	460	4235	4695
Apprch %	0	87.1	12.9			39.9	0.2	59.9			17.4	82.6	0			0	0	0					
Total %	0	26.2	3.9		30.1	14	0.1	20.9		35	6.1	28.9	0		34.9	0	0	0		0	9.8	90.2	

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	173	20	193	73	0	122	195	36	174	0	210	0	0	0	0	598
04:45 PM	0	153	16	169	76	1	114	191	36	163	0	199	0	0	0	0	559
05:00 PM	0	142	31	173	48	0	94	142	38	171	0	209	0	0	0	0	524
05:15 PM	0	134	25	159	77	1	126	204	30	143	0	173	0	0	0	0	536
Total Volume	0	602	92	694	274	2	456	732	140	651	0	791	0	0	0	0	2217
% App. Total	0	86.7	13.3		37.4	0.3	62.3		17.7	82.3	0		0	0	0		
PHF	.000	.870	.742	.899	.890	.500	.905	.897	.921	.935	.000	.942	.000	.000	.000	.000	.927



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	<b>173</b>	20	<b>193</b>	73	0	122	195	36	<b>174</b>	0	<b>210</b>	0	0	0	0	
+15 mins.	0	153	16	169	76	1	114	191	36	163	0	199	0	0	0	0	
+30 mins.	0	142	<b>31</b>	173	48	0	94	142	<b>38</b>	171	0	209	0	0	0	0	
+45 mins.	0	134	25	159	<b>77</b>	1	<b>126</b>	<b>204</b>	30	143	0	173	0	0	0	0	
Total Volume	0	602	92	694	274	2	456	732	140	651	0	791	0	0	0	0	
% App. Total	0	86.7	13.3		37.4	0.3	62.3		17.7	82.3	0		0	0	0		
PHF	.000	.870	.742	.899	.890	.500	.905	.897	.921	.935	.000	.942	.000	.000	.000	.000	

City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

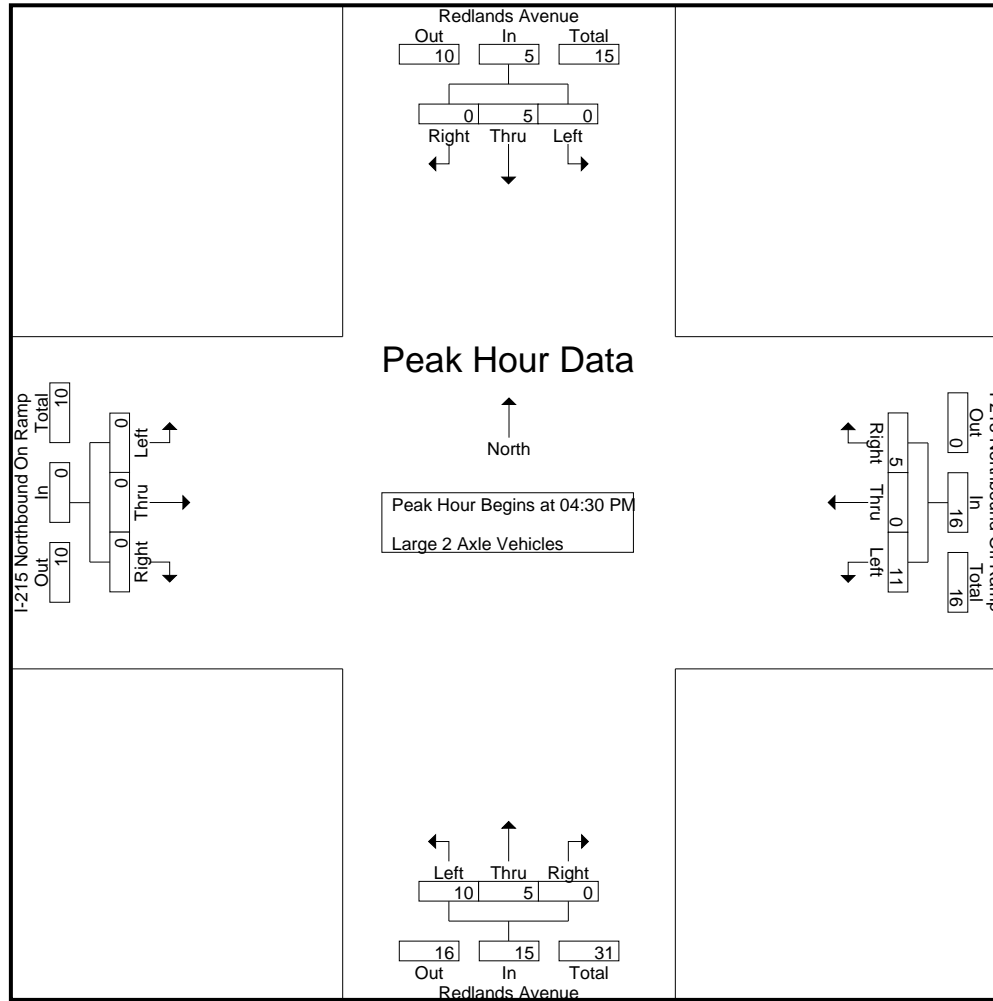
File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	3	0	0	3	2	0	0	0	2	2	1	0	0	3	0	0	0	0	0	0	8	8
04:15 PM	0	1	0	0	1	2	0	3	1	5	1	1	0	0	2	0	0	0	0	0	1	8	9
04:30 PM	0	2	0	0	2	5	0	2	0	7	3	1	0	0	4	0	0	0	0	0	0	13	13
04:45 PM	0	0	0	0	0	3	0	1	0	4	1	1	0	0	2	0	0	0	0	0	0	6	6
Total	0	6	0	0	6	12	0	6	1	18	7	4	0	0	11	0	0	0	0	0	1	35	36
05:00 PM	0	1	0	0	1	1	0	1	1	2	4	3	0	0	7	0	0	0	0	0	1	10	11
05:15 PM	0	2	0	0	2	2	0	1	0	3	2	0	0	0	2	0	0	0	0	0	0	7	7
05:30 PM	0	4	0	0	4	2	0	1	0	3	1	4	0	0	5	0	0	0	0	0	0	12	12
05:45 PM	0	4	0	0	4	4	0	0	0	4	1	4	0	0	5	0	0	0	0	0	0	13	13
Total	0	11	0	0	11	9	0	3	1	12	8	11	0	0	19	0	0	0	0	0	1	42	43
Grand Total	0	17	0	0	17	21	0	9	2	30	15	15	0	0	30	0	0	0	0	0	2	77	79
Apprch %	0	100	0			70	0	30			50	50	0			0	0	0					
Total %	0	22.1	0		22.1	27.3	0	11.7		39	19.5	19.5	0		39	0	0	0		0	2.5	97.5	

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	2	0	2	5	0	2	7	3	1	0	4	0	0	0	0	13
04:45 PM	0	0	0	0	3	0	1	4	1	1	0	2	0	0	0	0	6
05:00 PM	0	1	0	1	1	0	1	2	4	3	0	7	0	0	0	0	10
05:15 PM	0	2	0	2	2	0	1	3	2	0	0	2	0	0	0	0	7
Total Volume	0	5	0	5	11	0	5	16	10	5	0	15	0	0	0	0	36
% App. Total	0	100	0		68.8	0	31.2		66.7	33.3	0		0	0	0		
PHF	.000	.625	.000	.625	.550	.000	.625	.571	.625	.417	.000	.536	.000	.000	.000	.000	.692





City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	2	0	2	5	0	2	7	3	1	0	4	0	0	0	0	
+15 mins.	0	0	0	0	3	0	1	4	1	1	0	2	0	0	0	0	
+30 mins.	0	1	0	1	1	0	1	2	4	3	0	7	0	0	0	0	
+45 mins.	0	2	0	2	2	0	1	3	2	0	0	2	0	0	0	0	
Total Volume	0	5	0	5	11	0	5	16	10	5	0	15	0	0	0	0	
% App. Total	0	100	0		68.8	0	31.2		66.7	33.3	0		0	0	0		
PHF	.000	.625	.000	.625	.550	.000	.625	.571	.625	.417	.000	.536	.000	.000	.000	.000	

City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

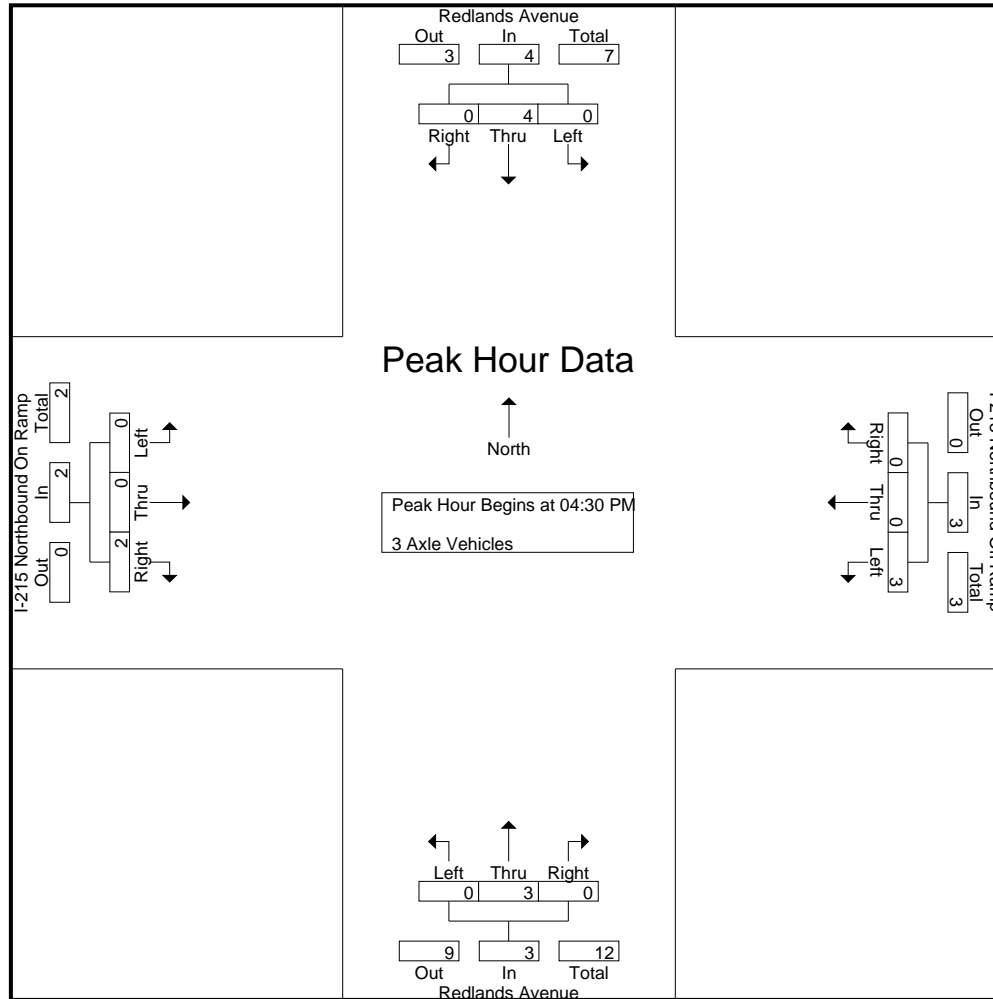
Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1	1	4	5
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	2	2
04:30 PM	0	0	0	0	0	2	0	0	0	2	0	3	0	0	3	0	0	0	0	0	0	5	5	5
04:45 PM	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	3	0	0	3	3	0	0	0	3	0	6	0	0	6	0	0	1	1	1	1	13	14	14
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	3	5	5
05:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	3	3
Total	0	5	0	0	5	1	0	0	0	1	0	0	0	0	0	0	0	2	2	2	2	8	10	10
Grand Total	0	8	0	0	8	4	0	0	0	4	0	6	0	0	6	0	0	3	3	3	3	21	24	24
Apprch %	0	100	0			100	0	0			0	100	0			0	0	100						
Total %	0	38.1	0		38.1	19	0	0		19	0	28.6	0		28.6	0	0	14.3		14.3	12.5	87.5		

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	2	0	0	2	0	3	0	3	0	0	0	0	5
04:45 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	3
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	4	0	4	3	0	0	3	0	3	0	3	0	0	2	2	12
% App. Total	0	100	0		100	0	0		0	100	0		0	0	100		
PHF	.000	.500	.000	.500	.375	.000	.000	.375	.000	.250	.000	.250	.000	.000	.250	.250	.600

City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	0	0	0	2	0	0	2	0	3	0	3	0	0	0	0	
+15 mins.	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	
+45 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	4	0	4	3	0	0	3	0	3	0	3	0	0	2	2	
% App. Total	0	100	0		100	0	0		0	100	0		0	0	100		
PHF	.000	.500	.000	.500	.375	.000	.000	.375	.000	.250	.000	.250	.000	.000	.250	.250	

City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

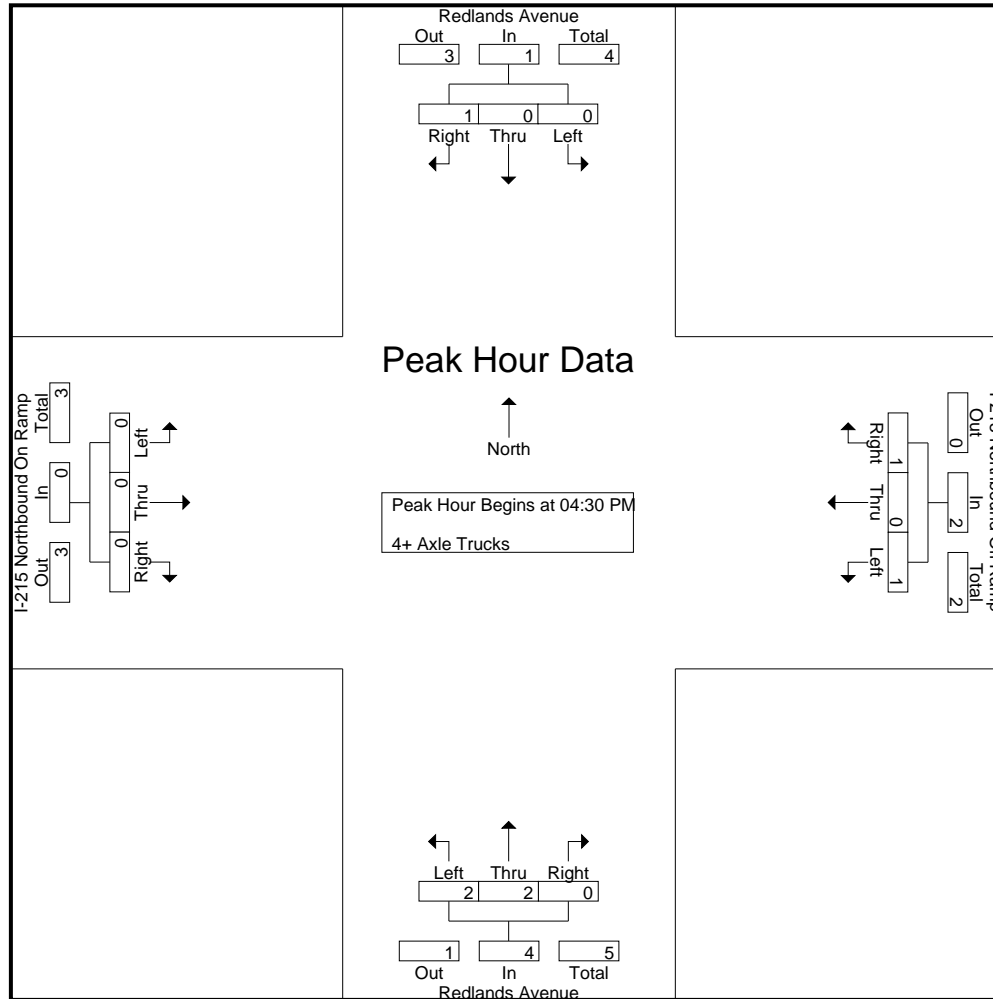
Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					I-215 Northbound Off Ramp Westbound					Redlands Avenue Northbound					I-215 Northbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
04:45 PM	0	0	1	0	1	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	4
Total	0	2	1	0	3	0	0	1	1	1	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	1	7	8
05:00 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	1	0	1	0	2	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	5	5
Grand Total	0	2	1	0	3	1	0	2	1	3	3	3	0	0	6	0	0	0	0	0	0	0	0	0	0	1	12	13
Apprch %	0	66.7	33.3			33.3	0	66.7			50	50	0			0	0	0			0	0	0					
Total %	0	16.7	8.3		25	8.3	0	16.7		25	25	25	0		50	0	0	0		0					0	7.7	92.3	

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	1	1	0	0	1	1	1	0	0	1	0	0	0	0	3
05:00 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	0	0	1	1	1	0	1	2	2	2	0	4	0	0	0	0	7
% App. Total	0	0	100		50	0	50		50	50	0		0	0	0		
PHF	.000	.000	.250	.250	.250	.000	.250	.500	.500	.500	.000	1.00	.000	.000	.000	.000	.583

City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 2



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps  
 Weather: Clear

File Name : 05\_PER\_Red\_215N PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	
+15 mins.	0	0	1	1	0	0	1	1	1	0	0	1	0	0	0	0	
+30 mins.	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	
Total Volume	0	0	1	1	1	0	1	2	2	2	0	4	0	0	0	0	
% App. Total	0	0	100		50	0	50		50	50	0		0	0	0		
PHF	.000	.000	.250	.250	.250	.000	.250	.500	.500	.500	.000	1.000	.000	.000	.000	.000	



Location: Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps



Date: 1/12/2021  
 Day: Tuesday

PEDESTRIANS

	North Leg Redlands Avenue	East Leg I-215 Northbound Ramps	South Leg Redlands Avenue	West Leg I-215 Northbound Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Redlands Avenue	East Leg I-215 Northbound Ramps	South Leg Redlands Avenue	West Leg I-215 Northbound Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Northbound Ramps



Date: 1/12/2021  
 Day: Tuesday

BICYCLES

	Southbound Redlands Avenue			Westbound I-215 Northbound Ramps			Northbound Redlands Avenue			Eastbound I-215 Northbound Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Redlands Avenue			Westbound I-215 Northbound Ramps			Northbound Redlands Avenue			Eastbound I-215 Northbound Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	1	0	0	0	0	3

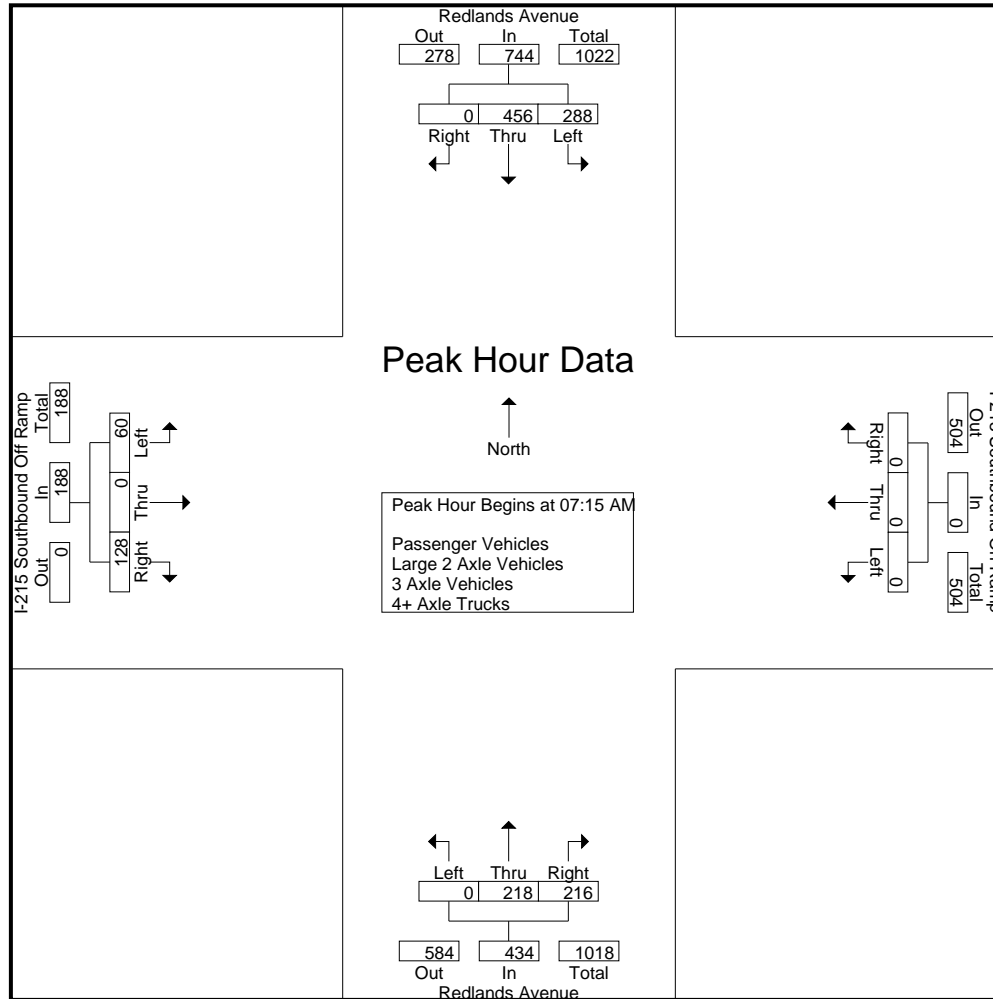
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	64	98	0	0	162	0	0	0	0	0	0	50	61	15	111	10	3	23	22	36	37	309	346
07:15 AM	64	106	0	0	170	0	0	0	0	0	0	42	65	5	107	12	0	41	36	53	41	330	371
07:30 AM	98	110	0	0	208	0	0	0	0	0	0	51	47	6	98	16	0	28	26	44	32	350	382
07:45 AM	74	132	0	0	206	0	0	0	0	0	0	61	46	8	107	22	0	32	17	54	25	367	392
Total	300	446	0	0	746	0	0	0	0	0	0	204	219	34	423	60	3	124	101	187	135	1356	1491
08:00 AM	52	108	0	0	160	0	0	0	0	0	0	64	58	7	122	10	0	27	22	37	29	319	348
08:15 AM	66	87	0	0	153	0	0	0	0	0	0	57	75	4	132	14	0	23	18	37	22	322	344
08:30 AM	62	102	0	0	164	0	0	0	0	0	0	62	56	4	118	18	0	23	20	41	24	323	347
08:45 AM	64	103	0	0	167	0	0	0	0	0	0	67	45	3	112	8	0	27	23	35	26	314	340
Total	244	400	0	0	644	0	0	0	0	0	0	250	234	18	484	50	0	100	83	150	101	1278	1379
Grand Total	544	846	0	0	1390	0	0	0	0	0	0	454	453	52	907	110	3	224	184	337	236	2634	2870
Apprch %	39.1	60.9	0			0	0	0			0	50.1	49.9			32.6	0.9	66.5					
Total %	20.7	32.1	0		52.8	0	0	0			0	17.2	17.2		34.4	4.2	0.1	8.5		12.8	8.2	91.8	
Passenger Vehicles	531	770	0		1301	0	0	0			0	391	393		824	97	1	186		444	0	0	2569
% Passenger Vehicles	97.6	91	0		93.6	0	0	0			0	86.1	86.8	76.9	85.9	88.2	33.3	83	87	85.2	0	0	89.5
Large 2 Axle Vehicles	9	55	0		64	0	0	0			0	33	40		80	11	1	11		31	0	0	175
% Large 2 Axle Vehicles	1.7	6.5	0		4.6	0	0	0			0	7.3	8.8	13.5	8.3	10	33.3	4.9	4.3	6	0	0	6.1
3 Axle Vehicles	1	11	0		12	0	0	0			0	8	11		24	0	1	6		13	0	0	49
% 3 Axle Vehicles	0.2	1.3	0		0.9	0	0	0			0	1.8	2.4	9.6	2.5	0	33.3	2.7	3.3	2.5	0	0	1.7
4+ Axle Trucks	3	10	0		13	0	0	0			0	22	9		31	2	0	21		33	0	0	77
% 4+ Axle Trucks	0.6	1.2	0		0.9	0	0	0			0	4.8	2	0	3.2	1.8	0	9.4	5.4	6.3	0	0	2.7

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	64	106	0	170	0	0	0	0	0	42	65	107	12	0	41	53	330
07:30 AM	98	110	0	208	0	0	0	0	0	51	47	98	16	0	28	44	350
07:45 AM	74	132	0	206	0	0	0	0	0	61	46	107	22	0	32	54	367
08:00 AM	52	108	0	160	0	0	0	0	0	64	58	122	10	0	27	37	319
Total Volume	288	456	0	744	0	0	0	0	0	218	216	434	60	0	128	188	1366
% App. Total	38.7	61.3	0		0	0	0		0	50.2	49.8		31.9	0	68.1		
PHF	.735	.864	.000	.894	.000	.000	.000	.000	.000	.852	.831	.889	.682	.000	.780	.870	.931



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				08:00 AM				07:15 AM				
+0 mins.	64	98	0	162	0	0	0	0	0	64	58	122	12	0	41	53	
+15 mins.	64	106	0	170	0	0	0	0	0	57	75	132	16	0	28	44	
+30 mins.	<b>98</b>	110	0	<b>208</b>	0	0	0	0	0	62	56	118	<b>22</b>	0	32	<b>54</b>	
+45 mins.	74	<b>132</b>	0	206	0	0	0	0	0	<b>67</b>	45	112	10	0	27	37	
Total Volume	300	446	0	746	0	0	0	0	0	250	234	484	60	0	128	188	
% App. Total	40.2	59.8	0		0	0	0		0	51.7	48.3		31.9	0	68.1		
PHF	.765	.845	.000	.897	.000	.000	.000	.000	.000	.933	.780	.917	.682	.000	.780	.870	

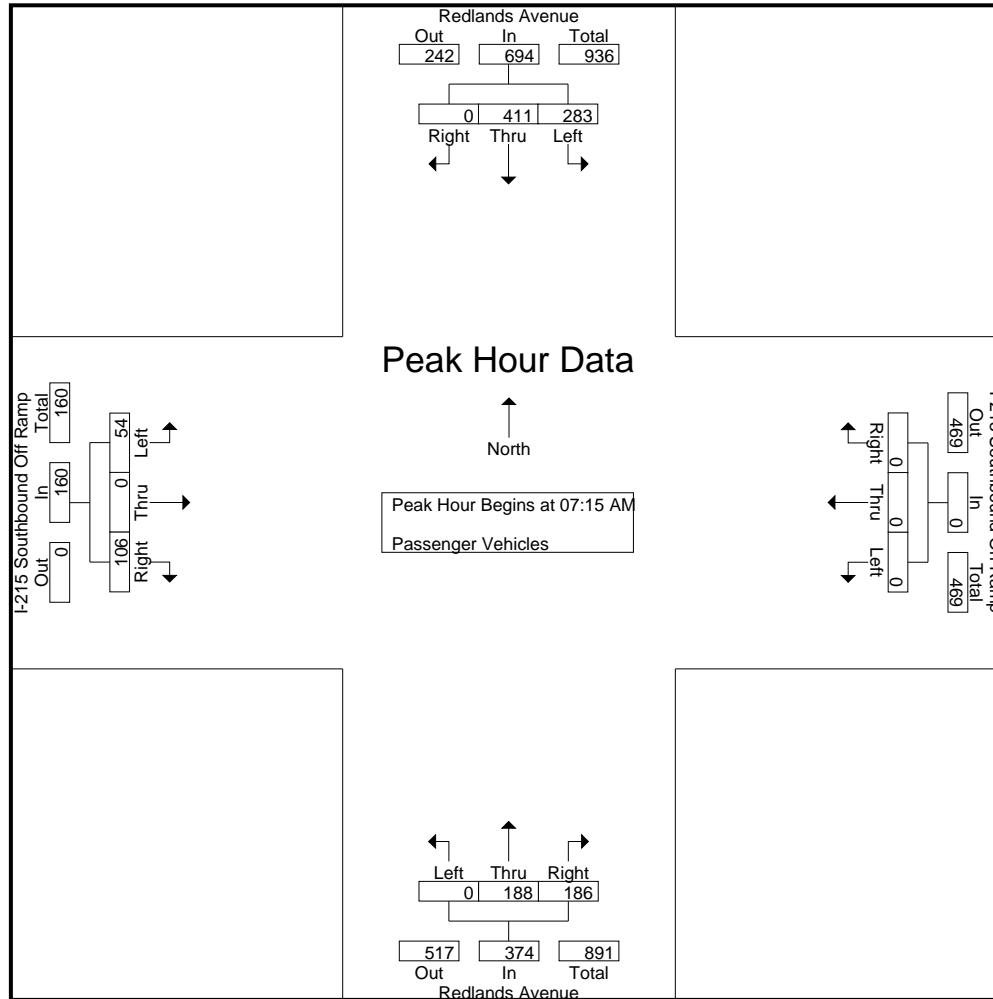
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	63	84	0	0	147	0	0	0	0	0	0	42	48	11	90	8	1	20	20	29	31	266	297
07:15 AM	61	102	0	0	163	0	0	0	0	0	0	38	59	5	97	9	0	36	31	45	36	305	341
07:30 AM	97	96	0	0	193	0	0	0	0	0	0	43	42	6	85	15	0	22	21	37	27	315	342
07:45 AM	73	117	0	0	190	0	0	0	0	0	0	50	36	4	86	21	0	26	16	47	20	323	343
Total	294	399	0	0	693	0	0	0	0	0	0	173	185	26	358	53	1	104	88	158	114	1209	1323
08:00 AM	52	96	0	0	148	0	0	0	0	0	0	57	49	6	106	9	0	22	19	31	25	285	310
08:15 AM	64	84	0	0	148	0	0	0	0	0	0	46	70	4	116	13	0	18	15	31	19	295	314
08:30 AM	60	95	0	0	155	0	0	0	0	0	0	53	50	4	103	14	0	19	17	33	21	291	312
08:45 AM	61	96	0	0	157	0	0	0	0	0	0	62	39	0	101	8	0	23	21	31	21	289	310
Total	237	371	0	0	608	0	0	0	0	0	0	218	208	14	426	44	0	82	72	126	86	1160	1246
Grand Total	531	770	0	0	1301	0	0	0	0	0	0	391	393	40	784	97	1	186	160	284	200	2369	2569
Apprch %	40.8	59.2	0			0	0	0			0	49.9	50.1			34.2	0.4	65.5					
Total %	22.4	32.5	0		54.9	0	0	0			0	16.5	16.6		33.1	4.1	0	7.9		12	7.8	92.2	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	61	102	0	163	0	0	0	0	0	38	59	97	9	0	36	45	305
07:30 AM	97	96	0	193	0	0	0	0	0	43	42	85	15	0	22	37	315
07:45 AM	73	117	0	190	0	0	0	0	0	50	36	86	21	0	26	47	343
08:00 AM	52	96	0	148	0	0	0	0	0	57	49	106	9	0	22	31	285
Total Volume	283	411	0	694	0	0	0	0	0	188	186	374	54	0	106	160	1228
% App. Total	40.8	59.2	0		0	0	0		0	50.3	49.7		33.8	0	66.2		
PHF	.729	.878	.000	.899	.000	.000	.000	.000	.000	.825	.788	.882	.643	.000	.736	.851	.950



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	61	102	0	163	0	0	0	0	0	38	<b>59</b>	97	9	0	<b>36</b>	45	
+15 mins.	<b>97</b>	96	0	<b>193</b>	0	0	0	0	0	43	42	85	15	0	22	37	
+30 mins.	73	<b>117</b>	0	190	0	0	0	0	0	50	36	86	<b>21</b>	0	26	<b>47</b>	
+45 mins.	52	96	0	148	0	0	0	0	0	<b>57</b>	49	<b>106</b>	9	0	22	31	
Total Volume	283	411	0	694	0	0	0	0	0	188	186	374	54	0	106	160	
% App. Total	40.8	59.2	0		0	0	0		0	50.3	49.7		33.8	0	66.2		
PHF	.729	.878	.000	.899	.000	.000	.000	.000	.000	.825	.788	.882	.643	.000	.736	.851	



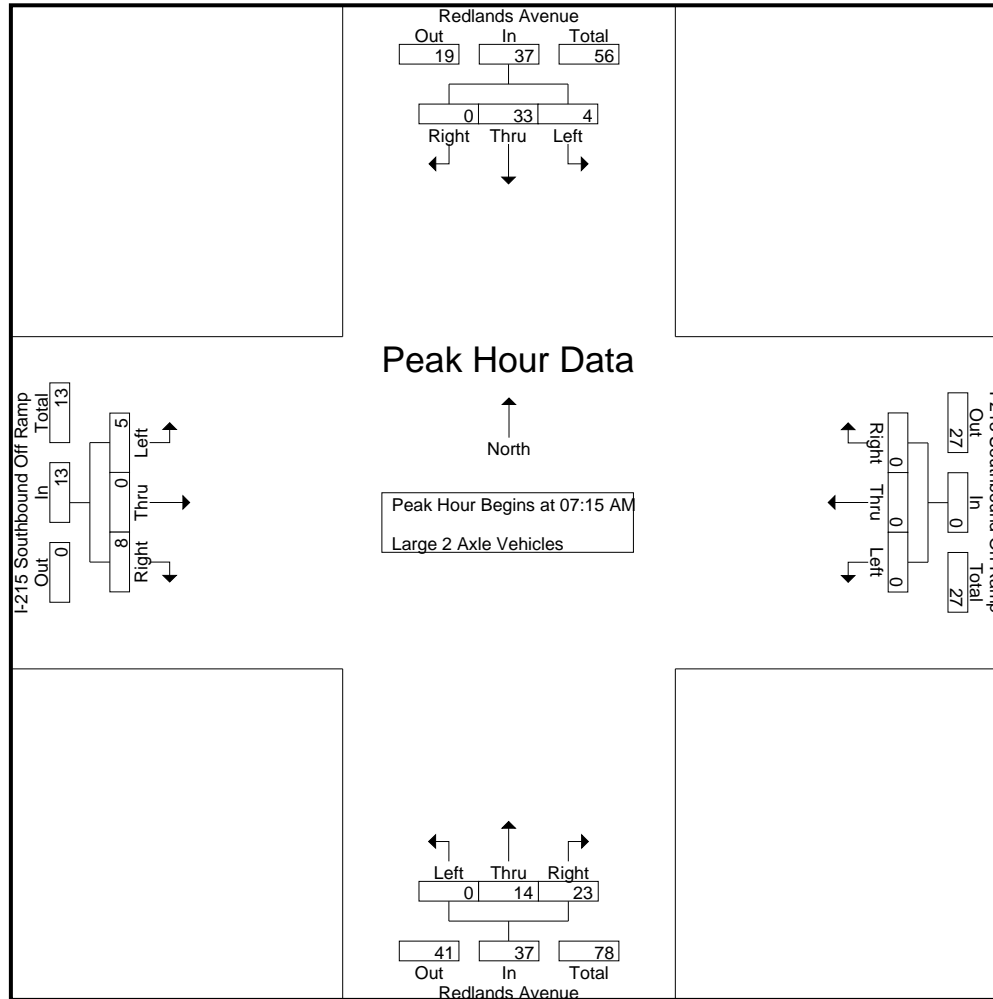
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	10	0	0	11	0	0	0	0	0	0	5	7	2	12	2	1	1	1	4	3	27	30
07:15 AM	3	4	0	0	7	0	0	0	0	0	0	2	6	0	8	3	0	1	1	4	1	19	20
07:30 AM	0	6	0	0	6	0	0	0	0	0	0	4	4	0	8	0	0	3	3	3	3	17	20
07:45 AM	1	15	0	0	16	0	0	0	0	0	0	5	8	4	13	1	0	2	0	3	4	32	36
Total	5	35	0	0	40	0	0	0	0	0	0	16	25	6	41	6	1	7	5	14	11	95	106
08:00 AM	0	8	0	0	8	0	0	0	0	0	0	3	5	1	8	1	0	2	1	3	2	19	21
08:15 AM	2	2	0	0	4	0	0	0	0	0	0	6	2	0	8	1	0	0	0	1	0	13	13
08:30 AM	1	4	0	0	5	0	0	0	0	0	0	7	6	0	13	3	0	1	1	4	1	22	23
08:45 AM	1	6	0	0	7	0	0	0	0	0	0	1	2	0	3	0	0	1	1	1	1	11	12
Total	4	20	0	0	24	0	0	0	0	0	0	17	15	1	32	5	0	4	3	9	4	65	69
Grand Total	9	55	0	0	64	0	0	0	0	0	0	33	40	7	73	11	1	11	8	23	15	160	175
Apprch %	14.1	85.9	0			0	0	0			0	45.2	54.8			47.8	4.3	47.8					
Total %	5.6	34.4	0		40	0	0	0		0	0	20.6	25		45.6	6.9	0.6	6.9		14.4	8.6	91.4	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	4	0	7	0	0	0	0	0	2	6	8	3	0	1	4	19
07:30 AM	0	6	0	6	0	0	0	0	0	4	4	8	0	0	3	3	17
07:45 AM	1	15	0	16	0	0	0	0	0	5	8	13	1	0	2	3	32
08:00 AM	0	8	0	8	0	0	0	0	0	3	5	8	1	0	2	3	19
Total Volume	4	33	0	37	0	0	0	0	0	14	23	37	5	0	8	13	87
% App. Total	10.8	89.2	0		0	0	0		0	37.8	62.2		38.5	0	61.5		
PHF	.333	.550	.000	.578	.000	.000	.000	.000	.000	.700	.719	.712	.417	.000	.667	.813	.680



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	3	4	0	7	0	0	0	0	0	2	6	8	3	0	1	4	
+15 mins.	0	6	0	6	0	0	0	0	0	4	4	8	0	0	3	3	
+30 mins.	1	15	0	16	0	0	0	0	0	5	8	13	1	0	2	3	
+45 mins.	0	8	0	8	0	0	0	0	0	3	5	8	1	0	2	3	
Total Volume	4	33	0	37	0	0	0	0	0	14	23	37	5	0	8	13	
% App. Total	10.8	89.2	0		0	0	0		0	37.8	62.2		38.5	0	61.5		
PHF	.333	.550	.000	.578	.000	.000	.000	.000	.000	.700	.719	.712	.417	.000	.667	.813	

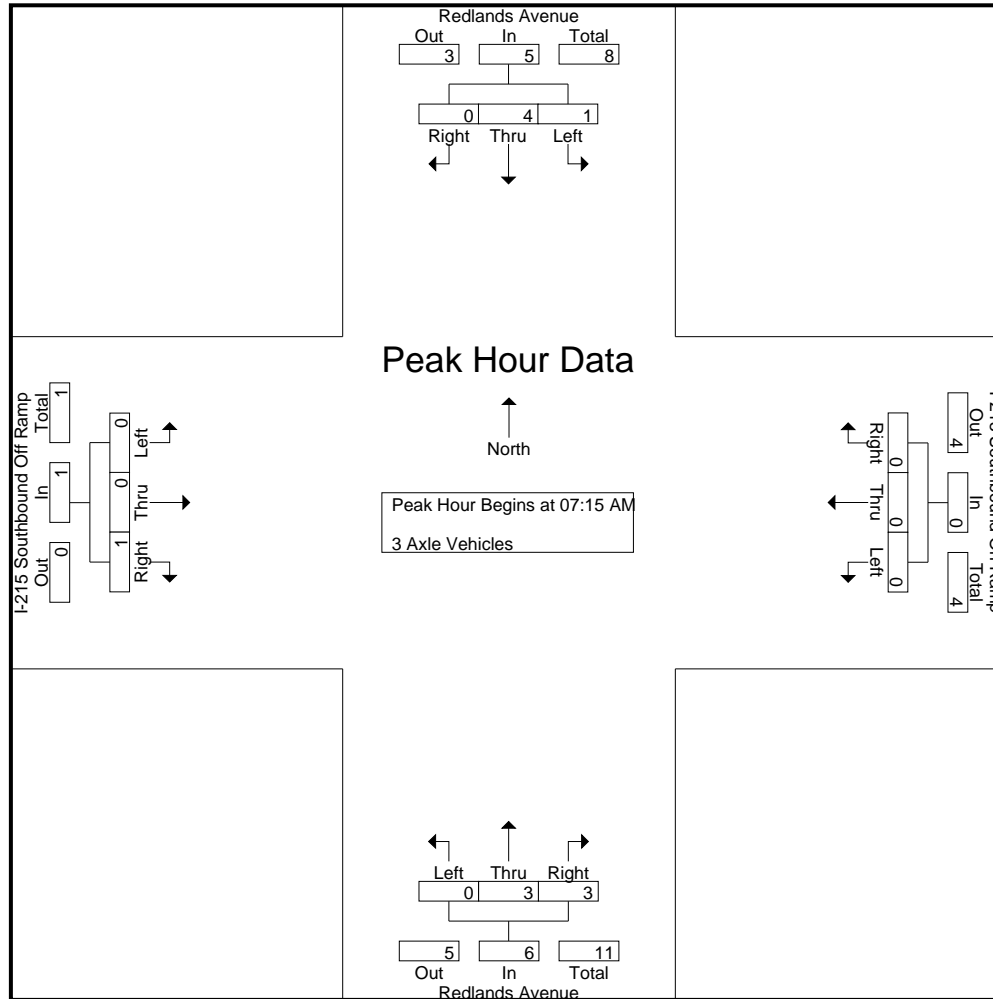
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	3	0	0	3	0	0	0	0	0	0	2	2	2	4	0	1	1	1	2	3	9	12
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	1	2	0	0	3	0	0	0	0	0	0	2	1	0	3	0	0	1	1	1	1	7	8
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	2	2
Total	1	5	0	0	6	0	0	0	0	0	0	5	4	2	9	0	1	2	2	3	4	18	22
08:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	3
08:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	2	0	3	0	0	1	1	1	1	5	6
08:30 AM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	2	2	2	2	6	8
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	4	3	5	0	0	1	1	1	4	6	10
Total	0	6	0	0	6	0	0	0	0	0	0	3	7	3	10	0	0	4	4	4	7	20	27
Grand Total	1	11	0	0	12	0	0	0	0	0	0	8	11	5	19	0	1	6	6	7	11	38	49
Apprch %	8.3	91.7	0			0	0	0			0	42.1	57.9			0	14.3	85.7					
Total %	2.6	28.9	0		31.6	0	0	0		0	0	21.1	28.9		50	0	2.6	15.8		18.4	22.4	77.6	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	1	2	0	3	0	0	0	0	0	2	1	3	0	0	1	1	7
07:45 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
08:00 AM	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3
Total Volume	1	4	0	5	0	0	0	0	0	3	3	6	0	0	1	1	12
% App. Total	20	80	0		0	0	0		0	50	50		0	0	100		
PHF	.250	.500	.000	.417	.000	.000	.000	.000	.000	.375	.750	.500	.000	.000	.250	.250	.429



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	1	2	0	3	0	0	0	0	0	2	1	3	0	0	1	1	
+30 mins.	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	
+45 mins.	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	
Total Volume	1	4	0	5	0	0	0	0	0	3	3	6	0	0	1	1	
% App. Total	20	80	0		0	0	0		0	50	50		0	0	100		
PHF	.250	.500	.000	.417	.000	.000	.000	.000	.000	.375	.750	.500	.000	.000	.250	.250	

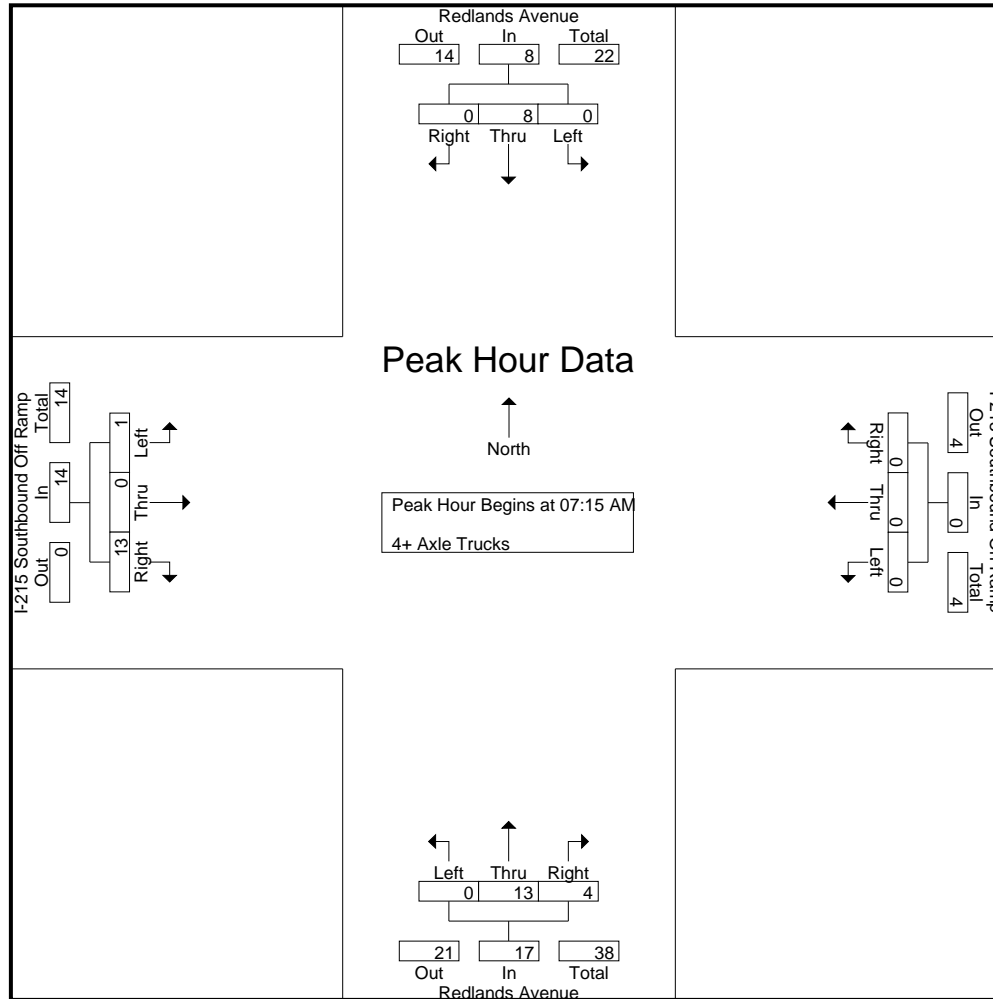
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	4	0	5	0	0	1	0	1	0	0	7	7
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	4	4	4	4	6	10	
07:30 AM	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	1	0	2	1	3	1	11	12	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6	0	0	4	1	4	1	10	11	
Total	0	7	0	0	7	0	0	0	0	0	0	10	5	0	15	1	0	11	6	12	6	34	40	
08:00 AM	0	2	0	0	2	0	0	0	0	0	0	4	3	0	7	0	0	3	2	3	2	12	14	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	1	0	5	0	0	4	2	4	2	9	11	
08:30 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	0	4	4	
08:45 AM	2	1	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2	0	8	8	
Total	3	3	0	0	6	0	0	0	0	0	0	12	4	0	16	1	0	10	4	11	4	33	37	
Grand Total	3	10	0	0	13	0	0	0	0	0	0	22	9	0	31	2	0	21	10	23	10	67	77	
Apprch %	23.1	76.9	0			0	0	0			0	71	29			8.7	0	91.3						
Total %	4.5	14.9	0		19.4	0	0	0		0	0	32.8	13.4		46.3	3	0	31.3		34.3	13	87		

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	4	4	6
07:30 AM	0	6	0	6	0	0	0	0	0	2	0	2	1	0	2	3	11
07:45 AM	0	0	0	0	0	0	0	0	0	5	1	6	0	0	4	4	10
08:00 AM	0	2	0	2	0	0	0	0	0	4	3	7	0	0	3	3	12
Total Volume	0	8	0	8	0	0	0	0	0	13	4	17	1	0	13	14	39
% App. Total	0	100	0		0	0	0		0	76.5	23.5		7.1	0	92.9		
PHF	.000	.333	.000	.333	.000	.000	.000	.000	.000	.650	.333	.607	.250	.000	.813	.875	.813





City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S AM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	4	4	
+15 mins.	0	6	0	6	0	0	0	0	0	2	0	2	1	0	2	3	
+30 mins.	0	0	0	0	0	0	0	0	0	5	1	6	0	0	4	4	
+45 mins.	0	2	0	2	0	0	0	0	0	4	3	7	0	0	3	3	
Total Volume	0	8	0	8	0	0	0	0	0	13	4	17	1	0	13	14	
% App. Total	0	100	0		0	0	0		0	76.5	23.5		7.1	0	92.9		
PHF	.000	.333	.000	.333	.000	.000	.000	.000	.000	.650	.333	.607	.250	.000	.813	.875	

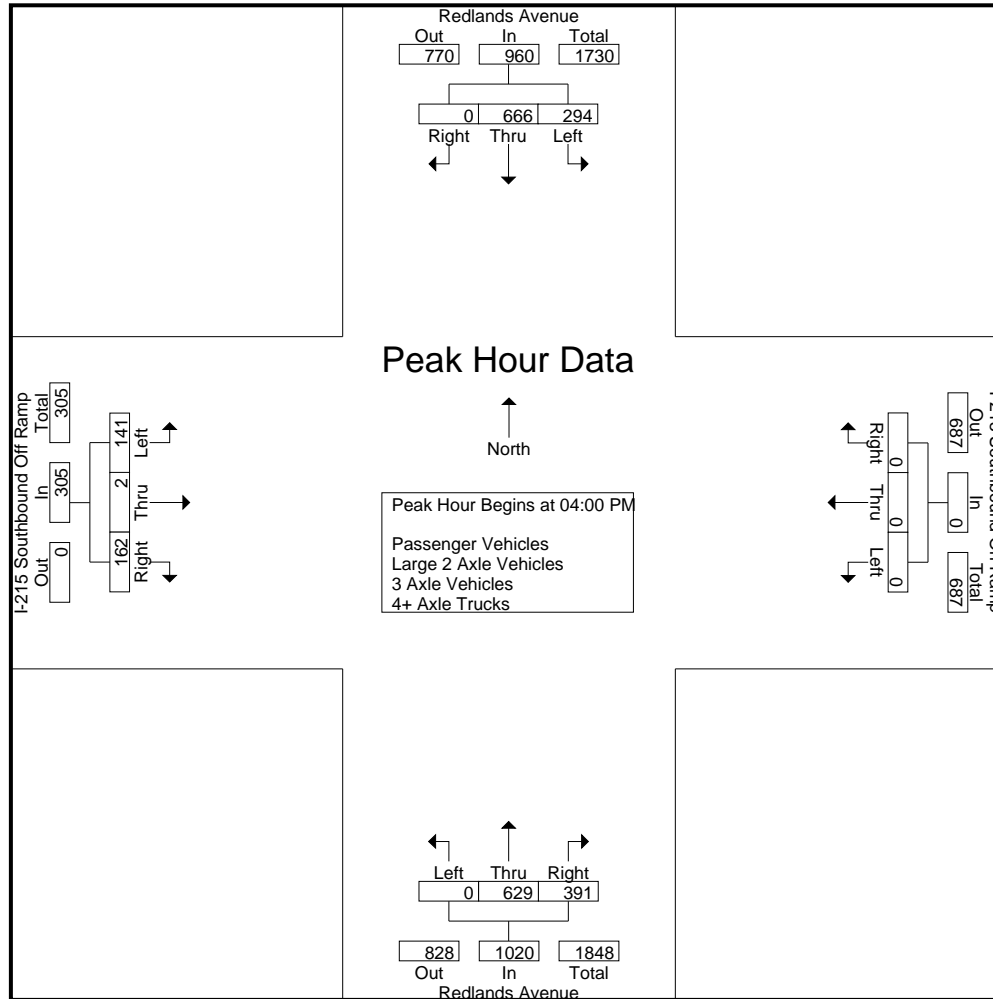
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	65	177	0	0	242	0	0	0	0	0	0	140	98	14	238	33	2	32	16	67	30	547	577
04:15 PM	62	157	0	0	219	0	0	0	0	0	0	159	107	34	266	29	0	45	35	74	69	559	628
04:30 PM	76	178	0	0	254	0	0	0	0	0	0	167	87	30	254	45	0	47	32	92	62	600	662
04:45 PM	91	154	0	0	245	0	0	0	0	0	0	163	99	26	262	34	0	38	29	72	55	579	634
Total	294	666	0	0	960	0	0	0	0	0	0	629	391	104	1020	141	2	162	112	305	216	2285	2501
05:00 PM	50	130	0	0	180	0	0	0	0	0	0	186	119	21	305	26	0	31	25	57	46	542	588
05:15 PM	69	161	0	0	230	0	0	0	0	0	0	156	104	21	260	33	0	27	17	60	38	550	588
05:30 PM	68	168	0	0	236	0	0	0	0	0	0	150	67	15	217	35	0	31	13	66	28	519	547
05:45 PM	40	129	0	0	169	0	0	0	0	0	0	148	80	15	228	35	1	42	28	78	43	475	518
Total	227	588	0	0	815	0	0	0	0	0	0	640	370	72	1010	129	1	131	83	261	155	2086	2241
Grand Total	521	1254	0	0	1775	0	0	0	0	0	0	1269	761	176	2030	270	3	293	195	566	371	4371	4742
Apprch %	29.4	70.6	0			0	0	0			0	62.5	37.5			47.7	0.5	51.8					
Total %	11.9	28.7	0		40.6	0	0	0			0	29	17.4		46.4	6.2	0.1	6.7		12.9	7.8	92.2	
Passenger Vehicles	515	1197	0		1712	0	0	0			0	1225	732		2129	256	3	267		707	0	0	4548
% Passenger Vehicles	98.8	95.5	0		96.5	0	0	0			0	96.5	96.2	97.7	96.5	94.8	100	91.1	92.8	92.9	0	0	95.9
Large 2 Axle Vehicles	5	42	0		47	0	0	0			0	27	21		52	11	0	14		33	0	0	132
% Large 2 Axle Vehicles	1	3.3	0		2.6	0	0	0			0	2.1	2.8	2.3	2.4	4.1	0	4.8	4.1	4.3	0	0	2.8
3 Axle Vehicles	1	12	0		13	0	0	0			0	8	5		13	2	0	2		6	0	0	32
% 3 Axle Vehicles	0.2	1	0		0.7	0	0	0			0	0.6	0.7	0	0.6	0.7	0	0.7	1	0.8	0	0	0.7
4+ Axle Trucks	0	3	0		3	0	0	0			0	9	3		12	1	0	10		15	0	0	30
% 4+ Axle Trucks	0	0.2	0		0.2	0	0	0			0	0.7	0.4	0	0.5	0.4	0	3.4	2.1	2	0	0	0.6

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:00 PM																		
04:00 PM	65	177	0	242	0	0	0	0	0	140	98	14	238	33	2	32	67	547
04:15 PM	62	157	0	219	0	0	0	0	0	159	<b>107</b>	34	<b>266</b>	29	0	45	74	559
04:30 PM	76	<b>178</b>	0	<b>254</b>	0	0	0	0	0	<b>167</b>	87	30	254	<b>45</b>	0	<b>47</b>	<b>92</b>	<b>600</b>
04:45 PM	<b>91</b>	154	0	245	0	0	0	0	0	163	99	26	262	34	0	38	72	579
Total Volume	294	666	0	960	0	0	0	0	0	629	391	104	1020	141	2	162	305	2285
% App. Total	30.6	69.4	0		0	0	0		0	61.7	38.3			46.2	0.7	53.1		
PHF	.808	.935	.000	.945	.000	.000	.000	.000	.000	.942	.914	.959	.783	.250	.862	.829	.952	



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:15 PM				04:00 PM				
+0 mins.	65	177	0	242	0	0	0	0	0	159	107	266	33	2	32	67	
+15 mins.	62	157	0	219	0	0	0	0	0	167	87	254	29	0	45	74	
+30 mins.	76	<b>178</b>	0	<b>254</b>	0	0	0	0	0	163	99	262	<b>45</b>	0	<b>47</b>	<b>92</b>	
+45 mins.	<b>91</b>	154	0	245	0	0	0	0	0	<b>186</b>	<b>119</b>	<b>305</b>	34	0	38	72	
Total Volume	294	666	0	960	0	0	0	0	0	675	412	1087	141	2	162	305	
% App. Total	30.6	69.4	0		0	0	0		0	62.1	37.9		46.2	0.7	53.1		
PHF	.808	.935	.000	.945	.000	.000	.000	.000	.000	.907	.866	.891	.783	.250	.862	.829	

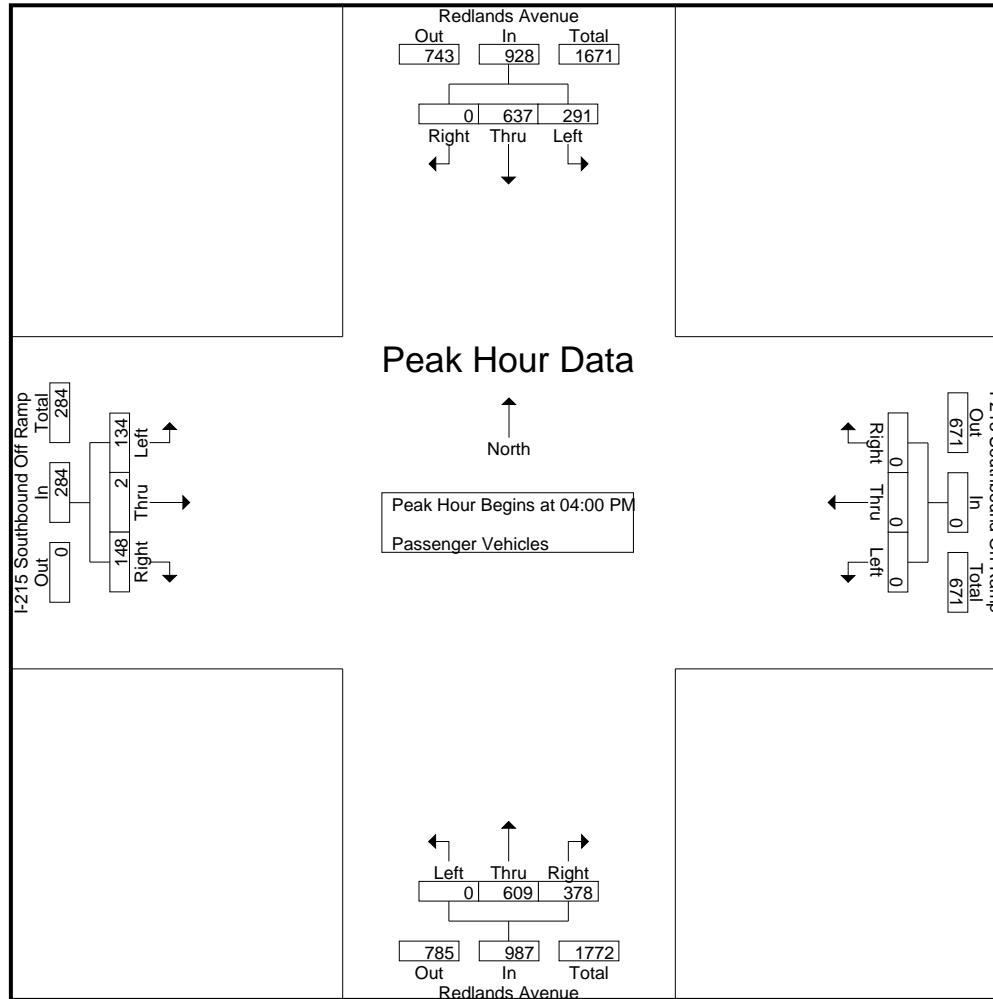
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	65	168	0	0	233	0	0	0	0	0	0	135	93	14	228	29	2	29	14	60	28	521	549
04:15 PM	60	154	0	0	214	0	0	0	0	0	0	150	103	34	253	28	0	43	34	71	68	538	606
04:30 PM	75	168	0	0	243	0	0	0	0	0	0	163	85	29	248	44	0	44	32	88	61	579	640
04:45 PM	91	147	0	0	238	0	0	0	0	0	0	161	97	26	258	33	0	32	25	65	51	561	612
Total	291	637	0	0	928	0	0	0	0	0	0	609	378	103	987	134	2	148	105	284	208	2199	2407
05:00 PM	50	126	0	0	176	0	0	0	0	0	0	176	115	20	291	25	0	27	21	52	41	519	560
05:15 PM	67	157	0	0	224	0	0	0	0	0	0	150	100	21	250	32	0	24	15	56	36	530	566
05:30 PM	68	159	0	0	227	0	0	0	0	0	0	146	64	15	210	33	0	28	13	61	28	498	526
05:45 PM	39	118	0	0	157	0	0	0	0	0	0	144	75	13	219	32	1	40	27	73	40	449	489
Total	224	560	0	0	784	0	0	0	0	0	0	616	354	69	970	122	1	119	76	242	145	1996	2141
Grand Total	515	1197	0	0	1712	0	0	0	0	0	0	1225	732	172	1957	256	3	267	181	526	353	4195	4548
Apprch %	30.1	69.9	0			0	0	0			0	62.6	37.4			48.7	0.6	50.8					
Total %	12.3	28.5	0		40.8	0	0	0			0	29.2	17.4		46.7	6.1	0.1	6.4		12.5	7.8	92.2	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	65	168	0	233	0	0	0	0	0	135	93	228	29	2	29	60	521
04:15 PM	60	154	0	214	0	0	0	0	0	150	103	253	28	0	43	71	538
04:30 PM	75	168	0	243	0	0	0	0	0	163	85	248	44	0	44	88	579
04:45 PM	91	147	0	238	0	0	0	0	0	161	97	258	33	0	32	65	561
Total Volume	291	637	0	928	0	0	0	0	0	609	378	987	134	2	148	284	2199
% App. Total	31.4	68.6	0		0	0	0		0	61.7	38.3		47.2	0.7	52.1		
PHF	.799	.948	.000	.955	.000	.000	.000	.000	.000	.934	.917	.956	.761	.250	.841	.807	.949



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	65	<b>168</b>	0	233	0	0	0	0	0	135	93	228	29	<b>2</b>	29	60	
+15 mins.	60	154	0	214	0	0	0	0	0	150	<b>103</b>	253	28	0	43	71	
+30 mins.	75	168	0	<b>243</b>	0	0	0	0	0	<b>163</b>	85	248	<b>44</b>	0	<b>44</b>	<b>88</b>	
+45 mins.	<b>91</b>	147	0	238	0	0	0	0	0	161	97	<b>258</b>	33	0	32	65	
Total Volume	291	637	0	928	0	0	0	0	0	609	378	987	134	2	148	284	
% App. Total	31.4	68.6	0		0	0	0		0	61.7	38.3		47.2	0.7	52.1		
PHF	.799	.948	.000	.955	.000	.000	.000	.000	.000	.934	.917	.956	.761	.250	.841	.807	

City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

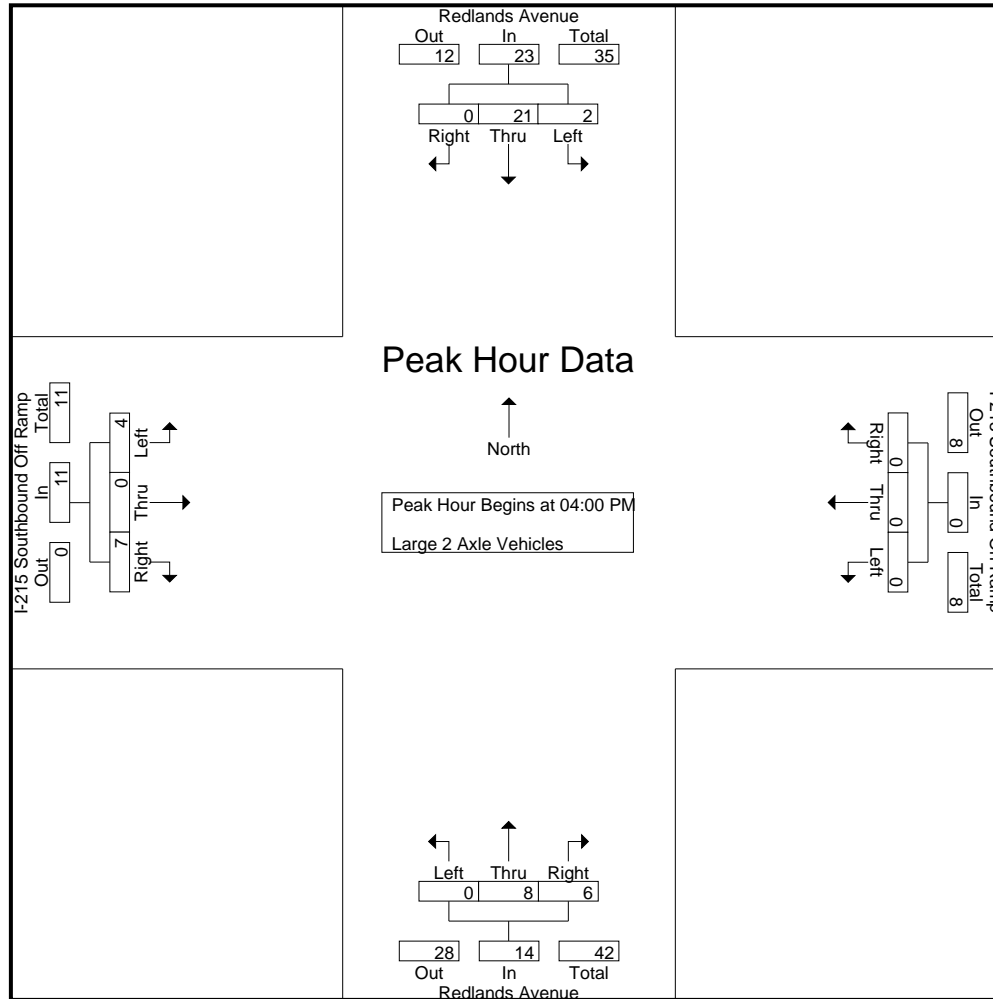
File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	6	0	0	6	0	0	0	0	0	0	0	2	0	2	3	0	1	1	4	1	12	13
04:15 PM	1	2	0	0	3	0	0	0	0	0	0	6	2	0	8	0	0	1	0	1	0	12	12
04:30 PM	1	8	0	0	9	0	0	0	0	0	0	1	1	1	2	0	0	1	0	1	1	12	13
04:45 PM	0	5	0	0	5	0	0	0	0	0	0	1	1	0	2	1	0	4	3	5	3	12	15
Total	2	21	0	0	23	0	0	0	0	0	0	8	6	1	14	4	0	7	4	11	5	48	53
05:00 PM	0	2	0	0	2	0	0	0	0	0	0	9	3	1	12	1	0	2	2	3	3	17	20
05:15 PM	2	3	0	0	5	0	0	0	0	0	0	3	4	0	7	1	0	1	1	2	1	14	15
05:30 PM	0	7	0	0	7	0	0	0	0	0	0	4	3	0	7	2	0	3	0	5	0	19	19
05:45 PM	1	9	0	0	10	0	0	0	0	0	0	3	5	2	8	3	0	1	1	4	3	22	25
Total	3	21	0	0	24	0	0	0	0	0	0	19	15	3	34	7	0	7	4	14	7	72	79
Grand Total	5	42	0	0	47	0	0	0	0	0	0	27	21	4	48	11	0	14	8	25	12	120	132
Apprch %	10.6	89.4	0			0	0	0			0	56.2	43.8			44	0	56					
Total %	4.2	35	0		39.2	0	0	0		0	0	22.5	17.5		40	9.2	0	11.7		20.8	9.1	90.9	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	6	0	6	0	0	0	0	0	0	2	2	3	0	1	4	12
04:15 PM	1	2	0	3	0	0	0	0	0	6	2	8	0	0	1	1	12
04:30 PM	1	8	0	9	0	0	0	0	0	1	1	2	0	0	1	1	12
04:45 PM	0	5	0	5	0	0	0	0	0	1	1	2	1	0	4	5	12
Total Volume	2	21	0	23	0	0	0	0	0	8	6	14	4	0	7	11	48
% App. Total	8.7	91.3	0		0	0	0		0	57.1	42.9		36.4	0	63.6		
PHF	.500	.656	.000	.639	.000	.000	.000	.000	.000	.333	.750	.438	.333	.000	.438	.550	1.00





City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	6	0	6	0	0	0	0	0	0	2	2	3	0	1	4	
+15 mins.	1	2	0	3	0	0	0	0	0	6	2	8	0	0	1	1	
+30 mins.	1	8	0	9	0	0	0	0	0	1	1	2	0	0	1	1	
+45 mins.	0	5	0	5	0	0	0	0	0	1	1	2	1	0	4	5	
Total Volume	2	21	0	23	0	0	0	0	0	8	6	14	4	0	7	11	
% App. Total	8.7	91.3	0		0	0	0		0	57.1	42.9		36.4	0	63.6		
PHF	.500	.656	.000	.639	.000	.000	.000	.000	.000	.333	.750	.438	.333	.000	.438	.550	

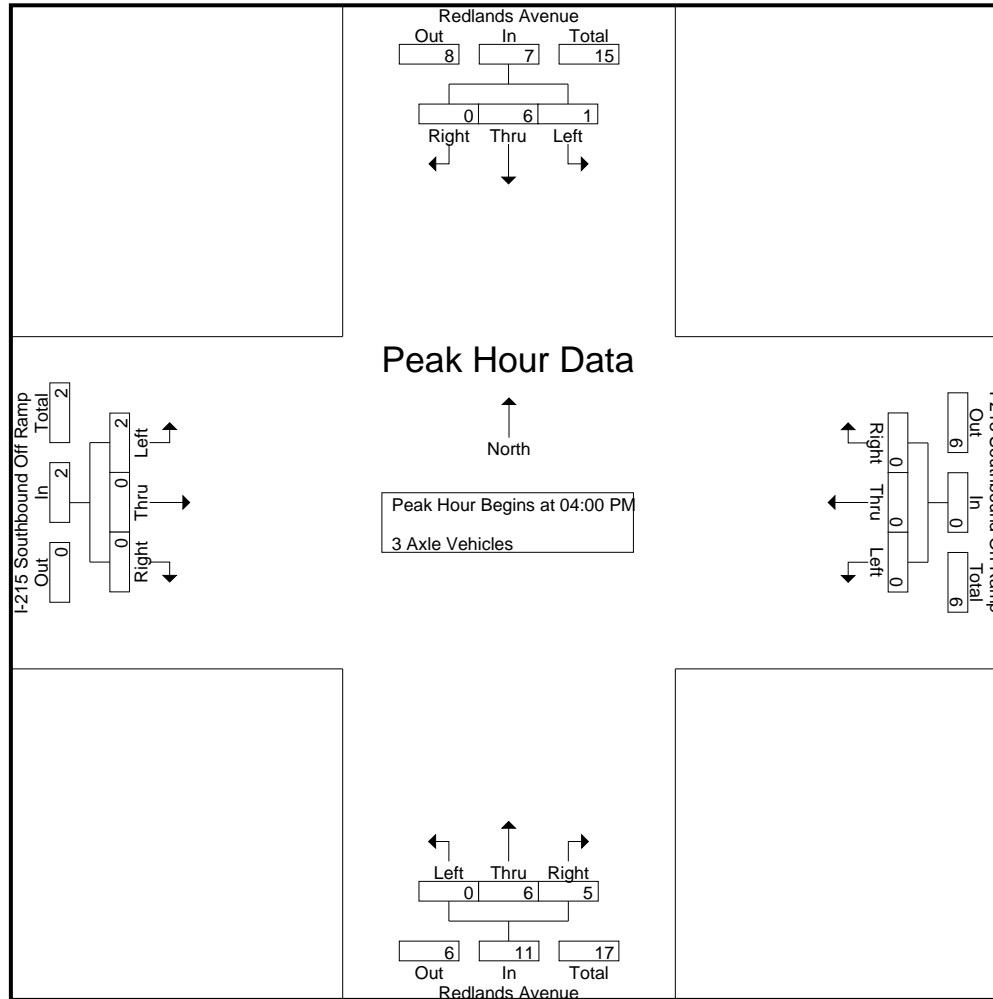
City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	0	0	6	6
04:15 PM	1	0	0	0	1	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	0	0	5	5
04:30 PM	0	2	0	0	2	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	0	6	6
04:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3	3
Total	1	6	0	0	7	0	0	0	0	0	0	6	5	0	11	2	0	0	0	2	0	0	20	20
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	3	5	5
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	3	3
05:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	2	2	2	2	10	12	12
Grand Total	1	12	0	0	13	0	0	0	0	0	0	8	5	0	13	2	0	2	2	4	2	30	32	32
Apprch %	7.7	92.3	0			0	0	0			0	61.5	38.5			50	0	50						
Total %	3.3	40	0		43.3	0	0	0		0	0	26.7	16.7		43.3	6.7	0	6.7		13.3	6.2	93.8		

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	2	0	2	0	0	0	0	0	1	2	3	1	0	0	1	6
04:15 PM	1	0	0	1	0	0	0	0	0	2	1	3	1	0	0	1	5
04:30 PM	0	2	0	2	0	0	0	0	0	3	1	4	0	0	0	0	6
04:45 PM	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3
Total Volume	1	6	0	7	0	0	0	0	0	6	5	11	2	0	0	2	20
% App. Total	14.3	85.7	0		0	0	0		0	54.5	45.5		100	0	0		
PHF	.250	.750	.000	.875	.000	.000	.000	.000	.000	.500	.625	.688	.500	.000	.000	.500	.833



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	2	0	2	0	0	0	0	0	1	2	3	1	0	0	1	
+15 mins.	1	0	0	1	0	0	0	0	0	2	1	3	1	0	0	1	
+30 mins.	0	2	0	2	0	0	0	0	0	3	1	4	0	0	0	0	
+45 mins.	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	
Total Volume	1	6	0	7	0	0	0	0	0	6	5	11	2	0	0	2	
% App. Total	14.3	85.7	0		0	0	0		0	54.5	45.5		100	0	0		
PHF	.250	.750	.000	.875	.000	.000	.000	.000	.000	.500	.625	.688	.500	.000	.000	.500	

City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

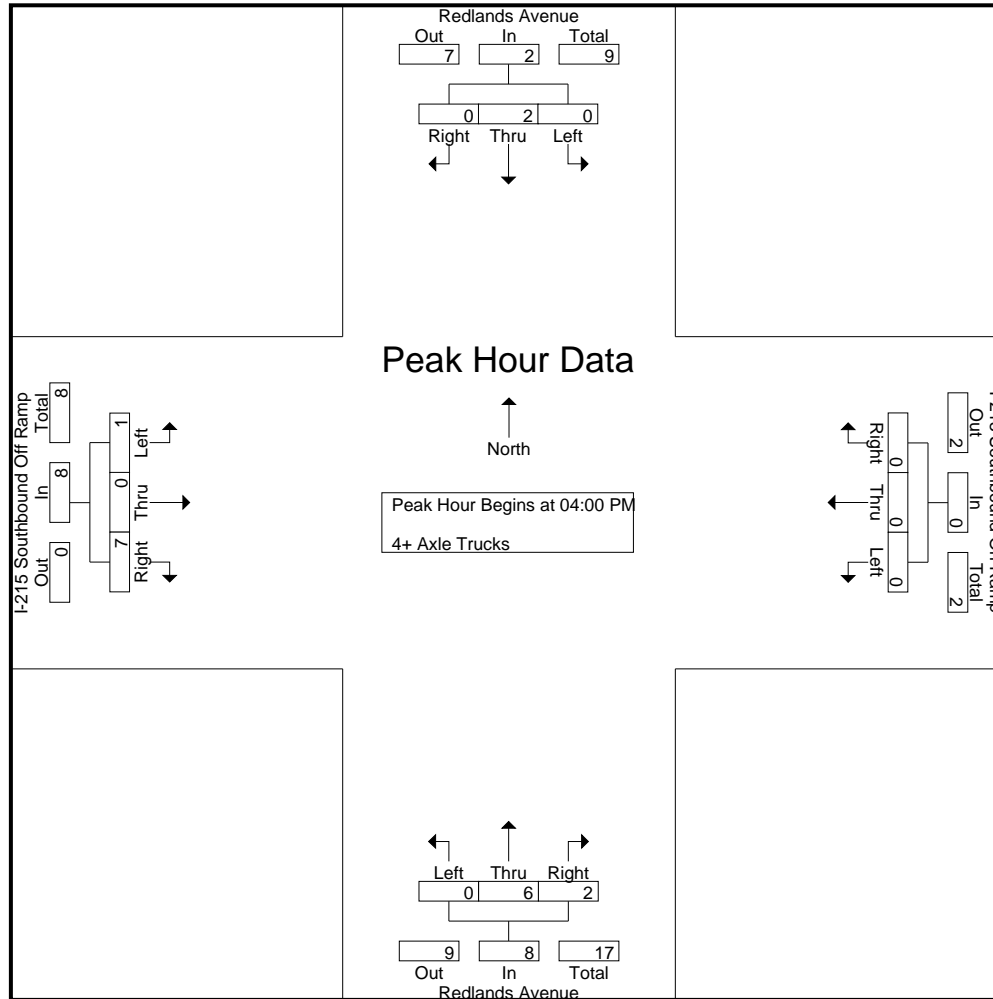
File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound					I-215 Southbound On Ramp Westbound					Redlands Avenue Northbound					I-215 Southbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	4	1	0	5	0	0	2	1	2	1	8	9
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	1	1	1	1	4	5
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0	3	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	1	2	1	3	4
Total	0	2	0	0	2	0	0	0	0	0	0	6	2	0	8	1	0	7	3	8	3	18	21
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	3	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	1	2	1	3	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	2	2
Total	0	1	0	0	1	0	0	0	0	0	0	3	1	0	4	0	0	3	1	3	1	8	9
Grand Total	0	3	0	0	3	0	0	0	0	0	0	9	3	0	12	1	0	10	4	11	4	26	30
Apprch %	0	100	0			0	0	0			0	75	25			9.1	0	90.9					
Total %	0	11.5	0		11.5	0	0	0		0	0	34.6	11.5		46.2	3.8	0	38.5		42.3	13.3	86.7	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	1	0	1	0	0	0	0	0	4	1	5	0	0	2	2	8
04:15 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	1	1	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	3
Total Volume	0	2	0	2	0	0	0	0	0	6	2	8	1	0	7	8	18
% App. Total	0	100	0		0	0	0		0	75	25		12.5	0	87.5		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.500	.400	.250	.000	.875	.667	.563

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



City of Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps  
 Weather: Clear

File Name : 04\_PER\_Red\_215S PM  
 Site Code : 05121026  
 Start Date : 1/12/2021  
 Page No : 3

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	1	0	1	0	0	0	0	0	4	1	5	0	0	2	2	
+15 mins.	0	1	0	1	0	0	0	0	0	1	1	2	0	0	1	1	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	
Total Volume	0	2	0	2	0	0	0	0	0	6	2	8	1	0	7	8	
% App. Total	0	100	0		0	0	0		0	75	25		12.5	0	87.5		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.500	.400	.250	.000	.875	.667	



Location: Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps



Date: 1/12/2021  
 Day: Tuesday

PEDESTRIANS

	North Leg Redlands Avenue	East Leg I-215 Southbound Ramps	South Leg Redlands Avenue	West Leg I-215 Southbound Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Redlands Avenue	East Leg I-215 Southbound Ramps	South Leg Redlands Avenue	West Leg I-215 Southbound Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Perris  
 N/S: Redlands Avenue  
 E/W: I-215 Southbound Ramps



Date: 1/12/2021  
 Day: Tuesday

BICYCLES

	Southbound Redlands Avenue			Westbound I-215 Southbound Ramps			Northbound Redlands Avenue			Eastbound I-215 Southbound Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Redlands Avenue			Westbound I-215 Southbound Ramps			Northbound Redlands Avenue			Eastbound I-215 Southbound Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	2	0	0	0	0	2

**ATTACHMENT B**  
**EXISTING HCM INTERSECTION ANALYSIS WORKSHEETS**



Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	58	105	170	24	37	118
Future Vol, veh/h	58	105	170	24	37	118
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	112	181	26	39	126

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	207	0	-	0	430
Stage 1	-	-	-	-	194
Stage 2	-	-	-	-	236
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1376	-	-	-	586
Stage 1	-	-	-	-	844
Stage 2	-	-	-	-	808
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1376	-	-	-	558
Mov Cap-2 Maneuver	-	-	-	-	558
Stage 1	-	-	-	-	803
Stage 2	-	-	-	-	808

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1376	-	-	-	757
HCM Lane V/C Ratio	0.045	-	-	-	0.218
HCM Control Delay (s)	7.7	0	-	-	11.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	42	147	281	1	11	130
Future Vol, veh/h	42	147	281	1	11	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	47	165	316	1	12	146

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	317	0	-	0	576 317
Stage 1	-	-	-	-	317 -
Stage 2	-	-	-	-	259 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1255	-	-	-	482 728
Stage 1	-	-	-	-	743 -
Stage 2	-	-	-	-	789 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1255	-	-	-	464 728
Mov Cap-2 Maneuver	-	-	-	-	553 -
Stage 1	-	-	-	-	716 -
Stage 2	-	-	-	-	789 -

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1255	-	-	-	710
HCM Lane V/C Ratio	0.038	-	-	-	0.223
HCM Control Delay (s)	8	-	-	-	11.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Timings

71: Redlands Av. & San Jacinto Av.

01/25/2021

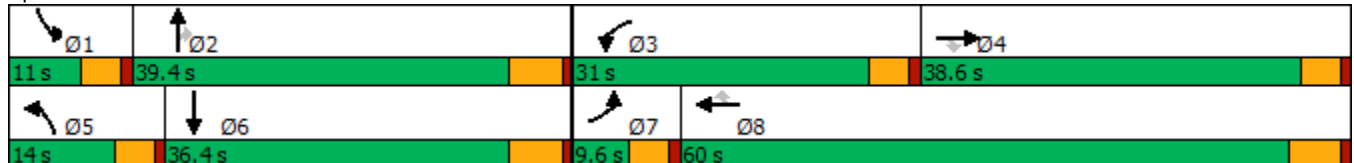


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↖	↑	↗	↖↖	↑	↗	↖	↑↑	↗	↖	↑↗
Traffic Volume (vph)	12	10	88	509	45	14	63	166	253	27	396
Future Volume (vph)	12	10	88	509	45	14	63	166	253	27	396
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	35.8	9.6	35.8
Total Split (s)	9.6	38.6	38.6	31.0	60.0	60.0	14.0	39.4	39.4	11.0	36.4
Total Split (%)	8.0%	32.2%	32.2%	25.8%	50.0%	50.0%	11.7%	32.8%	32.8%	9.2%	30.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min

Intersection Summary

























Cycle Length: 120  
 Actuated Cycle Length: 73.9  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	10	88	509	45	14	63	166	253	27	396	43
Future Volume (veh/h)	12	10	88	509	45	14	63	166	253	27	396	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	12	22	613	54	6	76	200	210	33	477	46
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	61	272	231	767	654	554	111	866	386	65	714	69
Arrive On Green	0.02	0.14	0.14	0.22	0.34	0.34	0.06	0.24	0.24	0.04	0.21	0.21
Sat Flow, veh/h	3510	1900	1610	3510	1900	1610	1810	3610	1610	1810	3328	320
Grp Volume(v), veh/h	14	12	22	613	54	6	76	200	210	33	258	265
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1610	1810	1805	1610	1810	1805	1842
Q Serve(g_s), s	0.2	0.3	0.7	9.5	1.1	0.1	2.4	2.6	6.5	1.0	7.5	7.6
Cycle Q Clear(g_c), s	0.2	0.3	0.7	9.5	1.1	0.1	2.4	2.6	6.5	1.0	7.5	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	61	272	231	767	654	554	111	866	386	65	387	395
V/C Ratio(X)	0.23	0.04	0.10	0.80	0.08	0.01	0.69	0.23	0.54	0.51	0.67	0.67
Avail Cap(c_a), veh/h	306	1127	955	1616	1796	1522	297	2115	944	202	963	983
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	21.2	21.3	21.2	12.7	12.4	26.4	17.5	19.0	27.2	20.6	20.7
Incr Delay (d2), s/veh	0.7	0.1	0.2	0.7	0.1	0.0	2.8	0.1	1.2	2.3	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.2	3.4	0.4	0.0	1.0	0.9	2.2	0.4	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	21.2	21.5	22.0	12.7	12.4	29.2	17.7	20.2	29.5	22.6	22.6
LnGrp LOS	C	C	C	C	B	B	C	B	C	C	C	C
Approach Vol, veh/h		48			673			486			556	
Approach Delay, s/veh		23.5			21.1			20.6			23.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	19.6	17.1	14.0	8.1	18.1	5.6	25.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	33.6	26.4	* 34	9.4	30.6	5.0	54.2				
Max Q Clear Time (g_c+I1), s	3.0	8.5	11.5	2.7	4.4	9.6	2.2	3.1				
Green Ext Time (p_c), s	0.0	1.8	1.0	0.1	0.0	2.7	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.6								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

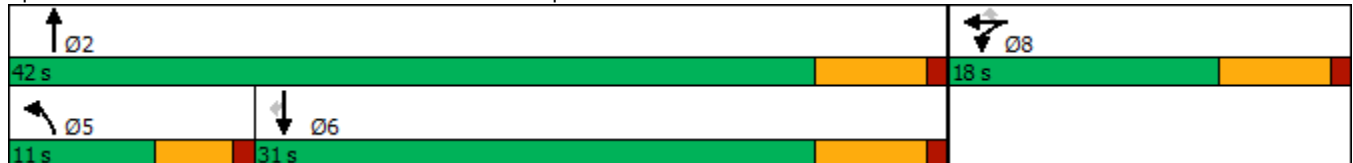


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↷	↶↷	↷↷	↑↑↑	↷
Traffic Volume (vph)	312	1	174	139	309	811	181
Future Volume (vph)	312	1	174	139	309	811	181
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8	8		5	2	6	
Permitted Phases			8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	9.5	11.0	31.0	31.0
Total Split (s)	18.0	18.0	18.0	11.0	42.0	31.0	31.0
Total Split (%)	30.0%	30.0%	30.0%	18.3%	70.0%	51.7%	51.7%
Yellow Time (s)	5.0	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	Min	Min	Min

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 47.4  
 Natural Cycle: 55  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 72: Redlands Av. & I-215 NB Ramps





HCM 6th Signalized Intersection Summary  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↙	↔	↗	↙↗	↕			↑↑↑	↗
Traffic Volume (veh/h)	0	0	0	312	1	174	139	309	0	0	811	181
Future Volume (veh/h)	0	0	0	312	1	174	139	309	0	0	811	181
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				388	0	79	156	347	0	0	911	96
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				619	0	276	363	1903	0	0	2031	500
Arrive On Green				0.17	0.00	0.17	0.10	0.53	0.00	0.00	0.31	0.31
Sat Flow, veh/h				3619	0	1610	3510	3705	0	0	6802	1610
Grp Volume(v), veh/h				388	0	79	156	347	0	0	911	96
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1755	1805	0	0	1634	1610
Q Serve(g_s), s				4.0	0.0	1.7	1.7	2.0	0.0	0.0	4.4	1.7
Cycle Q Clear(g_c), s				4.0	0.0	1.7	1.7	2.0	0.0	0.0	4.4	1.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				619	0	276	363	1903	0	0	2031	500
V/C Ratio(X)				0.63	0.00	0.29	0.43	0.18	0.00	0.00	0.45	0.19
Avail Cap(c_a), veh/h				1092	0	486	574	3268	0	0	4108	1012
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				15.3	0.0	14.4	16.7	4.9	0.0	0.0	11.0	10.0
Incr Delay (d2), s/veh				1.0	0.0	0.6	0.8	0.0	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.3	0.0	0.5	0.6	0.4	0.0	0.0	1.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				16.3	0.0	14.9	17.5	5.0	0.0	0.0	11.1	10.2
LnGrp LOS				B	A	B	B	A	A	A	B	B
Approach Vol, veh/h					467			503			1007	
Approach Delay, s/veh					16.1			8.9			11.0	
Approach LOS					B			A			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		27.0			8.6	18.4		12.8				
Change Period (Y+Rc), s		6.0			4.5	6.0		6.0				
Max Green Setting (Gmax), s		36.0			6.5	25.0		12.0				
Max Q Clear Time (g_c+I1), s		4.0			3.7	6.4		6.0				
Green Ext Time (p_c), s		2.3			0.1	5.9		0.9				

Intersection Summary

HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	91	0	189	356	283	417	706
Future Volume (vph)	91	0	189	356	283	417	706
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	11.0	11.0	9.5	33.0
Total Split (s)	17.0	17.0	17.0	21.0	21.0	22.0	43.0
Total Split (%)	28.3%	28.3%	28.3%	35.0%	35.0%	36.7%	71.7%
Yellow Time (s)	4.5	4.5	4.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0	4.5	6.0
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	None	Min

Intersection Summary

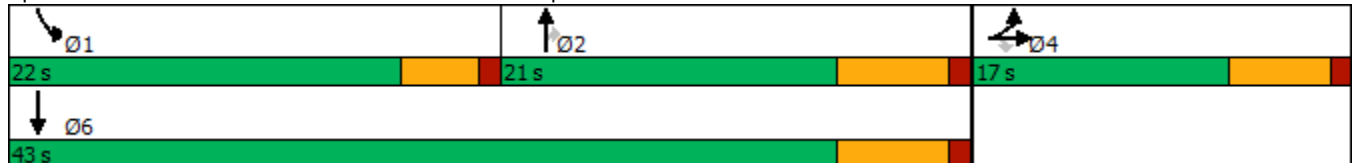
Cycle Length: 60

Actuated Cycle Length: 42.4

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Splits and Phases: 73: Redlands Av. & I-215 SB Ramps



HCM 6th Signalized Intersection Summary  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	0	189	0	0	0	0	356	283	417	706	0
Future Volume (veh/h)	91	0	189	0	0	0	0	356	283	417	706	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	121	0	49				0	383	271	448	759	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	420	0	187				0	1408	611	728	1995	0
Arrive On Green	0.12	0.00	0.12				0.00	0.22	0.22	0.21	0.55	0.00
Sat Flow, veh/h	3619	0	1610				0	6802	2834	3510	3705	0
Grp Volume(v), veh/h	121	0	49				0	383	271	448	759	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1634	1417	1755	1805	0
Q Serve(g_s), s	1.1	0.0	1.0				0.0	1.7	2.9	4.0	4.1	0.0
Cycle Q Clear(g_c), s	1.1	0.0	1.0				0.0	1.7	2.9	4.0	4.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	420	0	187				0	1408	611	728	1995	0
V/C Ratio(X)	0.29	0.00	0.26				0.00	0.27	0.44	0.62	0.38	0.00
Avail Cap(c_a), veh/h	1199	0	534				0	2825	1225	1770	3849	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.0	0.0	14.0				0.0	11.3	11.8	12.5	4.4	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.7				0.0	0.1	0.5	0.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3				0.0	0.5	0.7	1.2	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.4	0.0	14.7				0.0	11.4	12.3	13.3	4.5	0.0
LnGrp LOS	B	A	B				A	B	B	B	A	A
Approach Vol, veh/h		170						654			1207	
Approach Delay, s/veh		14.5						11.8			7.8	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	11.7	13.5		9.5		25.2						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	17.5	15.0		11.5		37.0						
Max Q Clear Time (g_c+I1), s	6.0	4.9		3.1		6.1						
Green Ext Time (p_c), s	1.3	2.6		0.3		5.7						

Intersection Summary

HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

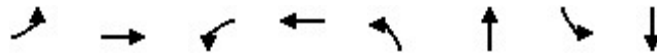
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↘	↕	↘	↕	↘	↕
Traffic Volume (vph)	15	60	13	107	103	197	10	94
Future Volume (vph)	15	60	13	107	103	197	10	94
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	32.8
Total Split (s)	9.6	32.8	9.6	32.8	9.6	33.0	9.6	33.0
Total Split (%)	11.3%	38.6%	11.3%	38.6%	11.3%	38.8%	11.3%	38.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max
Act Effct Green (s)	5.1	12.8	5.1	12.8	5.1	33.1	5.1	30.8
Actuated g/C Ratio	0.08	0.20	0.08	0.20	0.08	0.52	0.08	0.49
v/c Ratio	0.10	0.19	0.09	0.16	0.73	0.11	0.07	0.07
Control Delay	33.2	11.4	33.0	20.5	61.5	10.2	32.7	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	11.4	33.0	20.5	61.5	10.2	32.7	11.0
LOS	C	B	C	C	E	B	C	B
Approach Delay		13.6		21.8		27.6		12.6
Approach LOS		B		C		C		B

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 63.1

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.9

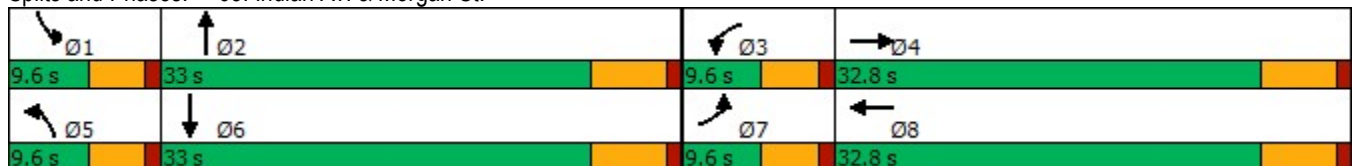
Intersection LOS: C

Intersection Capacity Utilization 43.4%

ICU Level of Service A

Analysis Period (min) 15

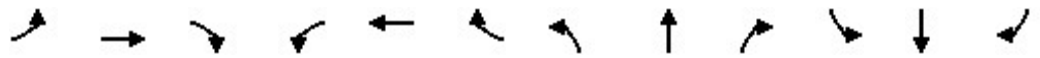
Splits and Phases: 68: Indian Av. & Morgan St.



HCM 6th Signalized Intersection Summary  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	15	60	72	13	107	4	103	197	4	10	94	25
Future Volume (veh/h)	15	60	72	13	107	4	103	197	4	10	94	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	15	62	37	13	110	1	106	203	1	10	97	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	33	317	175	29	510	5	136	1832	9	23	1299	260
Arrive On Green	0.02	0.14	0.14	0.02	0.14	0.14	0.08	0.50	0.50	0.01	0.43	0.43
Sat Flow, veh/h	1810	2245	1238	1810	3666	33	1810	3684	18	1810	2989	599
Grp Volume(v), veh/h	15	49	50	13	54	57	106	99	105	10	57	60
Grp Sat Flow(s),veh/h/ln	1810	1805	1677	1810	1805	1894	1810	1805	1897	1810	1805	1783
Q Serve(g_s), s	0.5	1.5	1.7	0.4	1.7	1.7	3.6	1.8	1.8	0.3	1.2	1.2
Cycle Q Clear(g_c), s	0.5	1.5	1.7	0.4	1.7	1.7	3.6	1.8	1.8	0.3	1.2	1.2
Prop In Lane	1.00		0.74	1.00		0.02	1.00		0.01	1.00		0.34
Lane Grp Cap(c), veh/h	33	255	237	29	251	264	136	898	943	23	785	775
V/C Ratio(X)	0.45	0.19	0.21	0.44	0.22	0.22	0.78	0.11	0.11	0.43	0.07	0.08
Avail Cap(c_a), veh/h	145	779	724	145	779	817	145	898	943	145	785	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	23.7	23.8	30.5	23.9	23.9	28.4	8.4	8.4	30.7	10.3	10.3
Incr Delay (d2), s/veh	3.5	0.4	0.4	3.9	0.4	0.4	19.7	0.1	0.1	4.7	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.6	0.2	0.7	0.7	2.2	0.6	0.6	0.2	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	24.1	24.2	34.4	24.3	24.3	48.1	8.4	8.4	35.4	10.5	10.5
LnGrp LOS	C	C	C	C	C	C	D	A	A	D	B	B
Approach Vol, veh/h		114			124			310			127	
Approach Delay, s/veh		25.4			25.4			22.0			12.5	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	36.9	5.6	14.6	9.3	33.0	5.7	14.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	2.3	3.8	2.4	3.7	5.6	3.2	2.5	3.7				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.4	0.0	0.5	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Timings  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↘	↑↑	↗
Traffic Volume (vph)	13	57	32	58	46	119	7	122	29	94	6
Future Volume (vph)	13	57	32	58	46	119	7	122	29	94	6
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	32.8	9.6	32.8	32.8
Total Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	33.0	9.6	33.0	33.0
Total Split (%)	11.3%	38.6%	38.6%	11.3%	38.6%	38.6%	11.3%	38.8%	11.3%	38.8%	38.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.7	13.4	13.4	5.7	17.4	17.4	5.7	19.8	5.7	21.6	21.6
Actuated g/C Ratio	0.12	0.28	0.28	0.12	0.36	0.36	0.12	0.41	0.12	0.45	0.45
v/c Ratio	0.07	0.07	0.07	0.31	0.04	0.20	0.04	0.12	0.16	0.07	0.01
Control Delay	29.6	16.7	0.2	32.7	13.4	3.9	29.7	13.7	29.9	14.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	16.7	0.2	32.7	13.4	3.9	29.7	13.7	29.9	14.4	0.0
LOS	C	B	A	C	B	A	C	B	C	B	A
Approach Delay		13.2			13.3			14.4		17.2	
Approach LOS		B			B			B		B	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 47.8

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 14.4

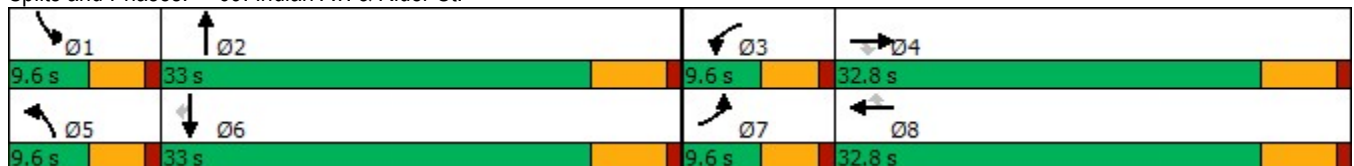
Intersection LOS: B

Intersection Capacity Utilization 35.9%

ICU Level of Service A

Analysis Period (min) 15

























Splits and Phases: 69: Indian Av. & Rider St.



HCM 6th Signalized Intersection Summary  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	57	32	58	46	119	7	122	30	29	94	6
Future Volume (veh/h)	13	57	32	58	46	119	7	122	30	29	94	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	15	66	29	67	53	95	8	142	8	34	109	4
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	35	577	257	117	741	331	19	831	47	71	966	431
Arrive On Green	0.02	0.16	0.16	0.06	0.21	0.21	0.01	0.24	0.24	0.04	0.27	0.27
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3476	194	1810	3610	1610
Grp Volume(v), veh/h	15	66	29	67	53	95	8	73	77	34	109	4
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1865	1810	1805	1610
Q Serve(g_s), s	0.3	0.7	0.6	1.5	0.5	2.1	0.2	1.3	1.4	0.8	1.0	0.1
Cycle Q Clear(g_c), s	0.3	0.7	0.6	1.5	0.5	2.1	0.2	1.3	1.4	0.8	1.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	35	577	257	117	741	331	19	432	446	71	966	431
V/C Ratio(X)	0.43	0.11	0.11	0.57	0.07	0.29	0.42	0.17	0.17	0.48	0.11	0.01
Avail Cap(c_a), veh/h	216	2331	1040	216	2331	1040	216	1174	1213	216	2348	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	15.0	15.0	19.0	13.4	14.0	20.6	12.6	12.6	19.7	11.6	11.2
Incr Delay (d2), s/veh	3.2	0.1	0.2	1.6	0.0	0.5	5.3	0.2	0.2	1.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.2	0.6	0.2	0.6	0.1	0.4	0.4	0.3	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	15.1	15.2	20.6	13.4	14.5	25.8	12.8	12.8	21.6	11.6	11.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		110			215			158			147	
Approach Delay, s/veh		16.3			16.2			13.5			13.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	15.8	7.3	12.5	5.0	17.0	5.4	14.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	2.8	3.4	3.5	2.7	2.2	3.0	2.3	4.1				
Green Ext Time (p_c), s	0.0	0.7	0.0	0.4	0.0	0.5	0.0	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				15.0								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	5.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	206	383	223	54	62	101
Future Vol, veh/h	206	383	223	54	62	101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	222	412	240	58	67	109

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	298	0	-	0	1125 269
Stage 1	-	-	-	-	269 -
Stage 2	-	-	-	-	856 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1275	-	-	-	229 775
Stage 1	-	-	-	-	781 -
Stage 2	-	-	-	-	420 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1275	-	-	-	177 775
Mov Cap-2 Maneuver	-	-	-	-	177 -
Stage 1	-	-	-	-	604 -
Stage 2	-	-	-	-	420 -

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	26.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1275	-	-	-	339
HCM Lane V/C Ratio	0.174	-	-	-	0.517
HCM Control Delay (s)	8.4	0	-	-	26.4
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.6	-	-	-	2.8



Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	190	580	318	18	12	106
Future Vol, veh/h	190	580	318	18	12	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	204	624	342	19	13	114

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	361	0	-	0	1384 352
Stage 1	-	-	-	-	352 -
Stage 2	-	-	-	-	1032 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1209	-	-	-	160 696
Stage 1	-	-	-	-	716 -
Stage 2	-	-	-	-	347 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1209	-	-	-	133 696
Mov Cap-2 Maneuver	-	-	-	-	255 -
Stage 1	-	-	-	-	595 -
Stage 2	-	-	-	-	347 -

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1209	-	-	-	592
HCM Lane V/C Ratio	0.169	-	-	-	0.214
HCM Control Delay (s)	8.6	-	-	-	12.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	0.8

Timings

Stoneridge Commerce Center SP (JN 13265)

71: Redlands Av. & San Jacinto Av.

01/25/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↑↗
Traffic Volume (vph)	43	28	88	406	31	23	108	521	724	59	353
Future Volume (vph)	43	28	88	406	31	23	108	521	724	59	353
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	35.8	9.6	35.8
Total Split (s)	9.6	38.6	38.6	24.0	53.0	53.0	17.0	45.4	45.4	12.0	40.4
Total Split (%)	8.0%	32.2%	32.2%	20.0%	44.2%	44.2%	14.2%	37.8%	37.8%	10.0%	33.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min

Intersection Summary

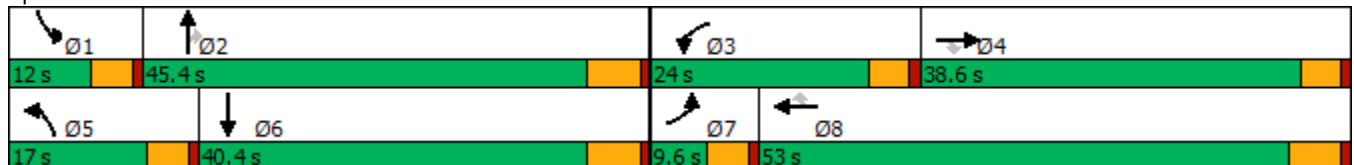
Cycle Length: 120

Actuated Cycle Length: 74.4

Natural Cycle: 105





























Control Type: Actuated-Uncoordinated

Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	43	28	88	406	31	23	108	521	724	59	353	31
Future Volume (veh/h)	43	28	88	406	31	23	108	521	724	59	353	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	30	35	437	33	12	116	560	564	63	380	20
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	142	234	198	537	448	375	148	1483	648	86	1313	69
Arrive On Green	0.04	0.12	0.12	0.15	0.24	0.24	0.08	0.41	0.41	0.05	0.38	0.38
Sat Flow, veh/h	3510	1900	1610	3510	1900	1589	1810	3610	1577	1810	3489	183
Grp Volume(v), veh/h	46	30	35	437	33	12	116	560	564	63	196	204
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1589	1810	1805	1577	1810	1805	1867
Q Serve(g_s), s	1.0	1.1	1.5	9.4	1.1	0.5	4.9	8.5	25.7	2.7	6.0	6.0
Cycle Q Clear(g_c), s	1.0	1.1	1.5	9.4	1.1	0.5	4.9	8.5	25.7	2.7	6.0	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	142	234	198	537	448	375	148	1483	648	86	679	703
V/C Ratio(X)	0.32	0.13	0.18	0.81	0.07	0.03	0.78	0.38	0.87	0.73	0.29	0.29
Avail Cap(c_a), veh/h	224	824	698	868	1144	957	286	1823	796	171	796	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	30.6	30.8	32.1	23.3	23.1	35.3	16.1	21.2	36.8	17.1	17.1
Incr Delay (d2), s/veh	0.5	0.2	0.4	1.2	0.1	0.0	3.4	0.2	8.8	4.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.5	0.6	3.8	0.4	0.2	2.2	3.1	9.7	1.2	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	30.9	31.2	33.4	23.4	23.1	38.7	16.3	30.0	41.3	17.3	17.3
LnGrp LOS	D	C	C	C	C	C	D	B	C	D	B	B
Approach Vol, veh/h		111			482			1240			463	
Approach Delay, s/veh		33.6			32.4			24.6			20.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	38.0	16.6	15.5	11.0	35.3	7.8	24.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	39.6	19.4	* 34	12.4	34.6	5.0	47.2				
Max Q Clear Time (g_c+I1), s	4.7	27.7	11.4	3.5	6.9	8.0	3.0	3.1				
Green Ext Time (p_c), s	0.0	4.5	0.6	0.2	0.1	2.1	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

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

Timings  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

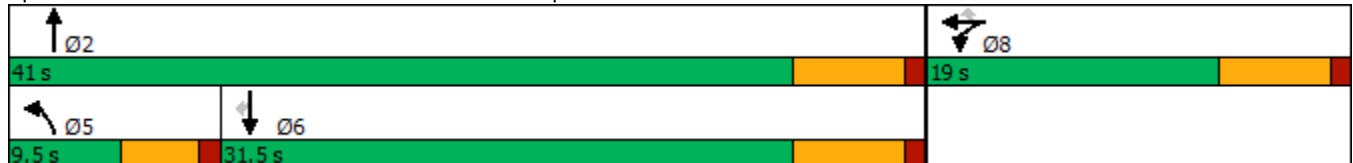


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↔	↗	↖↗	↑↑	↑↑↑	↗
Traffic Volume (vph)	432	2	554	204	797	733	113
Future Volume (vph)	432	2	554	204	797	733	113
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8	8		5	2	6	
Permitted Phases			8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	9.5	11.0	31.0	31.0
Total Split (s)	19.0	19.0	19.0	9.5	41.0	31.5	31.5
Total Split (%)	31.7%	31.7%	31.7%	15.8%	68.3%	52.5%	52.5%
Yellow Time (s)	5.0	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	Min	Min	Min

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 49.2  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 72: Redlands Av. & I-215 NB Ramps



HCM 6th Signalized Intersection Summary  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↔	↗	↖↗	↕			↑↑↑	↗
Traffic Volume (veh/h)	0	0	0	432	2	554	204	797	0	0	733	113
Future Volume (veh/h)	0	0	0	432	2	554	204	797	0	0	733	113
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				574	0	222	222	866	0	0	797	90
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				820	0	365	386	1764	0	0	1777	432
Arrive On Green				0.23	0.00	0.23	0.11	0.49	0.00	0.00	0.27	0.27
Sat Flow, veh/h				3619	0	1610	3510	3705	0	0	6802	1590
Grp Volume(v), veh/h				574	0	222	222	866	0	0	797	90
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1755	1805	0	0	1634	1590
Q Serve(g_s), s				6.1	0.0	5.2	2.5	6.8	0.0	0.0	4.3	1.8
Cycle Q Clear(g_c), s				6.1	0.0	5.2	2.5	6.8	0.0	0.0	4.3	1.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				820	0	365	386	1764	0	0	1777	432
V/C Ratio(X)				0.70	0.00	0.61	0.58	0.49	0.00	0.00	0.45	0.21
Avail Cap(c_a), veh/h				1117	0	497	417	2999	0	0	3956	962
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				15.0	0.0	14.6	17.8	7.2	0.0	0.0	12.7	11.8
Incr Delay (d2), s/veh				1.2	0.0	1.6	1.7	0.2	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.0	0.0	1.6	1.0	1.7	0.0	0.0	1.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				16.2	0.0	16.3	19.5	7.5	0.0	0.0	12.9	12.1
LnGrp LOS				B	A	B	B	A	A	A	B	B
Approach Vol, veh/h					796			1088			887	
Approach Delay, s/veh					16.2			9.9			12.8	
Approach LOS					B			A			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		26.6			9.1	17.5		15.5				
Change Period (Y+Rc), s		6.0			4.5	6.0		6.0				
Max Green Setting (Gmax), s		35.0			5.0	25.5		13.0				
Max Q Clear Time (g_c+I1), s		8.8			4.5	6.3		8.1				
Green Ext Time (p_c), s		6.5			0.0	5.2		1.4				

Intersection Summary

HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	184	2	213	816	478	351	815
Future Volume (vph)	184	2	213	816	478	351	815
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	11.0	11.0	9.5	33.0
Total Split (s)	19.0	19.0	19.0	23.0	23.0	18.0	41.0
Total Split (%)	31.7%	31.7%	31.7%	38.3%	38.3%	30.0%	68.3%
Yellow Time (s)	4.5	4.5	4.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0	4.5	6.0
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	None	Min

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 52.3

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Splits and Phases: 73: Redlands Av. & I-215 SB Ramps



HCM 6th Signalized Intersection Summary  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	2	213	0	0	0	0	816	478	351	815	0
Future Volume (veh/h)	184	2	213	0	0	0	0	816	478	351	815	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	221	0	57				0	859	374	369	858	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	443	0	197				0	1947	833	587	2098	0
Arrive On Green	0.12	0.00	0.12				0.00	0.30	0.30	0.17	0.58	0.00
Sat Flow, veh/h	3619	0	1610				0	6802	2796	3510	3705	0
Grp Volume(v), veh/h	221	0	57				0	859	374	369	858	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1634	1398	1755	1805	0
Q Serve(g_s), s	2.2	0.0	1.2				0.0	4.1	4.2	3.8	5.1	0.0
Cycle Q Clear(g_c), s	2.2	0.0	1.2				0.0	4.1	4.2	3.8	5.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	443	0	197				0	1947	833	587	2098	0
V/C Ratio(X)	0.50	0.00	0.29				0.00	0.44	0.45	0.63	0.41	0.00
Avail Cap(c_a), veh/h	1260	0	560				0	2865	1225	1222	3257	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.9	0.0	15.5				0.0	11.0	11.0	15.0	4.5	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.8				0.0	0.2	0.4	1.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.4				0.0	1.1	1.0	1.3	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	0.0	16.3				0.0	11.2	11.4	16.1	4.6	0.0
LnGrp LOS	B	A	B				A	B	B	B	A	A
Approach Vol, veh/h		278						1233			1227	
Approach Delay, s/veh		16.7						11.2			8.1	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	11.0	17.6		10.2				28.5				
Change Period (Y+Rc), s	4.5	6.0		5.5				6.0				
Max Green Setting (Gmax), s	13.5	17.0		13.5				35.0				
Max Q Clear Time (g_c+I1), s	5.8	6.2		4.2				7.1				
Green Ext Time (p_c), s	0.8	5.3		0.6				6.5				

Intersection Summary

HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

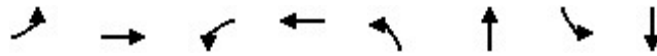
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↘	↕	↘	↕	↘	↕
Traffic Volume (vph)	18	79	23	30	87	148	20	237
Future Volume (vph)	18	79	23	30	87	148	20	237
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	32.8
Total Split (s)	9.6	32.8	9.6	32.8	9.6	33.0	9.6	33.0
Total Split (%)	11.3%	38.6%	11.3%	38.6%	11.3%	38.8%	11.3%	38.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max
Act Effct Green (s)	5.1	12.9	5.1	14.8	5.1	30.2	5.1	29.3
Actuated g/C Ratio	0.08	0.19	0.08	0.22	0.08	0.45	0.08	0.44
v/c Ratio	0.16	0.25	0.21	0.07	0.79	0.13	0.18	0.21
Control Delay	35.7	13.9	36.5	15.2	72.1	12.0	36.1	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	13.9	36.5	15.2	72.1	12.0	36.1	13.9
LOS	D	B	D	B	E	B	D	B
Approach Delay		16.3		22.7		32.2		15.5
Approach LOS		B		C		C		B

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 67.2

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 21.9

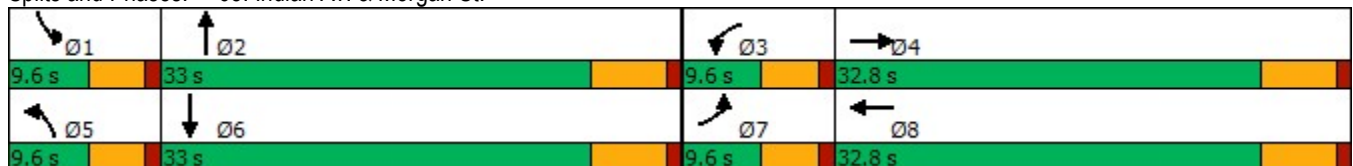
Intersection LOS: C

Intersection Capacity Utilization 43.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 68: Indian Av. & Morgan St.


























HCM 6th Signalized Intersection Summary  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	79	62	23	30	12	87	148	23	20	237	24
Future Volume (veh/h)	18	79	62	23	30	12	87	148	23	20	237	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	22	98	34	28	37	10	107	183	21	25	293	24
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	46	377	125	55	417	108	138	1549	176	51	1440	117
Arrive On Green	0.03	0.14	0.14	0.03	0.15	0.15	0.08	0.47	0.47	0.03	0.43	0.43
Sat Flow, veh/h	1810	2662	884	1810	2837	736	1810	3268	370	1810	3380	275
Grp Volume(v), veh/h	22	65	67	28	23	24	107	100	104	25	156	161
Grp Sat Flow(s),veh/h/ln	1810	1805	1741	1810	1805	1768	1810	1805	1833	1810	1805	1850
Q Serve(g_s), s	0.8	2.0	2.2	1.0	0.7	0.8	3.7	2.0	2.0	0.9	3.5	3.5
Cycle Q Clear(g_c), s	0.8	2.0	2.2	1.0	0.7	0.8	3.7	2.0	2.0	0.9	3.5	3.5
Prop In Lane	1.00		0.51	1.00		0.42	1.00		0.20	1.00		0.15
Lane Grp Cap(c), veh/h	46	256	246	55	265	260	138	856	869	51	769	788
V/C Ratio(X)	0.48	0.25	0.27	0.50	0.09	0.09	0.78	0.12	0.12	0.49	0.20	0.20
Avail Cap(c_a), veh/h	142	763	736	142	763	747	142	856	869	142	769	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	24.4	24.5	30.5	23.5	23.6	29.0	9.4	9.4	30.6	11.5	11.5
Incr Delay (d2), s/veh	2.9	0.5	0.6	2.6	0.1	0.2	20.9	0.1	0.1	2.7	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	0.9	0.4	0.3	0.3	2.3	0.6	0.6	0.4	1.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.6	24.9	25.1	33.1	23.7	23.7	49.8	9.4	9.4	33.3	12.1	12.1
LnGrp LOS	C	C	C	C	C	C	D	A	A	C	B	B
Approach Vol, veh/h		154			75			311			342	
Approach Delay, s/veh		26.2			27.2			23.3			13.7	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	36.1	6.6	14.8	9.5	33.0	6.2	15.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	2.9	4.0	3.0	4.2	5.7	5.5	2.8	2.8				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.6	0.0	1.4	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.4								
HCM 6th LOS				C								

Timings  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↘	↑↑	↗
Traffic Volume (vph)	24	137	19	36	23	89	5	74	59	218	4
Future Volume (vph)	24	137	19	36	23	89	5	74	59	218	4
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	32.8	9.6	32.8	32.8
Total Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	33.0	9.6	33.0	33.0
Total Split (%)	11.3%	38.6%	38.6%	11.3%	38.6%	38.6%	11.3%	38.8%	11.3%	38.8%	38.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.7	13.4	13.4	5.7	15.2	15.2	5.7	19.8	5.7	23.9	23.9
Actuated g/C Ratio	0.12	0.28	0.28	0.12	0.32	0.32	0.12	0.41	0.12	0.50	0.50
v/c Ratio	0.13	0.16	0.04	0.20	0.02	0.17	0.03	0.08	0.32	0.14	0.01
Control Delay	29.8	16.6	0.2	30.1	15.0	2.1	29.6	13.2	33.2	12.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	16.6	0.2	30.1	15.0	2.1	29.6	13.2	33.2	12.5	0.0
LOS	C	B	A	C	B	A	C	B	C	B	A
Approach Delay		16.7			10.9			14.0		16.7	
Approach LOS		B			B			B		B	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 47.8

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.32

Intersection Signal Delay: 15.1

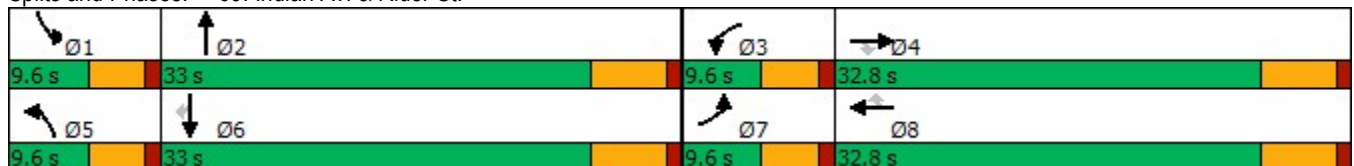
Intersection LOS: B

Intersection Capacity Utilization 35.9%

ICU Level of Service A

Analysis Period (min) 15

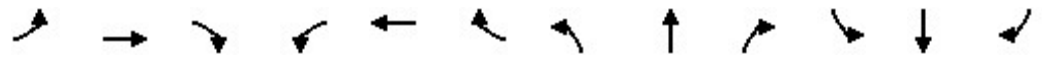
Splits and Phases: 69: Indian Av. & Rider St.



HCM 6th Signalized Intersection Summary  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	137	19	36	23	89	5	74	26	59	218	4
Future Volume (veh/h)	24	137	19	36	23	89	5	74	26	59	218	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	163	18	43	27	55	6	88	14	70	260	3
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	61	722	322	84	767	342	15	700	109	118	1013	452
Arrive On Green	0.03	0.20	0.20	0.05	0.21	0.21	0.01	0.22	0.22	0.06	0.28	0.28
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3130	487	1810	3610	1610
Grp Volume(v), veh/h	29	163	18	43	27	55	6	50	52	70	260	3
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1812	1810	1805	1610
Q Serve(g_s), s	0.7	1.7	0.4	1.0	0.3	1.2	0.1	1.0	1.0	1.7	2.5	0.1
Cycle Q Clear(g_c), s	0.7	1.7	0.4	1.0	0.3	1.2	0.1	1.0	1.0	1.7	2.5	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	61	722	322	84	767	342	15	404	405	118	1013	452
V/C Ratio(X)	0.47	0.23	0.06	0.51	0.04	0.16	0.41	0.12	0.13	0.60	0.26	0.01
Avail Cap(c_a), veh/h	202	2180	972	202	2180	972	202	1098	1102	202	2196	979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	15.0	14.5	20.8	14.0	14.4	22.1	13.9	13.9	20.3	12.5	11.6
Incr Delay (d2), s/veh	2.1	0.2	0.1	1.8	0.0	0.2	6.8	0.1	0.1	1.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	0.1	0.4	0.1	0.4	0.1	0.3	0.3	0.6	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	15.1	14.5	22.6	14.0	14.6	28.9	14.0	14.0	22.1	12.6	11.6
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		210			125			108			333	
Approach Delay, s/veh		16.2			17.2			14.8			14.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	15.8	6.7	14.7	5.0	18.3	6.1	15.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	3.7	3.0	3.0	3.7	2.1	4.5	2.7	3.2				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.9	0.0	1.4	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

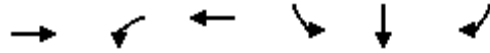
**ATTACHMENT C**  
**EAP (2030) HCM INTERSECTION ANALYSIS WORKSHEETS**



Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

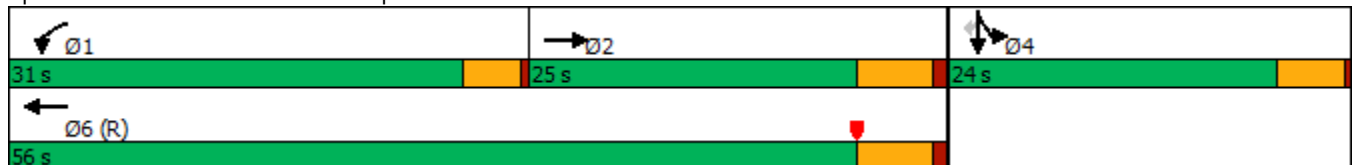


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑
Traffic Volume (vph)	317	283	528	306	0	85
Future Volume (vph)	317	283	528	306	0	85
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	25.0	31.0	56.0	24.0	24.0	24.0
Total Split (%)	31.3%	38.8%	70.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None
Act Effct Green (s)	34.0	18.9	56.8	13.2	13.2	13.2
Actuated g/C Ratio	0.42	0.24	0.71	0.16	0.16	0.16
v/c Ratio	0.34	0.72	0.22	0.59	0.59	0.27
Control Delay	15.3	37.7	4.7	38.8	39.0	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	37.7	4.7	38.8	39.0	8.4
LOS	B	D	A	D	D	A
Approach Delay	15.3		16.2		32.3	
Approach LOS	B		B		C	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 54.5 (68%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 19.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 57.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 6: I-215 SB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↔	↑↑					↔	↑↑	↔
Traffic Volume (veh/h)	0	317	146	283	528	0	0	0	0	306	0	85
Future Volume (veh/h)	0	317	146	283	528	0	0	0	0	306	0	85
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	345	159	308	574	0				333	0	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	925	418	358	2279	0				459	0	202
Arrive On Green	0.00	0.38	0.38	0.20	0.63	0.00				0.13	0.00	0.13
Sat Flow, veh/h	0	2507	1091	1810	3705	0				3619	0	1591
Grp Volume(v), veh/h	0	257	247	308	574	0				333	0	92
Grp Sat Flow(s),veh/h/ln	0	1805	1699	1810	1805	0				1810	0	1591
Q Serve(g_s), s	0.0	8.2	8.4	13.2	5.6	0.0				7.1	0.0	4.3
Cycle Q Clear(g_c), s	0.0	8.2	8.4	13.2	5.6	0.0				7.1	0.0	4.3
Prop In Lane	0.00		0.64	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	692	651	358	2279	0				459	0	202
V/C Ratio(X)	0.00	0.37	0.38	0.86	0.25	0.00				0.72	0.00	0.46
Avail Cap(c_a), veh/h	0	692	651	611	2279	0				882	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.7	17.8	31.0	6.5	0.0				33.6	0.0	32.4
Incr Delay (d2), s/veh	0.0	1.5	1.7	6.0	0.3	0.0				2.2	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.3	3.2	5.8	1.6	0.0				3.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.3	19.5	37.0	6.7	0.0				35.8	0.0	34.0
LnGrp LOS	A	B	B	D	A	A				D	A	C
Approach Vol, veh/h		504			882						425	
Approach Delay, s/veh		19.4			17.3						35.4	
Approach LOS		B			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.8	36.2		14.7		56.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	27.0	19.5		19.5		50.5						
Max Q Clear Time (g_c+I1), s	15.2	10.4		9.1		7.6						
Green Ext Time (p_c), s	0.7	1.2		1.1		2.2						

Intersection Summary

HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

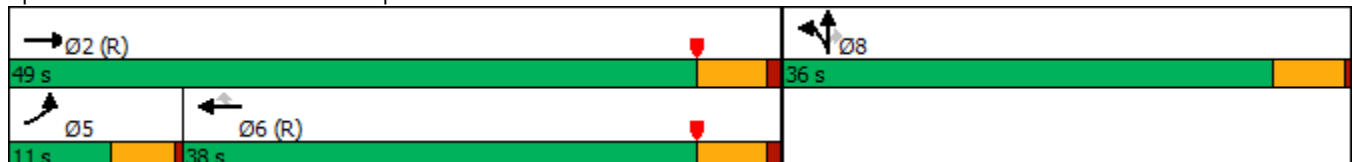


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷	↶	↷	↶	↷	↷
Traffic Volume (vph)	68	555	643	570	168	0	291
Future Volume (vph)	68	555	643	570	168	0	291
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	31.5	27.5	27.5	10.5	10.5	10.5
Total Split (s)	11.0	49.0	38.0	38.0	36.0	36.0	36.0
Total Split (%)	12.9%	57.6%	44.7%	44.7%	42.4%	42.4%	42.4%
Yellow Time (s)	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	0.5	1.0	1.0	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	8.0	63.4	52.9	52.9	11.1	11.1	11.1
Actuated g/C Ratio	0.09	0.75	0.62	0.62	0.13	0.13	0.13
v/c Ratio	0.44	0.22	0.31	0.51	0.41	0.41	0.77
Control Delay	43.8	4.2	10.0	2.8	37.4	37.5	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	4.2	10.0	2.8	37.4	37.5	22.8
LOS	D	A	A	A	D	D	C
Approach Delay		8.5	6.6			28.2	
Approach LOS		A	A			C	

Intersection Summary

Cycle Length: 85  
 Actuated Cycle Length: 85  
 Offset: 42.5 (50%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 11.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 57.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 7: I-215 NB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗	↘	↖	↗			
Traffic Volume (veh/h)	68	555	0	0	643	570	168	0	291	0	0	0
Future Volume (veh/h)	68	555	0	0	643	570	168	0	291	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	74	603	0	0	699	620	183	0	316			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	96	2357	0	0	1975	879	809	0	358			
Arrive On Green	0.05	0.65	0.00	0.00	0.55	0.55	0.22	0.00	0.22			
Sat Flow, veh/h	1810	3705	0	0	3705	1606	3619	0	1599			
Grp Volume(v), veh/h	74	603	0	0	699	620	183	0	316			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1606	1810	0	1599			
Q Serve(g_s), s	3.4	5.9	0.0	0.0	9.2	24.2	3.5	0.0	16.3			
Cycle Q Clear(g_c), s	3.4	5.9	0.0	0.0	9.2	24.2	3.5	0.0	16.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	96	2357	0	0	1975	879	809	0	358			
V/C Ratio(X)	0.77	0.26	0.00	0.00	0.35	0.71	0.23	0.00	0.88			
Avail Cap(c_a), veh/h	138	2357	0	0	1975	879	1320	0	583			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.8	6.1	0.0	0.0	10.8	14.2	27.0	0.0	31.9			
Incr Delay (d2), s/veh	7.9	0.2	0.0	0.0	0.5	4.7	0.1	0.0	5.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.6	1.7	0.0	0.0	3.1	8.1	1.4	0.0	6.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	6.4	0.0	0.0	11.3	18.9	27.0	0.0	37.4			
LnGrp LOS	D	A	A	A	B	B	C	A	D			
Approach Vol, veh/h		677			1319			499				
Approach Delay, s/veh		10.9			14.9			33.6				
Approach LOS		B			B			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		61.0			9.0	52.0		24.0				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		43.5			6.5	32.5		31.0				
Max Q Clear Time (g_c+I1), s		7.9			5.4	26.2		18.3				
Green Ext Time (p_c), s		2.4			0.0	2.4		0.8				

Intersection Summary

HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	170	45	178	98	30	149
Future Vol, veh/h	170	45	178	98	30	149
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	250	66	262	144	44	219
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	14	11.8	12
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	98	170	45	30	149
LT Vol	0	0	170	0	30	0
Through Vol	178	0	0	0	0	149
RT Vol	0	98	0	45	0	0
Lane Flow Rate	262	144	250	66	44	219
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.431	0.209	0.469	0.102	0.081	0.371
Departure Headway (Hd)	5.932	5.222	6.753	5.541	6.597	6.089
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	607	686	535	647	543	592
Service Time	3.67	2.96	4.489	3.276	4.337	3.828
HCM Lane V/C Ratio	0.432	0.21	0.467	0.102	0.081	0.37
HCM Control Delay	13.1	9.3	15.3	8.9	9.9	12.4
HCM Lane LOS	B	A	C	A	A	B
HCM 95th-tile Q	2.2	0.8	2.5	0.3	0.3	1.7

Timings  
23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	29	193	31	22	78	2	47	1326	11	549	77
Future Volume (vph)	29	193	31	22	78	2	47	1326	11	549	77
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	13.0	43.6	43.6	11.0	41.6	41.6	14.0	54.4	11.0	51.4	51.4
Total Split (%)	10.8%	36.3%	36.3%	9.2%	34.7%	34.7%	11.7%	45.3%	9.2%	42.8%	42.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.9	14.4	14.4	7.3	14.9	14.9	7.4	29.4	6.3	23.9	23.9
Actuated g/C Ratio	0.11	0.23	0.23	0.12	0.24	0.24	0.12	0.48	0.10	0.39	0.39
v/c Ratio	0.15	0.24	0.07	0.11	0.18	0.00	0.23	0.57	0.07	0.41	0.11
Control Delay	38.7	24.4	0.3	36.3	24.4	0.0	37.7	14.8	40.1	17.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	24.4	0.3	36.3	24.4	0.0	37.7	14.8	40.1	17.7	0.6
LOS	D	C	A	D	C	A	D	B	D	B	A
Approach Delay		23.1			26.5			15.5		16.1	
Approach LOS		C			C			B		B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 61.5

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 17.0

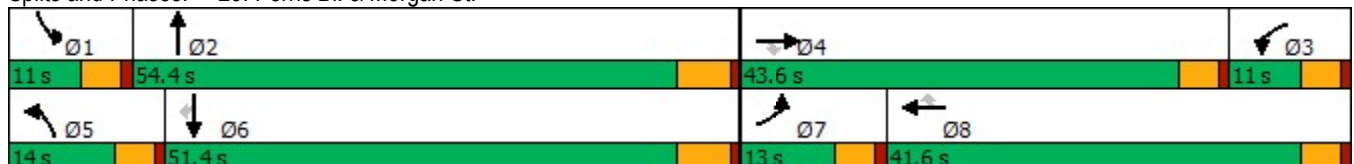
Intersection LOS: B

Intersection Capacity Utilization 59.0%

ICU Level of Service B

Analysis Period (min) 15

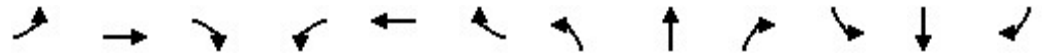
Splits and Phases: 23: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	193	31	22	78	2	47	1326	17	11	549	77
Future Volume (veh/h)	29	193	31	22	78	2	47	1326	17	11	549	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	203	17	23	82	1	49	1396	18	12	578	64
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	62	628	280	61	331	280	86	2290	30	27	1451	647
Arrive On Green	0.03	0.17	0.17	0.03	0.17	0.17	0.05	0.43	0.43	0.02	0.40	0.40
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5278	68	1810	3610	1610
Grp Volume(v), veh/h	31	203	17	23	82	1	49	915	499	12	578	64
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1888	1810	1805	1610
Q Serve(g_s), s	1.0	2.8	0.4	0.7	2.1	0.0	1.5	11.6	11.6	0.4	6.5	1.4
Cycle Q Clear(g_c), s	1.0	2.8	0.4	0.7	2.1	0.0	1.5	11.6	11.6	0.4	6.5	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	62	628	280	61	331	280	86	1501	819	27	1451	647
V/C Ratio(X)	0.50	0.32	0.06	0.38	0.25	0.00	0.57	0.61	0.61	0.44	0.40	0.10
Avail Cap(c_a), veh/h	266	2463	1099	203	1230	1042	298	2940	1605	203	2880	1285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	20.7	11.0	27.0	20.4	19.5	26.7	12.5	12.5	27.9	12.2	10.6
Incr Delay (d2), s/veh	2.4	0.3	0.1	1.4	0.4	0.0	2.2	0.4	0.7	4.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.2	0.2	0.3	0.9	0.0	0.6	3.5	3.8	0.2	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	21.0	11.1	28.4	20.8	19.5	28.9	12.9	13.2	31.9	12.4	10.7
LnGrp LOS	C	C	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h		251			106			1463			654	
Approach Delay, s/veh		21.3			22.4			13.5			12.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	30.6	6.5	14.6	7.3	28.8	6.5	14.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	6.4	48.6	6.4	39.0	9.4	45.6	8.4	37.0				
Max Q Clear Time (g_c+I1), s	2.4	13.6	2.7	4.8	3.5	8.5	3.0	4.1				
Green Ext Time (p_c), s	0.0	11.2	0.0	1.5	0.0	4.1	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

Timings  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

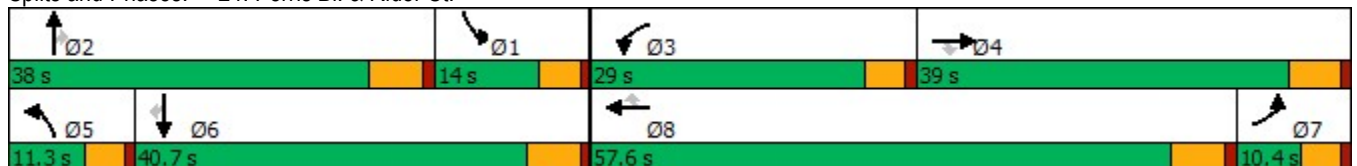
02/11/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	159	17	253	344	298	43	1088	134	63	427	32
Future Volume (vph)	27	159	17	253	344	298	43	1088	134	63	427	32
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	10.4	39.0	39.0	29.0	57.6	57.6	11.3	38.0	38.0	14.0	40.7	40.7
Total Split (%)	8.7%	32.5%	32.5%	24.2%	48.0%	48.0%	9.4%	31.7%	31.7%	11.7%	33.9%	33.9%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.3	14.2	14.2	17.7	29.8	29.8	6.4	27.9	27.9	7.7	31.6	31.6
Actuated g/C Ratio	0.11	0.16	0.16	0.20	0.34	0.34	0.07	0.32	0.32	0.09	0.36	0.36
v/c Ratio	0.15	0.29	0.05	0.74	0.30	0.43	0.35	0.70	0.23	0.42	0.24	0.05
Control Delay	40.9	35.8	0.2	48.6	25.9	7.9	53.4	30.4	3.8	52.5	22.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	35.8	0.2	48.6	25.9	7.9	53.4	30.4	3.8	52.5	22.1	0.1
LOS	D	D	A	D	C	A	D	C	A	D	C	A
Approach Delay		33.5			26.4			28.4			24.5	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 86.7  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 27.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

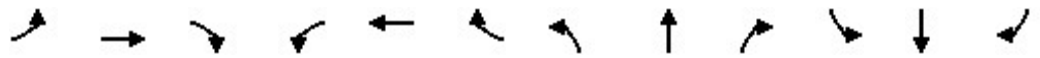
Splits and Phases: 24: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (veh/h)	27	159	17	253	344	298	43	1088	134	63	427	32
Future Volume (veh/h)	27	159	17	253	344	298	43	1088	134	63	427	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	171	9	272	370	210	46	1170	110	68	459	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	195	513	228	320	701	313	76	1683	523	93	1821	565
Arrive On Green	0.11	0.14	0.14	0.18	0.19	0.19	0.04	0.32	0.32	0.05	0.35	0.35
Sat Flow, veh/h	1810	3610	1607	1810	3610	1610	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	29	171	9	272	370	210	46	1170	110	68	459	24
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1805	1610	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	1.0	3.1	0.3	10.5	6.6	8.7	1.8	14.2	1.9	2.7	4.5	0.4
Cycle Q Clear(g_c), s	1.0	3.1	0.3	10.5	6.6	8.7	1.8	14.2	1.9	2.7	4.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	513	228	320	701	313	76	1683	523	93	1821	565
V/C Ratio(X)	0.15	0.33	0.04	0.85	0.53	0.67	0.61	0.69	0.21	0.73	0.25	0.04
Avail Cap(c_a), veh/h	195	1663	740	613	2594	1157	168	2317	719	236	2512	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	27.9	26.7	28.8	26.1	26.9	34.0	21.2	4.9	33.7	16.7	5.3
Incr Delay (d2), s/veh	0.1	0.4	0.1	2.5	0.6	2.5	2.9	0.5	0.2	4.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.2	0.1	4.4	2.6	3.3	0.8	5.1	1.2	1.2	1.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	28.2	26.8	31.2	26.7	29.4	36.9	21.8	5.1	37.7	16.7	5.3
LnGrp LOS	C	C	C	C	C	C	D	C	A	D	B	A
Approach Vol, veh/h		209			852			1326			551	
Approach Delay, s/veh		28.3			28.8			20.9			18.8	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	29.2	17.3	16.0	7.6	31.1	13.6	19.8				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	9.4	* 32	24.4	33.2	6.7	34.9	5.8	* 52				
Max Q Clear Time (g_c+I1), s	4.7	16.2	12.5	5.1	3.8	6.5	3.0	10.7				
Green Ext Time (p_c), s	0.0	7.2	0.3	1.0	0.0	3.0	0.0	3.0				

Intersection Summary

HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

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

Timings  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	16	73	38	137	245	43	926	34	37	600	38
Future Volume (vph)	16	73	38	137	245	43	926	34	37	600	38
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.6	9.6	34.6	34.6	9.6	36.8	36.8	9.6	34.8	34.8
Total Split (s)	12.0	33.0	15.0	36.0	36.0	10.0	46.0	46.0	26.0	62.0	62.0
Total Split (%)	10.0%	27.5%	12.5%	30.0%	30.0%	8.3%	38.3%	38.3%	21.7%	51.7%	51.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.4	14.7	7.2	17.3	17.3	6.3	28.3	28.3	7.2	29.3	29.3
Actuated g/C Ratio	0.10	0.22	0.11	0.26	0.26	0.09	0.42	0.42	0.11	0.44	0.44
v/c Ratio	0.10	0.24	0.22	0.31	0.44	0.28	0.67	0.05	0.21	0.42	0.06
Control Delay	41.8	27.7	40.5	27.4	6.5	44.7	21.0	0.1	40.5	16.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	27.7	40.5	27.4	6.5	44.7	21.0	0.1	40.5	16.0	0.1
LOS	D	C	D	C	A	D	C	A	D	B	A
Approach Delay		29.9		16.4			21.3			16.5	
Approach LOS		C		B			C			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 66.9

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 19.3

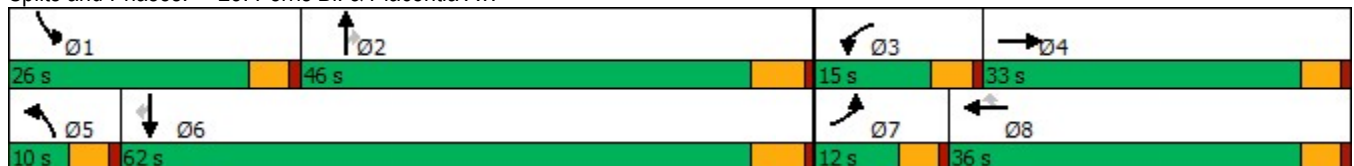
Intersection LOS: B

Intersection Capacity Utilization 57.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 25: Perris Bl. & Placentia Av.



HCM 6th Signalized Intersection Summary  
 25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	73	16	38	137	245	43	926	34	37	600	38
Future Volume (veh/h)	16	73	16	38	137	245	43	926	34	37	600	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	18	81	14	42	152	155	48	1029	29	41	667	36
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	274	47	77	369	313	84	1452	648	76	1435	639
Arrive On Green	0.02	0.17	0.17	0.04	0.19	0.19	0.05	0.40	0.40	0.04	0.40	0.40
Sat Flow, veh/h	1810	1578	273	1810	1900	1610	1810	3610	1610	1810	3610	1608
Grp Volume(v), veh/h	18	0	95	42	152	155	48	1029	29	41	667	36
Grp Sat Flow(s),veh/h/ln	1810	0	1851	1810	1900	1610	1810	1805	1610	1810	1805	1608
Q Serve(g_s), s	0.6	0.0	2.6	1.3	4.0	4.9	1.5	13.7	0.6	1.3	7.9	0.8
Cycle Q Clear(g_c), s	0.6	0.0	2.6	1.3	4.0	4.9	1.5	13.7	0.6	1.3	7.9	0.8
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	0	321	77	369	313	84	1452	648	76	1435	639
V/C Ratio(X)	0.46	0.00	0.30	0.55	0.41	0.50	0.57	0.71	0.04	0.54	0.46	0.06
Avail Cap(c_a), veh/h	232	0	912	327	1036	878	170	2519	1124	672	3522	1569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	0.0	20.7	27.0	20.3	20.7	26.9	14.4	10.5	27.1	12.8	10.7
Incr Delay (d2), s/veh	3.1	0.0	0.5	2.2	0.7	1.2	2.2	0.6	0.0	2.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.1	0.6	1.8	1.9	0.6	4.4	0.2	0.5	2.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	0.0	21.3	29.3	21.1	21.9	29.1	15.0	10.5	29.3	13.1	10.7
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		113			349			1106			744	
Approach Delay, s/veh		22.8			22.4			15.5			13.8	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	29.0	7.0	14.6	7.3	28.7	5.9	15.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	21.4	40.2	10.4	28.4	5.4	56.2	7.4	31.4				
Max Q Clear Time (g_c+I1), s	3.3	15.7	3.3	4.6	3.5	9.9	2.6	6.9				
Green Ext Time (p_c), s	0.0	7.4	0.0	0.5	0.0	4.8	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Timings  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

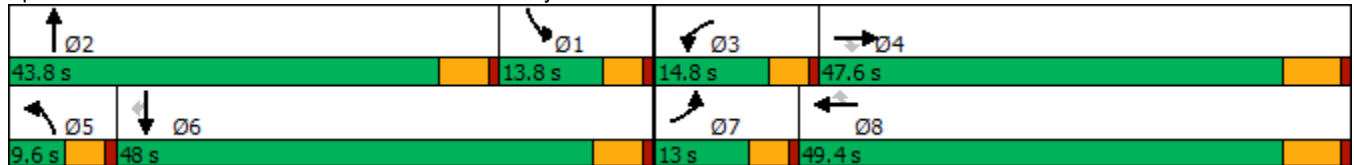


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↗	↖	↑	↗
Traffic Volume (vph)	52	1269	18	86	1845	600	13	10	332	1	22
Future Volume (vph)	52	1269	18	86	1845	600	13	10	332	1	22
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	27.2	9.6	43.4	9.6	23.4	23.4
Total Split (s)	13.0	47.6	47.6	14.8	49.4	49.4	9.6	43.8	13.8	48.0	48.0
Total Split (%)	10.8%	39.7%	39.7%	12.3%	41.2%	41.2%	8.0%	36.5%	11.5%	40.0%	40.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 30: Redlands Av. & Ramona Exwy.





HCM 6th Signalized Intersection Summary  
 30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑		↖	↑	↗
Traffic Volume (veh/h)	52	1269	18	86	1845	600	13	10	83	332	1	22
Future Volume (veh/h)	52	1269	18	86	1845	600	13	10	83	332	1	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.94	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	54	1322	19	90	1922	625	14	10	86	346	1	23
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	1973	597	115	2101	637	29	42	365	158	652	547
Arrive On Green	0.04	0.38	0.38	0.06	0.41	0.41	0.02	0.26	0.26	0.09	0.34	0.34
Sat Flow, veh/h	1810	5187	1569	1810	5187	1572	1810	161	1381	1810	1900	1592
Grp Volume(v), veh/h	54	1322	19	90	1922	625	14	0	96	346	1	23
Grp Sat Flow(s),veh/h/ln	1810	1729	1569	1810	1729	1572	1810	0	1541	1810	1900	1592
Q Serve(g_s), s	3.1	22.4	0.8	5.2	37.0	27.7	0.8	0.0	5.2	9.2	0.0	1.0
Cycle Q Clear(g_c), s	3.1	22.4	0.8	5.2	37.0	27.7	0.8	0.0	5.2	9.2	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.90	1.00		1.00
Lane Grp Cap(c), veh/h	70	1973	597	115	2101	637	29	0	408	158	652	547
V/C Ratio(X)	0.77	0.67	0.03	0.79	0.91	0.98	0.49	0.00	0.24	2.20	0.00	0.04
Avail Cap(c_a), veh/h	144	2033	615	175	2121	643	86	0	560	158	766	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	27.2	20.5	48.8	29.7	13.9	51.5	0.0	30.5	48.2	22.8	23.1
Incr Delay (d2), s/veh	6.6	0.8	0.0	5.9	6.7	30.6	4.6	0.0	0.3	558.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.7	0.3	2.4	15.2	13.6	0.4	0.0	1.9	28.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	28.0	20.5	54.6	36.4	44.4	56.2	0.0	30.7	606.4	22.8	23.1
LnGrp LOS	E	C	C	D	D	D	E	A	C	F	C	C
Approach Vol, veh/h		1395			2637			110			370	
Approach Delay, s/veh		29.1			38.9			34.0			568.6	
Approach LOS		C			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	33.4	11.3	46.4	6.3	41.7	8.7	49.0				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	9.2	* 38	10.2	41.4	5.0	42.6	8.4	43.2				
Max Q Clear Time (g_c+I1), s	11.2	7.2	7.2	24.4	2.8	3.0	5.1	39.0				
Green Ext Time (p_c), s	0.0	0.5	0.0	7.9	0.0	0.1	0.0	3.8				

Intersection Summary

HCM 6th Ctrl Delay	79.2
HCM 6th LOS	E

Notes

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

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗
Traffic Vol, veh/h	32	0	0	0	0	54
Future Vol, veh/h	32	0	0	0	0	54
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	38	0	0	0	0	64
Number of Lanes	1	1	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	8.1	0	6.9
HCM LOS	A	-	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	0%	0%
Vol Thru, %	100%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	32	0	0	54
LT Vol	0	32	0	0	0
Through Vol	0	0	0	0	0
RT Vol	0	0	0	0	54
Lane Flow Rate	0	38	0	0	64
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0	0.054	0	0	0.069
Departure Headway (Hd)	4.416	5.113	4.613	4.567	3.867
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	0	701	0	0	922
Service Time	2.466	2.837	2.336	2.307	1.606
HCM Lane V/C Ratio	0	0.054	0	0	0.069
HCM Control Delay	7.5	8.1	7.3	7.3	6.9
HCM Lane LOS	N	A	N	N	A
HCM 95th-tile Q	0	0.2	0	0	0.2

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

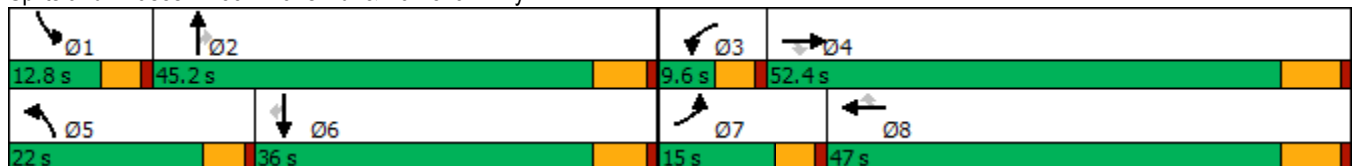
01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	1184	182	17	1573	362	535	493	31	230	297	423
Future Volume (vph)	300	1184	182	17	1573	362	535	493	31	230	297	423
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	15.0	52.4	52.4	9.6	47.0	47.0	22.0	45.2	45.2	12.8	36.0	36.0
Total Split (%)	12.5%	43.7%	43.7%	8.0%	39.2%	39.2%	18.3%	37.7%	37.7%	10.7%	30.0%	30.0%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.0	54.5	54.5	5.6	43.2	43.2	18.1	35.5	35.5	8.8	26.3	26.3
Actuated g/C Ratio	0.10	0.48	0.48	0.05	0.38	0.38	0.16	0.31	0.31	0.08	0.23	0.23
v/c Ratio	0.95	0.51	0.22	0.11	1.23	0.53	1.03	0.47	0.05	0.91	0.38	0.87
Control Delay	89.8	23.3	3.8	55.9	143.3	17.0	94.6	33.0	0.2	89.7	38.1	40.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.8	23.3	3.8	55.9	143.3	17.0	94.6	33.0	0.2	89.7	38.1	40.9
LOS	F	C	A	E	F	B	F	C	A	F	D	D
Approach Delay		33.1			119.1			63.2			51.9	
Approach LOS		C			F			E			D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.6  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.23  
 Intersection Signal Delay: 71.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 94.9%  
 ICU Level of Service F  
 Analysis Period (min) 15


































Splits and Phases: 39: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	 		 	 	
Traffic Volume (veh/h)	300	1184	182	17	1573	362	535	493	31	230	297	423
Future Volume (veh/h)	300	1184	182	17	1573	362	535	493	31	230	297	423
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	319	1260	0	18	1673	249	569	524	14	245	316	278
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	343	2364		86	1380	616	562	1080	482	275	785	345
Arrive On Green	0.10	0.46	0.00	0.02	0.38	0.38	0.16	0.30	0.30	0.08	0.22	0.22
Sat Flow, veh/h	3510	5187	1610	3510	3610	1610	3510	3610	1610	3510	3610	1589
Grp Volume(v), veh/h	319	1260	0	18	1673	249	569	524	14	245	316	278
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1805	1610	1755	1805	1610	1755	1805	1589
Q Serve(g_s), s	10.1	19.6	0.0	0.6	43.0	12.7	18.0	13.4	0.7	7.8	8.4	18.7
Cycle Q Clear(g_c), s	10.1	19.6	0.0	0.6	43.0	12.7	18.0	13.4	0.7	7.8	8.4	18.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	343	2364		86	1380	616	562	1080	482	275	785	345
V/C Ratio(X)	0.93	0.53		0.21	1.21	0.40	1.01	0.49	0.03	0.89	0.40	0.80
Avail Cap(c_a), veh/h	343	2364		175	1380	616	562	1323	590	275	1027	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	22.0	0.0	53.8	34.7	25.4	47.2	32.3	27.9	51.4	37.7	41.7
Incr Delay (d2), s/veh	30.5	0.2	0.0	0.4	102.3	0.4	41.1	0.3	0.0	27.6	0.3	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	7.2	0.0	0.2	36.7	4.6	10.8	5.7	0.3	4.4	3.6	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.8	22.2	0.0	54.2	137.0	25.8	88.4	32.6	27.9	79.0	38.1	49.5
LnGrp LOS	F	C		D	F	C	F	C	C	E	D	D
Approach Vol, veh/h		1579	A		1940			1107			839	
Approach Delay, s/veh		34.1			122.0			61.2			53.8	
Approach LOS		C			F			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	37.6	6.8	55.2	22.0	28.4	15.0	47.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	8.2	39.4	5.0	45.9	17.4	30.2	10.4	40.5				
Max Q Clear Time (g_c+I1), s	9.8	15.4	2.6	21.6	20.0	20.7	12.1	45.0				
Green Ext Time (p_c), s	0.0	3.2	0.0	8.5	0.0	2.0	0.0	0.0				

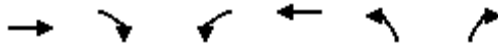
Intersection Summary

HCM 6th Ctrl Delay	73.8
HCM 6th LOS	E

Notes

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

Timings  
43: Bradley St. & Ramona Expy

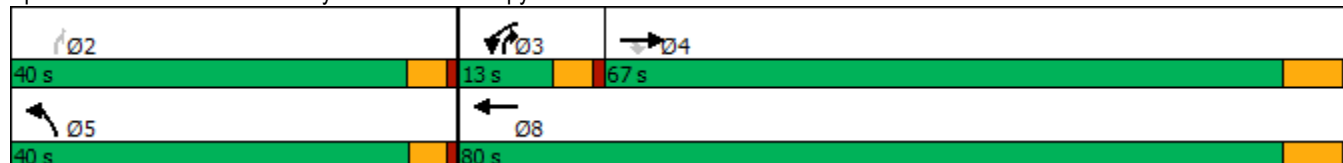


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø2
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓	
Traffic Volume (vph)	669	41	18	1352	245	32	
Future Volume (vph)	669	41	18	1352	245	32	
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov	
Protected Phases	4		3	8	5	3	2
Permitted Phases		4					2
Detector Phase	4	4	3	8	5	3	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	38.5	38.5	9.6	24.5	9.5	9.6	22.6
Total Split (s)	67.0	67.0	13.0	80.0	40.0	13.0	40.0
Total Split (%)	55.8%	55.8%	10.8%	66.7%	33.3%	10.8%	33%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.5	4.6	
Lead/Lag	Lag	Lag	Lead			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 68.5  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated

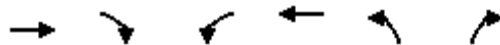
Splits and Phases: 43: Bradley St. & Ramona Expy



HCM 6th Signalized Intersection Summary  
43: Bradley St. & Ramona Expy

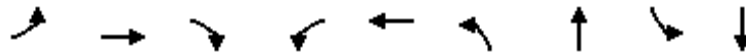
Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (veh/h)	669	41	18	1352	245	32
Future Volume (veh/h)	669	41	18	1352	245	32
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	760	45	20	1536	278	19
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1792	798	43	2180	355	355
Arrive On Green	0.50	0.50	0.02	0.60	0.20	0.20
Sat Flow, veh/h	3705	1607	1810	3705	1810	1610
Grp Volume(v), veh/h	760	45	20	1536	278	19
Grp Sat Flow(s),veh/h/ln	1805	1607	1810	1805	1810	1610
Q Serve(g_s), s	7.4	0.8	0.6	16.2	8.0	0.5
Cycle Q Clear(g_c), s	7.4	0.8	0.6	16.2	8.0	0.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1792	798	43	2180	355	355
V/C Ratio(X)	0.42	0.06	0.46	0.70	0.78	0.05
Avail Cap(c_a), veh/h	3964	1765	276	4816	1166	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.8	7.2	26.5	7.5	21.0	16.9
Incr Delay (d2), s/veh	0.2	0.0	2.8	0.4	3.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.2	0.3	2.9	3.5	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.0	7.2	29.4	7.9	24.8	17.0
LnGrp LOS	A	A	C	A	C	B
Approach Vol, veh/h	805			1556	297	
Approach Delay, s/veh	8.9			8.2	24.3	
Approach LOS	A			A	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		15.3	5.9	33.9		39.8
Change Period (Y+Rc), s		4.5	4.6	6.5		6.5
Max Green Setting (Gmax), s		35.5	8.4	60.5		73.5
Max Q Clear Time (g_c+I1), s		10.0	2.6	9.4		18.2
Green Ext Time (p_c), s		0.9	0.0	5.2		15.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.2			
HCM 6th LOS			B			

Timings  
46: Dunlap Dr. & Nuevo Rd.

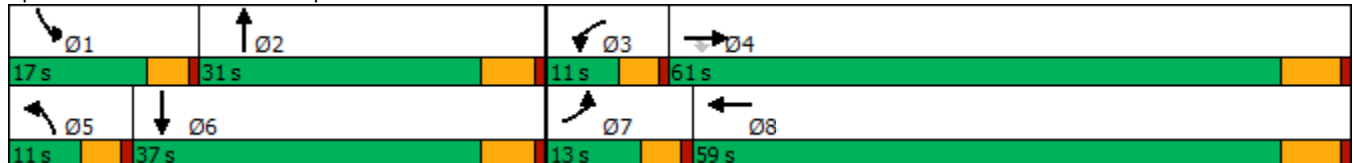


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	34	500	15	55	484	9	21	90	22
Future Volume (vph)	34	500	15	55	484	9	21	90	22
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.5	37.5	9.6	24.5	9.6	23.8	9.6	29.8
Total Split (s)	13.0	61.0	61.0	11.0	59.0	11.0	31.0	17.0	37.0
Total Split (%)	10.8%	50.8%	50.8%	9.2%	49.2%	9.2%	25.8%	14.2%	30.8%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6	6.5	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.8  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated























Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

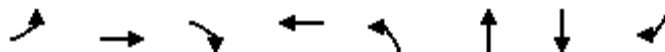
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	500	15	55	484	130	9	21	182	90	22	87
Future Volume (veh/h)	34	500	15	55	484	130	9	21	182	90	22	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	510	10	56	494	115	9	21	184	92	22	41
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	720	610	90	585	136	21	28	242	120	130	243
Arrive On Green	0.04	0.38	0.38	0.05	0.39	0.39	0.01	0.16	0.16	0.07	0.22	0.22
Sat Flow, veh/h	1810	1900	1610	1810	1491	347	1810	168	1468	1810	594	1107
Grp Volume(v), veh/h	35	510	10	56	0	609	9	0	205	92	0	63
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1838	1810	0	1636	1810	0	1701
Q Serve(g_s), s	1.2	14.4	0.2	1.9	0.0	19.0	0.3	0.0	7.6	3.2	0.0	1.9
Cycle Q Clear(g_c), s	1.2	14.4	0.2	1.9	0.0	19.0	0.3	0.0	7.6	3.2	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.90	1.00		0.65
Lane Grp Cap(c), veh/h	66	720	610	90	0	721	21	0	270	120	0	373
V/C Ratio(X)	0.53	0.71	0.02	0.62	0.00	0.84	0.43	0.00	0.76	0.77	0.00	0.17
Avail Cap(c_a), veh/h	241	1640	1390	183	0	1528	183	0	653	355	0	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	16.6	12.2	29.4	0.0	17.4	31.0	0.0	25.2	29.0	0.0	20.0
Incr Delay (d2), s/veh	2.5	1.3	0.0	2.6	0.0	2.8	5.1	0.0	4.4	3.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.1	0.1	0.8	0.0	6.6	0.2	0.0	2.9	1.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	17.9	12.3	32.1	0.0	20.3	36.1	0.0	29.6	32.9	0.0	20.2
LnGrp LOS	C	B	B	C	A	C	D	A	C	C	A	C
Approach Vol, veh/h		555			665			214			155	
Approach Delay, s/veh		18.7			21.3			29.8			27.7	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	16.2	7.7	30.4	5.3	19.6	6.9	31.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	12.4	25.2	6.4	54.5	6.4	31.2	8.4	52.5				
Max Q Clear Time (g_c+I1), s	5.2	9.6	3.9	16.4	2.3	3.9	3.2	21.0				
Green Ext Time (p_c), s	0.0	0.9	0.0	2.9	0.0	0.3	0.0	3.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				22.2								
HCM 6th LOS				C								



Timings  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖	↗	↕	↖	
Traffic Volume (vph)	236	0	377	0	271	1343	1228	185	
Future Volume (vph)	236	0	377	0	271	1343	1228	185	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4					6	
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	42.0	42.0	42.0	42.0	21.0	68.4	57.0	57.0	9.6
Total Split (%)	35.0%	35.0%	35.0%	35.0%	17.5%	57.0%	47.5%	47.5%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.1  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 47: Ramona Expy & Rider St.



HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↕		↗	↕	↗
Traffic Volume (veh/h)	236	0	377	0	0	1	271	1343	1	0	1228	185
Future Volume (veh/h)	236	0	377	0	0	1	271	1343	1	0	1228	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	268	0	285	0	0	1	308	1526	1	0	1395	161
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	413	0	368	0	0	368	396	2369	2	2	1707	761
Arrive On Green	0.23	0.00	0.23	0.00	0.00	0.23	0.11	0.64	0.64	0.00	0.47	0.47
Sat Flow, veh/h	1436	0	1610	0	0	1610	3510	3702	2	1810	3610	1610
Grp Volume(v), veh/h	268	0	285	0	0	1	308	744	783	0	1395	161
Grp Sat Flow(s),veh/h/ln	1436	0	1610	0	0	1610	1755	1805	1900	1810	1805	1610
Q Serve(g_s), s	14.9	0.0	14.0	0.0	0.0	0.0	7.2	21.3	21.3	0.0	28.1	4.9
Cycle Q Clear(g_c), s	15.0	0.0	14.0	0.0	0.0	0.0	7.2	21.3	21.3	0.0	28.1	4.9
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	0	368	0	0	368	396	1155	1216	2	1707	761
V/C Ratio(X)	0.65	0.00	0.77	0.00	0.00	0.00	0.78	0.64	0.64	0.00	0.82	0.21
Avail Cap(c_a), veh/h	721	0	713	0	0	713	681	1322	1392	107	2158	962
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	0.0	30.5	0.0	0.0	25.2	36.5	9.3	9.3	0.0	19.1	13.0
Incr Delay (d2), s/veh	1.7	0.0	3.5	0.0	0.0	0.0	1.3	0.9	0.8	0.0	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	5.5	0.0	0.0	0.0	2.9	5.9	6.2	0.0	10.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	0.0	34.0	0.0	0.0	25.2	37.7	10.2	10.2	0.0	21.2	13.2
LnGrp LOS	C	A	C	A	A	C	D	B	B	A	C	B
Approach Vol, veh/h		553			1			1835			1556	
Approach Delay, s/veh		33.4			25.2			14.8			20.4	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	60.6		23.9	14.1	46.4		23.9				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	61.9		37.4	16.4	50.5		37.4				
Max Q Clear Time (g_c+I1), s	0.0	23.3		17.0	9.2	30.1		2.0				
Green Ext Time (p_c), s	0.0	12.3		2.3	0.3	9.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

Timings  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

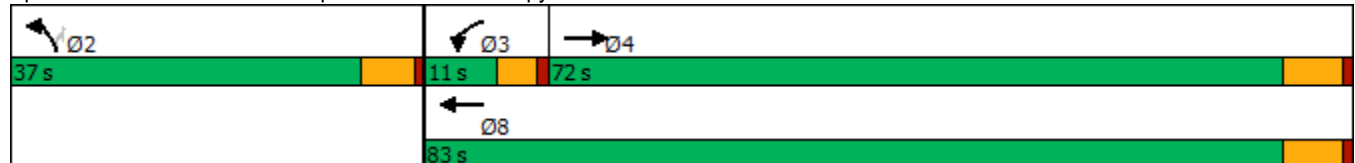


Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↵	↑↑	↵↵	↵
Traffic Volume (vph)	945	49	1419	195	15
Future Volume (vph)	945	49	1419	195	15
Turn Type	NA	Prot	NA	Prot	Perm
Protected Phases	4	3	8	2	
Permitted Phases					2
Detector Phase	4	3	8	2	2
Switch Phase					
Minimum Initial (s)	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	9.6	16.5	15.8	15.8
Total Split (s)	72.0	11.0	83.0	37.0	37.0
Total Split (%)	60.0%	9.2%	69.2%	30.8%	30.8%
Yellow Time (s)	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.6	6.5	5.8	5.8
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Max	None	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.5  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 48: Antelope Rd. & Ramona Expy



HCM 6th Signalized Intersection Summary  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	945	660	49	1419	195	15
Future Volume (veh/h)	945	660	49	1419	195	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1027	717	53	1542	212	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1445	939	70	2796	355	163
Arrive On Green	0.69	0.69	0.04	0.77	0.10	0.10
Sat Flow, veh/h	2193	1362	1810	3705	3510	1610
Grp Volume(v), veh/h	873	871	53	1542	212	16
Grp Sat Flow(s),veh/h/ln	1805	1655	1810	1805	1755	1610
Q Serve(g_s), s	28.8	34.1	2.9	16.6	5.7	0.9
Cycle Q Clear(g_c), s	28.8	34.1	2.9	16.6	5.7	0.9
Prop In Lane		0.82	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1244	1140	70	2796	355	163
V/C Ratio(X)	0.70	0.76	0.75	0.55	0.60	0.10
Avail Cap(c_a), veh/h	1244	1140	117	2796	1109	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.2	10.1	47.0	4.4	42.5	40.3
Incr Delay (d2), s/veh	3.3	4.9	6.0	0.8	1.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	9.9	1.3	3.2	2.5	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.6	15.0	53.0	5.2	44.1	40.6
LnGrp LOS	B	B	D	A	D	D
Approach Vol, veh/h	1744			1595	228	
Approach Delay, s/veh	13.8			6.8	43.8	
Approach LOS	B			A	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		15.8	8.4	74.6		83.0
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		31.2	6.4	65.5		76.5
Max Q Clear Time (g_c+I1), s		7.7	4.9	36.1		18.6
Green Ext Time (p_c), s		0.7	0.0	14.9		15.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			12.6			
HCM 6th LOS			B			

Timings  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↶	↷	↷	↶	↷
Traffic Volume (vph)	488	236	319	40	145
Future Volume (vph)	488	236	319	40	145
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	47.0	90.4	43.4	29.6	47.0
Total Split (%)	39.2%	75.3%	36.2%	24.7%	39.2%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 51: Nuevo Rd. & Antelope Rd.



HCM 6th Signalized Intersection Summary  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	488	236	319	134	40	145	
Future Volume (veh/h)	488	236	319	134	40	145	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	530	257	347	146	43	158	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	562	1501	554	233	170	651	
Arrive On Green	0.31	0.79	0.44	0.44	0.09	0.09	
Sat Flow, veh/h	1810	1900	1270	534	1810	1610	
Grp Volume(v), veh/h	530	257	0	493	43	158	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1804	1810	1610	
Q Serve(g_s), s	30.3	3.5	0.0	22.5	2.3	6.9	
Cycle Q Clear(g_c), s	30.3	3.5	0.0	22.5	2.3	6.9	
Prop In Lane	1.00			0.30	1.00	1.00	
Lane Grp Cap(c), veh/h	562	1501	0	788	170	651	
V/C Ratio(X)	0.94	0.17	0.00	0.63	0.25	0.24	
Avail Cap(c_a), veh/h	723	1501	0	788	406	861	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	35.7	2.7	0.0	23.2	44.6	20.9	
Incr Delay (d2), s/veh	16.6	0.2	0.0	3.7	0.8	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	15.0	0.8	0.0	9.5	1.1	7.5	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	52.3	2.9	0.0	26.9	45.4	21.1	
LnGrp LOS	D	A	A	C	D	C	
Approach Vol, veh/h		787	493		201		
Approach Delay, s/veh		36.2	26.9		26.3		
Approach LOS		D	C		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				90.4	15.8	37.5	52.9
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				83.9	23.8	42.4	36.9
Max Q Clear Time (g_c+I1), s				5.5	8.9	32.3	24.5
Green Ext Time (p_c), s				1.4	0.5	0.6	2.2
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			31.8				
HCM 6th LOS			C				

Intersection						
Int Delay, s/veh	7.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	246	127	208	29	46	194
Future Vol, veh/h	246	127	208	29	46	194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	262	135	221	31	49	206

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	252	0	-	0	896 237
Stage 1	-	-	-	-	237 -
Stage 2	-	-	-	-	659 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1325	-	-	-	313 807
Stage 1	-	-	-	-	807 -
Stage 2	-	-	-	-	518 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1325	-	-	-	246 807
Mov Cap-2 Maneuver	-	-	-	-	246 -
Stage 1	-	-	-	-	634 -
Stage 2	-	-	-	-	518 -

Approach	EB	WB	SB
HCM Control Delay, s	5.5	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1325	-	-	-	562
HCM Lane V/C Ratio	0.198	-	-	-	0.454
HCM Control Delay (s)	8.4	0	-	-	16.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	2.4

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	354	394	2	13	158
Future Vol, veh/h	51	354	394	2	13	158
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	57	398	443	2	15	178

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	445	0	-	0	956
Stage 1	-	-	-	-	444
Stage 2	-	-	-	-	512
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1126	-	-	-	289
Stage 1	-	-	-	-	651
Stage 2	-	-	-	-	606
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1126	-	-	-	274
Mov Cap-2 Maneuver	-	-	-	-	404
Stage 1	-	-	-	-	618
Stage 2	-	-	-	-	606

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1126	-	-	-	594
HCM Lane V/C Ratio	0.051	-	-	-	0.323
HCM Control Delay (s)	8.4	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.4



Timings

Stoneridge Commerce Center SP (JN 13265)

71: Redlands Av. & San Jacinto Av.

01/25/2021

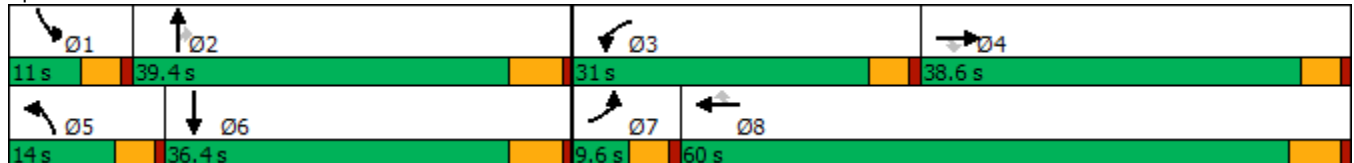


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↖↗
Traffic Volume (vph)	15	12	107	672	55	17	77	226	484	33	489
Future Volume (vph)	15	12	107	672	55	17	77	226	484	33	489
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	35.8	9.6	35.8
Total Split (s)	9.6	38.6	38.6	31.0	60.0	60.0	14.0	39.4	39.4	11.0	36.4
Total Split (%)	8.0%	32.2%	32.2%	25.8%	50.0%	50.0%	11.7%	32.8%	32.8%	9.2%	30.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min

Intersection Summary





























Cycle Length: 120  
 Actuated Cycle Length: 91.3  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	15	12	107	672	55	17	77	226	484	33	489	52
Future Volume (veh/h)	15	12	107	672	55	17	77	226	484	33	489	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	18	14	45	810	66	9	93	272	488	40	589	57
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	222	188	908	675	572	120	1220	544	66	1024	99
Arrive On Green	0.02	0.12	0.12	0.26	0.36	0.36	0.07	0.34	0.34	0.04	0.31	0.31
Sat Flow, veh/h	3510	1900	1610	3510	1900	1610	1810	3610	1610	1810	3326	321
Grp Volume(v), veh/h	18	14	45	810	66	9	93	272	488	40	319	327
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1610	1810	1805	1610	1810	1805	1842
Q Serve(g_s), s	0.4	0.5	2.1	18.5	1.9	0.3	4.2	4.5	23.9	1.8	12.4	12.4
Cycle Q Clear(g_c), s	0.4	0.5	2.1	18.5	1.9	0.3	4.2	4.5	23.9	1.8	12.4	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	72	222	188	908	675	572	120	1220	544	66	556	567
V/C Ratio(X)	0.25	0.06	0.24	0.89	0.10	0.02	0.78	0.22	0.90	0.61	0.57	0.58
Avail Cap(c_a), veh/h	211	777	659	1115	1239	1050	205	1460	651	139	665	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	32.7	33.3	29.7	17.9	17.4	38.2	19.7	26.1	39.5	24.2	24.2
Incr Delay (d2), s/veh	0.7	0.1	0.6	7.1	0.1	0.0	4.0	0.1	13.5	3.4	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.8	8.0	0.8	0.1	1.9	1.7	10.2	0.8	5.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	32.8	34.0	36.7	18.0	17.4	42.2	19.8	39.7	42.8	25.1	25.1
LnGrp LOS	D	C	C	D	B	B	D	B	D	D	C	C
Approach Vol, veh/h		77			885			853			686	
Approach Delay, s/veh		35.3			35.1			33.6			26.1	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	33.9	26.1	15.5	10.1	31.4	6.3	35.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	33.6	26.4	* 34	9.4	30.6	5.0	54.2				
Max Q Clear Time (g_c+I1), s	3.8	25.9	20.5	4.1	6.2	14.4	2.4	3.9				
Green Ext Time (p_c), s	0.0	2.2	1.0	0.2	0.0	3.2	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			32.2									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↷	↶↷	↷↷	↑↑↑	↷
Traffic Volume (vph)	380	1	387	169	400	1047	220
Future Volume (vph)	380	1	387	169	400	1047	220
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8	8		5	2	6	
Permitted Phases			8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	9.5	11.0	31.0	31.0
Total Split (s)	18.0	18.0	18.0	11.0	42.0	31.0	31.0
Total Split (%)	30.0%	30.0%	30.0%	18.3%	70.0%	51.7%	51.7%
Yellow Time (s)	5.0	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	Min	Min	Min

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 52.7

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 72: Redlands Av. & I-215 NB Ramps



HCM 6th Signalized Intersection Summary  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↙	↔	↗	↙↗	↕			↑↑↑	↗
Traffic Volume (veh/h)	0	0	0	380	1	387	169	400	0	0	1047	220
Future Volume (veh/h)	0	0	0	380	1	387	169	400	0	0	1047	220
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				539	0	239	190	449	0	0	1176	140
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				741	0	330	343	1945	0	0	2254	555
Arrive On Green				0.20	0.00	0.20	0.10	0.54	0.00	0.00	0.34	0.34
Sat Flow, veh/h				3619	0	1610	3510	3705	0	0	6802	1610
Grp Volume(v), veh/h				539	0	239	190	449	0	0	1176	140
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1755	1805	0	0	1634	1610
Q Serve(g_s), s				6.5	0.0	6.5	2.4	3.1	0.0	0.0	6.7	2.9
Cycle Q Clear(g_c), s				6.5	0.0	6.5	2.4	3.1	0.0	0.0	6.7	2.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				741	0	330	343	1945	0	0	2254	555
V/C Ratio(X)				0.73	0.00	0.72	0.55	0.23	0.00	0.00	0.52	0.25
Avail Cap(c_a), veh/h				928	0	413	488	2777	0	0	3492	860
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.4	0.0	17.4	20.1	5.7	0.0	0.0	12.2	11.0
Incr Delay (d2), s/veh				2.2	0.0	4.7	1.4	0.1	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	2.3	0.9	0.8	0.0	0.0	1.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				19.6	0.0	22.1	21.5	5.7	0.0	0.0	12.4	11.2
LnGrp LOS				B	A	C	C	A	A	A	B	B
Approach Vol, veh/h					778			639			1316	
Approach Delay, s/veh					20.3			10.4			12.3	
Approach LOS					C			B			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		31.2			9.1	22.1		15.6				
Change Period (Y+Rc), s		6.0			4.5	6.0		6.0				
Max Green Setting (Gmax), s		36.0			6.5	25.0		12.0				
Max Q Clear Time (g_c+I1), s		5.1			4.4	8.7		8.5				
Green Ext Time (p_c), s		3.1			0.1	7.4		1.1				

Intersection Summary

HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	110	0	230	458	345	560	868
Future Volume (vph)	110	0	230	458	345	560	868
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	11.0	11.0	9.5	33.0
Total Split (s)	17.0	17.0	17.0	21.0	21.0	22.0	43.0
Total Split (%)	28.3%	28.3%	28.3%	35.0%	35.0%	36.7%	71.7%
Yellow Time (s)	4.5	4.5	4.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0	4.5	6.0
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	None	Min

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 47.2

Natural Cycle: 45

Control Type: Actuated-Uncoordinated





















Splits and Phases: 73: Redlands Av. & I-215 SB Ramps



HCM 6th Signalized Intersection Summary  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	0	230	0	0	0	0	458	345	560	868	0
Future Volume (veh/h)	110	0	230	0	0	0	0	458	345	560	868	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	155	0	79				0	492	338	602	933	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	422	0	188				0	1519	659	868	2141	0
Arrive On Green	0.12	0.00	0.12				0.00	0.23	0.23	0.25	0.59	0.00
Sat Flow, veh/h	3619	0	1610				0	6802	2834	3510	3705	0
Grp Volume(v), veh/h	155	0	79				0	492	338	602	933	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1634	1417	1755	1805	0
Q Serve(g_s), s	1.6	0.0	1.8				0.0	2.5	4.1	6.2	5.6	0.0
Cycle Q Clear(g_c), s	1.6	0.0	1.8				0.0	2.5	4.1	6.2	5.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	422	0	188				0	1519	659	868	2141	0
V/C Ratio(X)	0.37	0.00	0.42				0.00	0.32	0.51	0.69	0.44	0.00
Avail Cap(c_a), veh/h	1050	0	467				0	2474	1073	1551	3371	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.2	0.0	16.3				0.0	12.6	13.3	13.6	4.4	0.0
Incr Delay (d2), s/veh	0.5	0.0	1.5				0.0	0.1	0.6	1.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.6				0.0	0.7	1.1	2.0	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	0.0	17.8				0.0	12.7	13.9	14.6	4.6	0.0
LnGrp LOS	B	A	B				A	B	B	B	A	A
Approach Vol, veh/h		234						830			1535	
Approach Delay, s/veh		17.0						13.2			8.5	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	14.3	15.2		10.1				29.5				
Change Period (Y+Rc), s	4.5	6.0		5.5				6.0				
Max Green Setting (Gmax), s	17.5	15.0		11.5				37.0				
Max Q Clear Time (g_c+I1), s	8.2	6.1		3.8				7.6				
Green Ext Time (p_c), s	1.6	3.1		0.4				7.3				

Intersection Summary

HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

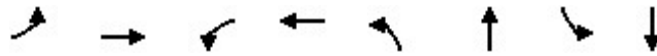
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022

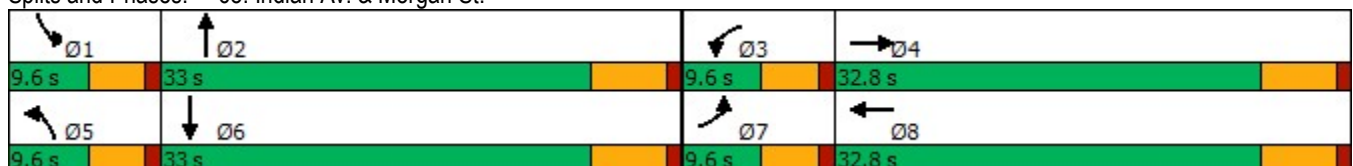


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	18	73	70	130	126	240	12	114
Future Volume (vph)	18	73	70	130	126	240	12	114
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	32.8
Total Split (s)	9.6	32.8	9.6	32.8	9.6	33.0	9.6	33.0
Total Split (%)	11.3%	38.6%	11.3%	38.6%	11.3%	38.8%	11.3%	38.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max
Act Effct Green (s)	5.1	12.9	5.1	18.8	5.1	35.8	5.1	27.6
Actuated g/C Ratio	0.07	0.19	0.07	0.27	0.07	0.52	0.07	0.40
v/c Ratio	0.15	0.24	0.55	0.14	0.99	0.24	0.09	0.11
Control Delay	36.4	12.7	51.9	18.7	116.1	7.4	35.6	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	12.7	51.9	18.7	116.1	7.4	35.6	12.7
LOS	D	B	D	B	F	A	D	B
Approach Delay		15.2		30.0		32.1		14.4
Approach LOS		B		C		C		B

Intersection Summary

Cycle Length: 85  
 Actuated Cycle Length: 69.5  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 26.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 59.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

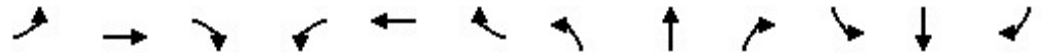
Splits and Phases: 68: Indian Av. & Morgan St.



HCM 6th Signalized Intersection Summary  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022


























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗		↖	↖↗	
Traffic Volume (veh/h)	18	73	87	70	130	5	126	240	189	12	114	30
Future Volume (veh/h)	18	73	87	70	130	5	126	240	189	12	114	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	19	75	53	72	134	2	130	247	192	12	118	25
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	40	289	187	101	622	9	138	936	699	27	1231	254
Arrive On Green	0.02	0.14	0.14	0.06	0.17	0.17	0.08	0.48	0.48	0.01	0.41	0.41
Sat Flow, veh/h	1810	2100	1360	1810	3641	54	1810	1969	1471	1810	2973	612
Grp Volume(v), veh/h	19	64	64	72	66	70	130	226	213	12	70	73
Grp Sat Flow(s),veh/h/ln	1810	1805	1655	1810	1805	1890	1810	1805	1635	1810	1805	1780
Q Serve(g_s), s	0.7	2.1	2.3	2.6	2.1	2.1	4.7	4.9	5.2	0.4	1.6	1.6
Cycle Q Clear(g_c), s	0.7	2.1	2.3	2.6	2.1	2.1	4.7	4.9	5.2	0.4	1.6	1.6
Prop In Lane	1.00		0.82	1.00		0.03	1.00		0.90	1.00		0.34
Lane Grp Cap(c), veh/h	40	248	228	101	308	323	138	858	777	27	747	737
V/C Ratio(X)	0.47	0.26	0.28	0.71	0.21	0.22	0.94	0.26	0.27	0.44	0.09	0.10
Avail Cap(c_a), veh/h	138	742	680	138	742	777	138	858	777	138	747	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	25.3	25.4	30.5	23.4	23.4	30.2	10.3	10.4	32.1	11.7	11.8
Incr Delay (d2), s/veh	3.1	0.5	0.7	5.3	0.3	0.3	59.0	0.2	0.2	4.2	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	0.9	1.2	0.8	0.9	4.1	1.6	1.5	0.2	0.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	25.9	26.1	35.8	23.8	23.8	89.2	10.5	10.6	36.3	12.0	12.0
LnGrp LOS	C	C	C	D	C	C	F	B	B	D	B	B
Approach Vol, veh/h		147			208			569			155	
Approach Delay, s/veh		27.1			27.9			28.5			13.9	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	37.0	8.3	14.8	9.6	33.0	6.1	17.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	2.4	7.2	4.6	4.3	6.7	3.6	2.7	4.1				
Green Ext Time (p_c), s	0.0	2.3	0.0	0.6	0.0	0.6	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			26.1									
HCM 6th LOS			C									



Timings  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

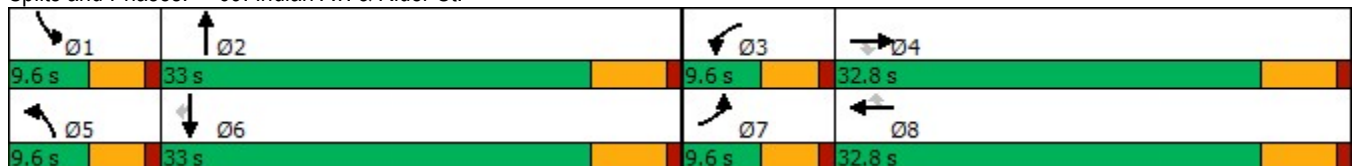
02/11/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	15	69	38	70	55	144	9	332	35	168	7	
Future Volume (vph)	15	69	38	70	55	144	9	332	35	168	7	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	32.8	9.6	32.8	32.8	
Total Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	33.0	9.6	33.0	33.0	
Total Split (%)	11.3%	38.6%	38.6%	11.3%	38.6%	38.6%	11.3%	38.8%	11.3%	38.8%	38.8%	
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min	
Act Effct Green (s)	5.7	13.4	13.4	7.6	17.4	17.4	5.7	20.7	5.7	22.4	22.4	
Actuated g/C Ratio	0.12	0.28	0.28	0.16	0.36	0.36	0.12	0.43	0.12	0.46	0.46	
v/c Ratio	0.08	0.08	0.08	0.29	0.05	0.24	0.05	0.28	0.19	0.12	0.01	
Control Delay	30.1	17.1	0.3	32.2	13.7	4.6	30.0	15.6	30.5	13.9	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	30.1	17.1	0.3	32.2	13.7	4.6	30.0	15.6	30.5	13.9	0.0	
LOS	C	B	A	C	B	A	C	B	C	B	A	
Approach Delay		13.4			13.6			15.9		16.2		
Approach LOS		B			B			B		B		

Intersection Summary

Cycle Length: 85  
 Actuated Cycle Length: 48.5  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.29  
 Intersection Signal Delay: 15.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 38.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

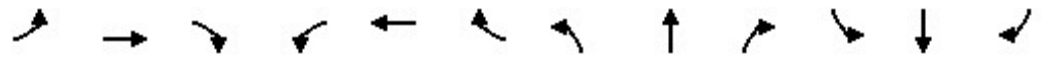
Splits and Phases: 69: Indian Av. & Rider St.



HCM 6th Signalized Intersection Summary  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗		↖	↗	↘
Traffic Volume (veh/h)	15	69	38	70	55	144	9	332	36	35	168	7
Future Volume (veh/h)	15	69	38	70	55	144	9	332	36	35	168	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	17	80	36	81	64	124	10	386	15	41	195	5
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	626	279	130	809	361	24	816	32	81	947	422
Arrive On Green	0.02	0.17	0.17	0.07	0.22	0.22	0.01	0.23	0.23	0.04	0.26	0.26
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3543	137	1810	3610	1610
Grp Volume(v), veh/h	17	80	36	81	64	124	10	196	205	41	195	5
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1875	1810	1805	1610
Q Serve(g_s), s	0.4	0.8	0.8	1.9	0.6	2.8	0.2	4.1	4.1	1.0	1.8	0.1
Cycle Q Clear(g_c), s	0.4	0.8	0.8	1.9	0.6	2.8	0.2	4.1	4.1	1.0	1.8	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	39	626	279	130	809	361	24	416	432	81	947	422
V/C Ratio(X)	0.44	0.13	0.13	0.62	0.08	0.34	0.42	0.47	0.47	0.50	0.21	0.01
Avail Cap(c_a), veh/h	208	2246	1002	208	2246	1002	208	1131	1175	208	2263	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	15.2	15.2	19.6	13.3	14.2	21.3	14.4	14.4	20.3	12.5	11.8
Incr Delay (d2), s/veh	2.9	0.1	0.2	1.8	0.0	0.6	4.4	0.8	0.8	1.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.3	0.7	0.2	0.8	0.1	1.4	1.4	0.4	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	15.2	15.4	21.4	13.3	14.7	25.6	15.2	15.2	22.0	12.6	11.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		133			269			411			241	
Approach Delay, s/veh		16.4			16.4			15.5			14.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.5	15.8	7.7	13.3	5.2	17.2	5.5	15.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	3.0	6.1	3.9	2.8	2.2	3.8	2.4	4.8				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.5	0.0	1.0	0.0	0.7				

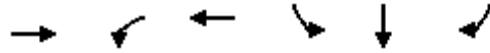
Intersection Summary

HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

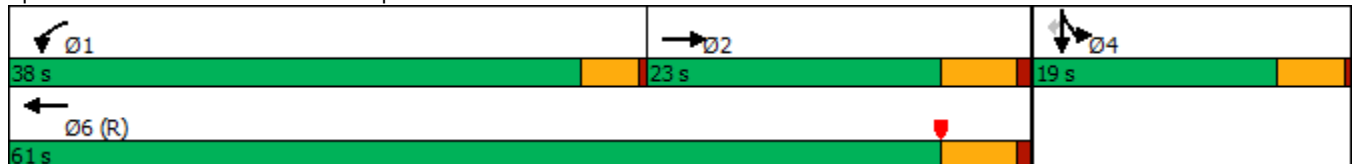


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↖	↑↑	↖	↖	↖
Traffic Volume (vph)	492	560	682	551	0	71
Future Volume (vph)	492	560	682	551	0	71
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	23.0	38.0	61.0	19.0	19.0	19.0
Total Split (%)	28.8%	47.5%	76.3%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 54.5 (68%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: I-215 SB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖	↖	↖
Traffic Volume (veh/h)	0	492	166	560	682	0	0	0	0	551	0	71
Future Volume (veh/h)	0	492	166	560	682	0	0	0	0	551	0	71
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	535	180	609	741	0				599	0	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	745	250	656	2504	0				656	0	289
Arrive On Green	0.00	0.28	0.28	0.36	0.69	0.00				0.18	0.00	0.18
Sat Flow, veh/h	0	2746	888	1810	3705	0				3619	0	1597
Grp Volume(v), veh/h	0	364	351	609	741	0				599	0	77
Grp Sat Flow(s),veh/h/ln	0	1805	1734	1810	1805	0				1810	0	1597
Q Serve(g_s), s	0.0	14.5	14.6	25.9	6.3	0.0				13.0	0.0	3.3
Cycle Q Clear(g_c), s	0.0	14.5	14.6	25.9	6.3	0.0				13.0	0.0	3.3
Prop In Lane	0.00		0.51	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	507	487	656	2504	0				656	0	289
V/C Ratio(X)	0.00	0.72	0.72	0.93	0.30	0.00				0.91	0.00	0.27
Avail Cap(c_a), veh/h	0	507	487	769	2504	0				656	0	289
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.80	0.80	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	25.9	25.9	24.5	4.7	0.0				32.1	0.0	28.2
Incr Delay (d2), s/veh	0.0	8.4	8.9	13.4	0.2	0.0				17.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.7	6.6	12.0	1.5	0.0				6.8	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.3	34.8	37.9	5.0	0.0				49.4	0.0	28.7
LnGrp LOS	A	C	C	D	A	A				D	A	C
Approach Vol, veh/h		715			1350						676	
Approach Delay, s/veh		34.6			19.8						47.1	
Approach LOS		C			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	33.0	28.0		19.0		61.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	34.0	17.5		14.5		55.5						
Max Q Clear Time (g_c+I1), s	27.9	16.6		15.0		8.3						
Green Ext Time (p_c), s	1.2	0.3		0.0		3.0						

Intersection Summary

HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

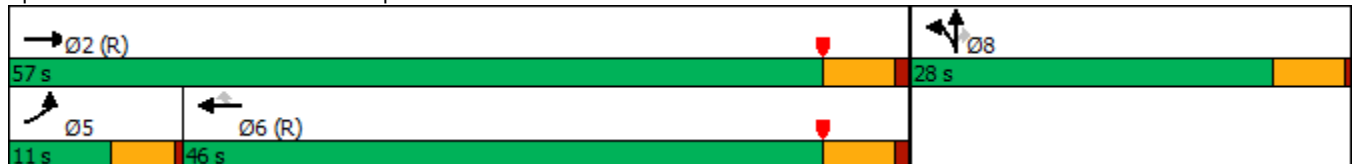


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	82	961	1100	719	141	0	302
Future Volume (vph)	82	961	1100	719	141	0	302
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	31.5	27.5	27.5	10.5	10.5	10.5
Total Split (s)	11.0	57.0	46.0	46.0	28.0	28.0	28.0
Total Split (%)	12.9%	67.1%	54.1%	54.1%	32.9%	32.9%	32.9%
Yellow Time (s)	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	0.5	1.0	1.0	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85  
 Actuated Cycle Length: 85  
 Offset: 42.5 (50%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 NB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗	↘	↖	↗			
Traffic Volume (veh/h)	82	961	0	0	1100	719	141	0	302	0	0	0
Future Volume (veh/h)	82	961	0	0	1100	719	141	0	302	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	89	1045	0	0	1196	782	153	0	328			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	114	2343	0	0	1923	855	824	0	364			
Arrive On Green	0.06	0.65	0.00	0.00	0.53	0.53	0.23	0.00	0.23			
Sat Flow, veh/h	1810	3705	0	0	3705	1606	3619	0	1600			
Grp Volume(v), veh/h	89	1045	0	0	1196	782	153	0	328			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1606	1810	0	1600			
Q Serve(g_s), s	4.1	12.2	0.0	0.0	19.7	37.7	2.9	0.0	16.9			
Cycle Q Clear(g_c), s	4.1	12.2	0.0	0.0	19.7	37.7	2.9	0.0	16.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	114	2343	0	0	1923	855	824	0	364			
V/C Ratio(X)	0.78	0.45	0.00	0.00	0.62	0.91	0.19	0.00	0.90			
Avail Cap(c_a), veh/h	138	2343	0	0	1923	855	979	0	433			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.46	0.46	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.2	7.4	0.0	0.0	13.9	18.1	26.5	0.0	31.9			
Incr Delay (d2), s/veh	8.1	0.3	0.0	0.0	1.5	15.9	0.0	0.0	17.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.0	3.4	0.0	0.0	6.9	14.8	1.2	0.0	7.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	7.7	0.0	0.0	15.4	34.0	26.5	0.0	49.7			
LnGrp LOS	D	A	A	A	B	C	C	A	D			
Approach Vol, veh/h		1134			1978			481				
Approach Delay, s/veh		10.8			22.7			42.4				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.7			9.9	50.8		24.3				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		51.5			6.5	40.5		23.0				
Max Q Clear Time (g_c+I1), s		14.2			6.1	39.7		18.9				
Green Ext Time (p_c), s		4.7			0.0	0.6		0.4				

Intersection Summary

HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	33	41	93	20	105	258
Future Vol, veh/h	33	41	93	20	105	258
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	49	60	137	29	154	379
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	9.3	9.1	12.2
HCM LOS	A	A	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	20	33	41	105	258
LT Vol	0	0	33	0	105	0
Through Vol	93	0	0	0	0	258
RT Vol	0	20	0	41	0	0
Lane Flow Rate	137	29	49	60	154	379
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.202	0.038	0.089	0.09	0.234	0.523
Departure Headway (Hd)	5.329	4.624	6.596	5.386	5.464	4.962
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	672	770	542	662	656	725
Service Time	3.082	2.377	4.356	3.145	3.205	2.702
HCM Lane V/C Ratio	0.204	0.038	0.09	0.091	0.235	0.523
HCM Control Delay	9.4	7.6	10	8.7	9.9	13.1
HCM Lane LOS	A	A	A	A	A	B
HCM 95th-tile Q	0.8	0.1	0.3	0.3	0.9	3.1

Timings  
23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022

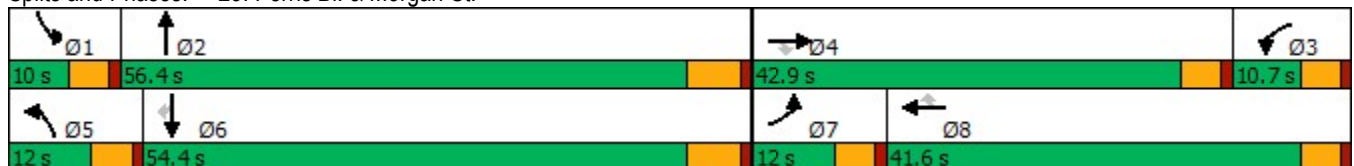


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	49	90	27	33	179	13	43	857	7	1117	35
Future Volume (vph)	49	90	27	33	179	13	43	857	7	1117	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	12.0	42.9	42.9	10.7	41.6	41.6	12.0	56.4	10.0	54.4	54.4
Total Split (%)	10.0%	35.8%	35.8%	8.9%	34.7%	34.7%	10.0%	47.0%	8.3%	45.3%	45.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	15.2	15.2	9.9	18.0	18.0	7.2	39.6	6.1	35.2	35.2
Actuated g/C Ratio	0.09	0.20	0.20	0.13	0.23	0.23	0.09	0.51	0.08	0.46	0.46
v/c Ratio	0.30	0.13	0.07	0.15	0.42	0.03	0.27	0.34	0.05	0.71	0.05
Control Delay	48.9	33.4	0.3	40.9	33.4	0.2	48.3	13.2	48.9	22.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	33.4	0.3	40.9	33.4	0.2	48.3	13.2	48.9	22.9	0.1
LOS	D	C	A	D	C	A	D	B	D	C	A
Approach Delay		32.7			32.5			14.8		22.3	
Approach LOS		C			C			B		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.9  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 21.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 23: Perris Bl. & Morgan St.





HCM 6th Signalized Intersection Summary  
 23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗	↘	↘	↗↗↗		↘	↗↗	↘
Traffic Volume (veh/h)	49	90	27	33	179	13	43	857	14	7	1117	35
Future Volume (veh/h)	49	90	27	33	179	13	43	857	14	7	1117	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	95	11	35	188	5	45	902	13	7	1176	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	85	565	252	85	297	252	78	2527	36	17	1609	702
Arrive On Green	0.05	0.16	0.16	0.05	0.16	0.16	0.04	0.48	0.48	0.01	0.45	0.45
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5267	76	1810	3610	1575
Grp Volume(v), veh/h	52	95	11	35	188	5	45	592	323	7	1176	31
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1885	1810	1805	1575
Q Serve(g_s), s	1.8	1.5	0.3	1.2	5.9	0.2	1.6	6.8	6.9	0.2	17.1	0.7
Cycle Q Clear(g_c), s	1.8	1.5	0.3	1.2	5.9	0.2	1.6	6.8	6.9	0.2	17.1	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	85	565	252	85	297	252	78	1659	904	17	1609	702
V/C Ratio(X)	0.61	0.17	0.04	0.41	0.63	0.02	0.58	0.36	0.36	0.42	0.73	0.04
Avail Cap(c_a), veh/h	210	2169	967	173	1103	935	210	2745	1496	153	2752	1201
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	23.3	13.8	29.5	25.2	22.8	29.9	10.4	10.4	31.4	14.5	10.0
Incr Delay (d2), s/veh	2.6	0.1	0.1	1.2	2.2	0.0	2.5	0.1	0.2	6.3	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.6	0.1	0.5	2.7	0.1	0.7	2.0	2.3	0.1	5.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	23.4	13.9	30.7	27.4	22.8	32.4	10.5	10.6	37.7	15.2	10.0
LnGrp LOS	C	C	B	C	C	C	C	B	B	D	B	B
Approach Vol, veh/h		158			228			960			1214	
Approach Delay, s/veh		25.7			27.8			11.6			15.2	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.2	36.4	7.6	14.6	7.3	34.2	7.6	14.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.4	50.6	6.1	38.3	7.4	48.6	7.4	37.0				
Max Q Clear Time (g_c+I1), s	2.2	8.9	3.2	3.5	3.6	19.1	3.8	7.9				
Green Ext Time (p_c), s	0.0	6.3	0.0	0.6	0.0	9.4	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Timings  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

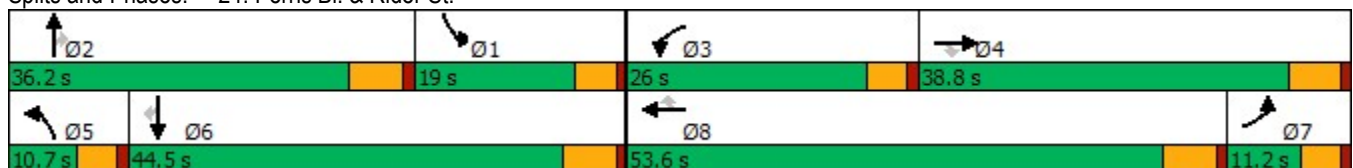
02/18/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	285	85	288	109	133	34	689	254	156	990	38
Future Volume (vph)	43	285	85	288	109	133	34	689	254	156	990	38
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	11.2	38.8	38.8	26.0	53.6	53.6	10.7	36.2	36.2	19.0	44.5	44.5
Total Split (%)	9.3%	32.3%	32.3%	21.7%	44.7%	44.7%	8.9%	30.2%	30.2%	15.8%	37.1%	37.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.0	15.5	15.5	20.1	25.4	25.4	5.8	20.5	20.5	12.2	31.6	31.6
Actuated g/C Ratio	0.17	0.17	0.17	0.22	0.28	0.28	0.06	0.23	0.23	0.14	0.35	0.35
v/c Ratio	0.15	0.48	0.22	0.74	0.11	0.24	0.30	0.61	0.47	0.67	0.57	0.06
Control Delay	35.5	36.8	1.2	47.9	31.0	3.4	53.5	34.4	7.2	54.4	26.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	36.8	1.2	47.9	31.0	3.4	53.5	34.4	7.2	54.4	26.8	0.2
LOS	D	D	A	D	C	A	D	C	A	D	C	A
Approach Delay		29.3			33.2			28.0			29.6	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 89.8  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 29.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 66.2%  
 ICU Level of Service C  
 Analysis Period (min) 15

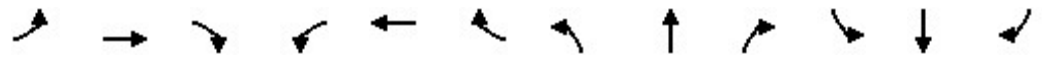
Splits and Phases: 24: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (veh/h)	43	285	85	288	109	133	34	689	254	156	990	38
Future Volume (veh/h)	43	285	85	288	109	133	34	689	254	156	990	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	45	297	42	300	114	73	35	718	182	162	1031	24
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	314	551	245	348	557	248	64	1183	366	203	1671	512
Arrive On Green	0.17	0.15	0.15	0.19	0.15	0.15	0.04	0.23	0.23	0.11	0.32	0.32
Sat Flow, veh/h	1810	3610	1604	1810	3610	1607	1810	5187	1606	1810	5187	1590
Grp Volume(v), veh/h	45	297	42	300	114	73	35	718	182	162	1031	24
Grp Sat Flow(s),veh/h/ln	1810	1805	1604	1810	1805	1607	1810	1729	1606	1810	1729	1590
Q Serve(g_s), s	1.5	5.3	1.6	11.2	1.9	2.8	1.3	8.7	3.9	6.1	11.8	0.4
Cycle Q Clear(g_c), s	1.5	5.3	1.6	11.2	1.9	2.8	1.3	8.7	3.9	6.1	11.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	314	551	245	348	557	248	64	1183	366	203	1671	512
V/C Ratio(X)	0.14	0.54	0.17	0.86	0.20	0.29	0.55	0.61	0.50	0.80	0.62	0.05
Avail Cap(c_a), veh/h	314	1703	757	554	2467	1098	158	2255	698	373	2870	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	27.4	25.8	27.3	25.8	26.2	33.2	24.2	7.3	30.3	20.0	4.1
Incr Delay (d2), s/veh	0.1	0.8	0.3	4.7	0.2	0.7	2.7	0.5	1.0	2.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.1	0.6	4.8	0.8	1.0	0.6	3.2	2.3	2.6	4.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	28.2	26.1	32.0	26.0	26.9	35.9	24.7	8.4	33.0	20.4	4.1
LnGrp LOS	C	C	C	C	C	C	D	C	A	C	C	A
Approach Vol, veh/h		384			487			935			1217	
Approach Delay, s/veh		27.5			29.8			21.9			21.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.7	21.7	18.1	16.5	7.1	28.3	17.9	16.6				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	14.4	* 30	21.4	33.0	6.1	38.7	6.6	* 48				
Max Q Clear Time (g_c+I1), s	8.1	10.7	13.2	7.3	3.3	13.8	3.5	4.8				
Green Ext Time (p_c), s	0.1	5.0	0.3	1.8	0.0	7.3	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Notes

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

Timings  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022

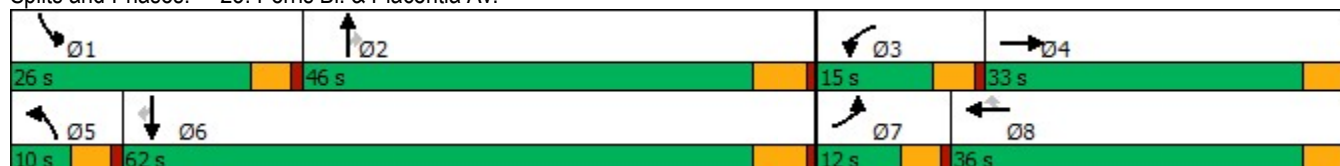


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	26	69	56	30	123	10	819	87	165	1164	10
Future Volume (vph)	26	69	56	30	123	10	819	87	165	1164	10
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.6	9.6	34.6	34.6	9.6	36.8	36.8	9.6	34.8	34.8
Total Split (s)	12.0	33.0	15.0	36.0	36.0	10.0	46.0	46.0	26.0	62.0	62.0
Total Split (%)	10.0%	27.5%	12.5%	30.0%	30.0%	8.3%	38.3%	38.3%	21.7%	51.7%	51.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.3	13.6	7.7	19.5	19.5	5.6	27.7	27.7	13.5	44.9	44.9
Actuated g/C Ratio	0.08	0.17	0.10	0.24	0.24	0.07	0.34	0.34	0.17	0.56	0.56
v/c Ratio	0.21	0.34	0.36	0.07	0.27	0.09	0.74	0.15	0.61	0.64	0.01
Control Delay	47.6	33.6	47.7	30.4	6.4	48.2	28.9	2.1	44.7	16.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	33.6	47.7	30.4	6.4	48.2	28.9	2.1	44.7	16.2	0.0
LOS	D	C	D	C	A	D	C	A	D	B	A
Approach Delay		36.6		20.9			26.6			19.6	
Approach LOS		D		C			C			B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80.8  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 23.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.6%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 25: Perris Bl. & Placentia Av.



HCM 6th Signalized Intersection Summary  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	69	27	56	30	123	10	819	87	165	1164	10
Future Volume (veh/h)	26	69	27	56	30	123	10	819	87	165	1164	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	77	26	62	33	20	11	910	88	183	1293	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	200	68	93	319	270	25	1351	603	230	1759	784
Arrive On Green	0.03	0.15	0.15	0.05	0.17	0.17	0.01	0.37	0.37	0.13	0.49	0.49
Sat Flow, veh/h	1810	1359	459	1810	1900	1610	1810	3610	1610	1810	3610	1609
Grp Volume(v), veh/h	29	0	103	62	33	20	11	910	88	183	1293	5
Grp Sat Flow(s),veh/h/ln	1810	0	1817	1810	1900	1610	1810	1805	1610	1810	1805	1609
Q Serve(g_s), s	1.0	0.0	3.4	2.2	1.0	0.7	0.4	13.8	2.4	6.4	18.7	0.1
Cycle Q Clear(g_c), s	1.0	0.0	3.4	2.2	1.0	0.7	0.4	13.8	2.4	6.4	18.7	0.1
Prop In Lane	1.00		0.25	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	0	268	93	319	270	25	1351	603	230	1759	784
V/C Ratio(X)	0.51	0.00	0.38	0.66	0.10	0.07	0.44	0.67	0.15	0.80	0.73	0.01
Avail Cap(c_a), veh/h	205	0	789	288	912	773	149	2218	989	592	3101	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	0.0	25.2	30.5	23.0	22.9	32.0	17.1	13.5	27.7	13.4	8.6
Incr Delay (d2), s/veh	2.6	0.0	0.9	3.0	0.1	0.1	4.4	0.6	0.1	2.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.5	1.0	0.4	0.3	0.2	4.9	0.8	2.7	5.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	0.0	26.1	33.4	23.2	23.0	36.4	17.7	13.7	30.2	14.0	8.6
LnGrp LOS	C	A	C	C	C	C	D	B	B	C	B	A
Approach Vol, veh/h		132			115			1009			1481	
Approach Delay, s/veh		27.8			28.7			17.6			16.0	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.9	30.3	8.0	14.3	5.5	37.7	6.6	15.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	21.4	40.2	10.4	28.4	5.4	56.2	7.4	31.4				
Max Q Clear Time (g_c+I1), s	8.4	15.8	4.2	5.4	2.4	20.7	3.0	3.0				
Green Ext Time (p_c), s	0.2	6.5	0.0	0.5	0.0	11.2	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Timings  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

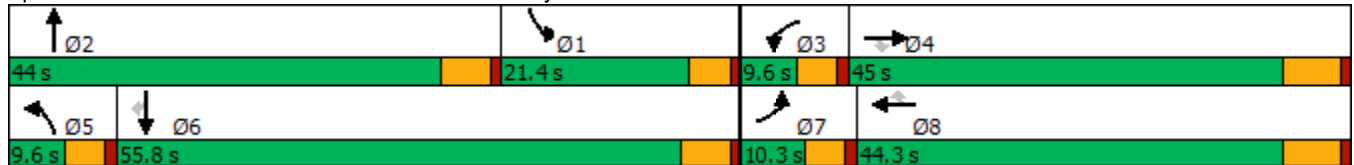


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑	↖	↑	↗
Traffic Volume (vph)	25	2018	29	41	1695	363	15	0	358	9	26
Future Volume (vph)	25	2018	29	41	1695	363	15	0	358	9	26
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	27.2	9.6	43.4	9.6	23.4	23.4
Total Split (s)	10.3	45.0	45.0	9.6	44.3	44.3	9.6	44.0	21.4	55.8	55.8
Total Split (%)	8.6%	37.5%	37.5%	8.0%	36.9%	36.9%	8.0%	36.7%	17.8%	46.5%	46.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	2018	29	41	1695	363	15	0	94	358	9	26
Future Volume (veh/h)	25	2018	29	41	1695	363	15	0	94	358	9	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	2193	27	45	1842	380	16	0	43	389	10	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	49	2254	698	68	2308	716	33	0	157	340	525	445
Arrive On Green	0.03	0.43	0.43	0.04	0.44	0.44	0.02	0.00	0.10	0.19	0.28	0.28
Sat Flow, veh/h	1810	5187	1606	1810	5187	1610	1810	0	1610	1810	1900	1610
Grp Volume(v), veh/h	27	2193	27	45	1842	380	16	0	43	389	10	14
Grp Sat Flow(s),veh/h/ln	1810	1729	1606	1810	1729	1610	1810	0	1610	1810	1900	1610
Q Serve(g_s), s	1.3	37.0	0.9	2.2	27.3	6.5	0.8	0.0	2.2	16.8	0.3	0.6
Cycle Q Clear(g_c), s	1.3	37.0	0.9	2.2	27.3	6.5	0.8	0.0	2.2	16.8	0.3	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	2254	698	68	2308	716	33	0	157	340	525	445
V/C Ratio(X)	0.55	0.97	0.04	0.66	0.80	0.53	0.48	0.00	0.27	1.14	0.02	0.03
Avail Cap(c_a), veh/h	116	2254	698	101	2308	716	101	0	696	340	1073	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	24.7	14.5	42.4	21.3	3.3	43.4	0.0	37.3	36.2	23.5	23.6
Incr Delay (d2), s/veh	3.5	13.2	0.0	4.0	2.1	0.7	4.0	0.0	0.9	93.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	15.7	0.3	1.0	10.0	4.2	0.4	0.0	0.9	15.9	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	37.9	14.5	46.4	23.4	4.0	47.4	0.0	38.3	129.5	23.5	23.6
LnGrp LOS	D	D	B	D	C	A	D	A	D	F	C	C
Approach Vol, veh/h		2247			2267			59			413	
Approach Delay, s/veh		37.7			20.6			40.7			123.4	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.2	14.1	8.0	45.0	6.2	30.1	7.0	45.9				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	16.8	* 39	5.0	38.8	5.0	50.4	5.7	38.1				
Max Q Clear Time (g_c+I1), s	18.8	4.2	4.2	39.0	2.8	2.6	3.3	29.3				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	0.1	0.0	7.1				

Intersection Summary

HCM 6th Ctrl Delay	37.1
HCM 6th LOS	D

Notes

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

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗
Traffic Vol, veh/h	63	0	0	0	0	50
Future Vol, veh/h	63	0	0	0	0	50
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	86	0	0	0	0	68
Number of Lanes	1	1	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	8.6	0	7.1
HCM LOS	A	-	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	0%	0%
Vol Thru, %	100%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	63	0	0	50
LT Vol	0	63	0	0	0
Through Vol	0	0	0	0	0
RT Vol	0	0	0	0	50
Lane Flow Rate	0	86	0	0	68
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0	0.123	0	0	0.075
Departure Headway (Hd)	4.61	5.121	4.621	4.652	3.951
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	0	701	0	0	892
Service Time	2.61	2.849	2.348	2.443	1.742
HCM Lane V/C Ratio	0	0.123	0	0	0.076
HCM Control Delay	7.6	8.6	7.3	7.4	7.1
HCM Lane LOS	N	A	N	N	A
HCM 95th-tile Q	0	0.4	0	0	0.2



Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

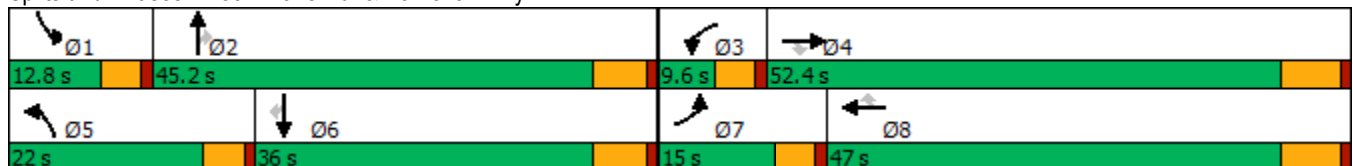
01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	484	1526	517	21	1417	334	268	391	9	345	634	414
Future Volume (vph)	484	1526	517	21	1417	334	268	391	9	345	634	414
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	15.0	52.4	52.4	9.6	47.0	47.0	22.0	45.2	45.2	12.8	36.0	36.0
Total Split (%)	12.5%	43.7%	43.7%	8.0%	39.2%	39.2%	18.3%	37.7%	37.7%	10.7%	30.0%	30.0%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.0	54.6	54.6	5.6	43.2	43.2	13.7	33.1	33.1	8.8	28.2	28.2
Actuated g/C Ratio	0.10	0.49	0.49	0.05	0.39	0.39	0.12	0.30	0.30	0.08	0.25	0.25
v/c Ratio	1.44	0.62	0.54	0.12	1.04	0.46	0.64	0.38	0.02	1.28	0.71	0.77
Control Delay	248.7	24.3	8.8	55.3	70.5	13.8	54.6	31.9	0.0	192.7	43.3	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	248.7	24.3	8.8	55.3	70.5	13.8	54.6	31.9	0.0	192.7	43.3	30.5
LOS	F	C	A	E	E	B	D	C	A	F	D	C
Approach Delay		64.1			59.7			40.6			76.5	
Approach LOS		E			E			D			E	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.44  
 Intersection Signal Delay: 63.1  
 Intersection LOS: E  
 Intersection Capacity Utilization 91.5%  
 ICU Level of Service F  
 Analysis Period (min) 15


































Splits and Phases: 39: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	 		 	 	
Traffic Volume (veh/h)	484	1526	517	21	1417	334	268	391	9	345	634	414
Future Volume (veh/h)	484	1526	517	21	1417	334	268	391	9	345	634	414
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	494	1557	0	21	1446	234	273	399	8	352	647	248
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	364	2501		96	1465	653	361	925	413	292	854	375
Arrive On Green	0.10	0.48	0.00	0.03	0.41	0.41	0.10	0.26	0.26	0.08	0.24	0.24
Sat Flow, veh/h	3510	5187	1610	3510	3610	1610	3510	3610	1610	3510	3610	1586
Grp Volume(v), veh/h	494	1557	0	21	1446	234	273	399	8	352	647	248
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1805	1610	1755	1805	1610	1755	1805	1586
Q Serve(g_s), s	11.0	23.5	0.0	0.6	42.1	10.7	8.0	9.8	0.4	8.8	17.7	15.0
Cycle Q Clear(g_c), s	11.0	23.5	0.0	0.6	42.1	10.7	8.0	9.8	0.4	8.8	17.7	15.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	364	2501		96	1465	653	361	925	413	292	854	375
V/C Ratio(X)	1.36	0.62		0.22	0.99	0.36	0.76	0.43	0.02	1.21	0.76	0.66
Avail Cap(c_a), veh/h	364	2501		186	1465	653	596	1404	626	292	1090	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	20.3	0.0	50.4	31.2	21.9	46.2	32.9	29.4	48.6	37.6	36.6
Incr Delay (d2), s/veh	177.0	0.5	0.0	0.4	20.4	0.3	1.2	0.3	0.0	121.0	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	8.4	0.0	0.3	20.4	3.7	3.4	4.1	0.1	8.6	7.7	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	224.5	20.8	0.0	50.8	51.6	22.2	47.5	33.3	29.5	169.6	40.0	38.9
LnGrp LOS	F	C		D	D	C	D	C	C	F	D	D
Approach Vol, veh/h		2051	A		1701			680			1247	
Approach Delay, s/veh		69.8			47.5			38.9			76.3	
Approach LOS		E			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	31.2	6.9	55.1	14.9	29.1	15.0	47.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	8.2	39.4	5.0	45.9	17.4	30.2	10.4	40.5				
Max Q Clear Time (g_c+I1), s	10.8	11.8	2.6	25.5	10.0	19.7	13.0	44.1				
Green Ext Time (p_c), s	0.0	2.4	0.0	10.2	0.3	3.6	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	60.9
HCM 6th LOS	E

Notes

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

Timings  
43: Bradley St. & Ramona Expy

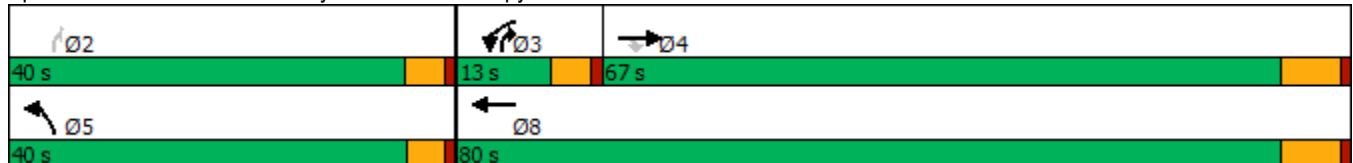


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø2
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓	
Traffic Volume (vph)	1302	235	31	723	90	16	
Future Volume (vph)	1302	235	31	723	90	16	
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov	
Protected Phases	4		3	8	5	3	2
Permitted Phases		4					2
Detector Phase	4	4	3	8	5	3	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	38.5	38.5	9.6	24.5	9.5	9.6	22.6
Total Split (s)	67.0	67.0	13.0	80.0	40.0	13.0	40.0
Total Split (%)	55.8%	55.8%	10.8%	66.7%	33.3%	10.8%	33%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.5	4.6	
Lead/Lag	Lag	Lag	Lead			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.6  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated

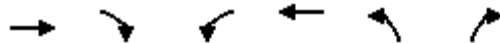
Splits and Phases: 43: Bradley St. & Ramona Expy



HCM 6th Signalized Intersection Summary  
43: Bradley St. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

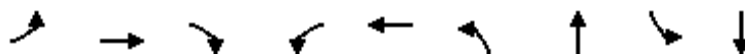


Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (veh/h)	1302	235	31	723	90	16
Future Volume (veh/h)	1302	235	31	723	90	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1371	227	33	761	95	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2067	921	67	2536	137	181
Arrive On Green	0.57	0.57	0.04	0.70	0.08	0.08
Sat Flow, veh/h	3705	1609	1810	3705	1810	1610
Grp Volume(v), veh/h	1371	227	33	761	95	5
Grp Sat Flow(s),veh/h/ln	1805	1609	1810	1805	1810	1610
Q Serve(g_s), s	13.0	3.5	0.9	3.9	2.5	0.1
Cycle Q Clear(g_c), s	13.0	3.5	0.9	3.9	2.5	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2067	921	67	2536	137	181
V/C Ratio(X)	0.66	0.25	0.49	0.30	0.70	0.03
Avail Cap(c_a), veh/h	4411	1966	307	5359	1297	1214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	5.3	23.4	2.8	22.3	19.6
Incr Delay (d2), s/veh	0.4	0.1	2.1	0.1	6.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.5	0.3	0.1	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.7	5.4	25.5	2.8	28.6	19.6
LnGrp LOS	A	A	C	A	C	B
Approach Vol, veh/h	1598			794	100	
Approach Delay, s/veh	7.3			3.8	28.1	
Approach LOS	A			A	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		8.2	6.4	34.9		41.3
Change Period (Y+Rc), s		4.5	4.6	6.5		6.5
Max Green Setting (Gmax), s		35.5	8.4	60.5		73.5
Max Q Clear Time (g_c+I1), s		4.5	2.9	15.0		5.9
Green Ext Time (p_c), s		0.3	0.0	13.4		5.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			7.0			
HCM 6th LOS			A			

Timings  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

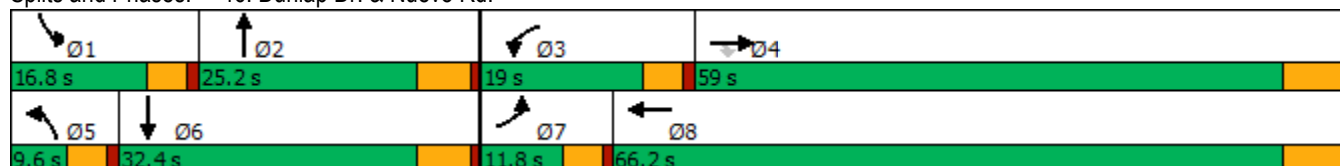


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	73	656	7	167	655	7	40	138	26
Future Volume (vph)	73	656	7	167	655	7	40	138	26
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.5	37.5	9.6	24.5	9.6	23.8	9.6	29.8
Total Split (s)	11.8	59.0	59.0	19.0	66.2	9.6	25.2	16.8	32.4
Total Split (%)	9.8%	49.2%	49.2%	15.8%	55.2%	8.0%	21.0%	14.0%	27.0%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6	6.5	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	73	656	7	167	655	98	7	40	63	138	26	54
Future Volume (veh/h)	73	656	7	167	655	98	7	40	63	138	26	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	830	6	211	829	109	9	51	79	175	33	50
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	116	872	739	240	868	114	20	65	101	204	135	205
Arrive On Green	0.06	0.46	0.46	0.13	0.53	0.53	0.01	0.10	0.10	0.11	0.20	0.20
Sat Flow, veh/h	1810	1900	1610	1810	1645	216	1810	672	1041	1810	680	1031
Grp Volume(v), veh/h	92	830	6	211	0	938	9	0	130	175	0	83
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1861	1810	0	1713	1810	0	1711
Q Serve(g_s), s	5.4	45.4	0.2	12.4	0.0	52.0	0.5	0.0	8.0	10.3	0.0	4.4
Cycle Q Clear(g_c), s	5.4	45.4	0.2	12.4	0.0	52.0	0.5	0.0	8.0	10.3	0.0	4.4
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.61	1.00		0.60
Lane Grp Cap(c), veh/h	116	872	739	240	0	982	20	0	166	204	0	340
V/C Ratio(X)	0.79	0.95	0.01	0.88	0.00	0.96	0.45	0.00	0.78	0.86	0.00	0.24
Avail Cap(c_a), veh/h	120	922	781	241	0	1026	84	0	307	204	0	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.9	28.1	15.9	46.1	0.0	24.4	53.2	0.0	47.8	47.2	0.0	36.5
Incr Delay (d2), s/veh	26.0	18.5	0.0	27.8	0.0	18.0	5.9	0.0	7.8	27.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	22.5	0.1	7.1	0.0	24.2	0.3	0.0	3.7	6.0	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.9	46.7	15.9	73.9	0.0	42.3	59.1	0.0	55.6	74.7	0.0	36.9
LnGrp LOS	E	D	B	E	A	D	E	A	E	E	A	D
Approach Vol, veh/h		928			1149			139			258	
Approach Delay, s/veh		49.4			48.1			55.8			62.6	
Approach LOS		D			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	16.3	19.0	56.2	5.8	27.3	11.6	63.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	12.2	19.4	14.4	52.5	5.0	26.6	7.2	59.7				
Max Q Clear Time (g_c+I1), s	12.3	10.0	14.4	47.4	2.5	6.4	7.4	54.0				
Green Ext Time (p_c), s	0.0	0.4	0.0	2.3	0.0	0.3	0.0	2.9				

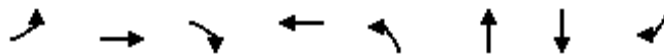
Intersection Summary

HCM 6th Ctrl Delay	50.5
HCM 6th LOS	D

Timings  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖	↗	↕	↖	
Traffic Volume (vph)	43	0	277	0	329	1488	1540	112	
Future Volume (vph)	43	0	277	0	329	1488	1540	112	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4					6	
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	42.0	42.0	42.0	42.0	21.0	68.4	57.0	57.0	9.6
Total Split (%)	35.0%	35.0%	35.0%	35.0%	17.5%	57.0%	47.5%	47.5%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.6  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 47: Ramona Expy & Rider St.



HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↕		↘	↕	↗
Traffic Volume (veh/h)	43	0	277	0	0	1	329	1488	1	0	1540	112
Future Volume (veh/h)	43	0	277	0	0	1	329	1488	1	0	1540	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	0	179	0	0	1	350	1583	1	0	1638	93
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	297	0	234	0	0	235	441	2660	2	2	1936	863
Arrive On Green	0.15	0.00	0.15	0.00	0.00	0.15	0.13	0.72	0.72	0.00	0.54	0.54
Sat Flow, veh/h	1433	0	1604	0	0	1610	3510	3702	2	1810	3610	1609
Grp Volume(v), veh/h	46	0	179	0	0	1	350	772	812	0	1638	93
Grp Sat Flow(s),veh/h/ln	1433	0	1604	0	0	1610	1755	1805	1900	1810	1805	1609
Q Serve(g_s), s	2.3	0.0	8.8	0.0	0.0	0.0	7.9	17.2	17.2	0.0	31.5	2.3
Cycle Q Clear(g_c), s	2.3	0.0	8.8	0.0	0.0	0.0	7.9	17.2	17.2	0.0	31.5	2.3
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	0	234	0	0	235	441	1297	1365	2	1936	863
V/C Ratio(X)	0.15	0.00	0.77	0.00	0.00	0.00	0.79	0.60	0.60	0.00	0.85	0.11
Avail Cap(c_a), veh/h	746	0	734	0	0	737	705	1368	1439	111	2231	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	33.6	0.0	0.0	29.8	34.7	5.7	5.7	0.0	16.1	9.3
Incr Delay (d2), s/veh	0.2	0.0	5.2	0.0	0.0	0.0	1.2	0.6	0.6	0.0	2.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	3.6	0.0	0.0	0.0	3.2	3.5	3.6	0.0	10.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	38.7	0.0	0.0	29.8	35.9	6.3	6.3	0.0	18.9	9.4
LnGrp LOS	C	A	D	A	A	C	D	A	A	A	B	A
Approach Vol, veh/h		225			1			1934			1731	
Approach Delay, s/veh		37.2			29.8			11.6			18.4	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	65.2		16.5	14.9	50.3		16.5				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	61.9		37.4	16.4	50.5		37.4				
Max Q Clear Time (g_c+I1), s	0.0	19.2		10.8	9.9	33.5		2.0				
Green Ext Time (p_c), s	0.0	13.5		0.8	0.4	10.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B



Timings  
48: Antelope Rd. & Ramona Expy

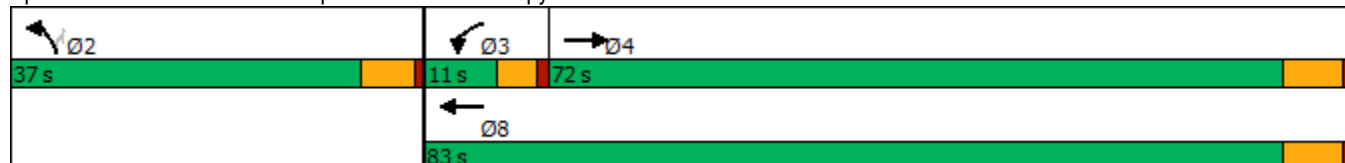


Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↵	↑↑	↵↵	↵
Traffic Volume (vph)	1502	73	1051	766	63
Future Volume (vph)	1502	73	1051	766	63
Turn Type	NA	Prot	NA	Prot	Perm
Protected Phases	4	3	8	2	
Permitted Phases					2
Detector Phase	4	3	8	2	2
Switch Phase					
Minimum Initial (s)	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	9.6	16.5	15.8	15.8
Total Split (s)	72.0	11.0	83.0	37.0	37.0
Total Split (%)	60.0%	9.2%	69.2%	30.8%	30.8%
Yellow Time (s)	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.6	6.5	5.8	5.8
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Max	None	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 119.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 48: Antelope Rd. & Ramona Expy



HCM 6th Signalized Intersection Summary  
48: Antelope Rd. & Ramona Expy

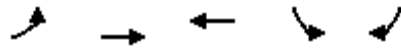
Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	1502	315	73	1051	766	63
Future Volume (veh/h)	1502	315	73	1051	766	63
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1633	342	79	1142	833	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1645	333	97	2319	893	409
Arrive On Green	0.55	0.55	0.05	0.64	0.25	0.25
Sat Flow, veh/h	3086	605	1810	3705	3510	1610
Grp Volume(v), veh/h	962	1013	79	1142	833	68
Grp Sat Flow(s),veh/h/ln	1805	1791	1810	1805	1755	1610
Q Serve(g_s), s	61.2	65.5	5.1	19.7	27.6	3.9
Cycle Q Clear(g_c), s	61.2	65.5	5.1	19.7	27.6	3.9
Prop In Lane		0.34	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	993	985	97	2319	893	409
V/C Ratio(X)	0.97	1.03	0.81	0.49	0.93	0.17
Avail Cap(c_a), veh/h	993	985	97	2319	920	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	26.8	55.7	11.1	43.4	34.6
Incr Delay (d2), s/veh	22.0	36.0	36.6	0.8	15.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.5	33.7	3.2	6.8	13.5	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.8	62.8	92.3	11.9	59.2	34.8
LnGrp LOS	D	F	F	B	E	C
Approach Vol, veh/h	1975			1221	901	
Approach Delay, s/veh	55.5			17.1	57.3	
Approach LOS	E			B	E	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		36.1	11.0	72.0		83.0
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		31.2	6.4	65.5		76.5
Max Q Clear Time (g_c+I1), s		29.6	7.1	67.5		21.7
Green Ext Time (p_c), s		0.7	0.0	0.0		9.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			44.5			
HCM 6th LOS			D			

Timings  
51: Nuevo Rd. & Antelope Rd.

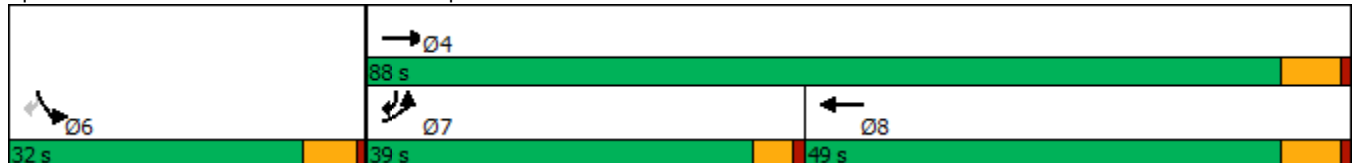


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↗	↑	↖	↙	↘
Traffic Volume (vph)	232	337	328	161	536
Future Volume (vph)	232	337	328	161	536
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	39.0	88.0	49.0	32.0	39.0
Total Split (%)	32.5%	73.3%	40.8%	26.7%	32.5%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.7  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated

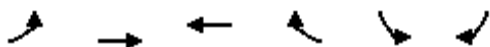
Splits and Phases: 51: Nuevo Rd. & Antelope Rd.



HCM 6th Signalized Intersection Summary  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↕	↗	↖		↘	↙	
Traffic Volume (veh/h)	232	337	328	73	161	536	
Future Volume (veh/h)	232	337	328	73	161	536	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	252	366	357	79	175	583	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	282	1290	731	162	395	602	
Arrive On Green	0.16	0.68	0.49	0.49	0.22	0.22	
Sat Flow, veh/h	1810	1900	1507	333	1810	1610	
Grp Volume(v), veh/h	252	366	0	436	175	583	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1840	1810	1610	
Q Serve(g_s), s	16.4	9.2	0.0	19.2	10.0	26.2	
Cycle Q Clear(g_c), s	16.4	9.2	0.0	19.2	10.0	26.2	
Prop In Lane	1.00			0.18	1.00	1.00	
Lane Grp Cap(c), veh/h	282	1290	0	893	395	602	
V/C Ratio(X)	0.90	0.28	0.00	0.49	0.44	0.97	
Avail Cap(c_a), veh/h	519	1290	0	893	395	602	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	49.7	7.6	0.0	20.8	40.6	36.9	
Incr Delay (d2), s/veh	4.0	0.6	0.0	1.9	0.8	28.8	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	7.4	3.3	0.0	8.1	4.4	36.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	53.7	8.2	0.0	22.7	41.4	65.6	
LnGrp LOS	D	A	A	C	D	E	
Approach Vol, veh/h		618	436		758		
Approach Delay, s/veh		26.8	22.7		60.0		
Approach LOS		C	C		E		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				88.0	32.0	23.3	64.7
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				81.5	26.2	34.4	42.5
Max Q Clear Time (g_c+I1), s				11.2	28.2	18.4	21.2
Green Ext Time (p_c), s				2.1	0.0	0.3	2.3
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			39.7				
HCM 6th LOS			D				

Intersection						
Int Delay, s/veh	59.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	312	467	272	66	76	284
Future Vol, veh/h	312	467	272	66	76	284
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	335	502	292	71	82	305

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	363	0	-	0	1500 328
Stage 1	-	-	-	-	328 -
Stage 2	-	-	-	-	1172 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1207	-	-	-	136 718
Stage 1	-	-	-	-	734 -
Stage 2	-	-	-	-	297 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1207	-	-	-	84 718
Mov Cap-2 Maneuver	-	-	-	-	84 -
Stage 1	-	-	-	-	451 -
Stage 2	-	-	-	-	297 -

Approach	EB	WB	SB
HCM Control Delay, s	3.7	0	234.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1207	-	-	-	277
HCM Lane V/C Ratio	0.278	-	-	-	1.397
HCM Control Delay (s)	9.1	0	-	-	234.6
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	1.1	-	-	-	20.8

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	232	769	549	22	14	129
Future Vol, veh/h	232	769	549	22	14	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	249	827	590	24	15	139

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	614	0	-	0	1927 602
Stage 1	-	-	-	-	602 -
Stage 2	-	-	-	-	1325 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	975	-	-	-	74 503
Stage 1	-	-	-	-	551 -
Stage 2	-	-	-	-	251 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	975	-	-	-	55 503
Mov Cap-2 Maneuver	-	-	-	-	165 -
Stage 1	-	-	-	-	410 -
Stage 2	-	-	-	-	251 -

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	975	-	-	-	419
HCM Lane V/C Ratio	0.256	-	-	-	0.367
HCM Control Delay (s)	10	-	-	-	18.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	1	-	-	-	1.7

Timings

Stoneridge Commerce Center SP (JN 13265)

71: Redlands Av. & San Jacinto Av.

01/25/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↖↗
Traffic Volume (vph)	52	34	107	655	38	28	132	646	944	72	457
Future Volume (vph)	52	34	107	655	38	28	132	646	944	72	457
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	35.8	9.6	35.8
Total Split (s)	9.6	38.6	38.6	24.0	53.0	53.0	17.0	45.4	45.4	12.0	40.4
Total Split (%)	8.0%	32.2%	32.2%	20.0%	44.2%	44.2%	14.2%	37.8%	37.8%	10.0%	33.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min

Intersection Summary

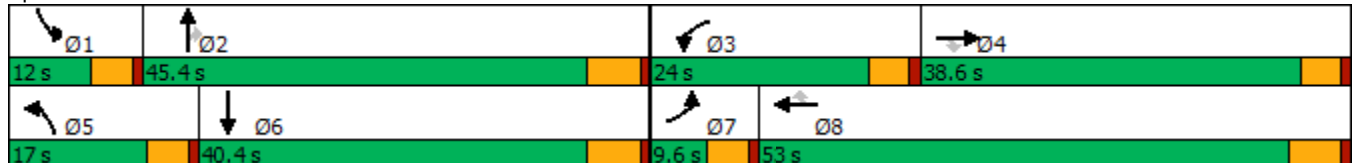
Cycle Length: 120

Actuated Cycle Length: 92.7

Natural Cycle: 115





























Control Type: Actuated-Uncoordinated

Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	52	34	107	655	38	28	132	646	944	72	457	37
Future Volume (veh/h)	52	34	107	655	38	28	132	646	944	72	457	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	56	37	55	704	41	17	142	695	801	77	491	27
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	143	199	169	717	510	427	174	1505	657	99	1307	72
Arrive On Green	0.04	0.10	0.10	0.20	0.27	0.27	0.10	0.42	0.42	0.05	0.38	0.38
Sat Flow, veh/h	3510	1900	1610	3510	1900	1590	1810	3610	1577	1810	3480	191
Grp Volume(v), veh/h	56	37	55	704	41	17	142	695	801	77	254	264
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1590	1810	1805	1577	1810	1805	1866
Q Serve(g_s), s	1.5	1.7	3.0	19.0	1.5	0.8	7.3	13.2	39.6	4.0	9.7	9.8
Cycle Q Clear(g_c), s	1.5	1.7	3.0	19.0	1.5	0.8	7.3	13.2	39.6	4.0	9.7	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	143	199	169	717	510	427	174	1505	657	99	678	701
V/C Ratio(X)	0.39	0.19	0.33	0.98	0.08	0.04	0.82	0.46	1.22	0.78	0.37	0.38
Avail Cap(c_a), veh/h	185	680	576	717	944	790	236	1505	657	141	678	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	38.8	39.4	37.6	26.0	25.7	42.1	20.0	27.7	44.3	21.5	21.6
Incr Delay (d2), s/veh	0.7	0.4	1.1	28.9	0.1	0.0	10.8	0.2	111.7	9.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.8	1.2	10.5	0.7	0.3	3.6	5.1	33.7	2.0	3.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	39.2	40.5	66.5	26.0	25.7	52.9	20.2	139.4	53.8	21.9	21.9
LnGrp LOS	D	D	D	E	C	C	D	C	F	D	C	C
Approach Vol, veh/h		148			762			1638			595	
Approach Delay, s/veh		41.9			63.4			81.3			26.0	
Approach LOS		D			E			F			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	45.4	24.0	15.8	13.7	41.5	8.5	31.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	39.6	19.4	* 34	12.4	34.6	5.0	47.2				
Max Q Clear Time (g_c+I1), s	6.0	41.6	21.0	5.0	9.3	11.8	3.5	3.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	2.7	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	64.7
HCM 6th LOS	E

Notes

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



Timings  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	527	3	736	249	984	1082	137
Future Volume (vph)	527	3	736	249	984	1082	137
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8	8		5	2	6	
Permitted Phases			8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	9.5	11.0	31.0	31.0
Total Split (s)	19.0	19.0	19.0	9.5	41.0	31.5	31.5
Total Split (%)	31.7%	31.7%	31.7%	15.8%	68.3%	52.5%	52.5%
Yellow Time (s)	5.0	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	Min	Min	Min

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 53.9

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 72: Redlands Av. & I-215 NB Ramps



HCM 6th Signalized Intersection Summary  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↔	↗	↖↗	↕			↑↑↑	↗
Traffic Volume (veh/h)	0	0	0	527	3	736	249	984	0	0	1082	137
Future Volume (veh/h)	0	0	0	527	3	736	249	984	0	0	1082	137
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				739	0	355	271	1070	0	0	1176	116
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				913	0	406	343	1854	0	0	2144	522
Arrive On Green				0.25	0.00	0.25	0.10	0.51	0.00	0.00	0.33	0.33
Sat Flow, veh/h				3619	0	1610	3510	3705	0	0	6802	1590
Grp Volume(v), veh/h				739	0	355	271	1070	0	0	1176	116
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1755	1805	0	0	1634	1590
Q Serve(g_s), s				9.8	0.0	10.8	3.9	10.5	0.0	0.0	7.6	2.7
Cycle Q Clear(g_c), s				9.8	0.0	10.8	3.9	10.5	0.0	0.0	7.6	2.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				913	0	406	343	1854	0	0	2144	522
V/C Ratio(X)				0.81	0.00	0.87	0.79	0.58	0.00	0.00	0.55	0.22
Avail Cap(c_a), veh/h				918	0	409	343	2466	0	0	3253	791
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.0	0.0	18.4	22.6	8.6	0.0	0.0	14.1	12.5
Incr Delay (d2), s/veh				5.5	0.0	18.4	11.9	0.3	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.0	0.0	5.3	2.0	3.0	0.0	0.0	2.2	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				23.5	0.0	36.8	34.5	8.9	0.0	0.0	14.3	12.7
LnGrp LOS				C	A	D	C	A	A	A	B	B
Approach Vol, veh/h					1094			1341			1292	
Approach Delay, s/veh					27.8			14.1			14.2	
Approach LOS					C			B			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		32.3			9.5	22.8		18.9				
Change Period (Y+Rc), s		6.0			4.5	6.0		6.0				
Max Green Setting (Gmax), s		35.0			5.0	25.5		13.0				
Max Q Clear Time (g_c+I1), s		12.5			5.9	9.6		12.8				
Green Ext Time (p_c), s		8.0			0.0	7.3		0.1				

Intersection Summary

HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	225	3	260	1007	583	589	1020
Future Volume (vph)	225	3	260	1007	583	589	1020
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	11.0	11.0	9.5	33.0
Total Split (s)	19.0	19.0	19.0	23.0	23.0	18.0	41.0
Total Split (%)	31.7%	31.7%	31.7%	38.3%	38.3%	30.0%	68.3%
Yellow Time (s)	4.5	4.5	4.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0	4.5	6.0
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	None	Min

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 56.4

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Splits and Phases: 73: Redlands Av. & I-215 SB Ramps



HCM 6th Signalized Intersection Summary  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	3	260	0	0	0	0	1007	583	589	1020	0
Future Volume (veh/h)	225	3	260	0	0	0	0	1007	583	589	1020	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	280	0	90				0	1060	485	620	1074	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	475	0	211				0	1967	841	799	2254	0
Arrive On Green	0.13	0.00	0.13				0.00	0.30	0.30	0.23	0.62	0.00
Sat Flow, veh/h	3619	0	1610				0	6802	2796	3510	3705	0
Grp Volume(v), veh/h	280	0	90				0	1060	485	620	1074	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1634	1398	1755	1805	0
Q Serve(g_s), s	3.4	0.0	2.4				0.0	6.4	6.9	7.8	7.5	0.0
Cycle Q Clear(g_c), s	3.4	0.0	2.4				0.0	6.4	6.9	7.8	7.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	475	0	211				0	1967	841	799	2254	0
V/C Ratio(X)	0.59	0.00	0.43				0.00	0.54	0.58	0.78	0.48	0.00
Avail Cap(c_a), veh/h	1039	0	462				0	2362	1011	1008	2686	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.2	0.0	18.8				0.0	13.7	13.9	17.0	4.7	0.0
Incr Delay (d2), s/veh	1.2	0.0	1.4				0.0	0.2	0.6	3.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.8				0.0	1.9	1.8	3.0	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	0.0	20.2				0.0	13.9	14.5	20.0	4.9	0.0
LnGrp LOS	C	A	C				A	B	B	C	A	A
Approach Vol, veh/h		370						1545			1694	
Approach Delay, s/veh		20.3						14.1			10.4	
Approach LOS		C						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	15.2	20.2	11.7	35.4								
Change Period (Y+Rc), s	4.5	6.0	5.5	6.0								
Max Green Setting (Gmax), s	13.5	17.0	13.5	35.0								
Max Q Clear Time (g_c+I1), s	9.8	8.9	5.4	9.5								
Green Ext Time (p_c), s	0.9	5.3	0.8	8.4								

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

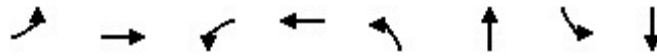
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	22	96	198	37	105	180	24	289
Future Volume (vph)	22	96	198	37	105	180	24	289
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	32.8
Total Split (s)	9.6	32.8	9.6	32.8	9.6	33.0	9.6	33.0
Total Split (%)	11.3%	38.6%	11.3%	38.6%	11.3%	38.8%	11.3%	38.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max
Act Effct Green (s)	5.0	12.9	5.0	15.0	5.0	33.5	5.0	27.4
Actuated g/C Ratio	0.07	0.18	0.07	0.21	0.07	0.47	0.07	0.38
v/c Ratio	0.21	0.31	1.92	0.09	1.02	0.20	0.24	0.29
Control Delay	37.9	14.8	467.8	16.8	125.7	9.6	38.5	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	14.8	467.8	16.8	125.7	9.6	38.5	16.4
LOS	D	B	F	B	F	A	D	B
Approach Delay		17.4		372.9		42.0		17.9
Approach LOS		B		F		D		B

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 71.4

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.92

Intersection Signal Delay: 101.9

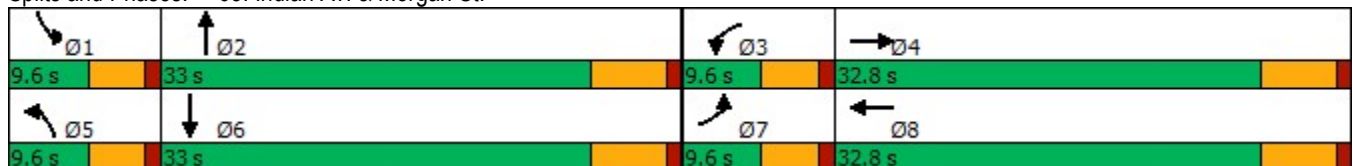
Intersection LOS: F

Intersection Capacity Utilization 51.4%

ICU Level of Service A

Analysis Period (min) 15

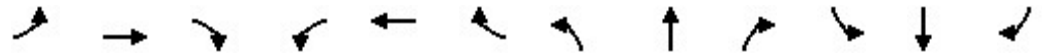
Splits and Phases: 68: Indian Av. & Morgan St.



HCM 6th Signalized Intersection Summary  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕		↖	↕	
Traffic Volume (veh/h)	22	96	76	198	37	15	105	180	92	24	289	29
Future Volume (veh/h)	22	96	76	198	37	15	105	180	92	24	289	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	119	51	244	46	14	130	222	107	30	357	30
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	53	355	145	134	514	150	134	1063	495	58	1357	113
Arrive On Green	0.03	0.14	0.14	0.07	0.19	0.19	0.07	0.44	0.44	0.03	0.40	0.40
Sat Flow, veh/h	1810	2501	1021	1810	2758	803	1810	2392	1113	1810	3372	282
Grp Volume(v), veh/h	27	84	86	244	29	31	130	166	163	30	190	197
Grp Sat Flow(s),veh/h/ln	1810	1805	1716	1810	1805	1756	1810	1805	1700	1810	1805	1849
Q Serve(g_s), s	1.0	2.8	3.1	5.0	0.9	1.0	4.8	3.8	4.0	1.1	4.8	4.8
Cycle Q Clear(g_c), s	1.0	2.8	3.1	5.0	0.9	1.0	4.8	3.8	4.0	1.1	4.8	4.8
Prop In Lane	1.00		0.59	1.00		0.46	1.00		0.65	1.00		0.15
Lane Grp Cap(c), veh/h	53	256	243	134	337	327	134	802	756	58	726	744
V/C Ratio(X)	0.51	0.33	0.35	1.82	0.09	0.09	0.97	0.21	0.22	0.52	0.26	0.26
Avail Cap(c_a), veh/h	134	721	686	134	721	701	134	802	756	134	726	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	26.1	26.2	31.3	22.7	22.8	31.2	11.5	11.5	32.2	13.5	13.5
Incr Delay (d2), s/veh	2.8	0.7	0.9	398.0	0.1	0.1	68.4	0.1	0.1	2.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.2	1.2	16.8	0.4	0.4	4.5	1.3	1.3	0.5	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	26.8	27.1	429.3	22.8	22.9	99.6	11.6	11.7	34.9	14.4	14.4
LnGrp LOS	D	C	C	F	C	C	F	B	B	C	B	B
Approach Vol, veh/h		197			304			459			417	
Approach Delay, s/veh		28.1			349.0			36.6			15.8	
Approach LOS		C			F			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.8	35.8	9.6	15.4	9.6	33.0	6.6	18.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	3.1	6.0	7.0	5.1	6.8	6.8	3.0	3.0				
Green Ext Time (p_c), s	0.0	1.7	0.0	0.8	0.0	1.8	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	98.1
HCM 6th LOS	F

Timings  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

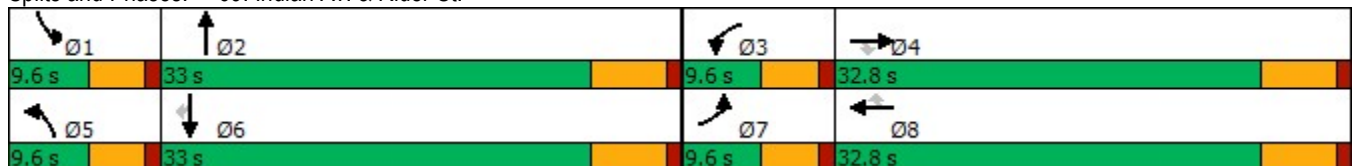
02/11/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	29	166	23	44	28	108	6	154	71	436	5
Future Volume (vph)	29	166	23	44	28	108	6	154	71	436	5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	32.8	9.6	32.8	32.8
Total Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	33.0	9.6	33.0	33.0
Total Split (%)	11.3%	38.6%	38.6%	11.3%	38.6%	38.6%	11.3%	38.8%	11.3%	38.8%	38.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.5	13.1	13.1	5.5	15.1	15.1	5.5	13.4	5.5	19.8	19.8
Actuated g/C Ratio	0.11	0.25	0.25	0.11	0.29	0.29	0.11	0.26	0.11	0.38	0.38
v/c Ratio	0.18	0.22	0.05	0.27	0.03	0.22	0.04	0.24	0.45	0.38	0.01
Control Delay	31.3	18.4	0.2	32.8	16.9	4.0	30.3	16.2	38.5	14.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	18.4	0.2	32.8	16.9	4.0	30.3	16.2	38.5	14.7	0.0
LOS	C	B	A	C	B	A	C	B	D	B	A
Approach Delay		18.3			13.0			16.6		17.9	
Approach LOS		B			B			B		B	

Intersection Summary

Cycle Length: 85  
 Actuated Cycle Length: 52  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.45  
 Intersection Signal Delay: 16.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 46.1%  
 ICU Level of Service A  
 Analysis Period (min) 15

























Splits and Phases: 69: Indian Av. & Rider St.



HCM 6th Signalized Intersection Summary  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	166	23	44	28	108	6	154	31	71	436	5
Future Volume (veh/h)	29	166	23	44	28	108	6	154	31	71	436	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	198	22	52	33	78	7	183	20	85	519	4
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	739	329	96	788	351	17	715	77	130	1013	452
Arrive On Green	0.04	0.20	0.20	0.05	0.22	0.22	0.01	0.22	0.22	0.07	0.28	0.28
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3286	355	1810	3610	1610
Grp Volume(v), veh/h	35	198	22	52	33	78	7	100	103	85	519	4
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1836	1810	1805	1610
Q Serve(g_s), s	0.9	2.1	0.5	1.3	0.3	1.8	0.2	2.1	2.1	2.1	5.5	0.1
Cycle Q Clear(g_c), s	0.9	2.1	0.5	1.3	0.3	1.8	0.2	2.1	2.1	2.1	5.5	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	71	739	329	96	788	351	17	393	400	130	1013	452
V/C Ratio(X)	0.49	0.27	0.07	0.54	0.04	0.22	0.42	0.25	0.26	0.65	0.51	0.01
Avail Cap(c_a), veh/h	197	2122	947	197	2122	947	197	1069	1087	197	2138	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	15.4	14.7	21.2	14.2	14.8	22.6	14.9	14.9	20.7	13.9	11.9
Incr Delay (d2), s/veh	2.0	0.2	0.1	1.8	0.0	0.3	6.0	0.3	0.3	2.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.7	0.2	0.5	0.1	0.6	0.1	0.7	0.7	0.8	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	15.6	14.8	23.0	14.2	15.1	28.6	15.2	15.2	22.8	14.3	11.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		255			163			210			608	
Approach Delay, s/veh		16.6			17.4			15.7			15.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	15.8	7.0	15.2	5.0	18.7	6.4	15.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	4.1	4.1	3.3	4.1	2.2	7.5	2.9	3.8				
Green Ext Time (p_c), s	0.0	0.9	0.0	1.1	0.0	3.0	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									



**ATTACHMENT D**  
**EXISTING TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**



### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2020) Conditions - Weekday PM Peak Hour**

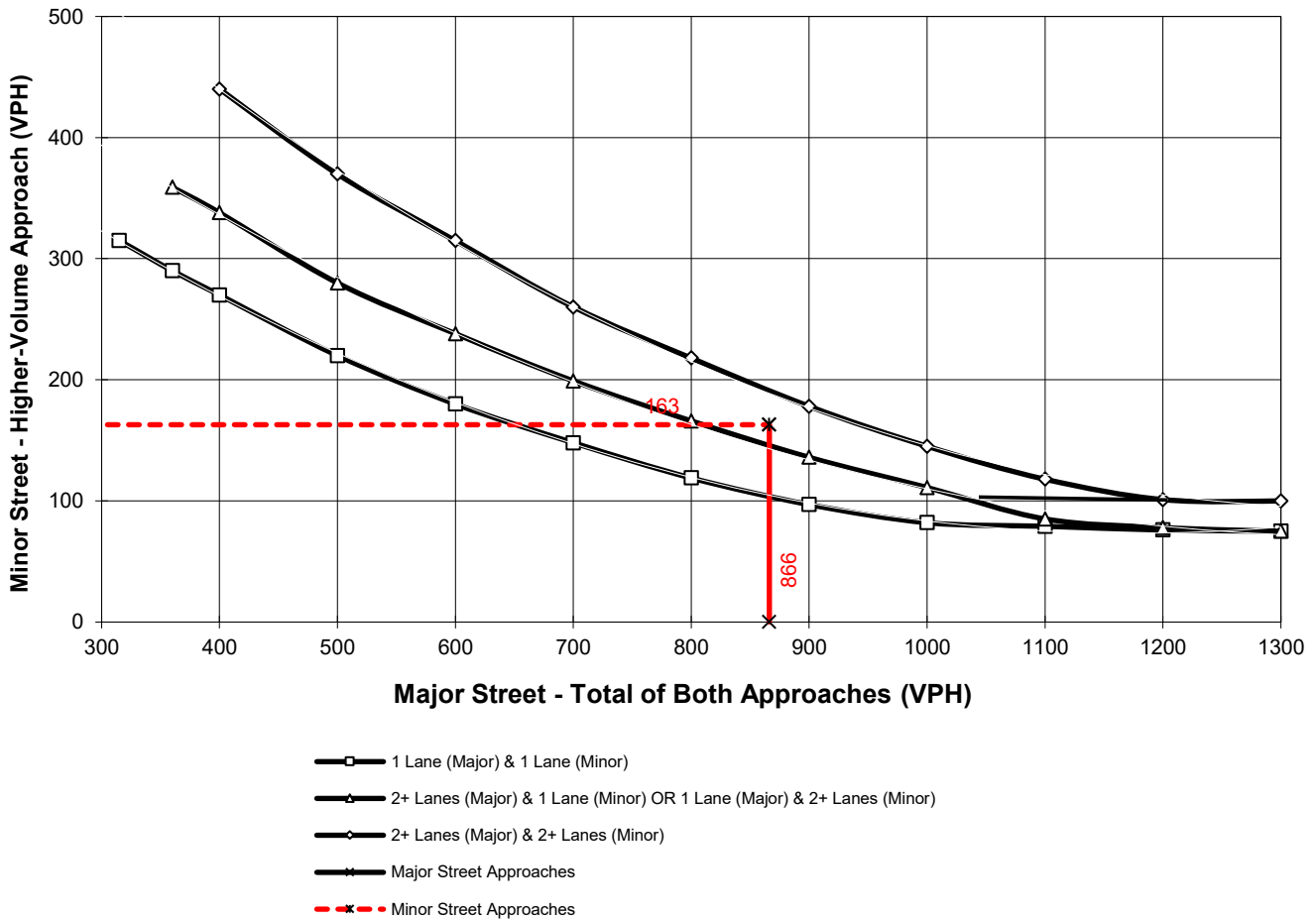
Major Street Name = **San Jacinto Av.**

Total of Both Approaches (VPH) = **866**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Dunlap Dr.**

High Volume Approach (VPH) = **163**  
 Number of Approach Lanes Minor Street = **1**

**WARRANTED FOR A SIGNAL**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2020) Conditions - Weekday PM Peak Hour**

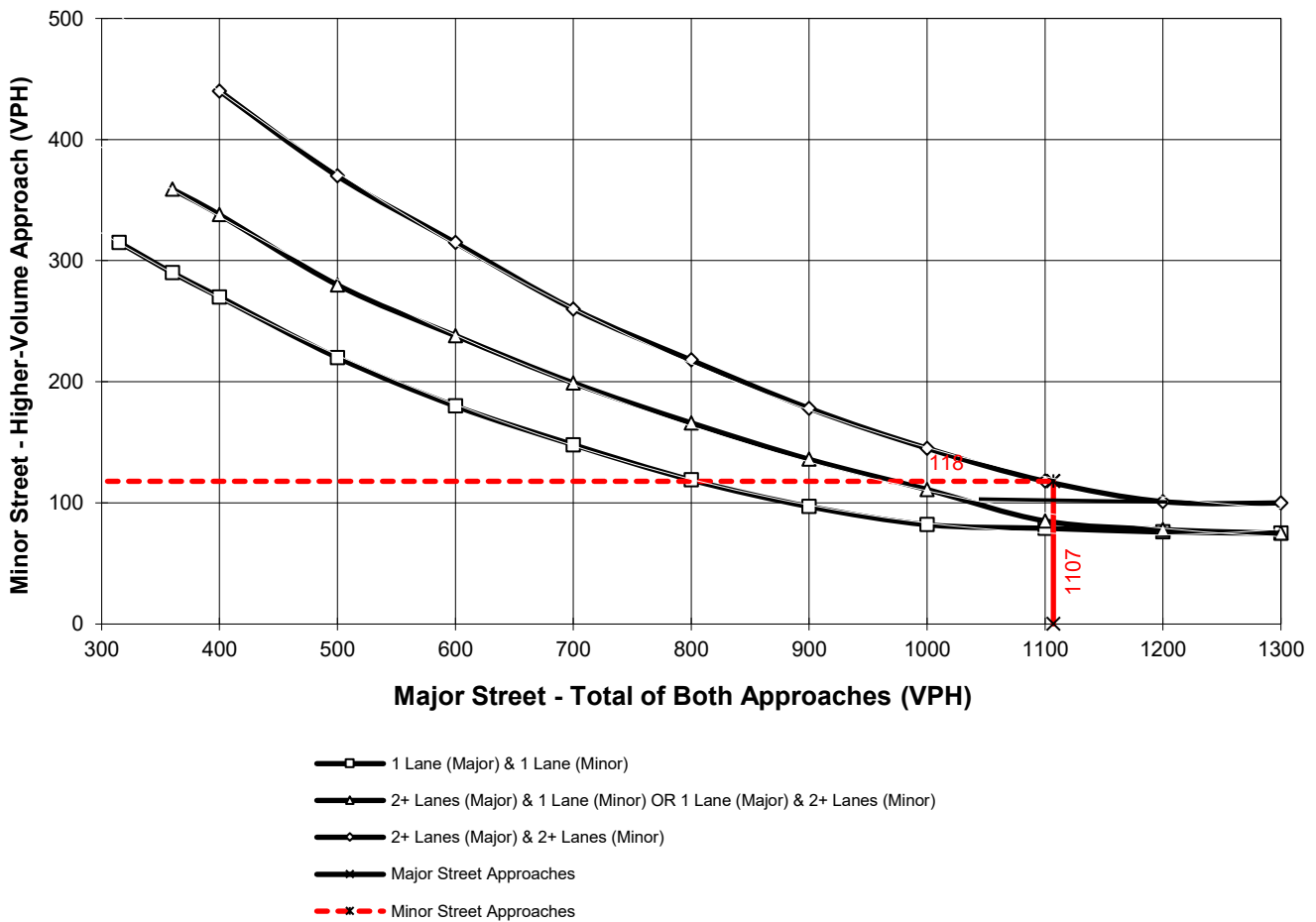
Major Street Name = **San Jacinto Av.**

Total of Both Approaches (VPH) = **1107**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Murrieta Rd.**

High Volume Approach (VPH) = **118**  
 Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**ATTACHMENT E**  
**EAP (2030) TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**



### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>EAP (2030)</u>
Jurisdiction: <u>County of Riverside</u>				<u>CS</u>		<u>DATE 01/25/21</u>
Major Street: <u>Placentia Av.</u>				<u>CS</u>		<u>DATE 01/25/21</u>
Minor Street: <u>I-215 SB Ramps</u>					Critical Approach Speed (Major) <u>45 mph</u>	
					Critical Approach Speed (Minor) <u>25 mph</u>	
Major Street Approach Lanes =		<u>2</u>	lane	Minor Street Approach Lanes =		<u>1</u> lane
Major Street Future ADT =		<u>22,803</u>	vpd	Minor Street Future ADT =		<u>3,847</u> vpd
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....					<input checked="" type="checkbox"/>	
					or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....					<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	<u>Minimum Requirements</u>			
	<b>XX</b>	<u>EADT</u>			
<b>CONDITION A - Minimum Vehicular Volume</b>		<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
1	1	8,000	5,600	2,400	1,680
2 + <b>22,803</b>	1 <b>3,847</b>	9,600	6,720 *	2,400	1,680 *
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
1	1	12,000	8,400	1,200	850
2 + <b>22,803</b>	1 <b>3,847</b>	14,400	10,080 *	1,200	850 *
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		<u>2 CONDITIONS</u>		<u>2 CONDITIONS</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
<b>XX</b>					
No one condition satisfied, but following conditions fulfilled 80% of more .....					
	<u>A</u>	<u>B</u>			
	<b>100%</b>	<b>100%</b>			

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>EAP (2030)</u>
Jurisdiction: <u>County of Riverside</u>				<u>CS</u>		DATE <u>01/25/21</u>
Major Street: <u>Placentia Av.</u>				<u>CS</u>		DATE <u>01/25/21</u>
Minor Street: <u>I-215 NB Ramps</u>					Critical Approach Speed (Major) <u>45</u> mph	Critical Approach Speed (Minor) <u>25</u> mph
Major Street Approach Lanes = <u>2</u> lane					Minor Street Approach Lanes: <u>1</u> lane	
Major Street Future ADT = <u>33,150</u> vpd					Minor Street Future ADT = <u>2,746</u> vpd	
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....					<input checked="" type="checkbox"/>	
					or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....					<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	<u>Minimum Requirements</u>			
	<b>XX</b>	<u>EADT</u>			
<b>CONDITION A - Minimum Vehicular Volume</b>		<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
1	1	8,000	5,600	2,400	1,680
2 + <b>33,150</b>	1 <b>2,746</b>	9,600	6,720 *	2,400	1,680 *
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
1	1	12,000	8,400	1,200	850
2 + <b>33,150</b>	1 <b>2,746</b>	14,400	10,080 *	1,200	850 *
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>					
<u>Satisfied</u>	<u>Not Satisfied</u>				
<b>XX</b>					
No one condition satisfied, but following conditions fulfilled 80% of more .....					
	<u>A</u>				
	<b>100%</b>				
	<u>B</u>				
	<b>100%</b>				
		2 CONDITIONS 80%		2 CONDITIONS 80%	

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAP (2030) Conditions - Weekday PM Peak Hour**

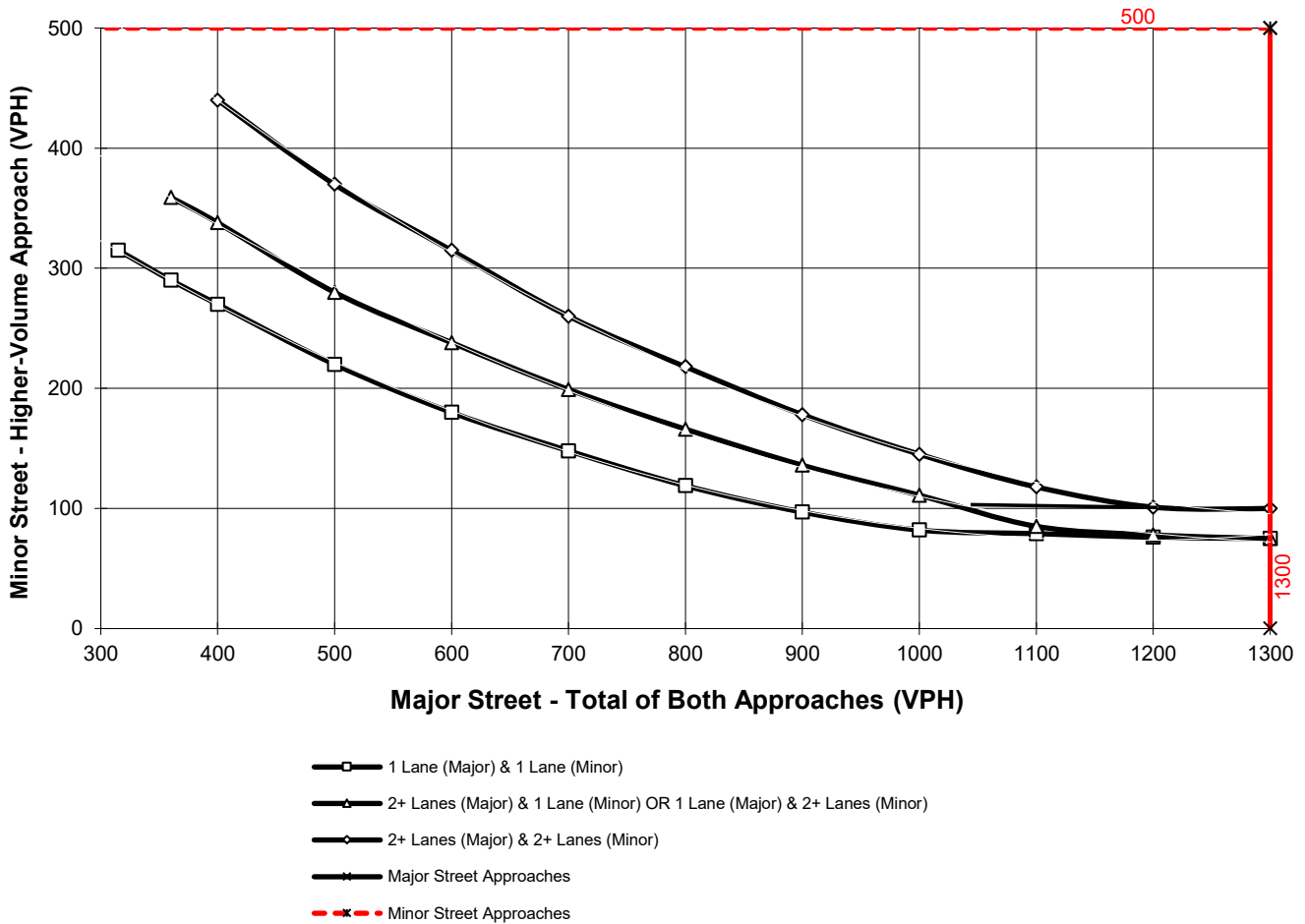
Major Street Name = **Placentia Av.**

Total of Both Approaches (VPH) = **2051**  
 Number of Approach Lanes Major Street = **2**

Minor Street Name = **Indian Av.**

High Volume Approach (VPH) = **541**  
 Number of Approach Lanes Minor Street = **1**

**WARRANTED FOR A SIGNAL**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAP (2030) Conditions - Weekday PM Peak Hour**

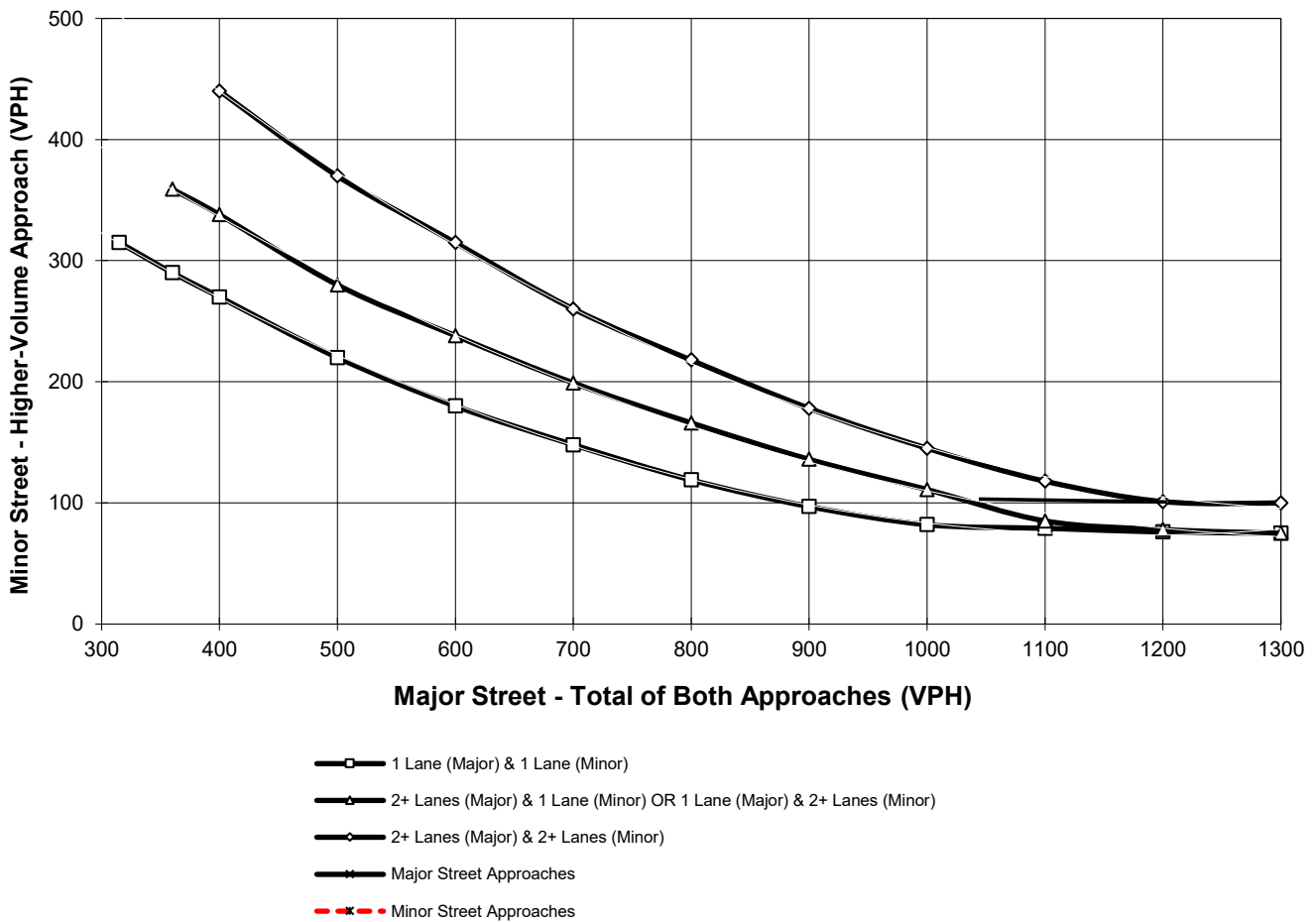
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **50**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Morgan St.**

High Volume Approach (VPH) = **63**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>EAP (2030)</u>
Jurisdiction: <u>County of Riverside</u>				<u>CS</u>		<u>DATE 01/25/21</u>
Major Street: <u>Ramona Expy.</u>				<u>CS</u>		<u>DATE 01/25/21</u>
Minor Street: <u>Antelope Rd.</u>					Critical Approach Speed (Major) <u>45 mph</u>	
					Critical Approach Speed (Minor) <u>25 mph</u>	

Major Street Approach Lanes = 2 lane                      Minor Street Approach Lanes: 1 lane

Major Street Future ADT = 35,254 vpd                      Minor Street Future ADT = 5,691 vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....    
 or **RURAL (R)**

In built up area of isolated community of < 10,000 population .....

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	<u>Minimum Requirements</u>			
	<b>XX</b>	<u>EADT</u>			
<b>CONDITION A - Minimum Vehicular Volume</b>		<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
1	1	8,000	5,600	2,400	1,680
2 + <b>35,254</b>	1 <b>5,691</b>	9,600	6,720 *	2,400	1,680 *
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
1	1	12,000	8,400	1,200	850
2 + <b>35,254</b>	1 <b>5,691</b>	14,400	10,080 *	1,200	850 *
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>					
<u>Satisfied</u>	<u>Not Satisfied</u>				
<b>XX</b>					
No one condition satisfied, but following conditions fulfilled 80% of more .....		2 CONDITIONS 80%		2 CONDITIONS 80%	
	<u>A</u>				
	<b>100%</b>				
	<u>B</u>				
	<b>100%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>EAP (2030)</u>
Jurisdiction: <u>County of Riverside</u>				<u>CS</u>		<u>DATE 01/25/21</u>
Major Street: <u>Nuevo Rd.</u>				<u>CHK CS</u>		<u>DATE 01/25/21</u>
Minor Street: <u>Antelope Rd.</u>					Critical Approach Speed (Major) <u>45 mph</u>	
					Critical Approach Speed (Minor) <u>25 mph</u>	
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes = <u>1</u>	lane			
Major Street Future ADT = <u>12,813</u>	vpd	Minor Street Future ADT = <u>4,698</u>	vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....		<input checked="" type="checkbox"/>				
		or				<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....		<input type="checkbox"/>				

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	<u>Minimum Requirements</u>			
	<b>XX</b>	<u>EADT</u>			
<b>CONDITION A - Minimum Vehicular Volume</b>		<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	8,000	5,600	2,400	1,680
<u>2 + 12,813</u>	<u>1 4,698</u>	9,600	6,720 *	2,400	1,680 *
<u>2 +</u>	<u>2 +</u>	9,600	6,720	3,200	2,240
<u>1</u>	<u>2 +</u>	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	12,000	8,400	1,200	850
<u>2 + 12,813</u>	<u>1 4,698</u>	14,400	10,080 *	1,200	850 *
<u>2 +</u>	<u>2 +</u>	14,400	10,080	1,600	1,120
<u>1</u>	<u>2 +</u>	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		<u>2 CONDITIONS</u>		<u>2 CONDITIONS</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
<b>XX</b>					
No one condition satisfied, but following conditions fulfilled 80% of more .....					
	<u>A</u>				
	<b>100%</b>				
	<u>B</u>				
	<b>100%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAP (2030) Conditions - Weekday PM Peak Hour**

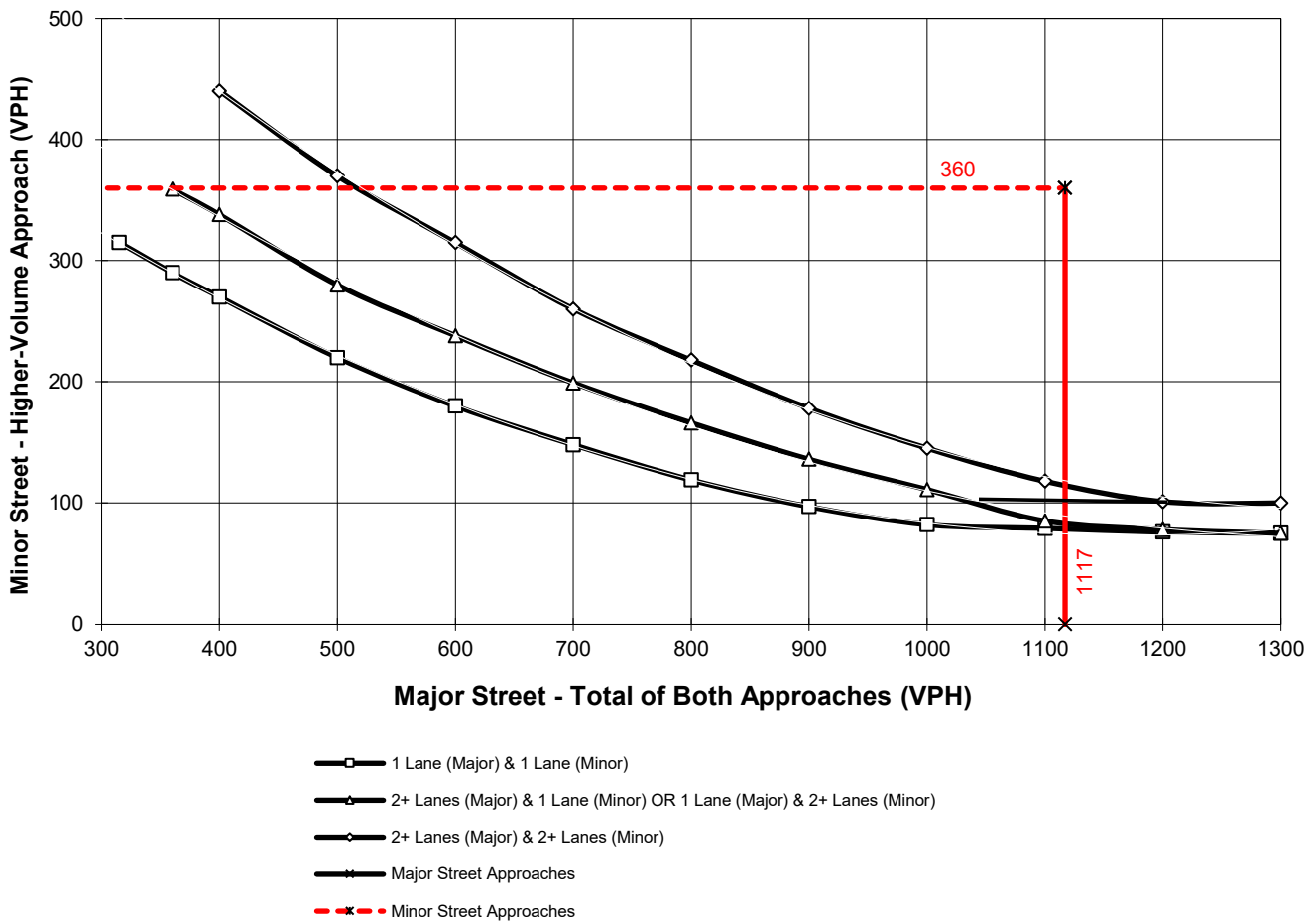
Major Street Name = **San Jacinto Av.**

Total of Both Approaches (VPH) = **1117**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Dunlap Dr.**

High Volume Approach (VPH) = **360**  
 Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAP (2030) Conditions - Weekday PM Peak Hour**

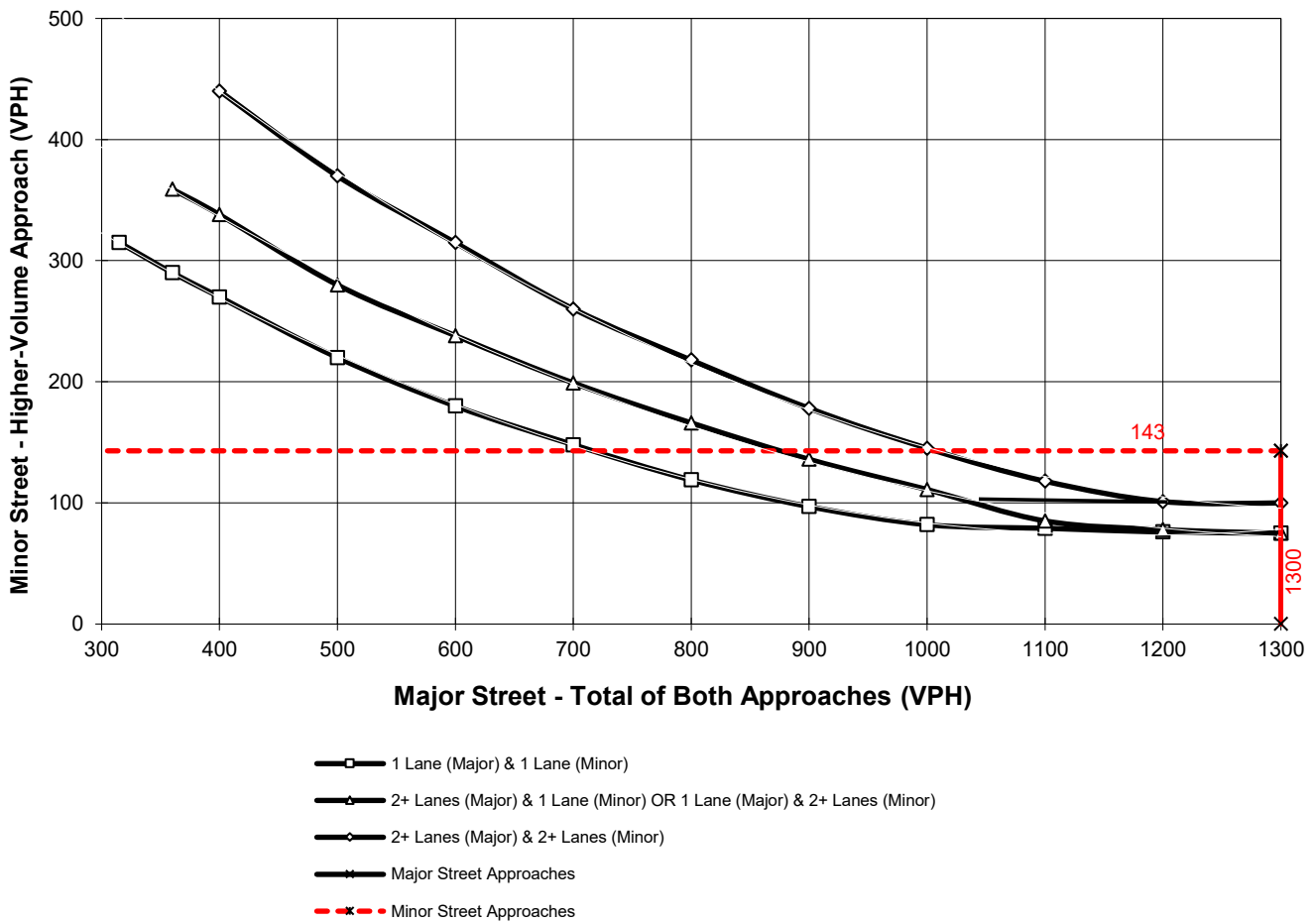
Major Street Name = **San Jacinto Av.**

Total of Both Approaches (VPH) = **1410**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Murrieta Rd.**

High Volume Approach (VPH) = **143**  
 Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**ATTACHMENT F**  
**EXISTING OFF-RAMP QUEUING ANALYSIS WORKSHEETS**



## Queues

## Stoneridge Commerce Center SP (JN 13265)

## 72: Redlands Av. &amp; I-215 NB Ramps

05/12/2021



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	190	187	171	156	347	911	203
v/c Ratio	0.53	0.54	0.38	0.32	0.18	0.40	0.29
Control Delay	24.9	24.0	6.8	23.7	5.9	12.7	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	24.0	6.8	23.7	5.9	12.7	3.5
Queue Length 50th (ft)	50	48	0	21	23	59	0
Queue Length 95th (ft)	123	123	43	51	40	81	31
Internal Link Dist (ft)		1091			342	726	
Turn Bay Length (ft)			400				
Base Capacity (vph)	457	442	534	505	2756	3632	987
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.42	0.32	0.31	0.13	0.25	0.21

## Intersection Summary

Queues  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

05/12/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	88	107	106	383	304	448	759
v/c Ratio	0.27	0.27	0.26	0.26	0.35	0.49	0.32
Control Delay	19.9	5.0	4.8	15.5	4.0	16.8	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	5.0	4.8	15.5	4.0	16.8	5.4
Queue Length 50th (ft)	20	0	0	23	0	48	45
Queue Length 95th (ft)	62	26	24	47	27	102	86
Internal Link Dist (ft)		1091		422			342
Turn Bay Length (ft)			130		200		
Base Capacity (vph)	508	536	550	2528	1286	1580	3030
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.20	0.19	0.15	0.24	0.28	0.25

Intersection Summary

## Queues

## Stoneridge Commerce Center SP (JN 13265)

## 72: Redlands Av. &amp; I-215 NB Ramps

05/12/2021



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	371	360	343	222	866	797	123
v/c Ratio	0.81	0.69	0.66	0.62	0.49	0.42	0.22
Control Delay	36.6	20.0	18.1	32.8	9.3	14.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	20.0	18.1	32.8	9.3	14.3	3.4
Queue Length 50th (ft)	97	50	44	30	78	52	0
Queue Length 95th (ft)	#298	#215	#187	#89	112	71	22
Internal Link Dist (ft)		1091			342	726	
Turn Bay Length (ft)			400				
Base Capacity (vph)	458	520	523	360	2598	3428	901
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.69	0.66	0.62	0.33	0.23	0.14

## Intersection Summary

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

Queue shown is maximum after two cycles.



Queues  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

05/12/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	145	141	134	859	503	369	858
v/c Ratio	0.45	0.39	0.34	0.44	0.42	0.52	0.40
Control Delay	24.7	12.5	7.0	16.3	3.2	22.2	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	12.5	7.0	16.3	3.2	22.2	6.7
Queue Length 50th (ft)	44	15	0	61	0	54	63
Queue Length 95th (ft)	93	60	37	99	32	95	111
Internal Link Dist (ft)		1091		422			342
Turn Bay Length (ft)			130		200		
Base Capacity (vph)	451	470	503	2165	1265	921	2462
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.30	0.27	0.40	0.40	0.40	0.35

Intersection Summary

**ATTACHMENT G**  
**EAP (2030) OFF-RAMP QUEUING ANALYSIS WORKSHEETS**



## Queues

## Stoneridge Commerce Center SP (JN 13265)

## 72: Redlands Av. &amp; I-215 NB Ramps

05/12/2021



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	299	290	274	190	449	1176	247
v/c Ratio	0.76	0.68	0.49	0.43	0.23	0.47	0.32
Control Delay	38.4	25.2	6.8	27.3	6.3	13.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	25.2	6.8	27.3	6.3	13.3	3.2
Queue Length 50th (ft)	100	64	0	30	33	84	0
Queue Length 95th (ft)	#237	#189	53	61	51	107	34
Internal Link Dist (ft)		1091			342	726	
Turn Bay Length (ft)			400				
Base Capacity (vph)	403	436	570	445	2546	3201	917
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.67	0.48	0.43	0.18	0.37	0.27

## Intersection Summary

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

Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	106	131	128	492	371	602	933
v/c Ratio	0.34	0.34	0.33	0.31	0.38	0.60	0.38
Control Delay	23.2	7.4	7.0	16.6	3.8	18.9	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	7.4	7.0	16.6	3.8	18.9	5.6
Queue Length 50th (ft)	29	0	0	34	0	79	64
Queue Length 95th (ft)	75	39	36	61	30	140	110
Internal Link Dist (ft)		1091		422			342
Turn Bay Length (ft)			130		200		
Base Capacity (vph)	461	499	512	2296	1239	1435	2773
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.26	0.25	0.21	0.30	0.42	0.34

## Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	476	452	448	271	1070	1176	149
v/c Ratio	1.14	1.03	0.94	0.83	0.56	0.51	0.22
Control Delay	115.7	73.5	48.9	50.6	9.4	14.2	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.7	73.5	48.9	50.6	9.4	14.2	3.3
Queue Length 50th (ft)	~197	~139	105	45	105	82	0
Queue Length 95th (ft)	#404	#358	#308	#115	147	107	27
Internal Link Dist (ft)		1091			342	726	
Turn Bay Length (ft)			400				
Base Capacity (vph)	416	439	475	326	2358	3111	837
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.14	1.03	0.94	0.83	0.45	0.38	0.18

**Intersection Summary**

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Queues  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

05/12/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	178	172	164	1060	614	620	1074
v/c Ratio	0.55	0.47	0.41	0.55	0.49	0.77	0.49
Control Delay	27.7	14.8	9.6	18.4	3.3	29.1	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	14.8	9.6	18.4	3.3	29.1	7.5
Queue Length 50th (ft)	58	25	8	88	0	102	92
Queue Length 95th (ft)	113	75	52	124	35	#180	148
Internal Link Dist (ft)		1091		422			342
Turn Bay Length (ft)			130		200		
Base Capacity (vph)	412	441	472	1981	1277	842	2252
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.39	0.35	0.54	0.48	0.74	0.48

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

**ATTACHMENT H**  
**EXISTING FREEWAY FACILITY ANALYSIS WORKSHEETS**



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2020)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 SB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	N of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1850	3
4	Merge	Basic	On-Ramp	1500	4
5	Basic	Basic	S of Redlands	5280	4

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV	Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952	3488		7161		0.49		68.7		16.9		B

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.877	3488	294	7200	2100	0.48	0.14	65.0	60.9	17.9	21.3	C

### Segment 3: Basic

Time Period	PHF		fHV	Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952	3217		7161		0.45		68.7		15.6		B

### Segment 4: Merge

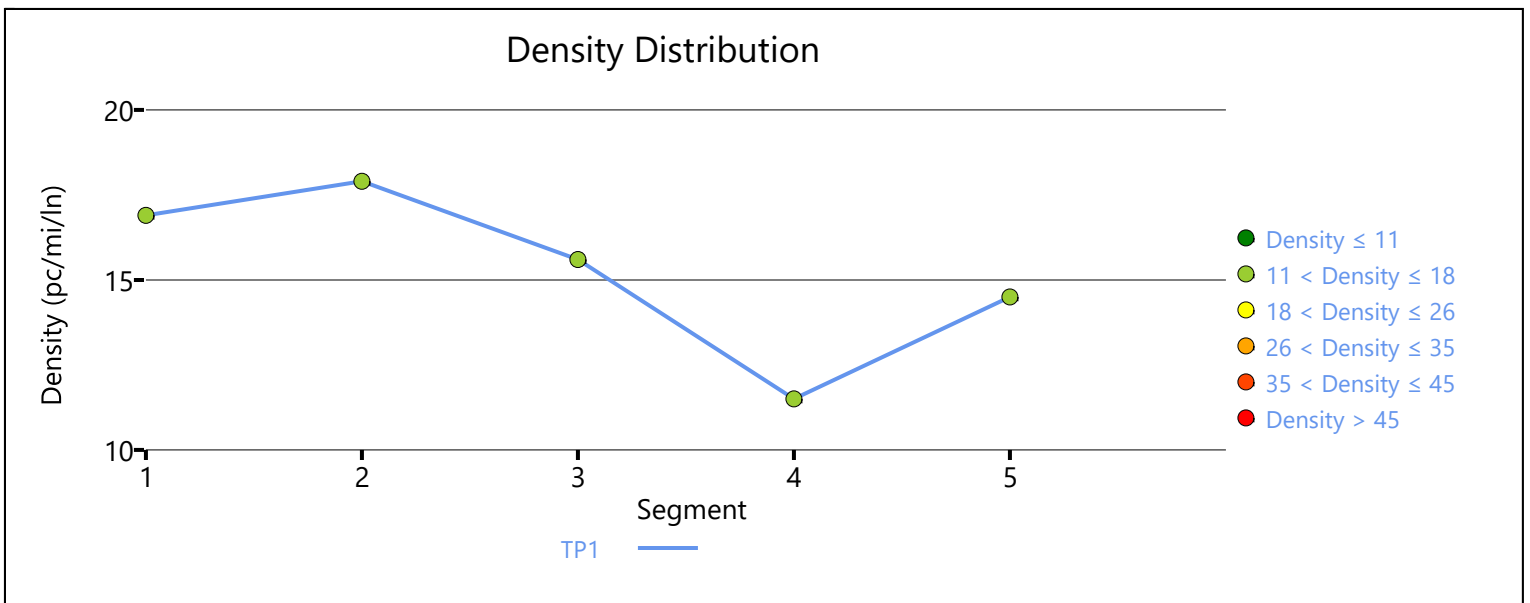
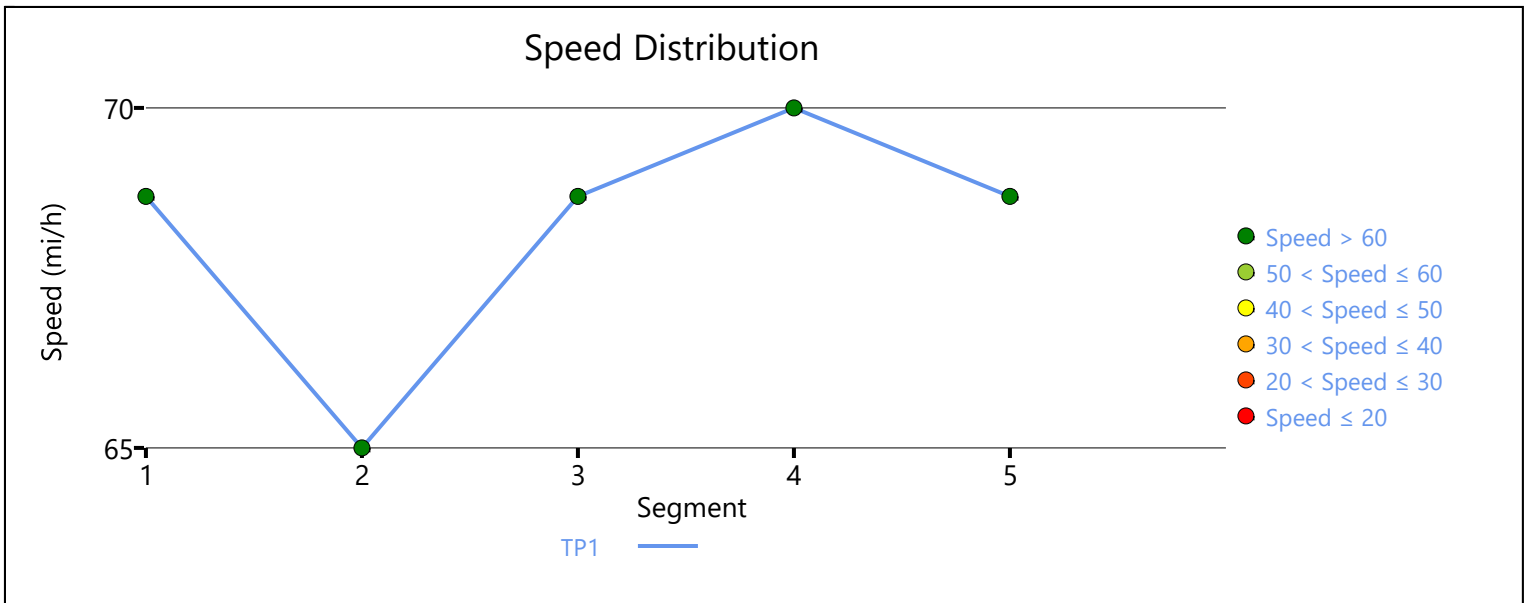
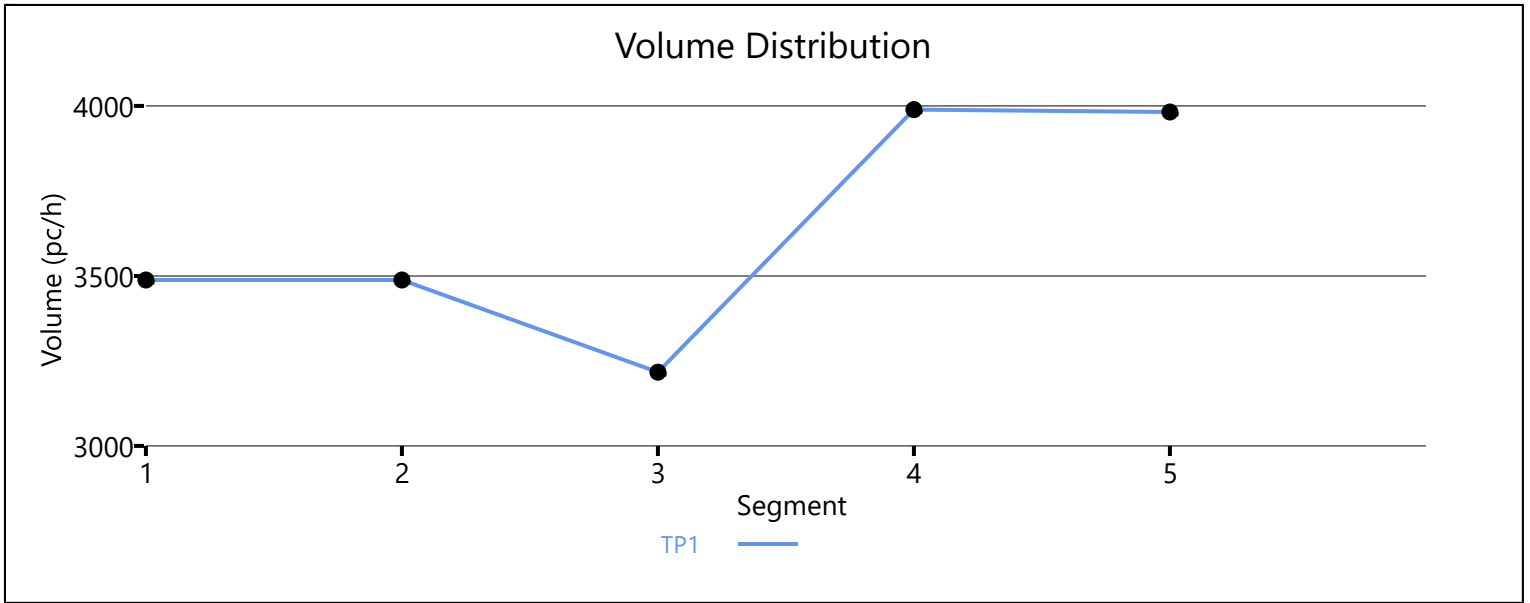
Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.943	3989	772	9600	2100	0.34	0.37	70.0	-	11.5	-	B

### Segment 5: Basic

Time Period	PHF		fHV	Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952	3982		9548		0.42		68.7		14.5		B



<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	68.5	15.3	14.6	2.6	B
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		68.5	Density, veh/mi/ln		14.6
Average Travel Time, min		2.6	Density, pc/mi/ln		15.3



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2020)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 NB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	S of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1675	3
4	Merge	Merge	On-Ramp	1500	3
5	Basic	Basic	N of Redlands	5280	3

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		3613		7161		0.50		68.7		17.5		B

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.909	3613	544	7200	2100	0.50	0.26	64.4	60.3	18.7	22.8	C

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		3093		7161		0.43		68.7		15.0		B

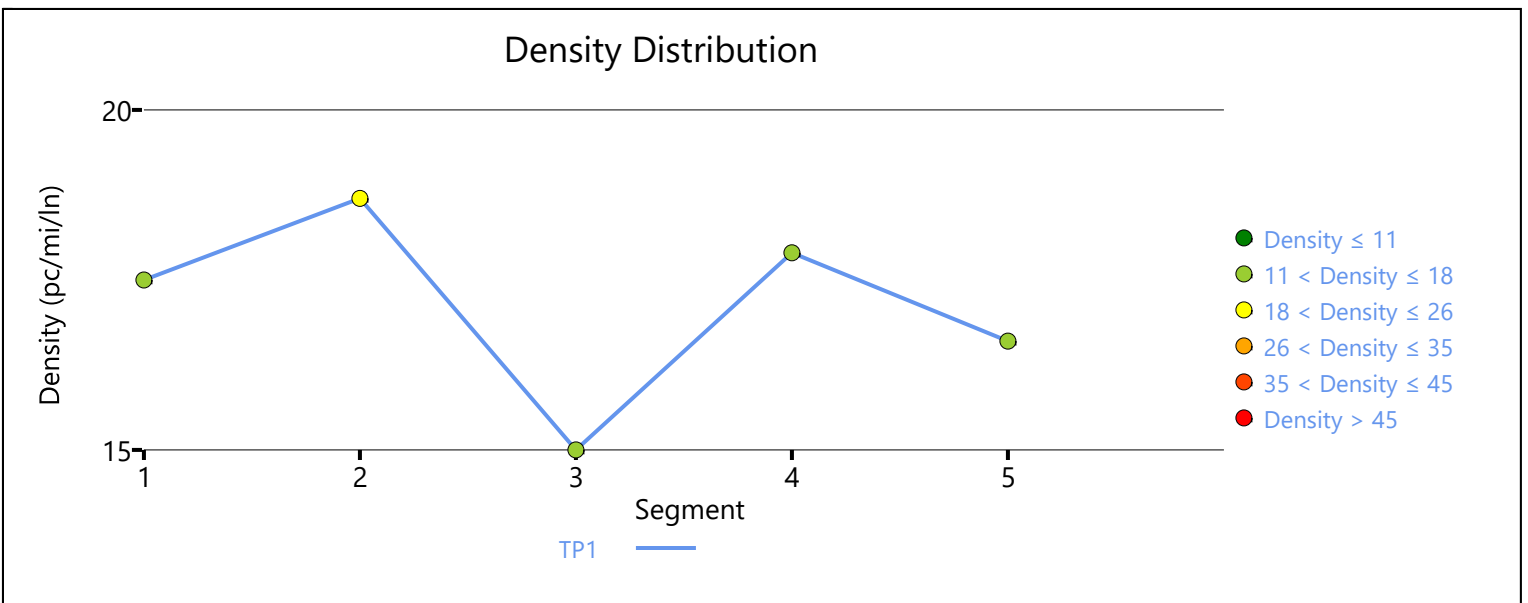
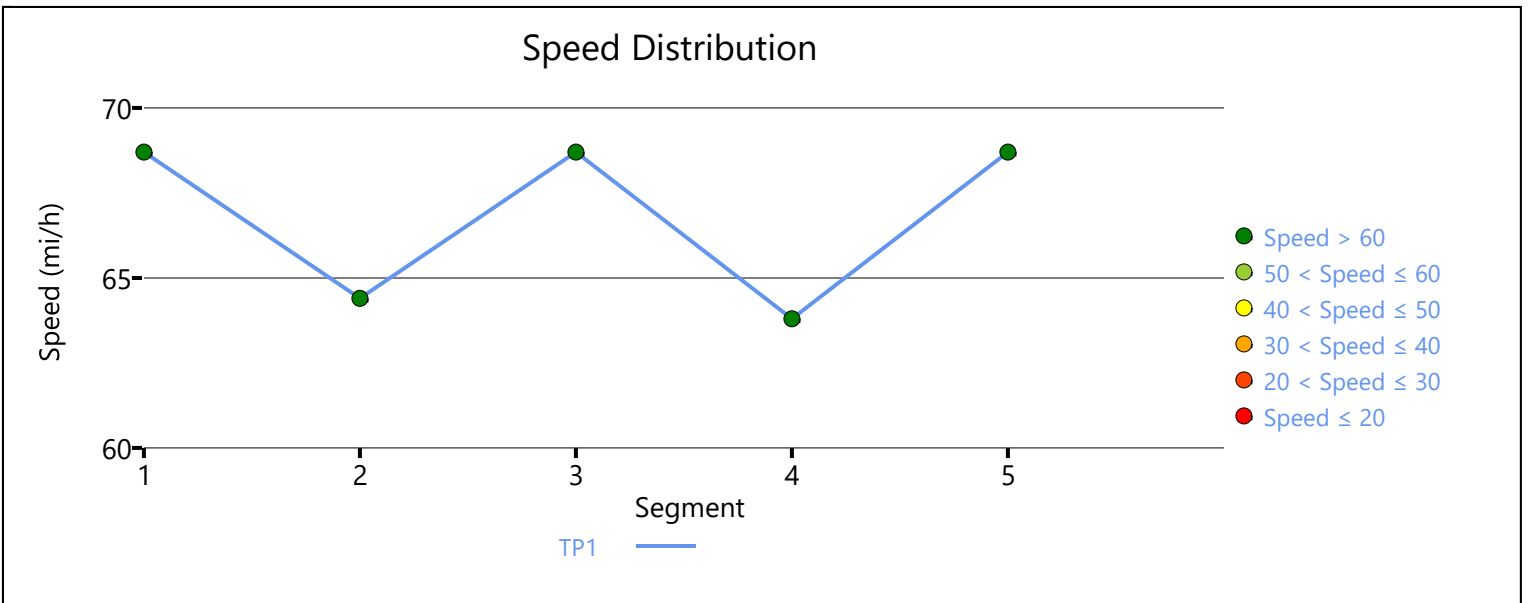
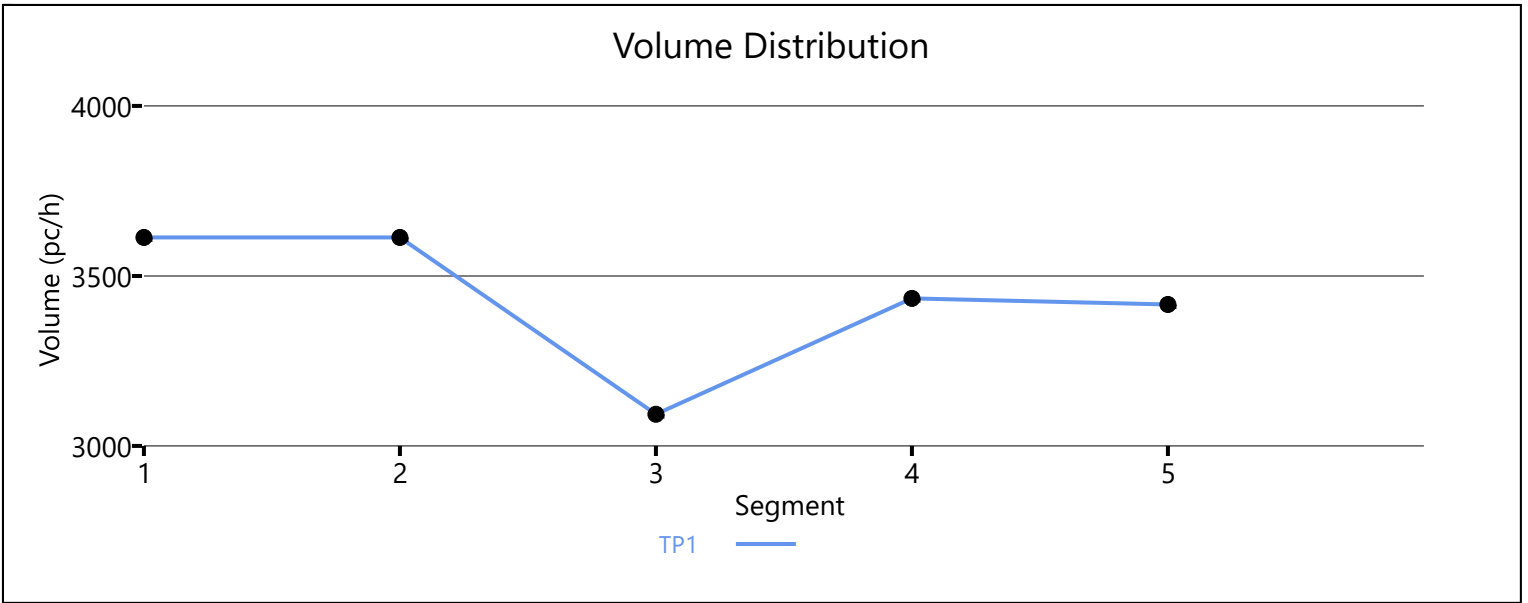
### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.901	3434	341	7200	2100	0.48	0.16	63.8	61.9	17.9	17.9	B

### Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		3416		7161		0.48		68.7		16.6		B

<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	67.7	17.1	16.3	2.6	B
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		67.7	Density, veh/mi/ln		16.3
Average Travel Time, min		2.6	Density, pc/mi/ln		17.1



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2020)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 SB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	N of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1850	3
4	Merge	Basic	On-Ramp	1500	4
5	Basic	Basic	S of Redlands	5280	4

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV	Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943	4680		7161		0.65		67.5		23.1		C

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.935	4680	432	7200	2100	0.65	0.21	64.7	60.6	24.1	27.1	C

### Segment 3: Basic

Time Period	PHF		fHV	Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943	4251		7161		0.59		68.4		20.7		C

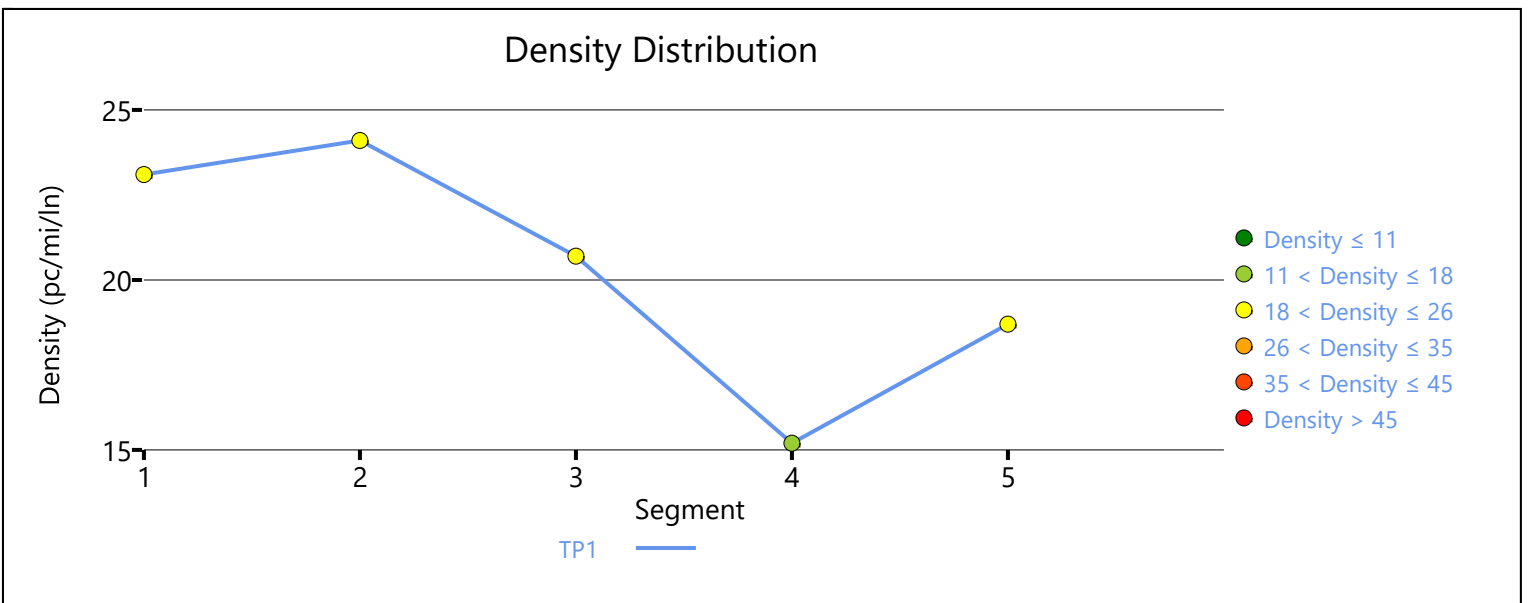
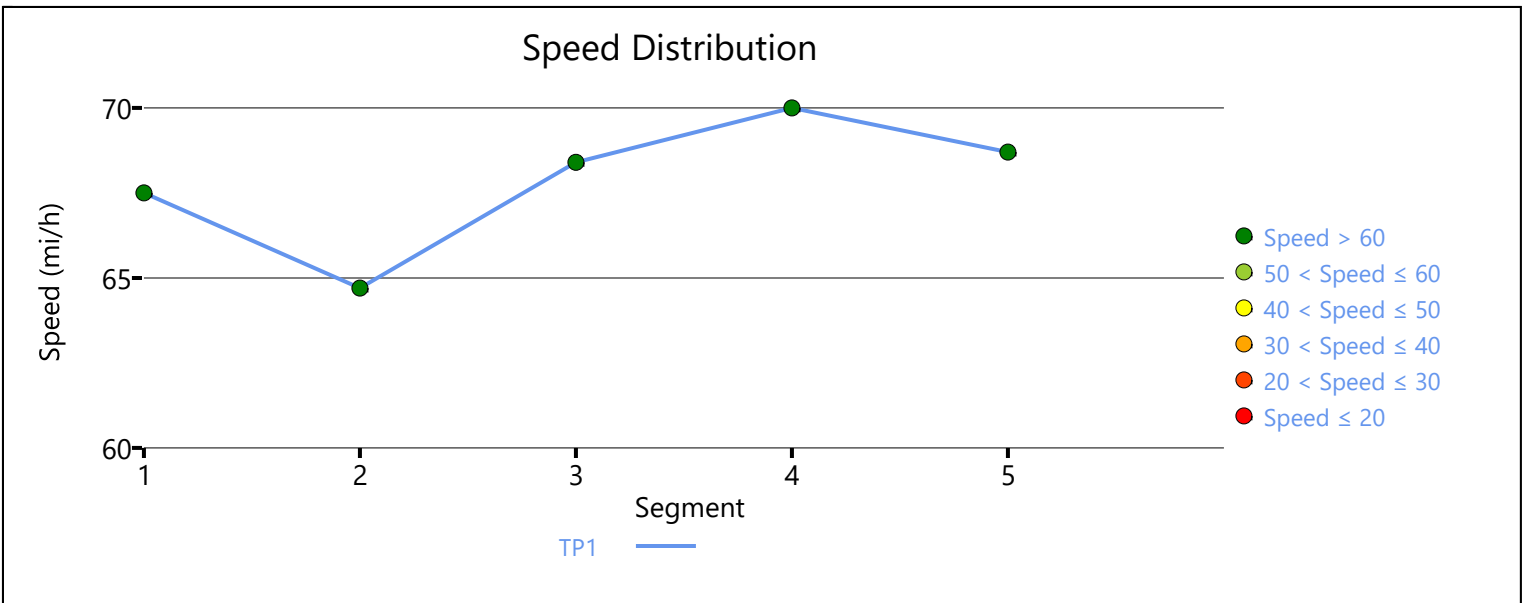
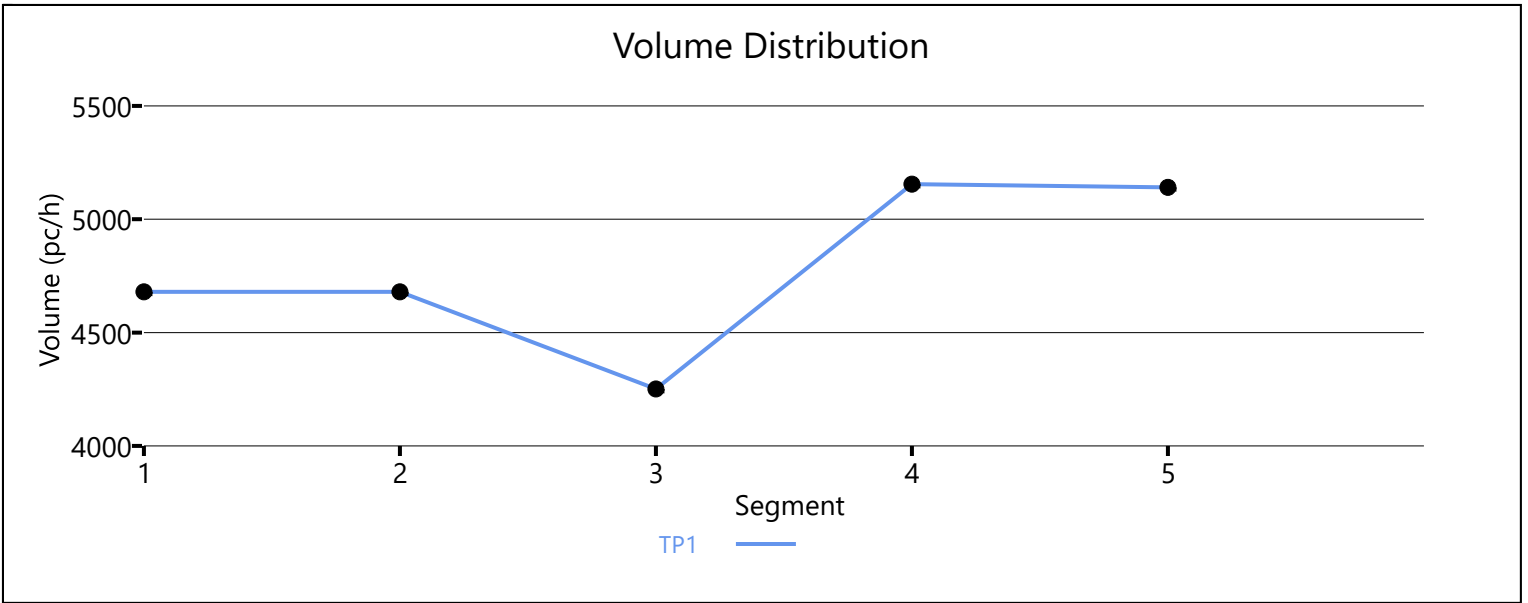
### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.980	5155	904	9600	2100	0.44	0.43	70.0	-	15.2	-	B

### Segment 5: Basic

Time Period	PHF		fHV	Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952	5141		9548		0.54		68.7		18.7		C

<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	68.0	20.3	19.2	2.6	C
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		68.0	Density, veh/mi/ln		19.2
Average Travel Time, min		2.6	Density, pc/mi/ln		20.3





# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2020)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 NB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	S of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1675	3
4	Merge	Merge	On-Ramp	1500	3
5	Basic	Basic	N of Redlands	5280	3

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		4676		7161		0.65		67.6		23.1		C

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.971	4676	1080	7200	2100	0.65	0.51	63.1	58.9	24.7	28.7	D

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		3574		7161		0.50		68.7		17.3		B

### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.926	3916	342	7200	2100	0.54	0.16	63.3	61.5	20.6	20.2	C

### Segment 5: Basic

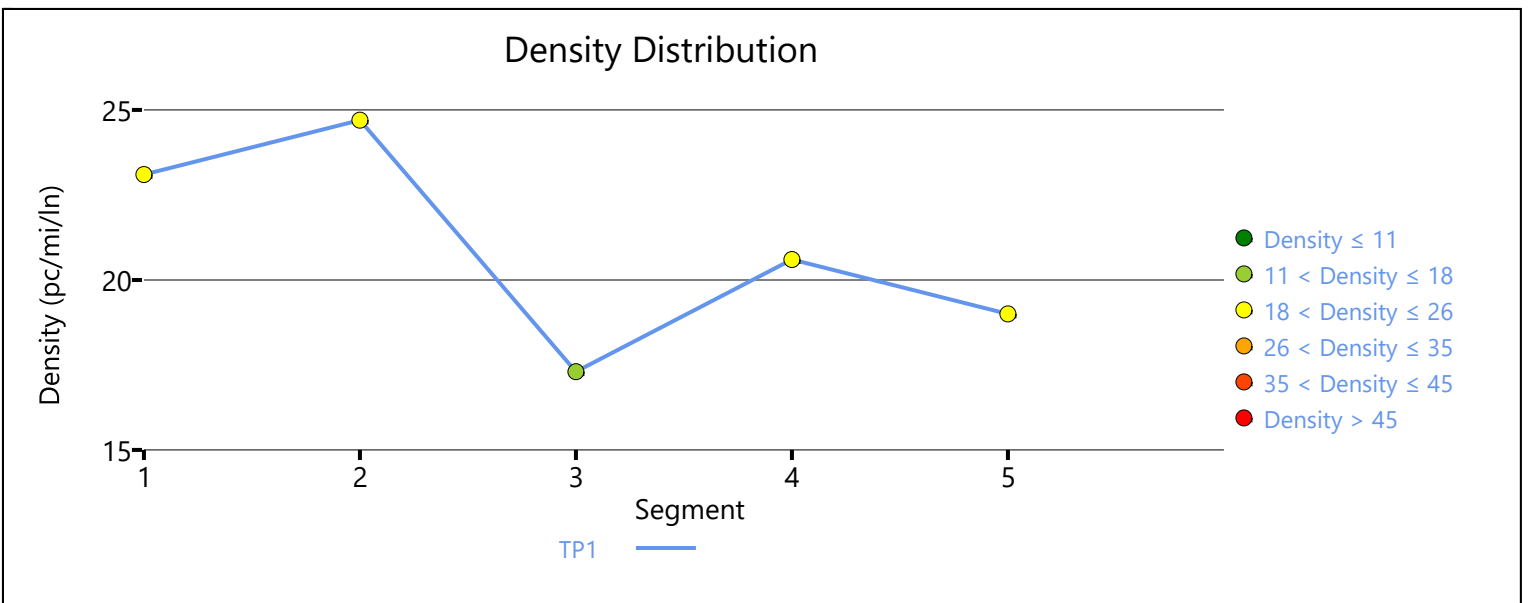
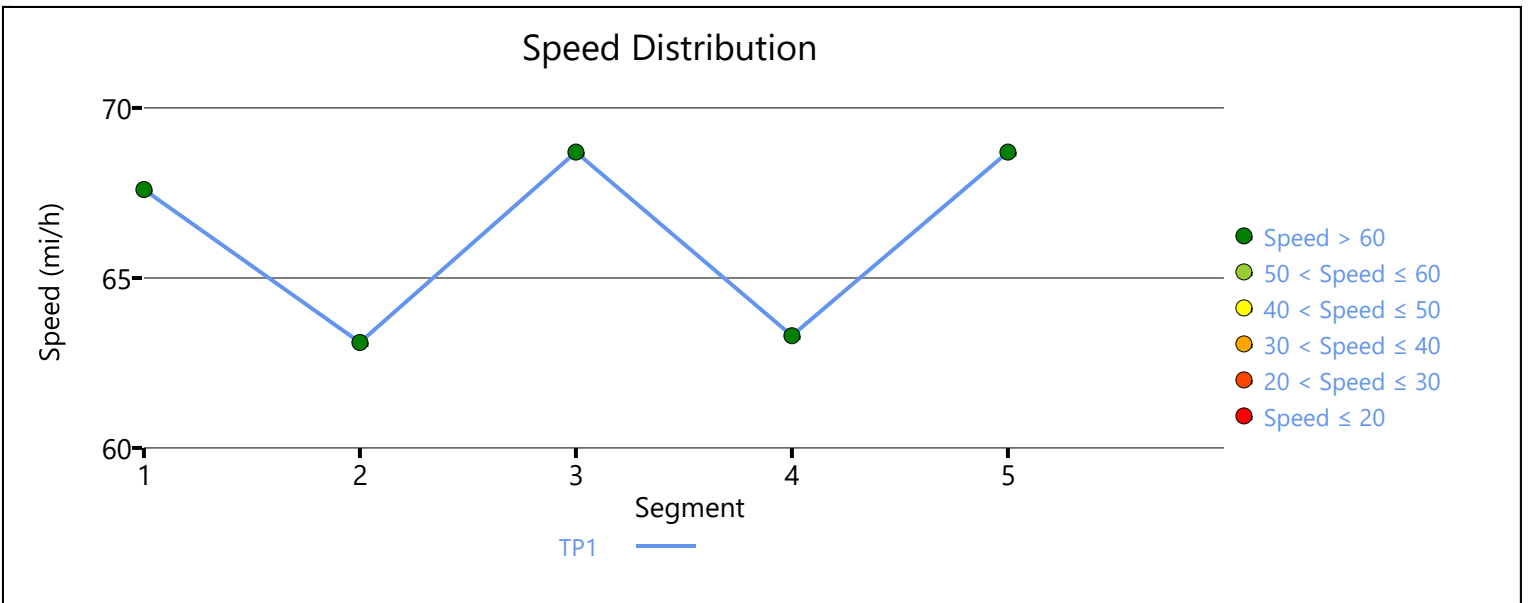
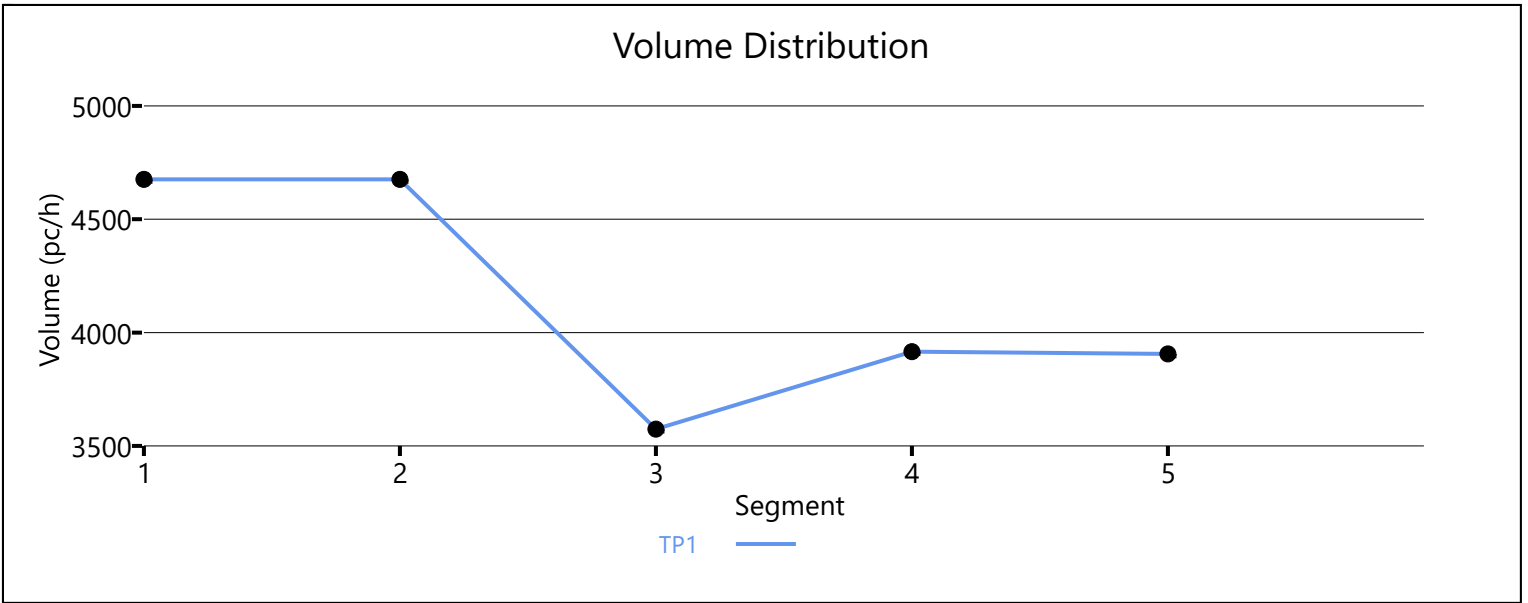
Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		3906		7161		0.55		68.7		19.0		C

**Facility Time Period Results**

<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	67.1	21.0	20.0	2.6	C

**Facility Overall Results**

Space Mean Speed, mi/h	67.1	Density, veh/mi/ln	20.0
Average Travel Time, min	2.6	Density, pc/mi/ln	21.0



**ATTACHMENT I**  
**EAP (2030) FREEWAY FACILITY ANALYSIS WORKSHEETS**



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	EAP
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 SB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	N of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1850	3
4	Merge	Basic	On-Ramp	1500	4
5	Basic	Basic	S of Redlands	5280	4

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		4375		7161		0.61		68.2		21.4		C

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.877	4375	358	7200	2100	0.61	0.17	64.9	60.8	22.5	25.6	C

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		4004		7161		0.56		68.6		19.5		C

### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.926	4986	982	9600	2100	0.42	0.47	70.0	-	14.3	-	B

### Segment 5: Basic

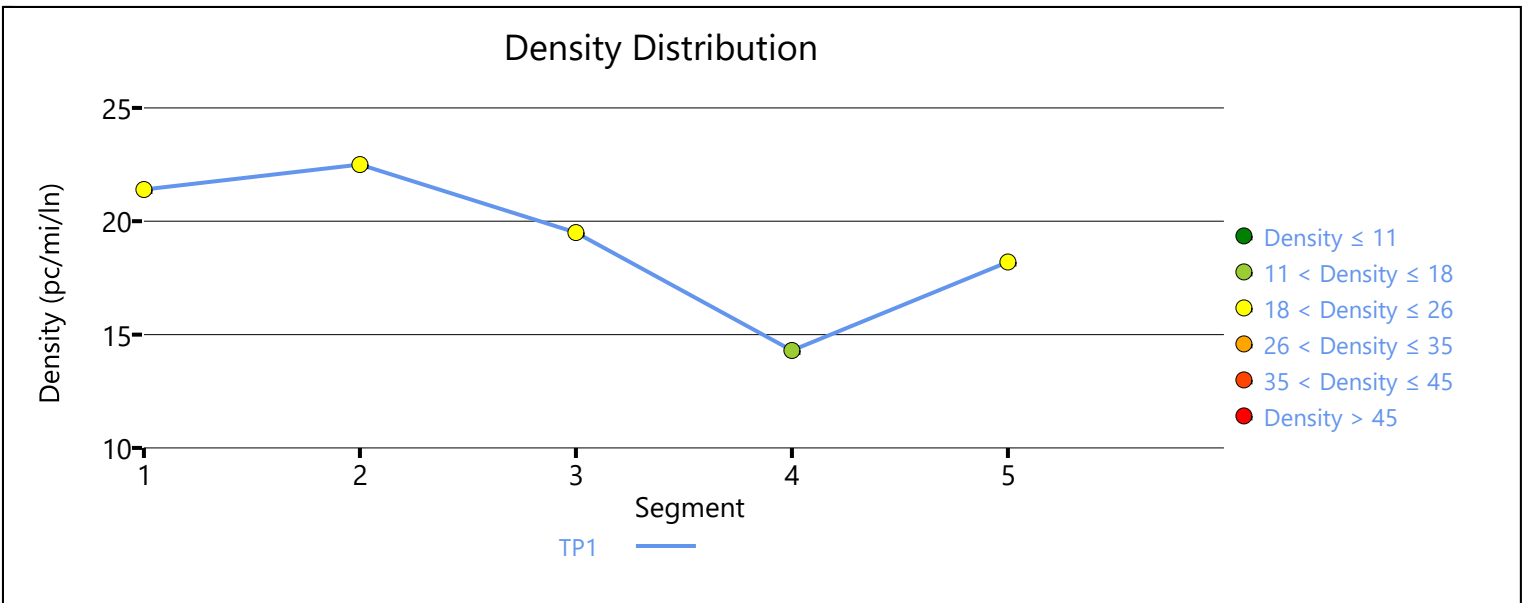
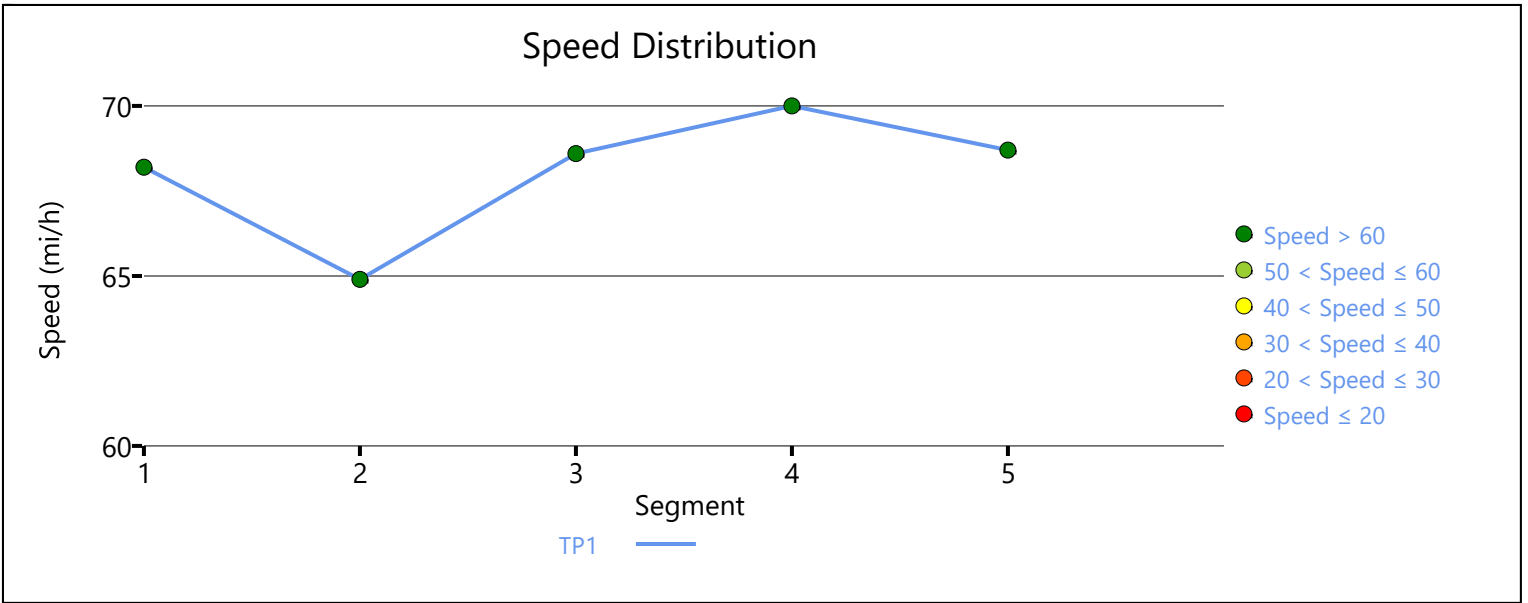
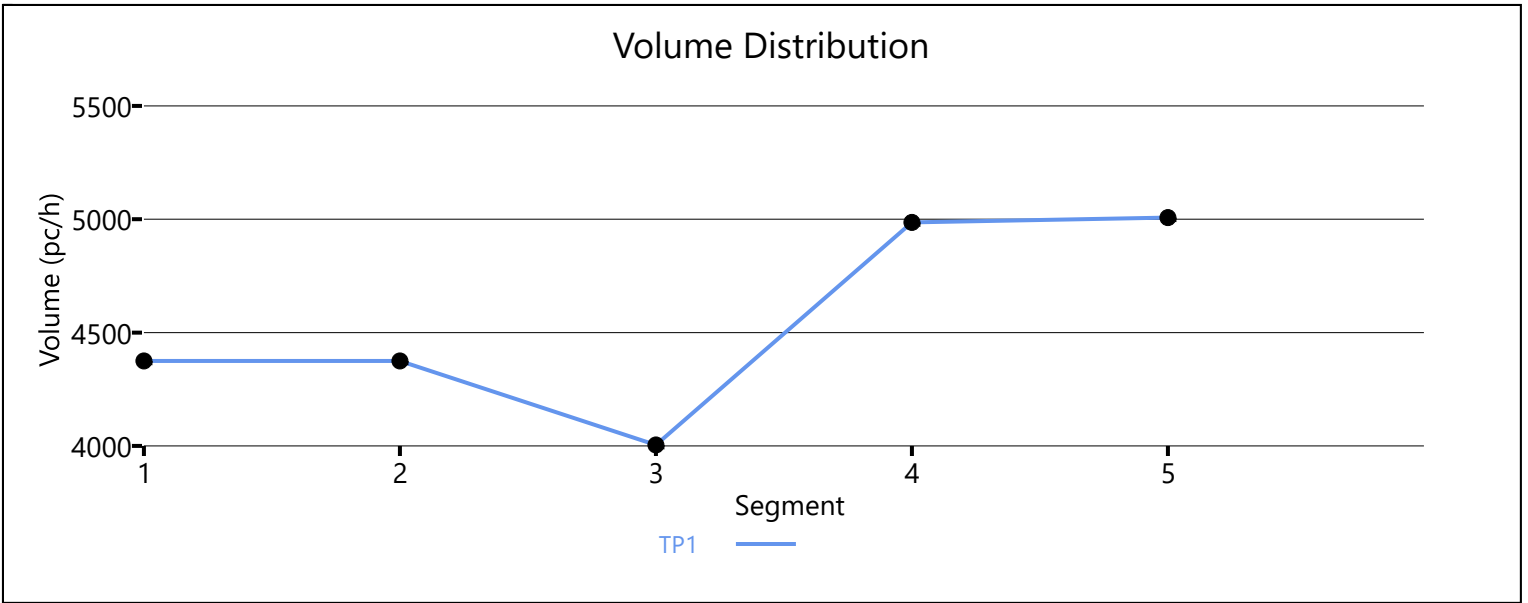
Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		5007		9548		0.52		68.7		18.2		C

**Facility Time Period Results**

<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	68.3	19.2	18.2	2.6	C

**Facility Overall Results**

Space Mean Speed, mi/h	68.3	Density, veh/mi/ln	18.2
Average Travel Time, min	2.6	Density, pc/mi/ln	19.2



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	EAP
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 NB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	S of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1675	3
4	Merge	Merge	On-Ramp	1500	3
5	Basic	Basic	N of Redlands	5280	3

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.926		4900		7161		0.68		66.9		24.4		C

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.833	4900	816	7200	2100	0.68	0.39	63.8	59.6	25.6	29.2	D

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		4091		7161		0.57		68.5		19.9		C

### Segment 4: Merge

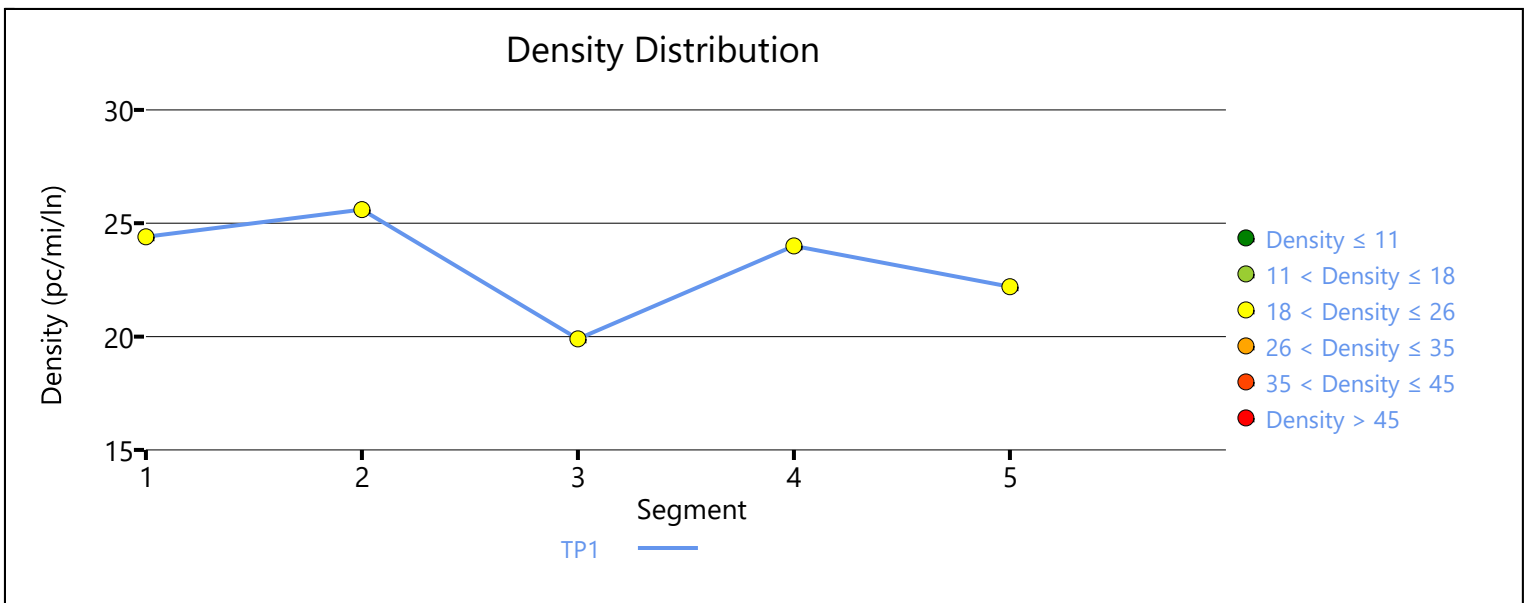
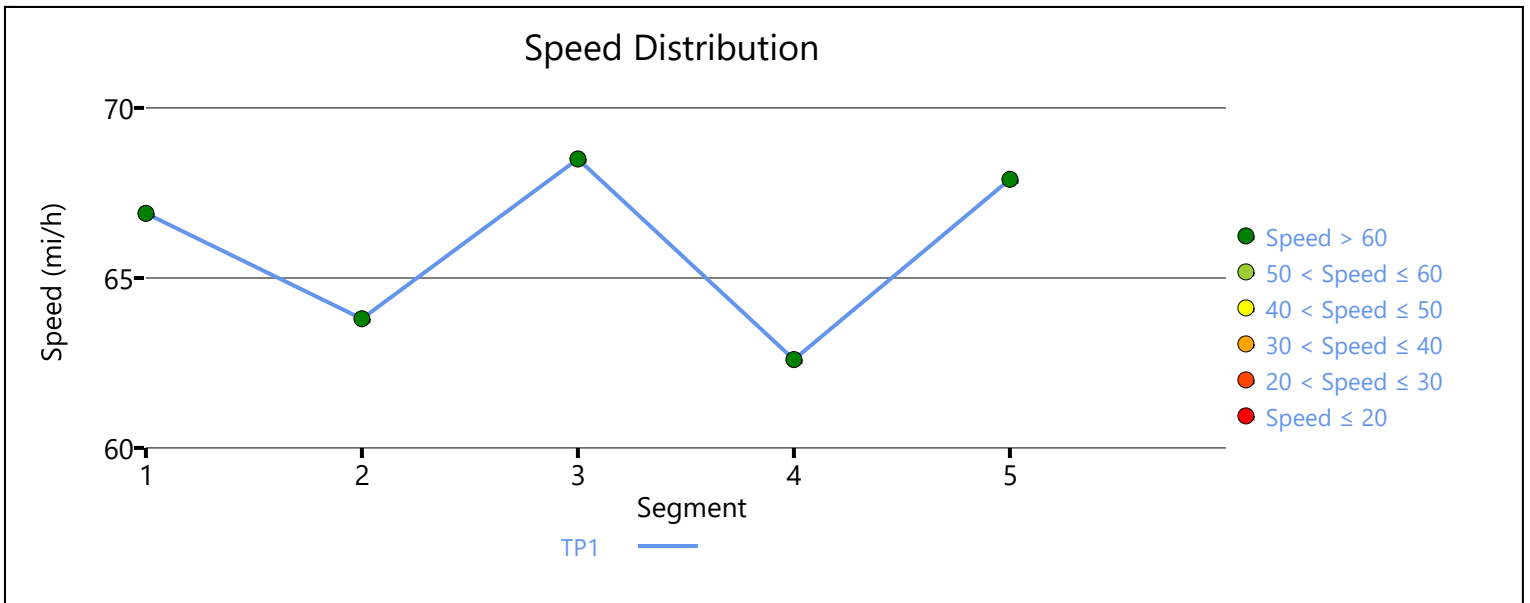
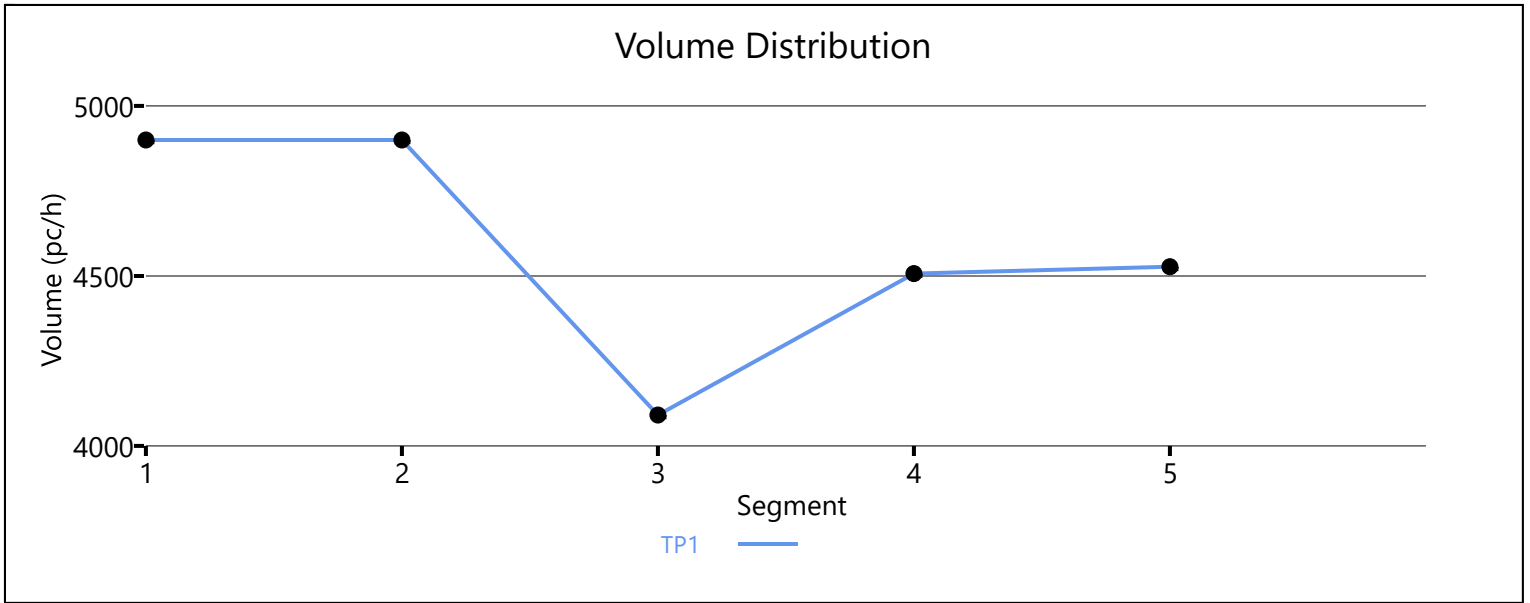
Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.901	4507	416	7200	2100	0.63	0.20	62.6	60.9	24.0	23.1	C

### Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.935		4527		7161		0.63		67.9		22.2		C



<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	66.6	23.2	21.7	2.6	C
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		66.6	Density, veh/mi/ln		21.7
Average Travel Time, min		2.6	Density, pc/mi/ln		23.2



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	EAP
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 SB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	N of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1850	3
4	Merge	Basic	On-Ramp	1500	4
5	Basic	Basic	S of Redlands	5280	4

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	6075	7161	0.85	61.4	33.0	D

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.935	0.935	6075	527	7200	2100	0.84	0.25	64.2	60.3	31.5	33.0	D

### Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	5549	7161	0.77	64.4	28.7	D

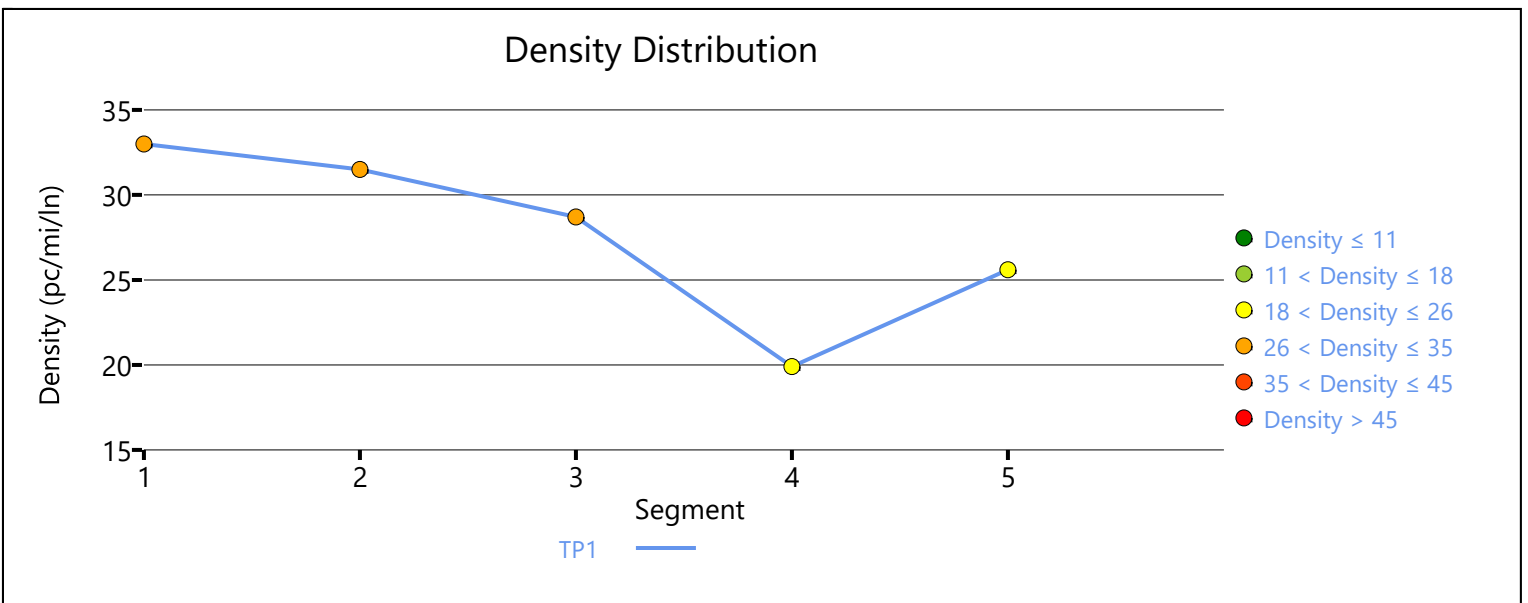
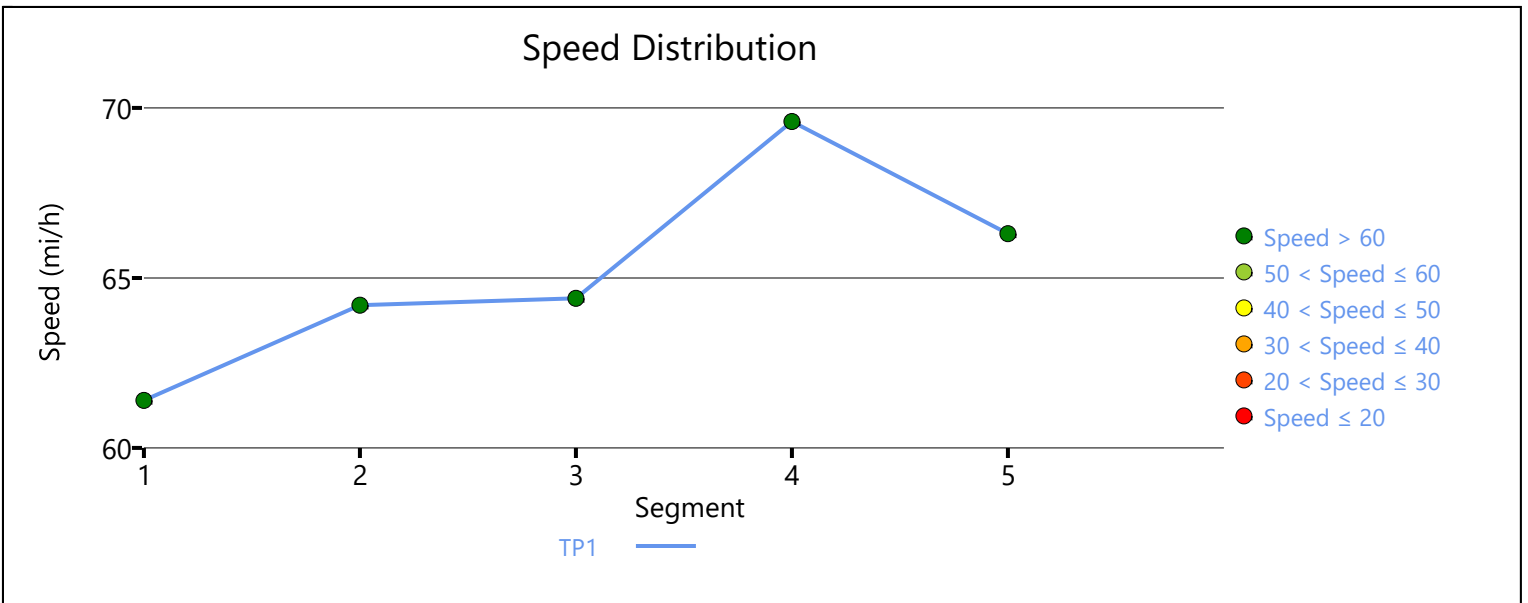
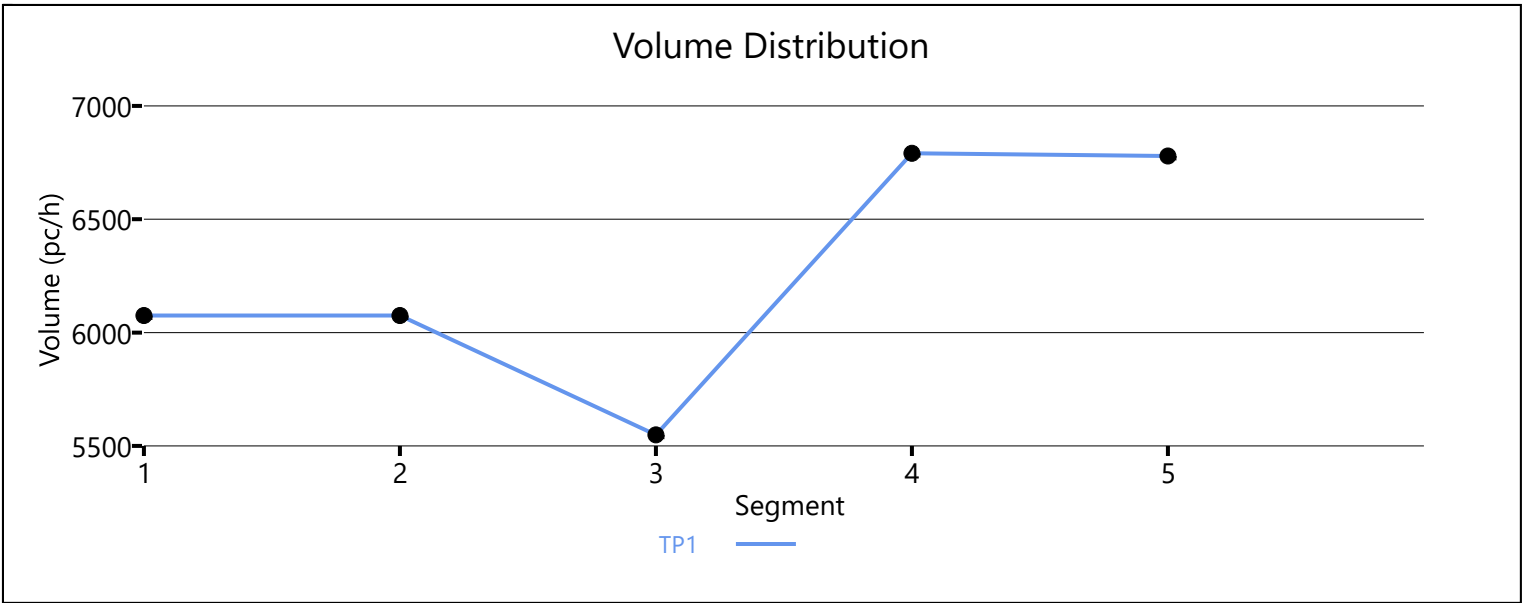
### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.935	0.926	6791	1242	9600	2100	0.58	0.59	69.6	-	19.9	-	C

### Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	6779	9548	0.71	66.3	25.6	C

<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	64.5	28.0	26.2	2.7	D
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		64.5	Density, veh/mi/ln		26.2
Average Travel Time, min		2.7	Density, pc/mi/ln		28.0



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	EAP
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 NB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	S of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1675	3
4	Merge	Merge	On-Ramp	1500	3
5	Basic	Basic	N of Redlands	5280	3

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		5866		7161		0.82		62.7		31.2		D

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.952	5866	1370	7200	2100	0.81	0.65	62.5	58.2	31.3	34.2	D

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		4496		7161		0.63		68.0		22.0		C

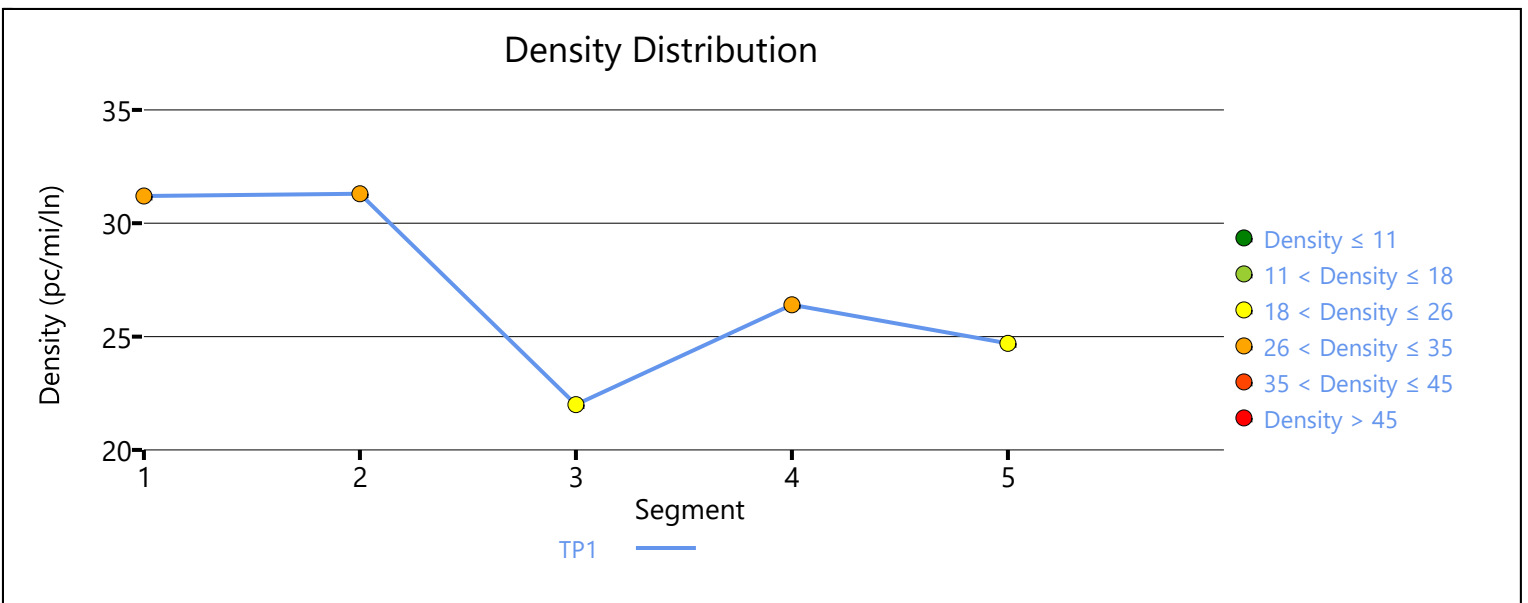
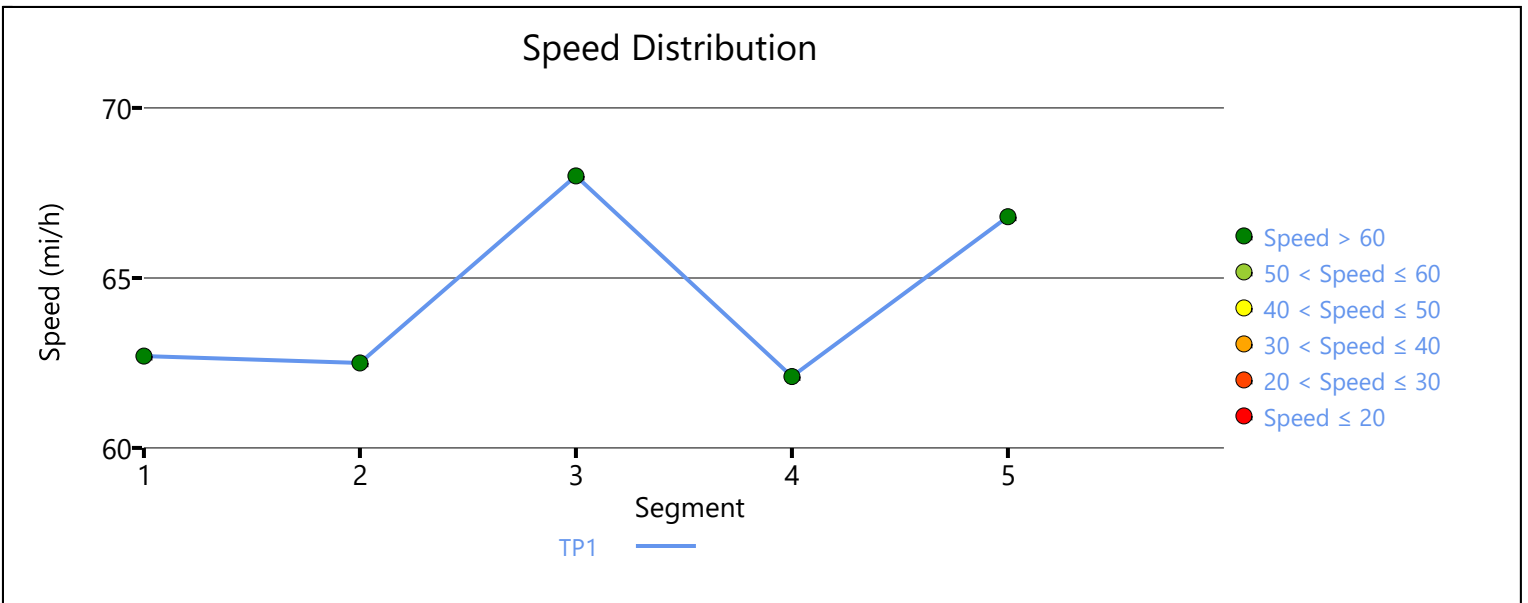
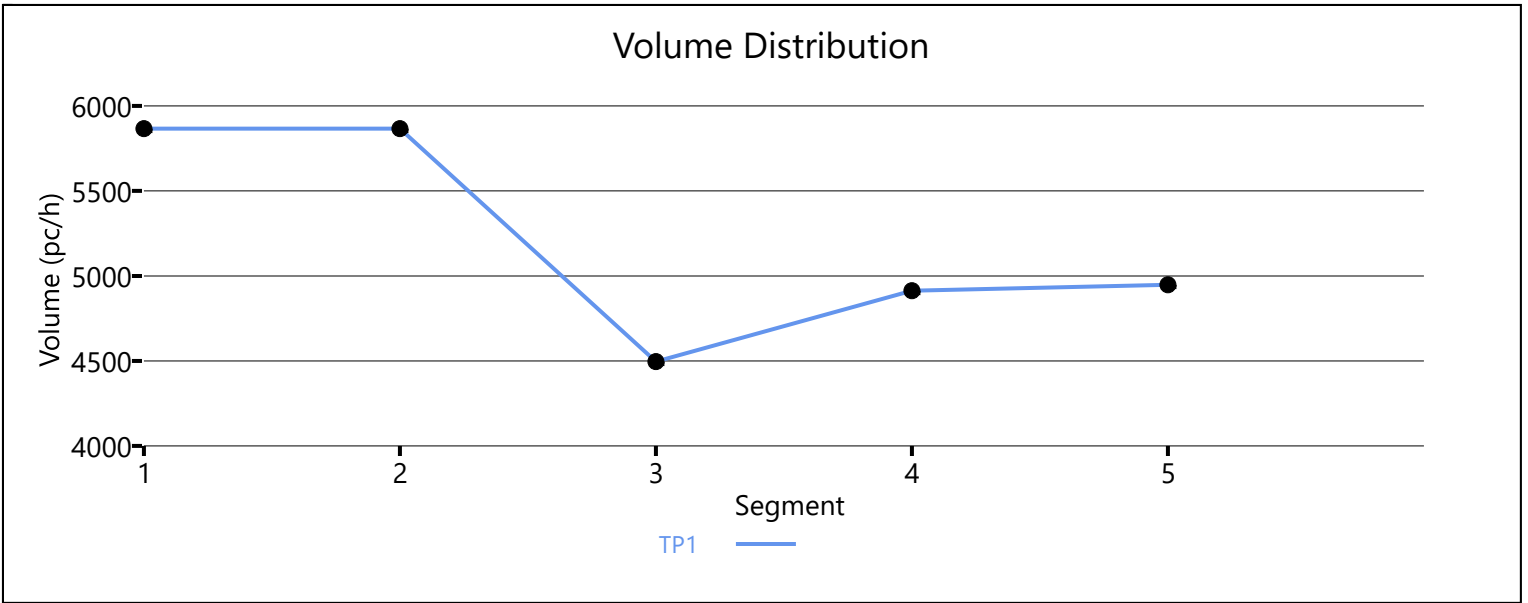
### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.926	4913	417	7200	2100	0.68	0.20	62.1	60.4	26.4	25.0	C

### Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		4948		7161		0.69		66.8		24.7		C

<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	64.4	27.5	26.1	2.7	D
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		64.4	Density, veh/mi/ln		26.1
Average Travel Time, min		2.7	Density, pc/mi/ln		27.5





**ATTACHMENT J**  
**EAP (2030) HCM INTERSECTION ANALYSIS WORKSHEETS, WITH IMPROVEMENTS**



Timings  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

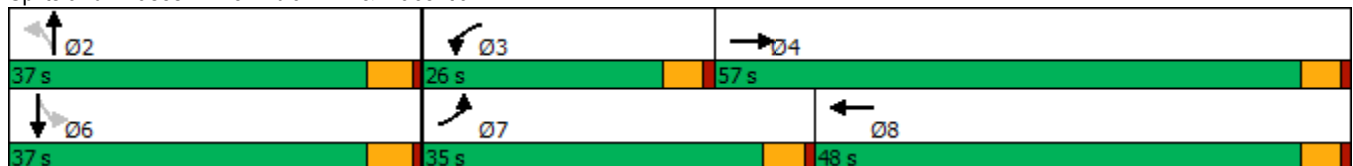


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↖	↕
Traffic Volume (vph)	116	659	170	797	42	178	30	149
Future Volume (vph)	116	659	170	797	42	178	30	149
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	9.6	26.6	27.1	27.1	27.1	27.1
Total Split (s)	35.0	57.0	26.0	48.0	37.0	37.0	37.0	37.0
Total Split (%)	29.2%	47.5%	21.7%	40.0%	30.8%	30.8%	30.8%	30.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.1	5.1	5.1	5.1
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	11.8	53.0	14.7	55.9	21.4	21.4	21.4	21.4
Actuated g/C Ratio	0.11	0.51	0.14	0.54	0.21	0.21	0.21	0.21
v/c Ratio	0.61	0.48	0.72	0.47	0.26	0.77	0.31	0.54
Control Delay	58.3	18.7	59.7	17.2	38.6	49.9	43.6	40.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	18.7	59.7	17.2	38.6	49.9	43.6	40.1
LOS	E	B	E	B	D	D	D	D
Approach Delay		23.7		24.4		48.4		40.6
Approach LOS		C		C		D		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.5  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 28.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 72.1%  
 ICU Level of Service C  
 Analysis Period (min) 15






















Splits and Phases: 15: Indian Av. & Placentia Av.



HCM 6th Signalized Intersection Summary  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	659	146	170	797	45	42	178	98	30	149	43
Future Volume (veh/h)	116	659	146	170	797	45	42	178	98	30	149	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	126	716	133	185	866	27	46	193	80	33	162	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	158	1619	301	220	2025	63	199	256	106	139	302	67
Arrive On Green	0.09	0.53	0.53	0.12	0.57	0.57	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1810	3039	564	1810	3574	111	1203	1276	529	1124	1505	335
Grp Volume(v), veh/h	126	425	424	185	437	456	46	0	273	33	0	198
Grp Sat Flow(s),veh/h/ln	1810	1805	1798	1810	1805	1880	1203	0	1805	1124	0	1840
Q Serve(g_s), s	6.7	14.2	14.2	9.8	13.6	13.6	3.5	0.0	14.0	2.8	0.0	9.5
Cycle Q Clear(g_c), s	6.7	14.2	14.2	9.8	13.6	13.6	13.0	0.0	14.0	16.8	0.0	9.5
Prop In Lane	1.00		0.31	1.00		0.06	1.00		0.29	1.00		0.18
Lane Grp Cap(c), veh/h	158	961	958	220	1023	1065	199	0	362	139	0	369
V/C Ratio(X)	0.80	0.44	0.44	0.84	0.43	0.43	0.23	0.00	0.75	0.24	0.00	0.54
Avail Cap(c_a), veh/h	559	961	958	394	1023	1065	347	0	585	277	0	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	14.1	14.1	42.3	12.2	12.2	41.0	0.0	37.0	45.0	0.0	35.2
Incr Delay (d2), s/veh	3.5	1.5	1.5	3.3	1.3	1.3	0.6	0.0	3.2	0.9	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	6.0	6.0	4.6	5.7	5.9	1.1	0.0	6.4	0.8	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	15.5	15.5	45.6	13.5	13.4	41.6	0.0	40.2	45.8	0.0	36.4
LnGrp LOS	D	B	B	D	B	B	D	A	D	D	A	D
Approach Vol, veh/h		975			1078			319			231	
Approach Delay, s/veh		19.7			19.0			40.4			37.8	
Approach LOS		B			B			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.8	16.5	57.0		24.8	13.2	60.4				
Change Period (Y+Rc), s		5.1	4.6	4.6		5.1	4.6	4.6				
Max Green Setting (Gmax), s		31.9	21.4	52.4		31.9	30.4	43.4				
Max Q Clear Time (g_c+I1), s		16.0	11.8	16.2		18.8	8.7	15.6				
Green Ext Time (p_c), s		1.5	0.2	6.8		0.9	0.2	6.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			23.5									
HCM 6th LOS			C									

Timings  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

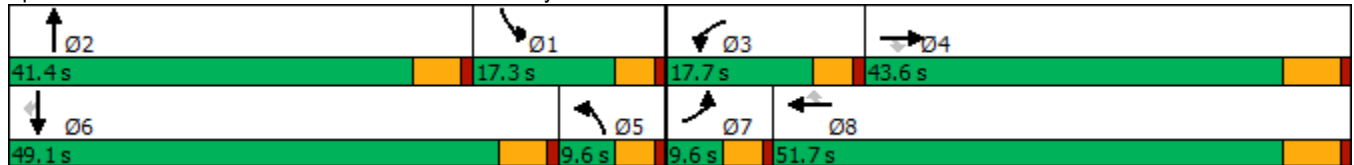


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑	↖↗	↑	↗
Traffic Volume (vph)	52	1269	18	86	1845	600	13	10	332	1	22
Future Volume (vph)	52	1269	18	86	1845	600	13	10	332	1	22
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	27.2	9.6	41.4	9.6	23.4	23.4
Total Split (s)	9.6	43.6	43.6	17.7	51.7	51.7	9.6	41.4	17.3	49.1	49.1
Total Split (%)	8.0%	36.3%	36.3%	14.8%	43.1%	43.1%	8.0%	34.5%	14.4%	40.9%	40.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated





























Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  					 		
Traffic Volume (veh/h)	52	1269	18	86	1845	600	13	10	83	332	1	22
Future Volume (veh/h)	52	1269	18	86	1845	600	13	10	83	332	1	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	54	1322	3	90	1922	401	14	10	-86	346	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	2602	788	117	2702	830	31	0	483	790	256	211
Arrive On Green	0.05	0.50	0.50	0.06	0.52	0.52	0.02	0.00	0.00	0.23	0.13	0.13
Sat Flow, veh/h	1810	5187	1571	1810	5187	1593	1810	1900	0	3510	1900	1564
Grp Volume(v), veh/h	54	1322	3	90	1922	401	14	-76	-76	346	1	2
Grp Sat Flow(s),veh/h/ln	1810	1729	1571	1810	1729	1593	1810	1900	1610	1755	1900	1564
Q Serve(g_s), s	2.2	12.6	0.0	3.6	20.8	2.7	0.6	0.0	0.0	6.3	0.0	0.1
Cycle Q Clear(g_c), s	2.2	12.6	0.0	3.6	20.8	2.7	0.6	0.0	0.0	6.3	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	2602	788	117	2702	830	31	0	0	790	256	211
V/C Ratio(X)	0.66	0.51	0.00	0.77	0.71	0.48	0.46	0.00	0.00	0.44	0.00	0.01
Avail Cap(c_a), veh/h	123	2629	796	321	3198	982	123	0	0	790	1125	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	12.3	4.2	34.0	13.5	0.6	35.9	0.0	0.0	24.6	27.6	17.3
Incr Delay (d2), s/veh	3.3	0.2	0.0	4.0	0.6	0.4	3.9	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.8	0.0	1.6	6.3	2.5	0.3	0.0	0.0	2.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	12.5	4.2	38.0	14.1	1.0	39.9	0.0	0.0	24.7	27.6	17.3
LnGrp LOS	D	B	A	D	B	A	D	A	A	C	C	B
Approach Vol, veh/h		1379			2413			-138			349	
Approach Delay, s/veh		13.4			12.8			0.0			24.7	
Approach LOS		B			B			A			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.2	0.0	9.4	43.2	5.8	15.4	7.9	44.6				
Change Period (Y+Rc), s	4.6	5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	12.7	36.0	13.1	37.4	5.0	43.7	5.0	45.5				
Max Q Clear Time (g_c+I1), s	8.3	0.0	5.6	14.6	2.6	2.1	4.2	22.8				
Green Ext Time (p_c), s	0.3	0.0	0.0	9.1	0.0	0.0	0.0	15.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

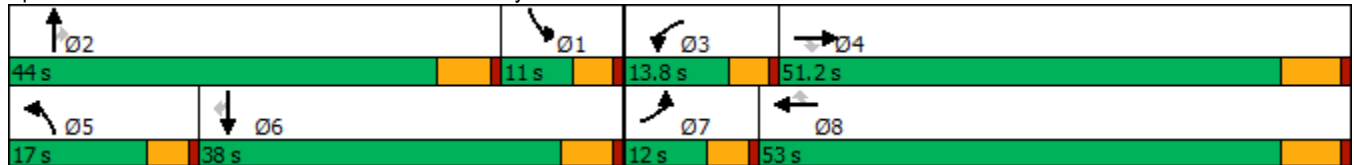
01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	1184	182	17	1573	362	535	493	31	230	297	423
Future Volume (vph)	300	1184	182	17	1573	362	535	493	31	230	297	423
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	12.0	51.2	51.2	13.8	53.0	53.0	17.0	44.0	44.0	11.0	38.0	38.0
Total Split (%)	10.0%	42.7%	42.7%	11.5%	44.2%	44.2%	14.2%	36.7%	36.7%	9.2%	31.7%	31.7%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 39: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 		 	 	
Traffic Volume (veh/h)	300	1184	182	17	1573	362	535	493	31	230	297	423
Future Volume (veh/h)	300	1184	182	17	1573	362	535	493	31	230	297	423
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	319	1260	0	18	1673	119	569	524	1	245	316	184
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	298	2555		48	2251	699	484	753	336	316	626	275
Arrive On Green	0.08	0.49	0.00	0.03	0.43	0.43	0.14	0.21	0.21	0.09	0.17	0.17
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	1589
Grp Volume(v), veh/h	319	1260	0	18	1673	119	569	524	1	245	316	184
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1589
Q Serve(g_s), s	8.0	15.3	0.0	0.9	25.4	2.4	13.0	12.7	0.0	6.4	7.5	10.2
Cycle Q Clear(g_c), s	8.0	15.3	0.0	0.9	25.4	2.4	13.0	12.7	0.0	6.4	7.5	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	298	2555		48	2251	699	484	753	336	316	626	275
V/C Ratio(X)	1.07	0.49		0.38	0.74	0.17	1.17	0.70	0.00	0.78	0.51	0.67
Avail Cap(c_a), veh/h	298	2598		188	2697	837	484	1532	683	316	1302	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	16.0	0.0	45.1	22.3	5.4	40.6	34.5	19.4	41.9	35.3	36.4
Incr Delay (d2), s/veh	72.1	0.1	0.0	1.8	0.9	0.1	98.7	1.2	0.0	10.5	0.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	5.2	0.0	0.4	9.1	1.3	12.0	5.4	0.0	3.1	3.2	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.2	16.2	0.0	47.0	23.2	5.5	139.3	35.7	19.4	52.4	35.9	39.2
LnGrp LOS	F	B		D	C	A	F	D	B	D	D	D
Approach Vol, veh/h		1579	A		1810			1094			745	
Approach Delay, s/veh		36.2			22.3			89.6			42.2	
Approach LOS		D			C			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.7	23.7	6.5	50.4	17.0	20.3	12.0	44.9				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	6.4	* 38	9.2	44.7	12.4	32.2	7.4	46.5				
Max Q Clear Time (g_c+I1), s	8.4	14.7	2.9	17.3	15.0	12.2	10.0	27.4				
Green Ext Time (p_c), s	0.0	3.2	0.0	8.9	0.0	2.3	0.0	11.0				

Intersection Summary

HCM 6th Ctrl Delay	43.4
HCM 6th LOS	D

Notes

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

Timings  
68: San Jacinto Av. & Dunlap Dr.

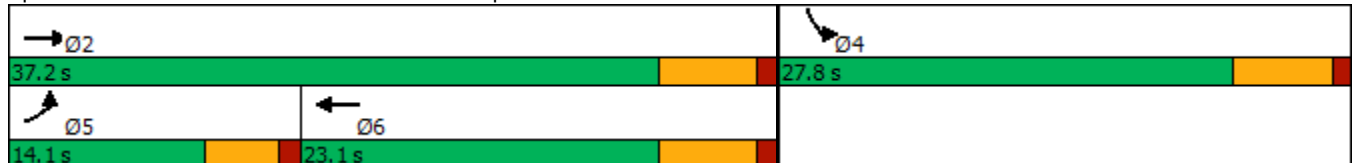


Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↖	↑	↗	↘
Traffic Volume (vph)	246	127	208	46
Future Volume (vph)	246	127	208	46
Turn Type	Prot	NA	NA	Prot
Protected Phases	5	2	6	4
Permitted Phases				
Detector Phase	5	2	6	4
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	27.8
Total Split (s)	14.1	37.2	23.1	27.8
Total Split (%)	21.7%	57.2%	35.5%	42.8%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 50.4  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated

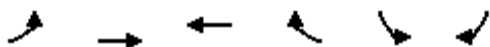
Splits and Phases: 68: San Jacinto Av. & Dunlap Dr.





HCM 6th Signalized Intersection Summary  
68: San Jacinto Av. & Dunlap Dr.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	246	127	208	29	46	194
Future Volume (veh/h)	246	127	208	29	46	194
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	262	135	221	31	49	206
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	323	966	368	52	72	301
Arrive On Green	0.18	0.51	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1810	1900	1630	229	315	1324
Grp Volume(v), veh/h	262	135	0	252	256	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1859	1646	0
Q Serve(g_s), s	6.1	1.7	0.0	5.3	6.3	0.0
Cycle Q Clear(g_c), s	6.1	1.7	0.0	5.3	6.3	0.0
Prop In Lane	1.00			0.12	0.19	0.80
Lane Grp Cap(c), veh/h	323	966	0	419	374	0
V/C Ratio(X)	0.81	0.14	0.00	0.60	0.68	0.00
Avail Cap(c_a), veh/h	391	1357	0	732	824	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.3	5.7	0.0	15.2	15.5	0.0
Incr Delay (d2), s/veh	8.6	0.1	0.0	1.4	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.4	0.0	1.7	2.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.9	5.8	0.0	16.6	17.7	0.0
LnGrp LOS	C	A	A	B	B	A
Approach Vol, veh/h		397	252		256	
Approach Delay, s/veh		19.1	16.6		17.7	
Approach LOS		B	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		28.2		15.8	12.4	15.7
Change Period (Y+Rc), s		5.8		5.8	4.6	5.8
Max Green Setting (Gmax), s		31.4		22.0	9.5	17.3
Max Q Clear Time (g_c+I1), s		3.7		8.3	8.1	7.3
Green Ext Time (p_c), s		0.6		0.6	0.1	0.8

Intersection Summary

HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings

Stoneridge Commerce Center SP (JN 13265)

71: Redlands Av. & San Jacinto Av.

01/25/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↖↗
Traffic Volume (vph)	15	12	107	672	55	17	77	226	484	33	489
Future Volume (vph)	15	12	107	672	55	17	77	226	484	33	489
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8		5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	9.6	9.6	35.8
Total Split (s)	9.6	38.6	38.6	33.4	62.4	62.4	11.8	36.5	33.4	11.5	36.2
Total Split (%)	8.0%	32.2%	32.2%	27.8%	52.0%	52.0%	9.8%	30.4%	27.8%	9.6%	30.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min

Intersection Summary

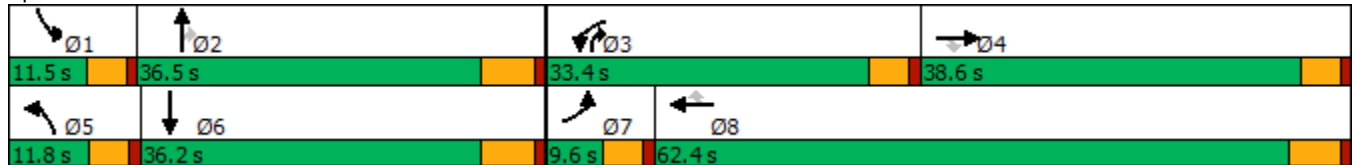
Cycle Length: 120

Actuated Cycle Length: 90.4

Natural Cycle: 115

Control Type: Actuated-Uncoordinated





























Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	15	12	107	672	55	17	77	226	484	33	489	52
Future Volume (veh/h)	15	12	107	672	55	17	77	226	484	33	489	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	18	14	45	810	66	9	93	272	488	40	589	57
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	74	253	214	937	720	610	120	976	865	69	806	78
Arrive On Green	0.02	0.13	0.13	0.27	0.38	0.38	0.07	0.27	0.27	0.04	0.24	0.24
Sat Flow, veh/h	3510	1900	1610	3510	1900	1610	1810	3610	1610	1810	3326	321
Grp Volume(v), veh/h	18	14	45	810	66	9	93	272	488	40	319	327
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1610	1810	1805	1610	1810	1805	1842
Q Serve(g_s), s	0.4	0.5	1.8	15.7	1.6	0.2	3.6	4.2	14.4	1.6	11.6	11.7
Cycle Q Clear(g_c), s	0.4	0.5	1.8	15.7	1.6	0.2	3.6	4.2	14.4	1.6	11.6	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	74	253	214	937	720	610	120	976	865	69	438	447
V/C Ratio(X)	0.24	0.06	0.21	0.86	0.09	0.01	0.77	0.28	0.56	0.58	0.73	0.73
Avail Cap(c_a), veh/h	246	905	767	1416	1506	1276	182	1552	1122	175	768	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	27.0	27.6	25.0	14.3	13.9	32.8	20.6	11.0	33.8	24.9	24.9
Incr Delay (d2), s/veh	0.6	0.1	0.5	2.5	0.1	0.0	4.8	0.2	0.6	2.8	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.7	6.1	0.6	0.1	1.6	1.6	4.1	0.7	4.7	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	27.1	28.1	27.5	14.3	13.9	37.7	20.7	11.6	36.6	27.2	27.2
LnGrp LOS	D	C	C	C	B	B	D	C	B	D	C	C
Approach Vol, veh/h		77			885			853			686	
Approach Delay, s/veh		29.5			26.4			17.3			27.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	25.1	23.7	15.3	9.3	23.1	6.1	32.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.9	30.7	28.8	* 34	7.2	30.4	5.0	56.6				
Max Q Clear Time (g_c+I1), s	3.6	16.4	17.7	3.8	5.6	13.7	2.4	3.6				
Green Ext Time (p_c), s	0.0	2.9	1.3	0.2	0.0	3.2	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.8								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
15: Indian Av. & Placentia Av.

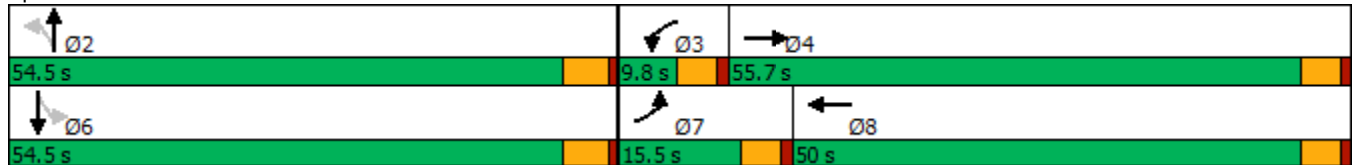


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↷	↶	↷	↶	↷	↶	↷
Traffic Volume (vph)	57	882	33	940	50	93	105	258
Future Volume (vph)	57	882	33	940	50	93	105	258
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	9.6	26.6	27.1	27.1	27.1	27.1
Total Split (s)	15.5	55.7	9.8	50.0	54.5	54.5	54.5	54.5
Total Split (%)	12.9%	46.4%	8.2%	41.7%	45.4%	45.4%	45.4%	45.4%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.1	5.1	5.1	5.1
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 98.5  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: Indian Av. & Placentia Av.



HCM 6th Signalized Intersection Summary  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	57	882	98	33	940	41	50	93	20	105	258	178
Future Volume (veh/h)	57	882	98	33	940	41	50	93	20	105	258	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	62	959	53	36	1022	34	54	101	0	114	280	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	1810	100	58	1810	60	152	574	0	419	352	188
Arrive On Green	0.04	0.52	0.52	0.03	0.51	0.51	0.30	0.30	0.00	0.30	0.30	0.30
Sat Flow, veh/h	1810	3478	192	1810	3565	119	973	1900	0	1314	1164	624
Grp Volume(v), veh/h	62	498	514	36	517	539	54	101	0	114	0	430
Grp Sat Flow(s),veh/h/ln	1810	1805	1865	1810	1805	1879	973	1900	0	1314	0	1788
Q Serve(g_s), s	3.3	17.9	17.9	1.9	19.4	19.4	5.3	3.8	0.0	6.9	0.0	21.7
Cycle Q Clear(g_c), s	3.3	17.9	17.9	1.9	19.4	19.4	27.0	3.8	0.0	10.7	0.0	21.7
Prop In Lane	1.00		0.10	1.00		0.06	1.00		0.00	1.00		0.35
Lane Grp Cap(c), veh/h	80	939	971	58	916	954	152	574	0	419	0	540
V/C Ratio(X)	0.77	0.53	0.53	0.62	0.56	0.56	0.35	0.18	0.00	0.27	0.00	0.80
Avail Cap(c_a), veh/h	201	939	971	96	916	954	348	956	0	683	0	899
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	15.6	15.6	47.0	16.7	16.7	43.9	25.3	0.0	29.2	0.0	31.5
Incr Delay (d2), s/veh	5.7	2.1	2.1	4.1	2.5	2.4	1.4	0.1	0.0	0.3	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	7.7	8.0	0.9	8.4	8.8	1.3	1.7	0.0	2.2	0.0	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	17.7	17.7	51.0	19.2	19.1	45.3	25.4	0.0	29.5	0.0	34.2
LnGrp LOS	D	B	B	D	B	B	D	C	A	C	A	C
Approach Vol, veh/h		1074			1092			155				544
Approach Delay, s/veh		19.7			20.2			32.3				33.2
Approach LOS		B			C			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		34.8	7.7	55.7		34.8	9.0	54.5				
Change Period (Y+Rc), s		5.1	4.6	4.6		5.1	4.6	4.6				
Max Green Setting (Gmax), s		49.4	5.2	51.1		49.4	10.9	45.4				
Max Q Clear Time (g_c+I1), s		29.0	3.9	19.9		23.7	5.3	21.4				
Green Ext Time (p_c), s		0.7	0.0	8.3		3.1	0.0	8.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.1								
HCM 6th LOS				C								

Timings  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

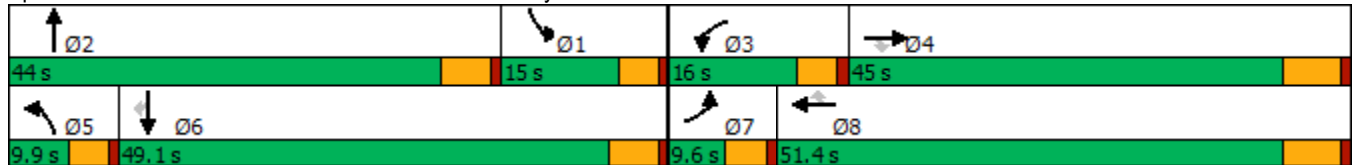


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑	↖↗	↑	↗
Traffic Volume (vph)	25	2018	29	41	1695	363	15	0	358	9	26
Future Volume (vph)	25	2018	29	41	1695	363	15	0	358	9	26
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	27.2	9.6	41.4	9.6	23.4	23.4
Total Split (s)	9.6	45.0	45.0	16.0	51.4	51.4	9.9	44.0	15.0	49.1	49.1
Total Split (%)	8.0%	37.5%	37.5%	13.3%	42.8%	42.8%	8.3%	36.7%	12.5%	40.9%	40.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 87.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↗		↖↗	↑	↗
Traffic Volume (veh/h)	25	2018	29	41	1695	363	15	0	94	358	9	26
Future Volume (veh/h)	25	2018	29	41	1695	363	15	0	94	358	9	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	2193	21	45	1842	259	16	0	43	389	10	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	51	2436	754	71	2494	774	34	0	157	449	412	349
Arrive On Green	0.03	0.47	0.47	0.04	0.48	0.48	0.02	0.00	0.10	0.13	0.22	0.22
Sat Flow, veh/h	1810	5187	1607	1810	5187	1610	1810	0	1610	3510	1900	1610
Grp Volume(v), veh/h	27	2193	21	45	1842	259	16	0	43	389	10	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1607	1810	1729	1610	1810	0	1610	1755	1900	1610
Q Serve(g_s), s	1.2	31.6	0.6	2.0	23.3	3.9	0.7	0.0	2.0	8.8	0.3	0.0
Cycle Q Clear(g_c), s	1.2	31.6	0.6	2.0	23.3	3.9	0.7	0.0	2.0	8.8	0.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	2436	754	71	2494	774	34	0	157	449	412	349
V/C Ratio(X)	0.53	0.90	0.03	0.63	0.74	0.33	0.47	0.00	0.27	0.87	0.02	0.00
Avail Cap(c_a), veh/h	111	2475	767	254	2883	895	118	0	764	449	1021	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	19.8	11.6	38.5	17.0	3.0	39.5	0.0	34.0	34.8	25.1	25.0
Incr Delay (d2), s/veh	3.2	4.9	0.0	3.4	0.9	0.3	3.8	0.0	0.9	15.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	11.5	0.2	0.9	7.8	2.2	0.3	0.0	0.8	4.5	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	24.8	11.6	41.9	17.9	3.2	43.3	0.0	34.9	50.4	25.1	25.0
LnGrp LOS	D	C	B	D	B	A	D	A	C	D	C	C
Approach Vol, veh/h		2241			2146			59			400	
Approach Delay, s/veh		24.8			16.6			37.2			49.7	
Approach LOS		C			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.8	13.3	7.8	44.4	6.1	23.0	6.9	45.3				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	10.4	* 39	11.4	38.8	5.3	43.7	5.0	45.2				
Max Q Clear Time (g_c+I1), s	10.8	4.0	4.0	33.6	2.7	2.3	3.2	25.3				
Green Ext Time (p_c), s	0.0	0.2	0.0	4.6	0.0	0.0	0.0	13.2				

Intersection Summary

HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

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

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

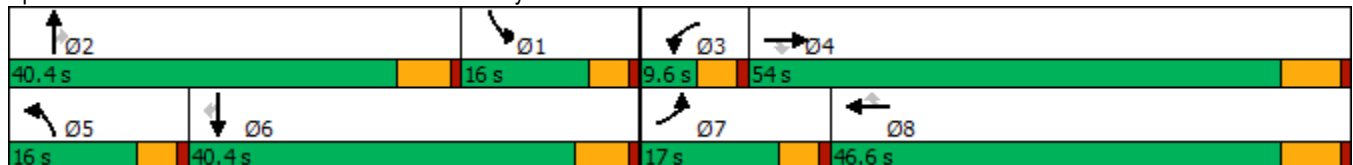
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	484	1526	517	21	1417	334	268	391	9	345	634	414
Future Volume (vph)	484	1526	517	21	1417	334	268	391	9	345	634	414
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	17.0	54.0	54.0	9.6	46.6	46.6	16.0	40.4	40.4	16.0	40.4	40.4
Total Split (%)	14.2%	45.0%	45.0%	8.0%	38.8%	38.8%	13.3%	33.7%	33.7%	13.3%	33.7%	33.7%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.1  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 39: Evans Rd. & Ramona Exwy.






































HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 		 	 	
Traffic Volume (veh/h)	484	1526	517	21	1417	334	268	391	9	345	634	414
Future Volume (veh/h)	484	1526	517	21	1417	334	268	391	9	345	634	414
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	494	1557	0	21	1446	55	273	399	-27	352	647	167
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	454	2418		51	1892	587	360	594	265	597	881	387
Arrive On Green	0.13	0.47	0.00	0.03	0.36	0.36	0.10	0.16	0.00	0.17	0.24	0.24
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	1586
Grp Volume(v), veh/h	494	1557	0	21	1446	55	273	399	-27	352	647	167
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1586
Q Serve(g_s), s	13.0	23.0	0.0	1.1	24.7	1.2	7.6	10.4	0.0	9.3	16.6	8.9
Cycle Q Clear(g_c), s	13.0	23.0	0.0	1.1	24.7	1.2	7.6	10.4	0.0	9.3	16.6	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	454	2418		51	1892	587	360	594	265	597	881	387
V/C Ratio(X)	1.09	0.64		0.41	0.76	0.09	0.76	0.67	-0.10	0.59	0.73	0.43
Avail Cap(c_a), veh/h	454	2583		101	2200	683	419	1309	584	597	1309	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	20.4	0.0	48.0	28.1	5.5	43.9	39.4	0.0	38.4	35.0	32.1
Incr Delay (d2), s/veh	67.8	0.5	0.0	2.0	1.4	0.1	5.4	1.3	0.0	1.1	1.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	8.2	0.0	0.5	9.4	0.8	3.4	4.5	0.0	3.9	7.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.5	21.0	0.0	50.0	29.5	5.5	49.2	40.7	0.0	39.5	36.2	32.8
LnGrp LOS	F	C		D	C	A	D	D	A	D	D	C
Approach Vol, veh/h		2051	A		1522			645			1166	
Approach Delay, s/veh		42.8			28.9			46.0			36.7	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.3	20.5	6.8	50.8	14.3	28.5	17.0	40.6				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	11.4	* 35	5.0	47.5	11.4	34.6	12.4	40.1				
Max Q Clear Time (g_c+I1), s	11.3	12.4	3.1	25.0	9.6	18.6	15.0	26.7				
Green Ext Time (p_c), s	0.0	2.3	0.0	10.7	0.1	4.1	0.0	7.5				

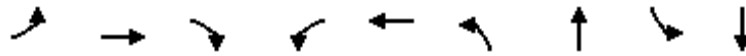
Intersection Summary

HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

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

Timings  
46: Dunlap Dr. & Nuevo Rd.

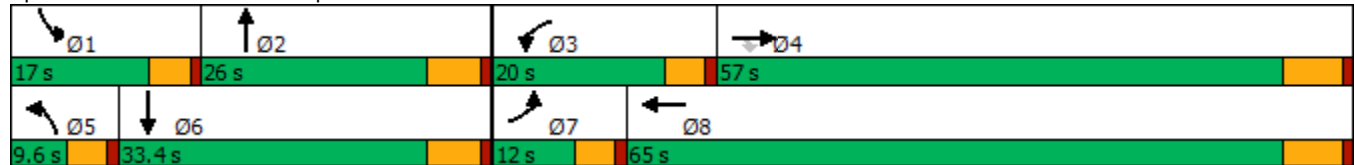


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	73	656	7	167	655	7	40	138	26
Future Volume (vph)	73	656	7	167	655	7	40	138	26
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.5	37.5	9.6	24.5	9.6	23.8	9.6	29.8
Total Split (s)	12.0	57.0	57.0	20.0	65.0	9.6	26.0	17.0	33.4
Total Split (%)	10.0%	47.5%	47.5%	16.7%	54.2%	8.0%	21.7%	14.2%	27.8%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6	6.5	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 101.9  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	656	7	167	655	98	7	40	63	138	26	54
Future Volume (veh/h)	73	656	7	167	655	98	7	40	63	138	26	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	79	713	6	182	712	25	8	43	67	150	28	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	102	794	673	219	880	31	18	76	119	184	137	215
Arrive On Green	0.06	0.42	0.42	0.12	0.48	0.48	0.01	0.11	0.11	0.10	0.21	0.21
Sat Flow, veh/h	1810	1900	1610	1810	1824	64	1810	669	1043	1810	665	1045
Grp Volume(v), veh/h	79	713	6	182	0	737	8	0	110	150	0	72
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1888	1810	0	1712	1810	0	1710
Q Serve(g_s), s	3.8	30.6	0.2	8.6	0.0	29.0	0.4	0.0	5.3	7.1	0.0	3.1
Cycle Q Clear(g_c), s	3.8	30.6	0.2	8.6	0.0	29.0	0.4	0.0	5.3	7.1	0.0	3.1
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.61	1.00		0.61
Lane Grp Cap(c), veh/h	102	794	673	219	0	911	18	0	195	184	0	352
V/C Ratio(X)	0.77	0.90	0.01	0.83	0.00	0.81	0.44	0.00	0.56	0.81	0.00	0.20
Avail Cap(c_a), veh/h	153	1095	928	318	0	1261	103	0	395	256	0	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.8	23.8	14.9	37.7	0.0	19.3	43.1	0.0	36.7	38.5	0.0	28.8
Incr Delay (d2), s/veh	6.4	7.7	0.0	7.9	0.0	2.8	6.0	0.0	2.5	9.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	13.3	0.1	4.0	0.0	11.1	0.2	0.0	2.3	3.5	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.2	31.5	14.9	45.6	0.0	22.1	49.1	0.0	39.3	47.7	0.0	29.1
LnGrp LOS	D	C	B	D	A	C	D	A	D	D	A	C
Approach Vol, veh/h		798			919			118				222
Approach Delay, s/veh		32.9			26.7			39.9				41.7
Approach LOS		C			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.5	15.8	15.2	43.1	5.5	23.8	9.5	48.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	12.4	20.2	15.4	50.5	5.0	27.6	7.4	58.5				
Max Q Clear Time (g_c+I1), s	9.1	7.3	10.6	32.6	2.4	5.1	5.8	31.0				
Green Ext Time (p_c), s	0.1	0.4	0.1	4.0	0.0	0.3	0.0	4.7				

Intersection Summary

HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Timings  
68: San Jacinto Av. & Dunlap Dr.

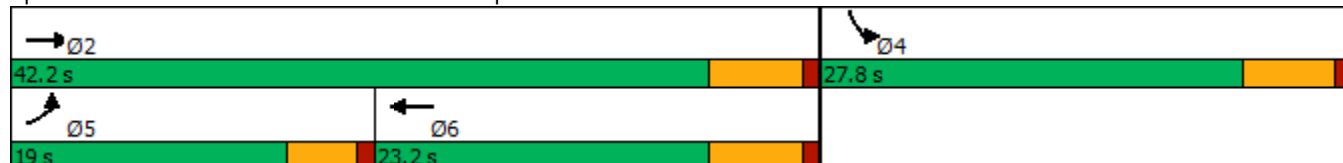


Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↖	↑	↗	↘
Traffic Volume (vph)	312	467	272	76
Future Volume (vph)	312	467	272	76
Turn Type	Prot	NA	NA	Prot
Protected Phases	5	2	6	4
Permitted Phases				
Detector Phase	5	2	6	4
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	27.8
Total Split (s)	19.0	42.2	23.2	27.8
Total Split (%)	27.1%	60.3%	33.1%	39.7%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 58  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 68: San Jacinto Av. & Dunlap Dr.



HCM 6th Signalized Intersection Summary  
68: San Jacinto Av. & Dunlap Dr.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	312	467	272	66	76	284
Future Volume (veh/h)	312	467	272	66	76	284
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	335	502	292	71	82	305
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	387	1005	348	85	95	352
Arrive On Green	0.21	0.53	0.24	0.24	0.27	0.27
Sat Flow, veh/h	1810	1900	1476	359	349	1296
Grp Volume(v), veh/h	335	502	0	363	388	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1835	1649	0
Q Serve(g_s), s	10.4	9.8	0.0	11.0	13.0	0.0
Cycle Q Clear(g_c), s	10.4	9.8	0.0	11.0	13.0	0.0
Prop In Lane	1.00			0.20	0.21	0.79
Lane Grp Cap(c), veh/h	387	1005	0	432	448	0
V/C Ratio(X)	0.86	0.50	0.00	0.84	0.87	0.00
Avail Cap(c_a), veh/h	448	1189	0	549	624	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.0	8.8	0.0	21.2	20.2	0.0
Incr Delay (d2), s/veh	13.1	0.4	0.0	9.1	9.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	2.9	0.0	4.9	5.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.1	9.2	0.0	30.2	29.3	0.0
LnGrp LOS	D	A	A	C	C	A
Approach Vol, veh/h		837	363		388	
Approach Delay, s/veh		19.6	30.2		29.3	
Approach LOS		B	C		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.5		21.6	17.0	19.5
Change Period (Y+Rc), s		5.8		5.8	4.6	5.8
Max Green Setting (Gmax), s		36.4		22.0	14.4	17.4
Max Q Clear Time (g_c+I1), s		11.8		15.0	12.4	13.0
Green Ext Time (p_c), s		2.9		0.8	0.1	0.7

Intersection Summary

HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

Stoneridge Commerce Center SP (JN 13265)

71: Redlands Av. & San Jacinto Av.

01/25/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↑↗
Traffic Volume (vph)	52	34	107	655	38	28	132	646	944	72	457
Future Volume (vph)	52	34	107	655	38	28	132	646	944	72	457
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8		5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	9.6	9.6	35.8
Total Split (s)	9.8	38.6	38.6	30.0	58.8	58.8	15.0	38.6	30.0	12.8	36.4
Total Split (%)	8.2%	32.2%	32.2%	25.0%	49.0%	49.0%	12.5%	32.2%	25.0%	10.7%	30.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min

Intersection Summary

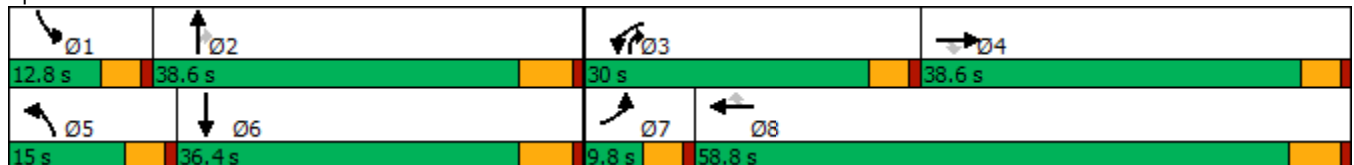
Cycle Length: 120

Actuated Cycle Length: 88.8

Natural Cycle: 115
































Control Type: Actuated-Uncoordinated

Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 		 	 		 		 		 	 	
Traffic Volume (veh/h)	52	34	107	655	38	28	132	646	944	72	457	37
Future Volume (veh/h)	52	34	107	655	38	28	132	646	944	72	457	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	56	37	55	704	41	17	142	695	801	77	491	27
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	148	213	181	796	564	472	175	1339	950	100	1145	63
Arrive On Green	0.04	0.11	0.11	0.23	0.30	0.30	0.10	0.37	0.37	0.06	0.33	0.33
Sat Flow, veh/h	3510	1900	1610	3510	1900	1590	1810	3610	1576	1810	3480	191
Grp Volume(v), veh/h	56	37	55	704	41	17	142	695	801	77	254	264
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1590	1810	1805	1576	1810	1805	1866
Q Serve(g_s), s	1.4	1.6	2.8	17.2	1.4	0.7	6.8	13.3	32.8	3.7	9.7	9.8
Cycle Q Clear(g_c), s	1.4	1.6	2.8	17.2	1.4	0.7	6.8	13.3	32.8	3.7	9.7	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	148	213	181	796	564	472	175	1339	950	100	594	614
V/C Ratio(X)	0.38	0.17	0.30	0.88	0.07	0.04	0.81	0.52	0.84	0.77	0.43	0.43
Avail Cap(c_a), veh/h	206	730	619	1008	1138	952	213	1339	950	168	624	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	35.5	36.1	33.1	22.4	22.1	39.2	21.7	14.6	41.3	23.2	23.2
Incr Delay (d2), s/veh	0.6	0.4	0.9	6.8	0.1	0.0	14.6	0.4	7.0	4.7	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	1.1	7.5	0.6	0.2	3.6	5.2	12.2	1.7	3.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	35.9	37.0	39.9	22.4	22.1	53.8	22.0	21.6	46.0	23.7	23.7
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		148			762			1638			595	
Approach Delay, s/veh		38.6			38.6			24.6			26.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	38.6	24.7	15.7	13.2	34.9	8.3	32.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	8.2	32.8	25.4	* 34	10.4	30.6	5.2	53.0				
Max Q Clear Time (g_c+I1), s	5.7	34.8	19.2	4.8	8.8	11.8	3.4	3.4				
Green Ext Time (p_c), s	0.0	0.0	0.9	0.3	0.0	2.6	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				29.0								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

**ATTACHMENT K**  
**EAPC (2030) HCM INTERSECTION ANALYSIS WORKSHEETS**

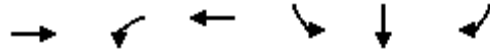




Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

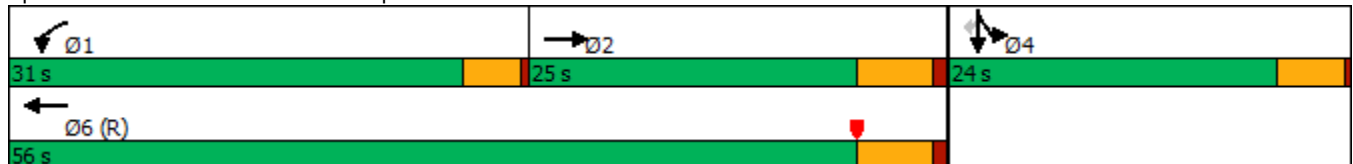


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑
Traffic Volume (vph)	317	333	528	463	0	85
Future Volume (vph)	317	333	528	463	0	85
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	25.0	31.0	56.0	24.0	24.0	24.0
Total Split (%)	31.3%	38.8%	70.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 54.5 (68%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: I-215 SB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	317	146	333	528	0	0	0	0	463	0	85
Future Volume (veh/h)	0	317	146	333	528	0	0	0	0	463	0	85
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	345	159	362	574	0				503	0	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	869	393	400	2279	0				631	0	278
Arrive On Green	0.00	0.36	0.36	0.44	1.00	0.00				0.17	0.00	0.17
Sat Flow, veh/h	0	2507	1091	1810	3705	0				3619	0	1596
Grp Volume(v), veh/h	0	257	247	362	574	0				503	0	92
Grp Sat Flow(s),veh/h/ln	0	1805	1698	1810	1805	0				1810	0	1596
Q Serve(g_s), s	0.0	8.5	8.7	14.9	0.0	0.0				10.7	0.0	4.0
Cycle Q Clear(g_c), s	0.0	8.5	8.7	14.9	0.0	0.0				10.7	0.0	4.0
Prop In Lane	0.00		0.64	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	651	612	400	2279	0				631	0	278
V/C Ratio(X)	0.00	0.39	0.40	0.91	0.25	0.00				0.80	0.00	0.33
Avail Cap(c_a), veh/h	0	651	612	611	2279	0				882	0	389
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.91	0.91	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.1	19.2	21.6	0.0	0.0				31.7	0.0	28.9
Incr Delay (d2), s/veh	0.0	1.8	2.0	11.3	0.2	0.0				3.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.4	3.4	5.3	0.1	0.0				4.6	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.9	21.1	32.8	0.2	0.0				35.2	0.0	29.6
LnGrp LOS	A	C	C	C	A	A				D	A	C
Approach Vol, veh/h		504			936						595	
Approach Delay, s/veh		21.0			12.8						34.3	
Approach LOS		C			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	21.7	34.3		18.4		56.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	27.0	19.5		19.5		50.5						
Max Q Clear Time (g_c+I1), s	16.9	10.7		12.7		2.0						
Green Ext Time (p_c), s	0.8	1.2		1.3		2.2						

Intersection Summary

HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
7: I-215 NB Ramps & Placentia Av.

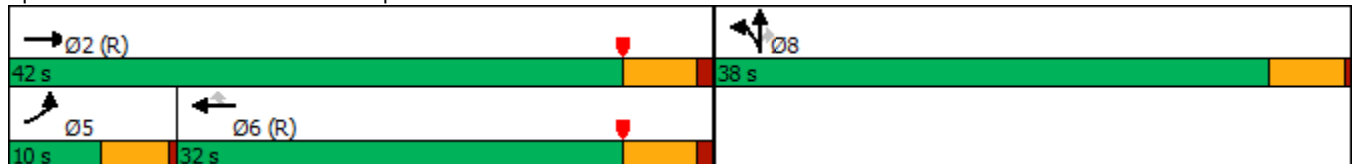


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	68	712	693	701	168	0	424
Future Volume (vph)	68	712	693	701	168	0	424
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	31.5	27.5	27.5	10.5	10.5	10.5
Total Split (s)	10.0	42.0	32.0	32.0	38.0	38.0	38.0
Total Split (%)	12.5%	52.5%	40.0%	40.0%	47.5%	47.5%	47.5%
Yellow Time (s)	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	0.5	1.0	1.0	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 NB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗	↘	↖	↗			
Traffic Volume (veh/h)	68	712	0	0	693	701	168	0	424	0	0	0
Future Volume (veh/h)	68	712	0	0	693	701	168	0	424	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	74	774	0	0	753	545	183	0	461			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	95	2004	0	0	1611	716	1135	0	502			
Arrive On Green	0.05	0.56	0.00	0.00	0.45	0.45	0.31	0.00	0.31			
Sat Flow, veh/h	1810	3705	0	0	3705	1605	3619	0	1602			
Grp Volume(v), veh/h	74	774	0	0	753	545	183	0	461			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1605	1810	0	1602			
Q Serve(g_s), s	3.2	9.7	0.0	0.0	11.7	22.8	2.9	0.0	22.2			
Cycle Q Clear(g_c), s	3.2	9.7	0.0	0.0	11.7	22.8	2.9	0.0	22.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	95	2004	0	0	1611	716	1135	0	502			
V/C Ratio(X)	0.77	0.39	0.00	0.00	0.47	0.76	0.16	0.00	0.92			
Avail Cap(c_a), veh/h	124	2004	0	0	1611	716	1493	0	661			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.86	0.86	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.4	10.1	0.0	0.0	15.5	18.6	19.9	0.0	26.5			
Incr Delay (d2), s/veh	12.6	0.5	0.0	0.0	1.0	7.5	0.0	0.0	13.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	3.1	0.0	0.0	4.3	8.5	1.1	0.0	9.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.1	10.6	0.0	0.0	16.5	26.1	19.9	0.0	39.5			
LnGrp LOS	D	B	A	A	B	C	B	A	D			
Approach Vol, veh/h		848			1298			644				
Approach Delay, s/veh		14.0			20.5			33.9				
Approach LOS		B			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		49.9			8.7	41.2		30.1				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		36.5			5.5	26.5		33.0				
Max Q Clear Time (g_c+I1), s		11.7			5.2	24.8		24.2				
Green Ext Time (p_c), s		3.1			0.0	0.9		0.9				

Intersection Summary

HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↗	↘	↘	↗
Traffic Vol, veh/h	170	59	188	98	35	152
Future Vol, veh/h	170	59	188	98	35	152
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	250	87	276	144	51	224
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	14	12.3	12.2
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	188	98	170	59	35	152
LT Vol	0	0	170	0	35	0
Through Vol	188	0	0	0	0	152
RT Vol	0	98	0	59	0	0
Lane Flow Rate	276	144	250	87	51	224
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.462	0.212	0.474	0.135	0.096	0.383
Departure Headway (Hd)	6.012	5.302	6.83	5.616	6.681	6.173
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	600	676	527	638	536	583
Service Time	3.752	3.041	4.571	3.358	4.426	3.917
HCM Lane V/C Ratio	0.46	0.213	0.474	0.136	0.095	0.384
HCM Control Delay	13.8	9.5	15.6	9.2	10.1	12.7
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	2.4	0.8	2.5	0.5	0.3	1.8

Timings  
23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022

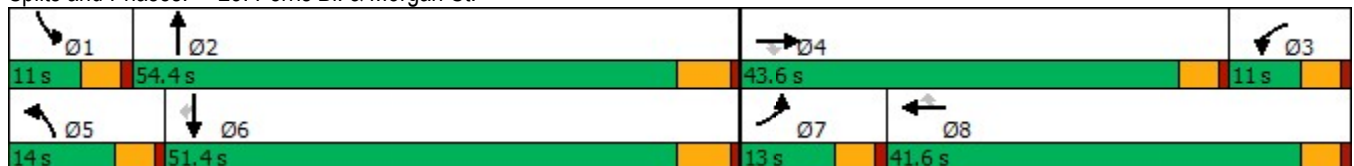


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	29	193	31	22	78	9	47	1438	36	683	77
Future Volume (vph)	29	193	31	22	78	9	47	1438	36	683	77
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	13.0	43.6	43.6	11.0	41.6	41.6	14.0	54.4	11.0	51.4	51.4
Total Split (%)	10.8%	36.3%	36.3%	9.2%	34.7%	34.7%	11.7%	45.3%	9.2%	42.8%	42.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.9	16.7	16.7	7.4	15.3	15.3	7.5	32.3	6.7	31.5	31.5
Actuated g/C Ratio	0.10	0.24	0.24	0.10	0.22	0.22	0.11	0.46	0.09	0.44	0.44
v/c Ratio	0.18	0.24	0.07	0.12	0.20	0.02	0.26	0.65	0.22	0.45	0.10
Control Delay	44.6	27.9	0.3	42.0	30.1	0.1	43.9	18.9	45.9	17.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	27.9	0.3	42.0	30.1	0.1	43.9	18.9	45.9	17.8	0.5
LOS	D	C	A	D	C	A	D	B	D	B	A
Approach Delay		26.4			30.1			19.7		17.4	
Approach LOS		C			C			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 70.9  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 20.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

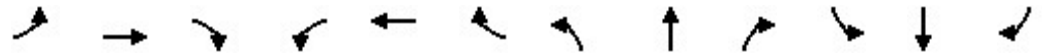
Splits and Phases: 23: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑		↘	↑↑	↗
Traffic Volume (veh/h)	29	193	31	22	78	9	47	1438	17	36	683	77
Future Volume (veh/h)	29	193	31	22	78	9	47	1438	17	36	683	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	203	17	23	82	8	49	1514	18	38	719	64
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	60	580	259	60	305	259	83	2384	28	70	1603	715
Arrive On Green	0.03	0.16	0.16	0.03	0.16	0.16	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5284	63	1810	3610	1610
Grp Volume(v), veh/h	31	203	17	23	82	8	49	991	541	38	719	64
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1889	1810	1805	1610
Q Serve(g_s), s	1.0	3.1	0.4	0.8	2.3	0.3	1.6	13.7	13.7	1.3	8.6	1.4
Cycle Q Clear(g_c), s	1.0	3.1	0.4	0.8	2.3	0.3	1.6	13.7	13.7	1.3	8.6	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	60	580	259	60	305	259	83	1560	852	70	1603	715
V/C Ratio(X)	0.51	0.35	0.07	0.38	0.27	0.03	0.59	0.64	0.64	0.54	0.45	0.09
Avail Cap(c_a), veh/h	245	2270	1013	187	1133	961	274	2710	1480	187	2654	1184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	23.1	13.0	29.4	22.8	22.0	29.0	13.1	13.1	29.3	12.0	10.0
Incr Delay (d2), s/veh	2.5	0.4	0.1	1.5	0.5	0.0	2.5	0.4	0.8	2.4	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.3	0.2	0.4	1.1	0.1	0.7	4.2	4.7	0.6	2.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	23.5	13.1	30.8	23.3	22.0	31.5	13.5	13.9	31.7	12.2	10.0
LnGrp LOS	C	C	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		251			113			1581			821	
Approach Delay, s/veh		23.8			24.7			14.2			12.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	33.8	6.7	14.6	7.5	33.3	6.7	14.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	6.4	48.6	6.4	39.0	9.4	45.6	8.4	37.0				
Max Q Clear Time (g_c+I1), s	3.3	15.7	2.8	5.1	3.6	10.6	3.0	4.3				
Green Ext Time (p_c), s	0.0	12.3	0.0	1.5	0.0	5.2	0.0	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.1									
HCM 6th LOS			B									

Timings  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

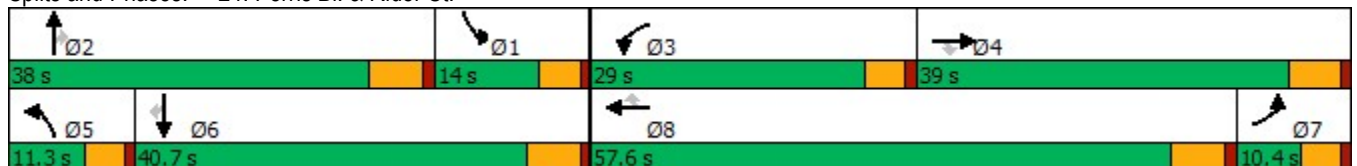
02/11/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	163	19	275	354	375	48	1122	179	143	476	37
Future Volume (vph)	29	163	19	275	354	375	48	1122	179	143	476	37
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	10.4	39.0	39.0	29.0	57.6	57.6	11.3	38.0	38.0	14.0	40.7	40.7
Total Split (%)	8.7%	32.5%	32.5%	24.2%	48.0%	48.0%	9.4%	31.7%	31.7%	11.7%	33.9%	33.9%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.5	14.0	14.0	19.5	30.7	30.7	6.3	29.6	29.6	9.6	35.3	35.3
Actuated g/C Ratio	0.10	0.15	0.15	0.21	0.33	0.33	0.07	0.31	0.31	0.10	0.38	0.38
v/c Ratio	0.17	0.32	0.05	0.79	0.32	0.56	0.43	0.74	0.31	0.84	0.26	0.06
Control Delay	42.3	37.9	0.3	53.0	27.2	13.2	58.6	33.3	7.5	80.0	23.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	37.9	0.3	53.0	27.2	13.2	58.6	33.3	7.5	80.0	23.4	0.2
LOS	D	D	A	D	C	B	E	C	A	E	C	A
Approach Delay		35.2			29.0			30.8			34.4	
Approach LOS		D			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 31.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 71.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 24: Perris Bl. & Rider St.

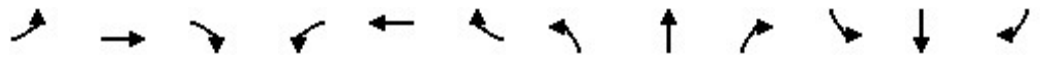




HCM 6th Signalized Intersection Summary  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (veh/h)	29	163	19	275	354	375	48	1122	179	143	476	37
Future Volume (veh/h)	29	163	19	275	354	375	48	1122	179	143	476	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	175	11	296	381	293	52	1206	158	154	512	30
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	107	452	201	338	860	384	77	1632	507	189	2031	630
Arrive On Green	0.06	0.13	0.13	0.19	0.24	0.24	0.04	0.31	0.31	0.10	0.39	0.39
Sat Flow, veh/h	1810	3610	1606	1810	3610	1610	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	31	175	11	296	381	293	52	1206	158	154	512	30
Grp Sat Flow(s),veh/h/ln	1810	1805	1606	1810	1805	1610	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	1.3	3.6	0.5	13.0	7.4	13.9	2.3	17.0	3.3	6.8	5.5	0.6
Cycle Q Clear(g_c), s	1.3	3.6	0.5	13.0	7.4	13.9	2.3	17.0	3.3	6.8	5.5	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	452	201	338	860	384	77	1632	507	189	2031	630
V/C Ratio(X)	0.29	0.39	0.05	0.88	0.44	0.76	0.68	0.74	0.31	0.81	0.25	0.05
Avail Cap(c_a), veh/h	128	1463	651	539	2283	1018	148	2039	633	208	2210	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	32.9	31.5	32.4	26.6	29.0	38.7	25.1	6.3	35.9	16.8	6.9
Incr Delay (d2), s/veh	0.5	0.5	0.1	5.8	0.4	3.2	3.9	1.1	0.3	17.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.5	0.2	5.8	3.0	5.3	1.1	6.5	2.0	3.8	2.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	33.5	31.7	38.2	26.9	32.2	42.5	26.2	6.6	53.8	16.9	7.0
LnGrp LOS	D	C	C	D	C	C	D	C	A	D	B	A
Approach Vol, veh/h		217			970			1416			696	
Approach Delay, s/veh		33.9			32.0			24.6			24.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	31.6	19.9	16.1	8.1	37.9	10.6	25.3				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	9.4	* 32	24.4	33.2	6.7	34.9	5.8	* 52				
Max Q Clear Time (g_c+I1), s	8.8	19.0	15.0	5.6	4.3	7.5	3.3	15.9				
Green Ext Time (p_c), s	0.0	6.8	0.3	1.0	0.0	3.4	0.0	3.4				

Intersection Summary

HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

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

Timings  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

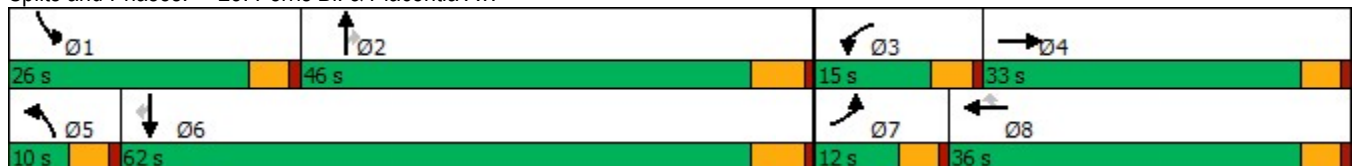
02/11/2022

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	27	117	54	237	245	84	1010	44	37	674	41
Future Volume (vph)	27	117	54	237	245	84	1010	44	37	674	41
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.6	9.6	34.6	34.6	9.6	36.8	36.8	9.6	34.8	34.8
Total Split (s)	12.0	33.0	15.0	36.0	36.0	10.0	46.0	46.0	26.0	62.0	62.0
Total Split (%)	10.0%	27.5%	12.5%	30.0%	30.0%	8.3%	38.3%	38.3%	21.7%	51.7%	51.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.4	17.1	7.7	20.9	20.9	6.0	34.8	34.8	7.1	29.7	29.7
Actuated g/C Ratio	0.08	0.22	0.10	0.26	0.26	0.08	0.44	0.44	0.09	0.38	0.38
v/c Ratio	0.21	0.54	0.34	0.52	0.43	0.68	0.71	0.06	0.25	0.55	0.07
Control Delay	46.7	33.0	46.5	33.1	6.3	70.0	24.1	0.2	46.0	21.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	33.0	46.5	33.1	6.3	70.0	24.1	0.2	46.0	21.1	0.2
LOS	D	C	D	C	A	E	C	A	D	C	A
Approach Delay		34.6		22.2			26.6			21.2	
Approach LOS		C		C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 24.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

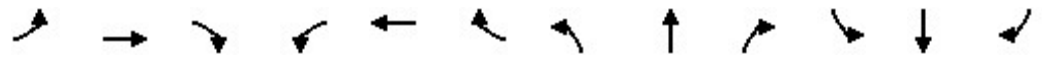
Splits and Phases: 25: Perris Bl. & Placentia Av.



HCM 6th Signalized Intersection Summary  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	117	81	54	237	245	84	1010	44	37	674	41
Future Volume (veh/h)	27	117	81	54	237	245	84	1010	44	37	674	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	30	130	86	60	263	155	93	1122	40	41	749	40
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	187	124	93	370	314	120	1516	676	74	1424	634
Arrive On Green	0.03	0.18	0.18	0.05	0.19	0.19	0.07	0.42	0.42	0.04	0.39	0.39
Sat Flow, veh/h	1810	1067	706	1810	1900	1610	1810	3610	1610	1810	3610	1608
Grp Volume(v), veh/h	30	0	216	60	263	155	93	1122	40	41	749	40
Grp Sat Flow(s),veh/h/ln	1810	0	1773	1810	1900	1610	1810	1805	1610	1810	1805	1608
Q Serve(g_s), s	1.0	0.0	7.2	2.0	8.1	5.4	3.2	16.4	0.9	1.4	10.0	1.0
Cycle Q Clear(g_c), s	1.0	0.0	7.2	2.0	8.1	5.4	3.2	16.4	0.9	1.4	10.0	1.0
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	0	311	93	370	314	120	1516	676	74	1424	634
V/C Ratio(X)	0.51	0.00	0.69	0.64	0.71	0.49	0.78	0.74	0.06	0.56	0.53	0.06
Avail Cap(c_a), veh/h	213	0	802	300	950	805	156	2311	1031	617	3231	1439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	24.3	29.2	23.6	22.5	28.9	15.3	10.8	29.6	14.5	11.8
Incr Delay (d2), s/veh	2.5	0.0	2.8	2.7	2.5	1.2	12.1	0.7	0.0	2.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	3.1	0.9	3.7	2.1	1.7	5.5	0.3	0.6	3.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	0.0	27.1	31.9	26.2	23.7	41.0	16.0	10.9	32.0	14.8	11.8
LnGrp LOS	C	A	C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		246			478			1255			830	
Approach Delay, s/veh		27.7			26.1			17.7			15.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	32.2	7.8	15.6	8.8	30.6	6.6	16.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	21.4	40.2	10.4	28.4	5.4	56.2	7.4	31.4				
Max Q Clear Time (g_c+I1), s	3.4	18.4	4.0	9.2	5.2	12.0	3.0	10.1				
Green Ext Time (p_c), s	0.0	7.9	0.0	1.2	0.0	5.5	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Timings  
30: Redlands Av. & Ramona Exwy.

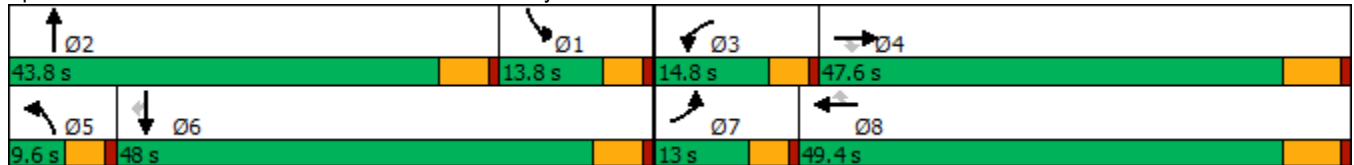


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↗	↖	↑	↗
Traffic Volume (vph)	99	1563	55	116	2975	628	40	35	352	88	62
Future Volume (vph)	99	1563	55	116	2975	628	40	35	352	88	62
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	27.2	9.6	43.4	9.6	23.4	23.4
Total Split (s)	13.0	47.6	47.6	14.8	49.4	49.4	9.6	43.8	13.8	48.0	48.0
Total Split (%)	10.8%	39.7%	39.7%	12.3%	41.2%	41.2%	8.0%	36.5%	11.5%	40.0%	40.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1563	55	116	2975	628	40	35	96	352	88	62
Future Volume (veh/h)	99	1563	55	116	2975	628	40	35	96	352	88	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.94	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	103	1628	57	121	3099	654	42	36	100	367	92	65
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	129	1972	596	148	2028	620	59	109	304	151	602	504
Arrive On Green	0.07	0.38	0.38	0.08	0.39	0.39	0.03	0.26	0.26	0.08	0.32	0.32
Sat Flow, veh/h	1810	5187	1569	1810	5187	1587	1810	422	1172	1810	1900	1590
Grp Volume(v), veh/h	103	1628	57	121	3099	654	42	0	136	367	92	65
Grp Sat Flow(s),veh/h/ln	1810	1729	1569	1810	1729	1587	1810	0	1593	1810	1900	1590
Q Serve(g_s), s	6.2	31.3	2.6	7.3	43.2	29.8	2.5	0.0	7.6	9.2	3.8	3.2
Cycle Q Clear(g_c), s	6.2	31.3	2.6	7.3	43.2	29.8	2.5	0.0	7.6	9.2	3.8	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	129	1972	596	148	2028	620	59	0	413	151	602	504
V/C Ratio(X)	0.80	0.83	0.10	0.82	1.53	1.05	0.71	0.00	0.33	2.44	0.15	0.13
Avail Cap(c_a), veh/h	138	1972	596	167	2028	620	82	0	554	151	733	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	30.9	22.0	49.9	33.6	16.1	52.9	0.0	33.1	50.6	27.1	26.9
Incr Delay (d2), s/veh	23.9	3.0	0.1	21.1	240.1	51.2	7.2	0.0	0.5	665.6	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	12.6	0.9	4.0	61.6	18.1	1.3	0.0	2.9	31.9	1.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	34.0	22.1	71.0	273.7	67.3	60.1	0.0	33.6	716.3	27.2	27.0
LnGrp LOS	E	C	C	E	F	F	E	A	C	F	C	C
Approach Vol, veh/h		1788			3874			178			524	
Approach Delay, s/veh		35.9			232.5			39.9			509.8	
Approach LOS		D			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	34.0	13.7	48.2	8.2	40.4	12.4	49.4				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	9.2	* 38	10.2	41.4	5.0	42.6	8.4	43.2				
Max Q Clear Time (g_c+I1), s	11.2	9.6	9.3	33.3	4.5	5.8	8.2	45.2				
Green Ext Time (p_c), s	0.0	0.8	0.0	5.7	0.0	0.7	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	194.7
HCM 6th LOS	F

Notes

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

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷			↶↷	↶↷
Traffic Vol, veh/h	32	15	10	1	4	2	3	63	0	20	134	54
Future Vol, veh/h	32	15	10	1	4	2	3	63	0	20	134	54
Peak Hour Factor	0.84	0.92	0.84	0.92	0.92	0.92	0.84	0.84	0.92	0.92	0.84	0.84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	38	16	12	1	4	2	4	75	0	22	160	64
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.5	8	8.2	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	13%	0%
Vol Thru, %	0%	100%	0%	60%	0%	67%	87%	0%
Vol Right, %	0%	0%	0%	40%	0%	33%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	63	32	25	1	6	154	54
LT Vol	3	0	32	0	1	0	20	0
Through Vol	0	63	0	15	0	4	134	0
RT Vol	0	0	0	10	0	2	0	54
Lane Flow Rate	4	75	38	28	1	7	181	64
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.005	0.102	0.061	0.039	0.002	0.009	0.243	0.073
Departure Headway (Hd)	5.399	4.897	5.768	4.984	5.838	5.101	4.831	4.065
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	665	734	623	720	614	703	747	885
Service Time	3.112	2.61	3.485	2.701	3.559	2.822	2.541	1.774
HCM Lane V/C Ratio	0.006	0.102	0.061	0.039	0.002	0.01	0.242	0.072
HCM Control Delay	8.1	8.2	8.9	7.9	8.6	7.9	9.1	7.1
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.2	0.1	0	0	1	0.2

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

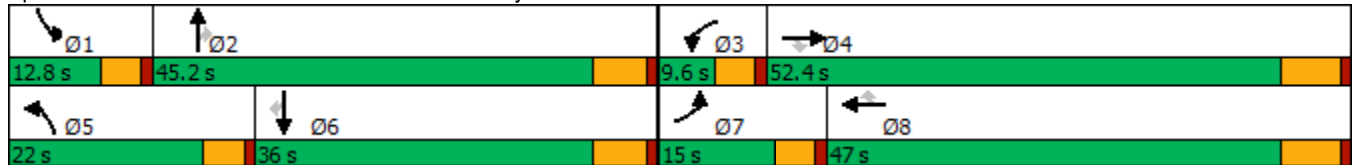
01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	1511	182	61	2761	452	535	493	42	252	297	423
Future Volume (vph)	300	1511	182	61	2761	452	535	493	42	252	297	423
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	15.0	52.4	52.4	9.6	47.0	47.0	22.0	45.2	45.2	12.8	36.0	36.0
Total Split (%)	12.5%	43.7%	43.7%	8.0%	39.2%	39.2%	18.3%	37.7%	37.7%	10.7%	30.0%	30.0%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.6  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated



































Splits and Phases: 39: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	 		 	 	 
Traffic Volume (veh/h)	300	1511	182	61	2761	452	535	493	42	252	297	423
Future Volume (veh/h)	300	1511	182	61	2761	452	535	493	42	252	297	423
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	319	1607	0	65	2937	345	569	524	26	268	316	278
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	343	2263		154	1380	616	562	1080	482	275	785	345
Arrive On Green	0.10	0.44	0.00	0.04	0.38	0.38	0.16	0.30	0.30	0.08	0.22	0.22
Sat Flow, veh/h	3510	5187	1610	3510	3610	1610	3510	3610	1610	3510	3610	1589
Grp Volume(v), veh/h	319	1607	0	65	2937	345	569	524	26	268	316	278
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1805	1610	1755	1805	1610	1755	1805	1589
Q Serve(g_s), s	10.1	28.5	0.0	2.0	43.0	18.9	18.0	13.4	1.3	8.6	8.4	18.7
Cycle Q Clear(g_c), s	10.1	28.5	0.0	2.0	43.0	18.9	18.0	13.4	1.3	8.6	8.4	18.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	343	2263		154	1380	616	562	1080	482	275	785	345
V/C Ratio(X)	0.93	0.71		0.42	2.13	0.56	1.01	0.49	0.05	0.98	0.40	0.80
Avail Cap(c_a), veh/h	343	2263		175	1380	616	562	1323	590	275	1027	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	25.9	0.0	52.4	34.7	27.3	47.2	32.3	28.1	51.7	37.7	41.7
Incr Delay (d2), s/veh	30.5	1.1	0.0	0.7	509.8	1.2	41.1	0.3	0.0	47.2	0.3	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	10.8	0.0	0.9	114.8	6.9	10.8	5.7	0.5	5.5	3.6	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.8	26.9	0.0	53.0	544.5	28.4	88.4	32.6	28.1	98.9	38.1	49.5
LnGrp LOS	F	C		D	F	C	F	C	C	F	D	D
Approach Vol, veh/h		1926	A		3347			1119			862	
Approach Delay, s/veh		35.9			481.8			60.9			60.7	
Approach LOS		D			F			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	37.6	8.9	53.1	22.0	28.4	15.0	47.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	8.2	39.4	5.0	45.9	17.4	30.2	10.4	40.5				
Max Q Clear Time (g_c+I1), s	10.6	15.4	4.0	30.5	20.0	20.7	12.1	45.0				
Green Ext Time (p_c), s	0.0	3.3	0.0	8.9	0.0	2.0	0.0	0.0				

Intersection Summary

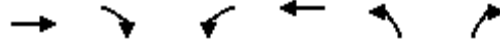
HCM 6th Ctrl Delay	248.4
HCM 6th LOS	F

Notes

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



Timings  
43: Bradley St. & Ramona Expy

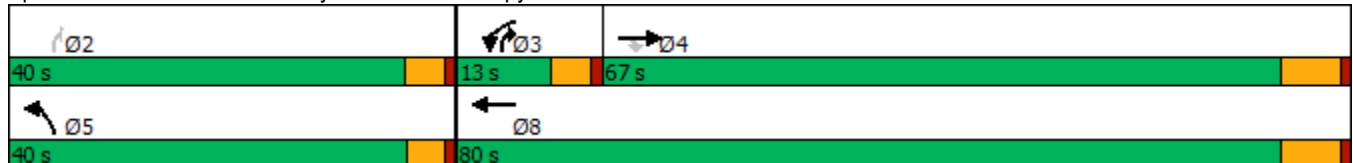


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø2
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑	
Traffic Volume (vph)	914	41	18	2381	245	32	
Future Volume (vph)	914	41	18	2381	245	32	
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov	
Protected Phases	4		3	8	5	3	2
Permitted Phases		4					2
Detector Phase	4	4	3	8	5	3	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	38.5	38.5	9.6	24.5	9.5	9.6	22.6
Total Split (s)	67.0	67.0	13.0	80.0	40.0	13.0	40.0
Total Split (%)	55.8%	55.8%	10.8%	66.7%	33.3%	10.8%	33%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.5	4.6	
Lead/Lag	Lag	Lag	Lead			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.1  
 Natural Cycle: 130  
 Control Type: Actuated-Uncoordinated

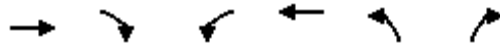
Splits and Phases: 43: Bradley St. & Ramona Expy



HCM 6th Signalized Intersection Summary  
43: Bradley St. & Ramona Expy

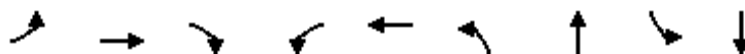
Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (veh/h)	914	41	18	2381	245	32
Future Volume (veh/h)	914	41	18	2381	245	32
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1039	45	20	2706	278	19
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2346	1045	38	2584	320	319
Arrive On Green	0.65	0.65	0.02	0.72	0.18	0.18
Sat Flow, veh/h	3705	1608	1810	3705	1810	1610
Grp Volume(v), veh/h	1039	45	20	2706	278	19
Grp Sat Flow(s),veh/h/ln	1805	1608	1810	1805	1810	1610
Q Serve(g_s), s	14.5	1.0	1.1	73.5	15.3	1.0
Cycle Q Clear(g_c), s	14.5	1.0	1.1	73.5	15.3	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2346	1045	38	2584	320	319
V/C Ratio(X)	0.44	0.04	0.52	1.05	0.87	0.06
Avail Cap(c_a), veh/h	2346	1045	148	2584	626	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.8	6.5	49.7	14.6	41.1	33.4
Incr Delay (d2), s/veh	0.1	0.0	4.0	31.6	7.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.3	0.5	30.0	7.5	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.0	6.5	53.8	46.2	48.2	33.5
LnGrp LOS	A	A	D	F	D	C
Approach Vol, veh/h	1084			2726	297	
Approach Delay, s/veh	8.9			46.2	47.3	
Approach LOS	A			D	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		22.7	6.8	73.2		80.0
Change Period (Y+Rc), s		4.5	4.6	6.5		6.5
Max Green Setting (Gmax), s		35.5	8.4	60.5		73.5
Max Q Clear Time (g_c+I1), s		17.3	3.1	16.5		75.5
Green Ext Time (p_c), s		0.8	0.0	7.9		0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			36.4			
HCM 6th LOS			D			

Timings  
46: Dunlap Dr. & Nuevo Rd.

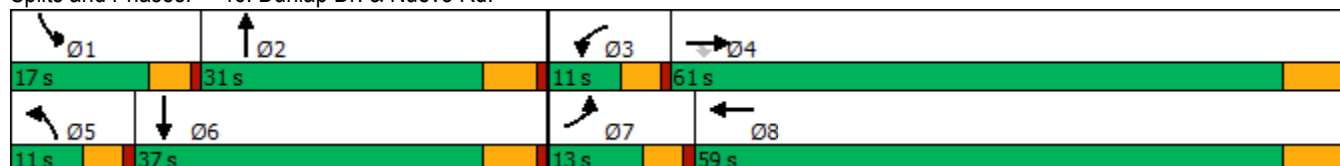


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	34	716	15	55	1322	9	21	101	22
Future Volume (vph)	34	716	15	55	1322	9	21	101	22
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.5	37.5	9.6	24.5	9.6	23.8	9.6	29.8
Total Split (s)	13.0	61.0	61.0	11.0	59.0	11.0	31.0	17.0	37.0
Total Split (%)	10.8%	50.8%	50.8%	9.2%	49.2%	9.2%	25.8%	14.2%	30.8%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6	6.5	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.9  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

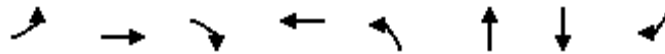


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↷	↶	↷		↶	↷		↶	↷	
Traffic Volume (veh/h)	34	716	15	55	1322	174	9	21	182	101	22	87
Future Volume (veh/h)	34	716	15	55	1322	174	9	21	182	101	22	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	731	10	56	1349	160	9	21	184	103	22	41
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	990	839	72	883	105	20	25	220	130	125	233
Arrive On Green	0.03	0.52	0.52	0.04	0.53	0.53	0.01	0.15	0.15	0.07	0.21	0.21
Sat Flow, veh/h	1810	1900	1610	1810	1667	198	1810	168	1468	1810	594	1107
Grp Volume(v), veh/h	35	731	10	56	0	1509	9	0	205	103	0	63
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1864	1810	0	1636	1810	0	1701
Q Serve(g_s), s	1.9	29.7	0.3	3.0	0.0	52.5	0.5	0.0	12.1	5.5	0.0	3.0
Cycle Q Clear(g_c), s	1.9	29.7	0.3	3.0	0.0	52.5	0.5	0.0	12.1	5.5	0.0	3.0
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.90	1.00		0.65
Lane Grp Cap(c), veh/h	56	990	839	72	0	988	20	0	245	130	0	358
V/C Ratio(X)	0.62	0.74	0.01	0.77	0.00	1.53	0.45	0.00	0.84	0.79	0.00	0.18
Avail Cap(c_a), veh/h	153	1045	886	117	0	988	117	0	416	226	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.4	18.5	11.4	47.1	0.0	23.3	48.7	0.0	40.9	45.2	0.0	32.0
Incr Delay (d2), s/veh	4.1	2.7	0.0	6.4	0.0	242.5	5.7	0.0	7.4	4.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	11.6	0.1	1.4	0.0	85.3	0.2	0.0	5.2	2.5	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	21.1	11.4	53.5	0.0	265.7	54.4	0.0	48.3	49.2	0.0	32.3
LnGrp LOS	D	C	B	D	A	F	D	A	D	D	A	C
Approach Vol, veh/h		776			1565			214				166
Approach Delay, s/veh		22.4			258.2			48.6				42.8
Approach LOS		C			F			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	20.6	8.6	58.1	5.7	26.7	7.7	59.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	12.4	25.2	6.4	54.5	6.4	31.2	8.4	52.5				
Max Q Clear Time (g_c+I1), s	7.5	14.1	5.0	31.7	2.5	5.0	3.9	54.5				
Green Ext Time (p_c), s	0.0	0.8	0.0	4.5	0.0	0.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	161.3
HCM 6th LOS	F

Timings  
47: Ramona Expy & Rider St.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖↗	↕	↕↕	↗	
Traffic Volume (vph)	236	0	399	0	359	2372	1473	185	
Future Volume (vph)	236	0	399	0	359	2372	1473	185	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4						6
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	42.0	42.0	42.0	42.0	21.0	68.4	57.0	57.0	9.6
Total Split (%)	35.0%	35.0%	35.0%	35.0%	17.5%	57.0%	47.5%	47.5%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 108.1  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 47: Ramona Expy & Rider St.



HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↗		↖	↗	↗
Traffic Volume (veh/h)	236	0	399	0	0	1	359	2372	1	0	1473	185
Future Volume (veh/h)	236	0	399	0	0	1	359	2372	1	0	1473	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	268	0	310	0	0	1	408	2695	1	0	1674	161
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	395	0	364	0	0	364	475	2466	1	2	1754	782
Arrive On Green	0.23	0.00	0.23	0.00	0.00	0.23	0.14	0.67	0.67	0.00	0.49	0.49
Sat Flow, veh/h	1436	0	1610	0	0	1610	3510	3703	1	1810	3610	1610
Grp Volume(v), veh/h	268	0	310	0	0	1	408	1313	1383	0	1674	161
Grp Sat Flow(s),veh/h/ln	1436	0	1610	0	0	1610	1755	1805	1900	1810	1805	1610
Q Serve(g_s), s	18.3	0.0	19.0	0.0	0.0	0.0	11.7	68.6	68.6	0.0	45.8	5.9
Cycle Q Clear(g_c), s	18.3	0.0	19.0	0.0	0.0	0.0	11.7	68.6	68.6	0.0	45.8	5.9
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	0	364	0	0	364	475	1202	1265	2	1754	782
V/C Ratio(X)	0.68	0.00	0.85	0.00	0.00	0.00	0.86	1.09	1.09	0.00	0.95	0.21
Avail Cap(c_a), veh/h	592	0	585	0	0	585	559	1202	1265	88	1770	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	38.2	0.0	0.0	30.9	43.6	17.2	17.2	0.0	25.4	15.1
Incr Delay (d2), s/veh	2.1	0.0	6.8	0.0	0.0	0.0	10.0	55.0	54.6	0.0	12.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	7.9	0.0	0.0	0.0	5.4	38.4	40.3	0.0	19.7	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	0.0	44.9	0.0	0.0	30.9	53.5	72.2	71.8	0.0	37.7	15.3
LnGrp LOS	D	A	D	A	A	C	D	F	F	A	D	B
Approach Vol, veh/h		578			1			3104			1835	
Approach Delay, s/veh		42.7			30.9			69.6			35.7	
Approach LOS		D			C			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	75.1		27.9	18.6	56.6		27.9				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	61.9		37.4	16.4	50.5		37.4				
Max Q Clear Time (g_c+I1), s	0.0	70.6		21.0	13.7	47.8		2.0				
Green Ext Time (p_c), s	0.0	0.0		2.3	0.2	2.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	55.5
HCM 6th LOS	E

Timings  
48: Antelope Rd. & Ramona Expy

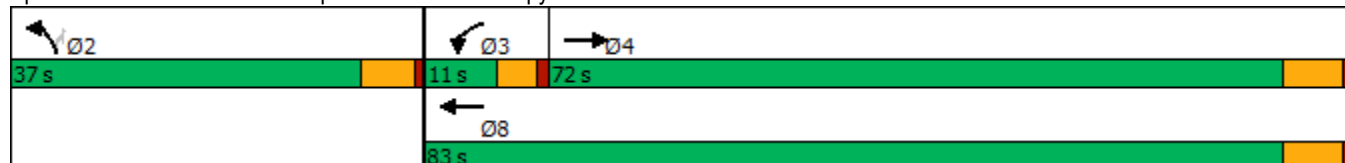


Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↙	↑↑	↙↘	↘
Traffic Volume (vph)	1212	183	2536	195	47
Future Volume (vph)	1212	183	2536	195	47
Turn Type	NA	Prot	NA	Prot	Perm
Protected Phases	4	3	8	2	
Permitted Phases					2
Detector Phase	4	3	8	2	2
Switch Phase					
Minimum Initial (s)	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	9.6	16.5	15.8	15.8
Total Split (s)	72.0	11.0	83.0	37.0	37.0
Total Split (%)	60.0%	9.2%	69.2%	30.8%	30.8%
Yellow Time (s)	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.6	6.5	5.8	5.8
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Max	None	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 48: Antelope Rd. & Ramona Expy



HCM 6th Signalized Intersection Summary  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↙↘	↗
Traffic Volume (veh/h)	1212	660	183	2536	195	47
Future Volume (veh/h)	1212	660	183	2536	195	47
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1317	717	199	2757	212	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1547	771	117	2795	355	163
Arrive On Green	0.66	0.66	0.06	0.77	0.10	0.10
Sat Flow, veh/h	2429	1162	1810	3705	3510	1610
Grp Volume(v), veh/h	991	1043	199	2757	212	51
Grp Sat Flow(s),veh/h/ln	1805	1691	1810	1805	1755	1610
Q Serve(g_s), s	40.5	53.6	6.4	72.1	5.7	2.9
Cycle Q Clear(g_c), s	40.5	53.6	6.4	72.1	5.7	2.9
Prop In Lane		0.69	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1197	1121	117	2795	355	163
V/C Ratio(X)	0.83	0.93	1.70	0.99	0.60	0.31
Avail Cap(c_a), veh/h	1197	1121	117	2795	1109	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	14.6	46.2	10.6	42.5	41.2
Incr Delay (d2), s/veh	6.7	14.6	347.7	14.1	1.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	18.8	14.0	18.3	2.5	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.1	29.3	393.9	24.7	44.1	42.3
LnGrp LOS	B	C	F	C	D	D
Approach Vol, veh/h	2034			2956	263	
Approach Delay, s/veh	24.3			49.6	43.7	
Approach LOS	C			D	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		15.8	11.0	72.0		83.0
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		31.2	6.4	65.5		76.5
Max Q Clear Time (g_c+I1), s		7.7	8.4	55.6		74.1
Green Ext Time (p_c), s		0.8	0.0	8.1		2.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			39.5			
HCM 6th LOS			D			



Timings  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↶	↷	↶	↶	↷
Traffic Volume (vph)	488	485	1289	62	145
Future Volume (vph)	488	485	1289	62	145
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	39.3	90.5	51.2	29.5	39.3
Total Split (%)	32.8%	75.4%	42.7%	24.6%	32.8%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.8  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

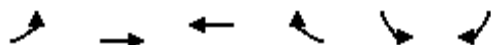
Splits and Phases: 51: Nuevo Rd. & Antelope Rd.



HCM 6th Signalized Intersection Summary  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	488	485	1289	222	62	145	
Future Volume (veh/h)	488	485	1289	222	62	145	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	530	527	1401	241	67	158	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	557	1502	694	119	170	647	
Arrive On Green	0.31	0.79	0.44	0.44	0.09	0.09	
Sat Flow, veh/h	1810	1900	1579	272	1810	1610	
Grp Volume(v), veh/h	530	527	0	1642	67	158	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1851	1810	1610	
Q Serve(g_s), s	30.5	8.6	0.0	46.7	3.7	6.9	
Cycle Q Clear(g_c), s	30.5	8.6	0.0	46.7	3.7	6.9	
Prop In Lane	1.00			0.15	1.00	1.00	
Lane Grp Cap(c), veh/h	557	1502	0	813	170	647	
V/C Ratio(X)	0.95	0.35	0.00	2.02	0.39	0.24	
Avail Cap(c_a), veh/h	591	1502	0	813	403	855	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	36.0	3.2	0.0	29.8	45.3	21.1	
Incr Delay (d2), s/veh	24.3	0.6	0.0	463.2	1.5	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	16.2	2.0	0.0	123.2	1.7	7.5	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	60.3	3.9	0.0	493.0	46.8	21.3	
LnGrp LOS	E	A	A	F	D	C	
Approach Vol, veh/h		1057	1642		225		
Approach Delay, s/veh		32.2	493.0		28.9		
Approach LOS		C	F		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				90.5	15.8	37.3	53.2
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				84.0	23.7	34.7	44.7
Max Q Clear Time (g_c+I1), s				10.6	8.9	32.5	48.7
Green Ext Time (p_c), s				3.2	0.5	0.2	0.0
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			290.7				
HCM 6th LOS			F				

Intersection						
Int Delay, s/veh	7.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	246	152	239	29	46	194
Future Vol, veh/h	246	152	239	29	46	194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	262	162	254	31	49	206

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	285	0	-	0	956 270
Stage 1	-	-	-	-	270 -
Stage 2	-	-	-	-	686 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1289	-	-	-	289 774
Stage 1	-	-	-	-	780 -
Stage 2	-	-	-	-	504 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1289	-	-	-	225 774
Mov Cap-2 Maneuver	-	-	-	-	225 -
Stage 1	-	-	-	-	606 -
Stage 2	-	-	-	-	504 -

Approach	EB	WB	SB
HCM Control Delay, s	5.3	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1289	-	-	-	527
HCM Lane V/C Ratio	0.203	-	-	-	0.484
HCM Control Delay (s)	8.5	0	-	-	18.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.8	-	-	-	2.6

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	391	441	2	13	158
Future Vol, veh/h	51	391	441	2	13	158
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	57	439	496	2	15	178

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	498	0	-	0	1050 497
Stage 1	-	-	-	-	497 -
Stage 2	-	-	-	-	553 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1076	-	-	-	254 577
Stage 1	-	-	-	-	615 -
Stage 2	-	-	-	-	580 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1076	-	-	-	241 577
Mov Cap-2 Maneuver	-	-	-	-	375 -
Stage 1	-	-	-	-	582 -
Stage 2	-	-	-	-	580 -

Approach	EB	WB	SB
HCM Control Delay, s	1	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1076	-	-	-	554
HCM Lane V/C Ratio	0.053	-	-	-	0.347
HCM Control Delay (s)	8.5	-	-	-	14.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.5

Timings

Stoneridge Commerce Center SP (JN 13265)

71: Redlands Av. & San Jacinto Av.

01/25/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↑↔
Traffic Volume (vph)	36	29	153	815	75	56	133	232	671	85	496
Future Volume (vph)	36	29	153	815	75	56	133	232	671	85	496
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	35.8	9.6	35.8
Total Split (s)	9.6	38.6	38.6	31.0	60.0	60.0	14.0	39.4	39.4	11.0	36.4
Total Split (%)	8.0%	32.2%	32.2%	25.8%	50.0%	50.0%	11.7%	32.8%	32.8%	9.2%	30.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min

Intersection Summary

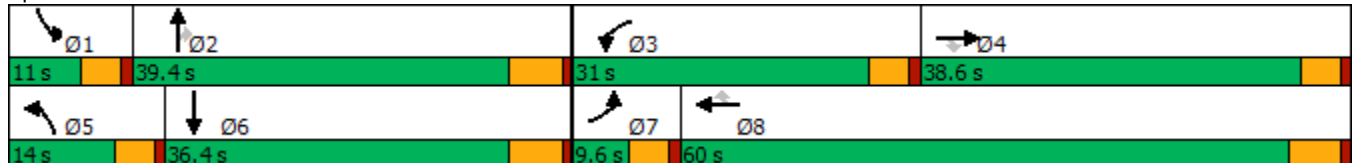
Cycle Length: 120

Actuated Cycle Length: 93.4

Natural Cycle: 115

Control Type: Actuated-Uncoordinated




























Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	36	29	153	815	75	56	133	232	671	85	496	77
Future Volume (veh/h)	36	29	153	815	75	56	133	232	671	85	496	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	35	100	982	90	56	160	280	713	102	598	87
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	124	195	166	953	644	546	175	1248	557	119	996	145
Arrive On Green	0.04	0.10	0.10	0.27	0.34	0.34	0.10	0.35	0.35	0.07	0.31	0.31
Sat Flow, veh/h	3510	1900	1610	3510	1900	1610	1810	3610	1610	1810	3163	459
Grp Volume(v), veh/h	43	35	100	982	90	56	160	280	713	102	341	344
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1610	1810	1805	1610	1810	1805	1817
Q Serve(g_s), s	1.2	1.6	5.8	26.4	3.2	2.3	8.5	5.3	33.6	5.4	15.5	15.6
Cycle Q Clear(g_c), s	1.2	1.6	5.8	26.4	3.2	2.3	8.5	5.3	33.6	5.4	15.5	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	124	195	166	953	644	546	175	1248	557	119	568	572
V/C Ratio(X)	0.35	0.18	0.60	1.03	0.14	0.10	0.91	0.22	1.28	0.86	0.60	0.60
Avail Cap(c_a), veh/h	181	665	563	953	1059	898	175	1248	557	119	568	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	39.8	41.7	35.4	22.3	22.0	43.5	22.6	31.8	44.9	28.1	28.1
Incr Delay (d2), s/veh	0.6	0.4	3.5	37.1	0.1	0.1	43.5	0.1	139.8	40.6	1.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.8	2.4	15.4	1.4	0.8	5.8	2.2	33.6	3.7	6.5	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	40.3	45.2	72.5	22.4	22.1	87.0	22.6	171.6	85.6	29.9	29.9
LnGrp LOS	D	D	D	F	C	C	F	C	F	F	C	C
Approach Vol, veh/h		178			1128			1153			787	
Approach Delay, s/veh		44.5			66.0			123.7			37.1	
Approach LOS		D			E			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	39.4	31.0	15.8	14.0	36.4	8.0	38.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	33.6	26.4	* 34	9.4	30.6	5.0	54.2				
Max Q Clear Time (g_c+I1), s	7.4	35.6	28.4	7.8	10.5	17.6	3.2	5.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	3.1	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	78.3
HCM 6th LOS	E

Notes

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

Timings  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

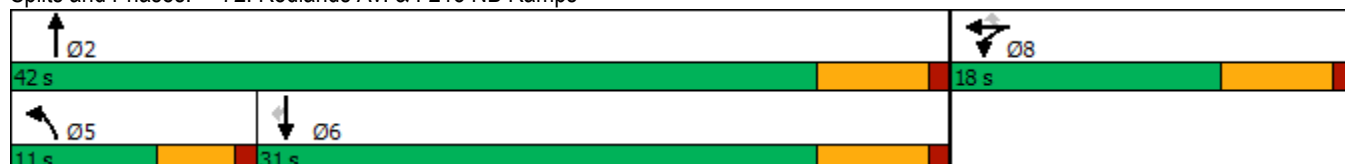


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↷	↶↷	↷↷	↑↑↑	↷
Traffic Volume (vph)	394	1	478	210	557	1183	281
Future Volume (vph)	394	1	478	210	557	1183	281
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8	8		5	2	6	
Permitted Phases			8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	9.5	11.0	31.0	31.0
Total Split (s)	18.0	18.0	18.0	11.0	42.0	31.0	31.0
Total Split (%)	30.0%	30.0%	30.0%	18.3%	70.0%	51.7%	51.7%
Yellow Time (s)	5.0	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	Min	Min	Min

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 57.3  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 72: Redlands Av. & I-215 NB Ramps



HCM 6th Signalized Intersection Summary  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↔	↗	↖↗	↕			↑↑↑	↗
Traffic Volume (veh/h)	0	0	0	394	1	478	210	557	0	0	1183	281
Future Volume (veh/h)	0	0	0	394	1	478	210	557	0	0	1183	281
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				589	0	304	236	626	0	0	1329	209
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				811	0	361	357	1966	0	0	2330	574
Arrive On Green				0.22	0.00	0.22	0.10	0.54	0.00	0.00	0.36	0.36
Sat Flow, veh/h				3619	0	1610	3510	3705	0	0	6802	1610
Grp Volume(v), veh/h				589	0	304	236	626	0	0	1329	209
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1755	1805	0	0	1634	1610
Q Serve(g_s), s				7.8	0.0	9.4	3.4	5.0	0.0	0.0	8.5	5.0
Cycle Q Clear(g_c), s				7.8	0.0	9.4	3.4	5.0	0.0	0.0	8.5	5.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				811	0	361	357	1966	0	0	2330	574
V/C Ratio(X)				0.73	0.00	0.84	0.66	0.32	0.00	0.00	0.57	0.36
Avail Cap(c_a), veh/h				836	0	372	439	2503	0	0	3147	775
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.7	0.0	19.3	22.5	6.5	0.0	0.0	13.5	12.4
Incr Delay (d2), s/veh				3.1	0.0	15.6	2.7	0.1	0.0	0.0	0.2	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	0.0	4.4	1.4	1.3	0.0	0.0	2.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				21.7	0.0	34.8	25.1	6.6	0.0	0.0	13.7	12.7
LnGrp LOS				C	A	C	C	A	A	A	B	B
Approach Vol, veh/h					893			862			1538	
Approach Delay, s/veh					26.2			11.7			13.6	
Approach LOS					C			B			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		34.3			9.8	24.5		17.6				
Change Period (Y+Rc), s		6.0			4.5	6.0		6.0				
Max Green Setting (Gmax), s		36.0			6.5	25.0		12.0				
Max Q Clear Time (g_c+I1), s		7.0			5.4	10.5		11.4				
Green Ext Time (p_c), s		4.5			0.1	8.0		0.3				

Intersection Summary

HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Timings  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	188	0	278	578	357	630	947
Future Volume (vph)	188	0	278	578	357	630	947
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	11.0	11.0	9.5	33.0
Total Split (s)	17.0	17.0	17.0	21.0	21.0	22.0	43.0
Total Split (%)	28.3%	28.3%	28.3%	35.0%	35.0%	36.7%	71.7%
Yellow Time (s)	4.5	4.5	4.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0	4.5	6.0
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	None	Min

Intersection Summary

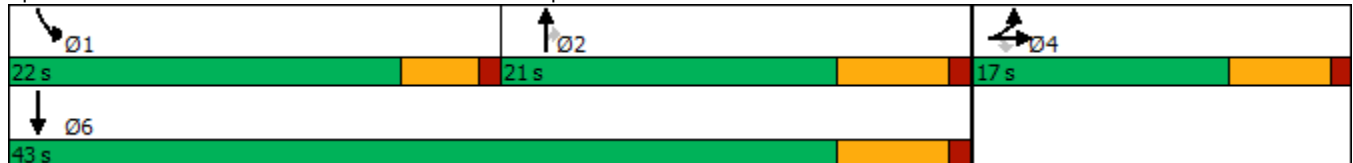
Cycle Length: 60

Actuated Cycle Length: 53.6

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Splits and Phases: 73: Redlands Av. & I-215 SB Ramps



HCM 6th Signalized Intersection Summary  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	0	278	0	0	0	0	578	357	630	947	0
Future Volume (veh/h)	188	0	278	0	0	0	0	578	357	630	947	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	255	0	113				0	622	351	677	1018	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	461	0	205				0	1549	672	922	2182	0
Arrive On Green	0.13	0.00	0.13				0.00	0.24	0.24	0.26	0.60	0.00
Sat Flow, veh/h	3619	0	1610				0	6802	2834	3510	3705	0
Grp Volume(v), veh/h	255	0	113				0	622	351	677	1018	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1634	1417	1755	1805	0
Q Serve(g_s), s	2.8	0.0	2.8				0.0	3.4	4.6	7.6	6.7	0.0
Cycle Q Clear(g_c), s	2.8	0.0	2.8				0.0	3.4	4.6	7.6	6.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	461	0	205				0	1549	672	922	2182	0
V/C Ratio(X)	0.55	0.00	0.55				0.00	0.40	0.52	0.73	0.47	0.00
Avail Cap(c_a), veh/h	970	0	432				0	2285	991	1432	3114	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.6	0.0	17.6				0.0	13.8	14.3	14.4	4.7	0.0
Incr Delay (d2), s/veh	1.0	0.0	2.3				0.0	0.2	0.6	1.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.0				0.0	1.0	1.3	2.5	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	19.9				0.0	14.0	14.9	15.6	4.8	0.0
LnGrp LOS	B	A	B				A	B	B	B	A	A
Approach Vol, veh/h		368						973			1695	
Approach Delay, s/veh		19.0						14.3			9.1	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	15.8	16.2		11.0				31.9				
Change Period (Y+Rc), s	4.5	6.0		5.5				6.0				
Max Green Setting (Gmax), s	17.5	15.0		11.5				37.0				
Max Q Clear Time (g_c+I1), s	9.6	6.6		4.8				8.7				
Green Ext Time (p_c), s	1.7	3.5		0.7				8.1				

Intersection Summary

HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

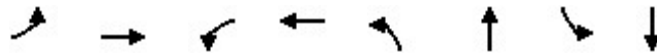
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022

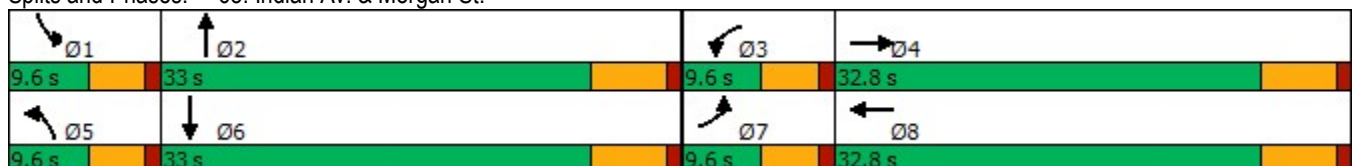


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	18	73	70	130	126	261	12	147
Future Volume (vph)	18	73	70	130	126	261	12	147
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	32.8
Total Split (s)	9.6	32.8	9.6	32.8	9.6	33.0	9.6	33.0
Total Split (%)	11.3%	38.6%	11.3%	38.6%	11.3%	38.8%	11.3%	38.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max
Act Effct Green (s)	5.1	12.9	5.1	18.8	5.1	35.8	5.1	27.6
Actuated g/C Ratio	0.07	0.19	0.07	0.27	0.07	0.52	0.07	0.40
v/c Ratio	0.15	0.24	0.55	0.14	0.99	0.25	0.09	0.13
Control Delay	36.4	12.7	51.9	18.7	116.1	7.7	35.6	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	12.7	51.9	18.7	116.1	7.7	35.6	13.3
LOS	D	B	D	B	F	A	D	B
Approach Delay		15.2		30.0		31.4		14.7
Approach LOS		B		C		C		B

Intersection Summary

Cycle Length: 85  
 Actuated Cycle Length: 69.5  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 25.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 59.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

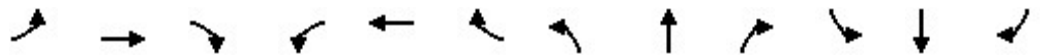
Splits and Phases: 68: Indian Av. & Morgan St.



HCM 6th Signalized Intersection Summary  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	18	73	87	70	130	5	126	261	189	12	147	30
Future Volume (veh/h)	18	73	87	70	130	5	126	261	189	12	147	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	19	75	53	72	134	2	130	269	192	12	152	25
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	40	289	187	101	622	9	138	970	670	27	1286	207
Arrive On Green	0.02	0.14	0.14	0.06	0.17	0.17	0.08	0.48	0.48	0.01	0.41	0.41
Sat Flow, veh/h	1810	2100	1360	1810	3641	54	1810	2042	1410	1810	3106	501
Grp Volume(v), veh/h	19	64	64	72	66	70	130	237	224	12	87	90
Grp Sat Flow(s),veh/h/ln	1810	1805	1655	1810	1805	1890	1810	1805	1646	1810	1805	1802
Q Serve(g_s), s	0.7	2.1	2.3	2.6	2.1	2.1	4.7	5.2	5.4	0.4	1.9	2.0
Cycle Q Clear(g_c), s	0.7	2.1	2.3	2.6	2.1	2.1	4.7	5.2	5.4	0.4	1.9	2.0
Prop In Lane	1.00		0.82	1.00		0.03	1.00		0.86	1.00		0.28
Lane Grp Cap(c), veh/h	40	248	228	101	308	323	138	858	782	27	747	746
V/C Ratio(X)	0.47	0.26	0.28	0.71	0.21	0.22	0.94	0.28	0.29	0.44	0.12	0.12
Avail Cap(c_a), veh/h	138	742	680	138	742	777	138	858	782	138	747	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	25.3	25.4	30.5	23.4	23.4	30.2	10.4	10.5	32.1	11.8	11.9
Incr Delay (d2), s/veh	3.1	0.5	0.7	5.3	0.3	0.3	59.0	0.2	0.2	4.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	0.9	1.2	0.8	0.9	4.1	1.7	1.6	0.2	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	25.9	26.1	35.8	23.8	23.8	89.2	10.6	10.7	36.3	12.2	12.2
LnGrp LOS	C	C	C	D	C	C	F	B	B	D	B	B
Approach Vol, veh/h		147			208			591			189	
Approach Delay, s/veh		27.1			27.9			27.9			13.7	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	37.0	8.3	14.8	9.6	33.0	6.1	17.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	2.4	7.4	4.6	4.3	6.7	4.0	2.7	4.1				
Green Ext Time (p_c), s	0.0	2.4	0.0	0.6	0.0	0.8	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Timings  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↘	↑↑	↗
Traffic Volume (vph)	15	77	38	70	75	144	9	353	35	201	7
Future Volume (vph)	15	77	38	70	75	144	9	353	35	201	7
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	32.8	9.6	32.8	32.8
Total Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	33.0	9.6	33.0	33.0
Total Split (%)	11.3%	38.6%	38.6%	11.3%	38.6%	38.6%	11.3%	38.8%	11.3%	38.8%	38.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.6	13.2	13.2	5.6	19.7	19.7	5.6	21.0	5.6	22.8	22.8
Actuated g/C Ratio	0.11	0.26	0.26	0.11	0.39	0.39	0.11	0.42	0.11	0.45	0.45
v/c Ratio	0.09	0.10	0.08	0.41	0.06	0.23	0.05	0.31	0.21	0.14	0.01
Control Delay	30.3	17.7	0.3	36.7	13.5	4.5	30.2	16.4	31.1	14.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	17.7	0.3	36.7	13.5	4.5	30.2	16.4	31.1	14.4	0.0
LOS	C	B	A	D	B	A	C	B	C	B	A
Approach Delay		14.0			14.6			16.7		16.4	
Approach LOS		B			B			B		B	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 50.6

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 15.7

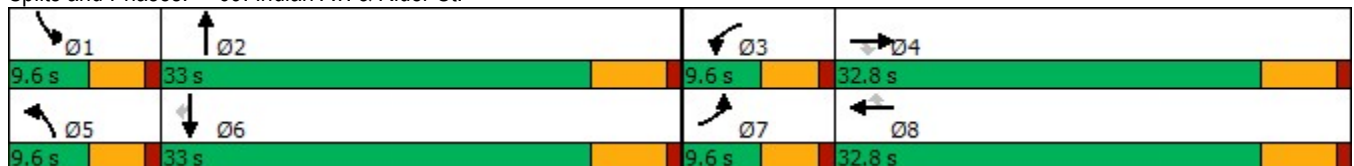
Intersection LOS: B

Intersection Capacity Utilization 39.1%

ICU Level of Service A

Analysis Period (min) 15

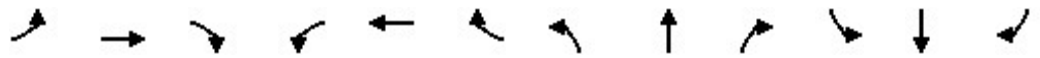
Splits and Phases: 69: Indian Av. & Rider St.



HCM 6th Signalized Intersection Summary  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	15	77	38	70	75	144	9	353	36	35	201	7
Future Volume (veh/h)	15	77	38	70	75	144	9	353	36	35	201	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	17	90	36	81	87	124	10	410	15	41	234	5
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	39	647	289	130	828	369	24	812	30	81	940	419
Arrive On Green	0.02	0.18	0.18	0.07	0.23	0.23	0.01	0.23	0.23	0.04	0.26	0.26
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3552	130	1810	3610	1610
Grp Volume(v), veh/h	17	90	36	81	87	124	10	208	217	41	234	5
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1877	1810	1805	1610
Q Serve(g_s), s	0.4	0.9	0.8	1.9	0.8	2.8	0.2	4.4	4.4	1.0	2.2	0.1
Cycle Q Clear(g_c), s	0.4	0.9	0.8	1.9	0.8	2.8	0.2	4.4	4.4	1.0	2.2	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	39	647	289	130	828	369	24	413	429	81	940	419
V/C Ratio(X)	0.44	0.14	0.12	0.63	0.11	0.34	0.42	0.50	0.51	0.51	0.25	0.01
Avail Cap(c_a), veh/h	207	2229	994	207	2229	994	207	1123	1167	207	2246	1002
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	15.1	15.1	19.7	13.3	14.1	21.4	14.7	14.7	20.4	12.8	12.0
Incr Delay (d2), s/veh	2.9	0.1	0.2	1.8	0.1	0.5	4.4	1.0	0.9	1.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.3	0.7	0.3	0.8	0.1	1.5	1.5	0.4	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	15.2	15.3	21.6	13.4	14.6	25.8	15.7	15.6	22.2	12.9	12.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		143			292			435			280	
Approach Delay, s/veh		16.3			16.2			15.9			14.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	15.8	7.7	13.6	5.2	17.2	5.5	15.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	3.0	6.4	3.9	2.9	2.2	4.2	2.4	4.8				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.5	0.0	1.3	0.0	0.8				

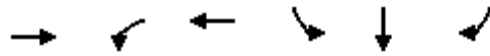
Intersection Summary

HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

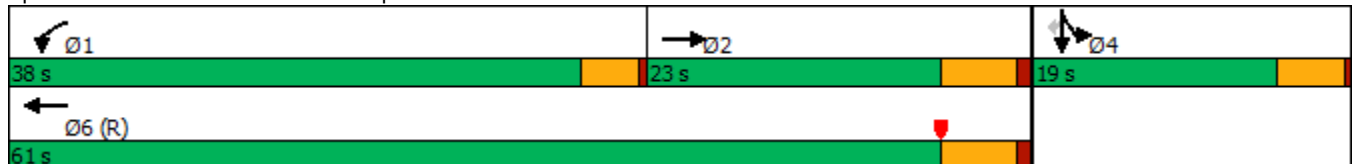


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↖	↑↑	↖	↖	↖
Traffic Volume (vph)	492	744	682	747	0	71
Future Volume (vph)	492	744	682	747	0	71
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	23.0	38.0	61.0	19.0	19.0	19.0
Total Split (%)	28.8%	47.5%	76.3%	23.8%	23.8%	23.8%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 54.5 (68%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: I-215 SB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖	↖	↖
Traffic Volume (veh/h)	0	492	166	744	682	0	0	0	0	747	0	71
Future Volume (veh/h)	0	492	166	744	682	0	0	0	0	747	0	71
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	535	180	809	741	0				812	0	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	580	194	769	2504	0				656	0	289
Arrive On Green	0.00	0.22	0.22	0.71	1.00	0.00				0.18	0.00	0.18
Sat Flow, veh/h	0	2745	888	1810	3705	0				3619	0	1597
Grp Volume(v), veh/h	0	364	351	809	741	0				812	0	77
Grp Sat Flow(s),veh/h/ln	0	1805	1733	1810	1805	0				1810	0	1597
Q Serve(g_s), s	0.0	15.8	15.9	34.0	0.0	0.0				14.5	0.0	3.3
Cycle Q Clear(g_c), s	0.0	15.8	15.9	34.0	0.0	0.0				14.5	0.0	3.3
Prop In Lane	0.00		0.51	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	395	379	769	2504	0				656	0	289
V/C Ratio(X)	0.00	0.92	0.93	1.05	0.30	0.00				1.24	0.00	0.27
Avail Cap(c_a), veh/h	0	395	379	769	2504	0				656	0	289
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.60	0.60	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	30.6	30.6	11.6	0.0	0.0				32.8	0.0	28.2
Incr Delay (d2), s/veh	0.0	29.2	31.0	40.0	0.2	0.0				119.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.4	9.2	13.0	0.1	0.0				16.8	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	59.8	61.6	51.6	0.2	0.0				152.6	0.0	28.7
LnGrp LOS	A	E	E	F	A	A				F	A	C
Approach Vol, veh/h		715			1550						889	
Approach Delay, s/veh		60.7			27.0						141.8	
Approach LOS		E			C						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	38.0	23.0		19.0		61.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	34.0	17.5		14.5		55.5						
Max Q Clear Time (g_c+I1), s	36.0	17.9		16.5		2.0						
Green Ext Time (p_c), s	0.0	0.0		0.0		3.0						

Intersection Summary

HCM 6th Ctrl Delay	67.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



Timings  
7: I-215 NB Ramps & Placentia Av.

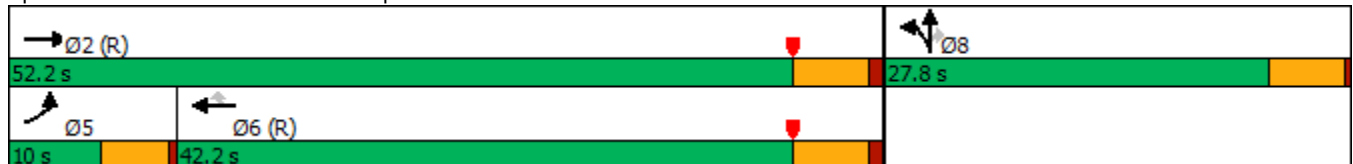


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷	↶	↷	↶	↷	↷
Traffic Volume (vph)	82	1157	1284	945	141	0	411
Future Volume (vph)	82	1157	1284	945	141	0	411
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	31.5	27.5	27.5	10.5	10.5	10.5
Total Split (s)	10.0	52.2	42.2	42.2	27.8	27.8	27.8
Total Split (%)	12.5%	65.3%	52.8%	52.8%	34.8%	34.8%	34.8%
Yellow Time (s)	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	0.5	1.0	1.0	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 NB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗	↘	↗	↗			
Traffic Volume (veh/h)	82	1157	0	0	1284	945	141	0	411	0	0	0
Future Volume (veh/h)	82	1157	0	0	1284	945	141	0	411	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	89	1258	0	0	1396	701	153	0	447			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	115	2107	0	0	1676	745	1031	0	456			
Arrive On Green	0.06	0.58	0.00	0.00	0.46	0.46	0.28	0.00	0.28			
Sat Flow, veh/h	1810	3705	0	0	3705	1605	3619	0	1602			
Grp Volume(v), veh/h	89	1258	0	0	1396	701	153	0	447			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1605	1810	0	1602			
Q Serve(g_s), s	3.9	17.8	0.0	0.0	27.0	33.2	2.5	0.0	22.1			
Cycle Q Clear(g_c), s	3.9	17.8	0.0	0.0	27.0	33.2	2.5	0.0	22.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	115	2107	0	0	1676	745	1031	0	456			
V/C Ratio(X)	0.78	0.60	0.00	0.00	0.83	0.94	0.15	0.00	0.98			
Avail Cap(c_a), veh/h	124	2107	0	0	1676	745	1031	0	456			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	36.9	10.6	0.0	0.0	18.7	20.4	21.4	0.0	28.4			
Incr Delay (d2), s/veh	2.3	0.1	0.0	0.0	5.0	21.3	0.0	0.0	36.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	5.3	0.0	0.0	10.4	14.5	1.0	0.0	12.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	10.8	0.0	0.0	23.7	41.7	21.4	0.0	64.8			
LnGrp LOS	D	B	A	A	C	D	C	A	E			
Approach Vol, veh/h		1347			2097			600				
Approach Delay, s/veh		12.6			29.8			53.8				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		52.2			9.6	42.6		27.8				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		46.7			5.5	36.7		22.8				
Max Q Clear Time (g_c+I1), s		19.8			5.9	35.2		24.1				
Green Ext Time (p_c), s		5.9			0.0	1.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	770.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	127	1115	98	33	1168	50	50	98	20	120	270	360
Future Vol, veh/h	127	1115	98	33	1168	50	50	98	20	120	270	360
Peak Hour Factor	0.92	0.92	0.92	0.68	0.92	0.68	0.92	0.68	0.68	0.68	0.68	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	138	1212	107	49	1270	74	54	144	29	176	397	391
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	926.2	1026.7	34.2	341.7
HCM LOS	F	F	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	83%	0%	92%	0%	96%	0%	43%
Vol Right, %	0%	17%	0%	8%	0%	4%	0%	57%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	118	127	1213	33	1218	120	630
LT Vol	50	0	127	0	33	0	120	0
Through Vol	0	98	0	1115	0	1168	0	270
RT Vol	0	20	0	98	0	50	0	360
Lane Flow Rate	54	174	138	1318	49	1343	176	788
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.155	0.464	0.355	3.187	0.126	3.286	0.453	1.825
Departure Headway (Hd)	19.517	18.819	14.5	13.883	13.704	13.126	13.473	12.458
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	185	194	250	277	264	295	270	300
Service Time	17.217	16.519	12.2	11.583	11.404	10.826	11.173	10.158
HCM Lane V/C Ratio	0.292	0.897	0.552	4.758	0.186	4.553	0.652	2.627
HCM Control Delay	25.8	36.8	25	1020.6	18.4	1063.1	26.9	412.2
HCM Lane LOS	D	E	C	F	C	F	D	F
HCM 95th-tile Q	0.5	2.2	1.5	75	0.4	82.5	2.2	35.4

Timings  
23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022

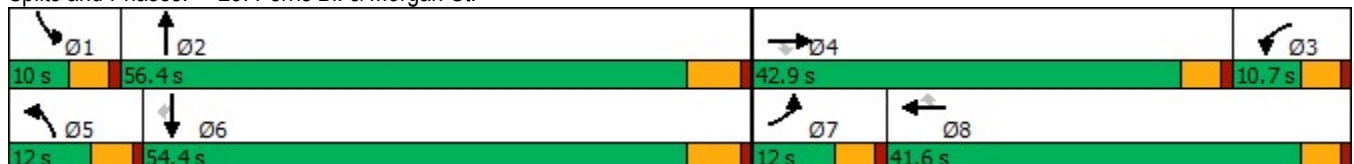


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	49	90	27	33	179	45	43	1064	20	1281	35
Future Volume (vph)	49	90	27	33	179	45	43	1064	20	1281	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	12.0	42.9	42.9	10.7	41.6	41.6	12.0	56.4	10.0	54.4	54.4
Total Split (%)	10.0%	35.8%	35.8%	8.9%	34.7%	34.7%	10.0%	47.0%	8.3%	45.3%	45.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.1	17.5	17.5	9.9	17.9	17.9	7.0	43.8	5.9	41.1	41.1
Actuated g/C Ratio	0.08	0.21	0.21	0.12	0.21	0.21	0.08	0.51	0.07	0.48	0.48
v/c Ratio	0.35	0.13	0.07	0.17	0.47	0.11	0.31	0.43	0.17	0.77	0.04
Control Delay	53.3	35.4	0.3	43.6	37.9	0.5	52.4	15.4	52.3	25.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	35.4	0.3	43.6	37.9	0.5	52.4	15.4	52.3	25.0	0.1
LOS	D	D	A	D	D	A	D	B	D	C	A
Approach Delay		35.1			32.1			16.8		24.7	
Approach LOS		D			C			B		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 85.2  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 22.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 23: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑		↘	↑↑	↗
Traffic Volume (veh/h)	49	90	27	33	179	45	43	1064	14	20	1281	35
Future Volume (veh/h)	49	90	27	33	179	45	43	1064	14	20	1281	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	95	11	35	188	38	45	1120	13	21	1348	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	519	231	82	273	231	76	2668	31	43	1758	767
Arrive On Green	0.05	0.14	0.14	0.05	0.14	0.14	0.04	0.50	0.50	0.02	0.49	0.49
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5285	61	1810	3610	1575
Grp Volume(v), veh/h	52	95	11	35	188	38	45	733	400	21	1348	31
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1888	1810	1805	1575
Q Serve(g_s), s	2.0	1.6	0.3	1.3	6.5	1.4	1.7	9.3	9.3	0.8	21.3	0.7
Cycle Q Clear(g_c), s	2.0	1.6	0.3	1.3	6.5	1.4	1.7	9.3	9.3	0.8	21.3	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	82	519	231	82	273	231	76	1746	953	43	1758	767
V/C Ratio(X)	0.63	0.18	0.05	0.42	0.69	0.16	0.60	0.42	0.42	0.48	0.77	0.04
Avail Cap(c_a), veh/h	193	1989	887	159	1011	857	193	2517	1374	141	2523	1101
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	26.2	16.3	32.3	28.3	26.1	32.7	10.8	10.8	33.5	14.6	9.3
Incr Delay (d2), s/veh	2.9	0.2	0.1	1.3	3.1	0.3	2.8	0.2	0.3	3.1	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.7	0.2	0.6	3.1	0.6	0.7	2.8	3.1	0.4	7.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	26.3	16.4	33.6	31.4	26.4	35.5	11.0	11.1	36.6	15.5	9.4
LnGrp LOS	D	C	B	C	C	C	D	B	B	D	B	A
Approach Vol, veh/h		158			261			1178			1400	
Approach Delay, s/veh		28.7			30.9			12.0			15.7	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	40.9	7.8	14.6	7.5	39.7	7.8	14.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.4	50.6	6.1	38.3	7.4	48.6	7.4	37.0				
Max Q Clear Time (g_c+l1), s	2.8	11.3	3.3	3.6	3.7	23.3	4.0	8.5				
Green Ext Time (p_c), s	0.0	8.3	0.0	0.6	0.0	10.6	0.0	1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			16.2									
HCM 6th LOS			B									

Timings  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

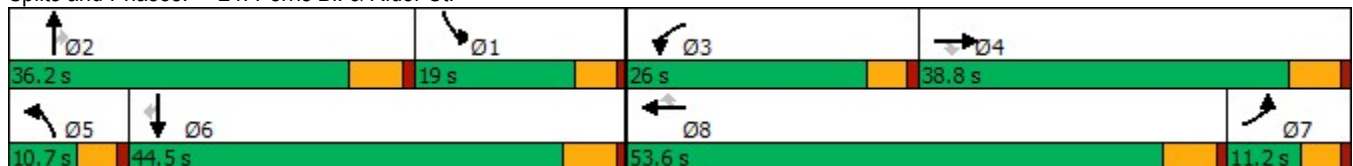
02/18/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	297	92	349	115	251	37	771	298	252	1055	41
Future Volume (vph)	50	297	92	349	115	251	37	771	298	252	1055	41
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	11.2	38.8	38.8	26.0	53.6	53.6	10.7	36.2	36.2	19.0	44.5	44.5
Total Split (%)	9.3%	32.3%	32.3%	21.7%	44.7%	44.7%	8.9%	30.2%	30.2%	15.8%	37.1%	37.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.6	16.0	16.0	21.7	26.6	26.6	5.8	22.9	22.9	14.6	36.2	36.2
Actuated g/C Ratio	0.16	0.17	0.17	0.23	0.28	0.28	0.06	0.24	0.24	0.15	0.38	0.38
v/c Ratio	0.18	0.52	0.24	0.90	0.12	0.42	0.36	0.65	0.50	0.96	0.57	0.06
Control Delay	37.1	39.7	1.6	64.1	32.0	6.4	57.5	36.4	7.0	89.1	27.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	39.7	1.6	64.1	32.0	6.4	57.5	36.4	7.0	89.1	27.0	0.2
LOS	D	D	A	E	C	A	E	D	A	F	C	A
Approach Delay		31.4			38.7			29.2			37.8	
Approach LOS		C			D			C			D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 34.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.7%  
 ICU Level of Service D  
 Analysis Period (min) 15

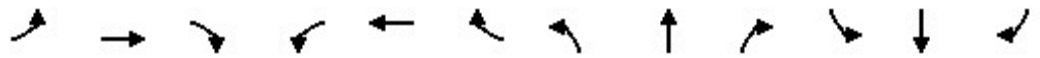
Splits and Phases: 24: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (veh/h)	50	297	92	349	115	251	37	771	298	252	1055	41
Future Volume (veh/h)	50	297	92	349	115	251	37	771	298	252	1055	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	309	49	364	120	195	39	803	227	262	1099	27
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	323	487	216	400	590	263	63	1182	366	297	1923	590
Arrive On Green	0.18	0.13	0.13	0.22	0.16	0.16	0.04	0.23	0.23	0.16	0.37	0.37
Sat Flow, veh/h	1810	3610	1603	1810	3610	1607	1810	5187	1606	1810	5187	1590
Grp Volume(v), veh/h	52	309	49	364	120	195	39	803	227	262	1099	27
Grp Sat Flow(s),veh/h/ln	1810	1805	1603	1810	1805	1607	1810	1729	1606	1810	1729	1590
Q Serve(g_s), s	2.1	7.1	2.4	17.1	2.5	10.1	1.9	12.3	6.2	12.3	14.8	0.5
Cycle Q Clear(g_c), s	2.1	7.1	2.4	17.1	2.5	10.1	1.9	12.3	6.2	12.3	14.8	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	323	487	216	400	590	263	63	1182	366	297	1923	590
V/C Ratio(X)	0.16	0.63	0.23	0.91	0.20	0.74	0.62	0.68	0.62	0.88	0.57	0.05
Avail Cap(c_a), veh/h	323	1365	606	444	1977	880	126	1807	559	299	2300	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	35.7	33.7	33.2	31.6	34.8	41.5	30.8	9.5	35.6	21.9	4.5
Incr Delay (d2), s/veh	0.1	1.4	0.5	20.4	0.2	4.1	3.6	0.7	1.7	24.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.0	0.9	9.2	1.0	4.0	0.9	4.9	3.9	7.1	5.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	37.1	34.2	53.6	31.8	38.9	45.1	31.5	11.2	59.8	22.2	4.5
LnGrp LOS	C	D	C	D	C	D	D	C	B	E	C	A
Approach Vol, veh/h		410			679			1069			1388	
Approach Delay, s/veh		35.9			45.5			27.7			28.9	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.1	25.7	23.9	17.6	7.7	38.2	21.4	20.1				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	14.4	* 30	21.4	33.0	6.1	38.7	6.6	* 48				
Max Q Clear Time (g_c+I1), s	14.3	14.3	19.1	9.1	3.9	16.8	4.1	12.1				
Green Ext Time (p_c), s	0.0	5.3	0.2	1.9	0.0	7.5	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Notes

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

Timings  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022

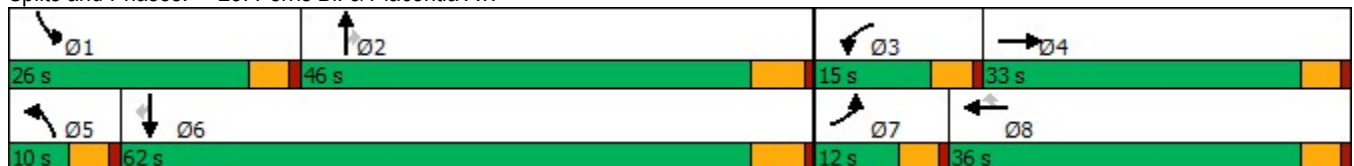


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	183	88	109	123	155	949	123	165	1297	24
Future Volume (vph)	31	183	88	109	123	155	949	123	165	1297	24
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.6	9.6	34.6	34.6	9.6	36.8	36.8	9.6	34.8	34.8
Total Split (s)	12.0	33.0	15.0	36.0	36.0	10.0	46.0	46.0	26.0	62.0	62.0
Total Split (%)	10.0%	27.5%	12.5%	30.0%	30.0%	8.3%	38.3%	38.3%	21.7%	51.7%	51.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.4	25.2	9.1	32.5	32.5	5.5	40.3	40.3	15.5	50.2	50.2
Actuated g/C Ratio	0.06	0.23	0.08	0.30	0.30	0.05	0.37	0.37	0.14	0.46	0.46
v/c Ratio	0.33	0.88	0.65	0.22	0.23	1.91	0.80	0.20	0.72	0.87	0.03
Control Delay	62.2	60.3	72.7	33.9	5.4	477.9	38.0	5.2	63.2	34.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	60.3	72.7	33.9	5.4	477.9	38.0	5.2	63.2	34.5	0.1
LOS	E	E	E	C	A	F	D	A	E	C	A
Approach Delay		60.4		33.6			90.2			37.1	
Approach LOS		E		C			F			D	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 110	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.91	
Intersection Signal Delay: 58.4	Intersection LOS: E
Intersection Capacity Utilization 84.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 25: Perris Bl. & Placentia Av.





HCM 6th Signalized Intersection Summary  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	183	156	88	109	123	155	949	123	165	1297	24
Future Volume (veh/h)	31	183	156	88	109	123	155	949	123	165	1297	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	203	106	98	121	20	172	1054	70	183	1441	21
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	236	123	125	454	385	100	1477	659	218	1712	763
Arrive On Green	0.03	0.20	0.20	0.07	0.24	0.24	0.06	0.41	0.41	0.12	0.47	0.47
Sat Flow, veh/h	1810	1176	614	1810	1900	1610	1810	3610	1610	1810	3610	1608
Grp Volume(v), veh/h	34	0	309	98	121	20	172	1054	70	183	1441	21
Grp Sat Flow(s),veh/h/ln	1810	0	1790	1810	1900	1610	1810	1805	1610	1810	1805	1608
Q Serve(g_s), s	1.8	0.0	16.3	5.2	5.1	0.9	5.4	23.8	2.6	9.7	34.1	0.7
Cycle Q Clear(g_c), s	1.8	0.0	16.3	5.2	5.1	0.9	5.4	23.8	2.6	9.7	34.1	0.7
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	0	360	125	454	385	100	1477	659	218	1712	763
V/C Ratio(X)	0.61	0.00	0.86	0.79	0.27	0.05	1.72	0.71	0.11	0.84	0.84	0.03
Avail Cap(c_a), veh/h	137	0	520	193	610	517	100	1485	662	396	2075	925
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	0.0	37.7	44.8	30.2	28.6	46.2	24.1	17.8	42.1	22.5	13.7
Incr Delay (d2), s/veh	4.0	0.0	9.6	4.9	0.3	0.1	362.7	1.6	0.1	3.4	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	8.1	2.5	2.4	0.4	12.4	9.6	1.0	4.3	13.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	0.0	47.3	49.7	30.5	28.7	408.9	25.7	17.9	45.5	25.3	13.7
LnGrp LOS	D	A	D	D	C	C	F	C	B	D	C	B
Approach Vol, veh/h		343			239			1296			1645	
Approach Delay, s/veh		47.6			38.2			76.2			27.4	
Approach LOS		D			D			E			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.4	45.8	11.3	24.3	10.0	52.2	7.6	28.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	21.4	40.2	10.4	28.4	5.4	56.2	7.4	31.4				
Max Q Clear Time (g_c+I1), s	11.7	25.8	7.2	18.3	7.4	36.1	3.8	7.1				
Green Ext Time (p_c), s	0.2	6.1	0.0	1.4	0.0	10.2	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			48.0									
HCM 6th LOS			D									

Timings

30: Redlands Av. & Ramona Exwy.

01/25/2021

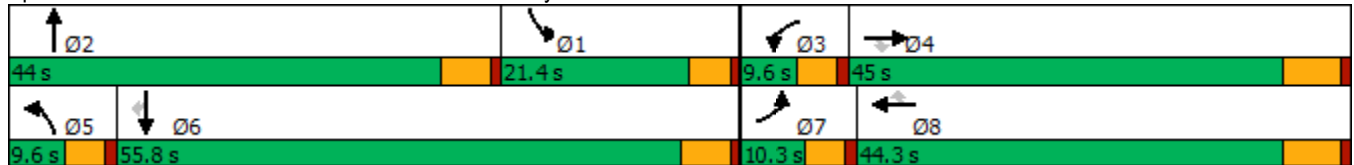


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑	↖	↑	↗
Traffic Volume (vph)	71	3324	59	57	2353	386	72	78	392	41	85
Future Volume (vph)	71	3324	59	57	2353	386	72	78	392	41	85
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	27.2	9.6	43.4	9.6	23.4	23.4
Total Split (s)	10.3	45.0	45.0	9.6	44.3	44.3	9.6	44.0	21.4	55.8	55.8
Total Split (%)	8.6%	37.5%	37.5%	8.0%	36.9%	36.9%	8.0%	36.7%	17.8%	46.5%	46.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 99.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	3324	59	57	2353	386	72	78	130	392	41	85
Future Volume (veh/h)	71	3324	59	57	2353	386	72	78	130	392	41	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	3613	59	62	2558	405	78	85	82	426	45	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	99	2177	674	80	2122	659	97	110	106	326	492	417
Arrive On Green	0.05	0.42	0.42	0.04	0.41	0.41	0.05	0.12	0.12	0.18	0.26	0.26
Sat Flow, veh/h	1810	5187	1606	1810	5187	1610	1810	889	857	1810	1900	1610
Grp Volume(v), veh/h	77	3613	59	62	2558	405	78	0	167	426	45	78
Grp Sat Flow(s),veh/h/ln	1810	1729	1606	1810	1729	1610	1810	0	1746	1810	1900	1610
Q Serve(g_s), s	3.9	39.1	2.1	3.2	38.1	9.0	4.0	0.0	8.6	16.8	1.7	3.5
Cycle Q Clear(g_c), s	3.9	39.1	2.1	3.2	38.1	9.0	4.0	0.0	8.6	16.8	1.7	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	99	2177	674	80	2122	659	97	0	216	326	492	417
V/C Ratio(X)	0.78	1.66	0.09	0.77	1.21	0.61	0.80	0.00	0.77	1.31	0.09	0.19
Avail Cap(c_a), veh/h	111	2177	674	97	2122	659	97	0	724	326	1028	871
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	27.0	16.3	44.0	27.5	5.1	43.6	0.0	39.5	38.2	26.2	26.9
Incr Delay (d2), s/veh	22.6	299.0	0.1	21.3	97.2	1.7	34.6	0.0	5.8	157.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	74.3	0.7	1.8	32.9	5.4	2.7	0.0	3.9	21.4	0.7	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	326.0	16.3	65.4	124.7	6.8	78.2	0.0	45.3	196.0	26.3	27.1
LnGrp LOS	E	F	B	E	F	A	E	A	D	F	C	C
Approach Vol, veh/h		3749			3025			245			549	
Approach Delay, s/veh		315.8			107.7			55.8			158.1	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.2	16.9	8.7	45.3	9.6	29.5	9.7	44.3				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	16.8	* 39	5.0	38.8	5.0	50.4	5.7	38.1				
Max Q Clear Time (g_c+I1), s	18.8	10.6	5.2	41.1	6.0	5.5	5.9	40.1				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	212.8
HCM 6th LOS	F

Notes

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

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷			↶	↷
Traffic Vol, veh/h	63	8	5	4	19	7	13	151	0	7	70	50
Future Vol, veh/h	63	8	5	4	19	7	13	151	0	7	70	50
Peak Hour Factor	0.73	0.92	0.73	0.92	0.92	0.92	0.73	0.73	0.92	0.92	0.73	0.73
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	86	9	7	4	21	8	18	207	0	8	96	68
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	9.5	8.5	9.8	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	1%	100%	0%	100%	0%	9%	0%
Vol Thru, %	0%	99%	0%	62%	0%	73%	91%	0%
Vol Right, %	0%	0%	0%	38%	0%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	152	63	13	4	26	77	50
LT Vol	12	1	63	0	4	0	7	0
Through Vol	0	151	0	8	0	19	70	0
RT Vol	0	0	0	5	0	7	0	50
Lane Flow Rate	16	209	86	16	4	28	103	68
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.025	0.292	0.144	0.023	0.007	0.042	0.148	0.084
Departure Headway (Hd)	5.54	5.042	5.994	5.22	6.095	5.401	5.139	4.389
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	646	714	597	684	586	660	698	815
Service Time	3.272	2.774	3.739	2.964	3.849	3.155	2.872	2.123
HCM Lane V/C Ratio	0.025	0.293	0.144	0.023	0.007	0.042	0.148	0.083
HCM Control Delay	8.4	9.9	9.8	8.1	8.9	8.4	8.8	7.5
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	1.2	0.5	0.1	0	0.1	0.5	0.3

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

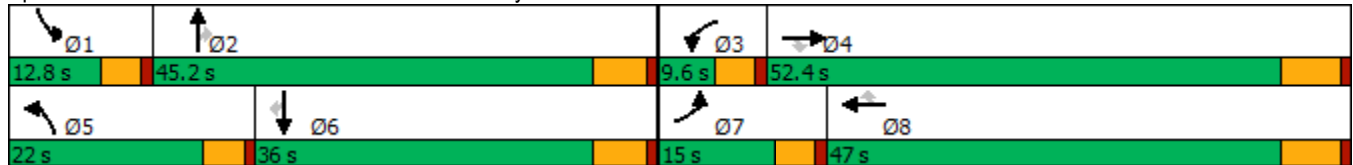
01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	484	2902	517	48	2114	389	268	391	58	447	634	414
Future Volume (vph)	484	2902	517	48	2114	389	268	391	58	447	634	414
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	15.0	52.4	52.4	9.6	47.0	47.0	22.0	45.2	45.2	12.8	36.0	36.0
Total Split (%)	12.5%	43.7%	43.7%	8.0%	39.2%	39.2%	18.3%	37.7%	37.7%	10.7%	30.0%	30.0%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated









































Splits and Phases: 39: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	  	  		  	 		  	  	 		  	  
Traffic Volume (veh/h)	484	2902	517	48	2114	389	268	391	58	447	634	414
Future Volume (veh/h)	484	2902	517	48	2114	389	268	391	58	447	634	414
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	494	2961	0	49	2157	290	273	399	58	456	647	248
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	364	2427		146	1465	653	361	925	413	292	854	375
Arrive On Green	0.10	0.47	0.00	0.04	0.41	0.41	0.10	0.26	0.26	0.08	0.24	0.24
Sat Flow, veh/h	3510	5187	1610	3510	3610	1610	3510	3610	1610	3510	3610	1586
Grp Volume(v), veh/h	494	2961	0	49	2157	290	273	399	58	456	647	248
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1805	1610	1755	1805	1610	1755	1805	1586
Q Serve(g_s), s	11.0	49.6	0.0	1.4	43.0	13.8	8.0	9.8	2.9	8.8	17.7	15.0
Cycle Q Clear(g_c), s	11.0	49.6	0.0	1.4	43.0	13.8	8.0	9.8	2.9	8.8	17.7	15.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	364	2427		146	1465	653	361	925	413	292	854	375
V/C Ratio(X)	1.36	1.22		0.33	1.47	0.44	0.76	0.43	0.14	1.56	0.76	0.66
Avail Cap(c_a), veh/h	364	2427		186	1465	653	596	1404	626	292	1090	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	28.2	0.0	49.3	31.5	22.8	46.2	32.9	30.4	48.6	37.6	36.6
Incr Delay (d2), s/veh	177.0	102.9	0.0	0.5	216.3	0.5	1.2	0.3	0.2	269.9	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	40.8	0.0	0.6	60.6	4.8	3.4	4.1	1.1	14.7	7.7	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	224.5	131.1	0.0	49.8	247.8	23.3	47.5	33.3	30.5	318.5	40.0	38.9
LnGrp LOS	F	F		D	F	C	D	C	C	F	D	D
Approach Vol, veh/h		3455	A		2496			730			1351	
Approach Delay, s/veh		144.5			217.8			38.4			133.8	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	31.2	8.4	53.6	14.9	29.1	15.0	47.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	8.2	39.4	5.0	45.9	17.4	30.2	10.4	40.5				
Max Q Clear Time (g_c+I1), s	10.8	11.8	3.4	51.6	10.0	19.7	13.0	45.0				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.0	0.3	3.6	0.0	0.0				

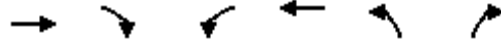
Intersection Summary

HCM 6th Ctrl Delay	155.8
HCM 6th LOS	F

Notes

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

Timings  
43: Bradley St. & Ramona Expy

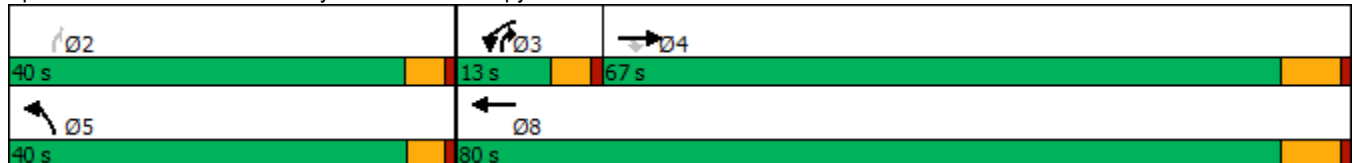


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø2
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓	
Traffic Volume (vph)	2463	235	31	1345	90	16	
Future Volume (vph)	2463	235	31	1345	90	16	
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov	
Protected Phases	4		3	8	5	3	2
Permitted Phases		4				2	
Detector Phase	4	4	3	8	5	3	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	38.5	38.5	9.6	24.5	9.5	9.6	22.6
Total Split (s)	67.0	67.0	13.0	80.0	40.0	13.0	40.0
Total Split (%)	55.8%	55.8%	10.8%	66.7%	33.3%	10.8%	33%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.5	4.6	
Lead/Lag	Lag	Lag	Lead			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 86.9  
 Natural Cycle: 140  
 Control Type: Actuated-Uncoordinated

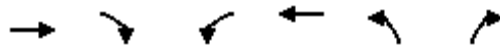
Splits and Phases: 43: Bradley St. & Ramona Expy



HCM 6th Signalized Intersection Summary  
43: Bradley St. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)

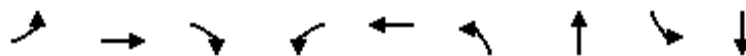
01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (veh/h)	2463	235	31	1345	90	16
Future Volume (veh/h)	2463	235	31	1345	90	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2593	227	33	1416	95	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2576	1148	58	2886	128	165
Arrive On Green	0.71	0.71	0.03	0.80	0.07	0.07
Sat Flow, veh/h	3705	1609	1810	3705	1810	1610
Grp Volume(v), veh/h	2593	227	33	1416	95	5
Grp Sat Flow(s),veh/h/ln	1805	1609	1810	1805	1810	1610
Q Serve(g_s), s	60.5	4.0	1.5	11.0	4.4	0.2
Cycle Q Clear(g_c), s	60.5	4.0	1.5	11.0	4.4	0.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2576	1148	58	2886	128	165
V/C Ratio(X)	1.01	0.20	0.57	0.49	0.74	0.03
Avail Cap(c_a), veh/h	2576	1148	179	3129	758	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	4.1	40.5	2.8	38.6	34.3
Incr Delay (d2), s/veh	19.4	0.1	3.3	0.1	8.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.3	0.8	0.7	0.9	2.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.5	4.1	43.8	2.9	46.8	34.3
LnGrp LOS	F	A	D	A	D	C
Approach Vol, veh/h	2820			1449	100	
Approach Delay, s/veh	29.3			3.9	46.2	
Approach LOS	C			A	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		10.5	7.3	67.0		74.3
Change Period (Y+Rc), s		4.5	4.6	6.5		6.5
Max Green Setting (Gmax), s		35.5	8.4	60.5		73.5
Max Q Clear Time (g_c+I1), s		6.4	3.5	62.5		13.0
Green Ext Time (p_c), s		0.3	0.0	0.0		13.2
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.3			
HCM 6th LOS			C			



Timings  
46: Dunlap Dr. & Nuevo Rd.

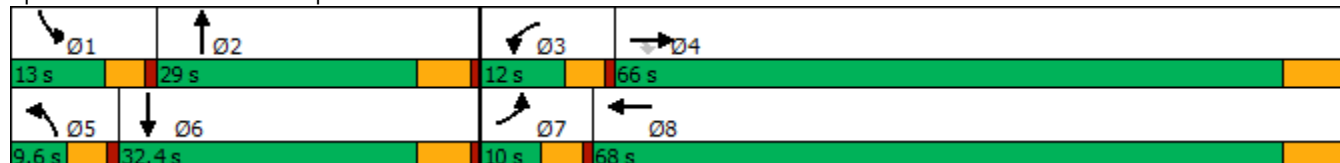


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	73	1618	7	167	1182	7	40	189	26
Future Volume (vph)	73	1618	7	167	1182	7	40	189	26
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.5	37.5	9.6	24.5	9.6	23.8	9.6	29.8
Total Split (s)	10.0	66.0	66.0	12.0	68.0	9.6	29.0	13.0	32.4
Total Split (%)	8.3%	55.0%	55.0%	10.0%	56.7%	8.0%	24.2%	10.8%	27.0%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6	6.5	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.4  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

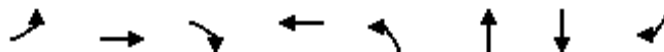


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1618	7	167	1182	126	7	40	63	189	26	54
Future Volume (veh/h)	73	1618	7	167	1182	126	7	40	63	189	26	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	2048	6	211	1496	144	9	51	79	239	33	50
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	1054	893	125	978	94	20	66	102	142	112	170
Arrive On Green	0.05	0.55	0.55	0.07	0.57	0.57	0.01	0.10	0.10	0.08	0.17	0.17
Sat Flow, veh/h	1810	1900	1610	1810	1706	164	1810	672	1041	1810	680	1031
Grp Volume(v), veh/h	92	2048	6	211	0	1640	9	0	130	239	0	83
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1870	1810	0	1713	1810	0	1711
Q Serve(g_s), s	5.4	59.5	0.2	7.4	0.0	61.5	0.5	0.0	8.0	8.4	0.0	4.6
Cycle Q Clear(g_c), s	5.4	59.5	0.2	7.4	0.0	61.5	0.5	0.0	8.0	8.4	0.0	4.6
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.61	1.00		0.60
Lane Grp Cap(c), veh/h	91	1054	893	125	0	1072	20	0	168	142	0	283
V/C Ratio(X)	1.01	1.94	0.01	1.69	0.00	1.53	0.45	0.00	0.78	1.69	0.00	0.29
Avail Cap(c_a), veh/h	91	1054	893	125	0	1072	84	0	370	142	0	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.0	23.9	10.7	50.0	0.0	22.9	52.7	0.0	47.2	49.5	0.0	39.3
Incr Delay (d2), s/veh	97.1	428.2	0.0	342.9	0.0	243.2	5.9	0.0	7.5	337.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	147.3	0.1	15.1	0.0	94.3	0.3	0.0	3.6	17.0	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	148.1	452.1	10.7	392.8	0.0	266.1	58.6	0.0	54.7	387.3	0.0	39.9
LnGrp LOS	F	F	B	F	A	F	E	A	D	F	A	D
Approach Vol, veh/h		2146			1851			139				322
Approach Delay, s/veh		437.9			280.5			55.0				297.7
Approach LOS		F			F			D				F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	16.3	12.0	66.0	5.8	23.5	10.0	68.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	8.4	23.2	7.4	59.5	5.0	26.6	5.4	61.5				
Max Q Clear Time (g_c+I1), s	10.4	10.0	9.4	61.5	2.5	6.6	7.4	63.5				
Green Ext Time (p_c), s	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	350.5
HCM 6th LOS	F

Timings  
47: Ramona Expy & Rider St.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖↗	↕↔	↕↕	↗	
Traffic Volume (vph)	43	0	377	0	383	2110	2701	112	
Future Volume (vph)	43	0	377	0	383	2110	2701	112	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4						6
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	42.0	42.0	42.0	42.0	21.0	68.4	57.0	57.0	9.6
Total Split (%)	35.0%	35.0%	35.0%	35.0%	17.5%	57.0%	47.5%	47.5%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 101.6  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 47: Ramona Expy & Rider St.



HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗		↖	↕	↗
Traffic Volume (veh/h)	43	0	377	0	0	1	383	2110	1	0	2701	112
Future Volume (veh/h)	43	0	377	0	0	1	383	2110	1	0	2701	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	0	285	0	0	1	407	2245	1	0	2873	93
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	366	0	329	0	0	330	477	2535	1	2	1815	809
Arrive On Green	0.20	0.00	0.20	0.00	0.00	0.20	0.14	0.68	0.68	0.00	0.50	0.50
Sat Flow, veh/h	1435	0	1605	0	0	1610	3510	3703	2	1810	3610	1609
Grp Volume(v), veh/h	46	0	285	0	0	1	407	1094	1152	0	2873	93
Grp Sat Flow(s),veh/h/ln	1435	0	1605	0	0	1610	1755	1805	1900	1810	1805	1609
Q Serve(g_s), s	2.6	0.0	17.2	0.0	0.0	0.0	11.4	48.8	48.8	0.0	50.5	3.1
Cycle Q Clear(g_c), s	2.7	0.0	17.2	0.0	0.0	0.0	11.4	48.8	48.8	0.0	50.5	3.1
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	366	0	329	0	0	330	477	1236	1300	2	1815	809
V/C Ratio(X)	0.13	0.00	0.87	0.00	0.00	0.00	0.85	0.89	0.89	0.00	1.58	0.11
Avail Cap(c_a), veh/h	607	0	598	0	0	600	573	1236	1300	90	1815	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	38.6	0.0	0.0	31.8	42.4	12.7	12.7	0.0	25.0	13.2
Incr Delay (d2), s/veh	0.2	0.0	6.9	0.0	0.0	0.0	9.0	8.0	7.7	0.0	264.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	7.2	0.0	0.0	0.0	5.2	16.1	16.8	0.0	84.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	45.5	0.0	0.0	31.8	51.4	20.7	20.4	0.0	289.8	13.2
LnGrp LOS	C	A	D	A	A	C	D	C	C	A	F	B
Approach Vol, veh/h		331			1			2653			2966	
Approach Delay, s/veh		43.7			31.8			25.3			281.2	
Approach LOS		D			C			C			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	75.2		25.2	18.2	57.0		25.2				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	61.9		37.4	16.4	50.5		37.4				
Max Q Clear Time (g_c+I1), s	0.0	50.8		19.2	13.4	52.5		2.0				
Green Ext Time (p_c), s	0.0	9.4		1.1	0.3	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	153.8
HCM 6th LOS	F

Timings  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

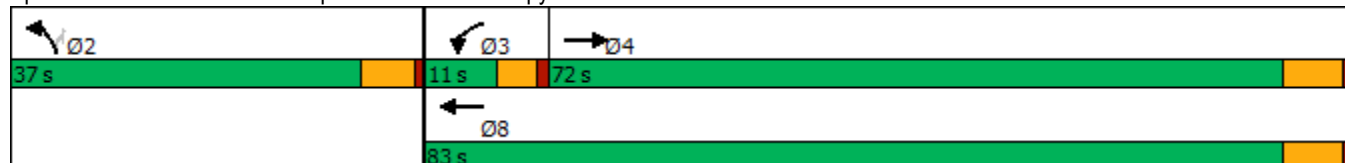


Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↵	↑↑	↵↵	↵
Traffic Volume (vph)	2763	156	1728	766	216
Future Volume (vph)	2763	156	1728	766	216
Turn Type	NA	Prot	NA	Prot	Perm
Protected Phases	4	3	8	2	
Permitted Phases					2
Detector Phase	4	3	8	2	2
Switch Phase					
Minimum Initial (s)	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	9.6	16.5	15.8	15.8
Total Split (s)	72.0	11.0	83.0	37.0	37.0
Total Split (%)	60.0%	9.2%	69.2%	30.8%	30.8%
Yellow Time (s)	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.6	6.5	5.8	5.8
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Max	None	Max	None	None

Intersection Summary

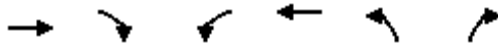
Cycle Length: 120  
 Actuated Cycle Length: 119.4  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 48: Antelope Rd. & Ramona Expy



HCM 6th Signalized Intersection Summary  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘↘	↘
Traffic Volume (veh/h)	2763	315	156	1728	766	216
Future Volume (veh/h)	2763	315	156	1728	766	216
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3003	342	170	1878	833	235
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1799	201	97	2317	895	410
Arrive On Green	0.55	0.55	0.05	0.64	0.25	0.25
Sat Flow, veh/h	3368	366	1810	3705	3510	1610
Grp Volume(v), veh/h	1630	1715	170	1878	833	235
Grp Sat Flow(s),veh/h/ln	1805	1834	1810	1805	1755	1610
Q Serve(g_s), s	65.5	65.5	6.4	46.3	27.6	15.2
Cycle Q Clear(g_c), s	65.5	65.5	6.4	46.3	27.6	15.2
Prop In Lane		0.20	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	992	1008	97	2317	895	410
V/C Ratio(X)	1.64	1.70	1.75	0.81	0.93	0.57
Avail Cap(c_a), veh/h	992	1008	97	2317	919	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	26.8	56.4	15.9	43.4	38.7
Incr Delay (d2), s/veh	293.8	320.1	376.1	3.2	15.4	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	105.0	114.0	13.0	16.4	13.4	5.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	320.7	346.9	432.5	19.1	58.8	40.5
LnGrp LOS	F	F	F	B	E	D
Approach Vol, veh/h	3345			2048	1068	
Approach Delay, s/veh	334.1			53.4	54.8	
Approach LOS	F			D	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		36.2	11.0	72.0		83.0
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		31.2	6.4	65.5		76.5
Max Q Clear Time (g_c+I1), s		29.6	8.4	67.5		48.3
Green Ext Time (p_c), s		0.8	0.0	0.0		16.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			199.0			
HCM 6th LOS			F			

Timings  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

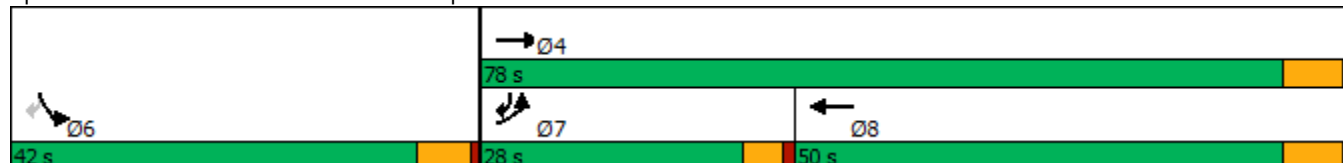


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↶	↶	↶	↶	↶
Traffic Volume (vph)	232	1451	937	262	536
Future Volume (vph)	232	1451	937	262	536
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	28.0	78.0	50.0	42.0	28.0
Total Split (%)	23.3%	65.0%	41.7%	35.0%	23.3%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 105.7  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 51: Nuevo Rd. & Antelope Rd.



HCM 6th Signalized Intersection Summary  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↗	↔	↖	↘	↖	
Traffic Volume (veh/h)	232	1451	937	128	262	536	
Future Volume (veh/h)	232	1451	937	128	262	536	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	252	1577	1018	139	285	583	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	280	1132	659	90	546	735	
Arrive On Green	0.15	0.60	0.40	0.40	0.30	0.30	
Sat Flow, veh/h	1810	1900	1636	223	1810	1610	
Grp Volume(v), veh/h	252	1577	0	1157	285	583	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1860	1810	1610	
Q Serve(g_s), s	16.4	71.5	0.0	48.3	15.7	36.2	
Cycle Q Clear(g_c), s	16.4	71.5	0.0	48.3	15.7	36.2	
Prop In Lane	1.00			0.12	1.00	1.00	
Lane Grp Cap(c), veh/h	280	1132	0	749	546	735	
V/C Ratio(X)	0.90	1.39	0.00	1.54	0.52	0.79	
Avail Cap(c_a), veh/h	353	1132	0	749	546	735	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	49.8	24.2	0.0	35.8	34.7	27.8	
Incr Delay (d2), s/veh	19.2	182.3	0.0	251.7	0.9	6.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	8.6	84.5	0.0	72.6	6.8	31.2	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	69.1	206.6	0.0	287.5	35.6	33.8	
LnGrp LOS	E	F	A	F	D	C	
Approach Vol, veh/h		1829	1157		868		
Approach Delay, s/veh		187.6	287.5		34.4		
Approach LOS		F	F		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				78.0	42.0	23.2	54.8
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				71.5	36.2	23.4	43.5
Max Q Clear Time (g_c+I1), s				73.5	38.2	18.4	50.3
Green Ext Time (p_c), s				0.0	0.0	0.2	0.0
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			183.1				
HCM 6th LOS			F				



Intersection						
Int Delay, s/veh	75.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	312	503	307	66	76	284
Future Vol, veh/h	312	503	307	66	76	284
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	335	541	330	71	82	305

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	401	0	-	0	1577 366
Stage 1	-	-	-	-	366 -
Stage 2	-	-	-	-	1211 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1169	-	-	-	122 684
Stage 1	-	-	-	-	706 -
Stage 2	-	-	-	-	285 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1169	-	-	-	~ 72 684
Mov Cap-2 Maneuver	-	-	-	-	~ 72 -
Stage 1	-	-	-	-	417 -
Stage 2	-	-	-	-	285 -

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	\$ 316
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1169	-	-	-	245
HCM Lane V/C Ratio	0.287	-	-	-	1.58
HCM Control Delay (s)	9.3	0	-	-	\$ 316
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	1.2	-	-	-	23.8

Notes  
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	232	822	602	22	14	129
Future Vol, veh/h	232	822	602	22	14	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	249	884	647	24	15	139

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	671	0	-	0	2041 659
Stage 1	-	-	-	-	659 -
Stage 2	-	-	-	-	1382 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	929	-	-	-	63 467
Stage 1	-	-	-	-	518 -
Stage 2	-	-	-	-	235 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	929	-	-	-	46 467
Mov Cap-2 Maneuver	-	-	-	-	152 -
Stage 1	-	-	-	-	379 -
Stage 2	-	-	-	-	235 -

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	20.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	929	-	-	-	388
HCM Lane V/C Ratio	0.269	-	-	-	0.396
HCM Control Delay (s)	10.3	-	-	-	20.2
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	1.1	-	-	-	1.9

Timings

Stoneridge Commerce Center SP (JN 13265)

71: Redlands Av. & San Jacinto Av.

01/25/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↑↗
Traffic Volume (vph)	93	67	198	815	70	72	221	654	1128	123	463
Future Volume (vph)	93	67	198	815	70	72	221	654	1128	123	463
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	35.8	9.6	35.8
Total Split (s)	9.6	38.6	38.6	24.0	53.0	53.0	17.0	45.4	45.4	12.0	40.4
Total Split (%)	8.0%	32.2%	32.2%	20.0%	44.2%	44.2%	14.2%	37.8%	37.8%	10.0%	33.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min

Intersection Summary

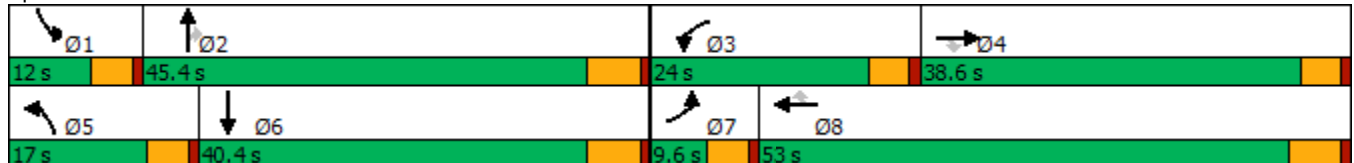
Cycle Length: 120

Actuated Cycle Length: 100.8

Natural Cycle: 115




























Control Type: Actuated-Uncoordinated

Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	93	67	198	815	70	72	221	654	1128	123	463	77
Future Volume (veh/h)	93	67	198	815	70	72	221	654	1128	123	463	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	100	72	153	876	75	64	238	703	999	132	498	70
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	166	230	195	686	512	428	226	1441	629	135	1109	155
Arrive On Green	0.05	0.12	0.12	0.20	0.27	0.27	0.12	0.40	0.40	0.07	0.35	0.35
Sat Flow, veh/h	3510	1900	1610	3510	1900	1590	1810	3610	1576	1810	3180	445
Grp Volume(v), veh/h	100	72	153	876	75	64	238	703	999	132	282	286
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1590	1810	1805	1576	1810	1805	1820
Q Serve(g_s), s	2.8	3.4	9.2	19.4	3.0	3.0	12.4	14.4	39.6	7.2	12.0	12.1
Cycle Q Clear(g_c), s	2.8	3.4	9.2	19.4	3.0	3.0	12.4	14.4	39.6	7.2	12.0	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	166	230	195	686	512	428	226	1441	629	135	629	635
V/C Ratio(X)	0.60	0.31	0.78	1.28	0.15	0.15	1.05	0.49	1.59	0.98	0.45	0.45
Avail Cap(c_a), veh/h	177	651	552	686	904	756	226	1441	629	135	629	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	39.8	42.3	39.9	27.6	27.6	43.4	22.2	29.8	45.8	24.9	25.0
Incr Delay (d2), s/veh	3.3	0.8	6.8	135.5	0.1	0.2	74.4	0.3	272.1	70.3	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.7	3.9	20.9	1.3	1.1	10.0	5.7	61.2	5.8	4.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	40.6	49.1	175.4	27.7	27.7	117.8	22.5	301.9	116.2	25.4	25.5
LnGrp LOS	D	D	D	F	C	C	F	C	F	F	C	C
Approach Vol, veh/h		325			1015			1940			700	
Approach Delay, s/veh		47.4			155.2			178.1			42.6	
Approach LOS		D			F			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	45.4	24.0	17.8	17.0	40.4	9.3	32.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	39.6	19.4	* 34	12.4	34.6	5.0	47.2				
Max Q Clear Time (g_c+I1), s	9.2	41.6	21.4	11.2	14.4	14.1	4.8	5.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	3.0	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	137.7
HCM 6th LOS	F

Notes

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

Timings  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	538	3	838	306	1163	1254	222
Future Volume (vph)	538	3	838	306	1163	1254	222
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8	8		5	2	6	
Permitted Phases			8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	9.5	11.0	31.0	31.0
Total Split (s)	19.0	19.0	19.0	9.5	41.0	31.5	31.5
Total Split (%)	31.7%	31.7%	31.7%	15.8%	68.3%	52.5%	52.5%
Yellow Time (s)	5.0	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	Min	Min	Min

Intersection Summary

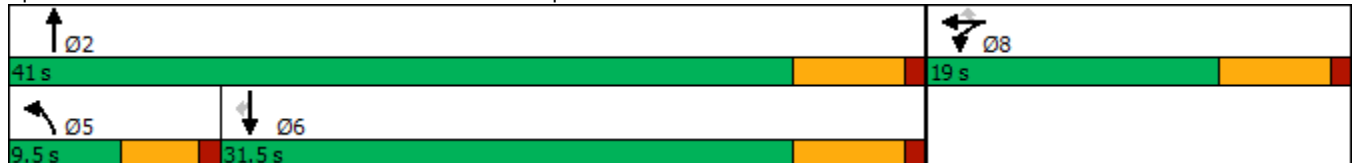
Cycle Length: 60

Actuated Cycle Length: 56.7

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Splits and Phases: 72: Redlands Av. & I-215 NB Ramps



HCM 6th Signalized Intersection Summary  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↔	↗	↖↗	↕			↑↑↑	↗
Traffic Volume (veh/h)	0	0	0	538	3	838	306	1163	0	0	1254	222
Future Volume (veh/h)	0	0	0	538	3	838	306	1163	0	0	1254	222
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				795	0	419	333	1264	0	0	1363	208
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				875	0	390	327	1931	0	0	2340	569
Arrive On Green				0.24	0.00	0.24	0.09	0.53	0.00	0.00	0.36	0.36
Sat Flow, veh/h				3619	0	1610	3510	3705	0	0	6802	1590
Grp Volume(v), veh/h				795	0	419	333	1264	0	0	1363	208
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1755	1805	0	0	1634	1590
Q Serve(g_s), s				11.5	0.0	13.0	5.0	13.5	0.0	0.0	9.1	5.2
Cycle Q Clear(g_c), s				11.5	0.0	13.0	5.0	13.5	0.0	0.0	9.1	5.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				875	0	390	327	1931	0	0	2340	569
V/C Ratio(X)				0.91	0.00	1.08	1.02	0.65	0.00	0.00	0.58	0.37
Avail Cap(c_a), veh/h				875	0	390	327	2351	0	0	3101	754
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				19.8	0.0	20.4	24.4	8.9	0.0	0.0	14.0	12.7
Incr Delay (d2), s/veh				13.2	0.0	67.3	54.9	0.5	0.0	0.0	0.2	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	11.3	4.4	3.9	0.0	0.0	2.6	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.0	0.0	87.7	79.2	9.4	0.0	0.0	14.2	13.1
LnGrp LOS				C	A	F	F	A	A	A	B	B
Approach Vol, veh/h					1214			1597			1571	
Approach Delay, s/veh					51.9			24.0			14.1	
Approach LOS					D			C			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		34.7			9.5	25.2		19.0				
Change Period (Y+Rc), s		6.0			4.5	6.0		6.0				
Max Green Setting (Gmax), s		35.0			5.0	25.5		13.0				
Max Q Clear Time (g_c+I1), s		15.5			7.0	11.1		15.0				
Green Ext Time (p_c), s		9.1			0.0	8.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
73: Redlands Av. & I-215 SB Ramps



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	315	3	300	1153	599	684	1108
Future Volume (vph)	315	3	300	1153	599	684	1108
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	11.0	11.0	9.5	33.0
Total Split (s)	19.0	19.0	19.0	23.0	23.0	18.0	41.0
Total Split (%)	31.7%	31.7%	31.7%	38.3%	38.3%	30.0%	68.3%
Yellow Time (s)	4.5	4.5	4.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0	4.5	6.0
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	None	Min

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 58.3  
 Natural Cycle: 55  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 73: Redlands Av. & I-215 SB Ramps



HCM 6th Signalized Intersection Summary  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	3	300	0	0	0	0	1153	599	684	1108	0
Future Volume (veh/h)	315	3	300	0	0	0	0	1153	599	684	1108	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	388	0	118				0	1214	502	720	1166	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	573	0	255				0	1909	817	851	2242	0
Arrive On Green	0.16	0.00	0.16				0.00	0.29	0.29	0.24	0.62	0.00
Sat Flow, veh/h	3619	0	1610				0	6802	2796	3510	3705	0
Grp Volume(v), veh/h	388	0	118				0	1214	502	720	1166	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1634	1398	1755	1805	0
Q Serve(g_s), s	5.3	0.0	3.5				0.0	8.4	8.1	10.2	9.4	0.0
Cycle Q Clear(g_c), s	5.3	0.0	3.5				0.0	8.4	8.1	10.2	9.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	573	0	255				0	1909	817	851	2242	0
V/C Ratio(X)	0.68	0.00	0.46				0.00	0.64	0.61	0.85	0.52	0.00
Avail Cap(c_a), veh/h	938	0	417				0	2133	912	910	2425	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.7	0.0	19.9				0.0	16.0	15.9	18.8	5.5	0.0
Incr Delay (d2), s/veh	1.4	0.0	1.3				0.0	0.5	1.0	7.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.2				0.0	2.7	2.3	4.4	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	0.0	21.2				0.0	16.6	16.9	25.9	5.7	0.0
LnGrp LOS	C	A	C				A	B	B	C	A	A
Approach Vol, veh/h		506						1716			1886	
Approach Delay, s/veh		21.9						16.7			13.4	
Approach LOS		C						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	17.1	21.2	13.8	38.4								
Change Period (Y+Rc), s	4.5	6.0	5.5	6.0								
Max Green Setting (Gmax), s	13.5	17.0	13.5	35.0								
Max Q Clear Time (g_c+I1), s	12.2	10.4	7.3	11.4								
Green Ext Time (p_c), s	0.4	4.8	1.0	9.1								

Intersection Summary

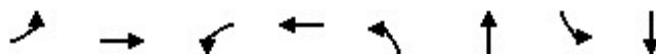
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Timings  
74: Indian Av. & Morgan St.

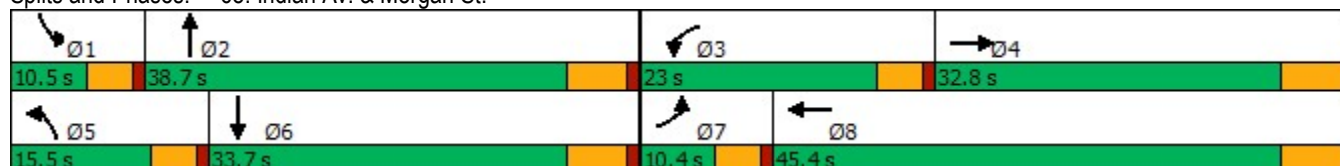


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↘	↕	↘	↕	↘	↕
Traffic Volume (vph)	22	96	198	37	105	342	24	308
Future Volume (vph)	22	96	198	37	105	342	24	308
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	32.8
Total Split (s)	10.4	32.8	23.0	45.4	15.5	38.7	10.5	33.7
Total Split (%)	9.9%	31.2%	21.9%	43.2%	14.8%	36.9%	10.0%	32.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max
Act Effct Green (s)	5.5	12.9	15.4	21.8	9.7	38.7	5.6	28.2
Actuated g/C Ratio	0.06	0.15	0.18	0.25	0.11	0.44	0.06	0.32
v/c Ratio	0.24	0.37	0.77	0.07	0.65	0.34	0.26	0.36
Control Delay	48.0	20.6	52.3	17.2	55.3	18.2	48.5	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	20.6	52.3	17.2	55.3	18.2	48.5	24.9
LOS	D	C	D	B	E	B	D	C
Approach Delay		23.6		44.9		25.4		26.5
Approach LOS		C		D		C		C

Intersection Summary

Cycle Length: 105  
 Actuated Cycle Length: 87.3  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 29.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 53.2%  
 ICU Level of Service A  
 Analysis Period (min) 15






















Splits and Phases: 68: Indian Av. & Morgan St.



HCM 6th Signalized Intersection Summary  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	96	76	198	37	15	105	342	92	24	308	29
Future Volume (veh/h)	22	96	76	198	37	15	105	342	92	24	308	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	119	51	244	46	14	130	422	107	30	380	30
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	51	313	128	287	704	205	164	1196	301	55	1215	96
Arrive On Green	0.03	0.13	0.13	0.16	0.26	0.26	0.09	0.42	0.42	0.03	0.36	0.36
Sat Flow, veh/h	1810	2501	1021	1810	2758	803	1810	2858	718	1810	3391	266
Grp Volume(v), veh/h	27	84	86	244	29	31	130	265	264	30	201	209
Grp Sat Flow(s),veh/h/ln	1810	1805	1716	1810	1805	1756	1810	1805	1771	1810	1805	1852
Q Serve(g_s), s	1.1	3.3	3.6	10.2	1.0	1.0	5.5	7.8	7.9	1.3	6.3	6.3
Cycle Q Clear(g_c), s	1.1	3.3	3.6	10.2	1.0	1.0	5.5	7.8	7.9	1.3	6.3	6.3
Prop In Lane	1.00		0.59	1.00		0.46	1.00		0.41	1.00		0.14
Lane Grp Cap(c), veh/h	51	226	215	287	461	448	164	756	741	55	647	664
V/C Ratio(X)	0.53	0.37	0.40	0.85	0.06	0.07	0.79	0.35	0.36	0.54	0.31	0.31
Avail Cap(c_a), veh/h	135	626	595	428	918	893	253	763	748	137	647	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	31.2	31.4	31.9	22.0	22.0	34.7	15.4	15.5	37.2	18.0	18.1
Incr Delay (d2), s/veh	3.1	1.0	1.2	6.9	0.1	0.1	4.1	0.3	0.3	3.0	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.4	1.5	4.7	0.4	0.4	2.4	2.8	2.8	0.6	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	32.3	32.5	38.7	22.0	22.0	38.8	15.7	15.8	40.2	19.3	19.3
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		197			304			659			440	
Approach Delay, s/veh		33.5			35.4			20.3			20.7	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	38.4	16.9	15.5	11.7	33.7	6.8	25.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.9	32.9	18.4	27.0	10.9	27.9	5.8	39.6				
Max Q Clear Time (g_c+I1), s	3.3	9.9	12.2	5.6	7.5	8.3	3.1	3.0				
Green Ext Time (p_c), s	0.0	2.9	0.2	0.8	0.0	1.9	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				24.9								
HCM 6th LOS				C								

Timings  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↘	↑↑	↗
Traffic Volume (vph)	29	192	23	44	40	108	6	316	71	455	5
Future Volume (vph)	29	192	23	44	40	108	6	316	71	455	5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	32.8	9.6	32.8	32.8
Total Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	33.0	9.6	33.0	33.0
Total Split (%)	11.3%	38.6%	38.6%	11.3%	38.6%	38.6%	11.3%	38.8%	11.3%	38.8%	38.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.6	13.2	13.2	5.6	15.2	15.2	5.6	13.8	5.6	20.1	20.1
Actuated g/C Ratio	0.11	0.25	0.25	0.11	0.29	0.29	0.11	0.26	0.11	0.38	0.38
v/c Ratio	0.18	0.25	0.05	0.27	0.05	0.22	0.04	0.44	0.45	0.39	0.01
Control Delay	31.8	18.9	0.2	33.3	17.1	4.0	30.8	18.9	39.0	14.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	18.9	0.2	33.3	17.1	4.0	30.8	18.9	39.0	14.7	0.0
LOS	C	B	A	C	B	A	C	B	D	B	A
Approach Delay		18.7			13.4			19.1		17.8	
Approach LOS		B			B			B		B	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 52.4

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 17.7

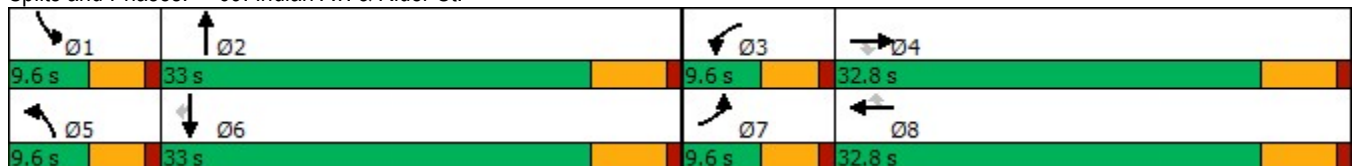
Intersection LOS: B

Intersection Capacity Utilization 46.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 69: Indian Av. & Rider St.



HCM 6th Signalized Intersection Summary  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	192	23	44	40	108	6	316	31	71	455	5
Future Volume (veh/h)	29	192	23	44	40	108	6	316	31	71	455	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	229	22	52	48	78	7	376	20	85	542	4
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	751	335	95	800	357	17	756	40	130	1008	450
Arrive On Green	0.04	0.21	0.21	0.05	0.22	0.22	0.01	0.22	0.22	0.07	0.28	0.28
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3487	185	1810	3610	1610
Grp Volume(v), veh/h	35	229	22	52	48	78	7	194	202	85	542	4
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1867	1810	1805	1610
Q Serve(g_s), s	0.9	2.5	0.5	1.3	0.5	1.8	0.2	4.4	4.4	2.1	5.9	0.1
Cycle Q Clear(g_c), s	0.9	2.5	0.5	1.3	0.5	1.8	0.2	4.4	4.4	2.1	5.9	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	71	751	335	95	800	357	17	391	404	130	1008	450
V/C Ratio(X)	0.49	0.30	0.07	0.55	0.06	0.22	0.42	0.50	0.50	0.65	0.54	0.01
Avail Cap(c_a), veh/h	196	2112	942	196	2112	942	196	1064	1100	196	2128	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	15.5	14.7	21.3	14.2	14.7	22.7	15.9	15.9	20.9	14.1	12.0
Incr Delay (d2), s/veh	2.0	0.2	0.1	1.8	0.0	0.3	6.0	1.0	1.0	2.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.8	0.2	0.5	0.2	0.6	0.1	1.5	1.6	0.8	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	15.7	14.8	23.1	14.2	15.0	28.7	16.8	16.8	22.9	14.6	12.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		286			178			403			631	
Approach Delay, s/veh		16.6			17.2			17.0			15.7	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	15.8	7.0	15.4	5.0	18.7	6.4	16.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+l1), s	4.1	6.4	3.3	4.5	2.2	7.9	2.9	3.8				
Green Ext Time (p_c), s	0.0	2.0	0.0	1.3	0.0	3.1	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

**ATTACHMENT L**  
**EAPC (2030) TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**



### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC (2030) Conditions - Weekday PM Peak Hour**

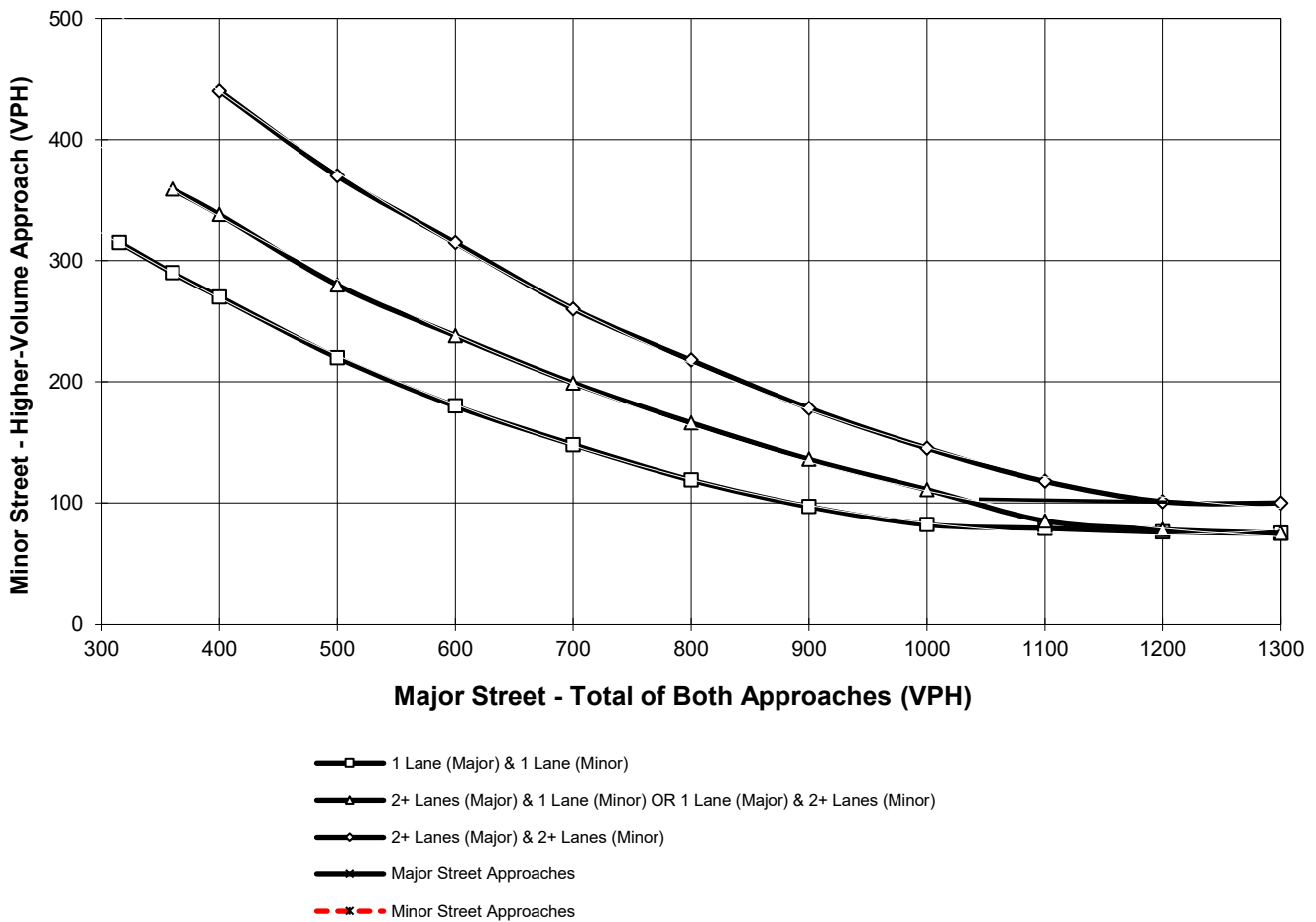
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **291**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Morgan St.**

High Volume Approach (VPH) = **76**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**ATTACHMENT M**  
**EAPC (2030) OFF-RAMP QUEUING ANALYSIS WORKSHEETS**



## Queues

## Stoneridge Commerce Center SP (JN 13265)

## 72: Redlands Av. &amp; I-215 NB Ramps

05/12/2021



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	341	323	317	236	626	1329	316
v/c Ratio	0.95	0.72	0.58	0.59	0.30	0.53	0.39
Control Delay	63.9	23.1	9.6	32.0	6.5	14.2	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.9	23.1	9.6	32.0	6.5	14.2	3.2
Queue Length 50th (ft)	130	58	11	43	50	97	0
Queue Length 95th (ft)	#280	#178	73	#74	72	123	38
Internal Link Dist (ft)		1091			342	726	
Turn Bay Length (ft)			400				
Base Capacity (vph)	360	447	544	398	2276	2861	884
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.72	0.58	0.59	0.28	0.46	0.36

## Intersection Summary

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

Queue shown is maximum after two cycles.



## Queues

## Stoneridge Commerce Center SP (JN 13265)

## 73: Redlands Av. &amp; I-215 SB Ramps

05/12/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	176	164	161	622	384	677	1018
v/c Ratio	0.56	0.43	0.41	0.40	0.40	0.70	0.47
Control Delay	29.0	10.6	10.1	18.6	3.9	22.5	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	10.6	10.1	18.6	3.9	22.5	6.9
Queue Length 50th (ft)	57	8	7	51	0	106	86
Queue Length 95th (ft)	117	57	53	76	30	160	123
Internal Link Dist (ft)		1091		422			342
Turn Bay Length (ft)			130		200		
Base Capacity (vph)	375	434	442	1869	1086	1168	2546
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.38	0.36	0.33	0.35	0.58	0.40

## Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	526	490	483	333	1264	1363	241
v/c Ratio	1.34	1.26	1.06	1.08	0.63	0.54	0.31
Control Delay	192.2	159.0	79.1	104.3	10.1	14.0	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	192.2	159.0	79.1	104.3	10.3	14.0	3.1
Queue Length 50th (ft)	~269	~234	~164	~72	135	99	0
Queue Length 95th (ft)	#450	#424	#343	#145	188	127	34
Internal Link Dist (ft)		1091			342	726	
Turn Bay Length (ft)			400				
Base Capacity (vph)	394	389	457	309	2236	2950	852
Starvation Cap Reductn	0	0	0	0	308	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.34	1.26	1.06	1.08	0.66	0.46	0.28

#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Queues  
73: Redlands Av. & I-215 SB Ramps



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	226	220	205	1214	631	720	1166
v/c Ratio	0.66	0.59	0.49	0.64	0.50	0.89	0.54
Control Delay	31.2	20.7	12.4	20.0	3.3	38.1	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	31.2	20.7	12.4	20.0	3.3	38.1	8.6
Queue Length 50th (ft)	76	49	21	111	0	131	120
Queue Length 95th (ft)	142	114	73	144	35	#225	167
Internal Link Dist (ft)		1091		422			342
Turn Bay Length (ft)			130		200		
Base Capacity (vph)	397	419	460	1908	1265	811	2170
Starvation Cap Reductn	0	0	0	0	0	0	353
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.53	0.45	0.64	0.50	0.89	0.64

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

**ATTACHMENT N**  
**EAPC (2030) FREEWAY FACILITY ANALYSIS WORKSHEETS**



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 SB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	N of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1850	3
4	Merge	Basic	On-Ramp	1500	4
5	Basic	Basic	S of Redlands	5280	4

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		4741		7161		0.66		67.4		23.4		C

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.909	4741	496	7200	2100	0.66	0.24	64.5	60.4	24.5	27.5	C

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		4267		7161		0.60		68.3		20.8		C

### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.926	5346	1079	9600	2100	0.44	0.51	70.0	-	15.2	-	B

### Segment 5: Basic

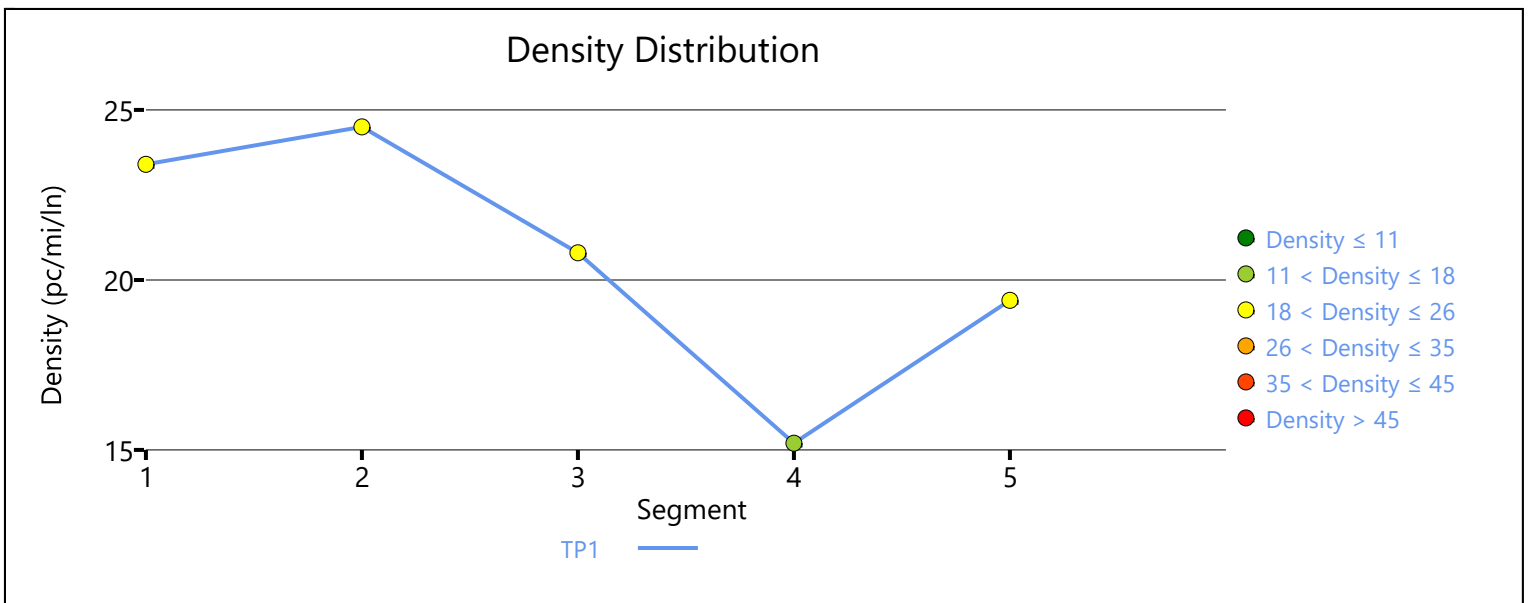
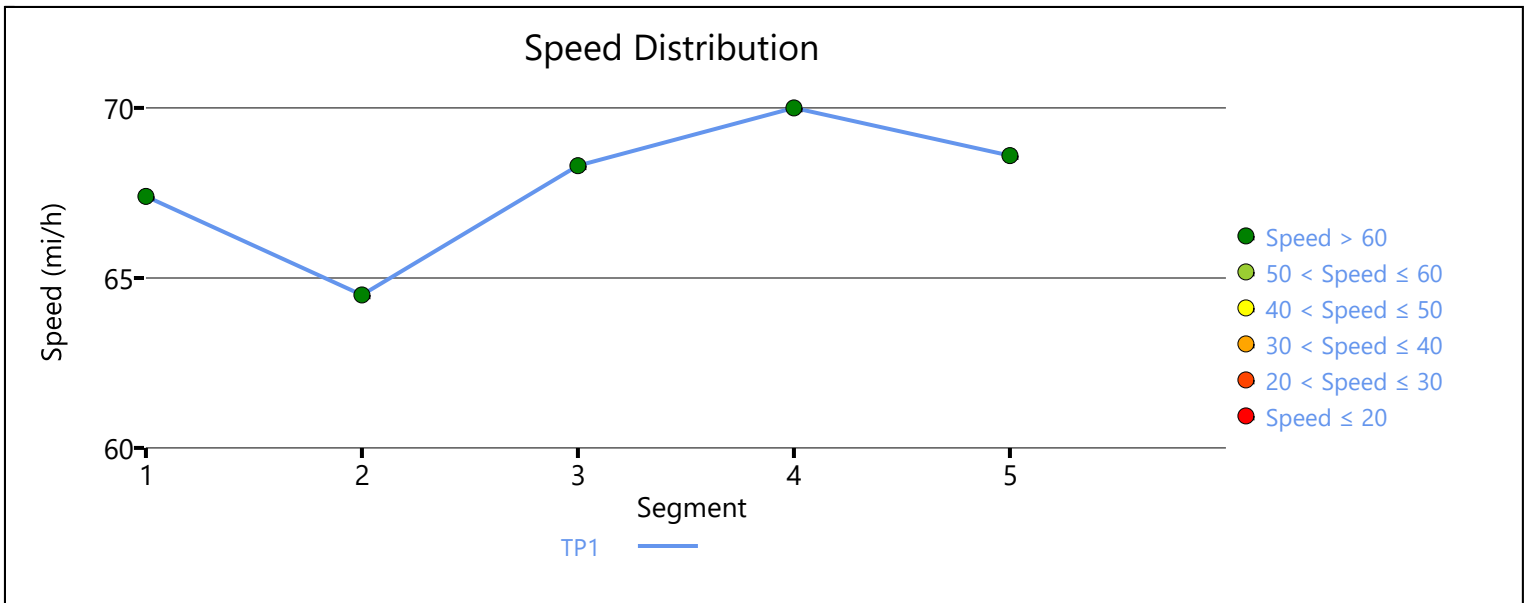
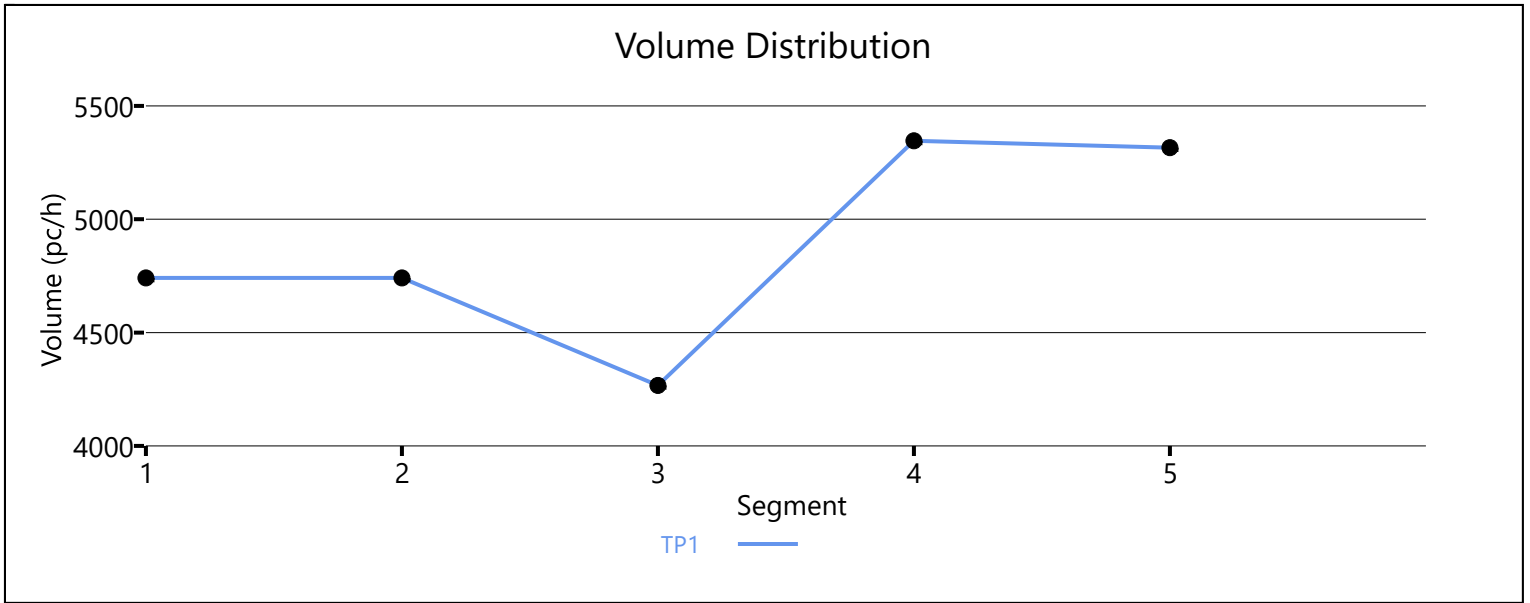
Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		5316		9548		0.56		68.6		19.4		C

**Facility Time Period Results**

<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	67.9	20.7	19.7	2.6	C

**Facility Overall Results**

Space Mean Speed, mi/h	67.9	Density, veh/mi/ln	19.7
Average Travel Time, min	2.6	Density, pc/mi/ln	20.7



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 NB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	S of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1675	3
4	Merge	Merge	On-Ramp	1500	3
5	Basic	Basic	N of Redlands	5280	3

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	5637	7161	0.79	63.9	29.4	D

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.935	0.855	5637	928	7200	2100	0.78	0.44	63.5	59.3	29.6	32.4	D

### Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4703	7161	0.66	67.5	23.2	C

### Segment 4: Merge

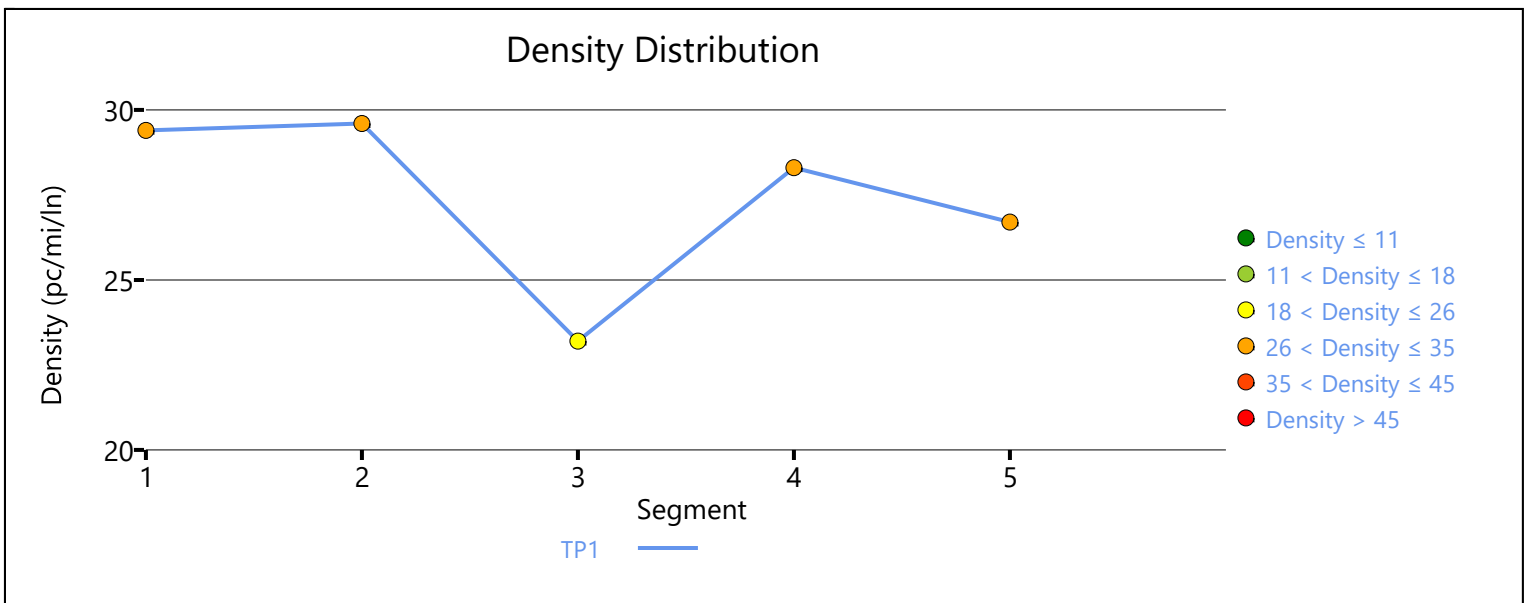
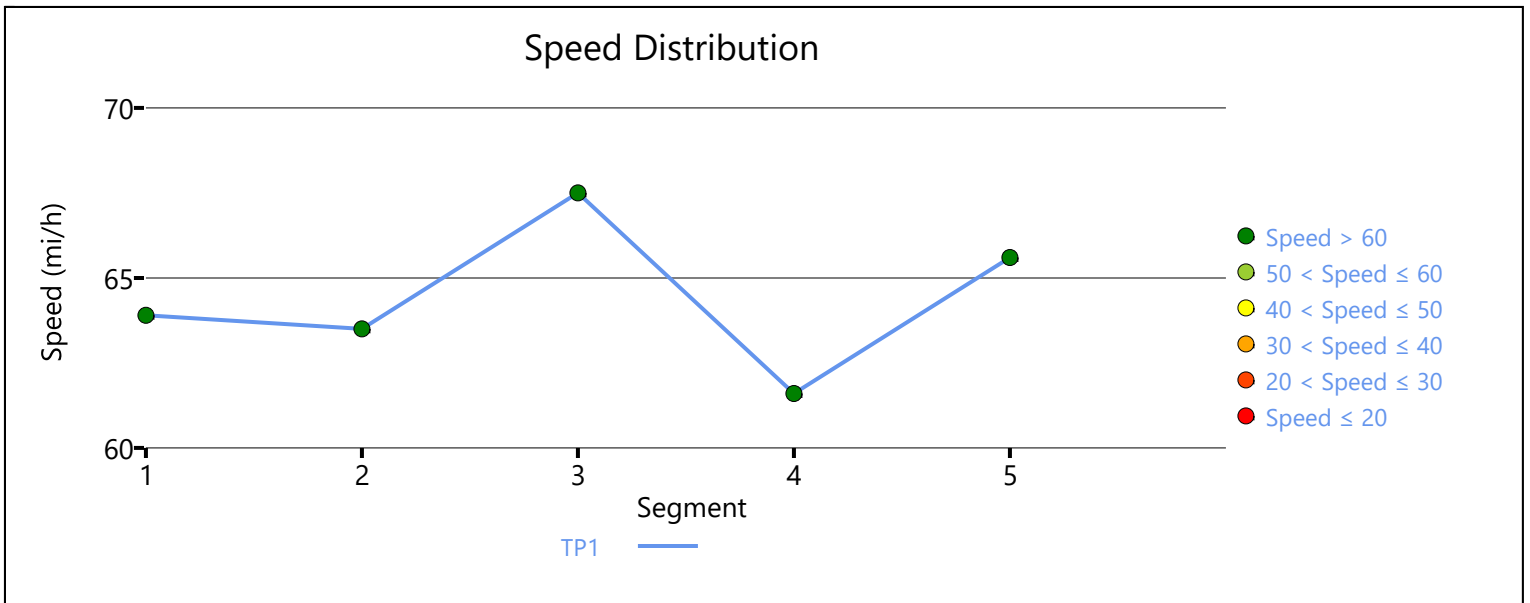
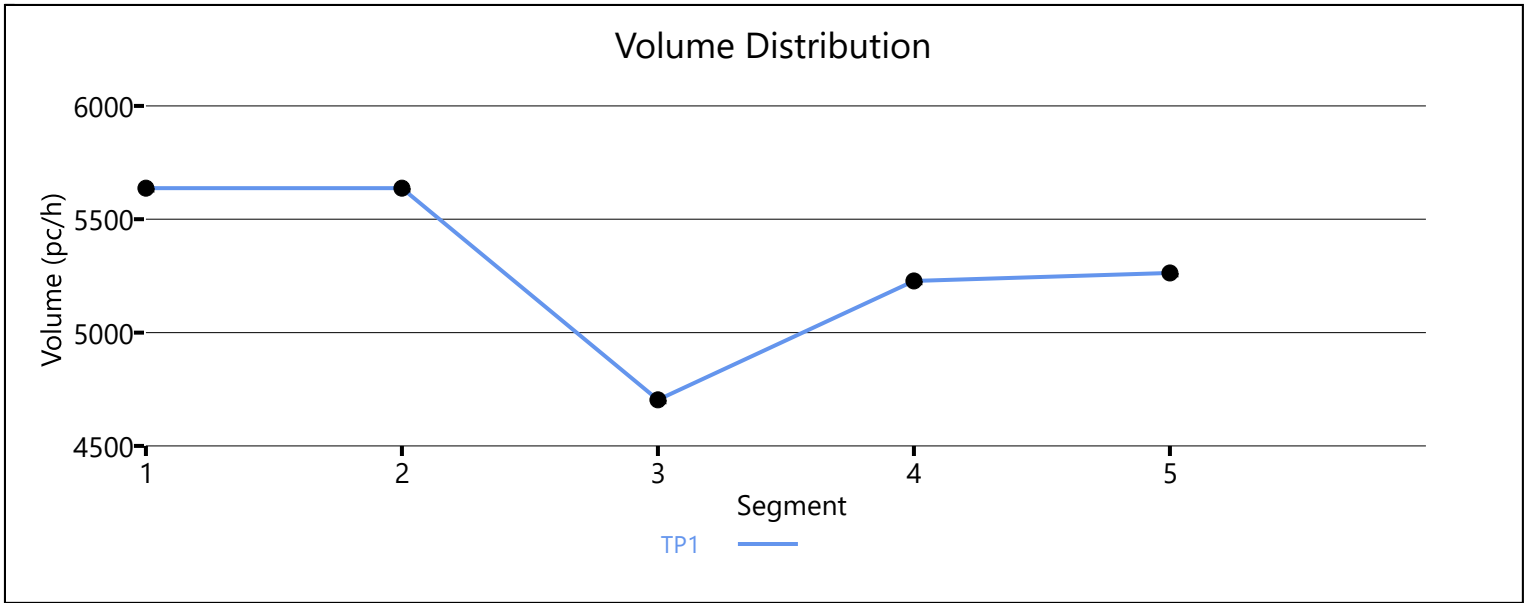
Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.926	5228	525	7200	2100	0.73	0.25	61.6	59.8	28.3	26.8	C

### Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	5263	7161	0.73	65.6	26.7	D



<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	64.5	27.7	26.1	2.7	D
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		64.5	Density, veh/mi/ln		26.1
Average Travel Time, min		2.7	Density, pc/mi/ln		27.7



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 SB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	N of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1850	3
4	Merge	Basic	On-Ramp	1500	4
5	Basic	Basic	S of Redlands	5280	4

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		7030		7161		0.98		54.2		43.2		E

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.952	7030	666	7200	2100	0.98	0.32	63.5	60.0	36.9	37.9	E

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		6358		7161		0.89		59.6		35.6		E

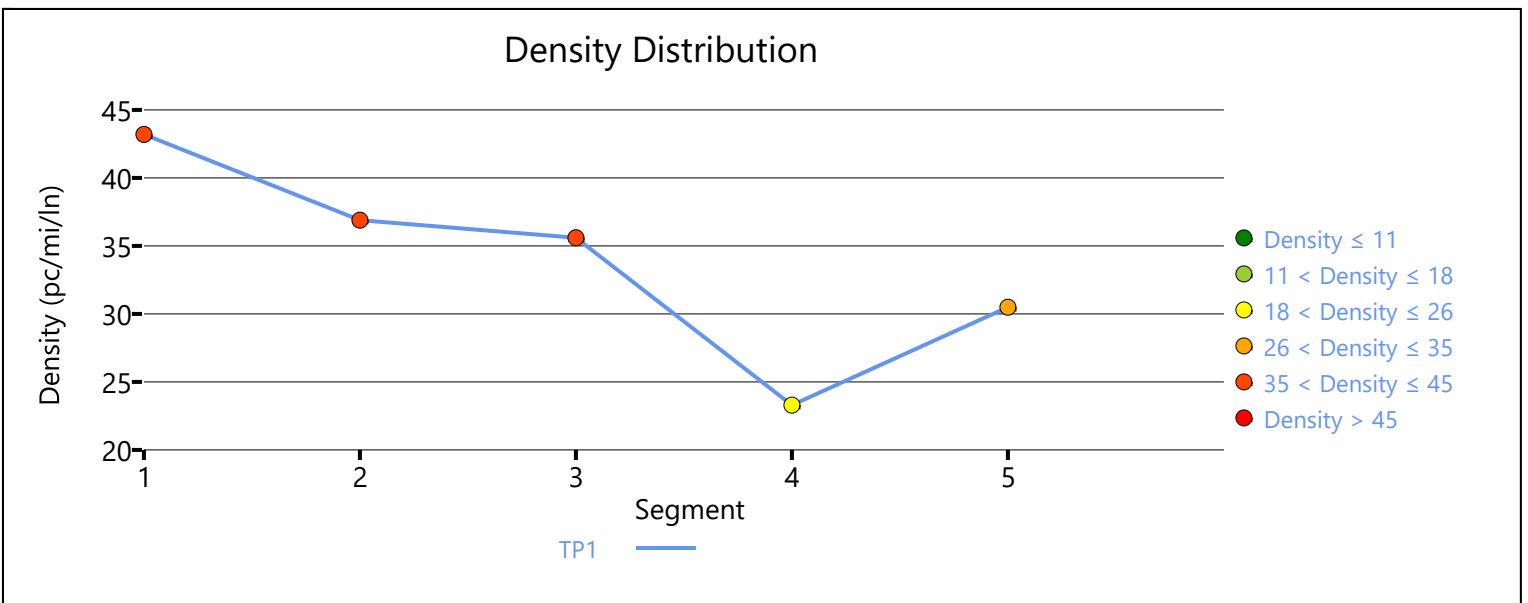
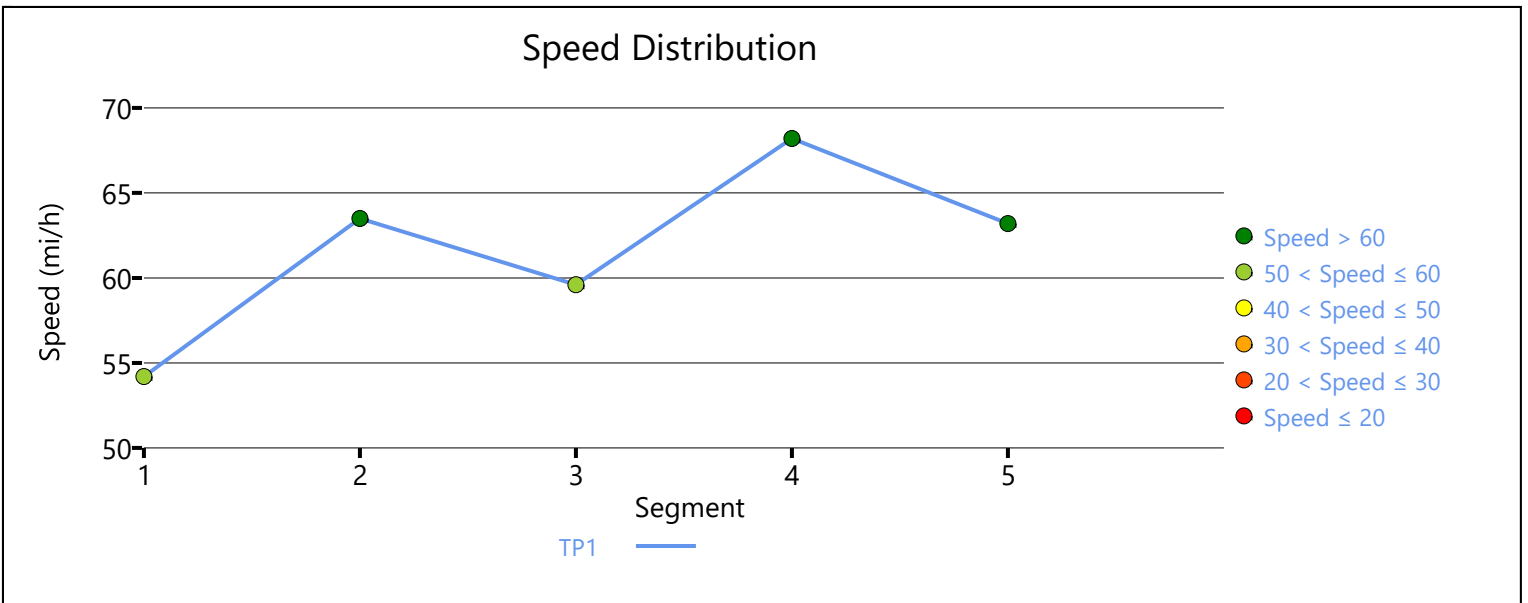
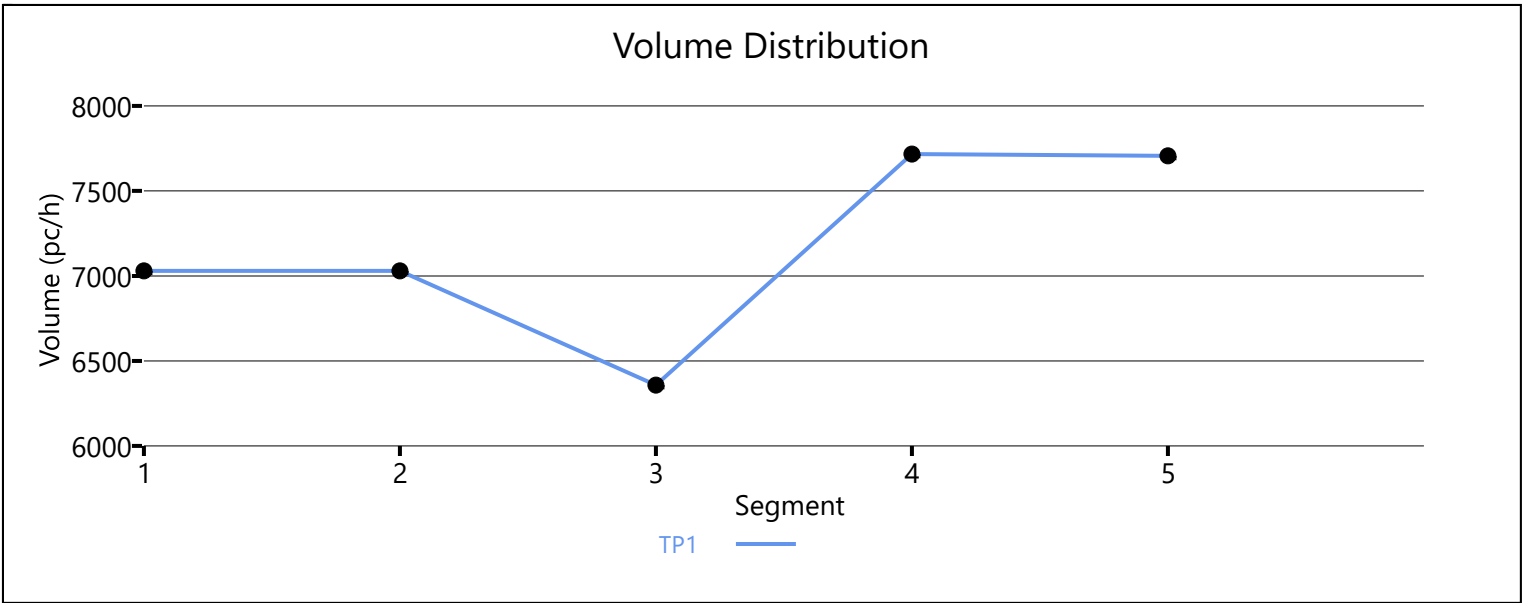
### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.935	7717	1359	9600	2100	0.66	0.65	68.2	-	23.3	-	C

### Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		7706		9548		0.81		63.2		30.5		D

<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	60.0	34.6	32.6	2.9	D
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		60.0	Density, veh/mi/ln		32.6
Average Travel Time, min		2.9	Density, pc/mi/ln		34.6



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 NB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	S of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1675	3
4	Merge	Merge	On-Ramp	1500	3
5	Basic	Basic	N of Redlands	5280	3

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	6290	7161	0.88	60.0	35.0	D

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.952	6290	1499	7200	2100	0.87	0.71	62.2	57.9	33.7	36.0	E

### Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4791	7161	0.67	67.3	23.7	C

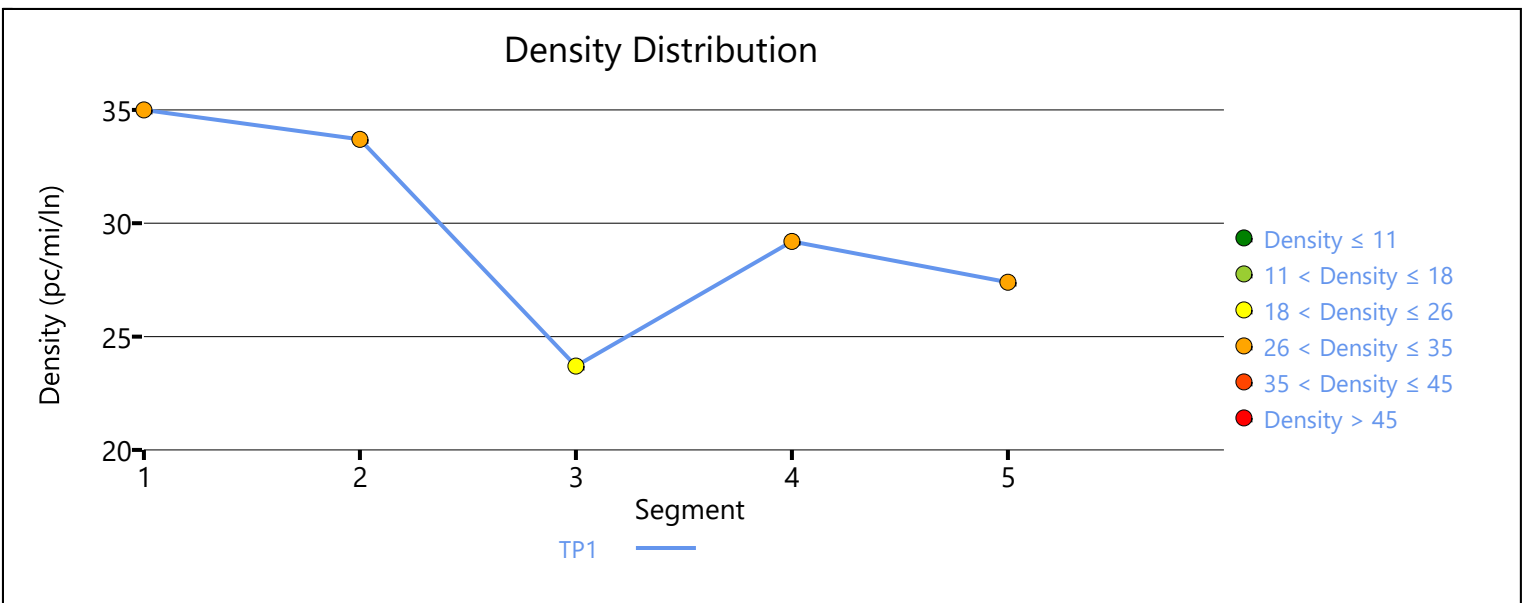
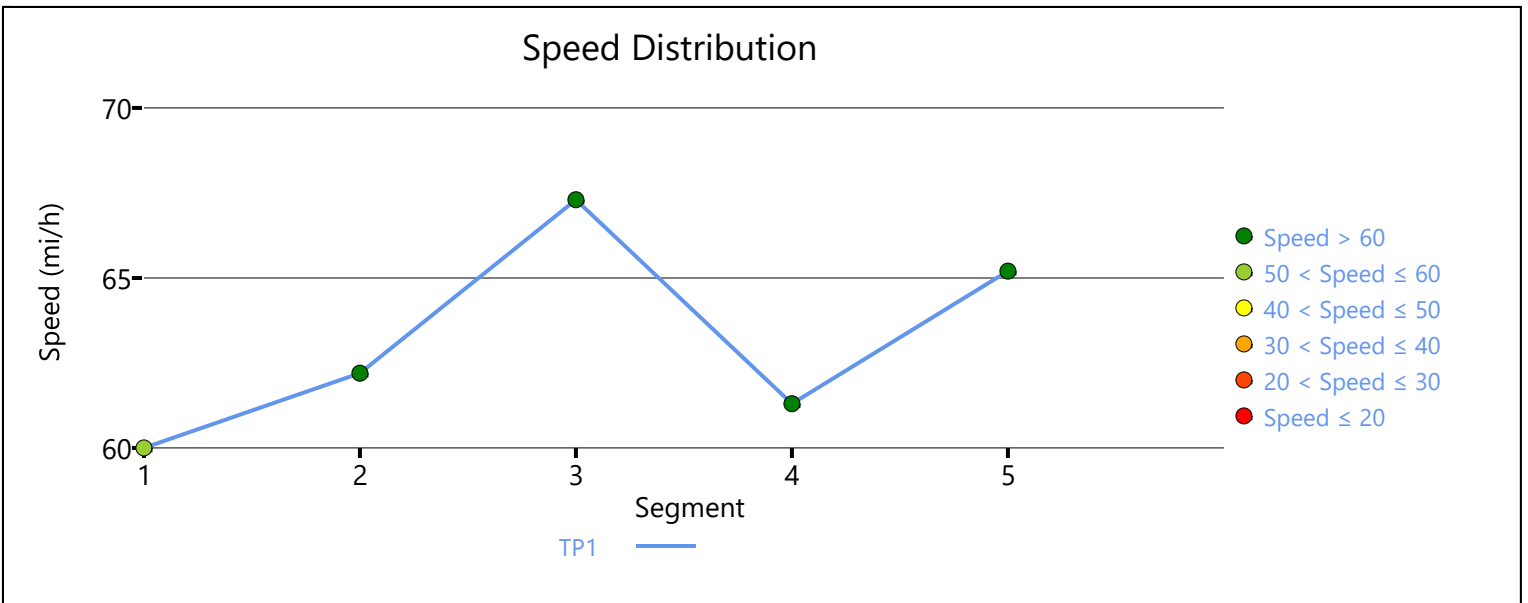
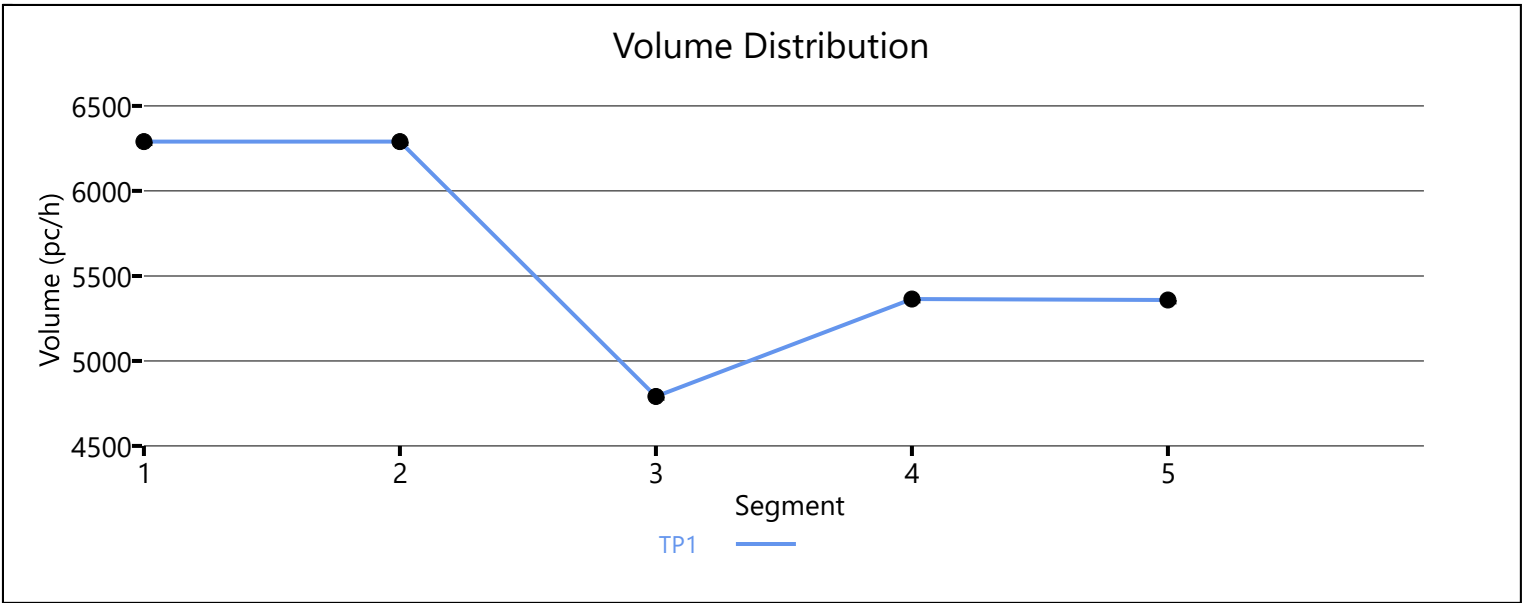
### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.943	5364	573	7200	2100	0.74	0.27	61.3	59.4	29.2	27.6	C

### Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	5358	7161	0.75	65.2	27.4	D

<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	62.6	30.4	29.0	2.8	D
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		62.6	Density, veh/mi/ln		29.0
Average Travel Time, min		2.8	Density, pc/mi/ln		30.4





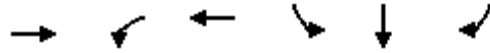
**ATTACHMENT O**  
**EAPC (2030) HCM INTERSECTION ANALYSIS WORKSHEETS, WITH IMPROVEMENTS**



Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

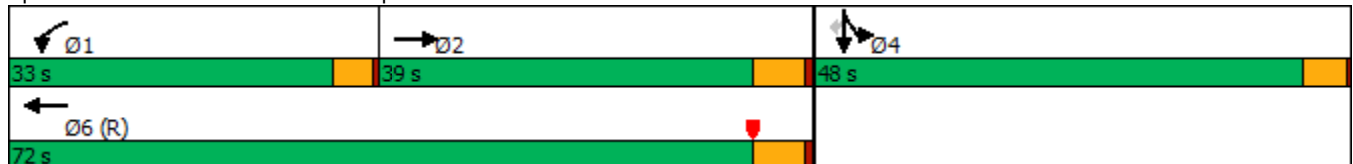


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑	↑	↑
Traffic Volume (vph)	317	333	528	463	0	85
Future Volume (vph)	317	333	528	463	0	85
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	39.0	33.0	72.0	48.0	48.0	48.0
Total Split (%)	32.5%	27.5%	60.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

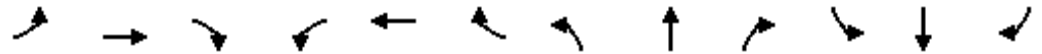
Splits and Phases: 6: I-215 SB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	317	146	333	528	0	0	0	0	463	0	85
Future Volume (veh/h)	0	317	146	333	528	0	0	0	0	463	0	85
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	345	159	362	574	0				503	0	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	959	434	433	2001	0				608	0	268
Arrive On Green	0.00	0.40	0.40	0.25	1.00	0.00				0.17	0.00	0.17
Sat Flow, veh/h	0	2507	1091	3510	3705	0				3619	0	1596
Grp Volume(v), veh/h	0	257	247	362	574	0				503	0	92
Grp Sat Flow(s),veh/h/ln	0	1805	1699	1755	1805	0				1810	0	1596
Q Serve(g_s), s	0.0	12.0	12.3	11.7	0.0	0.0				16.1	0.0	6.1
Cycle Q Clear(g_c), s	0.0	12.0	12.3	11.7	0.0	0.0				16.1	0.0	6.1
Prop In Lane	0.00		0.64	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	718	675	433	2001	0				608	0	268
V/C Ratio(X)	0.00	0.36	0.37	0.84	0.29	0.00				0.83	0.00	0.34
Avail Cap(c_a), veh/h	0	718	675	848	2001	0				1312	0	578
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.91	0.91	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	25.4	25.5	44.1	0.0	0.0				48.2	0.0	44.1
Incr Delay (d2), s/veh	0.0	1.4	1.5	4.0	0.3	0.0				2.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.2	5.0	4.6	0.1	0.0				7.3	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	26.8	27.0	48.0	0.3	0.0				51.2	0.0	44.8
LnGrp LOS	A	C	C	D	A	A				D	A	D
Approach Vol, veh/h		504			936						595	
Approach Delay, s/veh		26.9			18.8						50.2	
Approach LOS		C			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	18.8	53.2		24.7		72.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	29.0	33.5		43.5		66.5						
Max Q Clear Time (g_c+I1), s	13.7	14.3		18.1		2.0						
Green Ext Time (p_c), s	1.1	1.6		2.1		2.2						

Intersection Summary

HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C

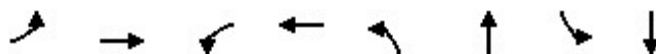
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022

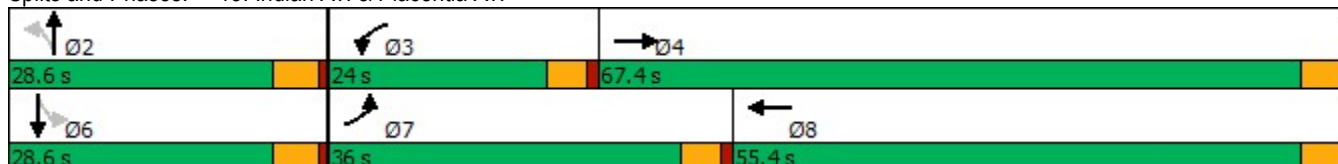


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↶↷	↶	↶↷	↶	↶↷	↶	↶↷
Traffic Volume (vph)	290	774	170	927	42	188	35	152
Future Volume (vph)	290	774	170	927	42	188	35	152
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	9.6	26.6	27.1	27.1	27.1	27.1
Total Split (s)	36.0	67.4	24.0	55.4	28.6	28.6	28.6	28.6
Total Split (%)	30.0%	56.2%	20.0%	46.2%	23.8%	23.8%	23.8%	23.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.1	5.1	5.1	5.1
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	22.4	63.1	14.6	55.3	13.9	13.9	13.9	13.9
Actuated g/C Ratio	0.21	0.60	0.14	0.52	0.13	0.13	0.13	0.13
v/c Ratio	0.83	0.47	0.75	0.57	0.39	0.61	0.38	0.50
Control Delay	58.3	13.7	63.3	20.5	52.9	39.0	54.5	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	13.7	63.3	20.5	52.9	39.0	54.5	30.2
LOS	E	B	E	C	D	D	D	C
Approach Delay		24.4		26.8		40.8		33.2
Approach LOS		C		C		D		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 28.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 76.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 15: Indian Av. & Placentia Av.



HCM 6th Signalized Intersection Summary  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	774	146	170	927	59	42	188	98	35	152	94
Future Volume (veh/h)	290	774	146	170	927	59	42	188	98	35	152	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	315	841	133	185	1008	42	46	204	80	38	165	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	349	1880	297	218	1870	78	149	359	136	139	321	169
Arrive On Green	0.19	0.60	0.60	0.12	0.53	0.53	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1810	3122	494	1810	3531	147	1141	2559	971	1113	2288	1201
Grp Volume(v), veh/h	315	486	488	185	515	535	46	142	142	38	128	128
Grp Sat Flow(s),veh/h/ln	1810	1805	1811	1810	1805	1874	1141	1805	1725	1113	1805	1684
Q Serve(g_s), s	17.7	15.3	15.3	10.4	19.6	19.6	4.1	7.6	8.0	3.5	6.9	7.4
Cycle Q Clear(g_c), s	17.7	15.3	15.3	10.4	19.6	19.6	11.4	7.6	8.0	11.5	6.9	7.4
Prop In Lane	1.00		0.27	1.00		0.08	1.00		0.56	1.00		0.71
Lane Grp Cap(c), veh/h	349	1087	1091	218	956	992	149	253	242	139	253	236
V/C Ratio(X)	0.90	0.45	0.45	0.85	0.54	0.54	0.31	0.56	0.59	0.27	0.51	0.54
Avail Cap(c_a), veh/h	545	1087	1091	337	956	992	246	407	389	234	407	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	11.3	11.3	45.0	16.2	16.2	47.0	41.8	42.0	47.4	41.5	41.7
Incr Delay (d2), s/veh	8.8	1.3	1.3	7.3	2.2	2.1	1.2	1.9	2.3	1.0	1.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	6.3	6.3	5.1	8.5	8.8	1.2	3.5	3.5	1.0	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	12.6	12.6	52.2	18.3	18.3	48.2	43.7	44.2	48.4	43.0	43.6
LnGrp LOS	D	B	B	D	B	B	D	D	D	D	D	D
Approach Vol, veh/h		1289			1235			330			294	
Approach Delay, s/veh		21.7			23.4			44.6			44.0	
Approach LOS		C			C			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		19.7	17.1	67.4		19.7	24.7	59.8				
Change Period (Y+Rc), s		5.1	4.6	4.6		5.1	4.6	4.6				
Max Green Setting (Gmax), s		23.5	19.4	62.8		23.5	31.4	50.8				
Max Q Clear Time (g_c+I1), s		13.4	12.4	17.3		13.5	19.7	21.6				
Green Ext Time (p_c), s		1.2	0.1	8.5		1.1	0.4	8.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				26.9								
HCM 6th LOS				C								

Timings

Stoneridge Commerce Center SP (JN 13265)

30: Redlands Av. & Ramona Exwy.

01/25/2021

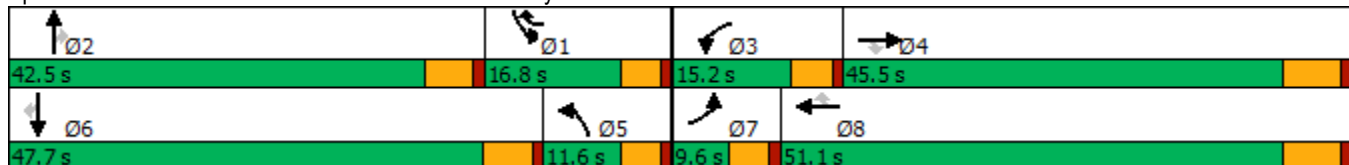


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑↑↑	↗	↖↖	↑↑↑	↗	↖	↑	↗	↖↖	↑	↗
Traffic Volume (vph)	99	1563	55	116	2975	628	40	35	96	352	88	62
Future Volume (vph)	99	1563	55	116	2975	628	40	35	96	352	88	62
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	9.6	9.6	41.4	41.4	9.6	23.4	23.4
Total Split (s)	9.6	45.5	45.5	15.2	51.1	16.8	11.6	42.5	42.5	16.8	47.7	47.7
Total Split (%)	8.0%	37.9%	37.9%	12.7%	42.6%	14.0%	9.7%	35.4%	35.4%	14.0%	39.8%	39.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	5.4	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 98.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated
































Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  					 		
Traffic Volume (veh/h)	99	1563	55	116	2975	628	40	35	96	352	88	62
Future Volume (veh/h)	99	1563	55	116	2975	628	40	35	96	352	88	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	103	1628	41	121	3099	430	42	36	-72	367	92	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	157	2629	638	179	2670	827	482	468	397	390	173	140
Arrive On Green	0.07	0.60	0.40	0.08	0.61	0.41	0.27	0.25	0.00	0.11	0.09	0.09
Sat Flow, veh/h	3510	6536	1586	3510	6536	1588	1810	1900	1610	3510	1900	1541
Grp Volume(v), veh/h	103	1628	41	121	3099	430	42	36	-72	367	92	44
Grp Sat Flow(s),veh/h/ln	1755	1634	1586	1755	1634	1588	1810	1900	1610	1755	1900	1541
Q Serve(g_s), s	3.1	17.3	0.7	3.7	44.9	3.5	1.9	1.6	0.0	11.4	5.1	2.5
Cycle Q Clear(g_c), s	3.1	17.3	0.7	3.7	44.9	3.5	1.9	1.6	0.0	11.4	5.1	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	2629	638	179	2670	827	482	468	397	390	173	140
V/C Ratio(X)	0.65	0.62	0.06	0.67	1.16	0.52	0.09	0.08	-0.18	0.94	0.53	0.31
Avail Cap(c_a), veh/h	160	2629	638	339	2670	827	482	641	544	390	731	593
HCM Platoon Ratio	1.50	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	16.5	3.1	49.9	21.3	7.1	30.3	31.8	0.0	48.5	47.7	33.8
Incr Delay (d2), s/veh	7.2	0.4	0.0	1.7	76.8	0.6	0.0	0.1	0.0	30.7	2.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.8	0.6	1.6	24.8	3.2	0.8	0.7	0.0	6.5	2.5	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	16.9	3.1	51.5	98.1	7.7	30.3	31.9	0.0	79.2	50.2	35.1
LnGrp LOS	E	B	A	D	F	A	C	C	A	E	D	D
Approach Vol, veh/h		1772			3650			6			503	
Approach Delay, s/veh		19.0			85.9			403.4			70.0	
Approach LOS		B			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	32.5	10.2	50.4	33.9	15.4	9.5	51.1				
Change Period (Y+Rc), s	4.6	5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	12.2	37.1	10.6	39.3	7.0	42.3	5.0	44.9				
Max Q Clear Time (g_c+I1), s	13.4	3.6	5.7	19.3	3.9	7.1	5.1	46.9				
Green Ext Time (p_c), s	0.0	0.1	0.1	11.0	0.0	0.6	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			64.9									
HCM 6th LOS			E									

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

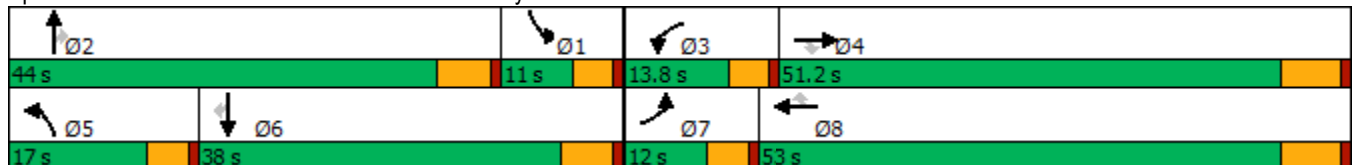
01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	1511	182	61	2761	452	535	493	42	252	297	423
Future Volume (vph)	300	1511	182	61	2761	452	535	493	42	252	297	423
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	12.0	51.2	51.2	13.8	53.0	53.0	17.0	44.0	44.0	11.0	38.0	38.0
Total Split (%)	10.0%	42.7%	42.7%	11.5%	44.2%	44.2%	14.2%	36.7%	36.7%	9.2%	31.7%	31.7%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 39: Evans Rd. & Ramona Exwy.





























HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1511	182	61	2761	452	535	493	42	252	297	423
Future Volume (veh/h)	300	1511	182	61	2761	452	535	493	42	252	297	423
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	319	1607	0	65	2937	215	569	524	13	268	316	184
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	280	2847		94	2702	763	455	746	316	310	638	267
Arrive On Green	0.10	0.65	0.00	0.07	0.62	0.62	0.13	0.20	0.20	0.09	0.17	0.17
Sat Flow, veh/h	3619	5700	1610	1810	5700	1610	3619	3800	1610	3619	3800	1589
Grp Volume(v), veh/h	319	1607	0	65	2937	215	569	524	13	268	316	184
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1610	1810	1900	1589
Q Serve(g_s), s	8.0	16.1	0.0	3.6	49.0	3.7	13.0	13.3	0.5	7.6	7.8	11.3
Cycle Q Clear(g_c), s	8.0	16.1	0.0	3.6	49.0	3.7	13.0	13.3	0.5	7.6	7.8	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	2847		94	2702	763	455	746	316	310	638	267
V/C Ratio(X)	1.14	0.56		0.69	1.09	0.28	1.25	0.70	0.04	0.86	0.50	0.69
Avail Cap(c_a), veh/h	280	2847		172	2702	763	455	1471	623	310	1250	523
HCM Platoon Ratio	1.30	1.30	1.30	1.30	1.30	1.30	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	11.9	0.0	47.4	19.8	3.9	45.2	38.7	21.3	46.6	39.0	40.5
Incr Delay (d2), s/veh	96.6	0.3	0.0	3.4	46.2	0.2	129.7	1.2	0.1	20.5	0.6	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	4.9	0.0	1.6	25.2	1.9	13.8	6.1	0.3	4.2	3.6	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	143.1	12.2	0.0	50.7	66.0	4.1	174.9	39.9	21.4	67.2	39.6	43.6
LnGrp LOS	F	B		D	F	A	F	D	C	E	D	D
Approach Vol, veh/h		1926	A		3217			1106			768	
Approach Delay, s/veh		33.8			61.5			109.1			50.2	
Approach LOS		C			E			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	24.3	9.4	55.6	17.0	21.4	12.0	53.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	6.4	* 38	9.2	44.7	12.4	32.2	7.4	46.5				
Max Q Clear Time (g_c+I1), s	9.6	15.3	5.6	18.1	15.0	13.3	10.0	51.0				
Green Ext Time (p_c), s	0.0	3.2	0.0	12.1	0.0	2.3	0.0	0.0				

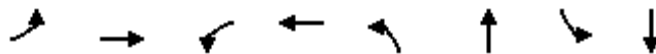
Intersection Summary

HCM 6th Ctrl Delay	60.2
HCM 6th LOS	E

Notes

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

Timings  
46: Dunlap Dr. & Nuevo Rd.

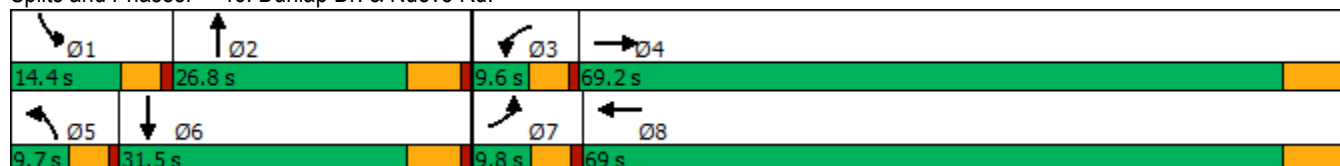


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↷	↶	↷	↶	↷	↶	↷
Traffic Volume (vph)	34	716	55	1322	9	21	101	22
Future Volume (vph)	34	716	55	1322	9	21	101	22
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.5	9.6	24.5	9.6	23.8	9.6	29.8
Total Split (s)	9.8	69.2	9.6	69.0	9.7	26.8	14.4	31.5
Total Split (%)	8.2%	57.7%	8.0%	57.5%	8.1%	22.3%	12.0%	26.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 89.9  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

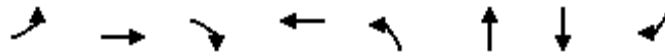


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	34	716	15	55	1322	174	9	21	182	101	22	87
Future Volume (veh/h)	34	716	15	55	1322	174	9	21	182	101	22	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	731	10	56	1349	160	9	21	184	103	22	41
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	1800	25	76	1637	193	20	25	222	131	126	235
Arrive On Green	0.03	0.49	0.49	0.04	0.50	0.50	0.01	0.15	0.15	0.07	0.21	0.21
Sat Flow, veh/h	1810	3646	50	1810	3253	383	1810	168	1468	1810	594	1107
Grp Volume(v), veh/h	35	362	379	56	745	764	9	0	205	103	0	63
Grp Sat Flow(s),veh/h/ln	1810	1805	1891	1810	1805	1831	1810	0	1636	1810	0	1701
Q Serve(g_s), s	1.7	11.3	11.3	2.7	31.2	31.8	0.4	0.0	10.9	5.0	0.0	2.7
Cycle Q Clear(g_c), s	1.7	11.3	11.3	2.7	31.2	31.8	0.4	0.0	10.9	5.0	0.0	2.7
Prop In Lane	1.00		0.03	1.00		0.21	1.00		0.90	1.00		0.65
Lane Grp Cap(c), veh/h	59	891	934	76	908	921	20	0	247	131	0	361
V/C Ratio(X)	0.60	0.41	0.41	0.74	0.82	0.83	0.44	0.00	0.83	0.78	0.00	0.17
Avail Cap(c_a), veh/h	105	1268	1328	101	1263	1282	103	0	385	199	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.6	14.3	14.3	42.3	18.8	18.9	43.9	0.0	36.8	40.7	0.0	28.8
Incr Delay (d2), s/veh	3.5	0.3	0.3	10.7	3.1	3.3	5.6	0.0	8.6	5.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.0	4.1	1.4	11.3	11.8	0.2	0.0	4.7	2.3	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	14.6	14.6	53.0	21.9	22.2	49.4	0.0	45.4	46.1	0.0	29.0
LnGrp LOS	D	B	B	D	C	C	D	A	D	D	A	C
Approach Vol, veh/h		776			1565			214				166
Approach Delay, s/veh		16.0			23.2			45.5				39.6
Approach LOS		B			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	19.3	8.4	50.6	5.6	24.8	7.5	51.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	9.8	21.0	5.0	62.7	5.1	25.7	5.2	62.5				
Max Q Clear Time (g_c+1), s	7.0	12.9	4.7	13.3	2.4	4.7	3.7	33.8				
Green Ext Time (p_c), s	0.0	0.6	0.0	4.2	0.0	0.2	0.0	11.2				

Intersection Summary

HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Timings  
47: Ramona Expy & Rider St.

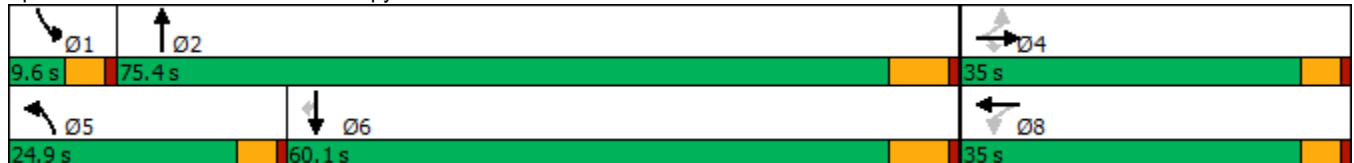


Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖	↗	↗	↗	↗
Traffic Volume (vph)	236	0	399	0	359	2372	1473	185	
Future Volume (vph)	236	0	399	0	359	2372	1473	185	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4						6
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	35.0	35.0	35.0	35.0	24.9	75.4	60.1	60.1	9.6
Total Split (%)	29.2%	29.2%	29.2%	29.2%	20.8%	62.8%	50.1%	50.1%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 101  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 47: Ramona Expy & Rider St.



HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗		↖	↗	↗
Traffic Volume (veh/h)	236	0	399	0	0	1	359	2372	1	0	1473	185
Future Volume (veh/h)	236	0	399	0	0	1	359	2372	1	0	1473	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	257	0	297	0	0	1	390	2578	1	0	1601	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	401	0	357	0	0	357	479	3485	1	2	2393	743
Arrive On Green	0.22	0.00	0.22	0.00	0.00	0.22	0.14	0.65	0.65	0.00	0.46	0.46
Sat Flow, veh/h	1436	0	1610	0	0	1610	3510	5356	2	1810	5187	1610
Grp Volume(v), veh/h	257	0	297	0	0	1	390	1665	914	0	1601	154
Grp Sat Flow(s),veh/h/ln	1436	0	1610	0	0	1610	1755	1729	1900	1810	1729	1610
Q Serve(g_s), s	14.8	0.0	15.3	0.0	0.0	0.0	9.4	28.3	28.3	0.0	21.0	5.0
Cycle Q Clear(g_c), s	14.8	0.0	15.3	0.0	0.0	0.0	9.4	28.3	28.3	0.0	21.0	5.0
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	401	0	357	0	0	357	479	2250	1236	2	2393	743
V/C Ratio(X)	0.64	0.00	0.83	0.00	0.00	0.00	0.81	0.74	0.74	0.00	0.67	0.21
Avail Cap(c_a), veh/h	584	0	561	0	0	561	817	2733	1501	104	3189	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	32.4	0.0	0.0	26.4	36.6	10.3	10.3	0.0	18.3	14.0
Incr Delay (d2), s/veh	1.7	0.0	6.0	0.0	0.0	0.0	1.3	0.9	1.6	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	6.2	0.0	0.0	0.0	3.8	7.4	8.4	0.0	7.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	0.0	38.3	0.0	0.0	26.4	37.9	11.1	11.8	0.0	18.6	14.1
LnGrp LOS	C	A	D	A	A	C	D	B	B	A	B	B
Approach Vol, veh/h		554			1			2969			1755	
Approach Delay, s/veh		36.3			26.4			14.9			18.2	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	63.2		24.0	16.5	46.7		24.0				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	68.9		30.4	20.3	53.6		30.4				
Max Q Clear Time (g_c+I1), s	0.0	30.3		17.3	11.4	23.0		2.0				
Green Ext Time (p_c), s	0.0	26.5		2.0	0.5	13.6		0.0				

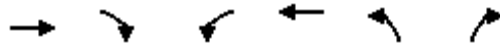
Intersection Summary

HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

# Timings

## 48: Antelope Rd. & Ramona Expy

01/25/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↔	↑↑↑	↔	↑
Traffic Volume (vph)	1212	660	183	2536	195	47
Future Volume (vph)	1212	660	183	2536	195	47
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	28.5	9.6	16.5	15.8	15.8
Total Split (s)	78.0	78.0	20.0	98.0	22.0	22.0
Total Split (%)	65.0%	65.0%	16.7%	81.7%	18.3%	18.3%
Yellow Time (s)	5.5	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	None

### Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.4  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated

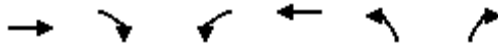
### Splits and Phases: 48: Antelope Rd. & Ramona Expy



# HCM 6th Signalized Intersection Summary

## 48: Antelope Rd. & Ramona Expy

01/25/2021

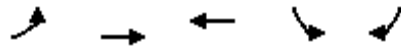


Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↔	↑↑↑	↔	↑
Traffic Volume (veh/h)	1212	660	183	2536	195	47
Future Volume (veh/h)	1212	660	183	2536	195	47
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1317	391	199	2757	212	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	3574	1109	262	4171	308	141
Arrive On Green	0.69	0.69	0.07	0.80	0.09	0.09
Sat Flow, veh/h	5358	1610	3510	5358	3510	1610
Grp Volume(v), veh/h	1317	391	199	2757	212	35
Grp Sat Flow(s),veh/h/ln	1729	1610	1755	1729	1755	1610
Q Serve(g_s), s	12.0	11.3	6.3	25.3	6.7	2.3
Cycle Q Clear(g_c), s	12.0	11.3	6.3	25.3	6.7	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3574	1109	262	4171	308	141
V/C Ratio(X)	0.37	0.35	0.76	0.66	0.69	0.25
Avail Cap(c_a), veh/h	3574	1109	475	4171	500	229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	7.3	51.7	4.7	50.4	48.4
Incr Delay (d2), s/veh	0.3	0.9	1.7	0.8	2.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	3.3	2.7	4.6	3.0	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.7	8.1	53.4	5.5	53.1	49.3
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1708			2956	247	
Approach Delay, s/veh	7.8			8.7	52.6	
Approach LOS	A			A	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		15.8	13.1	84.9		98.0
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		16.2	15.4	71.5		91.5
Max Q Clear Time (g_c+I1), s		8.7	8.3	14.0		27.3
Green Ext Time (p_c), s		0.5	0.2	13.8		43.7
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.6			
HCM 6th LOS			B			

# Timings

## 51: Nuevo Rd. & Antelope Rd.

01/25/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↗	↑↑	↑↑	↖	↗
Traffic Volume (vph)	488	485	1289	62	145
Future Volume (vph)	488	485	1289	62	145
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	36.0	91.0	55.0	29.0	36.0
Total Split (%)	30.0%	75.8%	45.8%	24.2%	30.0%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None

### Intersection Summary

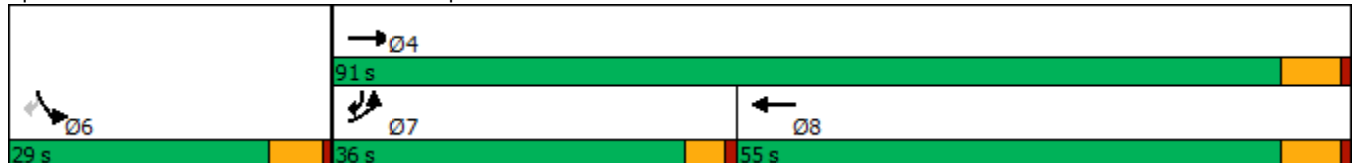
Cycle Length: 120

Actuated Cycle Length: 104.3

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Splits and Phases: 51: Nuevo Rd. & Antelope Rd.

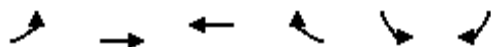




# HCM 6th Signalized Intersection Summary

51: Nuevo Rd. & Antelope Rd.

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑	↗		↙	↘	
Traffic Volume (veh/h)	488	485	1289	222	62	145	
Future Volume (veh/h)	488	485	1289	222	62	145	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	530	527	1401	105	67	76	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	533	2860	1548	116	167	623	
Arrive On Green	0.29	0.79	0.45	0.45	0.09	0.09	
Sat Flow, veh/h	1810	3705	3500	254	1810	1610	
Grp Volume(v), veh/h	530	527	740	766	67	76	
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1854	1810	1610	
Q Serve(g_s), s	31.2	3.8	40.4	40.9	3.7	3.2	
Cycle Q Clear(g_c), s	31.2	3.8	40.4	40.9	3.7	3.2	
Prop In Lane	1.00			0.14	1.00	1.00	
Lane Grp Cap(c), veh/h	533	2860	821	843	167	623	
V/C Ratio(X)	0.99	0.18	0.90	0.91	0.40	0.12	
Avail Cap(c_a), veh/h	533	2860	821	843	394	824	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	37.5	2.7	26.9	27.0	45.6	21.0	
Incr Delay (d2), s/veh	37.6	0.1	15.0	15.4	1.5	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	18.4	0.8	18.9	19.7	1.7	3.6	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	75.1	2.8	41.9	42.4	47.2	21.1	
LnGrp LOS	E	A	D	D	D	C	
Approach Vol, veh/h		1057	1506		143		
Approach Delay, s/veh		39.1	42.2		33.3		
Approach LOS		D	D		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				91.0	15.7	36.0	55.0
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				84.5	23.2	31.4	48.5
Max Q Clear Time (g_c+I1), s				5.8	5.7	33.2	42.9
Green Ext Time (p_c), s				3.4	0.3	0.0	3.9
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			40.5				
HCM 6th LOS			D				

Timings  
68: San Jacinto Av. & Dunlap Dr.

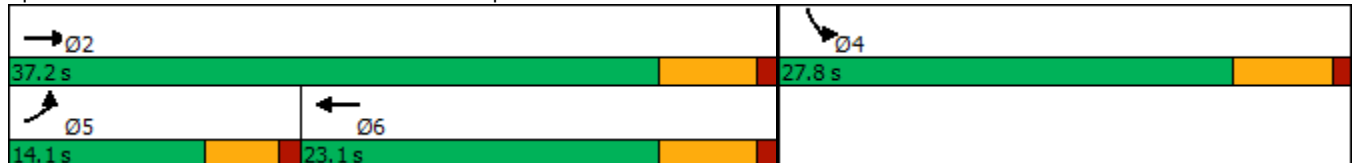


Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↖	↑	↗	↘
Traffic Volume (vph)	246	152	239	46
Future Volume (vph)	246	152	239	46
Turn Type	Prot	NA	NA	Prot
Protected Phases	5	2	6	4
Permitted Phases				
Detector Phase	5	2	6	4
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	27.8
Total Split (s)	14.1	37.2	23.1	27.8
Total Split (%)	21.7%	57.2%	35.5%	42.8%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 50.8  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 68: San Jacinto Av. & Dunlap Dr.



HCM 6th Signalized Intersection Summary  
68: San Jacinto Av. & Dunlap Dr.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶		↷	↷
Traffic Volume (veh/h)	246	152	239	29	46	194
Future Volume (veh/h)	246	152	239	29	46	194
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	262	162	254	31	49	206
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	323	967	376	46	72	301
Arrive On Green	0.18	0.51	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1810	1900	1661	203	315	1324
Grp Volume(v), veh/h	262	162	0	285	256	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1864	1646	0
Q Serve(g_s), s	6.1	2.0	0.0	6.1	6.3	0.0
Cycle Q Clear(g_c), s	6.1	2.0	0.0	6.1	6.3	0.0
Prop In Lane	1.00			0.11	0.19	0.80
Lane Grp Cap(c), veh/h	323	967	0	422	374	0
V/C Ratio(X)	0.81	0.17	0.00	0.68	0.68	0.00
Avail Cap(c_a), veh/h	391	1356	0	733	823	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.4	5.8	0.0	15.6	15.6	0.0
Incr Delay (d2), s/veh	8.6	0.1	0.0	1.9	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.5	0.0	2.1	2.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.0	5.9	0.0	17.4	17.8	0.0
LnGrp LOS	C	A	A	B	B	A
Approach Vol, veh/h		424	285		256	
Approach Delay, s/veh		18.3	17.4		17.8	
Approach LOS		B	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		28.2		15.8	12.4	15.8
Change Period (Y+Rc), s		5.8		5.8	4.6	5.8
Max Green Setting (Gmax), s		31.4		22.0	9.5	17.3
Max Q Clear Time (g_c+I1), s		4.0		8.3	8.1	8.1
Green Ext Time (p_c), s		0.8		0.6	0.1	0.9

Intersection Summary

HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings

71: Redlands Av. & San Jacinto Av.

01/25/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↖↗
Traffic Volume (vph)	36	29	153	815	75	56	133	232	671	85	496
Future Volume (vph)	36	29	153	815	75	56	133	232	671	85	496
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8		5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	9.6	9.6	35.8
Total Split (s)	9.6	38.6	38.6	31.0	60.0	60.0	14.0	38.0	31.0	12.4	36.4
Total Split (%)	8.0%	32.2%	32.2%	25.8%	50.0%	50.0%	11.7%	31.7%	25.8%	10.3%	30.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min

Intersection Summary

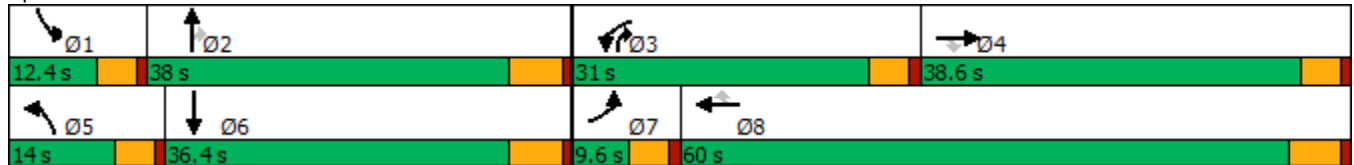
Cycle Length: 120

Actuated Cycle Length: 93.4

Natural Cycle: 115

Control Type: Actuated-Uncoordinated




























Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)

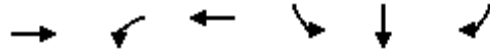
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	36	29	153	815	75	56	133	232	671	85	496	77
Future Volume (veh/h)	36	29	153	815	75	56	133	232	671	85	496	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	35	100	982	90	56	160	280	713	102	598	87
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	125	198	167	964	652	552	177	1205	979	129	972	141
Arrive On Green	0.04	0.10	0.10	0.27	0.34	0.34	0.10	0.33	0.33	0.07	0.31	0.31
Sat Flow, veh/h	3510	1900	1610	3510	1900	1610	1810	3610	1610	1810	3163	459
Grp Volume(v), veh/h	43	35	100	982	90	56	160	280	713	102	341	344
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1610	1810	1805	1610	1810	1805	1817
Q Serve(g_s), s	1.1	1.6	5.7	26.4	3.1	2.3	8.4	5.4	29.9	5.3	15.5	15.6
Cycle Q Clear(g_c), s	1.1	1.6	5.7	26.4	3.1	2.3	8.4	5.4	29.9	5.3	15.5	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	125	198	167	964	652	552	177	1205	979	129	554	558
V/C Ratio(X)	0.34	0.18	0.60	1.02	0.14	0.10	0.90	0.23	0.73	0.79	0.61	0.62
Avail Cap(c_a), veh/h	183	672	570	964	1071	908	177	1209	982	147	575	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	39.3	41.1	34.9	21.8	21.5	42.9	23.1	13.2	43.9	28.4	28.5
Incr Delay (d2), s/veh	0.6	0.4	3.4	33.7	0.1	0.1	40.7	0.1	2.7	19.2	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.8	2.3	15.0	1.3	0.8	5.6	2.2	9.6	3.0	6.5	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	39.7	44.5	68.6	21.9	21.6	83.6	23.2	16.0	63.1	30.3	30.3
LnGrp LOS	D	D	D	F	C	C	F	C	B	E	C	C
Approach Vol, veh/h		178			1128			1153			787	
Approach Delay, s/veh		43.9			62.5			27.1			34.6	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	37.9	31.0	15.8	14.0	35.3	8.0	38.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.8	32.2	26.4	* 34	9.4	30.6	5.0	54.2				
Max Q Clear Time (g_c+I1), s	7.3	31.9	28.4	7.7	10.4	17.6	3.1	5.1				
Green Ext Time (p_c), s	0.0	0.1	0.0	0.5	0.0	3.1	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			42.2									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

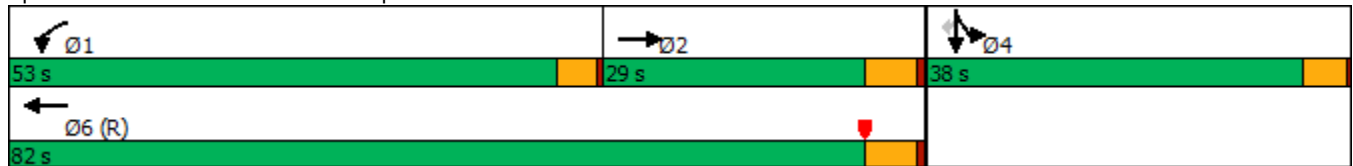


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑	↑	↑
Traffic Volume (vph)	492	744	682	747	0	71
Future Volume (vph)	492	744	682	747	0	71
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	29.0	53.0	82.0	38.0	38.0	38.0
Total Split (%)	24.2%	44.2%	68.3%	31.7%	31.7%	31.7%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: I-215 SB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	492	166	744	682	0	0	0	0	747	0	71
Future Volume (veh/h)	0	492	166	744	682	0	0	0	0	747	0	71
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	535	98	809	741	0				812	0	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1109	202	902	2422	0				899	0	397
Arrive On Green	0.00	0.35	0.35	0.42	1.00	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3125	570	3619	3800	0				3619	0	1600
Grp Volume(v), veh/h	0	324	309	809	741	0				812	0	55
Grp Sat Flow(s),veh/h/ln	0	1900	1795	1810	1900	0				1810	0	1600
Q Serve(g_s), s	0.0	15.9	16.1	25.0	0.0	0.0				26.1	0.0	3.2
Cycle Q Clear(g_c), s	0.0	15.9	16.1	25.0	0.0	0.0				26.1	0.0	3.2
Prop In Lane	0.00		0.32	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	674	637	902	2423	0				899	0	397
V/C Ratio(X)	0.00	0.48	0.48	0.90	0.31	0.00				0.90	0.00	0.14
Avail Cap(c_a), veh/h	0	674	637	1478	2423	0				1010	0	447
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.68	0.68	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	30.1	30.2	33.6	0.0	0.0				43.7	0.0	35.1
Incr Delay (d2), s/veh	0.0	2.5	2.6	3.2	0.2	0.0				10.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.4	7.1	8.9	0.1	0.0				12.5	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	32.6	32.8	36.8	0.2	0.0				54.2	0.0	35.3
LnGrp LOS	A	C	C	D	A	A				D	A	D
Approach Vol, veh/h		633			1550						867	
Approach Delay, s/veh		32.7			19.3						53.0	
Approach LOS		C			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	33.9	48.1		34.3		82.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	49.0	23.5		33.5		76.5						
Max Q Clear Time (g_c+I1), s	27.0	18.1		28.1		2.0						
Green Ext Time (p_c), s	2.9	1.1		1.7		3.0						

Intersection Summary

HCM 6th Ctrl Delay	31.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022

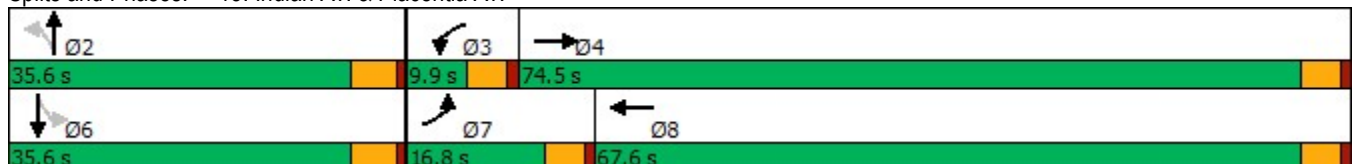


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↖	↕
Traffic Volume (vph)	127	1115	33	1168	50	98	120	270
Future Volume (vph)	127	1115	33	1168	50	98	120	270
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	9.6	26.6	27.1	27.1	27.1	27.1
Total Split (s)	16.8	74.5	9.9	67.6	35.6	35.6	35.6	35.6
Total Split (%)	14.0%	62.1%	8.3%	56.3%	29.7%	29.7%	29.7%	29.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.1	5.1	5.1	5.1
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	11.2	73.3	5.3	63.2	25.4	25.4	25.4	25.4
Actuated g/C Ratio	0.10	0.64	0.05	0.55	0.22	0.22	0.22	0.22
v/c Ratio	0.78	0.57	0.44	0.67	0.82	0.16	0.46	0.80
Control Delay	80.2	14.2	71.7	20.9	113.2	30.5	44.0	40.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.2	14.2	71.7	20.9	113.2	30.5	44.0	40.0
LOS	F	B	E	C	F	C	D	D
Approach Delay		20.4		22.2		54.9		40.6
Approach LOS		C		C		D		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.1  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 27.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 84.5%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 15: Indian Av. & Placentia Av.

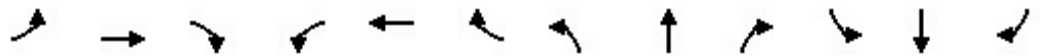




HCM 6th Signalized Intersection Summary  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕		↖	↕	
Traffic Volume (veh/h)	127	1115	98	33	1168	50	50	98	20	120	270	360
Future Volume (veh/h)	127	1115	98	33	1168	50	50	98	20	120	270	360
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	138	1212	53	36	1270	43	54	107	0	130	293	348
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	165	2089	91	53	1892	64	103	928	0	367	464	414
Arrive On Green	0.09	0.59	0.59	0.03	0.53	0.53	0.26	0.26	0.00	0.26	0.26	0.26
Sat Flow, veh/h	1810	3523	154	1810	3563	121	801	3705	0	1307	1805	1610
Grp Volume(v), veh/h	138	621	644	36	643	670	54	107	0	130	293	348
Grp Sat Flow(s),veh/h/ln	1810	1805	1872	1810	1805	1878	801	1805	0	1307	1805	1610
Q Serve(g_s), s	8.9	25.3	25.3	2.3	30.8	30.8	6.2	2.7	0.0	10.0	17.1	24.3
Cycle Q Clear(g_c), s	8.9	25.3	25.3	2.3	30.8	30.8	30.5	2.7	0.0	12.7	17.1	24.3
Prop In Lane	1.00		0.08	1.00		0.06	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	1070	1110	53	959	998	103	928	0	367	464	414
V/C Ratio(X)	0.84	0.58	0.58	0.68	0.67	0.67	0.53	0.12	0.00	0.35	0.63	0.84
Avail Cap(c_a), veh/h	186	1070	1110	81	959	998	103	928	0	367	464	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	15.0	15.0	57.0	20.2	20.3	56.9	33.7	0.0	38.6	39.1	41.7
Incr Delay (d2), s/veh	22.5	2.3	2.2	5.6	3.7	3.6	4.9	0.1	0.0	0.6	2.8	14.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	10.8	11.2	1.2	13.8	14.3	1.8	1.2	0.0	3.2	7.8	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.5	17.3	17.2	62.6	24.0	23.9	61.8	33.8	0.0	39.2	41.8	56.1
LnGrp LOS	E	B	B	E	C	C	E	C	A	D	D	E
Approach Vol, veh/h		1403			1349			161			771	
Approach Delay, s/veh		23.0			25.0			43.2			47.8	
Approach LOS		C			C			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		35.6	8.1	74.9		35.6	15.4	67.6				
Change Period (Y+Rc), s		5.1	4.6	4.6		5.1	4.6	4.6				
Max Green Setting (Gmax), s		30.5	5.3	69.9		30.5	12.2	63.0				
Max Q Clear Time (g_c+I1), s		32.5	4.3	27.3		26.3	10.9	32.8				
Green Ext Time (p_c), s		0.0	0.0	12.5		1.7	0.0	11.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				29.8								
HCM 6th LOS				C								

Timings

Stoneridge Commerce Center SP (JN 13265)

30: Redlands Av. & Ramona Exwy.

01/25/2021

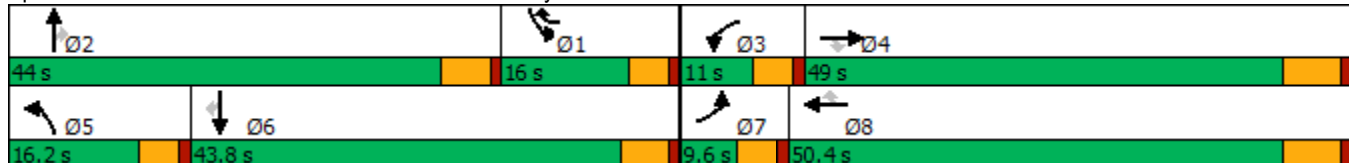


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑↑↑	↗	↖↖	↑↑↑	↗	↖	↑	↗	↖↖	↑	↗
Traffic Volume (vph)	71	3324	59	57	2353	386	72	78	130	392	41	85
Future Volume (vph)	71	3324	59	57	2353	386	72	78	130	392	41	85
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	9.6	9.6	41.4	41.4	9.6	23.4	23.4
Total Split (s)	9.6	49.0	49.0	11.0	50.4	16.0	16.2	44.0	44.0	16.0	43.8	43.8
Total Split (%)	8.0%	40.8%	40.8%	9.2%	42.0%	13.3%	13.5%	36.7%	36.7%	13.3%	36.5%	36.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	5.4	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔	↑	↔	↔↔	↑	↔
Traffic Volume (veh/h)	71	3324	59	57	2353	386	72	78	130	392	41	85
Future Volume (veh/h)	71	3324	59	57	2353	386	72	78	130	392	41	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	3613	53	62	2558	284	78	85	82	426	45	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	166	3140	773	153	3116	971	101	210	178	443	361	306
Arrive On Green	0.05	0.48	0.48	0.04	0.48	0.48	0.06	0.11	0.11	0.13	0.19	0.19
Sat Flow, veh/h	3510	6536	1608	3510	6536	1610	1810	1900	1610	3510	1900	1610
Grp Volume(v), veh/h	77	3613	53	62	2558	284	78	85	82	426	45	65
Grp Sat Flow(s),veh/h/ln	1755	1634	1608	1755	1634	1610	1810	1900	1610	1755	1900	1610
Q Serve(g_s), s	1.9	43.4	1.6	1.6	30.4	1.9	3.8	3.8	3.6	10.9	1.8	3.1
Cycle Q Clear(g_c), s	1.9	43.4	1.6	1.6	30.4	1.9	3.8	3.8	3.6	10.9	1.8	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	3140	773	153	3116	971	101	210	178	443	361	306
V/C Ratio(X)	0.46	1.15	0.07	0.40	0.82	0.29	0.77	0.40	0.46	0.96	0.12	0.21
Avail Cap(c_a), veh/h	194	3140	773	249	3197	991	232	812	688	443	807	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	23.5	12.6	42.1	20.3	2.1	42.1	37.4	25.7	39.3	30.4	30.9
Incr Delay (d2), s/veh	0.7	71.8	0.0	0.6	1.8	0.2	4.6	1.2	1.8	32.8	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	29.6	0.5	0.7	10.2	0.6	1.8	1.8	1.7	6.5	0.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	95.3	12.6	42.7	22.1	2.3	46.7	38.7	27.6	72.0	30.5	31.2
LnGrp LOS	D	F	B	D	C	A	D	D	C	E	C	C
Approach Vol, veh/h		3743			2904			245			536	
Approach Delay, s/veh		93.1			20.6			37.5			63.6	
Approach LOS		F			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	15.4	8.5	49.6	9.6	22.6	8.9	49.3				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	11.4	* 39	6.4	42.8	11.6	38.4	5.0	44.2				
Max Q Clear Time (g_c+I1), s	12.9	5.8	3.6	45.4	5.8	5.1	3.9	32.4				
Green Ext Time (p_c), s	0.0	0.7	0.0	0.0	0.0	0.4	0.0	10.7				

Intersection Summary

HCM 6th Ctrl Delay	60.8
HCM 6th LOS	E

Notes

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

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	484	2902	517	48	2114	389	268	391	58	447	634	414
Future Volume (vph)	484	2902	517	48	2114	389	268	391	58	447	634	414
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	17.0	54.0	54.0	9.6	46.6	46.6	16.0	40.4	40.4	16.0	40.4	40.4
Total Split (%)	14.2%	45.0%	45.0%	8.0%	38.8%	38.8%	13.3%	33.7%	33.7%	13.3%	33.7%	33.7%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

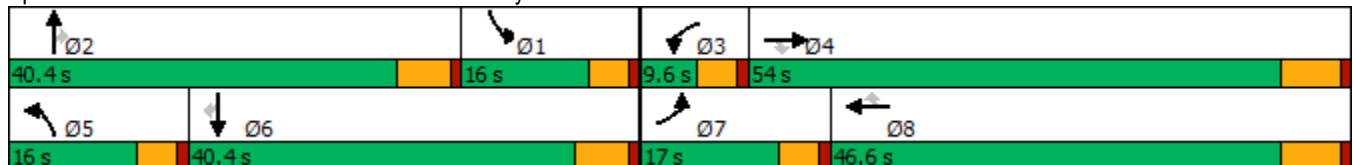
Cycle Length: 120

Actuated Cycle Length: 113.2

Natural Cycle: 115

Control Type: Actuated-Uncoordinated


































Splits and Phases: 39: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 		 	 	
Traffic Volume (veh/h)	484	2902	517	48	2114	389	268	391	58	447	634	414
Future Volume (veh/h)	484	2902	517	48	2114	389	268	391	58	447	634	414
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	494	2961	0	49	2157	111	273	399	23	456	647	167
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	440	2728		75	2272	642	357	595	252	587	880	367
Arrive On Green	0.16	0.62	0.00	0.05	0.52	0.52	0.10	0.16	0.16	0.16	0.23	0.23
Sat Flow, veh/h	3619	5700	1610	1810	5700	1610	3619	3800	1610	3619	3800	1586
Grp Volume(v), veh/h	494	2961	0	49	2157	111	273	399	23	456	647	167
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1610	1810	1900	1586
Q Serve(g_s), s	13.0	51.2	0.0	2.8	38.4	2.0	7.9	10.6	1.1	12.9	16.9	9.7
Cycle Q Clear(g_c), s	13.0	51.2	0.0	2.8	38.4	2.0	7.9	10.6	1.1	12.9	16.9	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	440	2728		75	2272	642	357	595	252	587	880	367
V/C Ratio(X)	1.12	1.09		0.65	0.95	0.17	0.76	0.67	0.09	0.78	0.74	0.45
Avail Cap(c_a), veh/h	440	2728		95	2272	642	406	1294	548	587	1294	540
HCM Platoon Ratio	1.30	1.30	1.30	1.30	1.30	1.30	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	20.2	0.0	49.8	24.7	4.3	47.0	42.5	26.1	42.9	38.0	35.3
Incr Delay (d2), s/veh	80.7	45.4	0.0	4.9	9.6	0.1	6.1	1.3	0.2	5.9	1.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	26.0	0.0	1.3	14.9	1.3	3.7	4.9	0.5	6.0	7.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.7	65.6	0.0	54.7	34.4	4.4	53.1	43.8	26.2	48.8	39.3	36.2
LnGrp LOS	F	F		D	C	A	D	D	C	D	D	D
Approach Vol, veh/h		3455	A		2317			695			1270	
Approach Delay, s/veh		74.2			33.4			46.9			42.3	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.6	20.7	8.4	55.2	14.5	28.7	17.0	46.6				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	11.4	* 35	5.0	47.5	11.4	34.6	12.4	40.1				
Max Q Clear Time (g_c+I1), s	14.9	12.6	4.8	53.2	9.9	18.9	15.0	40.4				
Green Ext Time (p_c), s	0.0	2.4	0.0	0.0	0.1	4.1	0.0	0.0				

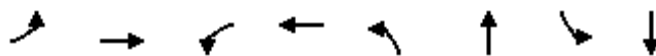
Intersection Summary

HCM 6th Ctrl Delay	54.3
HCM 6th LOS	D

Notes

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

Timings  
46: Dunlap Dr. & Nuevo Rd.

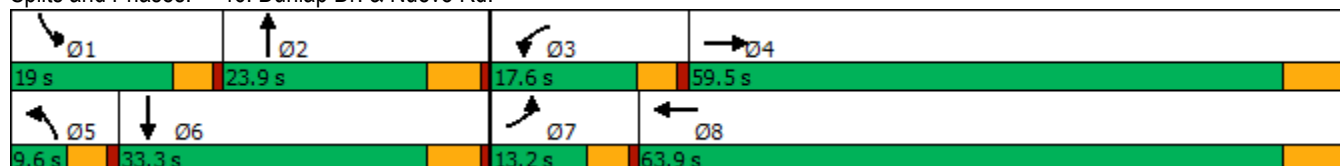


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	73	1618	167	1182	7	40	189	26
Future Volume (vph)	73	1618	167	1182	7	40	189	26
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.5	9.6	24.5	9.6	23.8	9.6	29.8
Total Split (s)	13.2	59.5	17.6	63.9	9.6	23.9	19.0	33.3
Total Split (%)	11.0%	49.6%	14.7%	53.3%	8.0%	19.9%	15.8%	27.8%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.7  
 Natural Cycle: 130  
 Control Type: Actuated-Uncoordinated






















Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

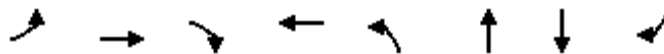
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1618	7	167	1182	126	7	40	63	189	26	54
Future Volume (veh/h)	73	1618	7	167	1182	126	7	40	63	189	26	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	79	1759	6	182	1285	55	8	43	67	205	28	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	101	1791	6	210	1930	83	18	60	94	233	139	218
Arrive On Green	0.06	0.47	0.47	0.12	0.53	0.53	0.01	0.09	0.09	0.13	0.21	0.21
Sat Flow, veh/h	1810	3785	13	1810	3617	155	1810	669	1043	1810	665	1045
Grp Volume(v), veh/h	79	883	882	182	674	666	8	0	110	205	0	72
Grp Sat Flow(s),veh/h/ln	1810	1900	1898	1810	1900	1872	1810	0	1712	1810	0	1710
Q Serve(g_s), s	4.8	51.2	51.3	11.1	28.7	28.8	0.5	0.0	7.0	12.5	0.0	3.9
Cycle Q Clear(g_c), s	4.8	51.2	51.3	11.1	28.7	28.8	0.5	0.0	7.0	12.5	0.0	3.9
Prop In Lane	1.00		0.01	1.00		0.08	1.00		0.61	1.00		0.61
Lane Grp Cap(c), veh/h	101	899	898	210	1014	999	18	0	154	233	0	357
V/C Ratio(X)	0.78	0.98	0.98	0.87	0.67	0.67	0.45	0.00	0.71	0.88	0.00	0.20
Avail Cap(c_a), veh/h	139	899	898	210	1014	999	81	0	277	233	0	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.2	29.0	29.0	48.6	18.9	18.9	55.1	0.0	49.5	48.0	0.0	36.6
Incr Delay (d2), s/veh	11.8	25.5	25.7	28.5	1.7	1.7	6.5	0.0	6.0	29.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	26.8	26.8	6.4	11.5	11.3	0.3	0.0	3.2	7.3	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.0	54.5	54.7	77.1	20.6	20.6	61.6	0.0	55.5	77.0	0.0	36.9
LnGrp LOS	E	D	D	E	C	C	E	A	E	E	A	D
Approach Vol, veh/h		1844			1522			118				277
Approach Delay, s/veh		55.0			27.3			55.9				66.6
Approach LOS		E			C			E				E
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	15.9	17.6	59.5	5.7	29.2	10.9	66.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	14.4	18.1	13.0	53.0	5.0	27.5	8.6	57.4				
Max Q Clear Time (g_c+I1), s	14.5	9.0	13.1	53.3	2.5	5.9	6.8	30.8				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.3	0.0	8.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			44.7									
HCM 6th LOS			D									

Timings  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖	↗	↗	↗	↗
Traffic Volume (vph)	43	0	377	0	383	2110	2701	112	
Future Volume (vph)	43	0	377	0	383	2110	2701	112	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4						6
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	34.6	34.6	34.6	34.6	18.5	75.8	66.9	66.9	9.6
Total Split (%)	28.8%	28.8%	28.8%	28.8%	15.4%	63.2%	55.8%	55.8%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 47: Ramona Expy & Rider St.


























HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	0	377	0	0	1	383	2110	1	0	2701	112
Future Volume (veh/h)	43	0	377	0	0	1	383	2110	1	0	2701	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	0	241	0	0	1	407	2245	1	0	2873	66
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	317	0	280	0	0	281	464	4118	2	2	3148	888
Arrive On Green	0.17	0.00	0.17	0.00	0.00	0.17	0.13	0.72	0.72	0.00	0.55	0.55
Sat Flow, veh/h	1434	0	1605	0	0	1610	3619	5697	3	1810	5700	1609
Grp Volume(v), veh/h	46	0	241	0	0	1	407	1497	749	0	2873	66
Grp Sat Flow(s),veh/h/ln	1434	0	1605	0	0	1610	1810	1900	1899	1810	1900	1609
Q Serve(g_s), s	3.0	0.0	15.8	0.0	0.0	0.1	12.0	19.5	19.5	0.0	49.3	2.1
Cycle Q Clear(g_c), s	3.0	0.0	15.8	0.0	0.0	0.1	12.0	19.5	19.5	0.0	49.3	2.1
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	317	0	280	0	0	281	464	2747	1373	2	3148	888
V/C Ratio(X)	0.15	0.00	0.86	0.00	0.00	0.00	0.88	0.55	0.55	0.00	0.91	0.07
Avail Cap(c_a), veh/h	464	0	444	0	0	446	464	2747	1373	83	3176	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	0.0	43.4	0.0	0.0	36.9	46.4	6.9	6.9	0.0	21.9	11.3
Incr Delay (d2), s/veh	0.2	0.0	9.7	0.0	0.0	0.0	16.5	0.2	0.4	0.0	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	6.8	0.0	0.0	0.0	6.2	5.5	5.5	0.0	19.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	0.0	53.1	0.0	0.0	37.0	62.9	7.1	7.3	0.0	26.5	11.4
LnGrp LOS	D	A	D	A	A	D	E	A	A	A	C	B
Approach Vol, veh/h		287			1			2653			2939	
Approach Delay, s/veh		50.7			37.0			15.7			26.1	
Approach LOS		D			D			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	84.9		23.5	18.5	66.4		23.5				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	69.3		30.0	13.9	60.4		30.0				
Max Q Clear Time (g_c+I1), s	0.0	21.5		17.8	14.0	51.3		2.1				
Green Ext Time (p_c), s	0.0	24.2		0.8	0.0	8.5		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			22.6									
HCM 6th LOS			C									

Timings  
48: Antelope Rd. & Ramona Expy

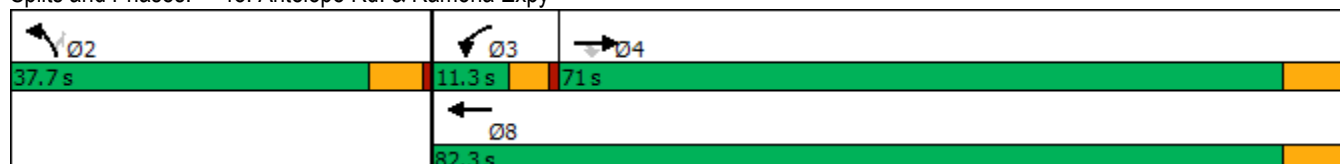


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↔	↑↑↑	↔	↑
Traffic Volume (vph)	2763	315	156	1728	766	216
Future Volume (vph)	2763	315	156	1728	766	216
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	28.5	9.6	16.5	15.8	15.8
Total Split (s)	71.0	71.0	11.3	82.3	37.7	37.7
Total Split (%)	59.2%	59.2%	9.4%	68.6%	31.4%	31.4%
Yellow Time (s)	5.5	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	0.0	0.0	-0.5	0.0	0.0
Total Lost Time (s)	6.0	6.5	4.6	6.0	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	None

Intersection Summary

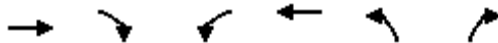
Cycle Length: 120  
 Actuated Cycle Length: 119.1  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 48: Antelope Rd. & Ramona Expy



HCM 6th Signalized Intersection Summary  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↵	↑↑↑	↵	↑
Traffic Volume (veh/h)	2763	315	156	1728	766	216
Future Volume (veh/h)	2763	315	156	1728	766	216
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3003	233	170	1878	833	126
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	3125	876	205	3668	902	414
Arrive On Green	0.55	0.54	0.06	0.64	0.26	0.26
Sat Flow, veh/h	5700	1610	3619	5700	3510	1610
Grp Volume(v), veh/h	3003	233	170	1878	833	126
Grp Sat Flow(s),veh/h/ln	1900	1610	1810	1900	1755	1610
Q Serve(g_s), s	59.6	9.1	5.5	20.7	27.4	7.5
Cycle Q Clear(g_c), s	59.6	9.1	5.5	20.7	27.4	7.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3125	876	205	3668	902	414
V/C Ratio(X)	0.96	0.27	0.83	0.51	0.92	0.30
Avail Cap(c_a), veh/h	3127	877	205	3671	945	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	14.4	55.3	11.2	42.9	35.5
Incr Delay (d2), s/veh	8.9	0.2	22.8	0.1	14.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.6	3.0	3.1	7.3	13.2	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.4	14.6	78.2	11.3	56.9	35.9
LnGrp LOS	C	B	E	B	E	D
Approach Vol, veh/h	3236			2048	959	
Approach Delay, s/veh	33.0			16.9	54.1	
Approach LOS	C			B	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		36.2	11.3	70.9		82.2
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		31.9	6.7	64.5		75.8
Max Q Clear Time (g_c+I1), s		29.4	7.5	61.6		22.7
Green Ext Time (p_c), s		1.0	0.0	2.8		20.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			31.0			
HCM 6th LOS			C			

Timings

51: Nuevo Rd. & Antelope Rd.

01/25/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↗	↑↑	↑↑↔	↖	↖
Traffic Volume (vph)	232	1451	937	262	536
Future Volume (vph)	232	1451	937	262	536
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	32.0	84.0	52.0	36.0	32.0
Total Split (%)	26.7%	70.0%	43.3%	30.0%	26.7%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.5  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated

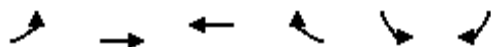
Splits and Phases: 51: Nuevo Rd. & Antelope Rd.



HCM 6th Signalized Intersection Summary  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	232	1451	937	128	262	536	
Future Volume (veh/h)	232	1451	937	128	262	536	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	252	1577	1018	30	285	393	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	282	2410	1690	50	410	616	
Arrive On Green	0.16	0.67	0.47	0.47	0.23	0.23	
Sat Flow, veh/h	1810	3705	3675	106	1810	1610	
Grp Volume(v), veh/h	252	1577	513	535	285	393	
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1881	1810	1610	
Q Serve(g_s), s	15.9	29.9	24.3	24.4	16.8	23.2	
Cycle Q Clear(g_c), s	15.9	29.9	24.3	24.4	16.8	23.2	
Prop In Lane	1.00			0.06	1.00	1.00	
Lane Grp Cap(c), veh/h	282	2410	852	888	410	616	
V/C Ratio(X)	0.89	0.65	0.60	0.60	0.70	0.64	
Avail Cap(c_a), veh/h	427	2410	852	888	471	670	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	48.1	11.4	22.6	22.6	41.2	29.3	
Incr Delay (d2), s/veh	10.8	1.4	3.1	3.0	3.7	1.8	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	7.7	10.2	10.2	10.6	7.6	0.3	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	58.9	12.8	25.7	25.6	44.9	31.1	
LnGrp LOS	E	B	C	C	D	C	
Approach Vol, veh/h		1829	1048		678		
Approach Delay, s/veh		19.1	25.7		36.9		
Approach LOS		B	C		D		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				84.0	32.1	22.7	61.3
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				77.5	30.2	27.4	45.5
Max Q Clear Time (g_c+I1), s				31.9	25.2	17.9	26.4
Green Ext Time (p_c), s				15.8	1.2	0.2	5.9
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			24.5				
HCM 6th LOS			C				

Timings  
68: San Jacinto Av. & Dunlap Dr.

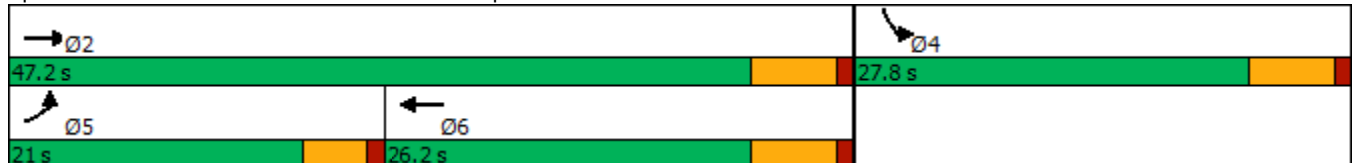


Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↗	↑	↖	↘
Traffic Volume (vph)	312	503	307	76
Future Volume (vph)	312	503	307	76
Turn Type	Prot	NA	NA	Prot
Protected Phases	5	2	6	4
Permitted Phases				
Detector Phase	5	2	6	4
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	27.8
Total Split (s)	21.0	47.2	26.2	27.8
Total Split (%)	28.0%	62.9%	34.9%	37.1%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

Cycle Length: 75  
 Actuated Cycle Length: 61.9  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated

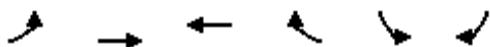
Splits and Phases: 68: San Jacinto Av. & Dunlap Dr.



HCM 6th Signalized Intersection Summary  
68: San Jacinto Av. & Dunlap Dr.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗		↙	↘
Traffic Volume (veh/h)	312	503	307	66	76	284
Future Volume (veh/h)	312	503	307	66	76	284
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	335	541	330	71	82	305
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	386	1033	388	83	94	348
Arrive On Green	0.21	0.54	0.26	0.26	0.27	0.27
Sat Flow, veh/h	1810	1900	1515	326	349	1296
Grp Volume(v), veh/h	335	541	0	401	388	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1841	1649	0
Q Serve(g_s), s	11.0	11.2	0.0	12.8	13.9	0.0
Cycle Q Clear(g_c), s	11.0	11.2	0.0	12.8	13.9	0.0
Prop In Lane	1.00			0.18	0.21	0.79
Lane Grp Cap(c), veh/h	386	1033	0	471	443	0
V/C Ratio(X)	0.87	0.52	0.00	0.85	0.88	0.00
Avail Cap(c_a), veh/h	480	1273	0	608	587	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.5	9.0	0.0	21.9	21.6	0.0
Incr Delay (d2), s/veh	11.4	0.4	0.0	9.0	11.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.3	0.0	5.7	5.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.9	9.4	0.0	30.9	32.8	0.0
LnGrp LOS	C	A	A	C	C	A
Approach Vol, veh/h		876	401		388	
Approach Delay, s/veh		19.1	30.9		32.8	
Approach LOS		B	C		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		39.4		22.4	17.8	21.6
Change Period (Y+Rc), s		5.8		5.8	4.6	5.8
Max Green Setting (Gmax), s		41.4		22.0	16.4	20.4
Max Q Clear Time (g_c+I1), s		13.2		15.9	13.0	14.8
Green Ext Time (p_c), s		3.3		0.7	0.2	1.0

Intersection Summary

HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

71: Redlands Av. & San Jacinto Av.

01/25/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↖↗
Traffic Volume (vph)	93	67	198	815	70	72	221	654	1128	123	463
Future Volume (vph)	93	67	198	815	70	72	221	654	1128	123	463
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8		5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	9.6	9.6	35.8
Total Split (s)	12.6	38.6	38.6	34.0	60.0	60.0	19.0	39.8	34.0	17.6	38.4
Total Split (%)	9.7%	29.7%	29.7%	26.2%	46.2%	46.2%	14.6%	30.6%	26.2%	13.5%	29.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min

Intersection Summary

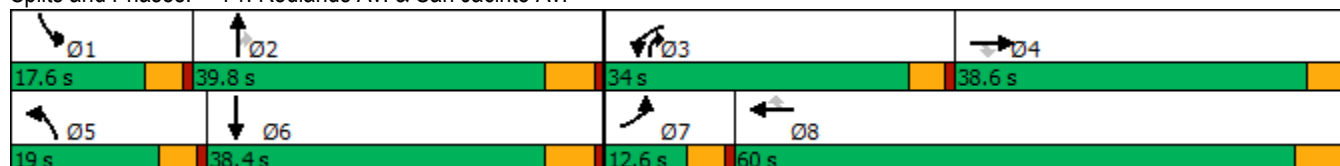
Cycle Length: 130

Actuated Cycle Length: 101.3

Natural Cycle: 115

Control Type: Actuated-Uncoordinated





























Splits and Phases: 71: Redlands Av. & San Jacinto Av.





HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	93	67	198	815	70	72	221	654	1128	123	463	77
Future Volume (veh/h)	93	67	198	815	70	72	221	654	1128	123	463	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	100	72	153	876	75	64	238	703	999	132	498	70
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	159	228	193	939	650	544	249	1172	943	162	879	123
Arrive On Green	0.05	0.12	0.12	0.27	0.34	0.34	0.14	0.32	0.32	0.09	0.28	0.28
Sat Flow, veh/h	3510	1900	1610	3510	1900	1590	1810	3610	1576	1810	3180	445
Grp Volume(v), veh/h	100	72	153	876	75	64	238	703	999	132	282	286
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1590	1810	1805	1576	1810	1805	1820
Q Serve(g_s), s	2.9	3.6	9.7	25.5	2.8	2.9	13.7	17.1	34.0	7.5	14.0	14.1
Cycle Q Clear(g_c), s	2.9	3.6	9.7	25.5	2.8	2.9	13.7	17.1	34.0	7.5	14.0	14.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	159	228	193	939	650	544	249	1172	943	162	499	503
V/C Ratio(X)	0.63	0.32	0.79	0.93	0.12	0.12	0.96	0.60	1.06	0.82	0.56	0.57
Avail Cap(c_a), veh/h	268	617	523	986	984	823	249	1172	943	225	562	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	42.1	44.8	37.4	23.6	23.6	44.8	29.6	21.5	46.8	32.5	32.5
Incr Delay (d2), s/veh	1.5	0.8	7.2	14.4	0.1	0.1	44.5	0.9	46.5	10.6	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.8	4.1	12.2	1.2	1.1	9.0	7.2	31.5	3.7	6.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	42.9	52.0	51.8	23.7	23.7	89.4	30.5	68.0	57.5	33.5	33.6
LnGrp LOS	D	D	D	D	C	C	F	C	F	E	C	C
Approach Vol, veh/h		325			1015			1940			700	
Approach Delay, s/veh		49.6			47.9			57.0			38.0	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	39.8	32.6	18.3	19.0	34.7	9.3	41.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	13.0	34.0	29.4	* 34	14.4	32.6	8.0	54.2				
Max Q Clear Time (g_c+I1), s	9.5	36.0	27.5	11.7	15.7	16.1	4.9	4.9				
Green Ext Time (p_c), s	0.0	0.0	0.5	0.9	0.0	2.8	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	50.8
HCM 6th LOS	D

Notes

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

**ATTACHMENT P**  
**POST PROCESSING WORKSHEETS**



Project: Stoneridge SP TIA  
 Scenario: 2040

Job #: 13265  
 Analyst: CS  
 Date: 44217

LOCATION: Dunlap Dr. & San Jacinto Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	223	222	22200%	1	125	124	12400%
	Through	1	152	151	15100%	1	223	222	22200%
	Right	1	65	64	6400%	1	101	100	10000%
	<b>NB Total</b>	<b>3</b>	<b>440</b>	<b>437</b>	<b>14567%</b>	<b>3</b>	<b>449</b>	<b>446</b>	<b>14867%</b>
SOUTH BOUND	Left	1	18	17	1700%	1	64	63	6300%
	Through	1	89	88	8800%	1	207	206	20600%
	Right	1	62	61	6100%	1	79	78	7800%
	<b>SB Total</b>	<b>3</b>	<b>169</b>	<b>166</b>	<b>5533%</b>	<b>3</b>	<b>350</b>	<b>347</b>	<b>11567%</b>
EAST BOUND	Left	1	30	29	2900%	1	66	65	6500%
	Through	2	117	115	5750%	2	268	266	13300%
	Right	1	63	62	6200%	1	96	95	9500%
	<b>EB Total</b>	<b>4</b>	<b>210</b>	<b>206</b>	<b>5150%</b>	<b>4</b>	<b>430</b>	<b>426</b>	<b>10650%</b>
WEST BOUND	Left	1	37	36	3600%	1	49	48	4800%
	Through	2	235	233	11650%	2	168	166	8300%
	Right	1	18	17	1700%	1	33	32	3200%
	<b>WB Total</b>	<b>4</b>	<b>290</b>	<b>286</b>	<b>7150%</b>	<b>4</b>	<b>250</b>	<b>246</b>	<b>6150%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>14</b>	<b>1,109</b>	<b>1095</b>	<b>7821%</b>	<b>14</b>	<b>1,479</b>	<b>1465</b>	<b>10464%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	169	350			
North Leg	Outbound	200	322			
<b>North Leg</b>	<b>TOTAL</b>	<b>369</b>	<b>672</b>	<b>9%</b>	<b>16%</b>	<b>4,259</b>
South Leg	Inbound	440	449			
South Leg	Outbound	189	352			
<b>South Leg</b>	<b>TOTAL</b>	<b>629</b>	<b>801</b>	<b>8%</b>	<b>10%</b>	<b>7,876</b>
East Leg	Inbound	290	250			
East Leg	Outbound	200	433			
<b>East Leg</b>	<b>TOTAL</b>	<b>490</b>	<b>683</b>	<b>8%</b>	<b>12%</b>	<b>5,922</b>
West Leg	Inbound	210	430			
West Leg	Outbound	520	372			
<b>West Leg</b>	<b>TOTAL</b>	<b>730</b>	<b>802</b>	<b>8%</b>	<b>9%</b>	<b>9,308</b>
<b>OVERALL TOTAL</b>		<b>2,218</b>	<b>2,958</b>	<b>8%</b>	<b>11%</b>	<b>27,365</b>

Project: Stoneridge SP TIA  
 Scenario: 2040

Job #: 13265  
 Analyst: CS  
 Date: 1/21/21

LOCATION: Evans Rd. & San Jacinto Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	11	10	1000%	1	13	12	1200%
	Through	1	425	424	42400%	1	726	725	72500%
	Right	1	31	30	3000%	1	89	88	8800%
	<b>NB Total</b>	<b>3</b>	<b>467</b>	<b>464</b>	<b>15467%</b>	<b>3</b>	<b>828</b>	<b>825</b>	<b>27500%</b>
SOUTH BOUND	Left	1	163	162	16200%	1	226	225	22500%
	Through	1	726	725	72500%	1	873	872	87200%
	Right	1	59	58	5800%	1	32	31	3100%
	<b>SB Total</b>	<b>3</b>	<b>948</b>	<b>945</b>	<b>31500%</b>	<b>3</b>	<b>1,131</b>	<b>1,128</b>	<b>37600%</b>
EAST BOUND	Left	1	25	24	2400%	1	105	104	10400%
	Through	2	17	15	750%	2	115	113	5650%
	Right	1	8	7	700%	1	50	49	4900%
	<b>EB Total</b>	<b>4</b>	<b>50</b>	<b>46</b>	<b>1150%</b>	<b>4</b>	<b>270</b>	<b>266</b>	<b>6650%</b>
WEST BOUND	Left	1	110	109	10900%	1	108	107	10700%
	Through	2	80	78	3900%	2	35	33	1650%
	Right	1	334	333	33300%	1	228	227	22700%
	<b>WB Total</b>	<b>4</b>	<b>524</b>	<b>520</b>	<b>13000%</b>	<b>4</b>	<b>371</b>	<b>367</b>	<b>9175%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>14</b>	<b>1,989</b>	<b>1975</b>	<b>14107%</b>	<b>14</b>	<b>2,600</b>	<b>2586</b>	<b>18471%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	948	1,131			
North Leg	Outbound	784	1,059			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,732</b>	<b>2,190</b>	<b>7%</b>	<b>9%</b>	<b>23,330</b>
South Leg	Inbound	467	828			
South Leg	Outbound	844	1,031			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,311</b>	<b>1,859</b>	<b>8%</b>	<b>11%</b>	<b>17,375</b>
East Leg	Inbound	524	371			
East Leg	Outbound	211	430			
<b>East Leg</b>	<b>TOTAL</b>	<b>735</b>	<b>801</b>	<b>8%</b>	<b>9%</b>	<b>9,308</b>
West Leg	Inbound	50	270			
West Leg	Outbound	150	80			
<b>West Leg</b>	<b>TOTAL</b>	<b>200</b>	<b>350</b>	<b>8%</b>	<b>13%</b>	<b>2,644</b>
<b>OVERALL TOTAL</b>		<b>3,978</b>	<b>5,200</b>	<b>8%</b>	<b>10%</b>	<b>52,657</b>

Project: Stoneridge SP TIA  
 Scenario: 2040

Job #: 13265  
 Analyst: CS  
 Date: 1/21/21

LOCATION: Murrieta Rd. & San Jacinto Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>NB Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>
SOUTH BOUND	Left	1	27	26	2600%	1	118	117	11700%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	1	191	190	19000%	1	220	219	21900%
	<b>SB Total</b>	<b>2</b>	<b>218</b>	<b>216</b>	<b>10800%</b>	<b>2</b>	<b>338</b>	<b>336</b>	<b>16800%</b>
EAST BOUND	Left	1	178	177	17700%	1	460	459	45900%
	Through	2	24	22	1100%	2	152	150	7500%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>EB Total</b>	<b>3</b>	<b>202</b>	<b>199</b>	<b>6633%</b>	<b>3</b>	<b>612</b>	<b>609</b>	<b>20300%</b>
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	2	74	72	3600%	2	30	28	1400%
	Right	1	76	75	7500%	1	50	49	4900%
	<b>WB Total</b>	<b>3</b>	<b>150</b>	<b>147</b>	<b>4900%</b>	<b>3</b>	<b>80</b>	<b>77</b>	<b>2567%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>8</b>	<b>570</b>	<b>562</b>	<b>7025%</b>	<b>8</b>	<b>1,030</b>	<b>1022</b>	<b>12775%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	218	338			
North Leg	Outbound	254	510			
<b>North Leg</b>	<b>TOTAL</b>	<b>472</b>	<b>848</b>	<b>6%</b>	<b>11%</b>	<b>7,586</b>
South Leg	Inbound	0	0			
South Leg	Outbound	0	0			
<b>South Leg</b>	<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>-</b>
East Leg	Inbound	150	80			
East Leg	Outbound	51	270			
<b>East Leg</b>	<b>TOTAL</b>	<b>201</b>	<b>350</b>	<b>8%</b>	<b>13%</b>	<b>2,644</b>
West Leg	Inbound	202	612			
West Leg	Outbound	265	250			
<b>West Leg</b>	<b>TOTAL</b>	<b>467</b>	<b>862</b>	<b>7%</b>	<b>13%</b>	<b>6,860</b>
<b>OVERALL TOTAL</b>		<b>1,140</b>	<b>2,060</b>	<b>7%</b>	<b>12%</b>	<b>17,090</b>

Project: Stoneridge SP TIA  
 Scenario: 2040

Job #: 13265  
 Analyst: CS  
 Date: 1/21/21

LOCATION: Redlands Av. & San Jacinto Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	115	114	11400%	1	131	130	13000%
	Through	3	355	352	11733%	3	501	498	16600%
	Right	1	136	135	13500%	1	394	393	39300%
	<b>NB Total</b>	<b>5</b>	<b>606</b>	<b>601</b>	<b>12020%</b>	<b>5</b>	<b>1,026</b>	<b>1,021</b>	<b>20420%</b>
SOUTH BOUND	Left	1	40	39	3900%	1	125	124	12400%
	Through	3	308	305	10167%	3	517	514	17133%
	Right	1	34	33	3300%	1	41	40	4000%
	<b>SB Total</b>	<b>5</b>	<b>382</b>	<b>377</b>	<b>7540%</b>	<b>5</b>	<b>683</b>	<b>678</b>	<b>13560%</b>
EAST BOUND	Left	1	7	6	600%	1	13	12	1200%
	Through	2	23	21	1050%	2	94	92	4600%
	Right	1	20	19	1900%	1	43	42	4200%
	<b>EB Total</b>	<b>4</b>	<b>50</b>	<b>46</b>	<b>1150%</b>	<b>4</b>	<b>150</b>	<b>146</b>	<b>3650%</b>
WEST BOUND	Left	1	112	111	11100%	1	123	122	12200%
	Through	2	111	109	5450%	2	89	87	4350%
	Right	1	38	37	3700%	1	38	37	3700%
	<b>WB Total</b>	<b>4</b>	<b>261</b>	<b>257</b>	<b>6425%</b>	<b>4</b>	<b>250</b>	<b>246</b>	<b>6150%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>18</b>	<b>1,299</b>	<b>1281</b>	<b>7117%</b>	<b>18</b>	<b>2,109</b>	<b>2091</b>	<b>11617%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	382	683			
North Leg	Outbound	400	552			
<b>North Leg</b>	<b>TOTAL</b>	<b>782</b>	<b>1,235</b>	<b>8%</b>	<b>12%</b>	<b>10,353</b>
South Leg	Inbound	606	1,026			
South Leg	Outbound	440	683			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,046</b>	<b>1,709</b>	<b>7%</b>	<b>12%</b>	<b>14,159</b>
East Leg	Inbound	261	250			
East Leg	Outbound	199	613			
<b>East Leg</b>	<b>TOTAL</b>	<b>460</b>	<b>863</b>	<b>7%</b>	<b>13%</b>	<b>6,860</b>
West Leg	Inbound	50	150			
West Leg	Outbound	260	261			
<b>West Leg</b>	<b>TOTAL</b>	<b>310</b>	<b>411</b>	<b>8%</b>	<b>10%</b>	<b>3,953</b>
<b>OVERALL TOTAL</b>		<b>2,598</b>	<b>4,218</b>	<b>7%</b>	<b>12%</b>	<b>35,325</b>

Project: Stoneridge SP  
 Scenario: Horizon Year (2040)

Job #: 13265  
 Analyst: CS  
 Date: 1/22/21

LOCATION: Redlands Av. & I-215 NB Ramps  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	104	107	3	2%	180	185	5	3%
	Through	291	293	2	1%	784	775	-9	-1%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>NB Total</b>	<b>396</b>	<b>400</b>	<b>4</b>	<b>1%</b>	<b>965</b>	<b>960</b>	<b>-5</b>	<b>-1%</b>
SOUTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	787	786	-1	0%	725	725	0	0%
	Right	178	174	-4	-2%	110	115	5	4%
	<b>SB Total</b>	<b>965</b>	<b>960</b>	<b>-5</b>	<b>0%</b>	<b>836</b>	<b>840</b>	<b>4</b>	<b>1%</b>
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>EB Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>
WEST BOUND	Left	282	289	7	2%	414	423	9	2%
	Through	1	1	0	-16%	2	3	1	26%
	Right	172	169	-3	-2%	548	564	16	3%
	<b>WB Total</b>	<b>455</b>	<b>459</b>	<b>4</b>	<b>1%</b>	<b>965</b>	<b>990</b>	<b>25</b>	<b>3%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>1,816</b>	<b>1,819</b>	<b>3.43250812</b>	<b>0%</b>	<b>2,765</b>	<b>2,790</b>	<b>25</b>	<b>1%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	960	840			
North Leg	Outbound	462	1,339			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,422</b>	<b>2,179</b>	<b>10%</b>	<b>15%</b>	<b>14,159</b>
South Leg	Inbound	400	960			
South Leg	Outbound	1,075	1,148			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,475</b>	<b>2,108</b>	<b>15%</b>	<b>22%</b>	<b>9,740</b>
East Leg	Inbound	459	990			
East Leg	Outbound	0	0			
<b>East Leg</b>	<b>TOTAL</b>	<b>459</b>	<b>990</b>	<b>7%</b>	<b>15%</b>	<b>6,470</b>
West Leg	Inbound	0	0			
West Leg	Outbound	282	303			
<b>West Leg</b>	<b>TOTAL</b>	<b>282</b>	<b>303</b>	<b>17%</b>	<b>19%</b>	<b>1,623</b>
<b>OVERALL TOTAL</b>		<b>3,638</b>	<b>5,580</b>	<b>11%</b>	<b>17%</b>	<b>31,992</b>

Project: Stoneridge SP  
 Scenario: Horizon Year (2040)

Job #: 13265  
 Analyst: CS  
 Date: 1/22/21

LOCATION: Redlands Av. & I-215 SB Ramps  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	311	313	2	1%	788	782	-6	-1%
	Right	256	257	1	0%	464	468	4	1%
	<b>NB Total</b>	<b>567</b>	<b>570</b>	<b>3</b>	<b>1%</b>	<b>1,252</b>	<b>1,250</b>	<b>-2</b>	<b>0%</b>
SOUTH BOUND	Left	414	413	-1	0%	349	353	4	1%
	Through	655	657	2	0%	790	787	-3	0%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>SB Total</b>	<b>1,069</b>	<b>1,070</b>	<b>1</b>	<b>0%</b>	<b>1,139</b>	<b>1,140</b>	<b>1</b>	<b>0%</b>
EAST BOUND	Left	85	87	2	2%	177	181	4	2%
	Through	0	0	0	#DIV/0!	2	2	0	-16%
	Right	152	153	1	1%	192	196	4	2%
	<b>EB Total</b>	<b>237</b>	<b>240</b>	<b>3</b>	<b>1%</b>	<b>372</b>	<b>379</b>	<b>7</b>	<b>2%</b>
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>WB Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>
<b>TOTAL ENTERING VOLUME</b>		<b>1,873</b>	<b>1,880</b>	<b>6.8174513</b>	<b>0%</b>	<b>2,763</b>	<b>2,769</b>	<b>6</b>	<b>0%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	1,070	1,140			
North Leg	Outbound	400	963			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,470</b>	<b>2,103</b>	<b>15%</b>	<b>22%</b>	<b>9,740</b>
South Leg	Inbound	570	1,250			
South Leg	Outbound	810	983			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,380</b>	<b>2,233</b>	<b>24%</b>	<b>39%</b>	<b>5,681</b>
East Leg	Inbound	0	0			
East Leg	Outbound	670	823			
<b>East Leg</b>	<b>TOTAL</b>	<b>670</b>	<b>823</b>	<b>11%</b>	<b>14%</b>	<b>6,095</b>
West Leg	Inbound	240	379			
West Leg	Outbound	0	0			
<b>West Leg</b>	<b>TOTAL</b>	<b>240</b>	<b>379</b>	<b>6%</b>	<b>9%</b>	<b>4,145</b>
<b>OVERALL TOTAL</b>		<b>3,760</b>	<b>5,538</b>	<b>15%</b>	<b>22%</b>	<b>25,661</b>



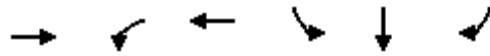
**ATTACHMENT Q**  
**HORIZON YEAR (2040) WITHOUT MCP WITH PROJECT HCM INTERSECTION ANALYSIS**  
**WORKSHEETS**



Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

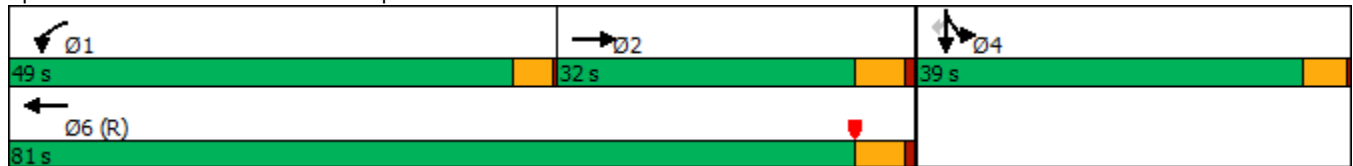


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑
Traffic Volume (vph)	388	398	635	714	0	102
Future Volume (vph)	388	398	635	714	0	102
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	32.0	49.0	81.0	39.0	39.0	39.0
Total Split (%)	26.7%	40.8%	67.5%	32.5%	32.5%	32.5%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: I-215 SB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖	↖	↖
Traffic Volume (veh/h)	0	388	175	398	635	0	0	0	0	714	0	102
Future Volume (veh/h)	0	388	175	398	635	0	0	0	0	714	0	102
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	422	190	433	690	0				776	0	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	831	370	458	2271	0				875	0	387
Arrive On Green	0.00	0.34	0.34	0.51	1.00	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	2520	1080	1810	3705	0				3619	0	1600
Grp Volume(v), veh/h	0	313	299	433	690	0				776	0	111
Grp Sat Flow(s),veh/h/ln	0	1805	1700	1810	1805	0				1810	0	1600
Q Serve(g_s), s	0.0	16.5	16.8	27.2	0.0	0.0				24.8	0.0	6.8
Cycle Q Clear(g_c), s	0.0	16.5	16.8	27.2	0.0	0.0				24.8	0.0	6.8
Prop In Lane	0.00		0.64	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	619	583	458	2271	0				875	0	387
V/C Ratio(X)	0.00	0.51	0.51	0.95	0.30	0.00				0.89	0.00	0.29
Avail Cap(c_a), veh/h	0	619	583	679	2271	0				1040	0	460
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.77	0.77	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	31.3	31.4	28.9	0.0	0.0				43.9	0.0	37.1
Incr Delay (d2), s/veh	0.0	2.9	3.2	14.4	0.3	0.0				8.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.4	7.1	9.2	0.1	0.0				11.7	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.3	34.6	43.3	0.3	0.0				52.3	0.0	37.5
LnGrp LOS	A	C	C	D	A	A				D	A	D
Approach Vol, veh/h		612			1123						887	
Approach Delay, s/veh		34.5			16.8						50.4	
Approach LOS		C			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	34.4	46.6		33.5		81.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	45.0	26.5		34.5		75.5						
Max Q Clear Time (g_c+I1), s	29.2	18.8		26.8		2.0						
Green Ext Time (p_c), s	1.1	1.4		2.2		2.8						

Intersection Summary

HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

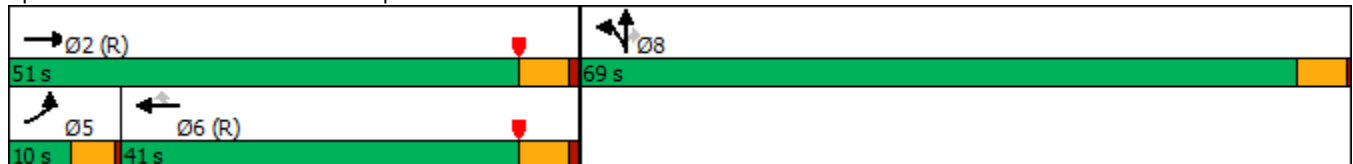


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	82	1020	832	887	201	0	507
Future Volume (vph)	82	1020	832	887	201	0	507
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	31.5	27.5	27.5	10.5	10.5	10.5
Total Split (s)	10.0	51.0	41.0	41.0	69.0	69.0	69.0
Total Split (%)	8.3%	42.5%	34.2%	34.2%	57.5%	57.5%	57.5%
Yellow Time (s)	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	0.5	1.0	1.0	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated






















Splits and Phases: 7: I-215 NB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	82	1020	0	0	832	887	201	0	507	0	0	0
Future Volume (veh/h)	82	1020	0	0	832	887	201	0	507	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	89	1109	0	0	904	692	218	0	279			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	83	2593	0	0	2292	1020	703	0	310			
Arrive On Green	0.05	0.72	0.00	0.00	0.64	0.64	0.19	0.00	0.19			
Sat Flow, veh/h	1810	3705	0	0	3705	1606	3619	0	1598			
Grp Volume(v), veh/h	89	1109	0	0	904	692	218	0	279			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1606	1810	0	1598			
Q Serve(g_s), s	5.5	15.0	0.0	0.0	14.6	33.1	6.2	0.0	20.5			
Cycle Q Clear(g_c), s	5.5	15.0	0.0	0.0	14.6	33.1	6.2	0.0	20.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	83	2593	0	0	2292	1020	703	0	310			
V/C Ratio(X)	1.07	0.43	0.00	0.00	0.39	0.68	0.31	0.00	0.90			
Avail Cap(c_a), veh/h	83	2593	0	0	2292	1020	1930	0	852			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.71	0.71	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	57.3	6.9	0.0	0.0	10.7	14.0	41.5	0.0	47.2			
Incr Delay (d2), s/veh	104.3	0.4	0.0	0.0	0.5	3.6	0.1	0.0	3.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.8	4.6	0.0	0.0	5.2	11.2	2.7	0.0	8.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.5	7.2	0.0	0.0	11.2	17.7	41.6	0.0	51.0			
LnGrp LOS	F	A	A	A	B	B	D	A	D			
Approach Vol, veh/h		1198			1596			497				
Approach Delay, s/veh		18.7			14.0			46.9				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		91.7			10.0	81.7		28.3				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		45.5			5.5	35.5		64.0				
Max Q Clear Time (g_c+I1), s		17.0			7.5	35.1		22.5				
Green Ext Time (p_c), s		5.0			0.0	0.2		0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					20.7							
HCM 6th LOS					C							
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↕	↘	↘	↕
Traffic Vol, veh/h	203	71	225	117	42	181
Future Vol, veh/h	203	71	225	117	42	181
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	299	104	331	172	62	266
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	17.6	15.5	14.7
HCM LOS	C	C	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	225	117	203	71	42	181
LT Vol	0	0	203	0	42	0
Through Vol	225	0	0	0	0	181
RT Vol	0	117	0	71	0	0
Lane Flow Rate	331	172	299	104	62	266
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.589	0.272	0.598	0.174	0.122	0.489
Departure Headway (Hd)	6.408	5.695	7.215	5.997	7.123	6.612
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	562	628	499	596	501	543
Service Time	4.176	3.462	4.978	3.759	4.897	4.386
HCM Lane V/C Ratio	0.589	0.274	0.599	0.174	0.124	0.49
HCM Control Delay	18	10.6	20.2	10	10.9	15.6
HCM Lane LOS	C	B	C	A	B	C
HCM 95th-tile Q	3.8	1.1	3.9	0.6	0.4	2.7

Timings  
23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022

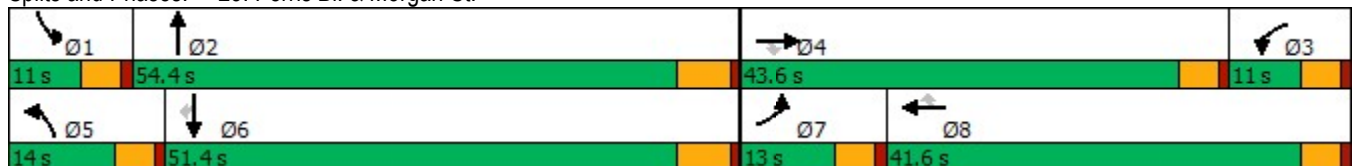


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	35	414	37	26	148	11	56	1719	43	816	93
Future Volume (vph)	35	414	37	26	148	11	56	1719	43	816	93
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	13.0	43.6	43.6	11.0	41.6	41.6	14.0	54.4	11.0	51.4	51.4
Total Split (%)	10.8%	36.3%	36.3%	9.2%	34.7%	34.7%	11.7%	45.3%	9.2%	42.8%	42.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.9	18.6	18.6	7.4	19.2	19.2	7.7	42.6	6.5	38.5	38.5
Actuated g/C Ratio	0.08	0.22	0.22	0.09	0.23	0.23	0.09	0.50	0.08	0.45	0.45
v/c Ratio	0.25	0.55	0.09	0.17	0.36	0.03	0.36	0.70	0.32	0.52	0.12
Control Delay	51.3	35.4	0.4	47.7	34.6	0.1	51.9	21.3	54.3	20.9	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	35.4	0.4	47.7	34.6	0.1	51.9	21.3	54.3	20.9	1.8
LOS	D	D	A	D	C	A	D	C	D	C	A
Approach Delay		33.9			34.3			22.3		20.5	
Approach LOS		C			C			C		C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 84.7	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

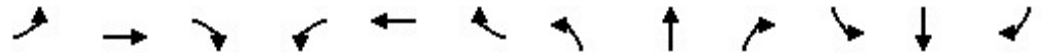
Splits and Phases: 23: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	414	37	26	148	11	56	1719	20	43	816	93
Future Volume (veh/h)	35	414	37	26	148	11	56	1719	20	43	816	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	436	23	27	156	11	59	1809	21	45	859	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	65	661	295	52	335	284	85	2565	30	73	1728	771
Arrive On Green	0.04	0.18	0.18	0.03	0.18	0.18	0.05	0.49	0.49	0.04	0.48	0.48
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5286	61	1810	3610	1610
Grp Volume(v), veh/h	37	436	23	27	156	11	59	1183	647	45	859	81
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1889	1810	1805	1610
Q Serve(g_s), s	1.5	8.4	0.7	1.1	5.5	0.4	2.4	20.0	20.0	1.8	12.2	2.1
Cycle Q Clear(g_c), s	1.5	8.4	0.7	1.1	5.5	0.4	2.4	20.0	20.0	1.8	12.2	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	65	661	295	52	335	284	85	1678	917	73	1728	771
V/C Ratio(X)	0.57	0.66	0.08	0.52	0.47	0.04	0.69	0.71	0.71	0.61	0.50	0.11
Avail Cap(c_a), veh/h	203	1883	840	155	940	797	227	2247	1228	155	2201	982
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	28.4	15.9	35.8	27.7	25.6	35.1	15.1	15.1	35.3	13.3	10.7
Incr Delay (d2), s/veh	2.9	1.1	0.1	3.0	1.0	0.1	3.7	0.7	1.2	3.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.6	0.3	0.5	2.6	0.2	1.1	6.6	7.3	0.8	4.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	29.5	16.0	38.8	28.7	25.6	38.8	15.7	16.3	38.3	13.6	10.8
LnGrp LOS	D	C	B	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		496			194			1889			985	
Approach Delay, s/veh		29.5			29.9			16.6			14.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	42.1	6.7	18.3	8.1	41.6	7.3	17.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	6.4	48.6	6.4	39.0	9.4	45.6	8.4	37.0				
Max Q Clear Time (g_c+I1), s	3.8	22.0	3.1	10.4	4.4	14.2	3.5	7.5				
Green Ext Time (p_c), s	0.0	14.3	0.0	3.3	0.0	6.5	0.0	1.0				

Intersection Summary

HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B



Timings  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

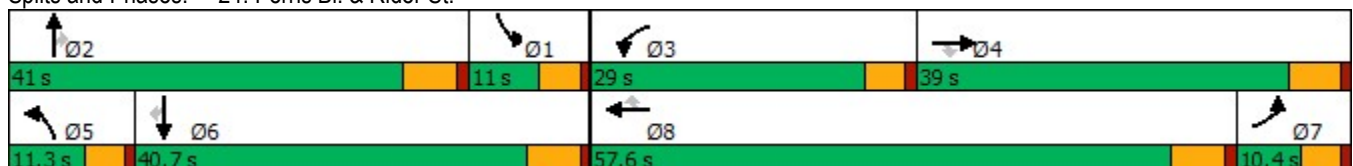
02/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	195	23	329	424	448	57	1341	214	171	569	45
Future Volume (vph)	34	195	23	329	424	448	57	1341	214	171	569	45
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	10.4	39.0	39.0	29.0	57.6	57.6	11.3	41.0	41.0	11.0	40.7	40.7
Total Split (%)	8.7%	32.5%	32.5%	24.2%	48.0%	48.0%	9.4%	34.2%	34.2%	9.2%	33.9%	33.9%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.8	14.9	14.9	23.9	36.2	36.2	6.4	34.7	34.7	6.5	36.9	36.9
Actuated g/C Ratio	0.07	0.15	0.15	0.24	0.36	0.36	0.06	0.34	0.34	0.06	0.37	0.37
v/c Ratio	0.31	0.39	0.07	0.83	0.35	0.69	0.54	0.81	0.34	1.60	0.32	0.07
Control Delay	54.0	40.6	0.3	55.5	25.6	23.1	66.5	35.4	9.6	338.4	25.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	40.6	0.3	55.5	25.6	23.1	66.5	35.4	9.6	338.4	25.6	0.2
LOS	D	D	A	E	C	C	E	D	A	F	C	A
Approach Delay		38.7			32.8			33.1			92.3	
Approach LOS		D			C			C			F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.60  
 Intersection Signal Delay: 45.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 79.9%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 24: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)  
02/14/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (veh/h)	34	195	23	329	424	448	57	1341	214	171	569	45
Future Volume (veh/h)	34	195	23	329	424	448	57	1341	214	171	569	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	210	16	354	456	372	61	1442	196	184	612	38
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	61	423	188	391	1033	461	79	1815	563	129	2029	630
Arrive On Green	0.03	0.12	0.12	0.22	0.29	0.29	0.04	0.35	0.35	0.07	0.39	0.39
Sat Flow, veh/h	1810	3610	1606	1810	3610	1610	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	37	210	16	354	456	372	61	1442	196	184	612	38
Grp Sat Flow(s),veh/h/ln	1810	1805	1606	1810	1805	1610	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	1.8	4.9	0.8	17.1	9.2	19.2	3.0	22.4	4.0	6.4	7.3	1.0
Cycle Q Clear(g_c), s	1.8	4.9	0.8	17.1	9.2	19.2	3.0	22.4	4.0	6.4	7.3	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	423	188	391	1033	461	79	1815	563	129	2029	630
V/C Ratio(X)	0.61	0.50	0.08	0.91	0.44	0.81	0.77	0.79	0.35	1.42	0.30	0.06
Avail Cap(c_a), veh/h	117	1337	595	493	2086	931	135	2037	632	129	2029	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	37.1	35.3	34.2	26.1	29.7	42.4	26.2	5.2	41.6	18.8	9.1
Incr Delay (d2), s/veh	3.6	0.9	0.2	15.6	0.3	3.4	5.9	2.0	0.4	229.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.1	0.3	8.7	3.7	7.3	1.4	8.7	2.6	11.0	2.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	38.0	35.5	49.9	26.4	33.1	48.3	28.3	5.5	271.3	18.9	9.2
LnGrp LOS	D	D	D	D	C	C	D	C	A	F	B	A
Approach Vol, veh/h		263			1182			1699			834	
Approach Delay, s/veh		39.0			35.5			26.4			74.2	
Approach LOS		D			D			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	37.2	24.0	16.3	8.5	40.9	8.8	31.5				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	6.4	* 35	24.4	33.2	6.7	34.9	5.8	* 52				
Max Q Clear Time (g_c+I1), s	8.4	24.4	19.1	6.9	5.0	9.3	3.8	21.2				
Green Ext Time (p_c), s	0.0	6.9	0.3	1.2	0.0	4.1	0.0	4.3				

Intersection Summary

HCM 6th Ctrl Delay	39.9
HCM 6th LOS	D

Notes

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

Timings  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

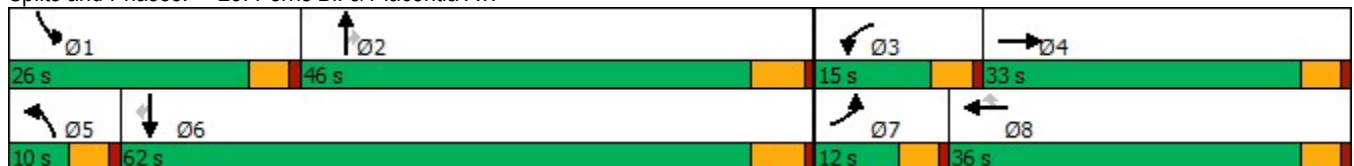
02/11/2022

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	33	300	65	331	293	101	1208	53	44	806	49
Future Volume (vph)	33	300	65	331	293	101	1208	53	44	806	49
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.6	9.6	34.6	34.6	9.6	36.8	36.8	9.6	34.8	34.8
Total Split (s)	12.0	33.0	15.0	36.0	36.0	10.0	46.0	46.0	26.0	62.0	62.0
Total Split (%)	10.0%	27.5%	12.5%	30.0%	30.0%	8.3%	38.3%	38.3%	21.7%	51.7%	51.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.4	28.3	8.1	32.0	32.0	5.5	40.9	40.9	7.3	40.2	40.2
Actuated g/C Ratio	0.06	0.28	0.08	0.32	0.32	0.06	0.41	0.41	0.07	0.40	0.40
v/c Ratio	0.32	0.84	0.49	0.60	0.44	1.13	0.90	0.08	0.37	0.61	0.08
Control Delay	55.3	49.8	58.1	35.5	5.4	175.8	39.8	0.2	54.5	26.1	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	49.8	58.1	35.5	5.4	175.8	39.8	0.2	54.5	26.1	0.9
LOS	E	D	E	D	A	F	D	A	D	C	A
Approach Delay		50.3		24.8			48.3			26.1	
Approach LOS		D		C			D			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 99.5  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.13  
 Intersection Signal Delay: 37.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 79.7%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 25: Perris Bl. & Placentia Av.



HCM 6th Signalized Intersection Summary  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	300	97	65	331	293	101	1208	53	44	806	49
Future Volume (veh/h)	33	300	97	65	331	293	101	1208	53	44	806	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	333	104	72	368	209	112	1342	50	49	896	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	61	373	117	93	545	462	109	1518	677	71	1441	642
Arrive On Green	0.03	0.27	0.27	0.05	0.29	0.29	0.06	0.42	0.42	0.04	0.40	0.40
Sat Flow, veh/h	1810	1388	434	1810	1900	1610	1810	3610	1610	1810	3610	1608
Grp Volume(v), veh/h	37	0	437	72	368	209	112	1342	50	49	896	48
Grp Sat Flow(s),veh/h/ln	1810	0	1822	1810	1900	1610	1810	1805	1610	1810	1805	1608
Q Serve(g_s), s	1.8	0.0	20.6	3.5	15.3	9.5	5.4	30.6	1.7	2.4	17.7	1.6
Cycle Q Clear(g_c), s	1.8	0.0	20.6	3.5	15.3	9.5	5.4	30.6	1.7	2.4	17.7	1.6
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	0	490	93	545	462	109	1518	677	71	1441	642
V/C Ratio(X)	0.61	0.00	0.89	0.77	0.67	0.45	1.02	0.88	0.07	0.69	0.62	0.07
Avail Cap(c_a), veh/h	150	0	580	211	669	567	109	1626	725	434	2273	1013
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	0.0	31.4	41.8	28.1	26.1	41.9	23.9	15.5	42.3	21.4	16.6
Incr Delay (d2), s/veh	3.6	0.0	14.3	5.0	2.0	0.7	92.3	5.9	0.0	4.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	10.8	1.7	7.2	3.7	5.1	12.8	0.6	1.1	6.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	0.0	45.7	46.8	30.1	26.8	134.2	29.8	15.5	46.6	21.9	16.6
LnGrp LOS	D	A	D	D	C	C	F	C	B	D	C	B
Approach Vol, veh/h		474			649			1504			993	
Approach Delay, s/veh		45.7			30.9			37.1			22.8	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	43.3	9.2	28.6	10.0	41.4	7.6	30.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	21.4	40.2	10.4	28.4	5.4	56.2	7.4	31.4				
Max Q Clear Time (g_c+I1), s	4.4	32.6	5.5	22.6	7.4	19.7	3.8	17.3				
Green Ext Time (p_c), s	0.0	4.9	0.0	1.4	0.0	6.8	0.0	2.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.2									
HCM 6th LOS			C									

Timings

30: Redlands Av. & Ramona Exwy.

01/25/2021

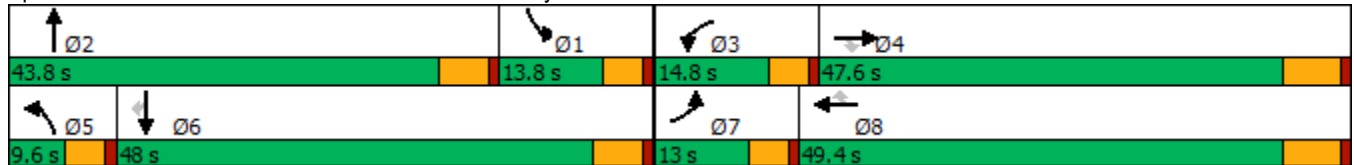


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑	↖	↑	↗
Traffic Volume (vph)	118	1983	65	142	3591	829	48	42	688	105	74
Future Volume (vph)	118	1983	65	142	3591	829	48	42	688	105	74
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	27.2	9.6	43.4	9.6	23.4	23.4
Total Split (s)	13.0	47.6	47.6	14.8	49.4	49.4	9.6	43.8	13.8	48.0	48.0
Total Split (%)	10.8%	39.7%	39.7%	12.3%	41.2%	41.2%	8.0%	36.5%	11.5%	40.0%	40.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑		↖	↑	↗
Traffic Volume (veh/h)	118	1983	65	142	3591	829	48	42	124	688	105	74
Future Volume (veh/h)	118	1983	65	142	3591	829	48	42	124	688	105	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.94	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	2066	68	148	3741	864	50	44	129	717	109	77
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	136	1916	580	165	2000	612	65	107	314	149	605	506
Arrive On Green	0.07	0.37	0.37	0.09	0.39	0.39	0.04	0.26	0.26	0.08	0.32	0.32
Sat Flow, veh/h	1810	5187	1569	1810	5187	1586	1810	405	1187	1810	1900	1590
Grp Volume(v), veh/h	123	2066	68	148	3741	864	50	0	173	717	109	77
Grp Sat Flow(s),veh/h/ln	1810	1729	1569	1810	1729	1586	1810	0	1591	1810	1900	1590
Q Serve(g_s), s	7.6	41.4	3.2	9.1	43.2	30.1	3.1	0.0	10.0	9.2	4.6	3.9
Cycle Q Clear(g_c), s	7.6	41.4	3.2	9.1	43.2	30.1	3.1	0.0	10.0	9.2	4.6	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	136	1916	580	165	2000	612	65	0	421	149	605	506
V/C Ratio(X)	0.91	1.08	0.12	0.90	1.87	1.41	0.77	0.00	0.41	4.83	0.18	0.15
Avail Cap(c_a), veh/h	136	1916	580	165	2000	612	81	0	545	149	722	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	35.3	23.3	50.4	34.4	16.8	53.6	0.0	34.0	51.4	27.6	27.4
Incr Delay (d2), s/veh	49.2	45.2	0.1	41.3	393.8	195.3	23.2	0.0	0.6	1736.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	24.1	1.1	5.8	89.5	42.7	1.8	0.0	3.9	75.8	2.1	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.6	80.5	23.4	91.7	428.2	212.1	76.8	0.0	34.6	1788.3	27.8	27.5
LnGrp LOS	F	F	C	F	F	F	E	A	C	F	C	C
Approach Vol, veh/h		2257			4753			223				903
Approach Delay, s/veh		79.9			378.4			44.1				1425.6
Approach LOS		E			F			D				F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	35.1	14.8	47.6	8.6	41.1	13.0	49.4				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	9.2	* 38	10.2	41.4	5.0	42.6	8.4	43.2				
Max Q Clear Time (g_c+I1), s	11.2	12.0	11.1	43.4	5.1	6.6	9.6	45.2				
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.0	0.8	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	402.7
HCM 6th LOS	F

Notes

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

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↕			↕			↶	↷
Traffic Vol, veh/h	47	18	12	1	5	2	4	75	0	24	160	68
Future Vol, veh/h	47	18	12	1	5	2	4	75	0	24	160	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	51	20	13	1	5	2	4	82	0	26	174	74
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	8.7	8.4	8.8	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	100%	0%	12%	13%	0%
Vol Thru, %	95%	0%	60%	62%	87%	0%
Vol Right, %	0%	0%	40%	25%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	47	30	8	184	68
LT Vol	4	47	0	1	24	0
Through Vol	75	0	18	5	160	0
RT Vol	0	0	12	2	0	68
Lane Flow Rate	86	51	33	9	200	74
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.121	0.083	0.046	0.013	0.272	0.085
Departure Headway (Hd)	5.057	5.862	5.077	5.341	4.898	4.131
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	612	706	670	736	869
Service Time	3.076	3.588	2.804	3.372	2.613	1.846
HCM Lane V/C Ratio	0.121	0.083	0.047	0.013	0.272	0.085
HCM Control Delay	8.8	9.1	8	8.4	9.4	7.2
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0.1	0	1.1	0.3

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

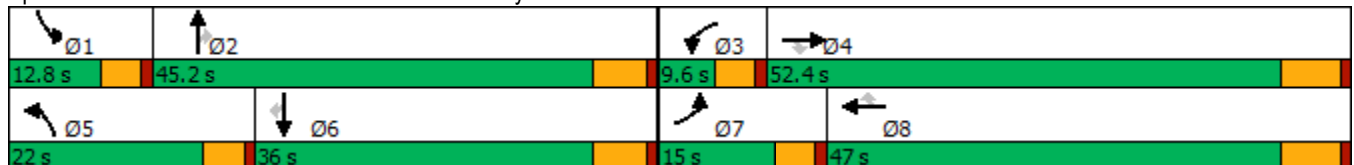
01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	359	2197	218	76	3416	567	640	590	61	394	356	506
Future Volume (vph)	359	2197	218	76	3416	567	640	590	61	394	356	506
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	15.0	52.4	52.4	9.6	47.0	47.0	22.0	45.2	45.2	12.8	36.0	36.0
Total Split (%)	12.5%	43.7%	43.7%	8.0%	39.2%	39.2%	18.3%	37.7%	37.7%	10.7%	30.0%	30.0%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 119.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 39: Evans Rd. & Ramona Exwy.






































HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	 		 	 	
Traffic Volume (veh/h)	359	2197	218	76	3416	567	640	590	61	394	356	506
Future Volume (veh/h)	359	2197	218	76	3416	567	640	590	61	394	356	506
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	382	2337	0	81	3634	467	681	628	46	419	379	366
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	325	2127		155	1306	583	532	1217	543	260	937	413
Arrive On Green	0.09	0.41	0.00	0.04	0.36	0.36	0.15	0.34	0.34	0.07	0.26	0.26
Sat Flow, veh/h	3510	5187	1610	3510	3610	1610	3510	3610	1610	3510	3610	1589
Grp Volume(v), veh/h	382	2337	0	81	3634	467	681	628	46	419	379	366
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1805	1610	1755	1805	1610	1755	1805	1589
Q Serve(g_s), s	11.0	48.7	0.0	2.7	43.0	31.0	18.0	16.6	2.3	8.8	10.3	26.3
Cycle Q Clear(g_c), s	11.0	48.7	0.0	2.7	43.0	31.0	18.0	16.6	2.3	8.8	10.3	26.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	325	2127		155	1306	583	532	1217	543	260	937	413
V/C Ratio(X)	1.18	1.10		0.52	2.78	0.80	1.28	0.52	0.08	1.61	0.40	0.89
Avail Cap(c_a), veh/h	325	2127		165	1306	583	532	1251	558	260	972	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	35.1	0.0	55.6	37.9	34.1	50.4	31.6	26.9	55.0	36.4	42.3
Incr Delay (d2), s/veh	106.6	52.4	0.0	1.0	804.3	7.9	140.3	0.3	0.1	292.6	0.3	19.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	28.9	0.0	1.2	163.3	12.5	18.0	7.0	0.9	14.3	4.5	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	160.5	87.4	0.0	56.6	842.2	42.0	190.8	32.0	27.0	347.7	36.7	61.5
LnGrp LOS	F	F		E	F	D	F	C	C	F	D	E
Approach Vol, veh/h		2719	A		4182			1355			1164	
Approach Delay, s/veh		97.7			737.6			111.6			156.4	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	44.1	9.3	52.7	22.0	34.9	15.0	47.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	8.2	39.4	5.0	45.9	17.4	30.2	10.4	40.5				
Max Q Clear Time (g_c+I1), s	10.8	18.6	4.7	50.7	20.0	28.3	13.0	45.0				
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	0.7	0.0	0.0				

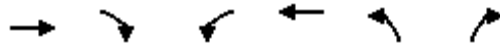
Intersection Summary

HCM 6th Ctrl Delay	391.1
HCM 6th LOS	F

Notes

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

Timings  
43: Bradley St. & Ramona Expy

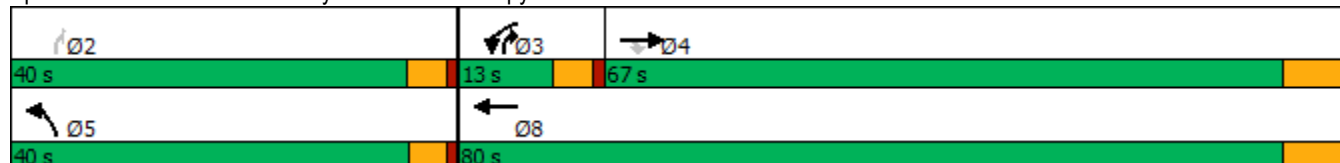


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø2
Lane Configurations	↑↑	↑	↘	↑↑	↘	↗	
Traffic Volume (vph)	1092	83	21	2847	303	38	
Future Volume (vph)	1092	83	21	2847	303	38	
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov	
Protected Phases	4		3	8	5	3	2
Permitted Phases		4				2	
Detector Phase	4	4	3	8	5	3	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	38.5	38.5	9.6	24.5	9.5	9.6	22.6
Total Split (s)	67.0	67.0	13.0	80.0	40.0	13.0	40.0
Total Split (%)	55.8%	55.8%	10.8%	66.7%	33.3%	10.8%	33%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.5	4.6	
Lead/Lag	Lag	Lag	Lead			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.7  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 43: Bradley St. & Ramona Expy



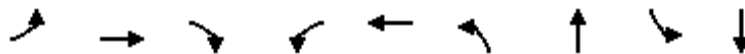
HCM 6th Signalized Intersection Summary  
43: Bradley St. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↑
Traffic Volume (veh/h)	1092	83	21	2847	303	38
Future Volume (veh/h)	1092	83	21	2847	303	38
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1187	88	23	3095	329	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2257	1005	42	2497	370	367
Arrive On Green	0.63	0.63	0.02	0.69	0.20	0.20
Sat Flow, veh/h	3705	1608	1810	3705	1810	1610
Grp Volume(v), veh/h	1187	88	23	3095	329	25
Grp Sat Flow(s),veh/h/ln	1805	1608	1810	1805	1810	1610
Q Serve(g_s), s	19.5	2.3	1.3	73.5	18.8	1.3
Cycle Q Clear(g_c), s	19.5	2.3	1.3	73.5	18.8	1.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2257	1005	42	2497	370	367
V/C Ratio(X)	0.53	0.09	0.55	1.24	0.89	0.07
Avail Cap(c_a), veh/h	2257	1005	143	2497	605	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	7.9	51.3	16.4	41.1	32.2
Incr Delay (d2), s/veh	0.2	0.0	4.1	111.3	9.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.7	0.6	59.3	9.3	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.3	7.9	55.4	127.7	50.4	32.2
LnGrp LOS	B	A	E	F	D	C
Approach Vol, veh/h	1275			3118	354	
Approach Delay, s/veh	11.1			127.1	49.1	
Approach LOS	B			F	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		26.2	7.1	72.9		80.0
Change Period (Y+Rc), s		4.5	4.6	6.5		6.5
Max Green Setting (Gmax), s		35.5	8.4	60.5		73.5
Max Q Clear Time (g_c+I1), s		20.8	3.3	21.5		75.5
Green Ext Time (p_c), s		1.0	0.0	9.7		0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			90.1			
HCM 6th LOS			F			

Timings  
46: Dunlap Dr. & Nuevo Rd.

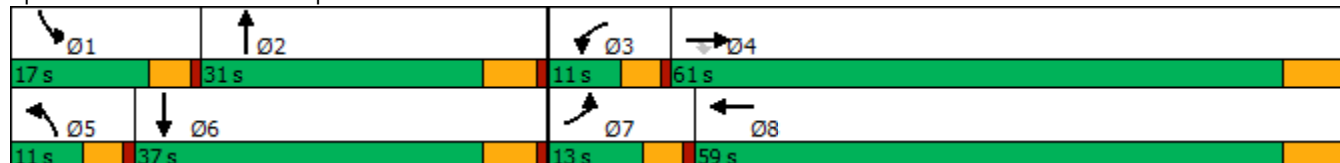


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	41	1062	17	120	1641	11	26	120	26
Future Volume (vph)	41	1062	17	120	1641	11	26	120	26
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.5	37.5	9.6	24.5	9.6	23.8	9.6	29.8
Total Split (s)	13.0	61.0	61.0	11.0	59.0	11.0	31.0	17.0	37.0
Total Split (%)	10.8%	50.8%	50.8%	9.2%	49.2%	9.2%	25.8%	14.2%	30.8%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6	6.5	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 117.4  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated






















Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



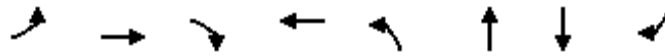
HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	1062	17	120	1641	207	11	26	405	120	26	103
Future Volume (veh/h)	41	1062	17	120	1641	207	11	26	405	120	26	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	1084	12	122	1674	193	11	27	411	122	27	57
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	58	883	749	99	816	94	23	22	328	149	155	327
Arrive On Green	0.03	0.46	0.46	0.05	0.49	0.49	0.01	0.21	0.21	0.08	0.28	0.28
Sat Flow, veh/h	1810	1900	1610	1810	1672	193	1810	100	1525	1810	544	1149
Grp Volume(v), veh/h	42	1084	12	122	0	1867	11	0	438	122	0	84
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1865	1810	0	1625	1810	0	1693
Q Serve(g_s), s	2.7	54.5	0.5	6.4	0.0	57.2	0.7	0.0	25.2	7.8	0.0	4.4
Cycle Q Clear(g_c), s	2.7	54.5	0.5	6.4	0.0	57.2	0.7	0.0	25.2	7.8	0.0	4.4
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.94	1.00		0.68
Lane Grp Cap(c), veh/h	58	883	749	99	0	910	23	0	349	149	0	481
V/C Ratio(X)	0.73	1.23	0.02	1.23	0.00	2.05	0.47	0.00	1.25	0.82	0.00	0.17
Avail Cap(c_a), veh/h	130	883	749	99	0	910	99	0	349	191	0	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	31.4	16.9	55.4	0.0	30.0	57.5	0.0	46.0	53.0	0.0	31.6
Incr Delay (d2), s/veh	6.5	112.3	0.0	166.5	0.0	477.3	5.5	0.0	135.5	15.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	49.7	0.2	7.4	0.0	143.1	0.4	0.0	22.9	4.1	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	143.6	16.9	221.9	0.0	507.4	62.9	0.0	181.5	68.5	0.0	31.8
LnGrp LOS	E	F	B	F	A	F	E	A	F	E	A	C
Approach Vol, veh/h		1138			1989			449			206	
Approach Delay, s/veh		139.3			489.9			178.6			53.5	
Approach LOS		F			F			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	31.0	11.0	61.0	6.1	39.1	8.3	63.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	12.4	25.2	6.4	54.5	6.4	31.2	8.4	52.5				
Max Q Clear Time (g_c+I1), s	9.8	27.2	8.4	56.5	2.7	6.4	4.7	59.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			323.7									
HCM 6th LOS			F									

Timings  
47: Ramona Expy & Rider St.

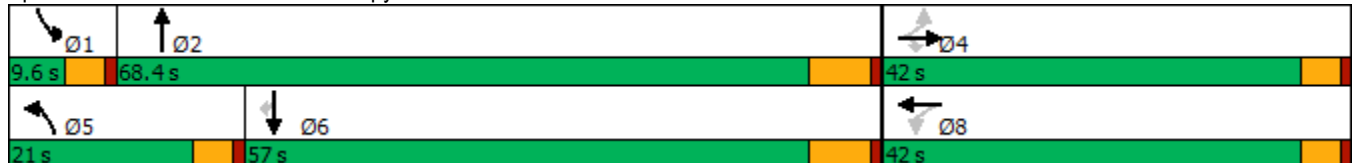


Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖↗	↕	↕	↗	
Traffic Volume (vph)	283	0	477	0	429	2992	2289	221	
Future Volume (vph)	283	0	477	0	429	2992	2289	221	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4						6
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	42.0	42.0	42.0	42.0	21.0	68.4	57.0	57.0	9.6
Total Split (%)	35.0%	35.0%	35.0%	35.0%	17.5%	57.0%	47.5%	47.5%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.9  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 47: Ramona Expy & Rider St.



HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗		↖	↕	↗
Traffic Volume (veh/h)	283	0	477	0	0	1	429	2992	1	0	2289	221
Future Volume (veh/h)	283	0	477	0	0	1	429	2992	1	0	2289	221
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	308	0	381	0	0	1	466	3252	1	0	2488	193
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	445	0	427	0	0	427	512	2355	1	2	1621	723
Arrive On Green	0.27	0.00	0.27	0.00	0.00	0.27	0.15	0.64	0.64	0.00	0.45	0.45
Sat Flow, veh/h	1436	0	1610	0	0	1610	3510	3704	1	1810	3610	1610
Grp Volume(v), veh/h	308	0	381	0	0	1	466	1585	1668	0	2488	193
Grp Sat Flow(s),veh/h/ln	1436	0	1610	0	0	1610	1755	1805	1900	1810	1805	1610
Q Serve(g_s), s	22.5	0.0	25.6	0.0	0.0	0.1	14.7	71.5	71.5	0.0	50.5	8.4
Cycle Q Clear(g_c), s	22.6	0.0	25.6	0.0	0.0	0.1	14.7	71.5	71.5	0.0	50.5	8.4
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	445	0	427	0	0	427	512	1148	1208	2	1621	723
V/C Ratio(X)	0.69	0.00	0.89	0.00	0.00	0.00	0.91	1.38	1.38	0.00	1.53	0.27
Avail Cap(c_a), veh/h	542	0	536	0	0	536	512	1148	1208	80	1621	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	0.0	39.7	0.0	0.0	30.4	47.3	20.5	20.5	0.0	31.0	19.4
Incr Delay (d2), s/veh	2.9	0.0	14.6	0.0	0.0	0.0	19.9	176.9	176.7	0.0	243.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	11.5	0.0	0.0	0.0	7.5	79.6	83.8	0.0	74.3	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	0.0	54.3	0.0	0.0	30.4	67.2	197.4	197.2	0.0	274.8	19.6
LnGrp LOS	D	A	D	A	A	C	E	F	F	A	F	B
Approach Vol, veh/h		689			1			3719			2681	
Approach Delay, s/veh		48.6			30.4			181.0			256.4	
Approach LOS		D			C			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	78.0		34.5	21.0	57.0		34.5				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	61.9		37.4	16.4	50.5		37.4				
Max Q Clear Time (g_c+I1), s	0.0	73.5		27.6	16.7	52.5		2.1				
Green Ext Time (p_c), s	0.0	0.0		2.3	0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	196.6
HCM 6th LOS	F

Timings  
48: Antelope Rd. & Ramona Expy

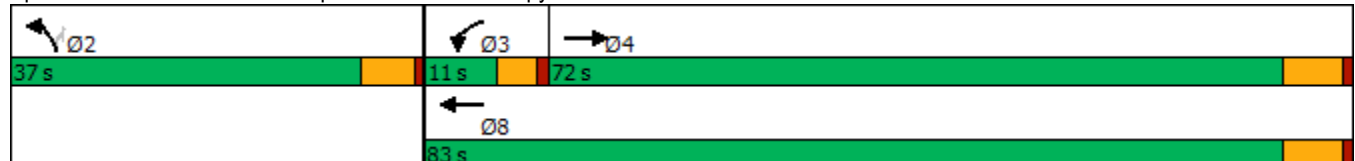


Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↵	↑↑	↵↵	↵
Traffic Volume (vph)	1502	246	3048	373	64
Future Volume (vph)	1502	246	3048	373	64
Turn Type	NA	Prot	NA	Prot	Perm
Protected Phases	4	3	8	2	
Permitted Phases					2
Detector Phase	4	3	8	2	2
Switch Phase					
Minimum Initial (s)	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	9.6	16.5	15.8	15.8
Total Split (s)	72.0	11.0	83.0	37.0	37.0
Total Split (%)	60.0%	9.2%	69.2%	30.8%	30.8%
Yellow Time (s)	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.6	6.5	5.8	5.8
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Max	None	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.3  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 48: Antelope Rd. & Ramona Expy





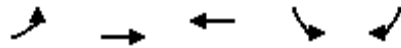
HCM 6th Signalized Intersection Summary  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	1502	1265	246	3048	373	64
Future Volume (veh/h)	1502	1265	246	3048	373	64
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1633	1375	267	3313	405	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1250	920	111	2659	509	234
Arrive On Green	0.63	0.63	0.06	0.74	0.15	0.15
Sat Flow, veh/h	2078	1459	1810	3705	3510	1610
Grp Volume(v), veh/h	1465	1543	267	3313	405	70
Grp Sat Flow(s),veh/h/ln	1805	1637	1810	1805	1755	1610
Q Serve(g_s), s	65.5	65.5	6.4	76.5	11.6	4.0
Cycle Q Clear(g_c), s	65.5	65.5	6.4	76.5	11.6	4.0
Prop In Lane		0.89	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1138	1032	111	2659	509	234
V/C Ratio(X)	1.29	1.49	2.39	1.25	0.79	0.30
Avail Cap(c_a), veh/h	1138	1032	111	2659	1054	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	19.2	48.7	13.7	42.9	39.7
Incr Delay (d2), s/veh	136.1	227.5	654.3	114.1	2.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	63.5	83.8	23.0	60.3	5.0	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	155.3	246.7	703.0	127.8	45.8	40.4
LnGrp LOS	F	F	F	F	D	D
Approach Vol, veh/h	3008			3580	475	
Approach Delay, s/veh	202.2			170.7	45.0	
Approach LOS	F			F	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		20.9	11.0	72.0		83.0
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		31.2	6.4	65.5		76.5
Max Q Clear Time (g_c+I1), s		13.6	8.4	67.5		78.5
Green Ext Time (p_c), s		1.5	0.0	0.0		0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			175.6			
HCM 6th LOS			F			

Timings  
51: Nuevo Rd. & Antelope Rd.



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↶	↷	↷	↶	↷
Traffic Volume (vph)	976	580	1542	118	289
Future Volume (vph)	976	580	1542	118	289
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	39.3	90.5	51.2	29.5	39.3
Total Split (%)	32.8%	75.4%	42.7%	24.6%	32.8%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.7  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

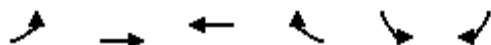
Splits and Phases: 51: Nuevo Rd. & Antelope Rd.



HCM 6th Signalized Intersection Summary  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↕	↗	↖		↘	↙	
Traffic Volume (veh/h)	976	580	1542	414	118	289	
Future Volume (veh/h)	976	580	1542	414	118	289	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	1061	630	1676	450	128	314	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	550	1399	565	152	282	741	
Arrive On Green	0.30	0.74	0.39	0.39	0.16	0.16	
Sat Flow, veh/h	1810	1900	1443	387	1810	1610	
Grp Volume(v), veh/h	1061	630	0	2126	128	314	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1830	1810	1610	
Q Serve(g_s), s	34.7	14.9	0.0	44.7	7.3	14.9	
Cycle Q Clear(g_c), s	34.7	14.9	0.0	44.7	7.3	14.9	
Prop In Lane	1.00			0.21	1.00	1.00	
Lane Grp Cap(c), veh/h	550	1399	0	717	282	741	
V/C Ratio(X)	1.93	0.45	0.00	2.96	0.45	0.42	
Avail Cap(c_a), veh/h	550	1399	0	717	376	824	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	39.7	5.9	0.0	34.7	43.7	20.7	
Incr Delay (d2), s/veh	424.1	1.0	0.0	887.7	1.1	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	79.3	4.7	0.0	195.1	3.3	15.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	463.8	7.0	0.0	922.4	44.9	21.0	
LnGrp LOS	F	A	A	F	D	C	
Approach Vol, veh/h		1691	2126		442		
Approach Delay, s/veh		293.6	922.4		28.0		
Approach LOS		F	F		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				90.5	23.6	39.3	51.2
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				84.0	23.7	34.7	44.7
Max Q Clear Time (g_c+I1), s				16.9	16.9	36.7	46.7
Green Ext Time (p_c), s				4.1	0.8	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay			579.9			
HCM 6th LOS			F			

Intersection						
Int Delay, s/veh	7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	244	125	235	29	45	191
Future Vol, veh/h	244	125	235	29	45	191
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	260	133	250	31	48	203

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	281	0	-	0	919
Stage 1	-	-	-	-	266
Stage 2	-	-	-	-	653
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1293	-	-	-	304
Stage 1	-	-	-	-	783
Stage 2	-	-	-	-	522
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1293	-	-	-	238
Mov Cap-2 Maneuver	-	-	-	-	238
Stage 1	-	-	-	-	613
Stage 2	-	-	-	-	522

Approach	EB	WB	SB
HCM Control Delay, s	5.6	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1293	-	-	-	543
HCM Lane V/C Ratio	0.201	-	-	-	0.462
HCM Control Delay (s)	8.5	0	-	-	17.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	2.4

Intersection						
Int Delay, s/veh	11.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	25	370	395	334	163	59
Future Vol, veh/h	25	370	395	334	163	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	402	429	363	177	64

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	792	0	-	0	1067
Stage 1	-	-	-	-	611
Stage 2	-	-	-	-	456
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	838	-	-	-	248
Stage 1	-	-	-	-	546
Stage 2	-	-	-	-	643
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	838	-	-	-	238
Mov Cap-2 Maneuver	-	-	-	-	238
Stage 1	-	-	-	-	524
Stage 2	-	-	-	-	643

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	66.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	838	-	-	-	276
HCM Lane V/C Ratio	0.032	-	-	-	0.874
HCM Control Delay (s)	9.4	0	-	-	66.8
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	7.6

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	178	350	388	76	27	191
Future Vol, veh/h	178	350	388	76	27	191
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	200	393	436	85	30	215

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	521	0	-	0	1272 479
Stage 1	-	-	-	-	479 -
Stage 2	-	-	-	-	793 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1056	-	-	-	187 591
Stage 1	-	-	-	-	627 -
Stage 2	-	-	-	-	449 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1056	-	-	-	152 591
Mov Cap-2 Maneuver	-	-	-	-	287 -
Stage 1	-	-	-	-	508 -
Stage 2	-	-	-	-	449 -

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	17.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1056	-	-	-	522
HCM Lane V/C Ratio	0.189	-	-	-	0.469
HCM Control Delay (s)	9.2	-	-	-	17.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	2.5

Timings

71: Redlands Av. & San Jacinto Av.

01/25/2021

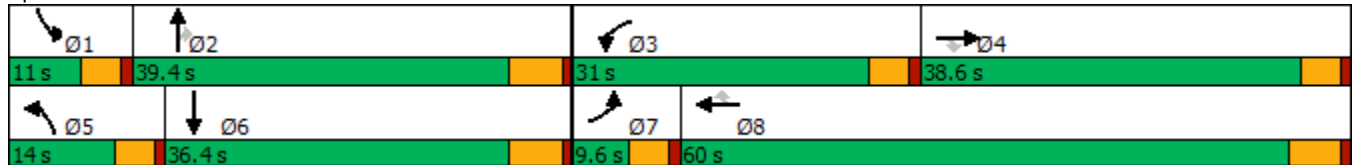


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↖	↑	↗	↖↖	↑	↗	↖	↑↑	↗	↖	↑↗
Traffic Volume (vph)	15	23	105	460	111	38	115	378	378	40	480
Future Volume (vph)	15	23	105	460	111	38	115	378	378	40	480
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	35.8	9.6	35.8
Total Split (s)	9.6	38.6	38.6	31.0	60.0	60.0	14.0	39.4	39.4	11.0	36.4
Total Split (%)	8.0%	32.2%	32.2%	25.8%	50.0%	50.0%	11.7%	32.8%	32.8%	9.2%	30.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min

Intersection Summary





























Cycle Length: 120  
 Actuated Cycle Length: 83  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	15	23	105	460	111	38	115	378	378	40	480	51
Future Volume (veh/h)	15	23	105	460	111	38	115	378	378	40	480	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	18	28	43	554	134	35	139	455	360	48	578	55
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	75	286	243	685	617	523	177	1058	472	80	799	76
Arrive On Green	0.02	0.15	0.15	0.20	0.32	0.32	0.10	0.29	0.29	0.04	0.24	0.24
Sat Flow, veh/h	3510	1900	1610	3510	1900	1610	1810	3610	1610	1810	3332	316
Grp Volume(v), veh/h	18	28	43	554	134	35	139	455	360	48	313	320
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1610	1810	1805	1610	1810	1805	1843
Q Serve(g_s), s	0.3	0.8	1.5	9.9	3.4	1.0	4.9	6.7	13.4	1.7	10.5	10.5
Cycle Q Clear(g_c), s	0.3	0.8	1.5	9.9	3.4	1.0	4.9	6.7	13.4	1.7	10.5	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	75	286	243	685	617	523	177	1058	472	80	433	442
V/C Ratio(X)	0.24	0.10	0.18	0.81	0.22	0.07	0.79	0.43	0.76	0.60	0.72	0.72
Avail Cap(c_a), veh/h	267	983	833	1410	1567	1328	259	1845	823	176	840	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	24.1	24.4	25.3	16.1	15.3	29.0	18.8	21.1	30.8	23.0	23.0
Incr Delay (d2), s/veh	0.6	0.1	0.3	0.9	0.2	0.1	5.3	0.3	2.6	2.6	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	0.5	3.7	1.3	0.3	2.2	2.5	4.7	0.7	4.2	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	24.2	24.7	26.2	16.3	15.4	34.3	19.1	23.7	33.5	25.3	25.3
LnGrp LOS	C	C	C	C	B	B	C	B	C	C	C	C
Approach Vol, veh/h		89			723			954			681	
Approach Delay, s/veh		26.1			23.8			23.0			25.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	25.1	17.4	15.7	11.0	21.6	6.0	27.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	33.6	26.4	* 34	9.4	30.6	5.0	54.2				
Max Q Clear Time (g_c+I1), s	3.7	15.4	11.9	3.5	6.9	12.5	2.3	5.4				
Green Ext Time (p_c), s	0.0	3.8	0.9	0.3	0.0	3.3	0.0	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			24.2									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

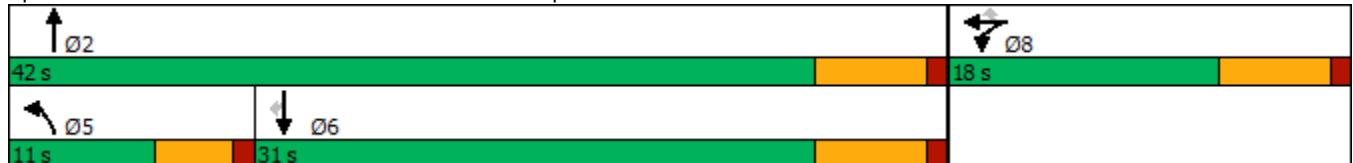


Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	373	1	383	166	488	828	216
Future Volume (vph)	373	1	383	166	488	828	216
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8	8		5	2	6	
Permitted Phases			8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	9.5	11.0	31.0	31.0
Total Split (s)	18.0	18.0	18.0	11.0	42.0	31.0	31.0
Total Split (%)	30.0%	30.0%	30.0%	18.3%	70.0%	51.7%	51.7%
Yellow Time (s)	5.0	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	Min	Min	Min

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 49.1  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 72: Redlands Av. & I-215 NB Ramps



HCM 6th Signalized Intersection Summary  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↔	↗	↖↗	↕			↑↑↑	↗
Traffic Volume (veh/h)	0	0	0	373	1	383	166	488	0	0	828	216
Future Volume (veh/h)	0	0	0	373	1	383	166	488	0	0	828	216
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				529	0	235	187	548	0	0	930	136
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				758	0	337	364	1848	0	0	1986	489
Arrive On Green				0.21	0.00	0.21	0.10	0.51	0.00	0.00	0.30	0.30
Sat Flow, veh/h				3619	0	1610	3510	3705	0	0	6802	1610
Grp Volume(v), veh/h				529	0	235	187	548	0	0	930	136
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1755	1805	0	0	1634	1610
Q Serve(g_s), s				5.8	0.0	5.8	2.2	3.8	0.0	0.0	5.0	2.8
Cycle Q Clear(g_c), s				5.8	0.0	5.8	2.2	3.8	0.0	0.0	5.0	2.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				758	0	337	364	1848	0	0	1986	489
V/C Ratio(X)				0.70	0.00	0.70	0.51	0.30	0.00	0.00	0.47	0.28
Avail Cap(c_a), veh/h				1008	0	448	530	3016	0	0	3792	934
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				15.8	0.0	15.8	18.3	6.1	0.0	0.0	12.2	11.4
Incr Delay (d2), s/veh				1.4	0.0	3.0	1.1	0.1	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.0	0.0	1.9	0.8	0.9	0.0	0.0	1.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				17.1	0.0	18.8	19.4	6.1	0.0	0.0	12.3	11.7
LnGrp LOS				B	A	B	B	A	A	A	B	B
Approach Vol, veh/h					764			735			1066	
Approach Delay, s/veh					17.7			9.5			12.3	
Approach LOS					B			A			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		28.1			9.0	19.1		15.0				
Change Period (Y+Rc), s		6.0			4.5	6.0		6.0				
Max Green Setting (Gmax), s		36.0			6.5	25.0		12.0				
Max Q Clear Time (g_c+I1), s		5.8			4.2	7.0		7.8				
Green Ext Time (p_c), s		3.8			0.1	6.1		1.2				

Intersection Summary

HCM 6th Ctrl Delay	13.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

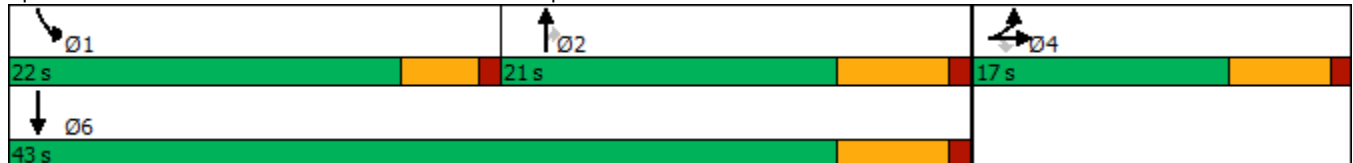


Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	158	0	226	495	338	450	751
Future Volume (vph)	158	0	226	495	338	450	751
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	11.0	11.0	9.5	33.0
Total Split (s)	17.0	17.0	17.0	21.0	21.0	22.0	43.0
Total Split (%)	28.3%	28.3%	28.3%	35.0%	35.0%	36.7%	71.7%
Yellow Time (s)	4.5	4.5	4.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0	4.5	6.0
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	None	Min

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 46.9  
 Natural Cycle: 45  
 Control Type: Actuated-Uncoordinated





















Splits and Phases: 73: Redlands Av. & I-215 SB Ramps



HCM 6th Signalized Intersection Summary  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	0	226	0	0	0	0	495	338	450	751	0
Future Volume (veh/h)	158	0	226	0	0	0	0	495	338	450	751	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	205	0	76				0	532	330	484	808	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	452	0	201				0	1570	681	747	2064	0
Arrive On Green	0.13	0.00	0.13				0.00	0.24	0.24	0.21	0.57	0.00
Sat Flow, veh/h	3619	0	1610				0	6802	2834	3510	3705	0
Grp Volume(v), veh/h	205	0	76				0	532	330	484	808	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1634	1417	1755	1805	0
Q Serve(g_s), s	2.0	0.0	1.6				0.0	2.6	3.8	4.8	4.7	0.0
Cycle Q Clear(g_c), s	2.0	0.0	1.6				0.0	2.6	3.8	4.8	4.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	452	0	201				0	1570	681	747	2064	0
V/C Ratio(X)	0.45	0.00	0.38				0.00	0.34	0.48	0.65	0.39	0.00
Avail Cap(c_a), veh/h	1097	0	488				0	2585	1121	1620	3522	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.4	0.0	15.2				0.0	11.9	12.4	13.6	4.5	0.0
Incr Delay (d2), s/veh	0.7	0.0	1.2				0.0	0.1	0.5	1.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.5				0.0	0.7	1.0	1.6	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	0.0	16.4				0.0	12.0	12.9	14.6	4.6	0.0
LnGrp LOS	B	A	B				A	B	B	B	A	A
Approach Vol, veh/h		281						862			1292	
Approach Delay, s/veh		16.2						12.4			8.3	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	12.6	15.1		10.2				27.7				
Change Period (Y+Rc), s	4.5	6.0		5.5				6.0				
Max Green Setting (Gmax), s	17.5	15.0		11.5				37.0				
Max Q Clear Time (g_c+I1), s	6.8	5.8		4.0				6.7				
Green Ext Time (p_c), s	1.3	3.3		0.5				6.2				

Intersection Summary

HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

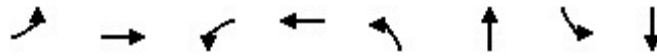
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↘	↕	↘	↕	↘	↕
Traffic Volume (vph)	22	87	138	155	150	312	14	176
Future Volume (vph)	22	87	138	155	150	312	14	176
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	32.8
Total Split (s)	9.6	32.8	9.6	32.8	9.6	33.0	9.6	33.0
Total Split (%)	11.3%	38.6%	11.3%	38.6%	11.3%	38.8%	11.3%	38.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max
Act Effct Green (s)	5.0	12.9	5.0	21.0	5.0	35.5	5.0	27.4
Actuated g/C Ratio	0.07	0.18	0.07	0.29	0.07	0.50	0.07	0.38
v/c Ratio	0.18	0.29	1.12	0.16	1.22	0.40	0.11	0.16
Control Delay	37.2	12.7	152.2	18.9	185.7	6.7	35.9	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	12.7	152.2	18.9	185.7	6.7	35.9	13.9
LOS	D	B	F	B	F	A	D	B
Approach Delay		15.2		80.3		37.5		15.2
Approach LOS		B		F		D		B

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 71.4

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.22

Intersection Signal Delay: 39.4

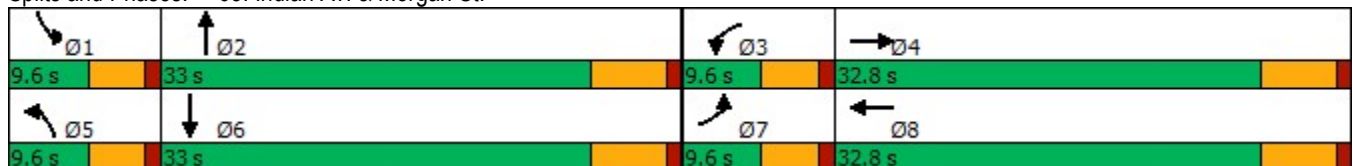
Intersection LOS: D

Intersection Capacity Utilization 64.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 68: Indian Av. & Morgan St.



HCM 6th Signalized Intersection Summary  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	87	104	138	155	6	150	312	410	14	176	36
Future Volume (veh/h)	22	87	104	138	155	6	150	312	410	14	176	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	90	70	142	160	3	155	322	420	14	181	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	283	202	134	685	13	134	830	741	31	1243	209
Arrive On Green	0.03	0.14	0.14	0.07	0.19	0.19	0.07	0.46	0.46	0.02	0.40	0.40
Sat Flow, veh/h	1810	2014	1433	1810	3625	68	1810	1805	1610	1810	3085	518
Grp Volume(v), veh/h	23	80	80	142	79	84	155	322	420	14	104	108
Grp Sat Flow(s),veh/h/ln	1810	1805	1642	1810	1805	1888	1810	1805	1610	1810	1805	1798
Q Serve(g_s), s	0.8	2.7	3.0	5.0	2.5	2.5	5.0	7.9	12.9	0.5	2.5	2.6
Cycle Q Clear(g_c), s	0.8	2.7	3.0	5.0	2.5	2.5	5.0	7.9	12.9	0.5	2.5	2.6
Prop In Lane	1.00		0.87	1.00		0.04	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	47	254	231	134	341	357	134	830	741	31	727	725
V/C Ratio(X)	0.49	0.31	0.35	1.06	0.23	0.23	1.16	0.39	0.57	0.45	0.14	0.15
Avail Cap(c_a), veh/h	134	722	657	134	722	755	134	830	741	134	727	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	26.1	26.2	31.3	23.2	23.2	31.3	12.0	13.3	32.9	12.8	12.8
Incr Delay (d2), s/veh	2.9	0.7	0.9	94.5	0.3	0.3	125.9	0.3	1.0	3.8	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.1	1.1	5.5	1.0	1.0	6.7	2.6	3.9	0.2	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	26.8	27.1	125.7	23.6	23.6	157.1	12.3	14.3	36.7	13.2	13.2
LnGrp LOS	D	C	C	F	C	C	F	B	B	D	B	B
Approach Vol, veh/h		183			305			897			226	
Approach Delay, s/veh		28.0			71.1			38.3			14.7	
Approach LOS		C			E			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	36.8	9.6	15.3	9.6	33.0	6.4	18.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	2.5	14.9	7.0	5.0	7.0	4.6	2.8	4.5				
Green Ext Time (p_c), s	0.0	3.5	0.0	0.7	0.0	0.9	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			40.0									
HCM 6th LOS			D									

Timings  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↘	↑↑	↗
Traffic Volume (vph)	18	93	46	84	90	173	10	606	42	294	9
Future Volume (vph)	18	93	46	84	90	173	10	606	42	294	9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	32.8	9.6	32.8	32.8
Total Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	33.0	9.6	33.0	33.0
Total Split (%)	11.3%	38.6%	38.6%	11.3%	38.6%	38.6%	11.3%	38.8%	11.3%	38.8%	38.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.5	13.3	13.3	7.7	19.4	19.4	5.5	18.5	5.5	22.1	22.1
Actuated g/C Ratio	0.10	0.23	0.23	0.14	0.34	0.34	0.10	0.33	0.10	0.39	0.39
v/c Ratio	0.12	0.13	0.11	0.40	0.09	0.29	0.07	0.65	0.28	0.24	0.01
Control Delay	33.9	21.0	0.4	39.4	16.2	4.7	33.2	20.8	35.8	13.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	21.0	0.4	39.4	16.2	4.7	33.2	20.8	35.8	13.9	0.0
LOS	C	C	A	D	B	A	C	C	D	B	A
Approach Delay		16.5			16.1			21.0		16.2	
Approach LOS		B			B			C		B	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 56.9

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 18.3

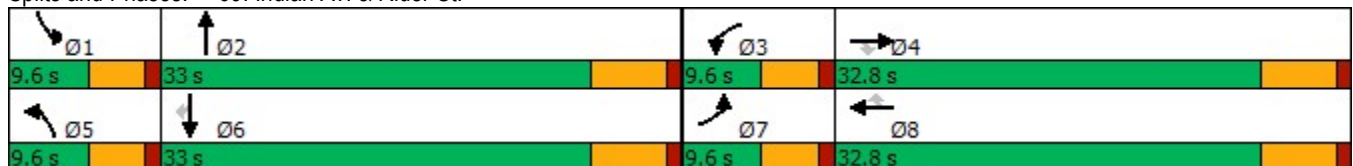
Intersection LOS: B

Intersection Capacity Utilization 47.1%

ICU Level of Service A

Analysis Period (min) 15

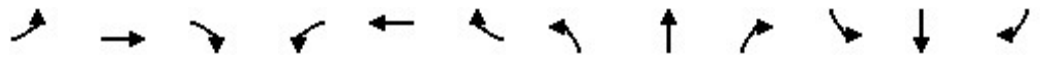
Splits and Phases: 69: Indian Av. & Rider St.



HCM 6th Signalized Intersection Summary  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/11/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	93	46	84	90	173	10	606	43	42	294	9
Future Volume (veh/h)	18	93	46	84	90	173	10	606	43	42	294	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	21	108	45	98	105	158	12	705	23	49	342	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	46	633	282	134	809	361	28	1028	34	89	1163	519
Arrive On Green	0.03	0.18	0.18	0.07	0.22	0.22	0.02	0.29	0.29	0.05	0.32	0.32
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3568	116	1810	3610	1610
Grp Volume(v), veh/h	21	108	45	98	105	158	12	357	371	49	342	7
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1879	1810	1805	1610
Q Serve(g_s), s	0.6	1.3	1.2	2.7	1.2	4.2	0.3	8.8	8.8	1.3	3.6	0.1
Cycle Q Clear(g_c), s	0.6	1.3	1.2	2.7	1.2	4.2	0.3	8.8	8.8	1.3	3.6	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	46	633	282	134	809	361	28	520	542	89	1163	519
V/C Ratio(X)	0.46	0.17	0.16	0.73	0.13	0.44	0.43	0.69	0.69	0.55	0.29	0.01
Avail Cap(c_a), veh/h	180	1936	864	180	1936	864	180	975	1015	180	1951	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	17.6	17.6	22.8	15.6	16.8	24.6	15.9	15.9	23.4	12.8	11.6
Incr Delay (d2), s/veh	2.7	0.1	0.3	5.7	0.1	0.8	3.9	1.6	1.6	2.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.4	1.2	0.4	1.4	0.2	3.1	3.2	0.5	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	17.8	17.9	28.5	15.7	17.6	28.5	17.5	17.4	25.3	12.9	11.6
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		174			361			740			398	
Approach Delay, s/veh		18.9			20.0			17.7			14.4	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	20.3	8.3	14.6	5.4	22.0	5.9	17.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	3.3	10.8	4.7	3.3	2.3	5.6	2.6	6.2				
Green Ext Time (p_c), s	0.0	3.7	0.0	0.7	0.0	1.9	0.0	1.0				

Intersection Summary

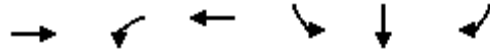
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B



Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

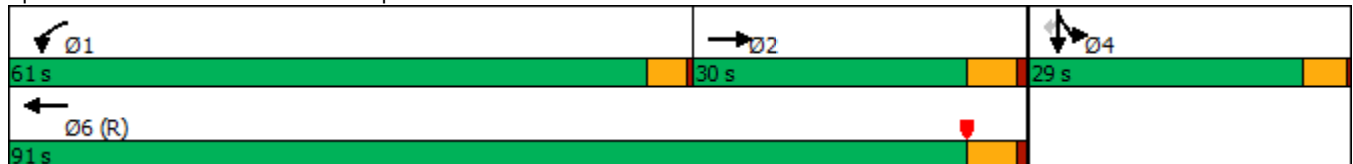


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↖	↑↑	↖	↖	↖
Traffic Volume (vph)	591	889	824	979	0	85
Future Volume (vph)	591	889	824	979	0	85
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	30.0	61.0	91.0	29.0	29.0	29.0
Total Split (%)	25.0%	50.8%	75.8%	24.2%	24.2%	24.2%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: I-215 SB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖	↖	↖
Traffic Volume (veh/h)	0	591	198	889	824	0	0	0	0	979	0	85
Future Volume (veh/h)	0	591	198	889	824	0	0	0	0	979	0	85
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	642	215	966	896	0				1064	0	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	541	181	860	2572	0				739	0	326
Arrive On Green	0.00	0.20	0.20	0.79	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	2746	887	1810	3705	0				3619	0	1598
Grp Volume(v), veh/h	0	437	420	966	896	0				1064	0	92
Grp Sat Flow(s),veh/h/ln	0	1805	1733	1810	1805	0				1810	0	1598
Q Serve(g_s), s	0.0	24.5	24.5	57.0	0.0	0.0				24.5	0.0	5.8
Cycle Q Clear(g_c), s	0.0	24.5	24.5	57.0	0.0	0.0				24.5	0.0	5.8
Prop In Lane	0.00		0.51	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	369	354	860	2572	0				739	0	326
V/C Ratio(X)	0.00	1.19	1.19	1.12	0.35	0.00				1.44	0.00	0.28
Avail Cap(c_a), veh/h	0	369	354	860	2572	0				739	0	326
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.59	0.59	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	47.8	47.8	12.4	0.0	0.0				47.8	0.0	40.3
Incr Delay (d2), s/veh	0.0	107.8	109.2	65.3	0.2	0.0				205.7	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	21.6	20.8	21.3	0.1	0.0				31.8	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	155.5	156.9	77.7	0.2	0.0				253.4	0.0	40.8
LnGrp LOS	A	F	F	F	A	A				F	A	D
Approach Vol, veh/h		857			1862						1156	
Approach Delay, s/veh		156.2			40.4						236.5	
Approach LOS		F			D						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	61.0	30.0		29.0		91.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	57.0	24.5		24.5		85.5						
Max Q Clear Time (g_c+I1), s	59.0	26.5		26.5		2.0						
Green Ext Time (p_c), s	0.0	0.0		0.0		3.9						

Intersection Summary

HCM 6th Ctrl Delay	124.5
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

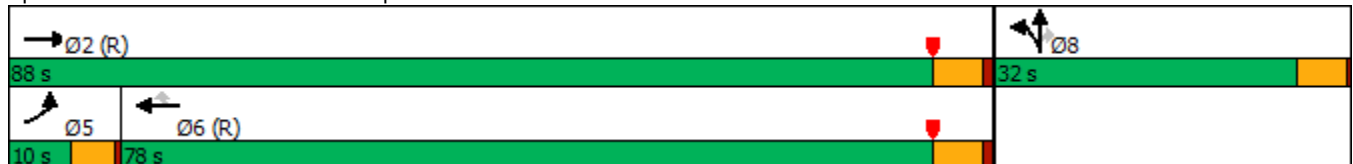


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	98	1472	1543	1321	169	0	492
Future Volume (vph)	98	1472	1543	1321	169	0	492
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	31.5	27.5	27.5	10.5	10.5	10.5
Total Split (s)	10.0	88.0	78.0	78.0	32.0	32.0	32.0
Total Split (%)	8.3%	73.3%	65.0%	65.0%	26.7%	26.7%	26.7%
Yellow Time (s)	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	0.5	1.0	1.0	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 NB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
7: I-215 NB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	1472	0	0	1543	1321	169	0	492	0	0	0
Future Volume (veh/h)	98	1472	0	0	1543	1321	169	0	492	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	107	1600	0	0	1677	947	184	0	372			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	83	2482	0	0	2181	970	814	0	360			
Arrive On Green	0.05	0.69	0.00	0.00	0.60	0.60	0.22	0.00	0.22			
Sat Flow, veh/h	1810	3705	0	0	3705	1606	3619	0	1599			
Grp Volume(v), veh/h	107	1600	0	0	1677	947	184	0	372			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1606	1810	0	1599			
Q Serve(g_s), s	5.5	29.9	0.0	0.0	41.2	68.2	5.0	0.0	27.0			
Cycle Q Clear(g_c), s	5.5	29.9	0.0	0.0	41.2	68.2	5.0	0.0	27.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	83	2482	0	0	2181	970	814	0	360			
V/C Ratio(X)	1.29	0.64	0.00	0.00	0.77	0.98	0.23	0.00	1.03			
Avail Cap(c_a), veh/h	83	2482	0	0	2181	970	814	0	360			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	57.3	10.5	0.0	0.0	17.6	22.9	38.0	0.0	46.5			
Incr Delay (d2), s/veh	138.7	0.1	0.0	0.0	2.7	23.6	0.1	0.0	56.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.6	9.6	0.0	0.0	15.6	28.1	2.2	0.0	16.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	196.0	10.6	0.0	0.0	20.2	46.5	38.0	0.0	102.9			
LnGrp LOS	F	B	A	A	C	D	D	A	F			
Approach Vol, veh/h		1707			2624			556				
Approach Delay, s/veh		22.3			29.7			81.4				
Approach LOS		C			C			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		88.0			10.0	78.0		32.0				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		82.5			5.5	72.5		27.0				
Max Q Clear Time (g_c+I1), s		31.9			7.5	70.2		29.0				
Green Ext Time (p_c), s		9.3			0.0	1.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	1186
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	216	1419	117	39	1587	60	60	117	23	143	323	600
Future Vol, veh/h	216	1419	117	39	1587	60	60	117	23	143	323	600
Peak Hour Factor	0.92	0.92	0.92	0.68	0.92	0.68	0.92	0.68	0.68	0.68	0.68	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	235	1542	127	57	1725	88	65	172	34	210	475	652
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	1287.7	1614.8	41.8	673.2
HCM LOS	F	F	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	84%	0%	92%	0%	96%	0%	35%
Vol Right, %	0%	16%	0%	8%	0%	4%	0%	65%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	140	216	1536	39	1647	143	923
LT Vol	60	0	216	0	39	0	143	0
Through Vol	0	117	0	1419	0	1587	0	323
RT Vol	0	23	0	117	0	60	0	600
Lane Flow Rate	65	206	235	1670	57	1813	210	1127
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.187	0.556	0.62	4.155	0.154	4.619	0.556	2.683
Departure Headway (Hd)	21.099	20.396	17.998	17.362	15.595	15.018	13.883	12.786
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	172	179	204	234	232	272	263	293
Service Time	18.799	18.096	15.698	15.062	13.295	12.718	11.583	10.486
HCM Lane V/C Ratio	0.378	1.151	1.152	7.137	0.246	6.665	0.798	3.846
HCM Control Delay	28.6	46	46.2	1462.3	21.1	1665.2	32.7	792.7
HCM Lane LOS	D	E	E	F	C	F	D	F
HCM 95th-tile Q	0.7	2.9	3.6	85.5	0.5	112.1	3.1	63.7

Timings  
23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

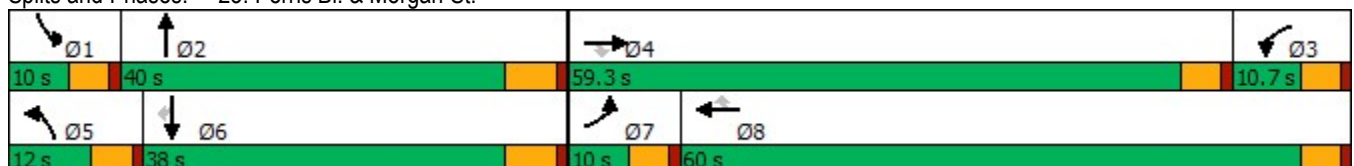
02/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	58	171	32	39	383	54	51	1272	24	1532	42	
Future Volume (vph)	58	171	32	39	383	54	51	1272	24	1532	42	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8	
Total Split (s)	10.0	59.3	59.3	10.7	60.0	60.0	12.0	40.0	10.0	38.0	38.0	
Total Split (%)	8.3%	49.4%	49.4%	8.9%	50.0%	50.0%	10.0%	33.3%	8.3%	31.7%	31.7%	
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	5.6	19.1	19.1	12.4	23.9	23.9	6.6	38.6	5.4	33.6	33.6	
Actuated g/C Ratio	0.07	0.23	0.23	0.15	0.28	0.28	0.08	0.46	0.06	0.40	0.40	
v/c Ratio	0.51	0.22	0.08	0.16	0.75	0.11	0.38	0.57	0.22	1.12	0.06	
Control Delay	59.4	30.5	0.3	35.7	37.4	0.8	50.0	21.1	47.9	93.1	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	59.4	30.5	0.3	35.7	37.4	0.8	50.0	21.1	47.9	93.1	0.2	
LOS	E	C	A	D	D	A	D	C	D	F	A	
Approach Delay		33.2			33.1			22.2		90.0		
Approach LOS		C			C			C		F		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 84.3  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.12  
 Intersection Signal Delay: 53.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 79.2%  
 ICU Level of Service D  
 Analysis Period (min) 15

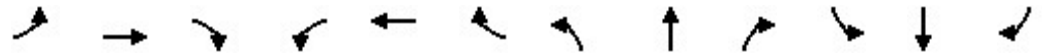
Splits and Phases: 23: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 23: Perris Bl. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/14/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	171	32	39	383	54	51	1272	17	24	1532	42
Future Volume (veh/h)	58	171	32	39	383	54	51	1272	17	24	1532	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	61	180	17	41	403	48	54	1339	16	25	1613	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	84	451	201	332	498	422	79	2217	26	48	1454	634
Arrive On Green	0.05	0.13	0.13	0.18	0.26	0.26	0.04	0.42	0.42	0.03	0.40	0.40
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5283	63	1810	3610	1575
Grp Volume(v), veh/h	61	180	17	41	403	48	54	877	478	25	1613	38
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1888	1810	1805	1575
Q Serve(g_s), s	2.7	3.7	0.6	1.5	15.9	1.8	2.4	15.8	15.8	1.1	32.2	1.2
Cycle Q Clear(g_c), s	2.7	3.7	0.6	1.5	15.9	1.8	2.4	15.8	15.8	1.1	32.2	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	84	451	201	332	498	422	79	1452	792	48	1454	634
V/C Ratio(X)	0.73	0.40	0.08	0.12	0.81	0.11	0.68	0.60	0.60	0.52	1.11	0.06
Avail Cap(c_a), veh/h	122	2470	1102	332	1316	1116	167	1479	807	122	1454	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	32.2	20.7	27.3	27.6	22.4	37.7	18.0	18.0	38.4	23.9	14.6
Incr Delay (d2), s/veh	4.4	0.6	0.2	0.1	3.2	0.1	3.8	0.7	1.2	3.2	59.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.6	0.3	0.7	7.5	0.7	1.1	5.6	6.2	0.5	23.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	32.8	20.9	27.3	30.8	22.6	41.5	18.7	19.3	41.6	83.5	14.7
LnGrp LOS	D	C	C	C	C	C	D	B	B	D	F	B
Approach Vol, veh/h		258			492			1409			1676	
Approach Delay, s/veh		34.2			29.7			19.8			81.3	
Approach LOS		C			C			B			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	39.4	19.3	14.6	8.1	38.0	8.3	25.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.4	34.2	6.1	54.7	7.4	32.2	5.4	55.4				
Max Q Clear Time (g_c+I1), s	3.1	17.8	3.5	5.7	4.4	34.2	4.7	17.9				
Green Ext Time (p_c), s	0.0	7.7	0.0	1.4	0.0	0.0	0.0	3.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			48.9									
HCM 6th LOS			D									

Timings  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

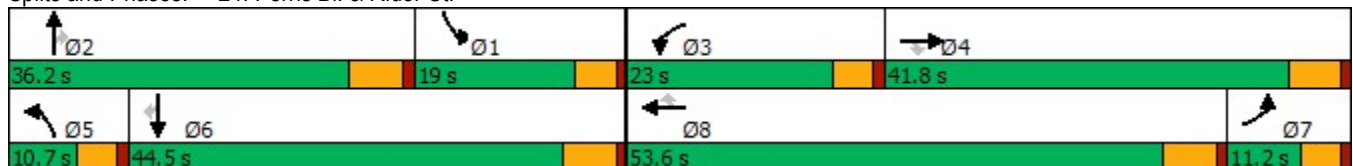
02/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	355	110	418	138	301	44	921	356	301	1262	49
Future Volume (vph)	59	355	110	418	138	301	44	921	356	301	1262	49
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	11.2	41.8	41.8	23.0	53.6	53.6	10.7	36.2	36.2	19.0	44.5	44.5
Total Split (%)	9.3%	34.8%	34.8%	19.2%	44.7%	44.7%	8.9%	30.2%	30.2%	15.8%	37.1%	37.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.1	17.6	17.6	18.6	20.3	20.3	5.9	26.2	26.2	14.6	39.4	39.4
Actuated g/C Ratio	0.18	0.18	0.18	0.19	0.21	0.21	0.06	0.27	0.27	0.15	0.40	0.40
v/c Ratio	0.18	0.57	0.28	1.27	0.19	0.54	0.43	0.69	0.56	1.17	0.63	0.07
Control Delay	37.5	40.3	3.2	178.3	36.0	7.6	60.9	35.8	9.0	149.1	27.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	40.3	3.2	178.3	36.0	7.6	60.9	35.8	9.0	149.1	27.0	0.2
LOS	D	D	A	F	D	A	E	D	A	F	C	A
Approach Delay		32.2			95.3			29.4			49.0	
Approach LOS		C			F			C			D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 98.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.27  
 Intersection Signal Delay: 50.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 86.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 24: Perris Bl. & Rider St.

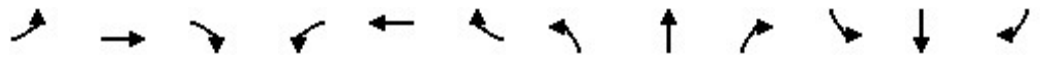




HCM 6th Signalized Intersection Summary  
24: Perris Bl. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/14/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↘	↘	↑↑	↘	↘	↑↑↑	↘	↘	↑↑↑	↘
Traffic Volume (veh/h)	59	355	110	418	138	301	44	921	356	301	1262	49
Future Volume (veh/h)	59	355	110	418	138	301	44	921	356	301	1262	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	61	370	68	435	144	248	46	959	288	314	1315	35
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	261	551	245	360	703	313	68	1320	409	282	2001	613
Arrive On Green	0.14	0.15	0.15	0.20	0.19	0.19	0.04	0.25	0.25	0.16	0.39	0.39
Sat Flow, veh/h	1810	3610	1604	1810	3610	1608	1810	5187	1606	1810	5187	1590
Grp Volume(v), veh/h	61	370	68	435	144	248	46	959	288	314	1315	35
Grp Sat Flow(s),veh/h/ln	1810	1805	1604	1810	1805	1608	1810	1729	1606	1810	1729	1590
Q Serve(g_s), s	2.8	8.9	3.5	18.4	3.1	13.6	2.3	15.6	8.8	14.4	19.3	0.7
Cycle Q Clear(g_c), s	2.8	8.9	3.5	18.4	3.1	13.6	2.3	15.6	8.8	14.4	19.3	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	551	245	360	703	313	68	1320	409	282	2001	613
V/C Ratio(X)	0.23	0.67	0.28	1.21	0.20	0.79	0.68	0.73	0.70	1.11	0.66	0.06
Avail Cap(c_a), veh/h	261	1406	625	360	1867	832	119	1706	528	282	2172	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	37.0	34.7	37.0	31.2	35.4	43.9	31.5	10.6	39.0	23.4	5.6
Incr Delay (d2), s/veh	0.2	1.4	0.6	116.6	0.1	4.5	4.4	1.1	2.9	87.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.9	1.3	19.3	1.3	5.4	1.1	6.2	5.3	12.9	7.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	38.4	35.3	153.6	31.4	40.0	48.3	32.6	13.5	126.7	24.0	5.7
LnGrp LOS	D	D	D	F	C	D	D	C	B	F	C	A
Approach Vol, veh/h		499			827			1293			1664	
Approach Delay, s/veh		37.6			98.3			28.9			43.0	
Approach LOS		D			F			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.2	29.3	23.0	19.9	8.1	41.5	19.1	23.8				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	14.4	* 30	18.4	36.0	6.1	38.7	6.6	* 48				
Max Q Clear Time (g_c+I1), s	16.4	17.6	20.4	10.9	4.3	21.3	4.8	15.6				
Green Ext Time (p_c), s	0.0	5.7	0.0	2.4	0.0	8.3	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	48.8
HCM 6th LOS	D

Notes

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

Timings  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022

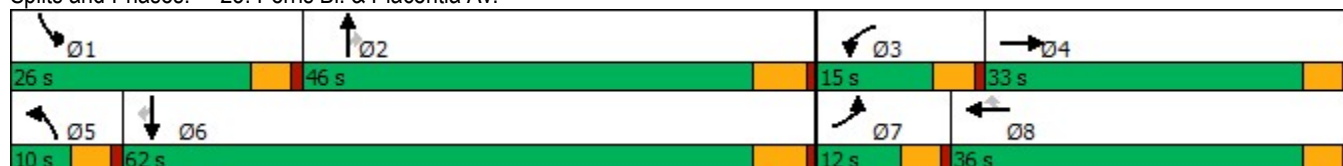


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	37	305	105	322	147	185	1134	147	197	1551	28
Future Volume (vph)	37	305	105	322	147	185	1134	147	197	1551	28
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.6	9.6	34.6	34.6	9.6	36.8	36.8	9.6	34.8	34.8
Total Split (s)	12.0	33.0	15.0	36.0	36.0	10.0	46.0	46.0	26.0	62.0	62.0
Total Split (%)	10.0%	27.5%	12.5%	30.0%	30.0%	8.3%	38.3%	38.3%	21.7%	51.7%	51.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.6	28.4	9.9	33.6	33.6	5.4	43.7	43.7	17.9	56.2	56.2
Actuated g/C Ratio	0.06	0.24	0.08	0.28	0.28	0.05	0.37	0.37	0.15	0.47	0.47
v/c Ratio	0.41	1.23	0.79	0.67	0.29	2.54	0.95	0.24	0.81	1.01	0.04
Control Delay	67.3	160.3	87.7	46.2	6.6	746.9	53.9	7.6	71.4	57.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	160.3	87.7	46.2	6.6	746.9	53.9	7.6	71.4	57.5	0.1
LOS	E	F	F	D	A	F	D	A	E	E	A
Approach Delay		153.8		43.7			136.9			58.1	
Approach LOS		F		D			F			E	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 119.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.54	
Intersection Signal Delay: 94.5	Intersection LOS: F
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 25: Perris Bl. & Placentia Av.



HCM 6th Signalized Intersection Summary  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	305	187	105	322	147	185	1134	147	197	1551	28
Future Volume (veh/h)	37	305	187	105	322	147	185	1134	147	197	1551	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	339	204	117	358	46	206	1260	154	219	1723	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	265	160	143	544	461	82	1375	613	247	1705	760
Arrive On Green	0.03	0.24	0.24	0.08	0.29	0.29	0.05	0.38	0.38	0.14	0.47	0.47
Sat Flow, veh/h	1810	1111	669	1810	1900	1610	1810	3610	1610	1810	3610	1608
Grp Volume(v), veh/h	41	0	543	117	358	46	206	1260	154	219	1723	25
Grp Sat Flow(s),veh/h/ln	1810	0	1780	1810	1900	1610	1810	1805	1610	1810	1805	1608
Q Serve(g_s), s	2.7	0.0	28.4	7.6	19.7	2.5	5.4	39.5	7.8	14.1	56.2	1.0
Cycle Q Clear(g_c), s	2.7	0.0	28.4	7.6	19.7	2.5	5.4	39.5	7.8	14.1	56.2	1.0
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	0	425	143	544	461	82	1375	613	247	1705	760
V/C Ratio(X)	0.73	0.00	1.28	0.82	0.66	0.10	2.51	0.92	0.25	0.89	1.01	0.03
Avail Cap(c_a), veh/h	113	0	425	158	544	461	82	1375	613	325	1705	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.1	0.0	45.3	54.0	37.3	31.2	56.8	35.0	25.2	50.4	31.4	16.8
Incr Delay (d2), s/veh	6.5	0.0	142.4	23.2	2.9	0.1	713.5	9.8	0.2	16.8	24.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	29.3	4.4	9.7	1.0	18.7	18.2	3.1	7.4	28.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	0.0	187.7	77.2	40.2	31.3	770.3	44.9	25.4	67.3	55.8	16.8
LnGrp LOS	E	A	F	E	D	C	F	D	C	E	F	B
Approach Vol, veh/h		584			521			1620			1967	
Approach Delay, s/veh		179.0			47.7			135.3			56.6	
Approach LOS		F			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.9	51.1	14.0	33.0	10.0	62.0	8.3	38.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	21.4	40.2	10.4	28.4	5.4	56.2	7.4	31.4				
Max Q Clear Time (g_c+I1), s	16.1	41.5	9.6	30.4	7.4	58.2	4.7	21.7				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			98.0									
HCM 6th LOS			F									

Timings

30: Redlands Av. & Ramona Exwy.

01/25/2021

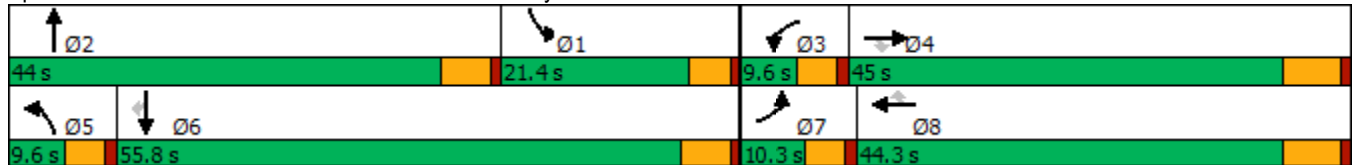


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑	↖	↑	↗
Traffic Volume (vph)	85	4036	70	76	2949	708	86	93	562	49	102
Future Volume (vph)	85	4036	70	76	2949	708	86	93	562	49	102
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	27.2	9.6	43.4	9.6	23.4	23.4
Total Split (s)	10.3	45.0	45.0	9.6	44.3	44.3	9.6	44.0	21.4	55.8	55.8
Total Split (%)	8.6%	37.5%	37.5%	8.0%	36.9%	36.9%	8.0%	36.7%	17.8%	46.5%	46.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 101.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated






























Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	85	4036	70	76	2949	708	86	93	159	562	49	102
Future Volume (veh/h)	85	4036	70	76	2949	708	86	93	159	562	49	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	4387	71	83	3205	755	93	101	114	611	53	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	106	2075	642	93	2037	632	93	124	140	313	537	455
Arrive On Green	0.06	0.40	0.40	0.05	0.39	0.39	0.05	0.15	0.15	0.17	0.28	0.28
Sat Flow, veh/h	1810	5187	1606	1810	5187	1610	1810	815	920	1810	1900	1610
Grp Volume(v), veh/h	92	4387	71	83	3205	755	93	0	215	611	53	97
Grp Sat Flow(s),veh/h/ln	1810	1729	1606	1810	1729	1610	1810	0	1734	1810	1900	1610
Q Serve(g_s), s	4.9	38.8	2.7	4.4	38.1	19.7	5.0	0.0	11.6	16.8	2.0	4.5
Cycle Q Clear(g_c), s	4.9	38.8	2.7	4.4	38.1	19.7	5.0	0.0	11.6	16.8	2.0	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	106	2075	642	93	2037	632	93	0	265	313	537	455
V/C Ratio(X)	0.87	2.11	0.11	0.89	1.57	1.19	1.00	0.00	0.81	1.95	0.10	0.21
Avail Cap(c_a), veh/h	106	2075	642	93	2037	632	93	0	690	313	987	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	29.1	18.3	45.7	29.5	7.9	46.0	0.0	39.8	40.1	25.7	26.6
Incr Delay (d2), s/veh	46.4	503.2	0.1	57.6	260.4	102.2	92.2	0.0	5.9	438.9	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	110.9	0.9	3.4	63.2	22.8	4.6	0.0	5.2	45.4	0.9	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.6	532.3	18.3	103.3	289.8	110.1	138.2	0.0	45.7	479.0	25.8	26.8
LnGrp LOS	F	F	B	F	F	F	F	A	D	F	C	C
Approach Vol, veh/h		4550			4043			308			761	
Approach Delay, s/veh		515.4			252.4			73.6			389.8	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.2	20.2	9.6	45.0	9.6	32.8	10.3	44.3				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	16.8	* 39	5.0	38.8	5.0	50.4	5.7	38.1				
Max Q Clear Time (g_c+I1), s	18.8	13.6	6.4	40.8	7.0	6.5	6.9	40.1				
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	0.6	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			381.4									
HCM 6th LOS			F									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	79	10	6	5	23	8	16	181	0	8	84	68
Future Vol, veh/h	79	10	6	5	23	8	16	181	0	8	84	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	86	11	7	5	25	9	17	197	0	9	91	74
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	9.5	8.9	10.4	8.3
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	8%	100%	0%	14%	9%	0%
Vol Thru, %	92%	0%	62%	64%	91%	0%
Vol Right, %	0%	0%	38%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	197	79	16	36	92	68
LT Vol	16	79	0	5	8	0
Through Vol	181	0	10	23	84	0
RT Vol	0	0	6	8	0	68
Lane Flow Rate	214	86	17	39	100	74
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.305	0.143	0.025	0.06	0.143	0.09
Departure Headway (Hd)	5.12	5.995	5.227	5.507	5.155	4.407
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	702	597	683	648	695	811
Service Time	3.156	3.745	2.976	3.563	2.892	2.144
HCM Lane V/C Ratio	0.305	0.144	0.025	0.06	0.144	0.091
HCM Control Delay	10.4	9.8	8.1	8.9	8.8	7.6
HCM Lane LOS	B	A	A	A	A	A
HCM 95th-tile Q	1.3	0.5	0.1	0.2	0.5	0.3

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

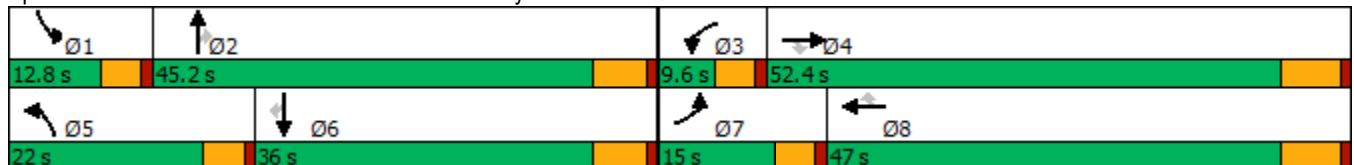
01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	579	3628	618	71	2919	574	321	468	75	584	759	495
Future Volume (vph)	579	3628	618	71	2919	574	321	468	75	584	759	495
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	15.0	52.4	52.4	9.6	47.0	47.0	22.0	45.2	45.2	12.8	36.0	36.0
Total Split (%)	12.5%	43.7%	43.7%	8.0%	39.2%	39.2%	18.3%	37.7%	37.7%	10.7%	30.0%	30.0%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.3  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 39: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	 		 	 	
Traffic Volume (veh/h)	579	3628	618	71	2919	574	321	468	75	584	759	495
Future Volume (veh/h)	579	3628	618	71	2919	574	321	468	75	584	759	495
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	591	3702	0	72	2979	479	328	478	76	596	774	331
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	343	2257		158	1381	616	410	1080	482	275	941	414
Arrive On Green	0.10	0.44	0.00	0.05	0.38	0.38	0.12	0.30	0.30	0.08	0.26	0.26
Sat Flow, veh/h	3510	5187	1610	3510	3610	1610	3510	3610	1610	3510	3610	1587
Grp Volume(v), veh/h	591	3702	0	72	2979	479	328	478	76	596	774	331
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1805	1610	1755	1805	1610	1755	1805	1587
Q Serve(g_s), s	11.0	48.9	0.0	2.2	43.0	29.4	10.2	12.0	3.9	8.8	22.7	21.9
Cycle Q Clear(g_c), s	11.0	48.9	0.0	2.2	43.0	29.4	10.2	12.0	3.9	8.8	22.7	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	343	2257		158	1381	616	410	1080	482	275	941	414
V/C Ratio(X)	1.72	1.64		0.45	2.16	0.78	0.80	0.44	0.16	2.17	0.82	0.80
Avail Cap(c_a), veh/h	343	2257		175	1381	616	562	1323	590	275	1027	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	31.8	0.0	52.3	34.7	30.5	48.4	31.8	29.0	51.8	39.1	38.8
Incr Delay (d2), s/veh	336.5	290.1	0.0	0.8	523.5	6.3	3.9	0.3	0.2	538.1	5.1	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.6	78.8	0.0	1.0	117.5	11.5	4.6	5.1	1.4	24.3	10.3	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	387.2	321.9	0.0	53.1	558.2	36.8	52.3	32.1	29.1	589.9	44.2	48.0
LnGrp LOS	F	F		D	F	D	D	C	C	F	D	D
Approach Vol, veh/h		4293	A		3530			882			1701	
Approach Delay, s/veh		330.9			477.1			39.4			236.2	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	37.6	9.1	52.9	17.1	33.3	15.0	47.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	8.2	39.4	5.0	45.9	17.4	30.2	10.4	40.5				
Max Q Clear Time (g_c+I1), s	10.8	14.0	4.2	50.9	12.2	24.7	13.0	45.0				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.0	0.3	2.8	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	340.3
HCM 6th LOS	F

Notes

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



Timings  
43: Bradley St. & Ramona Expy

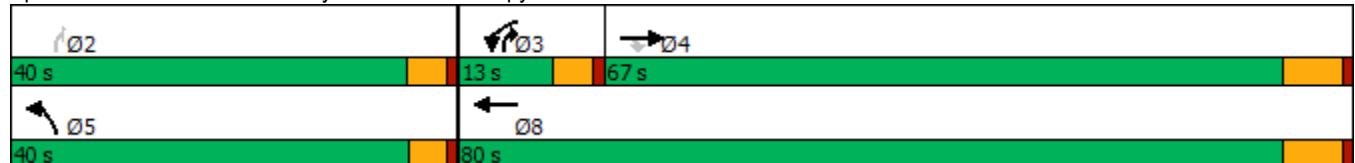


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø2
Lane Configurations	↑↑	↑	↙	↑↑	↙	↗	
Traffic Volume (vph)	2945	299	37	1609	149	19	
Future Volume (vph)	2945	299	37	1609	149	19	
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov	
Protected Phases	4		3	8	5	3	2
Permitted Phases		4				2	
Detector Phase	4	4	3	8	5	3	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	38.5	38.5	9.6	24.5	9.5	9.6	22.6
Total Split (s)	67.0	67.0	13.0	80.0	40.0	13.0	40.0
Total Split (%)	55.8%	55.8%	10.8%	66.7%	33.3%	10.8%	33%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.5	4.6	
Lead/Lag	Lag	Lag	Lead			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92.8  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

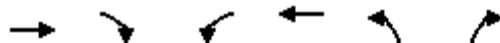
Splits and Phases: 43: Bradley St. & Ramona Expy



HCM 6th Signalized Intersection Summary  
43: Bradley St. & Ramona Expy

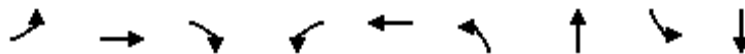
Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↑
Traffic Volume (veh/h)	2945	299	37	1609	149	19
Future Volume (veh/h)	2945	299	37	1609	149	19
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3100	295	39	1694	157	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2454	1094	63	2766	199	233
Arrive On Green	0.68	0.68	0.03	0.77	0.11	0.11
Sat Flow, veh/h	3705	1609	1810	3705	1810	1610
Grp Volume(v), veh/h	3100	295	39	1694	157	8
Grp Sat Flow(s),veh/h/ln	1805	1609	1810	1805	1810	1610
Q Serve(g_s), s	60.5	6.4	1.9	18.4	7.5	0.4
Cycle Q Clear(g_c), s	60.5	6.4	1.9	18.4	7.5	0.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2454	1094	63	2766	199	233
V/C Ratio(X)	1.26	0.27	0.62	0.61	0.79	0.03
Avail Cap(c_a), veh/h	2454	1094	171	2981	722	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	5.6	42.4	4.6	38.6	32.7
Incr Delay (d2), s/veh	121.9	0.1	3.7	0.3	6.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	56.6	1.4	0.9	3.0	3.7	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	136.2	5.7	46.0	4.9	45.3	32.8
LnGrp LOS	F	A	D	A	D	C
Approach Vol, veh/h	3395			1733	165	
Approach Delay, s/veh	124.8			5.8	44.7	
Approach LOS	F			A	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		14.3	7.7	67.0		74.7
Change Period (Y+Rc), s		4.5	4.6	6.5		6.5
Max Green Setting (Gmax), s		35.5	8.4	60.5		73.5
Max Q Clear Time (g_c+I1), s		9.5	3.9	62.5		20.4
Green Ext Time (p_c), s		0.5	0.0	0.0		18.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			83.4			
HCM 6th LOS			F			

Timings  
46: Dunlap Dr. & Nuevo Rd.

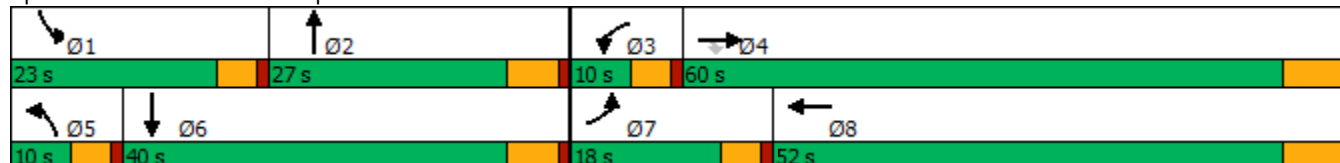


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	87	2046	9	375	1658	9	48	225	31
Future Volume (vph)	87	2046	9	375	1658	9	48	225	31
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.5	37.5	9.6	24.5	9.6	23.8	9.6	29.8
Total Split (s)	18.0	60.0	60.0	10.0	52.0	10.0	27.0	23.0	40.0
Total Split (%)	15.0%	50.0%	50.0%	8.3%	43.3%	8.3%	22.5%	19.2%	33.3%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6	6.5	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.4  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

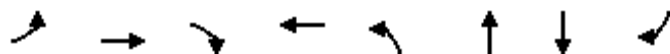


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	2046	9	375	1658	150	9	48	143	225	31	65
Future Volume (veh/h)	87	2046	9	375	1658	150	9	48	143	225	31	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	95	2224	8	408	1802	150	10	52	154	245	34	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	120	894	757	86	781	65	22	60	178	273	181	299
Arrive On Green	0.07	0.47	0.47	0.05	0.45	0.45	0.01	0.14	0.14	0.15	0.28	0.28
Sat Flow, veh/h	1810	1900	1610	1810	1730	144	1810	423	1252	1810	645	1062
Grp Volume(v), veh/h	95	2224	8	408	0	1952	10	0	206	245	0	90
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1874	1810	0	1675	1810	0	1707
Q Serve(g_s), s	5.9	53.5	0.3	5.4	0.0	51.4	0.6	0.0	13.7	15.1	0.0	4.6
Cycle Q Clear(g_c), s	5.9	53.5	0.3	5.4	0.0	51.4	0.6	0.0	13.7	15.1	0.0	4.6
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.75	1.00		0.62
Lane Grp Cap(c), veh/h	120	894	757	86	0	846	22	0	238	273	0	480
V/C Ratio(X)	0.79	2.49	0.01	4.75	0.00	2.31	0.46	0.00	0.86	0.90	0.00	0.19
Avail Cap(c_a), veh/h	213	894	757	86	0	846	86	0	312	293	0	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.3	30.1	16.0	54.2	0.0	31.2	55.8	0.0	47.7	47.4	0.0	31.0
Incr Delay (d2), s/veh	4.4	673.2	0.0	1713.3	0.0	591.6	5.7	0.0	17.5	25.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	188.6	0.1	43.2	0.0	159.6	0.3	0.0	6.7	8.5	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	703.4	16.0	1767.5	0.0	622.8	61.5	0.0	65.2	73.3	0.0	31.2
LnGrp LOS	E	F	B	F	A	F	E	A	E	E	A	C
Approach Vol, veh/h		2327			2360			216			335	
Approach Delay, s/veh		674.6			820.7			65.1			62.0	
Approach LOS		F			F			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.8	22.0	10.0	60.0	6.0	37.8	12.1	57.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	18.4	21.2	5.4	53.5	5.4	34.2	13.4	45.5				
Max Q Clear Time (g_c+I1), s	17.1	15.7	7.4	55.5	2.6	6.6	7.9	53.4				
Green Ext Time (p_c), s	0.1	0.5	0.0	0.0	0.0	0.4	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	676.1
HCM 6th LOS	F

Timings  
47: Ramona Expy & Rider St.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖↗	↕	↕	↗	
Traffic Volume (vph)	51	0	450	0	458	3076	3461	134	
Future Volume (vph)	51	0	450	0	458	3076	3461	134	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4						6
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	42.0	42.0	42.0	42.0	21.0	68.4	57.0	57.0	9.6
Total Split (%)	35.0%	35.0%	35.0%	35.0%	17.5%	57.0%	47.5%	47.5%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 47: Ramona Expy & Rider St.



HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↗		↖	↗	↗
Traffic Volume (veh/h)	51	0	450	0	0	1	458	3076	1	0	3461	134
Future Volume (veh/h)	51	0	450	0	0	1	458	3076	1	0	3461	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	54	0	363	0	0	1	487	3272	1	0	3682	117
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	423	0	400	0	0	401	523	2408	1	2	1657	738
Arrive On Green	0.25	0.00	0.25	0.00	0.00	0.25	0.15	0.65	0.65	0.00	0.46	0.46
Sat Flow, veh/h	1436	0	1606	0	0	1610	3510	3704	1	1810	3610	1608
Grp Volume(v), veh/h	54	0	363	0	0	1	487	1595	1678	0	3682	117
Grp Sat Flow(s),veh/h/ln	1436	0	1606	0	0	1610	1755	1805	1900	1810	1805	1608
Q Serve(g_s), s	3.2	0.0	24.1	0.0	0.0	0.1	15.1	71.5	71.5	0.0	50.5	4.7
Cycle Q Clear(g_c), s	3.3	0.0	24.1	0.0	0.0	0.1	15.1	71.5	71.5	0.0	50.5	4.7
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	423	0	400	0	0	401	523	1173	1235	2	1657	738
V/C Ratio(X)	0.13	0.00	0.91	0.00	0.00	0.00	0.93	1.36	1.36	0.00	2.22	0.16
Avail Cap(c_a), veh/h	554	0	546	0	0	548	523	1173	1235	82	1657	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	0.0	40.1	0.0	0.0	31.0	46.2	19.2	19.2	0.0	29.7	17.4
Incr Delay (d2), s/veh	0.1	0.0	15.3	0.0	0.0	0.0	23.1	167.1	166.9	0.0	551.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	10.9	0.0	0.0	0.0	7.9	76.9	80.9	0.0	146.2	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	0.0	55.4	0.0	0.0	31.0	69.3	186.4	186.2	0.0	581.4	17.4
LnGrp LOS	C	A	E	A	A	C	E	F	F	A	F	B
Approach Vol, veh/h		417			1			3760			3799	
Approach Delay, s/veh		52.4			31.0			171.1			564.0	
Approach LOS		D			C			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	78.0		32.0	21.0	57.0		32.0				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	61.9		37.4	16.4	50.5		37.4				
Max Q Clear Time (g_c+I1), s	0.0	73.5		26.1	17.1	52.5		2.1				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	352.0
HCM 6th LOS	F

Timings  
48: Antelope Rd. & Ramona Expy

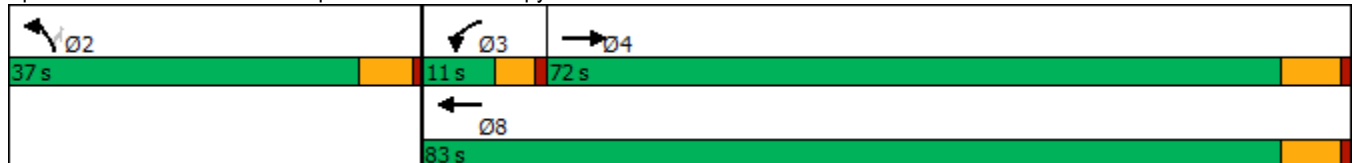


Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↵	↑↑	↵↵	↵
Traffic Volume (vph)	3410	247	2309	1412	294
Future Volume (vph)	3410	247	2309	1412	294
Turn Type	NA	Prot	NA	Prot	Perm
Protected Phases	4	3	8	2	
Permitted Phases					2
Detector Phase	4	3	8	2	2
Switch Phase					
Minimum Initial (s)	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	9.6	16.5	15.8	15.8
Total Split (s)	72.0	11.0	83.0	37.0	37.0
Total Split (%)	60.0%	9.2%	69.2%	30.8%	30.8%
Yellow Time (s)	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.6	6.5	5.8	5.8
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Max	None	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 48: Antelope Rd. & Ramona Expy



HCM 6th Signalized Intersection Summary  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



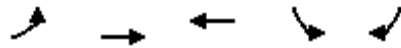
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	3410	631	247	2309	1412	294
Future Volume (veh/h)	3410	631	247	2309	1412	294
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3707	686	268	2510	1535	320
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1669	299	97	2301	913	419
Arrive On Green	0.55	0.55	0.05	0.64	0.26	0.26
Sat Flow, veh/h	3153	548	1810	3705	3510	1610
Grp Volume(v), veh/h	2140	2253	268	2510	1535	320
Grp Sat Flow(s),veh/h/ln	1805	1801	1810	1805	1755	1610
Q Serve(g_s), s	65.5	65.5	6.4	76.5	31.2	22.0
Cycle Q Clear(g_c), s	65.5	65.5	6.4	76.5	31.2	22.0
Prop In Lane		0.30	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	985	983	97	2301	913	419
V/C Ratio(X)	2.17	2.29	2.78	1.09	1.68	0.76
Avail Cap(c_a), veh/h	985	983	97	2301	913	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	27.3	56.8	21.7	44.4	41.0
Incr Delay (d2), s/veh	530.9	584.3	827.8	48.7	311.6	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	169.4	183.7	25.0	41.2	52.5	9.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	558.1	611.6	884.6	70.4	356.0	49.2
LnGrp LOS	F	F	F	F	F	D
Approach Vol, veh/h	4393			2778	1855	
Approach Delay, s/veh	585.5			149.0	303.1	
Approach LOS	F			F	F	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		37.0	11.0	72.0		83.0
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		31.2	6.4	65.5		76.5
Max Q Clear Time (g_c+I1), s		33.2	8.4	67.5		78.5
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			393.1			
HCM 6th LOS			F			



Timings

51: Nuevo Rd. & Antelope Rd.

01/25/2021

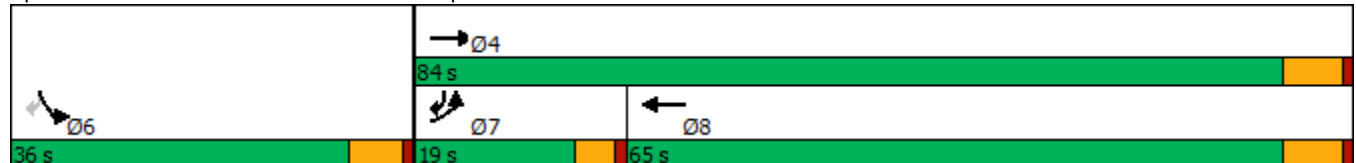


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↗	↔	↖	↗
Traffic Volume (vph)	321	1735	1120	490	707
Future Volume (vph)	321	1735	1120	490	707
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	19.0	84.0	65.0	36.0	19.0
Total Split (%)	15.8%	70.0%	54.2%	30.0%	15.8%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated

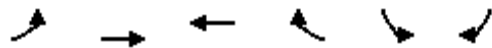
Splits and Phases: 51: Nuevo Rd. & Antelope Rd.



HCM 6th Signalized Intersection Summary  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↶	↷	↶		↶	↷	
Traffic Volume (veh/h)	321	1735	1120	233	490	707	
Future Volume (veh/h)	321	1735	1120	233	490	707	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	349	1886	1217	253	533	768	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	217	1227	744	155	455	598	
Arrive On Green	0.12	0.65	0.49	0.49	0.25	0.25	
Sat Flow, veh/h	1810	1900	1526	317	1810	1610	
Grp Volume(v), veh/h	349	1886	0	1470	533	768	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1843	1810	1610	
Q Serve(g_s), s	14.4	77.5	0.0	58.5	30.2	30.2	
Cycle Q Clear(g_c), s	14.4	77.5	0.0	58.5	30.2	30.2	
Prop In Lane	1.00			0.17	1.00	1.00	
Lane Grp Cap(c), veh/h	217	1227	0	898	455	598	
V/C Ratio(X)	1.61	1.54	0.00	1.64	1.17	1.28	
Avail Cap(c_a), veh/h	217	1227	0	898	455	598	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	52.8	21.2	0.0	30.8	44.9	37.7	
Incr Delay (d2), s/veh	293.7	245.8	0.0	291.4	97.9	139.9	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	24.0	111.6	0.0	96.0	25.4	55.7	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	346.5	267.0	0.0	322.1	142.8	177.6	
LnGrp LOS	F	F	A	F	F	F	
Approach Vol, veh/h		2235	1470		1301		
Approach Delay, s/veh		279.4	322.1		163.4		
Approach LOS		F	F		F		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				84.0	36.0	19.0	65.0
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				77.5	30.2	14.4	58.5
Max Q Clear Time (g_c+I1), s				79.5	32.2	16.4	60.5
Green Ext Time (p_c), s				0.0	0.0	0.0	0.0
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			261.8				
HCM 6th LOS			F				

Intersection						
Int Delay, s/veh	51.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	307	458	266	65	74	281
Future Vol, veh/h	307	458	266	65	74	281
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	330	492	286	70	80	302

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	356	0	-	0	1473 321
Stage 1	-	-	-	-	321 -
Stage 2	-	-	-	-	1152 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1214	-	-	-	141 724
Stage 1	-	-	-	-	740 -
Stage 2	-	-	-	-	304 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1214	-	-	-	88 724
Mov Cap-2 Maneuver	-	-	-	-	88 -
Stage 1	-	-	-	-	463 -
Stage 2	-	-	-	-	304 -

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	202
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1214	-	-	-	289
HCM Lane V/C Ratio	0.272	-	-	-	1.321
HCM Control Delay (s)	9.1	0	-	-	202
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	1.1	-	-	-	19.1

Intersection						
Int Delay, s/veh	183.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	105	765	548	228	226	32
Future Vol, veh/h	105	765	548	228	226	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	114	832	596	248	246	35

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	844	0	-	0	1780 720
Stage 1	-	-	-	-	720 -
Stage 2	-	-	-	-	1060 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	801	-	-	-	~ 91 431
Stage 1	-	-	-	-	486 -
Stage 2	-	-	-	-	336 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	801	-	-	-	~ 67 431
Mov Cap-2 Maneuver	-	-	-	-	~ 67 -
Stage 1	-	-	-	-	357 -
Stage 2	-	-	-	-	336 -

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	\$ 1348
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	801	-	-	-	75
HCM Lane V/C Ratio	0.142	-	-	-	3.739
HCM Control Delay (s)	10.2	0	-	-	-\$ 1348
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	29.3

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection						
Int Delay, s/veh	71.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	460	755	542	50	118	220
Future Vol, veh/h	460	755	542	50	118	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	495	812	583	54	127	237

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	637	0	-	0	2412 610
Stage 1	-	-	-	-	610 -
Stage 2	-	-	-	-	1802 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	956	-	-	-	~ 37 498
Stage 1	-	-	-	-	546 -
Stage 2	-	-	-	-	146 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	956	-	-	-	~ 18 498
Mov Cap-2 Maneuver	-	-	-	-	~ 93 -
Stage 1	-	-	-	-	263 -
Stage 2	-	-	-	-	146 -

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	\$ 435.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	956	-	-	-	198
HCM Lane V/C Ratio	0.517	-	-	-	1.836
HCM Control Delay (s)	12.7	-	-	-	\$ 435.6
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	3.1	-	-	-	25.9

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings

71: Redlands Av. & San Jacinto Av.

01/25/2021

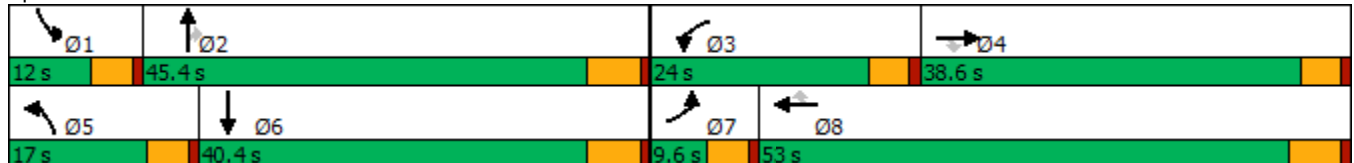


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↑	↖	↖↗	↑	↖	↖	↑↑	↖	↖	↑↗
Traffic Volume (vph)	51	94	105	446	89	38	131	634	627	125	544
Future Volume (vph)	51	94	105	446	89	38	131	634	627	125	544
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.6	38.6	9.6	35.8	35.8	9.6	35.8	35.8	9.6	35.8
Total Split (s)	9.6	38.6	38.6	24.0	53.0	53.0	17.0	45.4	45.4	12.0	40.4
Total Split (%)	8.0%	32.2%	32.2%	20.0%	44.2%	44.2%	14.2%	37.8%	37.8%	10.0%	33.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 85.1  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated





























Splits and Phases: 71: Redlands Av. & San Jacinto Av.



HCM 6th Signalized Intersection Summary  
71: Redlands Av. & San Jacinto Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	51	94	105	446	89	38	131	634	627	125	544	41
Future Volume (veh/h)	51	94	105	446	89	38	131	634	627	125	544	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	101	53	480	96	28	141	682	460	134	585	31
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	155	237	201	578	466	390	177	1294	565	167	1232	65
Arrive On Green	0.04	0.12	0.12	0.16	0.25	0.25	0.10	0.36	0.36	0.09	0.35	0.35
Sat Flow, veh/h	3510	1900	1610	3510	1900	1589	1810	3610	1576	1810	3487	185
Grp Volume(v), veh/h	55	101	53	480	96	28	141	682	460	134	302	314
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1755	1900	1589	1810	1805	1576	1810	1805	1867
Q Serve(g_s), s	1.2	3.9	2.4	10.6	3.2	1.1	6.1	12.0	21.2	5.8	10.4	10.5
Cycle Q Clear(g_c), s	1.2	3.9	2.4	10.6	3.2	1.1	6.1	12.0	21.2	5.8	10.4	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	155	237	201	578	466	390	177	1294	565	167	638	660
V/C Ratio(X)	0.36	0.43	0.26	0.83	0.21	0.07	0.80	0.53	0.81	0.80	0.47	0.48
Avail Cap(c_a), veh/h	219	807	684	850	1120	937	280	1785	780	167	780	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	32.4	31.7	32.4	24.0	23.2	35.4	20.3	23.3	35.6	20.1	20.1
Incr Delay (d2), s/veh	0.5	1.2	0.7	2.9	0.2	0.1	3.4	0.3	4.7	22.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.9	0.9	4.4	1.4	0.4	2.7	4.6	7.7	3.4	4.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	33.6	32.4	35.3	24.2	23.3	38.7	20.7	28.0	57.7	20.7	20.7
LnGrp LOS	D	C	C	D	C	C	D	C	C	E	C	C
Approach Vol, veh/h		209			604			1283			750	
Approach Delay, s/veh		34.4			33.0			25.3			27.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	34.5	17.8	15.8	12.4	34.1	8.1	25.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	* 5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	39.6	19.4	* 34	12.4	34.6	5.0	47.2				
Max Q Clear Time (g_c+I1), s	7.8	23.2	12.6	5.9	8.1	12.5	3.2	5.2				
Green Ext Time (p_c), s	0.0	5.5	0.6	0.7	0.1	3.3	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

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

Timings  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	516	3	623	244	769	960	135
Future Volume (vph)	516	3	623	244	769	960	135
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8	8		5	2	6	
Permitted Phases			8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	9.5	11.0	31.0	31.0
Total Split (s)	19.0	19.0	19.0	9.5	41.0	31.5	31.5
Total Split (%)	31.7%	31.7%	31.7%	15.8%	68.3%	52.5%	52.5%
Yellow Time (s)	5.0	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	Min	Min	Min

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 51.8

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 72: Redlands Av. & I-215 NB Ramps





HCM 6th Signalized Intersection Summary  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↔	↗	↖↗	↕			↑↑↑	↗
Traffic Volume (veh/h)	0	0	0	516	3	623	244	769	0	0	960	135
Future Volume (veh/h)	0	0	0	516	3	623	244	769	0	0	960	135
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				689	0	273	265	836	0	0	1043	114
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				872	0	388	366	1838	0	0	2035	495
Arrive On Green				0.24	0.00	0.24	0.10	0.51	0.00	0.00	0.31	0.31
Sat Flow, veh/h				3619	0	1610	3510	3705	0	0	6802	1590
Grp Volume(v), veh/h				689	0	273	265	836	0	0	1043	114
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1755	1805	0	0	1634	1590
Q Serve(g_s), s				8.6	0.0	7.4	3.5	7.1	0.0	0.0	6.3	2.6
Cycle Q Clear(g_c), s				8.6	0.0	7.4	3.5	7.1	0.0	0.0	6.3	2.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				872	0	388	366	1838	0	0	2035	495
V/C Ratio(X)				0.79	0.00	0.70	0.72	0.45	0.00	0.00	0.51	0.23
Avail Cap(c_a), veh/h				980	0	436	366	2631	0	0	3471	844
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.1	0.0	16.7	20.8	7.5	0.0	0.0	13.5	12.3
Incr Delay (d2), s/veh				4.0	0.0	4.4	7.0	0.2	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.3	0.0	2.6	1.6	1.9	0.0	0.0	1.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				21.1	0.0	21.1	27.8	7.7	0.0	0.0	13.7	12.5
LnGrp LOS				C	A	C	C	A	A	A	B	B
Approach Vol, veh/h					962			1101			1157	
Approach Delay, s/veh					21.1			12.5			13.6	
Approach LOS					C			B			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		30.5			9.5	21.0		17.6				
Change Period (Y+Rc), s		6.0			4.5	6.0		6.0				
Max Green Setting (Gmax), s		35.0			5.0	25.5		13.0				
Max Q Clear Time (g_c+I1), s		9.1			5.5	8.3		10.6				
Green Ext Time (p_c), s		6.2			0.0	6.7		1.0				

Intersection Summary

HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	221	3	255	793	572	531	945
Future Volume (vph)	221	3	255	793	572	531	945
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	11.0	11.0	9.5	33.0
Total Split (s)	19.0	19.0	19.0	23.0	23.0	18.0	41.0
Total Split (%)	31.7%	31.7%	31.7%	38.3%	38.3%	30.0%	68.3%
Yellow Time (s)	4.5	4.5	4.5	5.0	5.0	3.5	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	6.0	6.0	4.5	6.0
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	None	Min

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 55

Natural Cycle: 45

Control Type: Actuated-Uncoordinated





















Splits and Phases: 73: Redlands Av. & I-215 SB Ramps



HCM 6th Signalized Intersection Summary  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	3	255	0	0	0	0	793	572	531	945	0
Future Volume (veh/h)	221	3	255	0	0	0	0	793	572	531	945	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	274	0	86				0	835	473	559	995	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	477	0	212				0	1924	823	756	2204	0
Arrive On Green	0.13	0.00	0.13				0.00	0.29	0.29	0.22	0.61	0.00
Sat Flow, veh/h	3619	0	1610				0	6802	2796	3510	3705	0
Grp Volume(v), veh/h	274	0	86				0	835	473	559	995	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1634	1398	1755	1805	0
Q Serve(g_s), s	3.2	0.0	2.2				0.0	4.6	6.4	6.6	6.6	0.0
Cycle Q Clear(g_c), s	3.2	0.0	2.2				0.0	4.6	6.4	6.6	6.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	477	0	212				0	1924	823	756	2204	0
V/C Ratio(X)	0.57	0.00	0.41				0.00	0.43	0.57	0.74	0.45	0.00
Avail Cap(c_a), veh/h	1094	0	487				0	2488	1064	1061	2830	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.2	0.0	17.8				0.0	12.7	13.4	16.3	4.7	0.0
Incr Delay (d2), s/veh	1.1	0.0	1.2				0.0	0.2	0.6	1.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.7				0.0	1.4	1.7	2.4	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	0.0	19.0				0.0	12.9	14.0	18.1	4.8	0.0
LnGrp LOS	B	A	B				A	B	B	B	A	A
Approach Vol, veh/h		360						1308			1554	
Approach Delay, s/veh		19.2						13.3			9.6	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	14.1	19.1	11.4	33.3								
Change Period (Y+Rc), s	4.5	6.0	5.5	6.0								
Max Green Setting (Gmax), s	13.5	17.0	13.5	35.0								
Max Q Clear Time (g_c+I1), s	8.6	8.4	5.2	8.6								
Green Ext Time (p_c), s	1.0	4.7	0.8	7.7								

Intersection Summary

HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

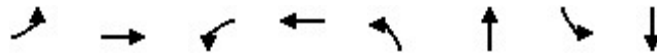
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022

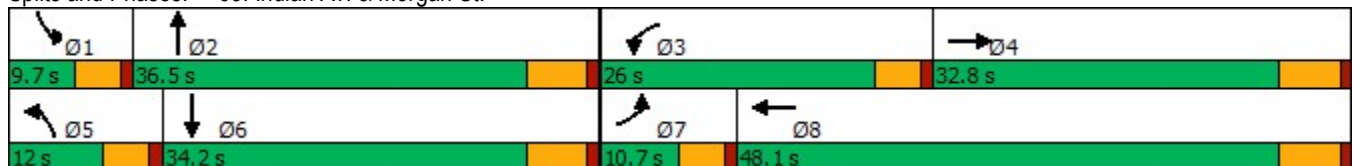


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↘	↕	↘	↕	↘	↕
Traffic Volume (vph)	26	114	407	44	126	409	28	368
Future Volume (vph)	26	114	407	44	126	409	28	368
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	32.8
Total Split (s)	10.7	32.8	26.0	48.1	12.0	36.5	9.7	34.2
Total Split (%)	10.2%	31.2%	24.8%	45.8%	11.4%	34.8%	9.2%	32.6%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max
Act Effct Green (s)	5.7	13.1	21.5	27.5	7.4	34.9	5.1	28.5
Actuated g/C Ratio	0.06	0.14	0.23	0.30	0.08	0.38	0.06	0.31
v/c Ratio	0.29	0.44	1.19	0.07	1.07	0.53	0.35	0.44
Control Delay	49.6	21.5	138.5	15.9	136.4	23.4	53.5	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	21.5	138.5	15.9	136.4	23.4	53.5	27.0
LOS	D	C	F	B	F	C	D	C
Approach Delay		24.7		122.6		43.5		28.8
Approach LOS		C		F		D		C

Intersection Summary

Cycle Length: 105  
 Actuated Cycle Length: 91.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.19  
 Intersection Signal Delay: 57.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 69.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

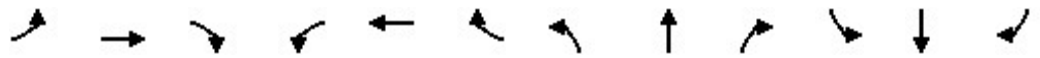
Splits and Phases: 68: Indian Av. & Morgan St.



HCM 6th Signalized Intersection Summary  
74: Indian Av. & Morgan St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	26	114	90	407	44	17	126	409	174	28	368	35
Future Volume (veh/h)	26	114	90	407	44	17	126	409	174	28	368	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	32	141	68	502	54	16	156	505	208	35	454	37
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	272	125	440	903	256	152	935	383	59	1092	89
Arrive On Green	0.03	0.11	0.11	0.24	0.33	0.33	0.08	0.37	0.37	0.03	0.32	0.32
Sat Flow, veh/h	1810	2403	1103	1810	2775	788	1810	2497	1023	1810	3381	275
Grp Volume(v), veh/h	32	104	105	502	34	36	156	364	349	35	242	249
Grp Sat Flow(s),veh/h/ln	1810	1805	1701	1810	1805	1758	1810	1805	1716	1810	1805	1851
Q Serve(g_s), s	1.5	4.8	5.1	21.4	1.1	1.2	7.4	13.9	14.0	1.7	9.2	9.3
Cycle Q Clear(g_c), s	1.5	4.8	5.1	21.4	1.1	1.2	7.4	13.9	14.0	1.7	9.2	9.3
Prop In Lane	1.00		0.65	1.00		0.45	1.00		0.60	1.00		0.15
Lane Grp Cap(c), veh/h	56	204	192	440	588	572	152	676	642	59	583	598
V/C Ratio(X)	0.57	0.51	0.55	1.14	0.06	0.06	1.02	0.54	0.54	0.59	0.41	0.42
Avail Cap(c_a), veh/h	126	554	522	440	868	846	152	676	642	105	583	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	36.7	36.9	33.3	20.4	20.4	40.3	21.6	21.6	42.0	23.3	23.3
Incr Delay (d2), s/veh	3.4	2.0	2.4	87.1	0.0	0.0	79.5	0.9	0.9	3.5	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.1	2.2	19.3	0.5	0.5	6.5	5.5	5.3	0.8	3.8	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	38.7	39.3	120.4	20.4	20.5	119.8	22.4	22.5	45.4	25.4	25.4
LnGrp LOS	D	D	D	F	C	C	F	C	C	D	C	C
Approach Vol, veh/h		241			572			869			526	
Approach Delay, s/veh		39.8			108.1			39.9			26.8	
Approach LOS		D			F			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	38.7	26.0	15.7	12.0	34.2	7.3	34.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.1	30.7	21.4	27.0	7.4	28.4	6.1	42.3				
Max Q Clear Time (g_c+I1), s	3.7	16.0	23.4	7.1	9.4	11.3	3.5	3.2				
Green Ext Time (p_c), s	0.0	3.5	0.0	1.0	0.0	2.2	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			54.5									
HCM 6th LOS			D									

Timings  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	35	230	28	52	48	129	7	442	85	714	6
Future Volume (vph)	35	230	28	52	48	129	7	442	85	714	6
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	32.8	9.6	32.8	32.8
Total Split (s)	9.6	32.8	32.8	9.6	32.8	32.8	9.6	33.0	9.6	33.0	33.0
Total Split (%)	11.3%	38.6%	38.6%	11.3%	38.6%	38.6%	11.3%	38.8%	11.3%	38.8%	38.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.3	13.1	13.1	5.3	15.1	15.1	5.3	15.7	5.3	24.7	24.7
Actuated g/C Ratio	0.09	0.23	0.23	0.09	0.27	0.27	0.09	0.28	0.09	0.44	0.44
v/c Ratio	0.25	0.33	0.07	0.36	0.06	0.28	0.05	0.57	0.59	0.54	0.01
Control Delay	34.3	20.7	0.2	37.9	18.0	5.8	32.1	20.6	47.8	15.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.3	20.7	0.2	37.9	18.0	5.8	32.1	20.6	47.8	15.9	0.0
LOS	C	C	A	D	B	A	C	C	D	B	A
Approach Delay		20.4			15.6			20.8		19.2	
Approach LOS		C			B			C		B	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 56.6

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 19.4

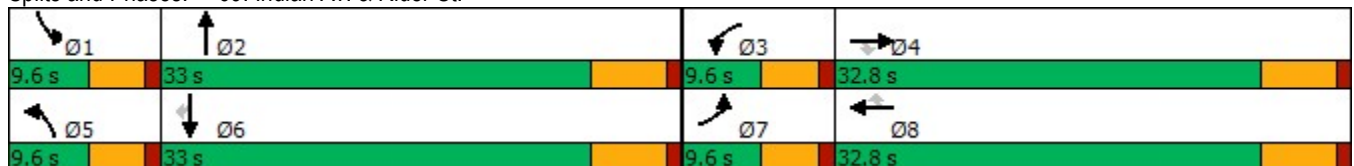
Intersection LOS: B

Intersection Capacity Utilization 53.7%

ICU Level of Service A

Analysis Period (min) 15

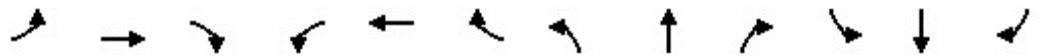
Splits and Phases: 69: Indian Av. & Rider St.



HCM 6th Signalized Intersection Summary  
75: Indian Av. & Rider St.

Stoneridge Commerce Center SP (JN 13265)

02/18/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	230	28	52	48	129	7	442	37	85	714	6
Future Volume (veh/h)	35	230	28	52	48	129	7	442	37	85	714	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	274	28	62	57	103	8	526	27	101	850	5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	693	309	103	741	331	19	948	49	134	1210	540
Arrive On Green	0.04	0.19	0.19	0.06	0.21	0.21	0.01	0.27	0.27	0.07	0.34	0.34
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3494	179	1810	3610	1610
Grp Volume(v), veh/h	42	274	28	62	57	103	8	271	282	101	850	5
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1868	1810	1805	1610
Q Serve(g_s), s	1.2	3.4	0.7	1.7	0.7	2.8	0.2	6.6	6.6	2.8	10.5	0.1
Cycle Q Clear(g_c), s	1.2	3.4	0.7	1.7	0.7	2.8	0.2	6.6	6.6	2.8	10.5	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	79	693	309	103	741	331	19	490	507	134	1210	540
V/C Ratio(X)	0.53	0.40	0.09	0.60	0.08	0.31	0.42	0.55	0.56	0.75	0.70	0.01
Avail Cap(c_a), veh/h	176	1898	846	176	1898	846	176	956	989	176	1912	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	18.1	17.1	23.6	16.5	17.3	25.3	16.0	16.1	23.3	14.8	11.4
Incr Delay (d2), s/veh	2.0	0.4	0.1	2.1	0.0	0.5	5.4	1.0	1.0	8.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	0.2	0.7	0.2	0.9	0.1	2.3	2.4	1.3	3.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	18.5	17.2	25.7	16.5	17.9	30.7	17.0	17.0	31.4	15.6	11.4
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		344			222			561			956	
Approach Delay, s/veh		19.3			19.7			17.2			17.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	19.7	7.5	15.7	5.1	23.0	6.9	16.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	27.2	5.0	27.0	5.0	27.2	5.0	27.0				
Max Q Clear Time (g_c+I1), s	4.8	8.6	3.7	5.4	2.2	12.5	3.2	4.8				
Green Ext Time (p_c), s	0.0	2.8	0.0	1.6	0.0	4.7	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.8								
HCM 6th LOS				B								

**ATTACHMENT R**  
**HORIZON YEAR (2040) WITHOUT MCP WITH PROJECT TRAFFIC SIGNAL WARRANT**  
**ANALYSIS WORKSHEETS**





### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2040 With Project (No MCP) Conditions - Weekday PM Peak Hour**

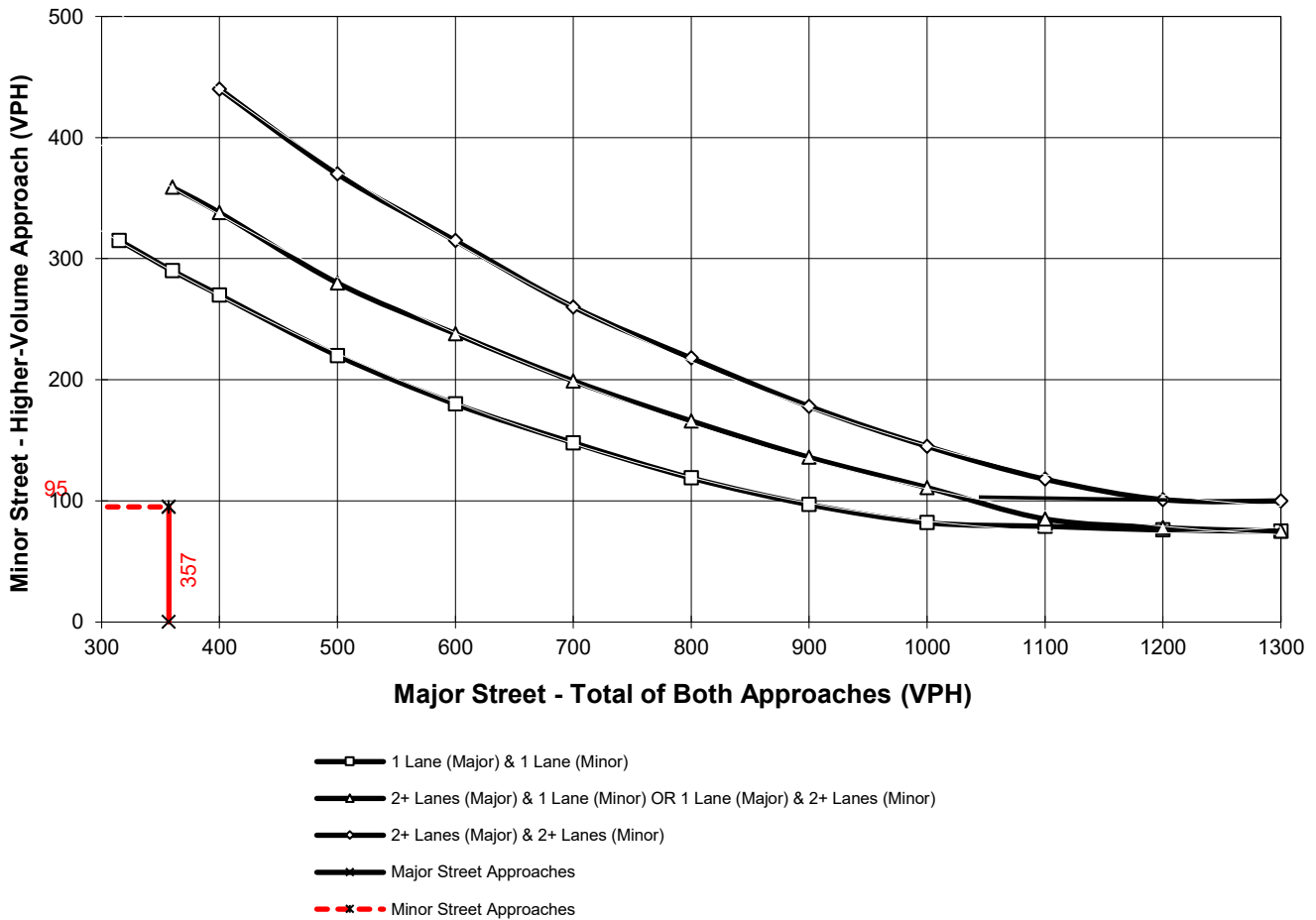
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **357**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Morgan St.**

High Volume Approach (VPH) = **95**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>2040 WP</u>
Jurisdiction: <u>County of Riverside</u>				<u>CS</u>		<u>DATE 01/25/21</u>
Major Street: <u>San Jacinto Av.</u>				<u>CS</u>		<u>DATE 01/25/21</u>
Minor Street: <u>Evans Rd.</u>					Critical Approach Speed (Major) <u>45 mph</u>	
					Critical Approach Speed (Minor) <u>25 mph</u>	

Major Street Approach Lanes = <u>2</u> lane	Minor Street Approach Lanes: <u>1</u> lane
Major Street Future ADT = <u>13,617</u> vpd	Minor Street Future ADT = <u>11,665</u> vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....  or  **RURAL (R)**

In built up area of isolated community of < 10,000 population .....

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	<u>Minimum Requirements</u>			
<b>CONDITION A - Minimum Vehicular Volume</b>		<b>EADT</b>			
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)</u>	
<b>XX</b>		<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<u>Number of lanes for moving traffic on each approach</u>	<u>Number of lanes for moving traffic on each approach</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	8,000	5,600	2,400	1,680
<u>2 + 13,617</u>	<u>1 11,665</u>	9,600	6,720 *	2,400	1,680 *
<u>2 +</u>	<u>2 +</u>	9,600	6,720	3,200	2,240
<u>1</u>	<u>2 +</u>	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		<u>Vehicles Per Day on Major Street</u>		<u>Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>(Total of Both Approaches)</u>		<u>(One Direction Only)</u>	
<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Number of lanes for moving traffic on each approach</u>	<u>Number of lanes for moving traffic on each approach</u>				
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	12,000	8,400	1,200	850
<u>2 + 13,617</u>	<u>1 11,665</u>	14,400	10,080 *	1,200	850 *
<u>2 +</u>	<u>2 +</u>	14,400	10,080	1,600	1,120
<u>1</u>	<u>2 +</u>	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		<u>2 CONDITIONS</u>		<u>2 CONDITIONS</u>	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
<b>XX</b>					
No one condition satisfied, but following conditions fulfilled 80% of more .....					
	<u>A</u>				
	<b>100%</b>				
	<u>B</u>				
	<b>100%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

**ATTACHMENT S**  
**HORIZON YEAR (2040) WITHOUT MCP WITH PROJECT OFF-RAMP QUEUING ANALYSIS**  
**WORKSHEETS**



Queues  
72: Redlands Av. & I-215 NB Ramps

Stoneridge Commerce Center SP (JN 13265)

05/12/2021



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	293	286	271	187	548	930	243
v/c Ratio	0.70	0.64	0.47	0.40	0.30	0.42	0.35
Control Delay	32.2	22.2	6.4	25.0	7.1	13.5	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	22.2	6.4	25.0	7.1	13.5	3.5
Queue Length 50th (ft)	84	54	0	26	42	63	0
Queue Length 95th (ft)	#232	#184	53	59	62	83	33
Internal Link Dist (ft)		1091			342	726	
Turn Bay Length (ft)			400				
Base Capacity (vph)	438	466	593	484	2685	3480	973
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.61	0.46	0.39	0.20	0.27	0.25

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

## Queues

## Stoneridge Commerce Center SP (JN 13265)

## 73: Redlands Av. &amp; I-215 SB Ramps

05/12/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	143	136	134	532	363	484	808
v/c Ratio	0.42	0.33	0.32	0.32	0.37	0.52	0.33
Control Delay	23.7	7.3	7.1	16.3	3.7	18.6	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	7.3	7.1	16.3	3.7	18.6	5.7
Queue Length 50th (ft)	38	0	0	36	0	63	56
Queue Length 95th (ft)	95	41	38	64	29	111	93
Internal Link Dist (ft)		1091		422			342
Turn Bay Length (ft)			130		200		
Base Capacity (vph)	459	503	510	2283	1229	1427	2793
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.27	0.26	0.23	0.30	0.34	0.29

## Intersection Summary

Queues

72: Redlands Av. & I-215 NB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	432	410	399	265	836	1043	147
v/c Ratio	1.00	0.81	0.78	0.78	0.45	0.49	0.24
Control Delay	68.6	28.1	25.3	43.8	8.6	14.4	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.6	28.1	25.3	43.8	8.6	14.4	3.6
Queue Length 50th (ft)	134	72	64	41	75	71	0
Queue Length 95th (ft)	#357	#262	#237	#110	107	94	27
Internal Link Dist (ft)		1091			342	726	
Turn Bay Length (ft)			400				
Base Capacity (vph)	434	506	511	340	2458	3243	865
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.81	0.78	0.78	0.34	0.32	0.17

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues  
73: Redlands Av. & I-215 SB Ramps

Stoneridge Commerce Center SP (JN 13265)

05/12/2021



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	175	168	161	835	602	559	995
v/c Ratio	0.53	0.44	0.40	0.44	0.49	0.71	0.46
Control Delay	27.0	12.8	9.3	17.3	3.3	26.1	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	12.8	9.3	17.3	3.3	26.1	7.3
Queue Length 50th (ft)	57	19	7	66	0	90	82
Queue Length 95th (ft)	112	68	51	97	35	143	134
Internal Link Dist (ft)		1091		422			342
Turn Bay Length (ft)			130		200		
Base Capacity (vph)	427	462	484	2050	1292	872	2331
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.36	0.33	0.41	0.47	0.64	0.43
<b>Intersection Summary</b>							

**ATTACHMENT T**  
**HORIZON YEAR (2040) WITHOUT MCP WITH PROJECT FREEWAY FACILITY ANALYSIS**  
**WORKSHEETS**





# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (Without MCP) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 SB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	N of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1850	3
4	Merge	Basic	On-Ramp	1500	4
5	Basic	Basic	S of Redlands	5280	4

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		5785		7161		0.81		63.1		30.6		D

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.909	5730	399	7200	2100	0.80	0.19	64.5	60.6	29.6	31.5	D

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		5349		7161		0.75		65.3		27.3		D

### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.909	6211	862	9600	2100	0.56	0.41	69.8	-	19.2	-	C

### Segment 5: Basic

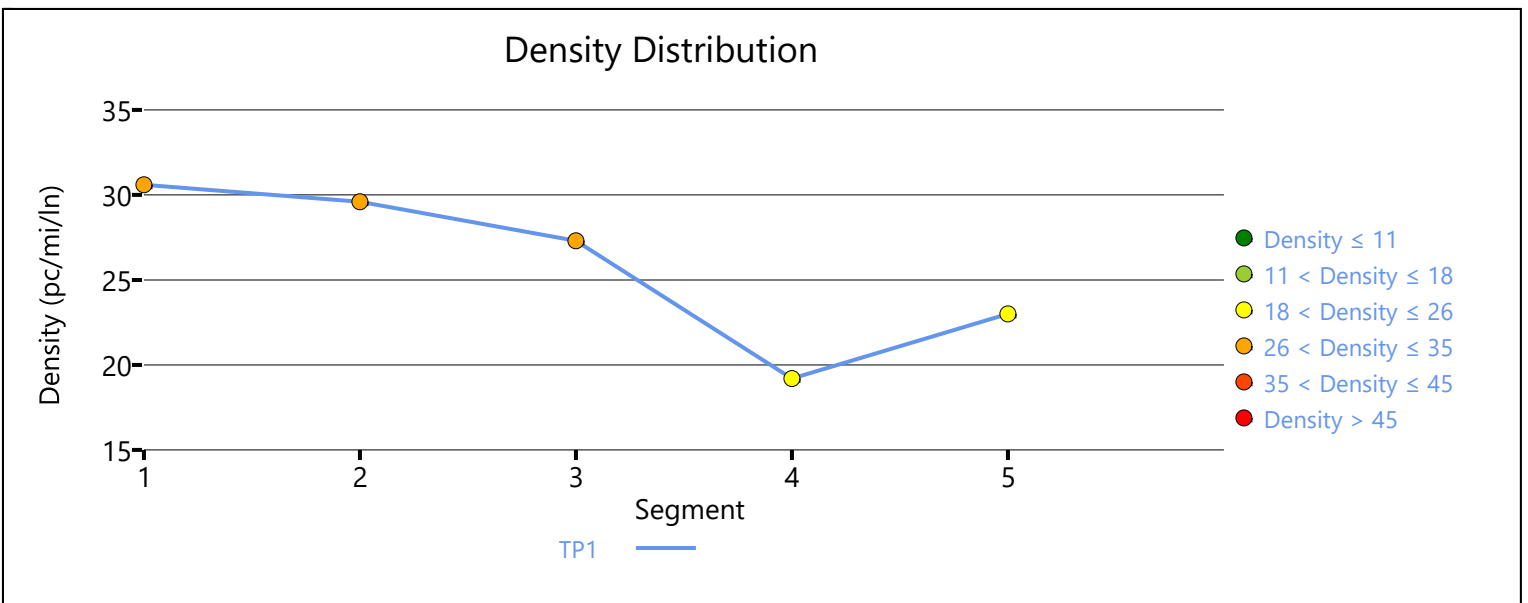
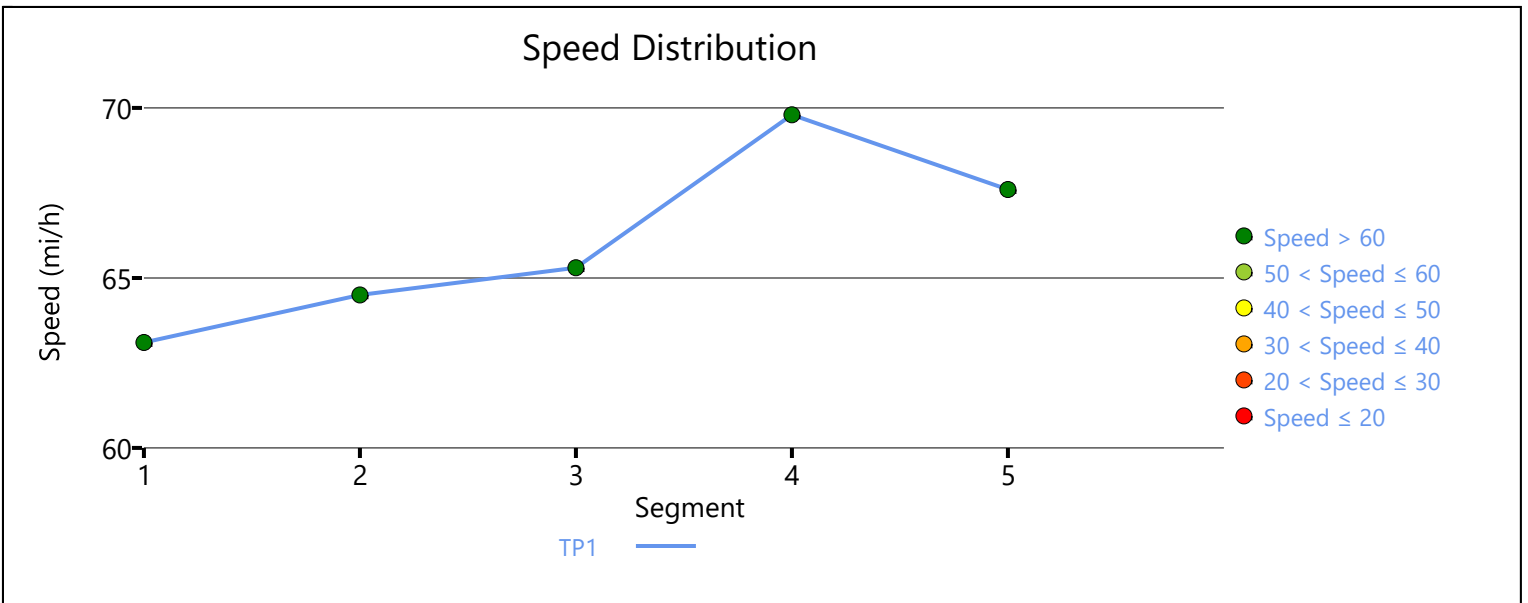
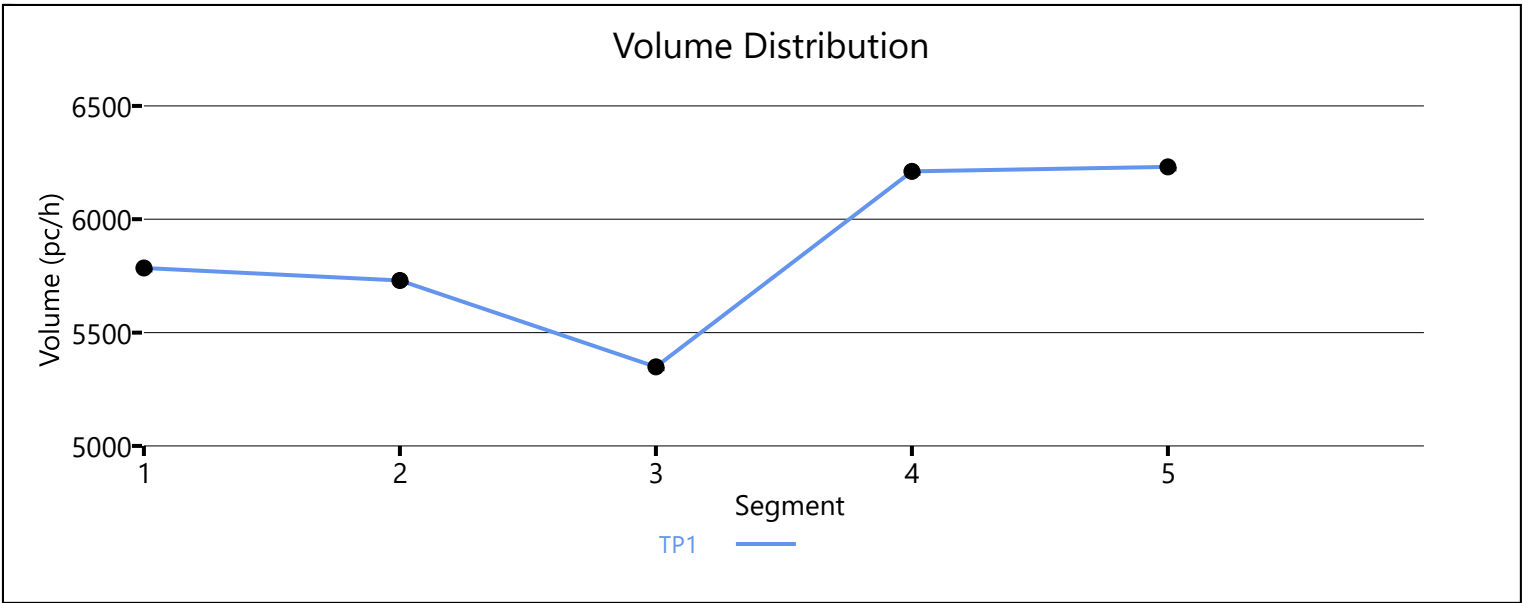
Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		6231		9548		0.65		67.6		23.0		C

**Facility Time Period Results**

<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	65.7	25.9	24.5	2.7	C

**Facility Overall Results**

Space Mean Speed, mi/h	65.7	Density, veh/mi/ln	24.5
Average Travel Time, min	2.7	Density, pc/mi/ln	25.9



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (Without MCP) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 NB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	S of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1675	3
4	Merge	Merge	On-Ramp	1500	3
5	Basic	Basic	N of Redlands	5280	3

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.917		7015		7161		0.98		54.4		43.0		E

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.794	7015	841	7200	2100	0.97	0.40	63.2	59.5	37.0	38.2	E

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		6114		7161		0.85		61.2		33.3		D

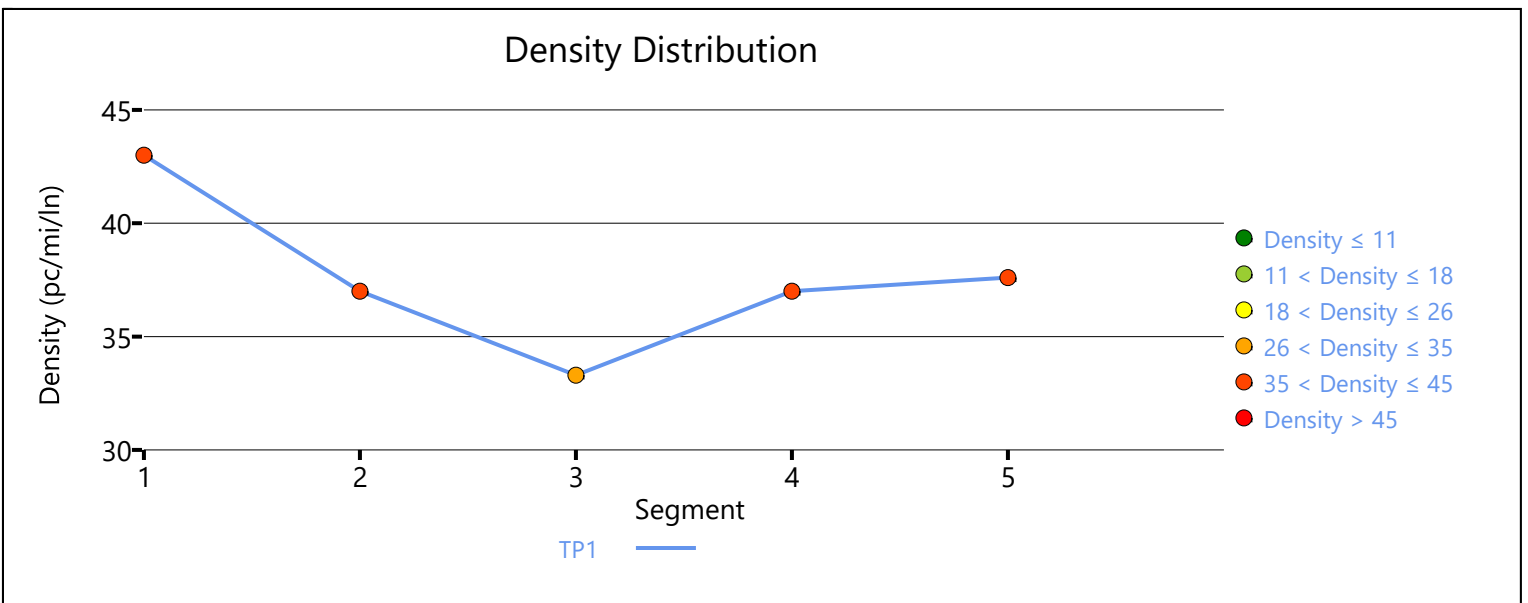
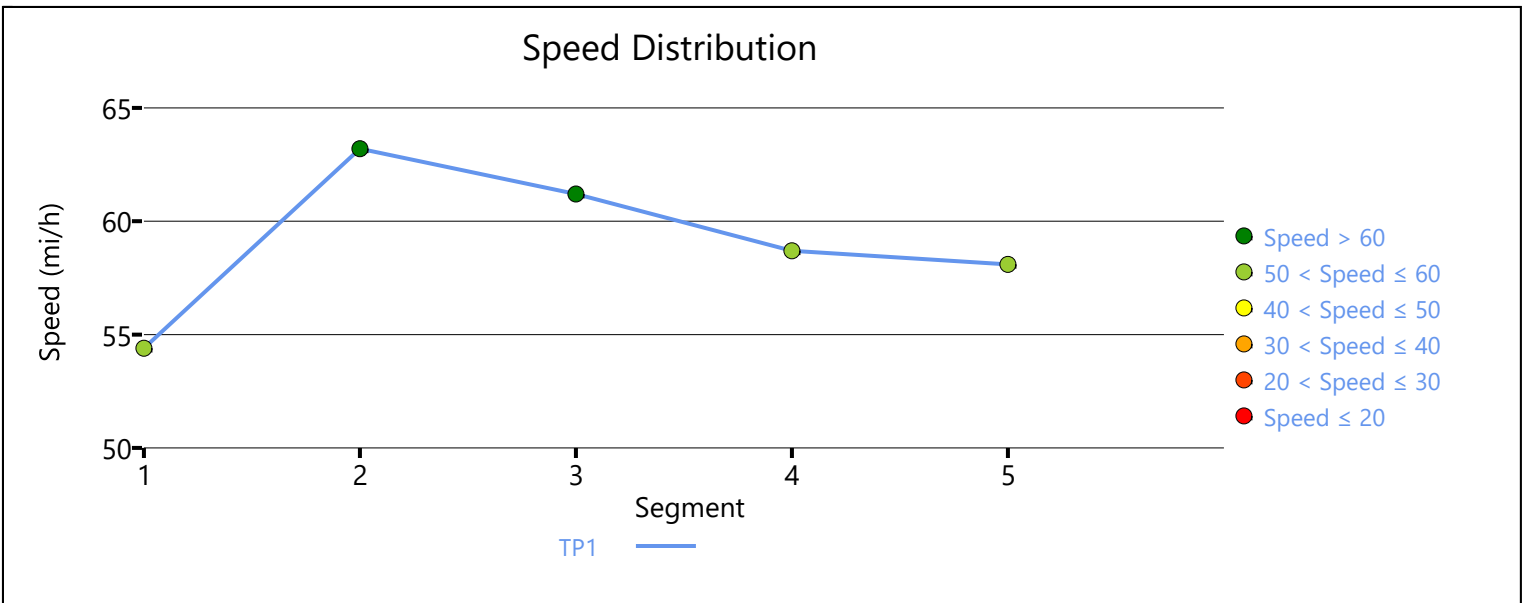
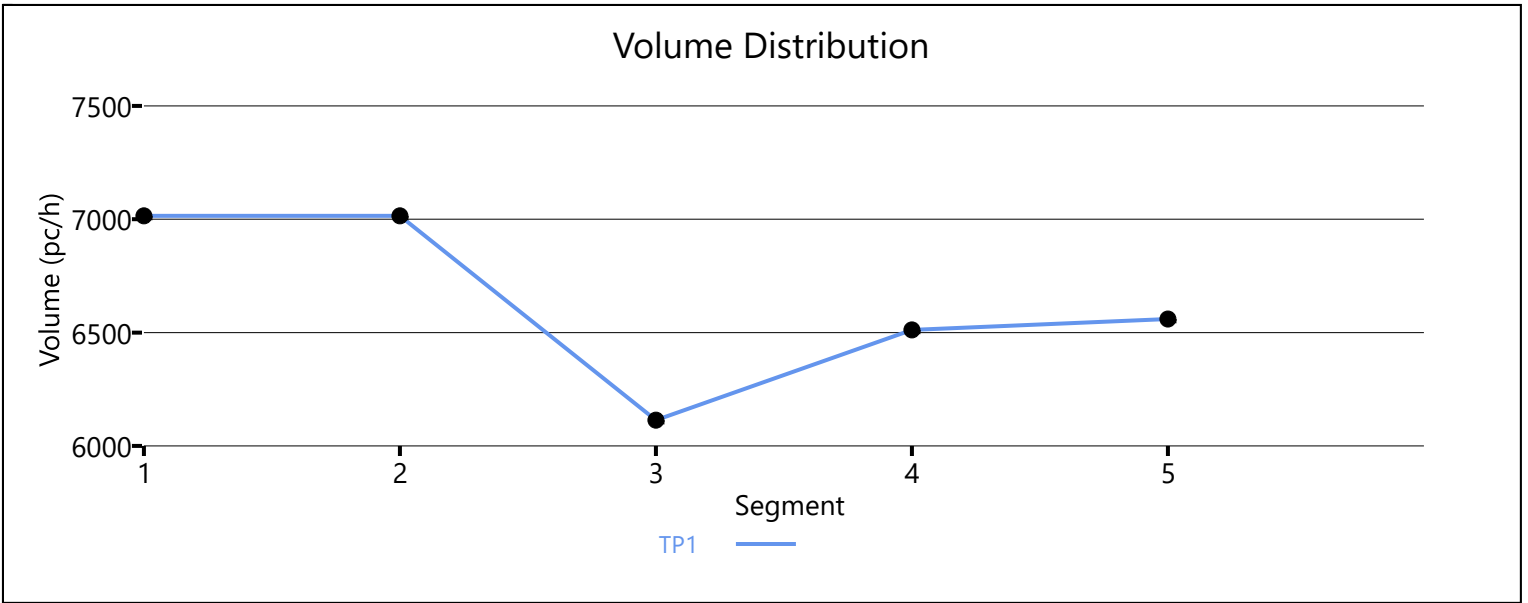
### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.926	6512	398	7200	2100	0.90	0.19	58.7	56.6	37.0	32.4	D

### Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.935		6560		7161		0.92		58.1		37.6		E

<b>Facility Time Period Results</b>					
<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	57.5	38.9	36.1	3.0	E
<b>Facility Overall Results</b>					
Space Mean Speed, mi/h		57.5	Density, veh/mi/ln		36.1
Average Travel Time, min		3.0	Density, pc/mi/ln		38.9



# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (Without MCP) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 SB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	N of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1850	3
4	Merge	Basic	On-Ramp	1500	4
5	Basic	Basic	S of Redlands	5280	4

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		8637		7161		1.21		53.0		45.0		F

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.952	7161	508	7200	2100	1.20	0.24	63.8	60.4	37.4	39.0	F

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		6653		7161		1.13		58.0		38.2		F

### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.885	7869	1216	9600	2100	0.85	0.58	61.1	-	32.2	-	D

### Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.935		7869		9548		0.98		63.2		31.1		D

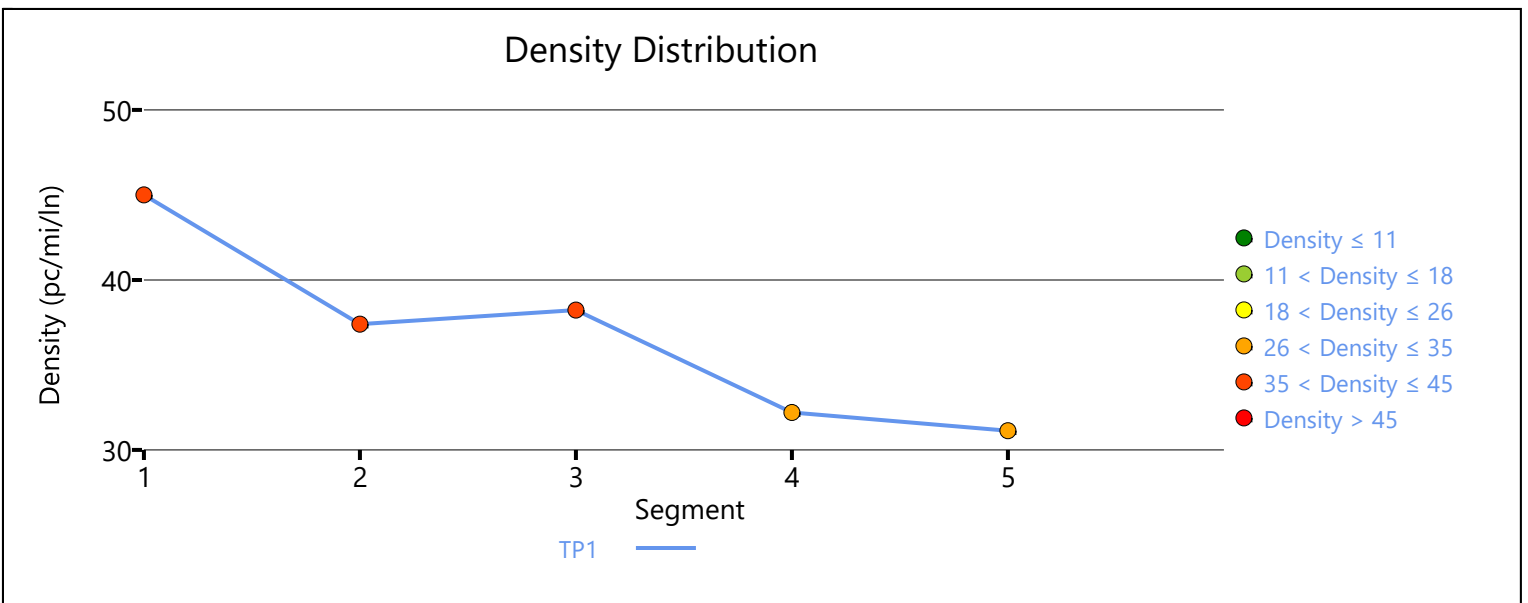
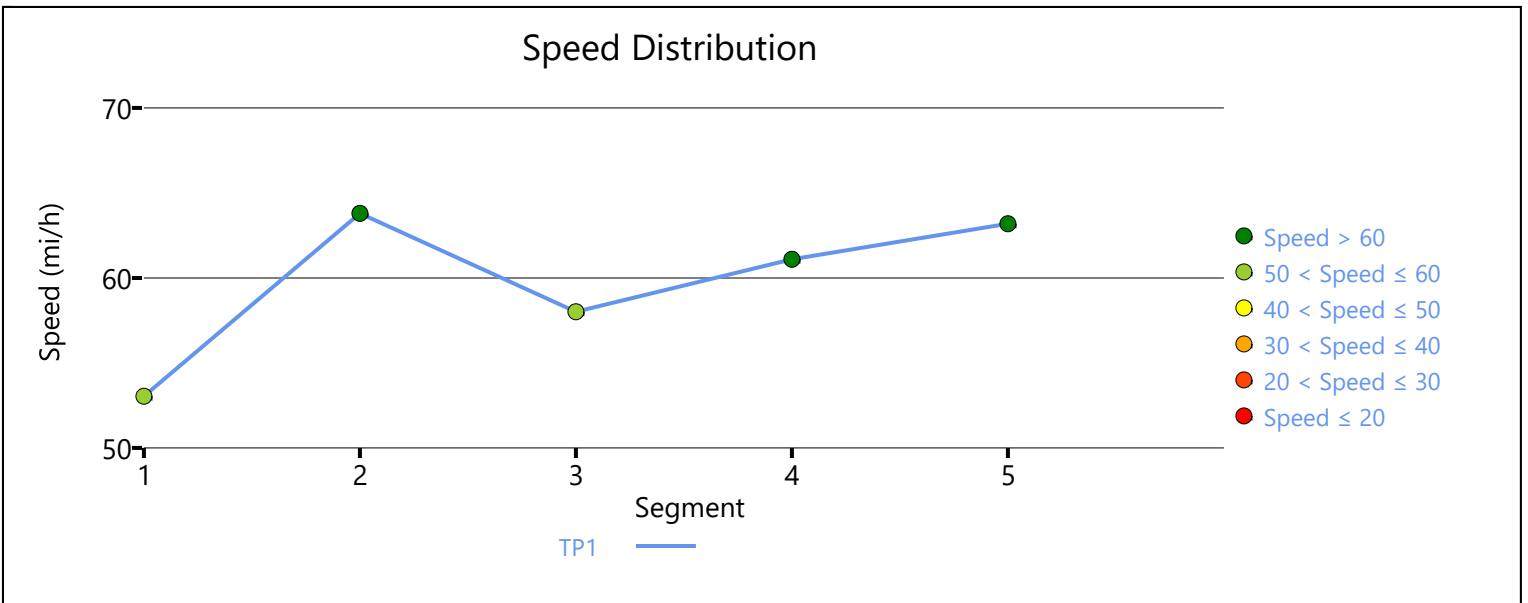
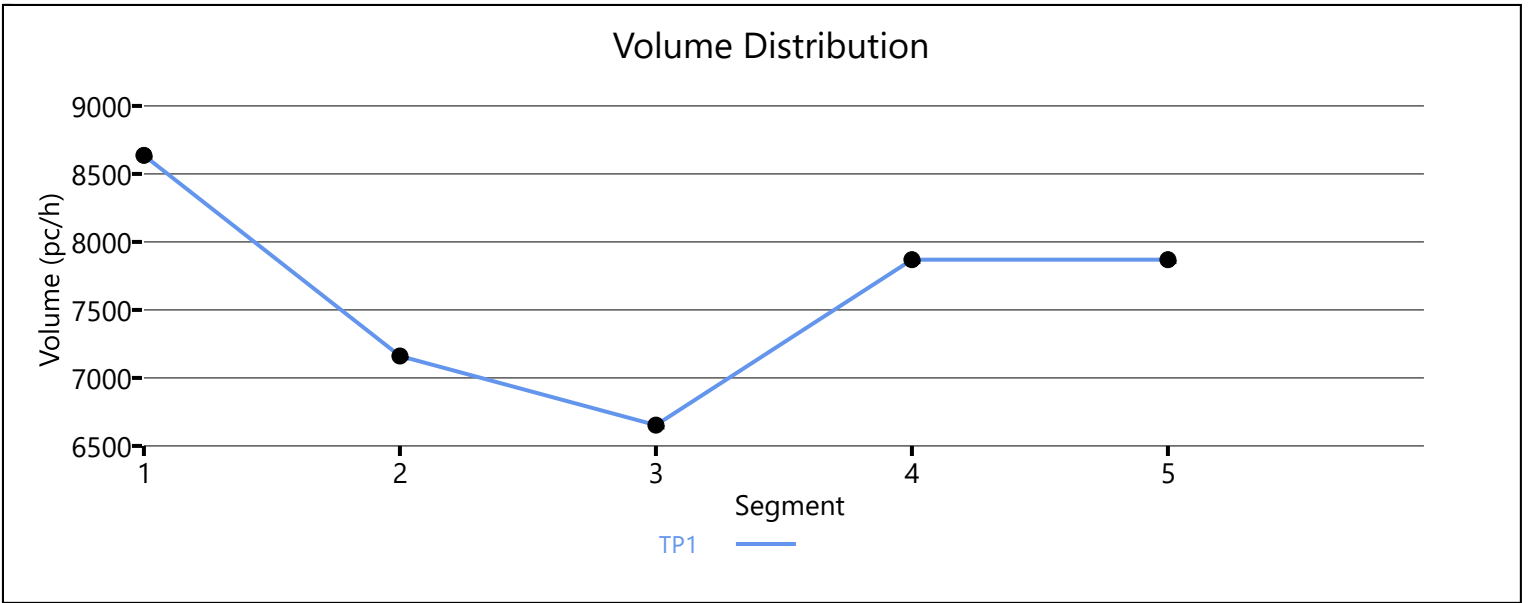
**Facility Time Period Results**

<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	59.0	36.5	34.3	3.0	F

**Facility Overall Results**

Space Mean Speed, mi/h	59.0	Density, veh/mi/ln	34.3
Average Travel Time, min	3.0	Density, pc/mi/ln	36.5





# HCS7 Freeway Facilities Report

## Project Information

Analyst	JB	Date	5/10/2021
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (Without MCP) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Stoneridge TIA (JN:13265) - I-215 NB		

## Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15

## Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	S of Redlands	5280	3
2	Diverge	Diverge	Off-Ramp	1500	3
3	Basic	Basic	Between	1675	3
4	Merge	Merge	On-Ramp	1500	3
5	Basic	Basic	N of Redlands	5280	3

## Facility Segment Data

### Segment 1: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		7404		7161		1.03		53.0		45.0		F

### Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.935	7161	1253	7200	2100	1.03	0.60	62.4	58.5	38.3	39.5	F

### Segment 3: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.952		5908		7161		0.85		63.1		31.2		D

### Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.943	6313	405	7200	2100	0.90	0.19	59.3	57.2	35.5	31.5	D

### Segment 5: Basic

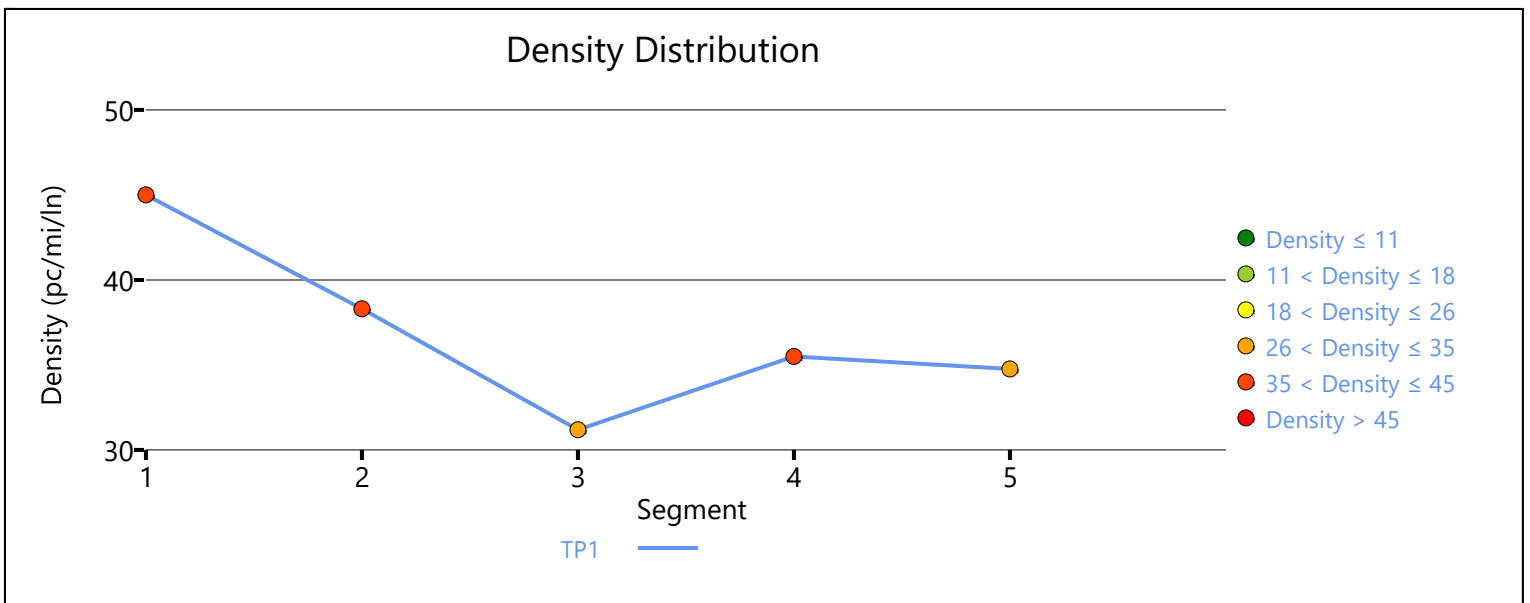
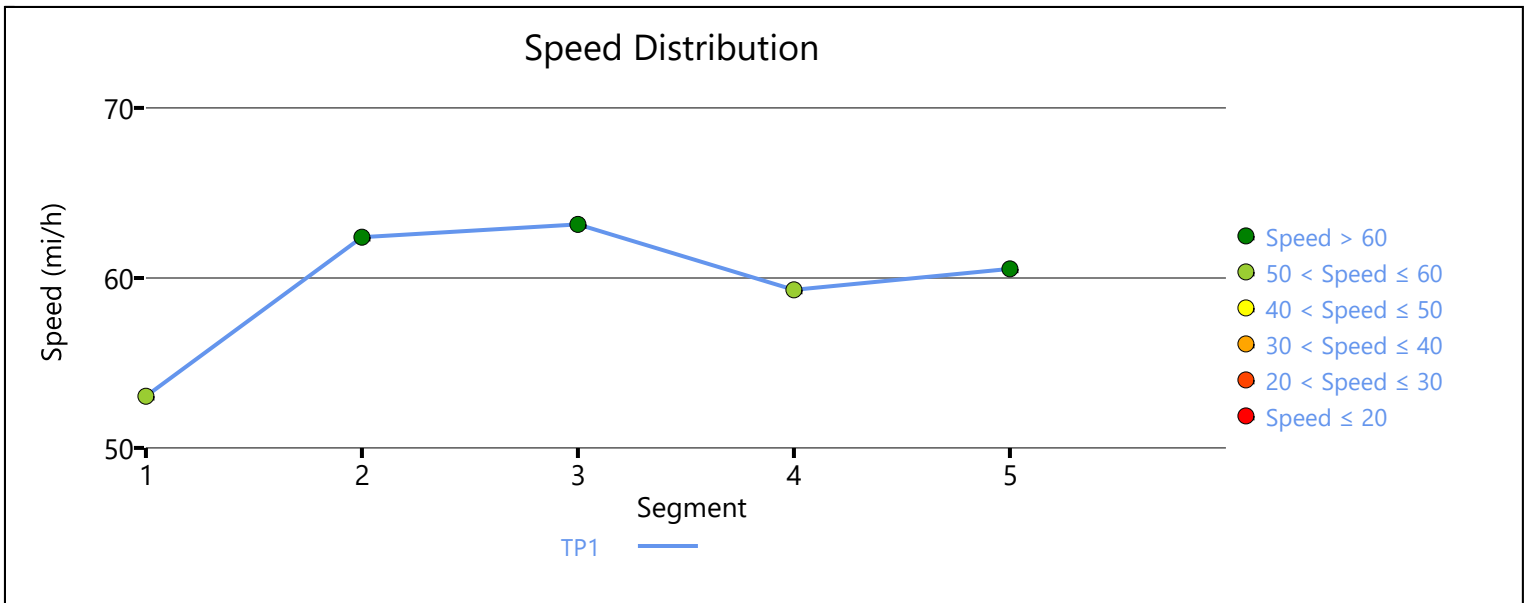
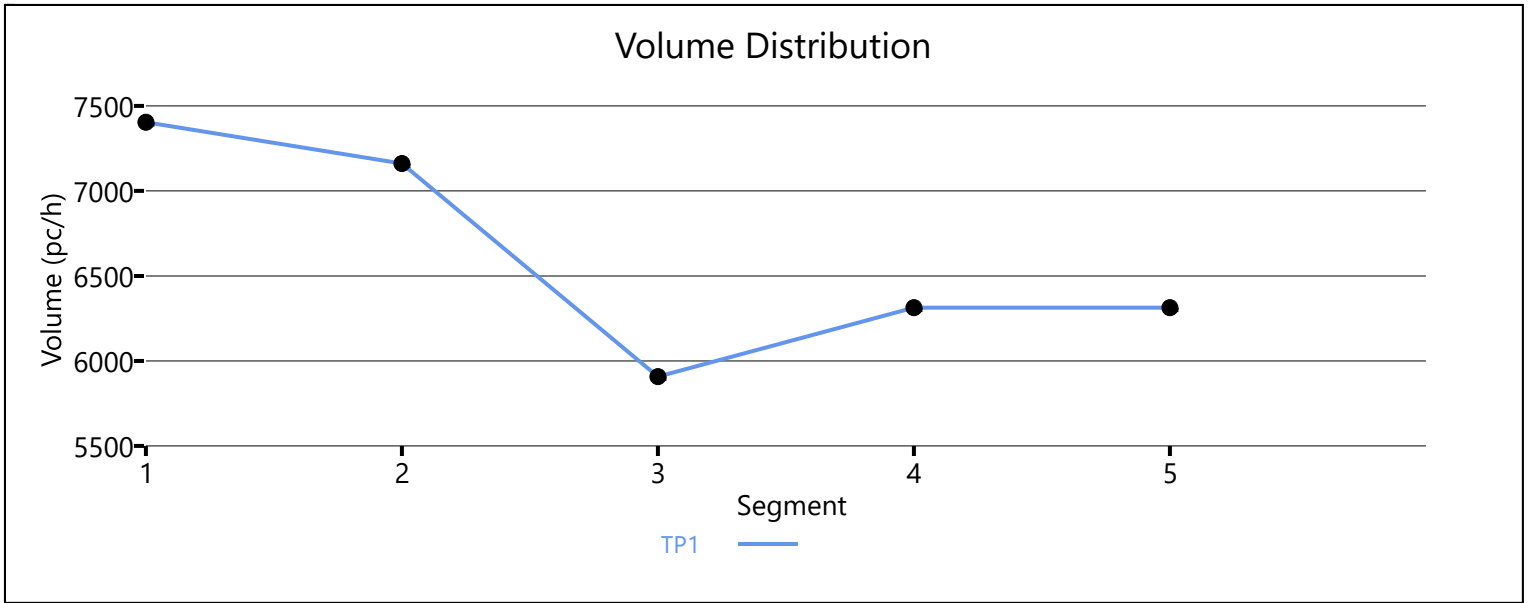
Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.92		0.943		6313		7161		0.92		60.5		34.8		D

**Facility Time Period Results**

<b>T</b>	<b>Speed, mi/h</b>	<b>Density, pc/mi/ln</b>	<b>Density, veh/mi/ln</b>	<b>Travel Time, min</b>	<b>LOS</b>
1	58.1	38.2	36.0	3.0	F

**Facility Overall Results**

Space Mean Speed, mi/h	58.1	Density, veh/mi/ln	36.0
Average Travel Time, min	3.0	Density, pc/mi/ln	38.2



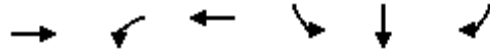
**ATTACHMENT U**  
**HORIZON YEAR (2040) WITHOUT MCP WITH PROJECT HCM INTERSECTION ANALYSIS**  
**WORKSHEETS, WITH IMPROVEMENTS**



Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

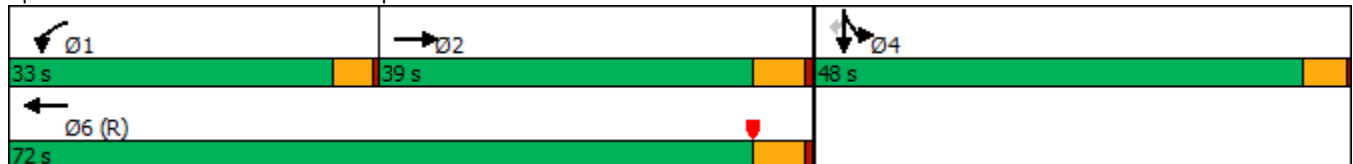


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑	↑	↑
Traffic Volume (vph)	388	398	635	714	0	102
Future Volume (vph)	388	398	635	714	0	102
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	39.0	33.0	72.0	48.0	48.0	48.0
Total Split (%)	32.5%	27.5%	60.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: I-215 SB Ramps & Placentia Av.



HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	388	175	398	635	0	0	0	0	714	0	102
Future Volume (veh/h)	0	388	175	398	635	0	0	0	0	714	0	102
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	422	190	433	690	0				776	0	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	915	408	504	2001	0				896	0	396
Arrive On Green	0.00	0.38	0.38	0.29	1.00	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	2520	1080	3510	3705	0				3619	0	1600
Grp Volume(v), veh/h	0	313	299	433	690	0				776	0	111
Grp Sat Flow(s),veh/h/ln	0	1805	1700	1755	1805	0				1810	0	1600
Q Serve(g_s), s	0.0	15.7	16.0	14.0	0.0	0.0				24.6	0.0	6.7
Cycle Q Clear(g_c), s	0.0	15.7	16.0	14.0	0.0	0.0				24.6	0.0	6.7
Prop In Lane	0.00		0.64	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	681	641	504	2001	0				896	0	396
V/C Ratio(X)	0.00	0.46	0.47	0.86	0.34	0.00				0.87	0.00	0.28
Avail Cap(c_a), veh/h	0	681	641	848	2001	0				1312	0	580
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.77	0.77	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.1	28.2	41.6	0.0	0.0				43.3	0.0	36.5
Incr Delay (d2), s/veh	0.0	2.2	2.4	3.7	0.4	0.0				4.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.9	6.6	5.2	0.1	0.0				11.2	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	30.4	30.7	45.3	0.4	0.0				47.6	0.0	36.9
LnGrp LOS	A	C	C	D	A	A				D	A	D
Approach Vol, veh/h		612			1123						887	
Approach Delay, s/veh		30.5			17.7						46.3	
Approach LOS		C			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	21.2	50.8		34.2		72.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	29.0	33.5		43.5		66.5						
Max Q Clear Time (g_c+I1), s	16.0	18.0		26.6		2.0						
Green Ext Time (p_c), s	1.2	1.9		3.1		2.8						

Intersection Summary

HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

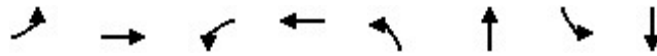
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022

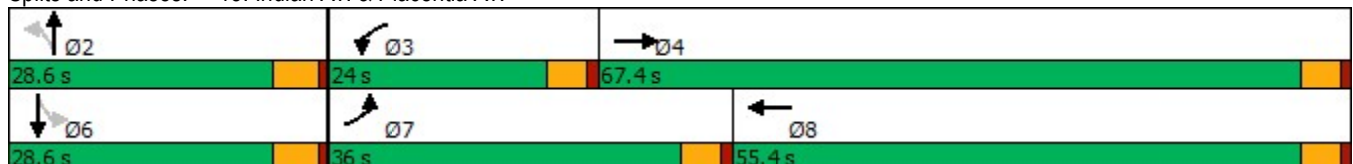


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↖	↕
Traffic Volume (vph)	531	1085	203	1156	50	225	42	181
Future Volume (vph)	531	1085	203	1156	50	225	42	181
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	9.6	26.6	27.1	27.1	27.1	27.1
Total Split (s)	36.0	67.4	24.0	55.4	28.6	28.6	28.6	28.6
Total Split (%)	30.0%	56.2%	20.0%	46.2%	23.8%	23.8%	23.8%	23.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.1	5.1	5.1	5.1
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	31.4	65.5	16.8	50.9	15.9	15.9	15.9	15.9
Actuated g/C Ratio	0.28	0.58	0.15	0.45	0.14	0.14	0.14	0.14
v/c Ratio	1.14	0.66	0.82	0.82	0.68	0.69	0.56	0.61
Control Delay	124.4	18.8	70.6	32.7	84.1	43.8	70.9	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	124.4	18.8	70.6	32.7	84.1	43.8	70.9	28.3
LOS	F	B	E	C	F	D	E	C
Approach Delay		50.1		38.1		48.9		32.9
Approach LOS		D		D		D		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.14  
 Intersection Signal Delay: 44.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 98.5%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 15: Indian Av. & Placentia Av.

























HCM 6th Signalized Intersection Summary  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	531	1085	175	203	1156	71	50	225	117	42	181	166
Future Volume (veh/h)	531	1085	175	203	1156	71	50	225	117	42	181	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	577	1179	164	221	1257	55	54	245	100	46	197	169
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	485	1795	249	249	1528	67	138	445	177	151	334	271
Arrive On Green	0.27	0.56	0.56	0.14	0.43	0.43	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1810	3184	441	1810	3523	154	1032	2524	1001	1052	1893	1536
Grp Volume(v), veh/h	577	667	676	221	643	669	54	173	172	46	187	179
Grp Sat Flow(s),veh/h/ln	1810	1805	1821	1810	1805	1872	1032	1805	1720	1052	1805	1624
Q Serve(g_s), s	31.4	29.9	30.2	14.1	36.8	36.9	6.0	10.2	10.7	4.9	11.2	11.9
Cycle Q Clear(g_c), s	31.4	29.9	30.2	14.1	36.8	36.9	17.9	10.2	10.7	15.6	11.2	11.9
Prop In Lane	1.00		0.24	1.00		0.08	1.00		0.58	1.00		0.95
Lane Grp Cap(c), veh/h	485	1018	1026	249	783	812	138	318	303	151	318	286
V/C Ratio(X)	1.19	0.66	0.66	0.89	0.82	0.82	0.39	0.54	0.57	0.31	0.59	0.62
Avail Cap(c_a), veh/h	485	1018	1026	300	783	812	163	362	345	176	362	326
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	17.7	17.7	49.6	29.2	29.2	52.9	44.0	44.2	51.3	44.3	44.7
Incr Delay (d2), s/veh	104.4	3.3	3.3	20.7	9.5	9.3	1.8	1.4	1.7	1.1	2.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.1	13.1	13.4	7.8	17.8	18.5	1.6	4.7	4.7	1.3	5.1	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.3	21.0	21.1	70.3	38.7	38.5	54.7	45.4	45.8	52.4	46.3	47.7
LnGrp LOS	F	C	C	E	D	D	D	D	D	D	D	D
Approach Vol, veh/h		1920			1533			399			412	
Approach Delay, s/veh		59.0			43.2			46.8			47.6	
Approach LOS		E			D			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.8	20.8	70.6		25.8	36.0	55.4				
Change Period (Y+Rc), s		5.1	4.6	4.6		5.1	4.6	4.6				
Max Green Setting (Gmax), s		23.5	19.4	62.8		23.5	31.4	50.8				
Max Q Clear Time (g_c+I1), s		19.9	16.1	32.2		17.6	33.4	38.9				
Green Ext Time (p_c), s		0.7	0.1	12.5		1.2	0.0	7.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			51.0									
HCM 6th LOS			D									

Timings  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022

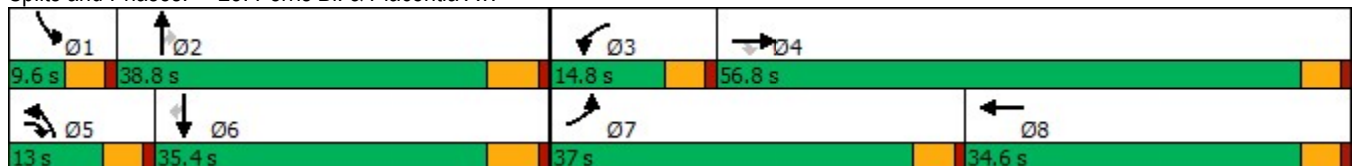


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (vph)	33	300	97	65	331	101	1208	53	44	806	49
Future Volume (vph)	33	300	97	65	331	101	1208	53	44	806	49
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	5	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.6	9.6	9.6	34.6	9.6	36.8	36.8	9.6	34.8	34.8
Total Split (s)	37.0	56.8	13.0	14.8	34.6	13.0	38.8	38.8	9.6	35.4	35.4
Total Split (%)	30.8%	47.3%	10.8%	12.3%	28.8%	10.8%	32.3%	32.3%	8.0%	29.5%	29.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.5	17.8	31.4	7.7	21.2	8.7	30.8	30.8	5.3	24.4	24.4
Actuated g/C Ratio	0.09	0.23	0.41	0.10	0.28	0.11	0.40	0.40	0.07	0.32	0.32
v/c Ratio	0.23	0.39	0.15	0.39	0.64	0.54	0.63	0.08	0.38	0.53	0.09
Control Delay	42.4	27.7	4.6	43.8	21.8	49.4	22.3	0.2	50.3	23.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	27.7	4.6	43.8	21.8	49.4	22.3	0.2	50.3	23.6	0.3
LOS	D	C	A	D	C	D	C	A	D	C	A
Approach Delay		23.7			23.9		23.5			23.6	
Approach LOS		C			C		C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.4  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 23.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 66.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 25: Perris Bl. & Placentia Av.



HCM 6th Signalized Intersection Summary  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)  
02/19/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↷	↶	↷		↶	↷	↷	↶	↷	↷
Traffic Volume (veh/h)	33	300	97	65	331	293	101	1208	53	44	806	49
Future Volume (veh/h)	33	300	97	65	331	293	101	1208	53	44	806	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	36	326	101	71	360	204	110	1313	49	48	876	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	67	785	476	101	529	295	142	1943	603	81	1769	549
Arrive On Green	0.04	0.22	0.22	0.06	0.24	0.24	0.08	0.37	0.37	0.04	0.34	0.34
Sat Flow, veh/h	1810	3610	1610	1810	2235	1245	1810	5187	1610	1810	5187	1609
Grp Volume(v), veh/h	36	326	101	71	289	275	110	1313	49	48	876	48
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1676	1810	1729	1610	1810	1729	1609
Q Serve(g_s), s	1.2	5.0	3.0	2.5	9.3	9.5	3.8	13.5	1.3	1.7	8.5	1.3
Cycle Q Clear(g_c), s	1.2	5.0	3.0	2.5	9.3	9.5	3.8	13.5	1.3	1.7	8.5	1.3
Prop In Lane	1.00		1.00	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	785	476	101	427	396	142	1943	603	81	1769	549
V/C Ratio(X)	0.54	0.42	0.21	0.70	0.68	0.69	0.78	0.68	0.08	0.59	0.50	0.09
Avail Cap(c_a), veh/h	918	2952	1443	289	848	788	238	2681	832	142	2405	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	21.5	16.9	29.6	22.2	22.2	28.9	16.7	12.9	29.9	16.7	14.3
Incr Delay (d2), s/veh	2.5	0.4	0.2	3.2	1.9	2.2	3.4	0.4	0.1	2.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.0	1.1	1.1	4.0	3.8	1.6	4.5	0.4	0.7	2.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	21.8	17.1	32.8	24.0	24.4	32.3	17.1	12.9	32.4	16.9	14.4
LnGrp LOS	C	C	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		463			635			1472			972	
Approach Delay, s/veh		21.6			25.2			18.1			17.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	29.7	8.2	18.5	9.6	27.6	7.0	19.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.0	33.0	10.2	52.2	8.4	29.6	32.4	30.0				
Max Q Clear Time (g_c+I1), s	3.7	15.5	4.5	7.0	5.8	10.5	3.2	11.5				
Green Ext Time (p_c), s	0.0	8.3	0.0	2.8	0.0	5.6	0.0	3.6				

Intersection Summary

HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Timings

Stoneridge Commerce Center SP (JN 13265)

30: Redlands Av. & Ramona Exwy.

01/25/2021

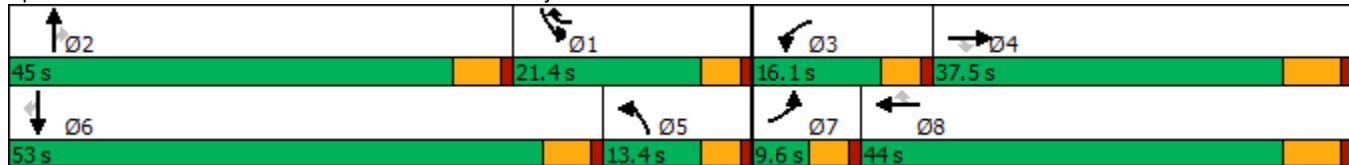


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑↑	↔	↔↔	↑↑↑↑	↔	↔	↑	↔	↔↔	↑	↔
Traffic Volume (vph)	118	1983	65	142	3591	829	48	42	124	688	105	74
Future Volume (vph)	118	1983	65	142	3591	829	48	42	124	688	105	74
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	9.6	9.6	41.4	41.4	9.6	23.4	23.4
Total Split (s)	9.6	37.5	37.5	16.1	44.0	21.4	13.4	45.0	45.0	21.4	53.0	53.0
Total Split (%)	8.0%	31.3%	31.3%	13.4%	36.7%	17.8%	11.2%	37.5%	37.5%	17.8%	44.2%	44.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	5.4	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 95.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	   		 	   					 		
Traffic Volume (veh/h)	118	1983	65	142	3591	829	48	42	124	688	105	74
Future Volume (veh/h)	118	1983	65	142	3591	829	48	42	124	688	105	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	2066	52	148	3741	640	50	44	-43	717	109	56
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	164	3234	539	212	3347	810	568	476	403	567	177	144
Arrive On Green	0.07	0.51	0.34	0.09	0.53	0.35	0.31	0.25	0.00	0.16	0.09	0.09
Sat Flow, veh/h	3510	9500	1585	3619	9500	1584	1810	1900	1610	3619	1900	1543
Grp Volume(v), veh/h	123	2066	52	148	3741	640	50	44	-43	717	109	56
Grp Sat Flow(s),veh/h/ln	1755	1900	1585	1810	1900	1584	1810	1900	1610	1810	1900	1543
Q Serve(g_s), s	3.7	16.9	0.9	4.3	37.8	11.1	2.1	1.9	0.0	16.8	5.9	3.1
Cycle Q Clear(g_c), s	3.7	16.9	0.9	4.3	37.8	11.1	2.1	1.9	0.0	16.8	5.9	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	3234	539	212	3347	810	568	476	403	567	177	144
V/C Ratio(X)	0.75	0.64	0.10	0.70	1.12	0.79	0.09	0.09	-0.11	1.27	0.62	0.39
Avail Cap(c_a), veh/h	164	3234	539	388	3347	810	568	701	594	567	843	685
HCM Platoon Ratio	1.50	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	21.5	3.3	48.0	25.3	9.8	26.0	30.8	0.0	45.2	46.8	32.7
Incr Delay (d2), s/veh	15.9	0.4	0.1	1.6	57.6	5.3	0.0	0.1	0.0	132.9	3.4	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	5.9	0.8	1.9	22.6	6.7	0.9	0.9	0.0	17.8	2.9	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	21.9	3.4	49.6	82.9	15.1	26.0	30.9	0.0	178.2	50.2	34.5
LnGrp LOS	E	C	A	D	F	B	C	C	A	F	D	C
Approach Vol, veh/h		2241			4529			51			882	
Approach Delay, s/veh		23.8			72.3			52.2			153.2	
Approach LOS		C			E			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.4	32.3	10.9	42.7	38.3	15.4	9.6	44.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	16.8	39.6	11.5	31.3	8.8	47.6	5.0	37.8				
Max Q Clear Time (g_c+I1), s	18.8	3.9	6.3	18.9	4.1	7.9	5.7	39.8				
Green Ext Time (p_c), s	0.0	0.2	0.1	9.6	0.0	0.8	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			67.3									
HCM 6th LOS			E									

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

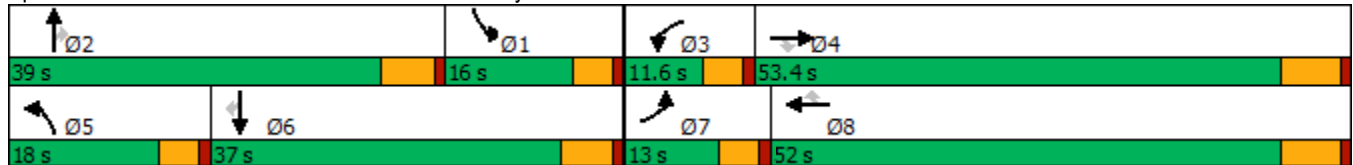


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑	↖
Traffic Volume (vph)	359	2197	218	76	3416	567	640	590	61	394	356	506
Future Volume (vph)	359	2197	218	76	3416	567	640	590	61	394	356	506
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	13.0	53.4	53.4	11.6	52.0	52.0	18.0	39.0	39.0	16.0	37.0	37.0
Total Split (%)	10.8%	44.5%	44.5%	9.7%	43.3%	43.3%	15.0%	32.5%	32.5%	13.3%	30.8%	30.8%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 39: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	359	2197	218	76	3416	567	640	590	61	394	356	506
Future Volume (veh/h)	359	2197	218	76	3416	567	640	590	61	394	356	506
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	382	2337	0	81	3634	337	681	628	33	419	379	272
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	293	3540		169	3280	695	456	832	353	412	827	346
Arrive On Green	0.11	0.61	0.00	0.06	0.56	0.56	0.13	0.22	0.22	0.11	0.22	0.22
Sat Flow, veh/h	3619	7600	1610	3619	7600	1610	3619	3800	1610	3619	3800	1589
Grp Volume(v), veh/h	382	2337	0	81	3634	337	681	628	33	419	379	272
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1610	1810	1900	1589
Q Serve(g_s), s	9.0	22.5	0.0	2.4	48.0	8.1	14.0	17.2	1.5	12.7	9.6	18.0
Cycle Q Clear(g_c), s	9.0	22.5	0.0	2.4	48.0	8.1	14.0	17.2	1.5	12.7	9.6	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	3540		169	3280	695	456	832	353	412	827	346
V/C Ratio(X)	1.30	0.66		0.48	1.11	0.48	1.49	0.75	0.09	1.02	0.46	0.79
Avail Cap(c_a), veh/h	293	3540		247	3280	695	456	1196	507	412	1128	472
HCM Platoon Ratio	1.30	1.30	1.30	1.30	1.30	1.30	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	16.1	0.0	50.9	24.4	5.6	48.6	40.6	22.5	49.3	37.8	41.1
Incr Delay (d2), s/veh	159.6	0.5	0.0	0.8	53.7	0.5	234.1	1.7	0.1	48.6	0.4	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	7.1	0.0	1.1	27.8	3.9	20.9	7.9	0.7	8.3	4.4	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	209.3	16.6	0.0	51.7	78.1	6.1	282.7	42.3	22.7	97.9	38.2	47.1
LnGrp LOS	F	B		D	F	A	F	D	C	F	D	D
Approach Vol, veh/h		2719	A		4052			1342			1070	
Approach Delay, s/veh		43.7			71.6			163.8			63.8	
Approach LOS		D			E			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	28.4	9.2	55.8	18.0	28.2	13.0	52.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	11.4	* 33	7.0	46.9	13.4	31.2	8.4	45.5				
Max Q Clear Time (g_c+I1), s	14.7	19.2	4.4	24.5	16.0	20.0	11.0	50.0				
Green Ext Time (p_c), s	0.0	3.4	0.0	16.8	0.0	2.5	0.0	0.0				

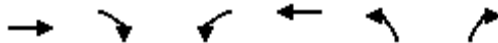
Intersection Summary

HCM 6th Ctrl Delay	75.9
HCM 6th LOS	E

Notes

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

Timings  
43: Bradley St. & Ramona Expy

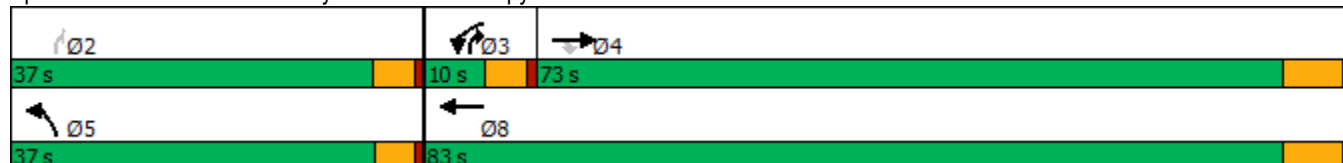


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø2
Lane Configurations	↑↑↑	↗	↖	↑↑↑	↖	↗	
Traffic Volume (vph)	1092	83	21	2847	303	38	
Future Volume (vph)	1092	83	21	2847	303	38	
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov	
Protected Phases	4		3	8	5	3	2
Permitted Phases		4					2
Detector Phase	4	4	3	8	5	3	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	38.5	38.5	9.6	24.5	9.5	9.6	22.6
Total Split (s)	73.0	73.0	10.0	83.0	37.0	10.0	37.0
Total Split (%)	60.8%	60.8%	8.3%	69.2%	30.8%	8.3%	31%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.5	4.6	
Lead/Lag	Lag	Lag	Lead			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.2  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 43: Bradley St. & Ramona Expy





HCM 6th Signalized Intersection Summary  
43: Bradley St. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗	↖	↑↑↑↑	↖	↗
Traffic Volume (veh/h)	1092	83	21	2847	303	38
Future Volume (veh/h)	1092	83	21	2847	303	38
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1187	88	23	3095	329	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	4036	993	43	4486	371	368
Arrive On Green	0.62	0.62	0.02	0.69	0.21	0.21
Sat Flow, veh/h	6802	1608	1810	6802	1810	1610
Grp Volume(v), veh/h	1187	88	23	3095	329	25
Grp Sat Flow(s),veh/h/ln	1634	1608	1810	1634	1810	1610
Q Serve(g_s), s	8.6	2.2	1.3	28.6	17.9	1.2
Cycle Q Clear(g_c), s	8.6	2.2	1.3	28.6	17.9	1.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	4036	993	43	4486	371	368
V/C Ratio(X)	0.29	0.09	0.54	0.69	0.89	0.07
Avail Cap(c_a), veh/h	4282	1053	96	4926	579	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.1	7.9	49.0	9.5	39.2	30.7
Incr Delay (d2), s/veh	0.0	0.0	3.9	0.4	10.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.6	0.6	7.3	9.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.1	7.9	52.9	9.9	49.3	30.7
LnGrp LOS	A	A	D	A	D	C
Approach Vol, veh/h	1275			3118	354	
Approach Delay, s/veh	9.0			10.2	48.0	
Approach LOS	A			B	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		25.3	7.0	69.2		76.2
Change Period (Y+Rc), s		4.5	4.6	6.5		6.5
Max Green Setting (Gmax), s		32.5	5.4	66.5		76.5
Max Q Clear Time (g_c+I1), s		19.9	3.3	10.6		30.6
Green Ext Time (p_c), s		0.9	0.0	9.8		39.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			12.7			
HCM 6th LOS			B			

Timings  
46: Dunlap Dr. & Nuevo Rd.

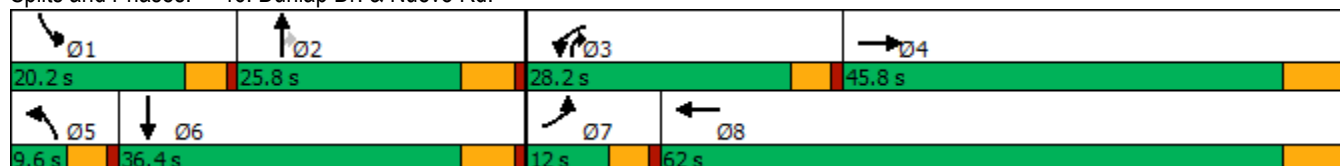


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↕↕↕	↙↙	↕↕↕	↙	↕	↗	↙	↕
Traffic Volume (vph)	41	1062	120	1641	11	26	405	120	26
Future Volume (vph)	41	1062	120	1641	11	26	405	120	26
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	37.5	9.6	24.5	9.6	23.8	9.6	9.6	29.8
Total Split (s)	12.0	45.8	28.2	62.0	9.6	25.8	28.2	20.2	36.4
Total Split (%)	10.0%	38.2%	23.5%	51.7%	8.0%	21.5%	23.5%	16.8%	30.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.6	4.8	3.6	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	4.6	5.8	4.6	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 86.9  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated


























Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



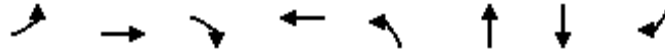
HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	41	1062	17	120	1641	207	11	26	405	120	26	103
Future Volume (veh/h)	41	1062	17	120	1641	207	11	26	405	120	26	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	1084	12	122	1674	193	11	27	411	122	27	57
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	63	2311	26	190	2152	247	24	389	417	152	150	317
Arrive On Green	0.03	0.44	0.44	0.05	0.46	0.46	0.01	0.20	0.20	0.08	0.28	0.28
Sat Flow, veh/h	1810	5289	59	3510	4718	542	1810	1900	1610	1810	544	1149
Grp Volume(v), veh/h	42	709	387	122	1226	641	11	27	411	122	0	84
Grp Sat Flow(s),veh/h/ln	1810	1729	1889	1755	1729	1802	1810	1900	1610	1810	0	1693
Q Serve(g_s), s	2.2	14.2	14.2	3.3	29.2	29.4	0.6	1.1	20.0	6.5	0.0	3.7
Cycle Q Clear(g_c), s	2.2	14.2	14.2	3.3	29.2	29.4	0.6	1.1	20.0	6.5	0.0	3.7
Prop In Lane	1.00		0.03	1.00		0.30	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	63	1511	826	190	1578	822	24	389	417	152	0	467
V/C Ratio(X)	0.67	0.47	0.47	0.64	0.78	0.78	0.46	0.07	0.99	0.80	0.00	0.18
Avail Cap(c_a), veh/h	137	1511	826	848	1964	1024	93	389	417	289	0	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.6	19.5	19.5	45.3	22.4	22.4	47.9	31.3	36.0	43.9	0.0	27.0
Incr Delay (d2), s/veh	4.5	0.2	0.4	1.4	1.6	3.1	5.0	0.1	40.4	3.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.1	5.6	1.4	10.6	11.4	0.3	0.5	13.6	2.9	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	19.7	19.9	46.6	24.0	25.5	52.9	31.4	76.4	47.6	0.0	27.1
LnGrp LOS	D	B	B	D	C	C	D	C	E	D	A	C
Approach Vol, veh/h		1138			1989			449			206	
Approach Delay, s/veh		20.9			25.9			73.1			39.2	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	25.8	9.9	49.2	5.9	32.7	8.0	51.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	15.6	20.0	23.6	39.3	5.0	30.6	7.4	55.5				
Max Q Clear Time (g_c+I1), s	8.5	22.0	5.3	16.2	2.6	5.7	4.2	31.4				
Green Ext Time (p_c), s	0.1	0.0	0.2	6.5	0.0	0.4	0.0	13.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				30.7								
HCM 6th LOS				C								

Timings  
47: Ramona Expy & Rider St.

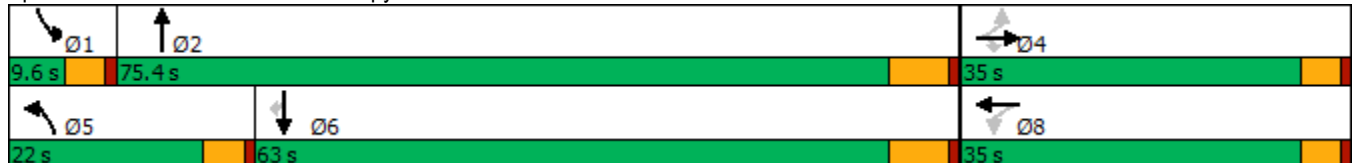


Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖	↑↑↑	↑↑↑	↗	
Traffic Volume (vph)	283	0	477	0	429	2992	2289	221	
Future Volume (vph)	283	0	477	0	429	2992	2289	221	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4						6
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	35.0	35.0	35.0	35.0	22.0	75.4	63.0	63.0	9.6
Total Split (%)	29.2%	29.2%	29.2%	29.2%	18.3%	62.8%	52.5%	52.5%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 117.3  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 47: Ramona Expy & Rider St.



HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↑↑↑		↘	↑↑↑	↗
Traffic Volume (veh/h)	283	0	477	0	0	1	429	2992	1	0	2289	221
Future Volume (veh/h)	283	0	477	0	0	1	429	2992	1	0	2289	221
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	308	0	381	0	0	1	466	3252	1	0	2488	193
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	425	0	407	0	0	407	519	4431	1	2	3035	748
Arrive On Green	0.25	0.00	0.25	0.00	0.00	0.25	0.15	0.65	0.65	0.00	0.46	0.46
Sat Flow, veh/h	1436	0	1610	0	0	1610	3510	6800	2	1810	6536	1610
Grp Volume(v), veh/h	308	0	381	0	0	1	466	2344	909	0	2488	193
Grp Sat Flow(s),veh/h/ln	1436	0	1610	0	0	1610	1755	1634	1900	1810	1634	1610
Q Serve(g_s), s	23.7	0.0	27.0	0.0	0.0	0.1	15.2	37.2	37.2	0.0	38.4	8.5
Cycle Q Clear(g_c), s	23.8	0.0	27.0	0.0	0.0	0.1	15.2	37.2	37.2	0.0	38.4	8.5
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	425	0	407	0	0	407	519	3195	1238	2	3035	748
V/C Ratio(X)	0.72	0.00	0.94	0.00	0.00	0.00	0.90	0.73	0.73	0.00	0.82	0.26
Avail Cap(c_a), veh/h	436	0	420	0	0	420	524	3195	1238	78	3169	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	0.0	42.6	0.0	0.0	32.5	48.8	13.5	13.5	0.0	27.0	19.0
Incr Delay (d2), s/veh	5.7	0.0	27.8	0.0	0.0	0.0	17.6	0.9	2.3	0.0	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	0.0	13.5	0.0	0.0	0.0	7.6	11.1	13.4	0.0	13.8	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	70.4	0.0	0.0	32.5	66.4	14.4	15.8	0.0	28.7	19.2
LnGrp LOS	D	A	E	A	A	C	E	B	B	A	C	B
Approach Vol, veh/h		689			1			3719			2681	
Approach Delay, s/veh		60.0			32.5			21.3			28.0	
Approach LOS		E			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	82.4		34.1	21.8	60.6		34.1				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	68.9		30.4	17.4	56.5		30.4				
Max Q Clear Time (g_c+I1), s	0.0	39.2		29.0	17.2	40.4		2.1				
Green Ext Time (p_c), s	0.0	25.9		0.5	0.0	13.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Timings  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)  
01/26/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↑	↖↗	↑↑↑↑	↖↗	↑
Traffic Volume (vph)	1502	1265	246	3048	373	64
Future Volume (vph)	1502	1265	246	3048	373	64
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	28.5	9.6	16.5	15.8	15.8
Total Split (s)	84.0	84.0	14.3	98.3	21.7	21.7
Total Split (%)	70.0%	70.0%	11.9%	81.9%	18.1%	18.1%
Yellow Time (s)	5.5	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	None
Act Effct Green (s)	77.5	77.5	9.7	91.8	15.7	15.7
Actuated g/C Ratio	0.65	0.65	0.08	0.77	0.13	0.13
v/c Ratio	0.39	1.07	0.94	0.83	0.88	0.26
Control Delay	10.3	59.0	95.7	11.6	72.3	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.3	59.0	95.7	11.6	72.3	13.3
LOS	B	E	F	B	E	B
Approach Delay	32.6			17.9	63.6	
Approach LOS	C			B	E	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 119.8  
 Natural Cycle: 140  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 27.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 94.6%  
 ICU Level of Service F  
 Analysis Period (min) 15

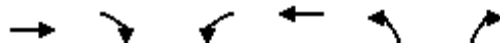
Splits and Phases: 48: Antelope Rd. & Ramona Expy



HCM 6th Signalized Intersection Summary  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)

01/26/2021

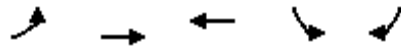


Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗	↙↙	↑↑↑	↙↙	↗
Traffic Volume (veh/h)	1502	1265	246	3048	373	64
Future Volume (veh/h)	1502	1265	246	3048	373	64
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1633	1049	267	3313	405	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	4230	1042	284	3977	459	210
Arrive On Green	0.65	0.65	0.08	0.77	0.13	0.13
Sat Flow, veh/h	6802	1610	3510	5358	3510	1610
Grp Volume(v), veh/h	1633	1049	267	3313	405	54
Grp Sat Flow(s),veh/h/ln	1634	1610	1755	1729	1755	1610
Q Serve(g_s), s	14.1	77.5	9.1	49.4	13.6	3.6
Cycle Q Clear(g_c), s	14.1	77.5	9.1	49.4	13.6	3.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	4230	1042	284	3977	459	210
V/C Ratio(X)	0.39	1.01	0.94	0.83	0.88	0.26
Avail Cap(c_a), veh/h	4230	1042	284	3977	466	214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	21.1	54.7	9.0	51.2	46.8
Incr Delay (d2), s/veh	0.3	29.5	36.9	2.2	17.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	31.4	5.3	12.3	6.9	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.2	50.6	91.6	11.2	68.8	47.5
LnGrp LOS	B	F	F	B	E	D
Approach Vol, veh/h	2682			3580	459	
Approach Delay, s/veh	26.0			17.2	66.3	
Approach LOS	C			B	E	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		21.4	14.3	84.0		98.3
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		15.9	9.7	77.5		91.8
Max Q Clear Time (g_c+I1), s		15.6	11.1	79.5		51.4
Green Ext Time (p_c), s		0.1	0.0	0.0		36.8
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			24.1			
HCM 6th LOS			C			

Timings  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/26/2021

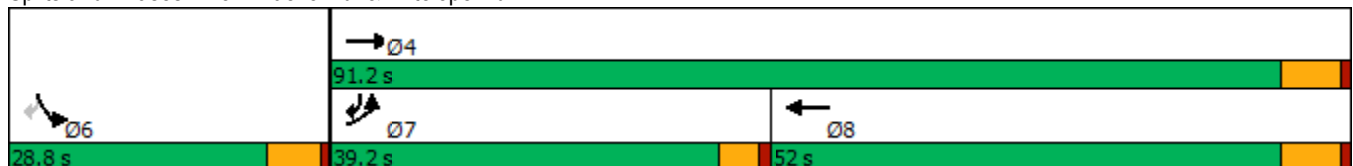


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔↔	↔↔
Traffic Volume (vph)	976	580	1542	118	289
Future Volume (vph)	976	580	1542	118	289
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	39.2	91.2	52.0	28.8	39.2
Total Split (%)	32.7%	76.0%	43.3%	24.0%	32.7%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None
Act Effct Green (s)	34.6	84.7	45.5	10.4	50.8
Actuated g/C Ratio	0.32	0.79	0.42	0.10	0.47
v/c Ratio	0.94	0.15	0.98	0.38	0.23
Control Delay	51.9	2.8	45.7	48.9	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	51.9	2.8	45.7	48.9	17.1
LOS	D	A	D	D	B
Approach Delay		33.6	45.7	26.3	
Approach LOS		C	D	C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 107.4	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 38.9	Intersection LOS: D
Intersection Capacity Utilization 89.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 51: Nuevo Rd. & Antelope Rd.

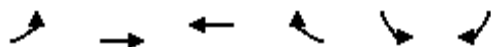




HCM 6th Signalized Intersection Summary  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/26/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖↖	↑↑↑	↑↑↑		↘↘	↘↘	
Traffic Volume (veh/h)	976	580	1542	414	118	289	
Future Volume (veh/h)	976	580	1542	414	118	289	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	1061	630	1676	314	128	232	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	1115	4106	1894	352	328	1165	
Arrive On Green	0.32	0.79	0.43	0.43	0.09	0.09	
Sat Flow, veh/h	3510	5358	4565	817	3510	2834	
Grp Volume(v), veh/h	1061	630	1316	674	128	232	
Grp Sat Flow(s),veh/h/ln	1755	1729	1729	1753	1755	1417	
Q Serve(g_s), s	31.6	3.1	37.4	38.0	3.7	5.6	
Cycle Q Clear(g_c), s	31.6	3.1	37.4	38.0	3.7	5.6	
Prop In Lane	1.00			0.47	1.00	1.00	
Lane Grp Cap(c), veh/h	1115	4106	1491	756	328	1165	
V/C Ratio(X)	0.95	0.15	0.88	0.89	0.39	0.20	
Avail Cap(c_a), veh/h	1135	4106	1491	756	755	1509	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	35.7	2.6	28.0	28.1	45.6	20.2	
Incr Delay (d2), s/veh	16.1	0.1	7.9	15.0	0.8	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	15.0	0.6	15.6	17.5	1.6	5.5	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	51.8	2.7	35.9	43.2	46.4	20.3	
LnGrp LOS	D	A	D	D	D	C	
Approach Vol, veh/h		1691	1990		360		
Approach Delay, s/veh		33.5	38.3		29.6		
Approach LOS		C	D		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				91.2	15.8	38.6	52.6
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				84.7	23.0	34.6	45.5
Max Q Clear Time (g_c+I1), s				5.1	7.6	33.6	40.0
Green Ext Time (p_c), s				4.3	1.1	0.3	4.5
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			35.5				
HCM 6th LOS			D				

Timings  
68: San Jacinto Av. & Dunlap Dr.

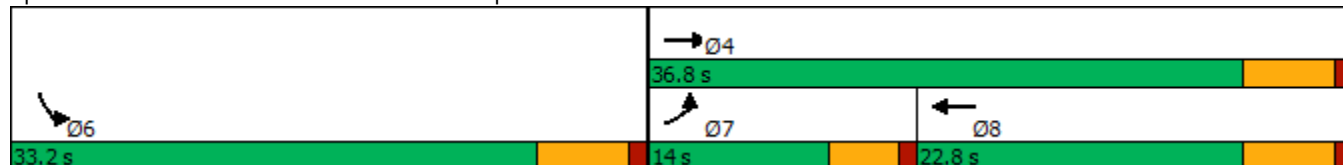


Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↖	↑	↗	↘
Traffic Volume (vph)	244	125	235	45
Future Volume (vph)	244	125	235	45
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	32.8
Total Split (s)	14.0	36.8	22.8	33.2
Total Split (%)	20.0%	52.6%	32.6%	47.4%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 51.6  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated

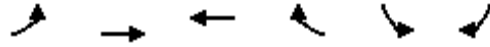
Splits and Phases: 68: San Jacinto Av. & Dunlap Dr.



HCM 6th Signalized Intersection Summary  
68: San Jacinto Av. & Dunlap Dr.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑	↗		↙	↘	
Traffic Volume (veh/h)	244	125	235	29	45	191	
Future Volume (veh/h)	244	125	235	29	45	191	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	260	133	250	31	48	203	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	321	965	375	47	71	302	
Arrive On Green	0.18	0.51	0.23	0.23	0.23	0.23	
Sat Flow, veh/h	1810	1900	1657	206	313	1326	
Grp Volume(v), veh/h	260	133	0	281	252	0	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1863	1646	0	
Q Serve(g_s), s	6.1	1.6	0.0	6.0	6.1	0.0	
Cycle Q Clear(g_c), s	6.1	1.6	0.0	6.0	6.1	0.0	
Prop In Lane	1.00			0.11	0.19	0.81	
Lane Grp Cap(c), veh/h	321	965	0	422	375	0	
V/C Ratio(X)	0.81	0.14	0.00	0.67	0.67	0.00	
Avail Cap(c_a), veh/h	387	1341	0	721	1027	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	17.4	5.7	0.0	15.5	15.5	0.0	
Incr Delay (d2), s/veh	8.6	0.1	0.0	1.8	2.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.7	0.4	0.0	2.0	2.0	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	26.0	5.8	0.0	17.3	17.6	0.0	
LnGrp LOS	C	A	A	B	B	A	
Approach Vol, veh/h		393	281		252		
Approach Delay, s/veh		19.2	17.3		17.6		
Approach LOS		B	B		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				28.1	15.8	12.4	15.7
Change Period (Y+Rc), s				5.8	5.8	4.6	5.8
Max Green Setting (Gmax), s				31.0	27.4	9.4	17.0
Max Q Clear Time (g_c+I1), s				3.6	8.1	8.1	8.0
Green Ext Time (p_c), s				0.6	0.7	0.1	0.9

Intersection Summary

HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
69: San Jacinto Av. & Evans Rd.



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↖	↗	↔	↘
Traffic Volume (vph)	25	370	395	163
Future Volume (vph)	25	370	395	163
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	23.8	23.8	32.8
Total Split (s)	9.7	55.7	46.0	34.3
Total Split (%)	10.8%	61.9%	51.1%	38.1%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

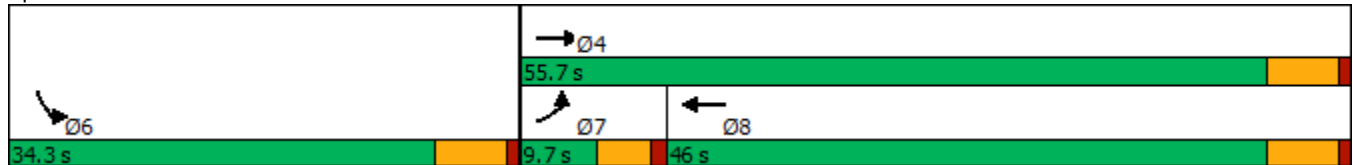
Cycle Length: 90

Actuated Cycle Length: 64.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Splits and Phases: 69: San Jacinto Av. & Evans Rd.



HCM 6th Signalized Intersection Summary  
69: San Jacinto Av. & Evans Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑	↗		↙	↘	
Traffic Volume (veh/h)	25	370	395	334	163	59	
Future Volume (veh/h)	25	370	395	334	163	59	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	27	402	429	363	177	64	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	55	1186	490	415	227	82	
Arrive On Green	0.03	0.62	0.52	0.52	0.18	0.18	
Sat Flow, veh/h	1810	1900	951	804	1282	463	
Grp Volume(v), veh/h	27	402	0	792	242	0	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1755	1752	0	
Q Serve(g_s), s	0.9	5.9	0.0	23.3	7.7	0.0	
Cycle Q Clear(g_c), s	0.9	5.9	0.0	23.3	7.7	0.0	
Prop In Lane	1.00			0.46	0.73	0.26	
Lane Grp Cap(c), veh/h	55	1186	0	904	310	0	
V/C Ratio(X)	0.49	0.34	0.00	0.88	0.78	0.00	
Avail Cap(c_a), veh/h	158	1624	0	1209	855	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	27.9	5.2	0.0	12.5	22.9	0.0	
Incr Delay (d2), s/veh	2.5	0.2	0.0	5.8	4.3	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	1.3	0.0	7.7	3.1	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	30.4	5.4	0.0	18.3	27.2	0.0	
LnGrp LOS	C	A	A	B	C	A	
Approach Vol, veh/h		429	792		242		
Approach Delay, s/veh		7.0	18.3		27.2		
Approach LOS		A	B		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				42.3	16.1	6.4	35.9
Change Period (Y+Rc), s				5.8	5.8	4.6	5.8
Max Green Setting (Gmax), s				49.9	28.5	5.1	40.2
Max Q Clear Time (g_c+I1), s				7.9	9.7	2.9	25.3
Green Ext Time (p_c), s				2.4	0.6	0.0	4.8

Intersection Summary

HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings

70: San Jacinto Av. & Murrieta Rd.

01/25/2021



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↖	↗	↘	↙
Traffic Volume (vph)	178	350	388	27
Future Volume (vph)	178	350	388	27
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	27.8
Total Split (s)	16.0	46.0	30.0	29.0
Total Split (%)	21.3%	61.3%	40.0%	38.7%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

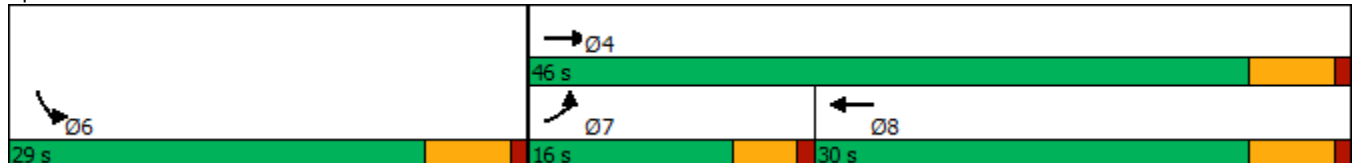
Cycle Length: 75

Actuated Cycle Length: 59.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 70: San Jacinto Av. & Murrieta Rd.



HCM 6th Signalized Intersection Summary  
70: San Jacinto Av. & Murrieta Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑	↗		↙	↘	
Traffic Volume (veh/h)	178	350	388	76	27	191	
Future Volume (veh/h)	178	350	388	76	27	191	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	200	393	436	85	30	215	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	252	1085	525	102	40	283	
Arrive On Green	0.14	0.57	0.34	0.34	0.20	0.20	
Sat Flow, veh/h	1810	1900	1545	301	199	1427	
Grp Volume(v), veh/h	200	393	0	521	246	0	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1846	1633	0	
Q Serve(g_s), s	5.4	5.6	0.0	13.1	7.2	0.0	
Cycle Q Clear(g_c), s	5.4	5.6	0.0	13.1	7.2	0.0	
Prop In Lane	1.00			0.16	0.12	0.87	
Lane Grp Cap(c), veh/h	252	1085	0	628	324	0	
V/C Ratio(X)	0.79	0.36	0.00	0.83	0.76	0.00	
Avail Cap(c_a), veh/h	410	1517	0	887	752	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	21.0	5.8	0.0	15.3	19.0	0.0	
Incr Delay (d2), s/veh	2.1	0.2	0.0	4.7	3.6	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.1	1.3	0.0	4.9	2.7	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	23.1	6.0	0.0	19.9	22.7	0.0	
LnGrp LOS	C	A	A	B	C	A	
Approach Vol, veh/h		593	521		246		
Approach Delay, s/veh		11.8	19.9		22.7		
Approach LOS		B	B		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				34.6	15.8	11.6	22.9
Change Period (Y+Rc), s				5.8	5.8	4.6	5.8
Max Green Setting (Gmax), s				40.2	23.2	11.4	24.2
Max Q Clear Time (g_c+I1), s				7.6	9.2	7.4	15.1
Green Ext Time (p_c), s				2.3	0.6	0.1	2.1

Intersection Summary

HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

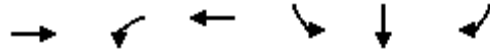
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

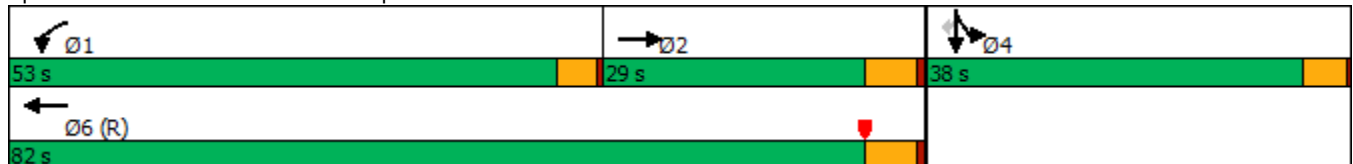


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑	↑	↑
Traffic Volume (vph)	591	889	824	979	0	85
Future Volume (vph)	591	889	824	979	0	85
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	25.5	9.5	9.5	9.5
Total Split (s)	29.0	53.0	82.0	38.0	38.0	38.0
Total Split (%)	24.2%	44.2%	68.3%	31.7%	31.7%	31.7%
Yellow Time (s)	4.5	3.5	4.5	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?						
Recall Mode	Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 6:WBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: I-215 SB Ramps & Placentia Av.





HCM 6th Signalized Intersection Summary  
6: I-215 SB Ramps & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	591	198	889	824	0	0	0	0	979	0	85
Future Volume (veh/h)	0	591	198	889	824	0	0	0	0	979	0	85
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	642	133	966	896	0				1064	0	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	952	197	1057	2422	0				1010	0	447
Arrive On Green	0.00	0.31	0.31	0.49	1.00	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3052	631	3619	3800	0				3619	0	1602
Grp Volume(v), veh/h	0	399	376	966	896	0				1064	0	70
Grp Sat Flow(s),veh/h/ln	0	1900	1783	1810	1900	0				1810	0	1602
Q Serve(g_s), s	0.0	22.0	22.0	29.6	0.0	0.0				33.5	0.0	4.0
Cycle Q Clear(g_c), s	0.0	22.0	22.0	29.6	0.0	0.0				33.5	0.0	4.0
Prop In Lane	0.00		0.35	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	593	556	1057	2423	0				1010	0	447
V/C Ratio(X)	0.00	0.67	0.68	0.91	0.37	0.00				1.05	0.00	0.16
Avail Cap(c_a), veh/h	0	593	556	1478	2423	0				1010	0	447
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.47	0.47	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	36.0	36.0	29.3	0.0	0.0				43.3	0.0	32.6
Incr Delay (d2), s/veh	0.0	6.0	6.5	3.5	0.2	0.0				43.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.7	10.1	9.9	0.1	0.0				20.4	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	42.0	42.4	32.9	0.2	0.0				86.6	0.0	32.8
LnGrp LOS	A	D	D	C	A	A				F	A	C
Approach Vol, veh/h		775			1862						1134	
Approach Delay, s/veh		42.2			17.1						83.3	
Approach LOS		D			B						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	39.1	42.9		38.0		82.0						
Change Period (Y+Rc), s	4.0	5.5		4.5		5.5						
Max Green Setting (Gmax), s	49.0	23.5		33.5		76.5						
Max Q Clear Time (g_c+I1), s	31.6	24.0		35.5		2.0						
Green Ext Time (p_c), s	3.5	0.0		0.0		3.9						

Intersection Summary

HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

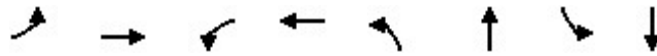
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022

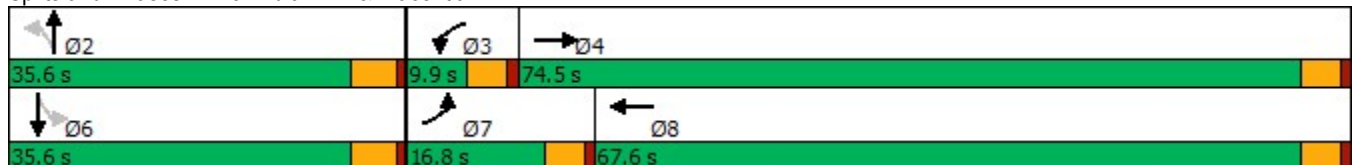


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↖↗	↖	↖↗	↖	↖↗	↖	↖↗
Traffic Volume (vph)	216	1419	39	1587	60	117	143	323
Future Volume (vph)	216	1419	39	1587	60	117	143	323
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	9.6	26.6	27.1	27.1	27.1	27.1
Total Split (s)	16.8	74.5	9.9	67.6	35.6	35.6	35.6	35.6
Total Split (%)	14.0%	62.1%	8.3%	56.3%	29.7%	29.7%	29.7%	29.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.1	5.1	5.1	5.1
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	12.2	71.9	5.2	63.0	30.5	30.5	30.5	30.5
Actuated g/C Ratio	0.10	0.60	0.04	0.52	0.25	0.25	0.25	0.25
v/c Ratio	1.28	0.78	0.54	0.95	1.03	0.17	0.49	1.29dr
Control Delay	205.9	21.8	80.8	39.0	169.0	31.2	44.4	93.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	205.9	21.8	80.8	39.0	169.0	31.2	44.4	93.1
LOS	F	C	F	D	F	C	D	F
Approach Delay		44.5		40.0		72.5		86.6
Approach LOS		D		D		E		F

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.28  
 Intersection Signal Delay: 53.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 110.5%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 15: Indian Av. & Placentia Av.



HCM 6th Signalized Intersection Summary  
15: Indian Av. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	1419	117	39	1587	60	60	117	23	143	323	600
Future Volume (veh/h)	216	1419	117	39	1587	60	60	117	23	143	323	600
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	235	1542	67	42	1725	32	65	127	3	155	351	326
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	184	2098	91	57	1904	35	110	916	22	350	459	409
Arrive On Green	0.10	0.60	0.60	0.03	0.52	0.52	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1810	3525	153	1810	3626	67	774	3605	85	1280	1805	1610
Grp Volume(v), veh/h	235	787	822	42	857	900	65	63	67	155	351	326
Grp Sat Flow(s),veh/h/ln	1810	1805	1873	1810	1805	1888	774	1805	1885	1280	1805	1610
Q Serve(g_s), s	12.2	37.6	38.0	2.8	51.5	51.9	7.8	3.3	3.3	12.8	21.6	22.7
Cycle Q Clear(g_c), s	12.2	37.6	38.0	2.8	51.5	51.9	30.5	3.3	3.3	16.1	21.6	22.7
Prop In Lane	1.00		0.08	1.00		0.04	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	184	1074	1115	57	948	991	110	459	479	350	459	409
V/C Ratio(X)	1.28	0.73	0.74	0.74	0.90	0.91	0.59	0.14	0.14	0.44	0.77	0.80
Avail Cap(c_a), veh/h	184	1074	1115	80	948	991	110	459	479	350	459	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	17.4	17.5	57.6	25.8	25.9	57.0	34.6	34.6	40.8	41.4	41.8
Incr Delay (d2), s/veh	160.0	4.4	4.4	10.5	13.6	13.5	8.0	0.1	0.1	0.9	7.5	10.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	16.4	17.2	1.4	25.1	26.3	2.2	1.4	1.5	4.1	10.4	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.9	21.9	21.9	68.1	39.4	39.4	65.0	34.7	34.7	41.7	49.0	52.4
LnGrp LOS	F	C	C	E	D	D	E	C	C	D	D	D
Approach Vol, veh/h		1844			1799			195			832	
Approach Delay, s/veh		46.3			40.1			44.8			48.9	
Approach LOS		D			D			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		35.6	8.4	76.0		35.6	16.8	67.6				
Change Period (Y+Rc), s		5.1	4.6	4.6		5.1	4.6	4.6				
Max Green Setting (Gmax), s		30.5	5.3	69.9		30.5	12.2	63.0				
Max Q Clear Time (g_c+I1), s		32.5	4.8	40.0		24.7	14.2	53.9				
Green Ext Time (p_c), s		0.0	0.0	16.0		2.4	0.0	7.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			44.3									
HCM 6th LOS			D									

Timings  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022

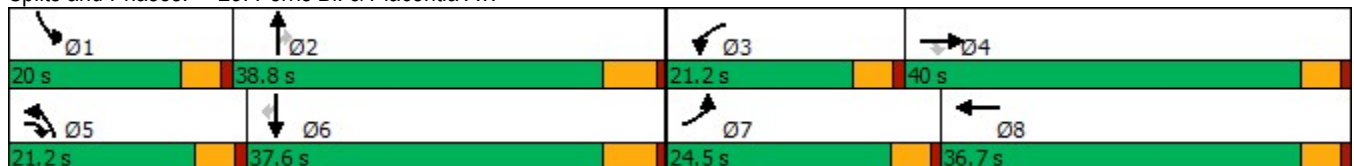


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (vph)	37	305	187	105	322	185	1134	147	197	1551	28
Future Volume (vph)	37	305	187	105	322	185	1134	147	197	1551	28
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	5	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.6	9.6	9.6	34.6	9.6	36.8	36.8	9.6	34.8	34.8
Total Split (s)	24.5	40.0	21.2	21.2	36.7	21.2	38.8	38.8	20.0	37.6	37.6
Total Split (%)	20.4%	33.3%	17.7%	17.7%	30.6%	17.7%	32.3%	32.3%	16.7%	31.3%	31.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.7	15.0	33.8	10.2	22.9	14.1	31.5	31.5	14.8	32.2	32.2
Actuated g/C Ratio	0.07	0.16	0.37	0.11	0.25	0.15	0.35	0.35	0.16	0.35	0.35
v/c Ratio	0.30	0.55	0.30	0.56	0.56	0.72	0.68	0.26	0.73	0.91	0.05
Control Delay	49.2	39.3	8.8	51.3	29.9	53.5	29.1	11.6	54.1	38.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	39.3	8.8	51.3	29.9	53.5	29.1	11.6	54.1	38.8	0.1
LOS	D	D	A	D	C	D	C	B	D	D	A
Approach Delay		29.2			33.8		30.4			39.9	
Approach LOS		C			C		C			D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.3  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 34.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.7%  
 ICU Level of Service D  
 Analysis Period (min) 15

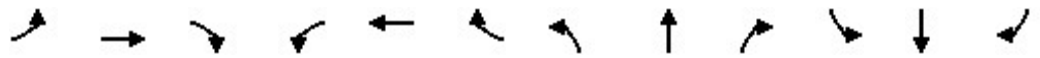
Splits and Phases: 25: Perris Bl. & Placentia Av.



HCM 6th Signalized Intersection Summary  
25: Perris Bl. & Placentia Av.

Stoneridge Commerce Center SP (JN 13265)

02/19/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (veh/h)	37	305	187	105	322	147	185	1134	147	197	1551	28
Future Volume (veh/h)	37	305	187	105	322	147	185	1134	147	197	1551	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	40	328	40	113	346	82	199	1219	77	212	1668	7
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	518	445	146	542	127	241	1975	612	254	2013	623
Arrive On Green	0.04	0.14	0.14	0.08	0.19	0.19	0.13	0.38	0.38	0.14	0.39	0.39
Sat Flow, veh/h	1810	3610	1610	1810	2902	679	1810	5187	1606	1810	5187	1606
Grp Volume(v), veh/h	40	328	40	113	214	214	199	1219	77	212	1668	7
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1776	1810	1729	1606	1810	1729	1606
Q Serve(g_s), s	1.7	6.6	1.4	4.7	8.4	8.6	8.2	14.6	2.4	8.8	22.3	0.2
Cycle Q Clear(g_c), s	1.7	6.6	1.4	4.7	8.4	8.6	8.2	14.6	2.4	8.8	22.3	0.2
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	518	445	146	337	332	241	1975	612	254	2013	623
V/C Ratio(X)	0.59	0.63	0.09	0.78	0.63	0.65	0.83	0.62	0.13	0.84	0.83	0.01
Avail Cap(c_a), veh/h	469	1663	956	391	754	742	391	2227	690	363	2146	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	31.0	20.6	34.7	28.8	28.9	32.5	19.3	15.5	32.2	21.2	14.5
Incr Delay (d2), s/veh	3.0	1.3	0.1	3.3	2.0	2.1	3.3	0.4	0.1	7.7	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.9	0.5	2.2	3.7	3.8	3.6	5.2	0.9	4.1	8.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	32.3	20.7	38.0	30.8	31.0	35.8	19.7	15.6	39.9	23.9	14.5
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		408			541			1495			1887	
Approach Delay, s/veh		31.9			32.4			21.6			25.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	35.1	10.8	15.6	14.8	35.6	7.5	18.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	15.4	33.0	16.6	35.4	16.6	31.8	19.9	32.1				
Max Q Clear Time (g_c+I1), s	10.8	16.6	6.7	8.6	10.2	24.3	3.7	10.6				
Green Ext Time (p_c), s	0.1	7.5	0.1	2.4	0.1	5.5	0.0	2.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			25.7									
HCM 6th LOS			C									

Timings

Stoneridge Commerce Center SP (JN 13265)

30: Redlands Av. & Ramona Exwy.

01/25/2021

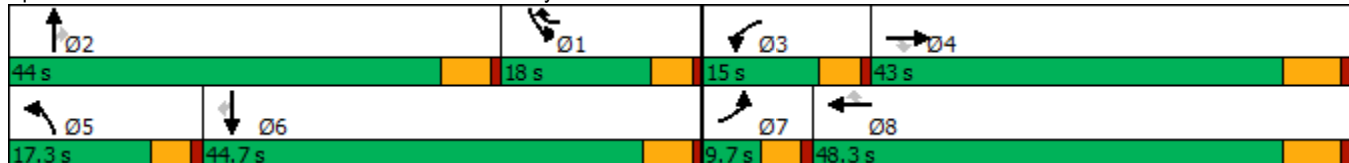


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↑ ↑ ↑	↖	↖ ↗	↑ ↑ ↑ ↑	↖	↖	↑	↖	↖ ↗	↑	↖
Traffic Volume (vph)	85	4036	70	76	2949	708	86	93	159	562	49	102
Future Volume (vph)	85	4036	70	76	2949	708	86	93	159	562	49	102
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	27.2	9.6	9.6	41.4	41.4	9.6	23.4	23.4
Total Split (s)	9.7	43.0	43.0	15.0	48.3	18.0	17.3	44.0	44.0	18.0	44.7	44.7
Total Split (%)	8.1%	35.8%	35.8%	12.5%	40.3%	15.0%	14.4%	36.7%	36.7%	15.0%	37.3%	37.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	5.4	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 30: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
30: Redlands Av. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑↑	↔	↔↔	↑↑↑↑	↔	↔	↑	↔	↔↔	↑	↔
Traffic Volume (veh/h)	85	4036	70	76	2949	708	86	93	159	562	49	102
Future Volume (veh/h)	85	4036	70	76	2949	708	86	93	159	562	49	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	4387	65	83	3205	634	93	101	114	611	53	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	174	4338	734	175	4325	970	120	209	177	534	380	322
Arrive On Green	0.07	0.69	0.46	0.07	0.68	0.46	0.07	0.11	0.11	0.15	0.20	0.20
Sat Flow, veh/h	3510	9500	1608	3619	9500	1610	1810	1900	1610	3619	1900	1610
Grp Volume(v), veh/h	92	4387	65	83	3205	634	93	101	114	611	53	84
Grp Sat Flow(s),veh/h/ln	1755	1900	1608	1810	1900	1610	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	2.3	41.5	2.1	2.0	19.7	5.9	4.6	4.5	5.1	13.4	2.1	4.0
Cycle Q Clear(g_c), s	2.3	41.5	2.1	2.0	19.7	5.9	4.6	4.5	5.1	13.4	2.1	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	4338	734	175	4325	970	120	209	177	534	380	322
V/C Ratio(X)	0.53	1.01	0.09	0.48	0.74	0.65	0.78	0.48	0.64	1.15	0.14	0.26
Avail Cap(c_a), veh/h	197	4338	734	414	4400	983	253	807	684	534	822	696
HCM Platoon Ratio	1.50	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	14.3	14.0	41.1	11.0	2.9	41.8	38.0	26.2	38.7	29.9	30.7
Incr Delay (d2), s/veh	0.9	16.5	0.1	0.7	0.7	1.5	4.1	1.7	3.9	85.6	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	10.8	0.7	0.9	4.8	1.6	2.1	2.1	2.4	12.0	0.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	30.8	14.0	41.8	11.6	4.4	45.8	39.7	30.1	124.4	30.1	31.1
LnGrp LOS	D	F	B	D	B	A	D	D	C	F	C	C
Approach Vol, veh/h		4544			3922			308			748	
Approach Delay, s/veh		30.8			11.1			38.0			107.2	
Approach LOS		C			B			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.8	15.4	9.0	47.7	10.6	23.6	9.1	47.6				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	13.4	* 39	10.4	36.8	12.7	39.3	5.1	42.1				
Max Q Clear Time (g_c+I1), s	15.4	7.1	4.0	43.5	6.6	6.0	4.3	21.7				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.0	0.5	0.0	19.7				

Intersection Summary

HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Notes

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

Timings  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

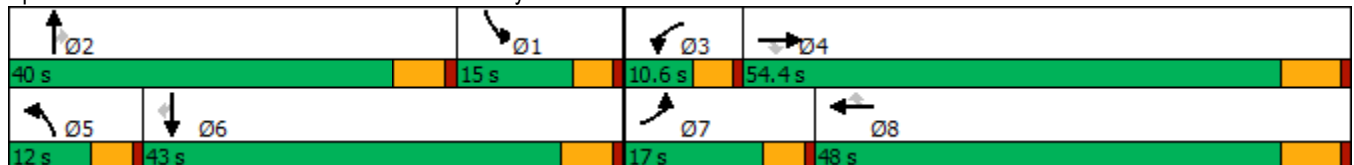
01/25/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	579	3628	618	71	2919	574	321	468	75	584	759	495
Future Volume (vph)	579	3628	618	71	2919	574	321	468	75	584	759	495
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	33.5	33.5	9.6	36.5	36.5	9.6	38.8	38.8	9.6	34.8	34.8
Total Split (s)	17.0	54.4	54.4	10.6	48.0	48.0	12.0	40.0	40.0	15.0	43.0	43.0
Total Split (%)	14.2%	45.3%	45.3%	8.8%	40.0%	40.0%	10.0%	33.3%	33.3%	12.5%	35.8%	35.8%
Yellow Time (s)	3.6	5.5	5.5	3.6	5.5	5.5	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.5	-2.5	-0.6	-2.5	-2.5	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 39: Evans Rd. & Ramona Exwy.







































HCM 6th Signalized Intersection Summary  
39: Evans Rd. & Ramona Exwy.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	579	3628	618	71	2919	574	321	468	75	584	759	495
Future Volume (veh/h)	579	3628	618	71	2919	574	321	468	75	584	759	495
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	591	3702	0	72	2979	300	328	478	41	596	774	250
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	426	3573		165	3026	641	262	677	287	544	1015	424
Arrive On Green	0.15	0.61	0.00	0.06	0.52	0.52	0.07	0.18	0.18	0.15	0.27	0.27
Sat Flow, veh/h	3619	7600	1610	3619	7600	1610	3619	3800	1610	3619	3800	1587
Grp Volume(v), veh/h	591	3702	0	72	2979	300	328	478	41	596	774	250
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1610	1810	1900	1587
Q Serve(g_s), s	13.0	51.9	0.0	2.1	42.6	7.0	8.0	13.1	1.9	16.6	20.7	15.1
Cycle Q Clear(g_c), s	13.0	51.9	0.0	2.1	42.6	7.0	8.0	13.1	1.9	16.6	20.7	15.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	426	3573		165	3026	641	262	677	287	544	1015	424
V/C Ratio(X)	1.39	1.04		0.44	0.98	0.47	1.25	0.71	0.14	1.10	0.76	0.59
Avail Cap(c_a), veh/h	426	3573		216	3026	641	262	1238	525	544	1341	560
HCM Platoon Ratio	1.30	1.30	1.30	1.30	1.30	1.30	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	21.5	0.0	50.6	26.3	5.5	51.3	42.7	25.5	46.9	37.3	35.2
Incr Delay (d2), s/veh	188.7	25.5	0.0	0.7	12.9	0.5	140.8	1.4	0.2	67.3	1.9	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	21.8	0.0	0.9	17.3	3.8	8.6	6.1	0.9	12.3	9.5	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	235.5	47.0	0.0	51.3	39.2	6.1	192.1	44.0	25.8	114.3	39.2	36.6
LnGrp LOS	F	F		D	D	A	F	D	C	F	D	D
Approach Vol, veh/h		4293	A		3351			847			1620	
Approach Delay, s/veh		72.9			36.5			100.5			66.4	
Approach LOS		E			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.8	23.7	9.1	55.9	12.0	33.5	17.0	48.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	10.4	* 34	6.0	47.9	7.4	37.2	12.4	41.5				
Max Q Clear Time (g_c+I1), s	18.6	15.1	4.1	53.9	10.0	22.7	15.0	44.6				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.0	0.0	5.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	62.1
HCM 6th LOS	E

Notes

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

Timings  
43: Bradley St. & Ramona Expy

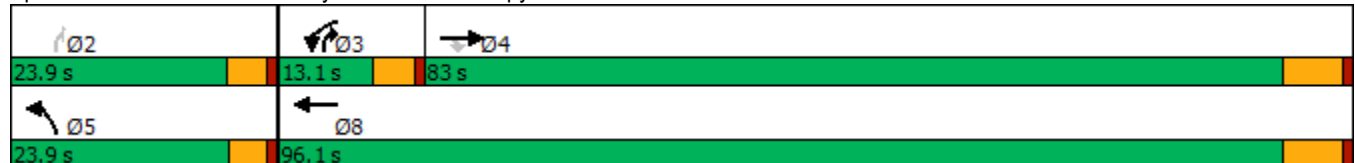


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø2
Lane Configurations	↑↑↑	↗	↖	↑↑↑	↖	↗	
Traffic Volume (vph)	2945	299	37	1609	149	19	
Future Volume (vph)	2945	299	37	1609	149	19	
Turn Type	NA	Perm	Prot	NA	Prot	pm+ov	
Protected Phases	4		3	8	5	3	2
Permitted Phases		4				2	
Detector Phase	4	4	3	8	5	3	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	38.5	38.5	9.6	24.5	9.5	9.6	22.6
Total Split (s)	83.0	83.0	13.1	96.1	23.9	13.1	23.9
Total Split (%)	69.2%	69.2%	10.9%	80.1%	19.9%	10.9%	20%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.5	4.6	
Lead/Lag	Lag	Lag	Lead			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.6  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated

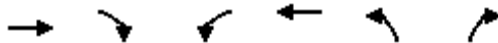
Splits and Phases: 43: Bradley St. & Ramona Expy



HCM 6th Signalized Intersection Summary  
43: Bradley St. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗	↖	↑↑↑↑	↖	↗
Traffic Volume (veh/h)	2945	299	37	1609	149	19
Future Volume (veh/h)	2945	299	37	1609	149	19
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3100	295	39	1694	157	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	4603	1133	60	5120	193	225
Arrive On Green	0.70	0.70	0.03	0.78	0.11	0.11
Sat Flow, veh/h	6802	1609	1810	6802	1810	1610
Grp Volume(v), veh/h	3100	295	39	1694	157	8
Grp Sat Flow(s),veh/h/ln	1634	1609	1810	1634	1810	1610
Q Serve(g_s), s	26.7	6.6	2.1	7.6	8.5	0.4
Cycle Q Clear(g_c), s	26.7	6.6	2.1	7.6	8.5	0.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	4603	1133	60	5120	193	225
V/C Ratio(X)	0.67	0.26	0.65	0.33	0.81	0.04
Avail Cap(c_a), veh/h	5003	1232	154	5860	351	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.3	5.4	47.7	3.2	43.7	37.2
Incr Delay (d2), s/veh	0.3	0.1	4.4	0.0	8.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	1.5	1.0	1.2	4.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.6	5.5	52.1	3.2	51.7	37.2
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	3395			1733	165	
Approach Delay, s/veh	8.4			4.3	51.0	
Approach LOS	A			A	D	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		15.2	7.9	76.9		84.8
Change Period (Y+Rc), s		4.5	4.6	6.5		6.5
Max Green Setting (Gmax), s		19.4	8.5	76.5		89.6
Max Q Clear Time (g_c+I1), s		10.5	4.1	28.7		9.6
Green Ext Time (p_c), s		0.3	0.0	41.7		17.6
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			8.4			
HCM 6th LOS			A			

Timings  
46: Dunlap Dr. & Nuevo Rd.

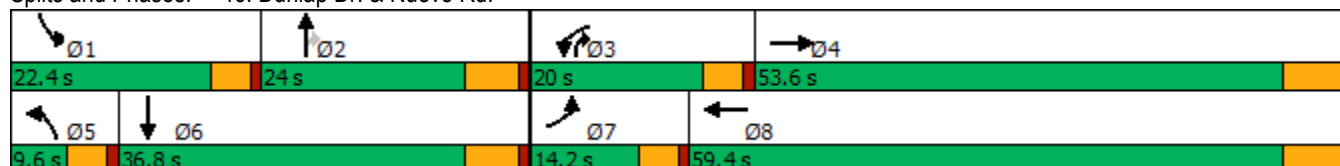


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↵	↕↕↕	↵↵	↕↕↕	↵	↕	↕	↵	↕
Traffic Volume (vph)	87	2046	375	1658	9	48	143	225	31
Future Volume (vph)	87	2046	375	1658	9	48	143	225	31
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	37.5	9.6	24.5	9.6	23.8	9.6	9.6	29.8
Total Split (s)	14.2	53.6	20.0	59.4	9.6	24.0	20.0	22.4	36.8
Total Split (%)	11.8%	44.7%	16.7%	49.5%	8.0%	20.0%	16.7%	18.7%	30.7%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.6	4.8	3.6	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	4.6	5.8	4.6	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 108.9  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated


























Splits and Phases: 46: Dunlap Dr. & Nuevo Rd.



HCM 6th Signalized Intersection Summary  
46: Dunlap Dr. & Nuevo Rd.

Stoneridge Commerce Center SP (JN 13265)

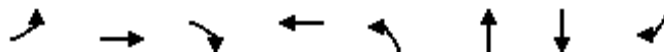
01/26/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	87	2046	9	375	1658	150	9	48	143	225	31	65
Future Volume (veh/h)	87	2046	9	375	1658	150	9	48	143	225	31	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	95	2224	8	408	1802	81	10	52	154	245	34	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	120	2382	9	466	2632	118	22	196	380	274	156	257
Arrive On Green	0.07	0.42	0.42	0.13	0.49	0.49	0.01	0.10	0.10	0.15	0.24	0.24
Sat Flow, veh/h	1810	5676	20	3510	5413	243	1810	1900	1610	1810	645	1062
Grp Volume(v), veh/h	95	1489	743	408	1264	619	10	52	154	245	0	90
Grp Sat Flow(s),veh/h/ln	1810	1900	1896	1755	1900	1856	1810	1900	1610	1810	0	1707
Q Serve(g_s), s	5.8	41.6	41.6	12.7	28.5	28.6	0.6	2.8	9.0	14.8	0.0	4.7
Cycle Q Clear(g_c), s	5.8	41.6	41.6	12.7	28.5	28.6	0.6	2.8	9.0	14.8	0.0	4.7
Prop In Lane	1.00		0.01	1.00		0.13	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	120	1595	796	466	1848	903	22	196	380	274	0	414
V/C Ratio(X)	0.79	0.93	0.93	0.88	0.68	0.69	0.46	0.27	0.41	0.90	0.00	0.22
Avail Cap(c_a), veh/h	156	1609	803	486	1848	903	81	311	477	289	0	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.2	30.8	30.8	47.3	22.0	22.0	54.6	46.0	35.9	46.4	0.0	33.7
Incr Delay (d2), s/veh	14.1	10.4	17.7	15.1	1.1	2.2	5.6	0.7	0.7	26.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	19.3	20.9	6.2	11.5	11.6	0.3	1.3	3.4	8.4	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	41.2	48.5	62.5	23.1	24.2	60.2	46.7	36.6	72.4	0.0	34.0
LnGrp LOS	E	D	D	E	C	C	E	D	D	E	A	C
Approach Vol, veh/h		2327			2291			216			335	
Approach Delay, s/veh		44.5			30.4			40.1			62.1	
Approach LOS		D			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.4	17.3	19.4	53.2	5.9	32.8	12.0	60.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.5	4.6	5.8	4.6	6.5				
Max Green Setting (Gmax), s	17.8	18.2	15.4	47.1	5.0	31.0	9.6	52.9				
Max Q Clear Time (g_c+I1), s	16.8	11.0	14.7	43.6	2.6	6.7	7.8	30.6				
Green Ext Time (p_c), s	0.0	0.4	0.1	3.1	0.0	0.4	0.0	12.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				39.2								
HCM 6th LOS				D								

Timings  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR	Ø1
Lane Configurations		↕	↗	↔	↖	↑↑↑	↑↑↑	↗	
Traffic Volume (vph)	51	0	450	0	458	3076	3461	134	
Future Volume (vph)	51	0	450	0	458	3076	3461	134	
Turn Type	Perm	NA	Perm	NA	Prot	NA	NA	Perm	
Protected Phases		4		8	5	2	6		1
Permitted Phases	4		4					6	
Detector Phase	4	4	4	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	34.6	34.6	34.6	34.6	9.6	16.5	47.5	47.5	9.6
Total Split (s)	34.6	34.6	34.6	34.6	18.0	75.8	67.4	67.4	9.6
Total Split (%)	28.8%	28.8%	28.8%	28.8%	15.0%	63.2%	56.2%	56.2%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.5	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	4.6	6.5	6.5	6.5	
Lead/Lag					Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 119.3  
 Natural Cycle: 125  
 Control Type: Actuated-Uncoordinated





















Splits and Phases: 47: Ramona Expy & Rider St.



HCM 6th Signalized Intersection Summary  
47: Ramona Expy & Rider St.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	0	450	0	0	1	458	3076	1	0	3461	134
Future Volume (veh/h)	51	0	450	0	0	1	458	3076	1	0	3461	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	54	0	319	0	0	1	487	3272	1	0	3682	90
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	376	0	351	0	0	352	421	5204	2	2	4017	850
Arrive On Green	0.22	0.00	0.22	0.00	0.00	0.22	0.12	0.68	0.68	0.00	0.53	0.53
Sat Flow, veh/h	1436	0	1606	0	0	1610	3619	7597	2	1810	7600	1609
Grp Volume(v), veh/h	54	0	319	0	0	1	487	2455	818	0	3682	90
Grp Sat Flow(s),veh/h/ln	1436	0	1606	0	0	1610	1810	1900	1900	1810	1900	1609
Q Serve(g_s), s	3.5	0.0	22.3	0.0	0.0	0.1	13.4	27.4	27.4	0.0	51.0	3.2
Cycle Q Clear(g_c), s	3.6	0.0	22.3	0.0	0.0	0.1	13.4	27.4	27.4	0.0	51.0	3.2
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	376	0	351	0	0	352	421	3904	1301	2	4017	850
V/C Ratio(X)	0.14	0.00	0.91	0.00	0.00	0.00	1.16	0.63	0.63	0.00	0.92	0.11
Avail Cap(c_a), veh/h	437	0	419	0	0	420	421	3904	1301	79	4022	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	0.0	43.8	0.0	0.0	35.2	50.8	10.0	10.0	0.0	24.8	13.5
Incr Delay (d2), s/veh	0.2	0.0	21.2	0.0	0.0	0.0	93.7	0.3	1.0	0.0	3.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	10.7	0.0	0.0	0.0	11.3	8.8	9.1	0.0	20.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	0.0	65.0	0.0	0.0	35.2	144.6	10.4	11.0	0.0	28.7	13.6
LnGrp LOS	D	A	E	A	A	D	F	B	B	A	C	B
Approach Vol, veh/h		373			1			3760			3772	
Approach Delay, s/veh		60.9			35.2			27.9			28.3	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	85.3		29.8	18.0	67.3		29.8				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	6.5		4.6				
Max Green Setting (Gmax), s	5.0	69.3		30.0	13.4	60.9		30.0				
Max Q Clear Time (g_c+I1), s	0.0	29.4		24.3	15.4	53.0		2.1				
Green Ext Time (p_c), s	0.0	33.5		0.7	0.0	7.8		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			29.6									
HCM 6th LOS			C									

Timings  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)

01/26/2021

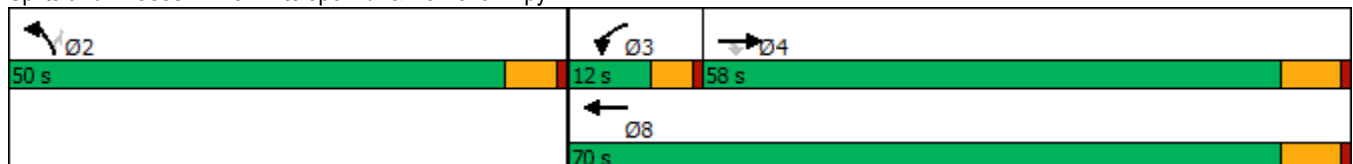


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↑	↙↘	↑↑↑↑	↙↘	↑
Traffic Volume (vph)	3324	589	248	2077	1309	294
Future Volume (vph)	3324	589	248	2077	1309	294
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	28.5	28.5	9.6	16.5	15.8	15.8
Total Split (s)	58.0	58.0	12.0	70.0	50.0	50.0
Total Split (%)	48.3%	48.3%	10.0%	58.3%	41.7%	41.7%
Yellow Time (s)	5.5	5.5	3.6	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	0.0	0.0	-0.5	0.0	0.0
Total Lost Time (s)	6.0	6.5	4.6	6.0	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	52.0	51.5	7.4	64.0	44.2	44.2
Actuated g/C Ratio	0.43	0.43	0.06	0.53	0.37	0.37
v/c Ratio	1.10	0.72	1.22	0.56	1.07	0.47
Control Delay	82.3	18.2	178.0	19.2	82.8	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.3	18.2	178.0	19.2	82.8	18.5
LOS	F	B	F	B	F	B
Approach Delay	72.6			36.2	71.0	
Approach LOS	E			D	E	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Natural Cycle: 130  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.22  
 Intersection Signal Delay: 61.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 106.3%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 48: Antelope Rd. & Ramona Expy





HCM 6th Signalized Intersection Summary  
48: Antelope Rd. & Ramona Expy

Stoneridge Commerce Center SP (JN 13265)  
01/26/2021

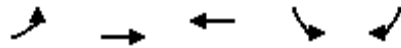


Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗	↖↖	↑↑↑↑	↖↖	↗
Traffic Volume (veh/h)	3324	589	248	2077	1309	294
Future Volume (veh/h)	3324	589	248	2077	1309	294
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3613	586	270	2258	1423	266
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	3293	691	223	4053	1333	593
Arrive On Green	0.65	0.64	0.09	0.80	0.55	0.55
Sat Flow, veh/h	7600	1610	3619	7600	3619	1610
Grp Volume(v), veh/h	3613	586	270	2258	1423	266
Grp Sat Flow(s),veh/h/ln	1900	1610	1810	1900	1810	1610
Q Serve(g_s), s	52.0	34.3	7.4	12.9	44.2	11.8
Cycle Q Clear(g_c), s	52.0	34.3	7.4	12.9	44.2	11.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3293	691	223	4053	1333	593
V/C Ratio(X)	1.10	0.85	1.21	0.56	1.07	0.45
Avail Cap(c_a), veh/h	3293	691	223	4053	1333	593
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	18.3	54.5	6.9	26.9	19.6
Incr Delay (d2), s/veh	49.2	9.7	128.6	0.2	44.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.6	9.4	7.1	3.2	22.5	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.2	28.0	183.0	7.1	71.7	20.1
LnGrp LOS	F	C	F	A	F	C
Approach Vol, veh/h	4199			2528	1689	
Approach Delay, s/veh	64.3			25.9	63.6	
Approach LOS	E			C	E	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		50.0	12.0	58.0		70.0
Change Period (Y+Rc), s		5.8	4.6	6.5		6.5
Max Green Setting (Gmax), s		44.2	7.4	51.5		63.5
Max Q Clear Time (g_c+I1), s		46.2	9.4	54.0		14.9
Green Ext Time (p_c), s		0.0	0.0	0.0		26.7
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			52.6			
HCM 6th LOS			D			

Timings  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/26/2021



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔↔	↔↔
Traffic Volume (vph)	455	1735	1120	490	1061
Future Volume (vph)	455	1735	1120	490	1061
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	16.5	28.5	27.8	9.6
Total Split (s)	38.0	86.0	48.0	34.0	38.0
Total Split (%)	31.7%	71.7%	40.0%	28.3%	31.7%
Yellow Time (s)	3.6	5.5	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	5.8	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None
Act Effct Green (s)	30.0	79.6	45.0	22.3	58.1
Actuated g/C Ratio	0.26	0.70	0.39	0.20	0.51
v/c Ratio	0.54	0.52	0.73	0.78	0.79
Control Delay	38.5	9.3	32.3	52.1	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	9.3	32.3	52.1	27.0
LOS	D	A	C	D	C
Approach Delay		15.3	32.3	35.0	
Approach LOS		B	C	C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.2  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 25.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.2%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 51: Nuevo Rd. & Antelope Rd.



HCM 6th Signalized Intersection Summary  
51: Nuevo Rd. & Antelope Rd.

Stoneridge Commerce Center SP (JN 13265)

01/26/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	455	1735	1120	233	490	1061	
Future Volume (veh/h)	455	1735	1120	233	490	1061	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	495	1886	1217	144	533	963	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	565	3436	2178	258	825	1122	
Arrive On Green	0.16	0.66	0.46	0.46	0.23	0.23	
Sat Flow, veh/h	3510	5358	4873	556	3510	2834	
Grp Volume(v), veh/h	495	1886	895	466	533	963	
Grp Sat Flow(s),veh/h/ln	1755	1729	1729	1800	1755	1417	
Q Serve(g_s), s	16.5	23.1	22.5	22.5	16.4	28.2	
Cycle Q Clear(g_c), s	16.5	23.1	22.5	22.5	16.4	28.2	
Prop In Lane	1.00			0.31	1.00	1.00	
Lane Grp Cap(c), veh/h	565	3436	1602	834	825	1122	
V/C Ratio(X)	0.88	0.55	0.56	0.56	0.65	0.86	
Avail Cap(c_a), veh/h	977	3436	1602	834	825	1122	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	49.2	10.7	23.3	23.3	41.4	33.2	
Incr Delay (d2), s/veh	2.0	0.6	1.4	2.7	1.8	6.8	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	7.1	7.6	8.8	9.5	7.1	26.8	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	51.2	11.4	24.7	26.0	43.2	40.0	
LnGrp LOS	D	B	C	C	D	D	
Approach Vol, veh/h		2381	1361		1496		
Approach Delay, s/veh		19.6	25.2		41.1		
Approach LOS		B	C		D		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				86.0	34.0	23.9	62.1
Change Period (Y+Rc), s				6.5	5.8	4.6	6.5
Max Green Setting (Gmax), s				79.5	28.2	33.4	41.5
Max Q Clear Time (g_c+I1), s				25.1	30.2	18.5	24.5
Green Ext Time (p_c), s				21.1	0.0	0.8	7.7
<b>Intersection Summary</b>							
HCM 6th Ctrl Delay			27.2				
HCM 6th LOS			C				

Timings  
68: San Jacinto Av. & Dunlap Dr.

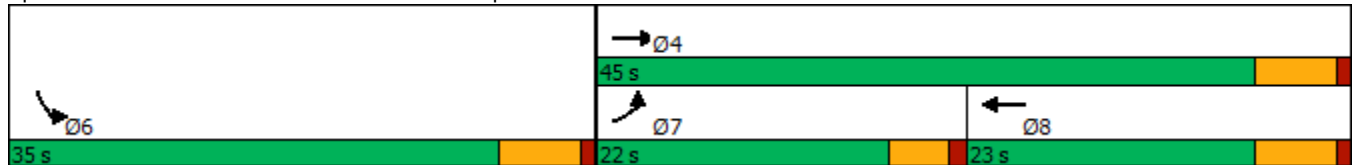


Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↖	↑	↗	↘
Traffic Volume (vph)	307	458	266	74
Future Volume (vph)	307	458	266	74
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	32.8
Total Split (s)	22.0	45.0	23.0	35.0
Total Split (%)	27.5%	56.3%	28.8%	43.8%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 61.3  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 68: San Jacinto Av. & Dunlap Dr.



HCM 6th Signalized Intersection Summary  
68: San Jacinto Av. & Dunlap Dr.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	307	458	266	65	74	281	
Future Volume (veh/h)	307	458	266	65	74	281	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	330	492	286	70	80	302	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	386	998	342	84	94	356	
Arrive On Green	0.21	0.53	0.23	0.23	0.27	0.27	
Sat Flow, veh/h	1810	1900	1474	361	344	1300	
Grp Volume(v), veh/h	330	492	0	356	383	0	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1835	1649	0	
Q Serve(g_s), s	10.1	9.6	0.0	10.7	12.7	0.0	
Cycle Q Clear(g_c), s	10.1	9.6	0.0	10.7	12.7	0.0	
Prop In Lane	1.00			0.20	0.21	0.79	
Lane Grp Cap(c), veh/h	386	998	0	426	451	0	
V/C Ratio(X)	0.85	0.49	0.00	0.84	0.85	0.00	
Avail Cap(c_a), veh/h	546	1292	0	547	835	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	21.8	8.8	0.0	21.1	19.8	0.0	
Incr Delay (d2), s/veh	6.8	0.4	0.0	8.7	4.6	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4.4	2.8	0.0	4.7	4.6	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	28.6	9.1	0.0	29.7	24.4	0.0	
LnGrp LOS	C	A	A	C	C	A	
Approach Vol, veh/h		822	356		383		
Approach Delay, s/veh		17.0	29.7		24.4		
Approach LOS		B	C		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				36.1	21.6	16.9	19.2
Change Period (Y+Rc), s				5.8	5.8	4.6	5.8
Max Green Setting (Gmax), s				39.2	29.2	17.4	17.2
Max Q Clear Time (g_c+I1), s				11.6	14.7	12.1	12.7
Green Ext Time (p_c), s				2.9	1.1	0.2	0.7

Intersection Summary

HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
69: San Jacinto Av. & Evans Rd.

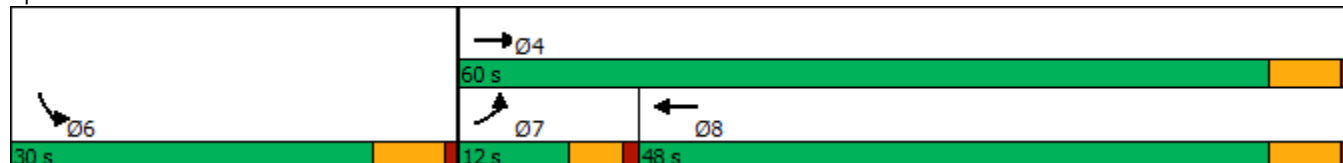


Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↖	↑	↗	↘
Traffic Volume (vph)	105	765	548	226
Future Volume (vph)	105	765	548	226
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	27.8
Total Split (s)	12.0	60.0	48.0	30.0
Total Split (%)	13.3%	66.7%	53.3%	33.3%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

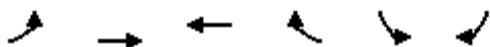
Cycle Length: 90  
 Actuated Cycle Length: 81.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 69: San Jacinto Av. & Evans Rd.



HCM 6th Signalized Intersection Summary  
69: San Jacinto Av. & Evans Rd.

Stoneridge Commerce Center SP (JN 13265)  
01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑	↗		↙	↘	
Traffic Volume (veh/h)	105	765	548	228	226	32	
Future Volume (veh/h)	105	765	548	228	226	32	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	114	832	596	248	246	35	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	146	1241	649	270	293	42	
Arrive On Green	0.08	0.65	0.51	0.51	0.19	0.19	
Sat Flow, veh/h	1810	1900	1274	530	1555	221	
Grp Volume(v), veh/h	114	832	0	844	282	0	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1805	1782	0	
Q Serve(g_s), s	4.5	19.7	0.0	31.5	11.1	0.0	
Cycle Q Clear(g_c), s	4.5	19.7	0.0	31.5	11.1	0.0	
Prop In Lane	1.00			0.29	0.87	0.12	
Lane Grp Cap(c), veh/h	146	1241	0	919	335	0	
V/C Ratio(X)	0.78	0.67	0.00	0.92	0.84	0.00	
Avail Cap(c_a), veh/h	183	1410	0	1043	591	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	32.9	7.8	0.0	16.5	28.6	0.0	
Incr Delay (d2), s/veh	12.0	1.0	0.0	11.7	5.7	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.3	5.5	0.0	13.1	4.8	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	45.0	8.9	0.0	28.2	34.2	0.0	
LnGrp LOS	D	A	A	C	C	A	
Approach Vol, veh/h		946	844		282		
Approach Delay, s/veh		13.2	28.2		34.2		
Approach LOS		B	C		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				53.5	19.5	10.5	43.0
Change Period (Y+Rc), s				5.8	5.8	4.6	5.8
Max Green Setting (Gmax), s				54.2	24.2	7.4	42.2
Max Q Clear Time (g_c+I1), s				21.7	13.1	6.5	33.5
Green Ext Time (p_c), s				6.4	0.6	0.0	3.7

Intersection Summary

HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

70: San Jacinto Av. & Murrieta Rd.

01/25/2021



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations	↖	↑	↗	↘
Traffic Volume (vph)	460	755	542	118
Future Volume (vph)	460	755	542	118
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	27.8
Total Split (s)	32.4	70.8	38.4	29.2
Total Split (%)	32.4%	70.8%	38.4%	29.2%
Yellow Time (s)	3.6	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	5.8
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	None	None	Min

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 96.8  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 70: San Jacinto Av. & Murrieta Rd.





HCM 6th Signalized Intersection Summary  
70: San Jacinto Av. & Murrieta Rd.

Stoneridge Commerce Center SP (JN 13265)

01/25/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	460	755	542	50	118	220	
Future Volume (veh/h)	460	755	542	50	118	220	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	495	812	583	54	127	237	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	503	1236	559	52	136	254	
Arrive On Green	0.28	0.65	0.33	0.33	0.23	0.23	
Sat Flow, veh/h	1810	1900	1713	159	583	1088	
Grp Volume(v), veh/h	495	812	0	637	365	0	
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1871	1675	0	
Q Serve(g_s), s	27.2	26.1	0.0	32.6	21.3	0.0	
Cycle Q Clear(g_c), s	27.2	26.1	0.0	32.6	21.3	0.0	
Prop In Lane	1.00			0.08	0.35	0.65	
Lane Grp Cap(c), veh/h	503	1236	0	610	391	0	
V/C Ratio(X)	0.98	0.66	0.00	1.04	0.93	0.00	
Avail Cap(c_a), veh/h	503	1236	0	610	392	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	35.8	10.7	0.0	33.7	37.5	0.0	
Incr Delay (d2), s/veh	35.6	1.3	0.0	48.3	29.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	16.2	9.1	0.0	21.9	11.6	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	71.5	12.0	0.0	82.0	66.6	0.0	
LnGrp LOS	E	B	A	F	E	A	
Approach Vol, veh/h		1307	637		365		
Approach Delay, s/veh		34.5	82.0		66.6		
Approach LOS		C	F		E		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				70.8	29.2	32.4	38.4
Change Period (Y+Rc), s				5.8	5.8	4.6	5.8
Max Green Setting (Gmax), s				65.0	23.4	27.8	32.6
Max Q Clear Time (g_c+I1), s				28.1	23.3	29.2	34.6
Green Ext Time (p_c), s				6.2	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	52.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

**ATTACHMENT V**  
**SITE ACCESS QUEUING ANALYSIS**



# Queuing and Blocking Report

Horizon Year (2040) Without MCP With Project With Improvements - AM Peak Hour 01/26/2021

## Intersection: 48: Antelope Rd. & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	T	T	T	T	R	L	L	T	T	T	L	L
Maximum Queue (ft)	219	453	883	918	300	125	150	392	385	333	125	146
Average Queue (ft)	130	110	462	918	300	102	116	168	168	154	85	98
95th Queue (ft)	196	275	949	918	300	137	167	355	328	283	135	147
Link Distance (ft)	903	903	903	903				1270	1270	1270		
Upstream Blk Time (%)			0	49								
Queuing Penalty (veh)			0	0								
Storage Bay Dist (ft)					200	100	100				100	100
Storage Blk Time (%)					39	31	31	4			5	10
Queuing Penalty (veh)					146	318	311	10			3	6

## Intersection: 48: Antelope Rd. & Ramona Expy

Movement	NB
Directions Served	R
Maximum Queue (ft)	185
Average Queue (ft)	35
95th Queue (ft)	106
Link Distance (ft)	5125
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Intersection: 51: Nuevo Rd. & Antelope Rd.

Movement	EB	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB	SB
Directions Served	L	L	T	T	T	T	T	TR	L	L	R	R
Maximum Queue (ft)	325	350	3074	3074	3068	370	409	457	81	96	66	70
Average Queue (ft)	324	349	3063	3058	1625	244	279	329	26	51	24	35
95th Queue (ft)	327	351	3160	3174	3800	343	384	436	63	85	52	62
Link Distance (ft)			3058	3058	3058	6652	6652	6652			3978	3978
Upstream Blk Time (%)			94	58	1							
Queuing Penalty (veh)			0	0	0							
Storage Bay Dist (ft)	300	300							200	200		
Storage Blk Time (%)	22	85										
Queuing Penalty (veh)	43	165										

Queuing and Blocking Report

Horizon Year (2040) Without MCP With Project With Improvements - PM Peak Hour 01/26/2021

Intersection: 48: Antelope Rd. & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	T	T	T	T	R	L	L	T	T	T	T	L
Maximum Queue (ft)	918	918	918	918	300	125	150	714	701	533	361	125
Average Queue (ft)	915	907	907	918	293	114	138	380	362	239	184	123
95th Queue (ft)	932	950	949	920	353	146	176	743	717	419	297	127
Link Distance (ft)	903	903	903	903				1270	1270	1270	1270	
Upstream Blk Time (%)	40	33	31	67								
Queuing Penalty (veh)	0	0	0	0								
Storage Bay Dist (ft)					200	100	100					100
Storage Blk Time (%)				55	1	60	67	12				44
Queuing Penalty (veh)				324	11	311	347	30				130

Intersection: 48: Antelope Rd. & Ramona Expy

Movement	NB	NB
Directions Served	L	R
Maximum Queue (ft)	150	2827
Average Queue (ft)	149	2700
95th Queue (ft)	151	2840
Link Distance (ft)		5125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)	53	6
Queuing Penalty (veh)	157	81

Intersection: 51: Nuevo Rd. & Antelope Rd.

Movement	EB	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB	SB
Directions Served	L	L	T	T	T	T	T	TR	L	L	R	R
Maximum Queue (ft)	308	328	484	482	190	288	286	326	216	244	291	277
Average Queue (ft)	229	250	207	205	106	184	194	225	132	146	139	129
95th Queue (ft)	360	378	578	526	174	259	267	306	199	218	230	219
Link Distance (ft)			3058	3058	3058	6652	6652	6652			3978	3978
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300							200	200		
Storage Blk Time (%)	5	20							0	1	1	
Queuing Penalty (veh)	27	113							2	6	5	